CS720, CS725, CS727, CS728, C4150 Printers

Service Manual

November 2026

www.lexmark.com

Product information

Product name:
Lexmark CS720, CS725, CS727, CS728, C4150 printers
Machine type:
5028
Models:
1A5, 135, 6A0, 630, 6A9, 639

Edition notice

January 2016

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

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

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

All rights reserved.

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

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

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

All other trademarks are the property of their respective owners.

Contents

Product information **2**

Edition notice **3**

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

Laser notice 7

Conventions 10

Safety information 11

General caution statements 15

Change history **16**

Change history 16

General information **25**

Printer model configurations 25

Finding the serial number 25

Paper and specialty media guide 26

Tools required for service 31

Diagnostics and troubleshooting **32**

Troubleshooting precautions 32

Troubleshooting overview 34

Securing the printer 35

Fixing print quality issues 41

Paper jams 90

User attendance messages 224

Printer hardware errors 260

Other symptoms 343

Contacting customer support 369

Service menus **370**

Understanding the printer control panel 370

Configuring the door interlock bypass jumpers 374

Diagnostics menu 375

Configuration Menu 382

Entering Recovery mode 386

Service Engineer menu 387

Reset Device 389
Parts removal 390
Important removal information 390
Adjustments 404
Removal procedures 408
Cover removals 409
Control panel removals 419
Duplex removals 426
Left removals 431
Right removals 443
Front removals 459
Rear removals 475
Top removals 480
Bottom removals 487
550-sheet tray removals 494
Component locations 504
Printer configurations 504
Controller board connectors 505
LVPS controller board connectors 516
Motor locations 518
Sensor locations 519
Maintenance 520
Inspection guide 520
Scheduled maintenance 521
Cleaning the printer 524
Parts catalog 526
Legend 526
Covers 1 527
Covers 2 529
Control panel 530
Fuser 533
Transfer module 534
Paper feed 535
Paper path 1 537
Paper path 2 539
Duplex 541

Electrical 543
550-sheet tray option 1 547
550-sheet tray option 2 548
Adjustable stand 550
Miscellaneous parts 551
Maintenance kits 552
Power cords 553
Printer specifications 555
Power consumption 555
Selecting a location for the printer 556
Noise emission levels 557
Temperature information 558
Applicability of Regulation (EU) 2019/2015 and (EU) 2019/2020 558
Options and features 559
Available internal options 559
Installing optional trays 559
Adding available options in the print driver 560
Theory of operation 562
Paper path and transport components 562
Print engine theory 567
Color theory 572
Acronyms 576
Acronyms 576
Index 578

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 printer contains a Class IIIb (3b) AlGaInP laser that is nominally 15 milliwatts operating in the wavelength region of 650–670 nanometers and enclosed in a non-serviceable printhead assembly. 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.

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. L'imprimante contient un dispositif laser AlGaInP (aluminium, gallium, indium et phosphore) de classe IIIb (3b) d'une puissance nominale de 15 milliwatts fonctionnant dans la plage de longueurs d'onde allant de 650 à 670 nanomètres et scellé dans un compartiment de têtes d'impression non réparable. 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.

Notificació del làser

La impressora està certificada als EUA per complir els requeriments de DHHS 21 CFR, capítol I, subcapítol J per a productes de làser Classe I (1), i a la resta del món s'ha certificat com productes de làser Classe I segons els requeriments de la norma IEC 60825-1: 2014.

Els productes de làser Classe I no es consideren perillosos. La impressora conté un làser intern Classe IIIb (3b) AlGaInP que normalment és de 15 miliwatts, que funciona a la regió de longitud d'ona de 650 a 670 nanòmetres i es troba dins d'una unitat de capçals d'impressió no substituïble. El sistema làser i la impressora estan dissenyats de manera que les persones no estiguin exposades a una radiació del làser superior al nivell de Classe I durant el funcionament normal, el manteniment de l'usuari o les condicions de servei prescrites.

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. Este producto contiene un láser interno de Clase IIIb (3b) AlGaInP que opera nominalmente a 15 milivatios en una longitud de onda de 650–670 nanómetros cerrado en un conjunto de cabezal de impresión que no se puede reparar. 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.

Aviso sobre laser

Esta impressora foi certificada nos EUA por estar em conformidade com os requisitos do DHHS 21 CFR capítulo I, subcapítulo J, para produtos a laser de Classe I (1) e, nos demais países, foi certificada como um produto a laser de Classe I em conformidade com os requisitos da IEC 60825-1: 2014.

Os produtos a laser de Classe I não são considerados prejudiciais. A impressora contém, internamente, um laser de Classe IIIb (3b) AlGaInP que funciona nominalmente a 15 miliwatts no comprimento de onda de 650-670 nanômetros, incluso em um conjunto do cabeçote de impressão sem possibilidade de manutenção. O sistema do laser e a impressora foram projetados para que jamais haja acesso humano à radiação do laser acima do nível da Classe I durante a operação normal ou a manutenção pelo usuário ou sob as condições de manutenção prescritas.

Avvertenze sui prodotti laser

La stampante è certificata negli Stati Uniti come prodotto conforme ai requisiti DHHS 21 CFR Capitolo I, Sottocapitolo J per i prodotti laser di Classe I (1), mentre in altri paesi è certificata come prodotto laser di Classe I conforme ai requisiti IEC 60825-1: 2014.

I prodotti laser di Classe I non sono considerati pericolosi. La stampante contiene internamente un laser AlGaInP di Classe IIIb (3b) con valore nominale di 15 milliwatt, funzionante nella regione della lunghezza d'onda dei 650-670 nanometri e contenuto in un gruppo testina di stampa non riparabile. Il sistema laser e la stampante sono stati progettati in modo da impedire l'esposizione a radiazioni laser superiori al livello previsto dalla Classe I durante le normali operazioni di stampa, manutenzione o assistenza.

Laserinformatie

De printer is in de Verenigde Staten gecertificeerd als een product dat voldoet aan de vereisten van DHHS 21 CFR hoofdstuk 1, paragraaf J voor laserproducten van klasse I (1). Elders is de printer gecertificeerd als een laserproduct van klasse I dat voldoet aan de vereisten van IEC 60825-1: 2014.

Laserproducten van klasse I worden geacht geen gevaar op te leveren. De printer bevat intern een laser van klasse IIIb (3b) AlGaInP met een nominaal vermogen van 15 milliwatt in een golflengtebereik van 650-670 nanometer in een niet-bruikbare printkopeenheid. Het lasersysteem en de printer zijn zodanig ontworpen dat gebruikers nooit blootstaan aan laserstraling die hoger is dan het toegestane niveau voor klasse I-apparaten, tijdens normaal gebruik, onderhoudswerkzaamheden door de gebruiker of voorgeschreven servicewerkzaamheden.

Lasererklæring

Printeren er certificeret i USA i henhold til kravene i DHHS 21 CFR kapitel I, underafsnit J for klasse I (1) laserprodukter og er andre steder certificeret som et klasse I-laserprodukt i henhold til kravene i IEC 60825-1: 2014.

Klasse I-laserprodukter er ikke anset som farlige. Printeren indeholder internt en Klasse IIIb (3b) AlGaAs-laser, der nominelt er en 15 milliwatt laser, som fungerer i bølgelængdeområdet 650–670 nanometer og indbygget i en printhovedenhed, der ikke er servicerbar. Lasersystemet og printeren er designet på en sådan måde, at der ikke er en direkte laserstråling, der overskrider Klasse I-niveauet under normal brug, brugers vedligeholdelse eller de foreskrevne servicebetingelser.

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: 2014 entspricht.

Laserprodukte der Klasse I werden nicht als gefährlich betrachtet. Der Drucker enthält im Inneren einen Laser der Klasse IIIb (3b) AlGaInP mit 15 Milliwatt, im Wellenlängenbereich von 650 bis 670 Nanometern arbeitet. Dieser befindet sich in einer Druckkopfeinheit, die nicht gewartet werden kann. 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.

Laserilmoitus

Tämä tulostin on sertifioitu Yhdysvalloissa DHHS 21 CFR, Chapter I, Subchapter J -standardin mukaiseksi luokan I (1) -lasertuotteeksi ja muualla IEC 60825-1: 2014 -standardin mukaiseksi luokan I lasertuotteeksi.

Luokan I lasertuotteita ei pidetä haitallisina. Tulostimen sisällä on luokan IIIb (3b) AlGaInP -laser, jonka nimellisteho on 15 mW milliwatts, joka toimii 650–670 nanometrin aallonpituuksilla ja joka on suljettu tulostuspäähän, jota käyttäjä ei voi huoltaa. Laserjärjestelmä ja tulostin ovat rakenteeltaan sellaisia, että käyttäjä ei joudu alttiiksi luokkaa 1 suuremmalle säteilylle normaalin käytön, ylläpidon tai huollon aikana.

Lasermerknad

Skriveren er sertifisert i USA for samsvar med kravene i DHHS 21 CFR, kapittel I, underkapittel J for laserprodukter av klasse I (1) og er andre steder sertifisert som et laserprodukt av klasse I som samsvarer med kravene i IEC 60825-1: 2014.

Laserprodukter av klasse I anses ikke som helseskadelige. Skriveren inneholder en intern AlGaInP-laser av klasse IIIb (3b) på nominelt 15 milliwatt, som opererer i bølgelengder på 650–670 nanometer, inne i en skrivehodeenhet som ikke kan vedlikeholdes. Lasersystemet og skriveren er utformet slik at mennesker ikke utsettes for laserstråling utover nivået i klasse I under normal drift, vedlikehold eller foreskrevet service.

Meddelande om laser

Skrivaren är certifierad i USA i enlighet med kraven i DHHS 21 CFR kapitel I, underkapitel J för klass I (1)-laserprodukter, och på andra platser certifierad som en klass I-laserprodukt i enlighet med kraven i IEC 60825-1: 2014.

Laserprodukter av klass I anses inte vara skadliga. Skrivaren innehåller en klass IIIb (3b) AlGaInP-laser på nominellt 15 mW som arbetar inom en våglängd på 650–670 nm och är innesluten i en icke-servicebar skrivhuvudenhet. Lasersystemet och skrivaren är utformade så att människor aldrig utsätts för laserstrålning över klass I-nivå under normala förhållanden vid användning, underhåll eller service.

レーザーについて

本機は、米国において クラス I（1）レーザー製品に対する DHHS 21 CFR、Chapter I、Subchapter J の要件に準拠し、その他の国では IEC 60825-1: 2014 の要件に準拠するクラス I レーザー製品として認可されています。

クラス I レーザー製品は、危険性がないとみなされています。 本機には、クラス IIIb（3b）AlGaInP レーザーが内蔵されています。これは、650 ～ 670 ナノメートルの波長で、定格 15 ミリワットで動作するレーザーであ

り、整備不可のプリントヘッドアセンブリに収容されています。 レーザーシステムとプリンタは、通常の操作、ユーザーによるメンテナンス、または所定のサービス条件の下で、ユーザーがクラス I レベルを超えるレーザー放射に絶対にさらされないように設計されています。

레이저 고지사항

프린터는 미국에서 레이저 제품용 DHHS 21 CFR Chapter I, Subchapter J의 요구 사항을 준수하며 이외 지역에서 IEC 60825-1: 2014의 요구 사항을 준수하는 클래스 I(1) 레이저 제품으로 승인되었습니다.

Class I 레이저 제품은 위험한 제품으로 간주되지 않습니다. 프린터에는 650~670 나노미터 범위의 파장 영역에서 공칭 작동하는 15밀리와트 AlGaInP 레이저인 클래스 IIIb(3b) 레이저가 내부에 포함되어 있으며 서비스 불가 프린트 헤드 어셈블리가 포함되어 있습니다. 레이저 시스템과 프린터는 정상적인 작동, 사용자 유지 관리 또는 사전 설명된 서비스 조건에는 사람에게 클래스 I 수준 이상의 레이저 방사가 노출되지 않도록 설계되었습니다.

激光注意事项

本打印机在美国认证合乎 DHHS 21 CFR Chapter I，Subchapter J 对分类 I（1）激光产品的标准，而在其他地区则被认证是合乎IEC 60825-1: 2014 的分类 I 激光产品。

一般认为分类 I 激光产品不具有危险性。本打印机内部含有分类 IIIb（3b）的磷化铝镓铟激光，标称值为 15 毫瓦，其工作波长范围在 650–670nm 之间，并被封闭在不可维修的打印头配件中。本激光系统及打印机的设计，在一般操作、使用者维护或规定内的维修情况下，不会使人体接触分类 I 以上等级的辐射。

雷射聲明

本印表機係經過美國核可，符合 DHHS 21 CFR，Chapter I，Subchapter J 規定的 I (1) 級雷射產品；在美國以外的地區，為符合 IEC 60825-1: 2014 規定的 I 級雷射產品。

根據 I 級雷射產品的規定，這類產品不會對人體造成傷害。 本印表機所採用之 IIIb (3b) 級 AlGaInP 雷射在 650 至 670 奈米 (nanometer) 波長範圍內運作時通常為 15 毫瓦特 (milliwatt)，且含括在不可修復列印頭組件中。 使用者只要以正確的方法操作及維護保養，並依照先前所述之維修方式進行修護，此印表機與其雷射系統絕不會產生 I 級以上的放射線，而對人體造成傷害。

Conventions

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

CAUTION—POTENTIAL INJURY
Indicates a risk of injury.

CAUTION—SHOCK HAZARD
Indicates a risk of electrical shock.

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

CAUTION—TIPPING HAZARD
Indicates a crush hazard.

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

Safety information

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



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



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



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



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



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



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



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



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

Consignes de sécurité

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



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



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



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



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



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



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



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



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

Información de seguridad

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



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



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



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



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



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



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



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



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

Sicherheitshinweise

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

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

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

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

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

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

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

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

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

General caution statements

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

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

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

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

CAUTION—POTENTIAL INJURY
Do not use this product with an inline surge protector. The use of a surge protection device may result in a risk of fire, property damage, or poor printer performance.

Change history

Change history

November 3, 2026

- Moved and revised the "Adjusting the Color Alignment" content from the Registration Adjustment topic to the Color Alignment Adjust topic under the Diagnostics Menu chapter. See Color alignment adjust on page 380.

October 19, 2026

- Updated images in the Top cover removal topic in the Parts removal chapter by adding orientation cues to help technicians identify the correct printer side and component location. See Top cover removal on page 411.

October 14, 2026

- Added new topics 600–611 error messages and Tray not ready to feed to the Diagnostics and troubleshooting chapter. See 600–611 error messages on page 313 and Tray not ready to feed on page 313.

October 6, 2026

- Removed step 1 and added step 2 in the instructions of the Duplex inner guide removal topic of the Parts removal chapter. See Duplex inner guide removal on page 427.
- Moved the note from step 4 to step 3 and updated the image in step 2 of the instructions of the Sensors (fuser buckle and narrow media) removal topic of the Parts removal chapter. See Sensors (fuser buckle and narrow media) removal on page 430.

September 23, 2026

- Added the "Lost or Forgotten Printer Security Password" topic to the Diagnostics and Troubleshooting chapter. See Lost or forgotten printer security password on page 39.
- Added the "Importing a Configuration File" and "Exporting a Configuration File" topics to the Parts Removal chapter and updated related cross-references. See Importing a configuration file on page 397 and Exporting a configuration file on page 397.

September 21, 2026

- Added topic Motor (transport) failure in the Diagnostics and troubleshooting chapter. See Motor (transport) failure on page 309.
- Updated the title of the 166–168 error messages topic to 166–169 error messages of the Diagnostics and troubleshooting chapter. See 166–169 error messages on page 306.
- Added 169.8x error codes and updated the action links in the 166–169 error messages topic of the Diagnostics and troubleshooting chapter. See 166–169 error messages on page 306.

April 13, 2026

- Updated the Dead machine service check topic of the Diagnostics and troubleshooting chapter. See Dead machine service check on page 349.

January 27, 2026

- Updated the LVPS cage removal topic of the Parts removal chapter. See LVPS cage removal on page 440.

November 14, 2025

- Updated the Motor (black only retract) removal topic of the Parts removal chapter. See Motor (black only retract) removal on page 442.

August 18, 2025

- Added the Reset device topic in the Service menus chapter. See Reset Device on page 389.

July 25, 2025

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

December 20, 2024

- Added PN 41X2868 (Special media separator bracket) to the Paper feed in the Parts catalog chapter. See Paper feed on page 535 .

August 16, 2024

- Added the 42.60–42.64K error codes in the 42 user attendance messages topic of the Diagnostics and troubleshooting chapter. See 42 user attendance error messages on page 230.
- Added the Toner cartridge service check topic in the Diagnostics and troubleshooting chapter. See Toner cartridge service check on page 231.

August 1, 2024

- Updated the Missing toner, developer, or photoconductor service check topic of the Diagnostics and troubleshooting chapter. See Missing toner, developer, or photoconductor service check on page 227.

June 26, 2023

- Added the PN 41X0906 (Screws pack) in the Miscellaneous assembly in the Parts catalog chapter. See Miscellaneous parts on page 551.

June 5, 2023

- Updated the Fuser temperature service check topic in the Diagnostics and troubleshooting chapter. See Fuser temperature error service check on page 277.

April 11, 2023

- Updated the topic Fuser service check in the Diagnostics and troubleshooting chapter. See Fuser service check on page 278.

February 16, 2023

- Added another step (step 4) for the Top cover removal topic of the Parts removal chapter. See Top cover removal on page 411.

December 15, 2022

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

October 20, 2022

- Updated the 121.42 error code in the 121 error messages topic of the Diagnostics and troubleshooting chapter. See 121 error messages on page 273.
- Added PN 41X1083 Sensor (fuser nip) in the Fuser topic of the Parts catalog chapter. See Fuser on page 533.
- Added the new sensor (fuser nip) art and updated the content of the Fuser section topic of the Theory of operation chapter. See Fuser section on page 565.

August 23, 2022

- Updated the Entering recovery mode topic in the Service menus chapter. See Entering Recovery mode on page 386.
- Added Applicability of Regulation (EU) 2019/2015 and (EU) 2019/2020 notice in the Printer specifications chapter.

July 11, 2022

- Removed topic on enabling edge-to-edge printing (feature not supported).

May 30, 2022

- Added the PN 40X8033 (Lockable tray key) in the Optional trays assembly in the Parts catalog chapter. See 550-sheet tray option 1 on page 547.

March 2, 2022

- Added PN 41X2032 to the illustration and parts table in the Parts catalog chapter. See Covers 1 on page 527.
- Added the video removal links for the following topics in the Parts removal chapter:
    - HVPS removal
    - Sensor (TPS) removal
    - Media feeder removal
    - LVPS removal
    - Printhead removal
    - Isolation unit removal

February 3, 2022

- Updated the 91x.xx (910.xx-919.xx) Engine software service check topic in the Diagnostics and troubleshooting chapter. See 91x.xx (910.xx-919.xx) Engine software service check on page 328.

October 25, 2021

- Updated the 900 error service check topic in the Diagnostics and troubleshooting chapter. See 900 error service check on page 323.
- Added PN 41X3710 to the illustration and parts table in the Parts catalog chapter. See Electrical on page 543.
- Added the Applicability of Regulation (EU) 2019/2015 and (EU) 2019/2020 topic in the Printer specifications chapter.
- Updated the description of the following PNs the Parts catalog chapter:
  - 41X0416
  - 41X0871
  - 41X2062
  - 41X0872
  - 41X2063
  - 41X0873

  See Control panel on page 530.
- Changed the Upper control panel cover part name to Control panel front cover. See Control panel front cover removal on page 419.
- Changed the Badge cover part name to Bezel. See Bezel removal on page 422.

June 24, 2021

- Replaced the System software error service check with the 900 error service check topic in the Diagnostics and troubleshooting chapter. See 900 error service check on page 323.

May 20, 2021

- Updated the PN 41X0392 Motor (output) in the Paper path 1 assembly in the Parts catalog chapter (Paper path 1 on page 537).
- Updated the Hard disk failure service check topic in the Diagnostics and troubleshooting chapter (Hard disk failure service check on page 258).

August 14, 2020

- Removed PN 41X0450 (Sensor (media type)) from the following topics in the Parts catalog chapters:.
  - Paper path 1
  - Electrical
- Updated the Critical information for controller board or control panel replacement topic in the Parts removal chapter.
- Updated the 95y error messages topic in the Diagnostics and troubleshooting chapter.
- Replaced the 950.xx NVRAM failure service check topic with the NVRAM mismatch failure service check topic in the Diagnostics and troubleshooting chapter.

July 30, 2020

- Obsoleted PN 41X1014 in the Parts catalog chapter.
- Added the 71 user attendance errors in the Diagnostics and troubleshooting chapter.
- Added the Fax failure service check topic in the Diagnostics and troubleshooting chapter.
- Added a note under the JSHUT1 connector information in the Control board connectors topic in the Component locations chapter.

- Updated the Restoring the printer configuration after replacing the controller board topic in the Parts removal chapter.

May 20, 2020

- Updated the description of PN 41X0450 in the Parts catalog chapter.

November 5, 2019

- Added the 5028-1A5, 5028-6A0, and 5028-6A9 MTMNs in the “General information” chapter.
- Updated error code 100.4D to 100.04D in the topic “100 error messages” in the “Diagnostics information” chapter.

August 15, 2019

- Removed PN 41X0023 and added PN 41X2543 in the Miscellaneous assembly of the Parts catalog chapter.

May 8, 2019

- Updated the Sensor (input): Paper failed to arrive service check topic in the Diagnostics and troubleshooting chapter.

January 18, 2019

- Updated the Supply reset topic in the Service menus chapter.

December 13, 2018

- Added the Maintenance kits assembly in the Parts catalog chapter.

August 14, 2018

- Updated the Data security notice topic in the Parts removal chapter.

August 13, 2018

- Changed PN 41X0331 to 41X0714 in the Parts catalog chapter.
- Updated the description of PN 41X0450 in the Parts catalog chapter.
- Updated the Sensor (media type) removal topic in the Parts removal chapter.
- Added the Printer runs slow service check topic in the Diagnostics and troubleshooting chapter.

June 26, 2018

- Removed PN 41X0015 (Adapter–N8360 ISP + NFC/BLE dual band) and added PN 41X0023 (MarkNet 8360 Wireless, NFC) in the parts catalog chapter under Miscellaneous.
- Updated the action column in the Maintenance kits topic for the transfer module in the Maintenance chapter.

April 26, 2018

- Updated the 550-sheet tray option 2 assembly in the Parts catalog chapter.

April 20, 2018

- Removed PN 41X0469, 41X0470, and 41X0472 from the Parts catalog chapter.

April 3, 2018

- Added an action column to the maintenance kits table under the Maintenance chapter to provide information when the maintenance counter needs to be reset.
- Deleted the following PNs in the maintenance kits table:
  - 41X0553 (Fuser maintenance kit, type 07, 100V, narrow media)
  - 41X0555 (Fuser maintenance kit, type 05, 110–120V, narrow media)
  - 41X0557 (Fuser maintenance kit, type 06, 220–240V, narrow media)
- Updated the parts catalog section with the following:
  - Deleted PNs 41X0254, 41X0255, and 41X0256 under the Fuser assembly.
  - Added PN 41X1906 (controller board shield) in the Electrical assembly.
  - Updated the art for the Paper feed assembly to include PNs 41X0373 and 41X0374 in the 550-sheet tray (41X0268).
- Removed the installation note to reset the fuser maintenance counter in the fuser removal.

January 22, 2018

- Added 666.84 in the printer hardware errors.

December 18, 2017

- Updated the pick roller part number in the Maintenance kit from 40X7593 to 41X0956.

September 13, 2017

- Updated Skewed print service check on page 84.
- Updated Control panel on page 530.

August 31, 2017

- Updated the Fuser removal on page 459 and Transfer module removal on page 460 in the Parts removal chapter.
- Updated the Sensor (input): Paper failed to arrive service check on page 101 in the Diagnostics and troubleshooting chapter.

August 22, 2017

- Created this error code table for 621 error, 621 error messages on page 314.
- Updated Left cover removal on page 413 to add a note at the beginning of the removal procedure.
- Updated Missing toner, developer, or photoconductor service check on page 227.
- Updated Sensor (duplex path 1): Paper failed to arrive service check on page 129.

June 27, 2017

- Added “CS727” and “CS728” in the cover.
- Added “CS727de” and “CS728de” in the introduction to the “General information" chapter.
- Added 41X2062 and 41X2063 to the topic "Control panel" in the "Parts catalog" chapter.

June 19, 2017

- Updated Printhead removal on page 480.
- Created/updated the following checks/topics, which are all related to the RFID Option:
  - RFID tag silhouette on prints check on page 89
  - RFID Option jam service check on page 223
  - Non-supply user attendance error messages on page 241
  - Error on every page service check on page 245
  - Error on some pages service check on page 247
  - Hardware failure service check on page 251
  - RFID data within print job is invalid service check on page 250
  - 985 error messages on page 340
  - RFID Option communication error service check on page 341
  - RFID Option connection error service check on page 341
  - Printer fails to program RFID tags service check on page 363
  - Behavioral issues (without error codes) of printers with RFID Option on page 367
- Updated 40X4827 to 40X9652 in the topic “Miscellaneous” in the “Parts catalog” chapter.

May 15, 2017

- Updated Controller board removal on page 477 to add an installation note on the restoration of the printer configuration.

April 27, 2017

- Updated steps 3 and 5 of Sensor (tray 1 pick) static jam service check on page 181.
- Updated Isolation unit section on page 563 to change the description for callout 1 to Sensor (tray 1 pick).

April 6, 2017

- Added the topic “Paper out actuator spring removal” in the group “Bottom removals” in the chapter “Repair information.”
- Added the paper out actuator spring in the topic “Paper feed” in the chapter “Parts catalog.”
- Changed 41X0001 to 41X1038 in the topic “Paper path 1” in the chapter “Parts catalog.”

March 6, 2017

- Changed the descriptions for 41X0871 and 41X0872 in the topic "Control panel" in the “Parts catalog” chapter.

March 2, 2017

- Added rows to the tables and deleted from them in the topic “121 error messages” in the “Diagnostics information” chapter.
- Deleted rows from the table of the topic “126-127 error messages” in the “Diagnostics information” chapter.
- Added a note to the “Scheduled maintenance” group of topics in the “Maintenance” chapter.
- Added 40X9929 and changed "separation block" to "separator pad" in the topic "Maintenance kits" in the “Maintenance” chapter.
- Changed "separation block" to "separator pad" in the topic "Paperfeed" in the “Parts catalog” chapter.

February 6, 2017

- Added the topic “Non-Lexmark supply” in the “Diagnostic information” chapter.
- Revised the following topics in the “Diagnostic information” chapter.
  - Vertical white lines check
  - 33 user attendance messages
- Revised the following topics in the “Repair information” chapter:
  - Upper control panel removal
  - Controller board removal
- Revised the following topics in the “Parts catalog” chapter:
  - Control panel
  - Electrical

January 10, 2017

- Updated the Entering the diagnostics menu topic in the Service menus chapter.

November 4, 2016

- Updated the Ghost images check topic in the Diagnostics information chapter.
- Updated the Maintenance kits topic in the Maintenance chapter.

October 26, 2016

- Added the Tray actuator and spring service check topic in the Diagnostic information chapter.

October 3, 2016

- Updated the Restoring solutions, licenses, and configuration settings topic in the Repair information chapter.

August 17, 2016

- Updated the Light print check topic in the Diagnostics information chapter.

August 10, 2016

- Updated the Light print check topic in the Diagnostics information chapter.

August 3, 2016

- Updated the Printhead removal topic in the Repair information chapter.

July 20, 2016

- Updated the Missing color check topic in the Diagnostic information chapter.
- Moved all of the symptoms topics into the Other symptoms group in the Diagnostic information chapter.
- Updated the Deskew rollers removal topic in the Repair information chapter.
- Added the Resetting the maintenance counter topic in the Maintenance chapter.

June 20, 2016

- Updated the Maintenance kit service check topic in the Diagnostics information chapter.
- Added the Resetting the maintenance counter topic in the Maintenance chapter.
- Added PN 40X8671 and PN 40X9934 in the Parts catalog chapter.

June 13, 2016

- Updated the Printhead removal topic in the Repair information chapter.

April 26, 2016

- Added the Enabling the security reset jumper topic in appendix A.
- Updated the Entering the Service Engineer (SE) menu topic.

February 23, 2016

- Added the Configuring the door interlock bypass jumpers topic in the Service menus chapter.

February 5, 2016

- Update the following topics in the Diagnostics information chapter.
    - Blurred or misaligned color check
    - Dark print check
    - Toner patch sensing service check
    - Auto alignment service check
- Added the Marks on leading or trailing edges check topic in the Diagnostics information chapter.
- Removed the external air filter (PN 41X1009) from the Parts catalog and Repair information chapters.

General information

Printer model configurations

The Lexmark™ CS720 and CS725 are network-capable, A4 laser printers that print both color and monochrome print jobs. All information in this service manual pertains to all models unless explicitly noted.
The printers are available in the following models:

Model name	Configuration / description	Machine type / model number
CS720dte	4.3-in. color touch screen display, duplex print, networking, additional 550-sheet tray	5028-135 5028-1A5
CS720de	4.3-in. color touch screen display, duplex print, networking	
CS727de		
CS725dte	4.3-in. color touch screen display, duplex print, networking, additional 550-sheet tray	5028-630 5028-6A0
CS725de	4.3-in. color touch screen display, duplex print, networking	
CS728de		
C4150	4.3-in. color touch screen display, duplex print, networking	5028-639 5028-6A9

Finding the serial number

Open the front cover, and then find the serial number at the lower left side of the printer.



Paper and specialty media guide

Paper guidelines

Paper characteristics

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

Weight

See Supported paper types and weights on page 30.

Curl

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

Smoothness

Paper smoothness directly affects print quality. If paper is too rough, toner cannot fuse to it properly. If paper is too smooth, it can cause paper feeding or print quality issues. Always use paper between 100 and 200 Sheffield points.

Moisture content

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

Store paper in its original wrapper in the same environment as the printer for 24 to 48 hours before printing. Extend the time several days if the storage or transportation environment is very different from the printer environment. Thick paper may also require a longer conditioning period.

Grain direction

Grain refers to the alignment of the paper fibers in a sheet of paper. Grain is either *grain long*, running the length of the paper, or *grain short*, running the width of the paper.

For 60–176 g/m^2 (16–65-lb) paper, grain long paper is recommended.

Fiber content

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

Selecting paper

Using the appropriate paper prevents jams and helps ensure trouble-free printing.
To help avoid paper jams and poor print quality:

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

Storing paper

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

- For best results, store paper where the temperature is 21°C (70°F) and the relative humidity is 40 percent. Most label manufacturers recommend printing in a temperature range of 18–24°C (65–75°F) with relative humidity between 40 and 60 percent.
- Store paper in cartons, on a pallet or shelf, rather than on the floor.
- Store individual packages on a flat surface.
- Do not store anything on top of individual paper packages.
- Take paper out of the carton or wrapper only when you are ready to load it in the printer. The carton and wrapper help keep the paper clean, dry, and flat.

Using specialty media

Tips on using envelopes

- From the printer control panel, set the paper size, type, texture, and weight in the Paper menu to match the envelopes loaded in the tray.
- Print samples on the envelopes being considered for use before buying large quantities.
- Use envelopes designed specifically for laser printers.
- For best performance, use envelopes made from 90-g/m^2 (24-lb) paper or 25% cotton.
- Use only new envelopes from undamaged packages.
- To optimize performance and minimize jams, do not use envelopes that:

    - Have excessive curl or twist.
    - Are stuck together or damaged in any way.
    - Have windows, holes, perforations, cutouts, or embossing.
    - Have metal clasps, string ties, or folding bars.
    - Have an interlocking design.
    - Have postage stamps attached.
    - Have any exposed adhesive when the flap is in the sealed or closed position.
    - Have bent corners.
    - Have rough, cockle, or laid finishes.

- Adjust the width guides to fit the width of the envelopes.
- Before loading the envelopes on the tray, flex the stack of envelopes back and forth to loosen them, and then fan them. Straighten the edges on a level surface.

Note: A combination of high humidity (over 60%) and high printing temperature may wrinkle or seal envelopes.

Tips on using labels

- From the printer control panel, set the paper size, type, texture, and weight in the Paper menu to match the labels loaded in the tray.
- Print samples on labels being considered for use before buying large quantities.
- For more information on label printing, characteristics, and design, see the *Card Stock & Label Guide* on the Lexmark Web site at http://support.lexmark.com.
- Use labels designed specifically for laser printers.
- Do not use labels with slick backing material.
- Do not use labels with exposed adhesive.
- Use full label sheets. Partial sheets may cause labels to peel off during printing, resulting in a jam. Partial sheets also contaminate the printer and the cartridge with adhesive, and could void the printer and toner cartridge warranties.
- Before loading labels on the tray, flex and fan labels to loosen them. Straighten the edges on a level surface.

Tips on using card stock

Card stock is heavy, single-ply specialty media. Many of its variable characteristics, such as moisture content, thickness, and texture, can significantly affect print quality.

- From the printer control panel, set the paper size, type, texture, and weight in the Paper menu to match the card stock loaded in the tray.
- Print samples on the card stock being considered for use before buying large quantities.
- Specify the paper texture and weight from the tray settings to match the paper loaded in the tray.
- Preprinting, perforation, and creasing may significantly affect the print quality and cause jams or other paper feed problems.

- Before loading the card stock on the tray, flex and fan the card stock to loosen them. Straighten the edges on a level surface.

Supported paper sizes, types, and weights

Supported paper sizes

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

Paper size	Dimensions	550-sheet tray	Multipurpose feeder	Two-sided printing
A6	105 x 148 mm (4.1 x 5.8 in.)	✓	✓	✓
A5	148 x 210 mm (5.8 x 8.3 in.)	✓ [1]	✓	✓
ISO B5 [2]	176 x 250 mm (6.9 x 9.8 in.)	✓	✓	✓
JIS B5	182 x 257 mm (7.2 x 10.1 in.)	✓	✓	✓
A4	210 x 297 mm (8.3 x 11.7 in.)	✓	✓	✓
Oficio	216 x 340 mm (8.5 x 13.4 in.)	✓	✓	✓
3 x 5 [2]	76.2 x 127 mm (3 x 5 in.)	**X**	✓	**X**
4 x 5 [2]	101.6 x 127 mm (4 x 5 in.)	**X**	✓	**X**
Statement	140 x 216 mm (5.5 x 8.5 in.)	✓	✓	✓
Executive	184 x 267 mm (7.3 x 10.5 in.)	✓	✓	✓
Letter	216 x 279 mm (8.5 x 11 in.)	✓	✓	✓
Folio	216 x 330 mm (8.5 x 13 in.)	✓	✓	✓
Legal	216 x 356 mm (8.5 x 14 in.)	✓	✓	✓
DL Envelope	110 x 220 mm (4.3 x 8.7 in.)	✓	✓	**X**
C5 Envelope	162 x 229 mm (6.4 x 9 in.)	✓	✓	**X**

Paper size	Dimensions	550-sheet tray	Multipurpose feeder	Two-sided printing
B5 Envelope	176 x 250 mm (6.9 x 9.8 in.)	✓	✓	**X**
7 3/4 Envelope	98 x 191 mm (3.9 x 7.5 in.)	**X**	✓	**X**
9 Envelope	98 x 225 mm (3.9 x 8.9 in.)	**X**	✓	**X**
10 Envelope	105 x 241 mm (4.1 x 9.5 in.)	✓	✓	**X**
Monarch Envelope	98.4 x 190.5 mm (3.9 x 7.5 in.)	**X**	✓	**X**
Other Envelope [3]	98 x 162 mm (3.9 x 6.4 in.) to 176 x 250 mm (6.9 x 9.8 in.)	**X**	✓	**X**
Universal	104.8 x 148 mm (4.13 x 5.83 in.) to 215.9 x 360 mm (8.5 x 14.17 in.)	✓	✓	✓
76.2 x 123.8 mm (3 x 4.9 in.) to 215.9 x 1321 mm (8.5 x 52 in.)	**X**	✓	**X**	

[1] Supported only in long-edge orientation.

[2] Supported only using Universal paper size setting.

[3] Supported only if Size Sensing is set to Off.

Note: Banner is supported in the multipurpose feeder only if width up to 215.9 mm (8.5 in.) and length to 1320.8 mm (52 in.). Make sure the paper size setting is set Universal.

Supported paper types and weights

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

Paper type	Standard 550-sheet tray	Optional 550-sheet tray	Multipurpose feeder
Plain Paper[1]	✓	✓	✓
Card Stock[2]	✓	✓	✓
Glossy[1]	✓	✓	✓

Paper type	Standard 550-sheet tray	Optional 550-sheet tray	Multipurpose feeder
Labels • Paper[1] • Vinyl	✓	✓	✓
Envelopes	✓	✓	✓
Light Paper[1]	✓	✓	✓
Heavy Paper[1]	✓	✓	✓

[1] Supported for two-sided printing.

[2] Supported for two-sided printing only up to 162-g/m^2 (90-lb) index.

Tools required for service

- Flat-blade screwdrivers, magnetic, various sizes
- #1 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic short-blade
- 7/32 inch (5.5 mm) open-end wrench
- 7.0 mm nut driver
- Needle-nose pliers
- Diagonal side cutters
- Spring hook
- Feeler gauges
- Analog or digital multimeter
- Parallel wrap plug 1319128
- Twinax/serial debug cable 1381963
- Coax/serial debug cable 1381964
- Flash light (optional)
- 3 mm hex wrench

Diagnostics and troubleshooting

Troubleshooting precautions

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

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

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

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

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

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

Précautions de dépannage

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

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

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

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

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

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

Precauciones durante la solución de problemas

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

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

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

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

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

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

Vorsichtsmaßnahmen bei der Fehlerbehebung

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

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

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

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

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

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

Troubleshooting overview

Performing the initial troubleshooting check

- 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 558.
- 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.

Power-on reset (POR) sequence

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

Check for the correct POR function of the printer by observing the following:

1. The initial boot screen appears.
2. The splash screen appears.
3. The progress bar appears on the splash screen.
4. The printer begins to POST, and the motors and sensors are polled and tested.
5. The home screen displays.
6. Printer calibration may begin.

> **Note:** If any of the tests fail, the printer displays an error code.

Securing the printer

Clearing the printer security password

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

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

Using the Reset Device menu

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

Using the Settings menu

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

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

Notes

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

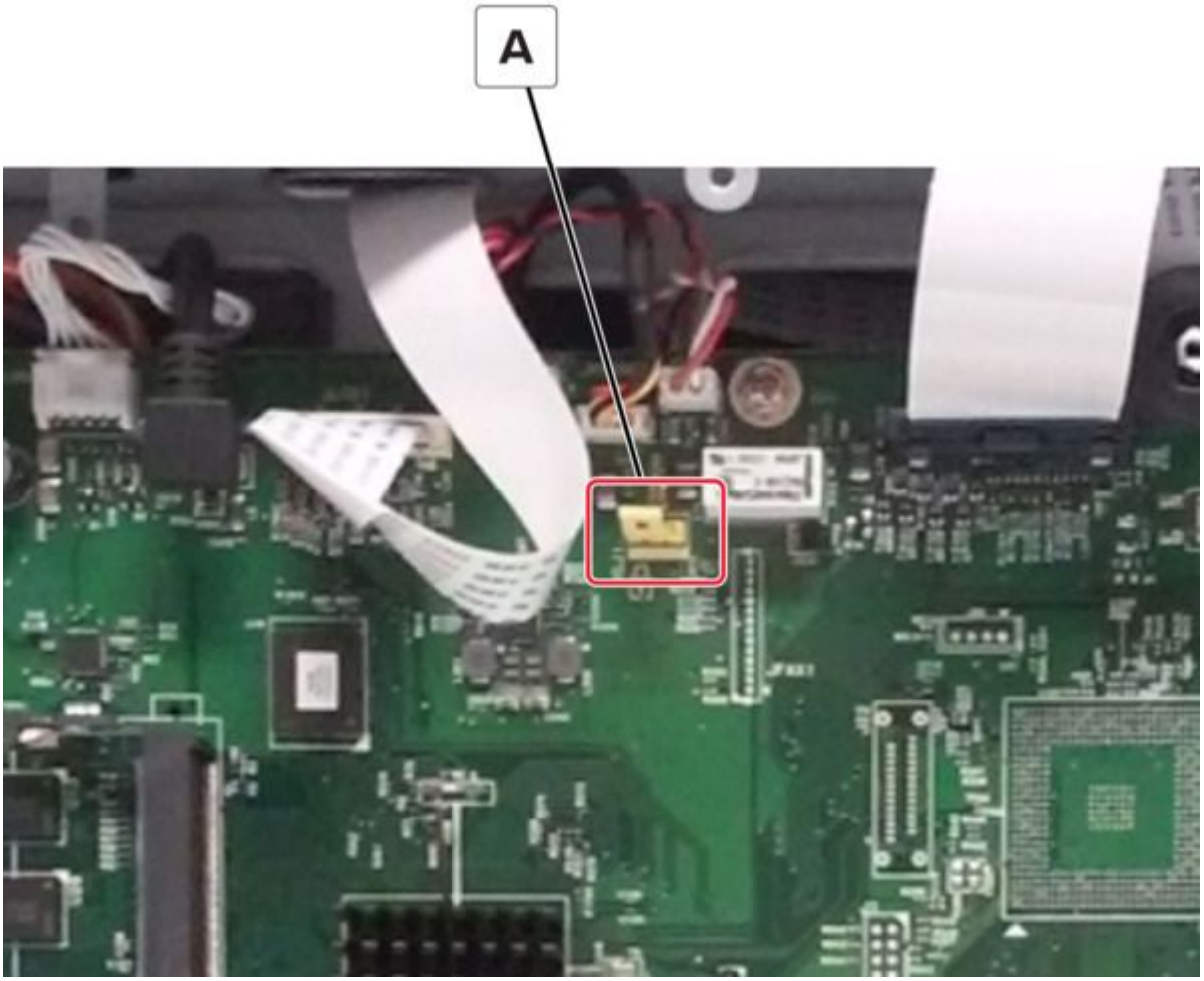
Using the security reset jumper

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

Notes

- To enable the effect of the security reset jumper, from the control panel navigate to: **Security › Miscellaneous › Security Reset Jumper › Enable “Guest” Access**.
- To disable the effect of the jumper, select **No Effect** from the Security Reset Jumper section in the Security menu. If the password is forgotten or lost, then perform an **Out of Service Erase** from the Diagnostics menu. For more information, see Restoring the printer configuration on page 393.

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



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

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

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

Notes

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

Data security notice

Identifying printer memory

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

The following parts can store memory:

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

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

Erasing printer memory

To erase volatile memory, turn off the printer.

To erase nonvolatile memory, do the following:

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

To erase hard disk memory, do the following:

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

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

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

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

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

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

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

Lost or forgotten printer security password

Issue description

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

Customer resolution

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

1. Contact the printer administrator for assistance with resetting the printer security password.
2. Before resetting the printer, back up the current configuration if you have access to the Embedded Web Server and permission to export printer settings. For more information, see Exporting a configuration file on page 397.

Remote resolution

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

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

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

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

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

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

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

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

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

Initial parts replacement

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

Detailed diagnostics

1. If installed applications are difficult to reinstall, use the security reset jumper to restore the printer to factory defaults. For more information, see Using the security reset jumper on page 36.
2. If **Out of Service Erase** is unavailable from the **Settings** menu or **Reset Device** menu, or if administrator credentials are required, perform **Out of Service Erase** from the **Diagnostics** menu.

   Depending on the printer model, use one of the following methods:
   - **4.3-inch display or larger**
     a. From the home screen, swipe right to open the **Control Center**.
     b. Enter ****73**, and then select **OK**.
     c. Select **Out of Service Erase**.
   - **2.8-inch display**
     a. Press **Back, Back, Home,** and **Start** in sequence.
     b. Select **Out of Service Erase**.
   - **2-line display**
     a. Press **Back, Right Arrow, Back,** and **Right Arrow** in sequence.
     b. Select **Out of Service Erase**.

3. Restore the printer configuration to complete the service procedure.
   a. Use the **Service Restore Tool** to download the software bundle. For more information, see Restoring the printer configuration on page 393.

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

   b. Restore printer settings and embedded solutions. For more information, see Restoring solutions, licenses, and configuration settings on page 396.
   c. Import the exported configuration file back to the printer. For more information, see Importing a configuration file on page 397.

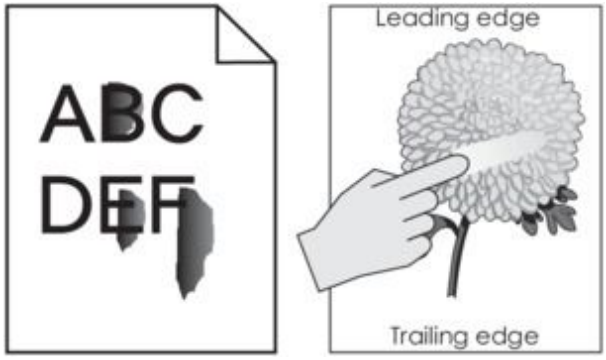
Fixing print quality issues

Initial print quality check

Before troubleshooting print problems, perform the following:

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

Toner easily rubs off check



1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper type and size settings match the paper type and size set on the tray.

   Do the settings match?

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

2. Change the paper size and type, or adjust the size settings in the tray.

   Does the problem remain?

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

3. Check the paper for texture or rough finish.

   Is the paper textured or rough?

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

4. Replace the textured or rough paper with plain paper.

   Does the problem remain?

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

5. Remove, and then reinstall the fuser. See Fuser removal on page 459.

   Does the problem remain?

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

6. Replace the fuser. See Fuser removal on page 459.

   Does the problem remain?

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

7. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Maintenance > Configuration Menu > Reports > Event Log**.
   b. Check the log history for fuser error codes.

   Are there fuser error codes on the event log?

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

8. Perform the service check for the error code found.

Does the problem remain?

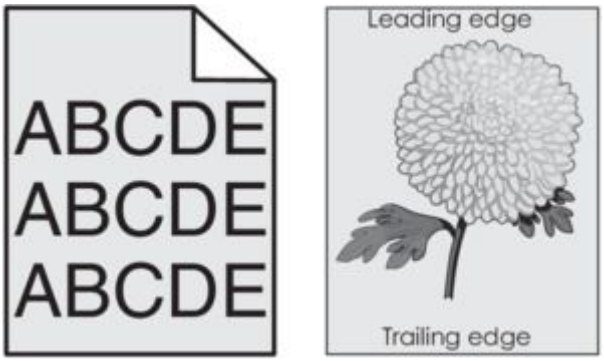
- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

9. Replace the LVPS. See LVPS removal on page 438.

   Does the problem remain?

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

Background or gray background check



1. Perform the following tests:
   a. From the home screen, touch **Settings > Reports > Device > Device Statistics**.
   b. Check the status of the imaging unit if it was recently replaced.

   Does the status show that the imaging unit was recently replaced?

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

2. Check if only one color is producing the background of the print job.

   Is only one color producing the background?

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

3. Perform the following tests:

- If the affected color is cyan, magenta, or yellow, then replace the developer unit of the affected color.
- If the affected color is black, then replace the imaging unit.

Does the problem remain?

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

4. Replace the imaging kit.

   Does the problem remain?

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

5. Reseat the HVPS cable on the HVPS and on the JHVPS1 connector on the controller board.

   Does the problem remain?

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

6. Check the contact pins connecting the HVPS to the transfer module for damage.

   Are the contact pins damaged?

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

7. Replace the HVPS. See HVPS removal on page 448.

   Does the problem remain?

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

8. Remove the printhead, and then clean the printhead lenses. See .Printhead removal on page 480

   Does the problem remain?

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

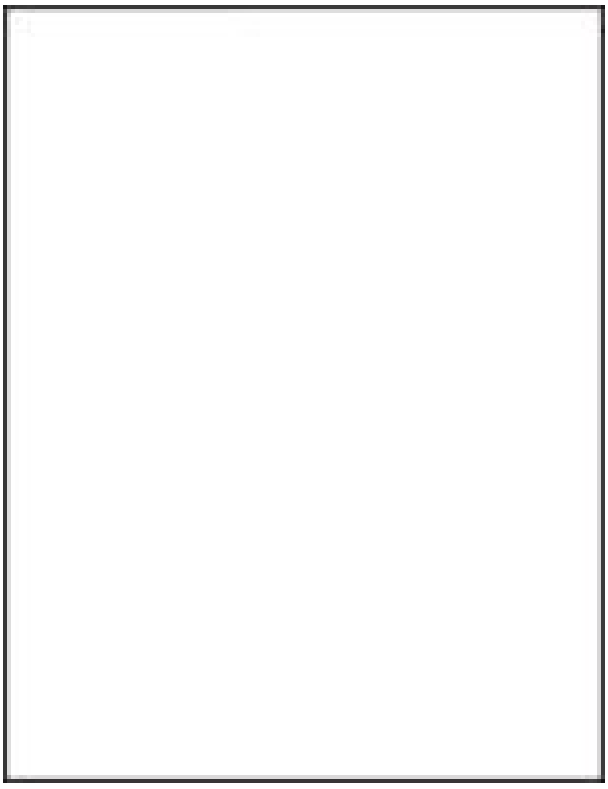
The problem is solved.

9. Replace the printhead. See .Printhead removal on page 480

   Does the problem remain?

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

Blank or white pages check



1. Make sure all the packing materials on the imaging unit are removed.

   Does the problem remain?

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

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

      Advanced Print Quality Samples > Advanced Print Quality Samples

   b. Check the test page.

   Is only one color missing?

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

3. Check the contacts between the imaging unit and developer unit of the affected color.

   Are the contacts clean?

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

4. Clean the contacts.

   Does the problem remain?

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

5. Perform the following tests:

   - If the affected color is cyan, magenta, or yellow, then replace the developer unit of the affected color.
   - If the affected color is black, then replace the imaging unit.

   Does the problem remain?

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

6. Perform the following tests:
   a. Remove the imaging kit.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests

   c. Select the developer unit motor of the affected color, and then touch **Start**.

   Does the motor run?

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

7. Replace the motor. See Motor (EP drive) removal on page 431.

   Does the problem remain?

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

8. Perform the following tests:
   a. Manually turn the motor.
   b. While turning the motor, check if the couplers that drive the imaging kit move.

   Do the couplers move?

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

9. Replace the EP gear box. See EP gear box removal on page 436.

   Does the problem remain?

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

10. Check if the pins on the HVPS freely move.

    Do the pins freely move?

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

11. Replace the HVPS. See HVPS removal on page 448.

    Does the problem remain?

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

12. Check the continuity of the cable on the JSC1 connector on the controller board.

    Does the cable have continuity?

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

13. Replace the cable.

    Does the problem remain?

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

14. Replace the printhead. See .Printhead removal on page 480

    Does the problem remain?

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

15. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

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

Gapping or half color page check

1. Make sure all the packing materials on the imaging unit are removed.

   Does the problem remain?

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

2. Perform the following tests:
   a. Reseat the cyan, magenta, and yellow developer units in the imaging kit.
   b. Reseat the imaging kit.
   c. Enter the Diagnostics menu, and then navigate to:

      Advanced Print Quality Samples > Advanced Print Quality Samples

   d. Check the test page.

   Does the problem remain?

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

3. Check the developer hold down arms and springs for damage, and replace if necessary. See .Developer hold down removal on page 483

Does the problem remain?

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

4. Perform the following tests:
   - If the affected color is cyan, magenta, or yellow, then replace the developer unit of the affected color.
   - If the affected color is black, then replace the imaging unit.

   Does the problem remain?

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

5. Replace the imaging kit.

   Does the problem remain?

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

Blurred print or misaligned color check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Print Quality Pages**.
   b. Check the test page.

   Is only one color blurred or misaligned?

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

2. Perform the color alignment adjustment on the misaligned color. See Color alignment adjust on page 380.

   Does the problem remain?

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

3. Perform color alignment adjustment on all colors. See Color alignment adjust on page 380.

   Does the problem remain?

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

4. Perform the Auto alignment service check. See Auto alignment service check on page 360.

   Does the problem remain?

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

5. Perform the following tests:
   a. Open and close the toner door a few times to clean the toner patch sensors and alignment sensor.
   b. Enter the Diagnostics menu, and then navigate to:

      Advanced Print Quality Samples > Advanced Print Quality Samples

   Does the problem remain?

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

6. Remove the imaging kit, and then clean the printhead lenses. See Cleaning the printhead lenses on page 524.

   Does the problem remain?

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

7. Replace the motor (EP drive). See Motor (EP drive) removal on page 431.

   Does the problem remain?

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

8. Replace the printhead. See .Printhead removal on page 480

   Does the problem remain?

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

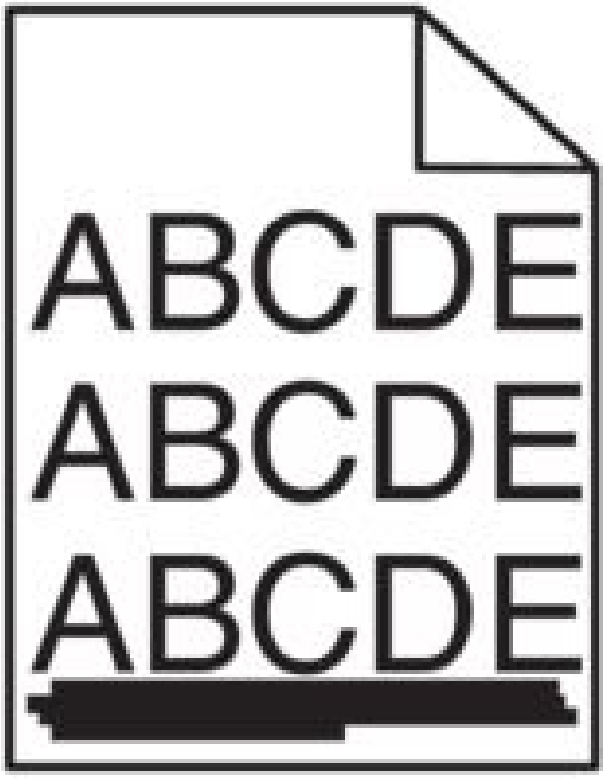
- **No**:
  The problem is solved.

9. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

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

Horizontal colored lines or banding check



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

      Advanced Print Quality Samples > Advanced Print Quality Samples

   b. Check the test page for lines.

   Are the lines white?

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

2. Perform the repeating defects check. See Repeating defects check on page 76.

Does the problem remain?

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

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

      Advanced Print Quality Samples > Advanced Print Quality Samples

   b. Check if the lines appear on the same area of the page.

   Do the lines appear on the same area?

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

4. Perform the repeating defects check. See Repeating defects check on page 76.

   Does the problem remain?

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

5. Check the pages right after the defective page.

   Do the lines appear after two consecutive normal pages were printed?

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

6. Check the transfer module for contamination.

   Is the transfer module free of contamination?

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

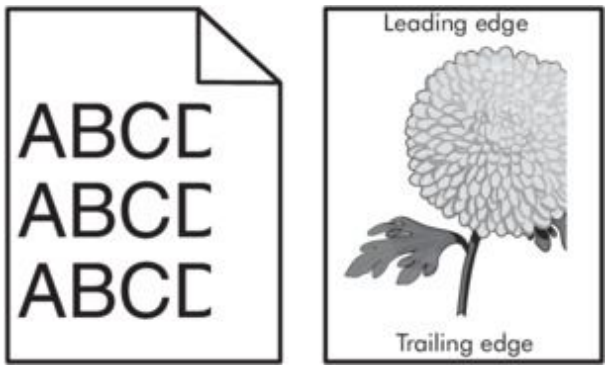
7. Clean the transfer module.

   Does the problem remain?

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

The problem is solved.

Text or images cut off check



1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper type and size settings match the paper type and size set on the tray.

   Do the settings match?

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

2. Change the paper size and type, or adjust the size settings in the tray.

   Does the problem remain?

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

Mottled print and dots check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper type and size settings match the paper type and size set on the tray.

   Do the settings match?

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

2. Change the paper size and type, or adjust the size settings in the tray.

Does the problem remain?

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

3. Check the paper for texture or rough finish.

   Is the paper textured or rough?

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

4. Replace the textured or rough paper with plain paper.

   Does the problem remain?

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

5. Check the printer for toner leaks.

   Are there toner leaks?

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

6. Perform the following tests:
   a. Clean the printer thoroughly using a toner vacuum.
   b. Perform a print job to clear the remaining toner from the imaging components.

   Does the problem remain?

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

7. Perform the following tests:

   - If the affected color is cyan, magenta, or yellow, then replace the developer unit of the affected color.
   - If the affected color is black, then replace the imaging unit.

   Does the problem remain?

   - **Yes**:

Go to the next step.

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

8. Check if the affected color is black.

   Is the affected color black?

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

9. Replace the photoconductor unit.

   Does the problem remain?

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

10. Check the transfer module for proper installation and damage, and replace if necessary. See Transfer module removal on page 460.

    Does the problem remain?

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

Vertical white lines check



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

1. Perform the following tests:
   a. Remove the imaging kit.
   b. Inspect and clean the printhead lenses.
   c. Print a test page.

   Does the problem remain?

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

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

      Advanced Print Quality Samples > Advanced Print Quality Test Pages

   b. Check the test page.

   Did the print defect appear on all the pages?

   - **Yes**:
     Go to step 3.

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

3. Replace the affected imaging kit or imaging unit.

   Does the problem remain?

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

4. Check the transfer module for improper installation and damage.

   Is the transfer module properly installed and free of damage?

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

5. Reinstall or replace the transfer module. See Transfer module removal on page 460.

   Does the problem remain?

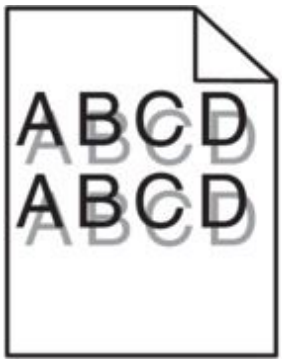
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the printhead. See .Printhead removal on page 480

   Does the problem remain?

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

Ghost images check





1. Perform the following tests:

a. From the home screen, touch **Settings > Paper > Size/Type**.

b. Select the paper source.

c. Check if the paper type and size settings match the paper type and size set on the tray.

Do the settings match?

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

2. Change the paper size and type, or adjust the size settings in the tray.

   Does the problem remain?

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

3. Perform the following tests:
   a. From the home screen, touch **Status/supplies > Hardware**.

   b. Check the status of the black and color imaging components.

   Does the status indicate OK?

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

4. Measure the distance from one point of the original image to the same point on the ghost image.

   Is the distance 43.9 mm?

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

5. Perform the following tests:
   - If the affected color is cyan, magenta, or yellow, then replace the developer unit of the affected color.
   - If the affected color is black, then replace the imaging unit.

   Does the problem remain?

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

6. Perform the following tests:
   a. Check if the ghost image is colored or black.
   b. Measure the distance from one point of the original image to the same point on the ghost image.

   Is the distance 94.2 mm?

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

7. Perform the following tests:
   - If the ghost image is colored, then replace the color photoconductor unit.
   - If the ghost image is black, then replace the black imaging kit.

   Does the problem remain?

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

8. Perform the following tests:
   a. From the home screen, touch **Settings > Reports > Menu Settings Page**.

   > **Note:** Perform this step twice to clear any debris.

   b. Check the fuser assembly for toner contamination.

   Is there toner contamination?

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

9. Replace the fuser. See Fuser removal on page 459.

   Does the problem remain?

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

Solid color or black image check



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

      Advanced Print Quality Samples > Advanced Print Quality Samples

   b. Check the test page.

   Is the solid color page black only?

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

2. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to step 4.
   - **No**:
     The problem is solved.

3. Replace the photocunductor unit.

   Does the problem remain?

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

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

4. Perform the following tests:
   a. Place a narrow strip of paper over the gap between the developers.

      Note: Make sure that the paper stays in place when reinstalling the imaging unit to prevent the laser from discharging the photoconductors.

   b. From the home screen, touch **Settings > Reports > Print Quality Pages**.
   c. Check the test page.

   Is there vertical banding?

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

5. Replace the printhead. See .Printhead removal on page 480

   Does the problem remain?

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

6. Check the toner cartridge contacts for damage, and replace if necessary. See Toner cartridge contacts removal on page 456.

   Does the problem remain?

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

7. Turn off the printer, and then check the continuity of the HVPS cable.

   Does the cable have continuity?

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

8. Replace the HVPS cable.

   Does the problem remain?

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

The problem is solved.

9. Replace the HVPS. See HVPS removal on page 448.

   Does the problem remain?

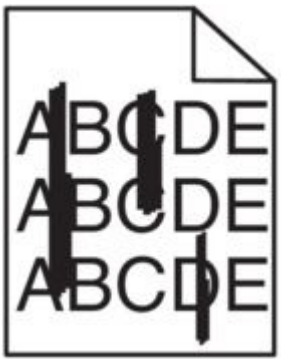
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the printhead. See .Printhead removal on page 480

    Does the problem remain?

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

Vertical colored lines or banding check





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

      Advanced Print Quality Samples > Advanced Print Quality Samples

   b. Check the test page.

   Is only one color producing the defect?

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

2. Perform the following tests:
   - If the affected color is cyan, magenta, or yellow, then replace the developer unit of the affected color.
   - If the affected color is black, then replace the imaging unit.

Does the problem remain?

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

3. Replace the photoconductor unit.

   Does the problem remain?

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

4. Replace the transfer module. See Transfer module removal on page 460.

   Does the problem remain?

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

5. Replace the fuser. See Fuser removal on page 459.

   Does the problem remain?

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

Image void scan direction check

1. Load paper from a fresh package.

   > **Note:** Paper may absorb moisture due to high humidity. Store paper in its original wrapper until it is ready to be used.

   Does the problem remain?

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

2. Reseat the imaging kit, and then perform a print job.

   Does the problem remain?

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

3. Check if the problem affects only one color.

   Does the problem affect only one color?

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

4. Perform the following tests:
   - If the affected color is cyan, magenta, or yellow, then reseat the developer unit of the affected color.
   - If the affected color is black, then reseat the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to step 6.
   - **No**:
     The problem is solved.

5. Reseat all the developer units in the imaging kit.

   Does the problem remain?

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

6. Measure the interval between every defect.

   Does the defect occur in 55-mm intervals?

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

7. Check the HVPS cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

8. Replace the HVPS. See HVPS removal on page 448.

Does the problem remain?

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

9. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

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

10. Replace the printhead. See .Printhead removal on page 480

    Does the problem remain?

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

Image void process direction check

1. Load paper from a fresh package.

   > **Note:** Paper may absorb moisture due to high humidity. Store paper in its original wrapper until it is ready to be used.

   Does the problem remain?

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

2. Reseat all the developer units in the imaging kit, and then perform a print job.

   Does the problem remain?

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

3. Check if the problem appears only on one side of the page.

   Does the problem appear only on one side?

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

4. Check the developer hold downs for damage or loose springs, and replace if necessary. See .Developer hold down removal on page 483

   Does the problem remain?

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

5. Check for missing colors.

   Is only one color missing?

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

6. Check the printhead for dust or debris.

   Is the printhead free of dust or debris?

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

7. Remove the dust or debris.

   Does the problem remain?

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

8. Perform the following tests:
   - If the affected color is cyan, magenta, or yellow, then replace the developer unit of the affected color.
   - If the affected color is black, then replace the imaging unit.

   Does the problem remain?

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

9. Replace the printhead. See .Printhead removal on page 480

   Does the problem remain?

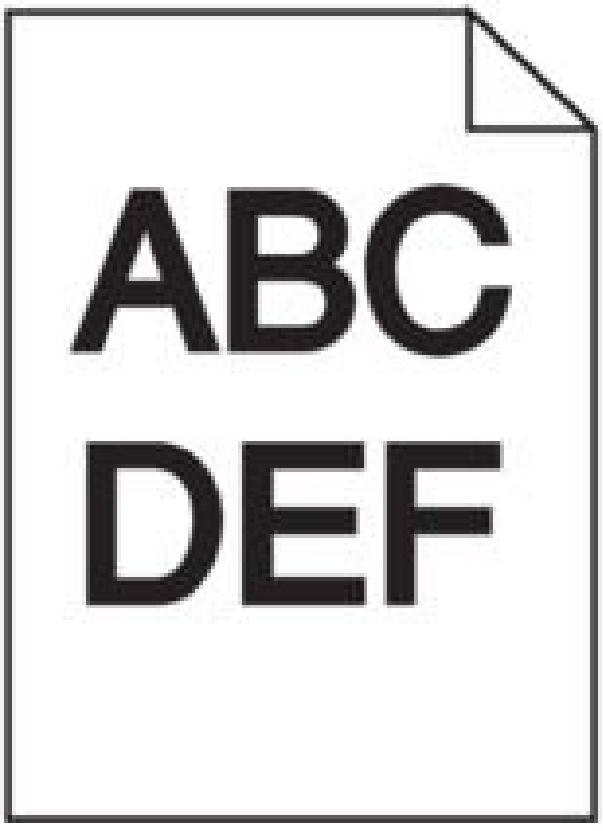
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

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

Dark print check



1. Perform the following tests:
   a. From the home screen, touch **Settings > Print > Quality > Toner Darkness**.
   b. Check the toner darkness setting value.

   Is the darkness setting too high?

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

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

2. Adjust the darkness setting to the proper value.

   Does the problem remain?

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

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

      Advanced Print Quality Samples > Advanced Print Quality Samples

   b. Check the test page.

   Is only one color affected?

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

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

      Printer diagnostics & adjustments > Color alignment adjust

   b. On the AA adjustment row, touch **Start**.

   Does the problem remain?

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

5. Perform the toner patch sensing service check. See Toner patch sensing service check on page 358.

   Does the problem remain?

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

6. Check the HVPS cable for proper connection and damage, and reseat if necessary.

   Does the problem remain?

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

The problem is solved.

7. Check the continuity of the main HVPS cable.

   Does the cable have continuity?

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

8. Replace the cable.

   Does the problem remain?

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

9. Check the pins on the toner cartridge contact.

   Are the pins stuck or damaged?

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

10. Replace the toner cartridge contacts. See Toner cartridge contacts removal on page 456.

    Does the problem remain?

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

11. Check the electrical contacts on the transfer module for damage.

    Are the contacts on the belt damaged?

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

12. Replace the transfer module. See Transfer module removal on page 460.

    Does the problem remain?

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

13. Replace the HVPS. See HVPS removal on page 448.

Does the problem remain?

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

Missing color check

1. Make sure that all packing materials of the imaging unit are removed.

   Does the problem remain?

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

2. Make sure that all supplies are properly installed.

   Does the problem remain?

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

3. Reinstall the imaging unit and waste toner bottle.

   Does the problem remain?

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

4. Open the toner access door, and then pull down the developer unit release mechanism.



Does the problem remain?

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

5. Reconnect the printhead cable connector on the controller board.

   Does the problem remain?

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

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

      Print Quality Pages > Print Quality Pages

   b. Check the test page.

   Is only one color missing?

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

7. Check if the missing color is yellow.

   Is the missing color yellow?

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

Go to step 10.

8. Remove the imaging unit, and then check if the ITU cleaning blade is in the correct position.



Does the cleaning blade appear like the picture above?

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

9. Replace the transfer module. See Transfer module removal on page 460.

   Does the problem remain?

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

10. Check the contacts on the imaging unit and the developer of the missing color for dust or debris.

    Are the contacts free of dust or debris?

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

11. Clean the contacts between the developer and the imaging unit.

    Does the problem remain?

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

12. Perform the following tests:
    - If the missing color is cyan, magenta, or yellow, then replace the developer unit of the missing color.
    - If the missing color is black, then replace the imaging unit.

Does the problem remain?

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

13. Check if the spring-loaded pins in the HVPS freely move in and out with an equal amount of spring force.

    Do the pins freely move?

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

14. Replace the HVPS. See HVPS removal on page 448.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests

    c. Go to the appropriate developer unit motor test for the missing color, and then touch **Start**.

    Does the motor run?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

16. Replace the defective EP drive motor. See Motor (EP drive) removal on page 431.

    Does the problem remain?

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

17. While manually turning the motors, check if the couplers that drive the imaging kit move.

    Do the couplers move?

    - **Yes**:
      Go to step 19.

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

18. Replace the EP gear box. See EP gear box removal on page 436.

    Does the problem remain?

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

19. Check the continuity of the cable on the JSC1 connector on the controller board.

    Is there continuity?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.

20. Replace the cable.

    Does the problem remain?

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

21. Replace the printhead. See .Printhead removal on page 480

    Does the problem remain?

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

22. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

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

Uneven print density check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper type and size settings match the paper type and size set on the tray.

Do the settings match?

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

2. Change the paper size and type, or adjust the size settings in the tray.

   Does the problem remain?

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

3. Check the paper for texture or rough finish.

   Is the paper textured or rough?

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

4. Replace the textured or rough paper with plain paper.

   Does the problem remain?

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

5. Remove, and then reinstall the fuser. See Fuser removal on page 459.

   Does the problem remain?

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

6. Replace the fuser. See Fuser removal on page 459.

   Does the problem remain?

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

7. Replace the LVPS. See LVPS removal on page 438.

   Does the problem remain?

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

Repeating defects check

1. Check the printer rollers for dust or debris.

   Are the rollers free of dust or debris?

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

2. Remove the dust or debris.

   Does the problem remain?

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

3. Measure the distance between the repeating marks.

   Is the distance between the marks either 43.9 mm or 45.5 mm?

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

4. Perform the following tests:

   - If the affected color is cyan, magenta, or yellow, then replace the developer unit of the affected color.
   - If the affected color is black, then replace the imaging unit.

   Does the problem remain?

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

5. Measure the distance between the repeating marks.

   Is the distance between the marks either 29.8 mm, 25.1 mm, or 94.2 mm?

   - **Yes**:

Go to the next step.

- **No**:
  Go to step 7.

6. Perform the following tests:
   - If the affected color is cyan, magenta, or yellow, then replace the CMY imaging kit.
   - If the affected color is black, then replace the black imaging kit.

   Does the problem remain?

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

7. Measure the distance between the repeating marks.

   Is the distance between the marks either 34.6 mm, 95 mm, or 110 mm?

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

8. Replace the fuser. See Fuser removal on page 459.

   Does the problem remain?

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

9. Measure the distance between the repeating marks.

   Is the distance between the marks either 37.7 mm, 55 mm, or 78.5 mm?

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

10. Check the marks that appear on a multi-page print job.

    Do the marks appear on every other page?

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

11. Replace the transfer module. See Transfer module removal on page 460.

    Does the problem remain?

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

Random marks check

1. Check the printer for toner leaks.

   Are there toner leaks?

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

2. Perform the following tests:
   a. Clean the printer thoroughly using a toner vacuum.
   b. Perform a print job to clear the remaining toner from the imaging components.

   Does the problem remain?

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

3. Check the imaging kit for debris and fragments.

   Is the imaging kit free of debris and fragments?

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

4. Remove the debris and fragments.

   Does the problem remain?

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

5. Check the transfer module for debris and fragments.

   Is the transfer module free of debris and fragments?

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

Go to the next step.

6. Remove the debris and fragments.

   Does the problem remain?

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

Light print check

1. Perform the following tests:
   a. Remove the transfer module. See Transfer module removal on page 460.
   b. Check if the three contacts are visible and if they freely move.



   Are the contacts visible and do they freely move?

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

2. Check if the index pin behind the transfer module retract arm is visible and properly aligned.



Is the index pin visible and properly aligned?

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

3. Perform the following tests:
   a. Reseat the HVPS.
   b. Make sure that the contacts are visible and can freely move.
   c. Make sure that the index pin is properly aligned.

   Does the problem remain?

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

4. Perform the following tests:
   a. From the home screen, touch **Settings > Print > Quality**.
   b. Check the Toner darkness setting value.

   Is the darkness setting too low?

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

5. Adjust the darkness setting to the proper value.

   Does the problem remain?

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

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

      Advanced Print Quality Samples > Advanced Print Quality Samples

   b. Check the test page.

   Is only one color affected?

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

7. Check the toner cartridge of the affected color for proper installation.

   - Make sure that there are no packing materials still on it.
   - Check for misalignment.

   Is the toner cartridge properly installed?

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

8. Reinstall the toner cartridge.

   Does the problem remain?

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

9. Check the cartridge toner level.

   Is the cartridge empty?

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

10. Replace the toner cartridge.

Does the problem remain?

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

11. Remove, and then reinstall the developer unit of the affected color.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests

    b. Select the developer unit of the affected color, and then touch **Start**.

    Does the motor run?

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

13. Check the motor cable for proper installation, and reseat if necessary.

    Does the problem remain?

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

14. Replace the motor. See Motor (EP drive) removal on page 431.

    Does the problem remain?

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

15. Remove the printhead, and then check the printhead lenses for dust or debris. See .Printhead removal on page 480

    Are the lenses free of dust or debris?

    - **Yes**:
      Go to step 17.

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

16. Clean the printhead lenses.

    Does the problem remain?

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

17. Check the HVPS cable on the HVPS and on the JHVPS1 connector on the controller board for proper connection.

    Is the cable properly connected at both ends?

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

18. Reconnect the cable.

    Does the problem remain?

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

19. Check the cable for continuity.

    Does the cable have continuity?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.

20. Replace the HVPS cable.

    Does the problem remain?

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

21. Check the toner cartridge contacts for damage, and replace if necessary. See Toner cartridge contacts removal on page 456.

    Does the problem remain?

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

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

22. Replace the transfer module. See Transfer module removal on page 460.

    Does the problem remain?

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

23. Replace the HVPS. See HVPS removal on page 448.

    Does the problem remain?

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

Skewed print service check

1. Check the paper for improper loading and damage, and replace if necessary.

   Does the problem remain?

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

2. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper type and size settings match the paper type and size set on the tray.

   Do the settings match?

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

3. Change the paper size and type, or adjust the size settings in the tray.

   Does the problem remain?

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

4. Check the isolation unit for dust or debris.

Is the isolation unit free of dust or debris?

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

5. Remove the dust or debris.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Motor tests > Deskew

   b. Touch **Start**.

   Does the motor run?

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

7. Check the cable on the JMTR1 connector on the controller board for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

8. Replace the motor (deskew). See Motor (deskew) removal on page 434.

   Does the problem remain?

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

9. Check the condition of the deskew rollers.

   Are the rollers free from excess wear, contamination, and damage?

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

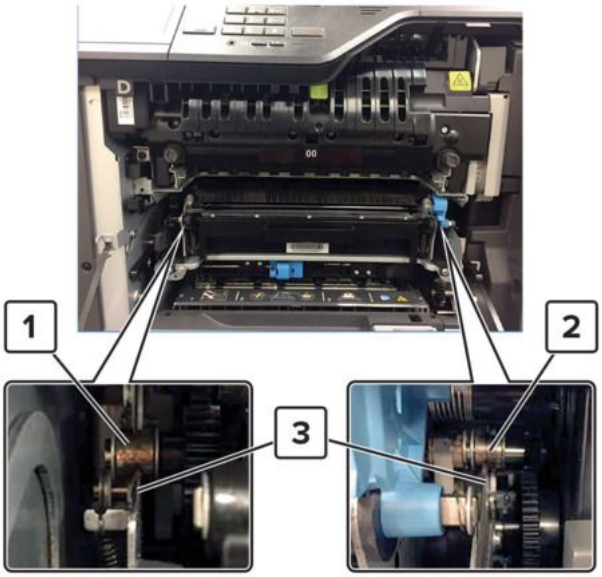
- **No**:
  Go to the next step.

10. Clean or replace the rollers.

    Does the problem remain?

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

11. Perform the following tests:
    a. Check if the ITU bearings are properly seated on the frame.



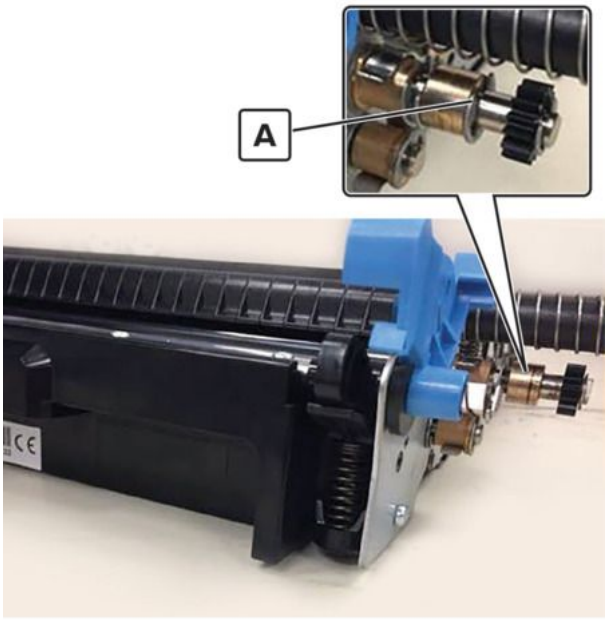
#	Part
1	Left bearing
2	Right bearing
3	Frame

    b. If necessary, reinstall the bearings.

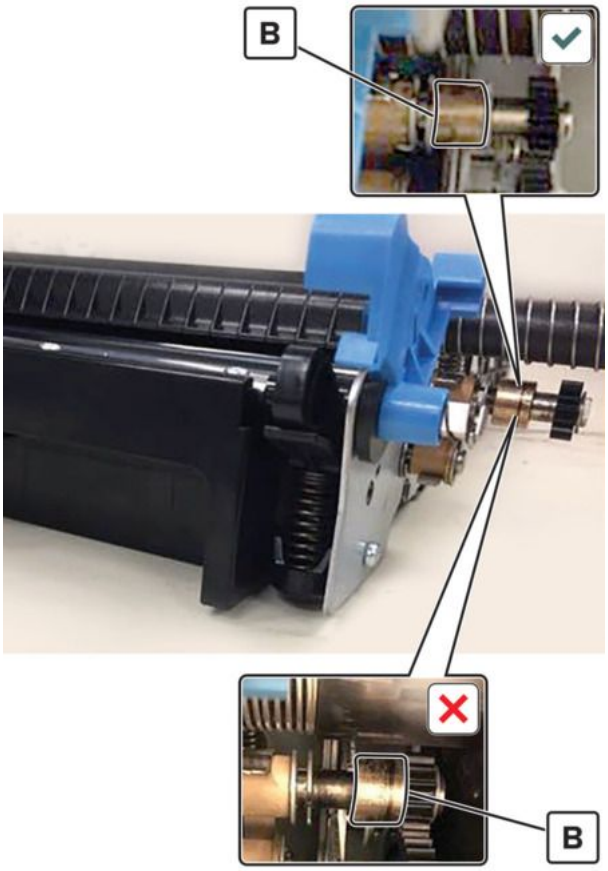
    Does the problem remain?

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

12. Perform the following tests:
    a. Check if the E-clip (A) is not missing.



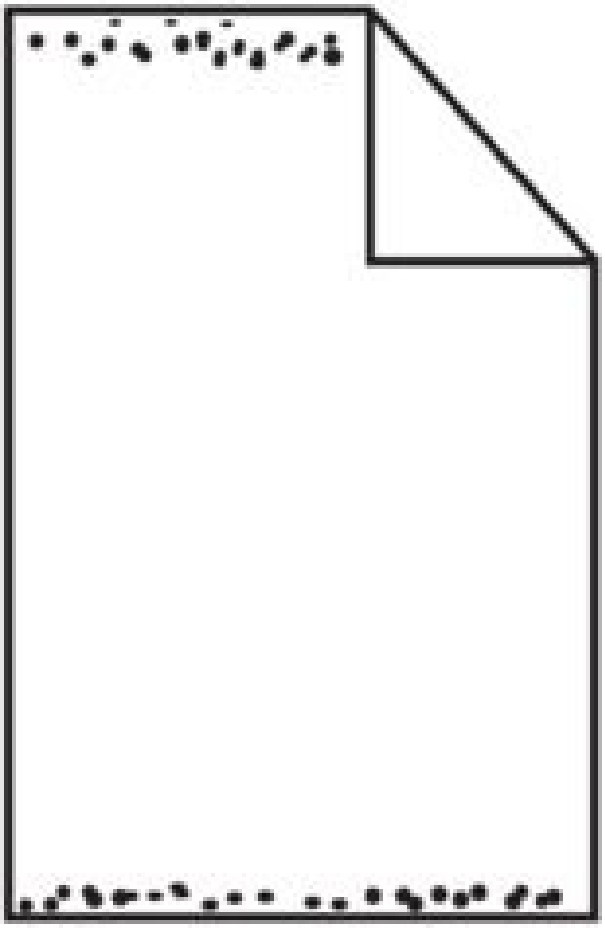
b. Check if the bearing (B) is properly seated.



Does the problem remain?

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

Marks on leading or trailing edges check



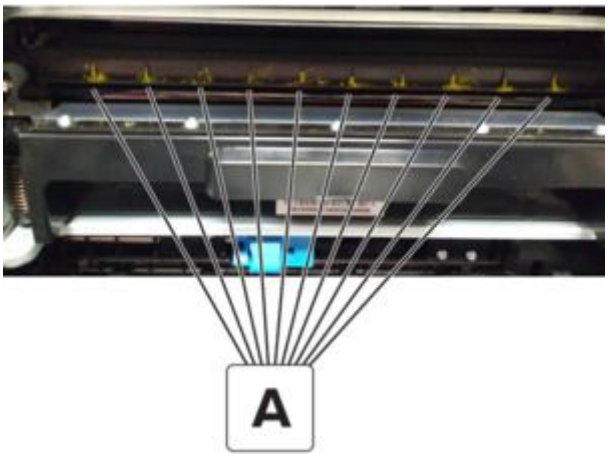
1. Check the leading and trailing edges of the printout for marks.

   Does the printout have marks on the leading or trailing edges?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to another print quality check.

2. Perform the following tests:
   a. Use a dry and lint-free cloth to clean the ribs (A) on the transfer module cleaning assembly housing.

      Note: Do not remove the transfer belt to clean the housing.



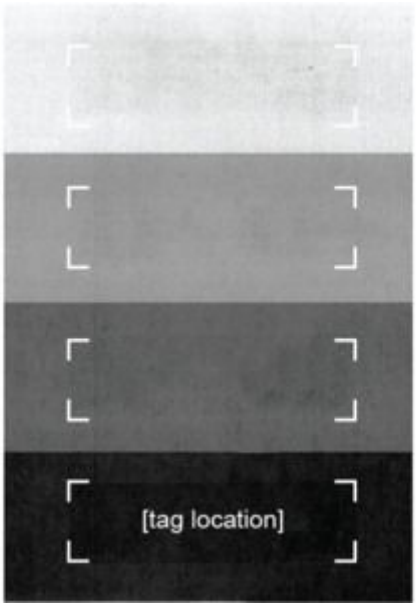
b. Use a toner vacuum to remove the remaining toner.

c. Perform a print job.

Does the problem remain?

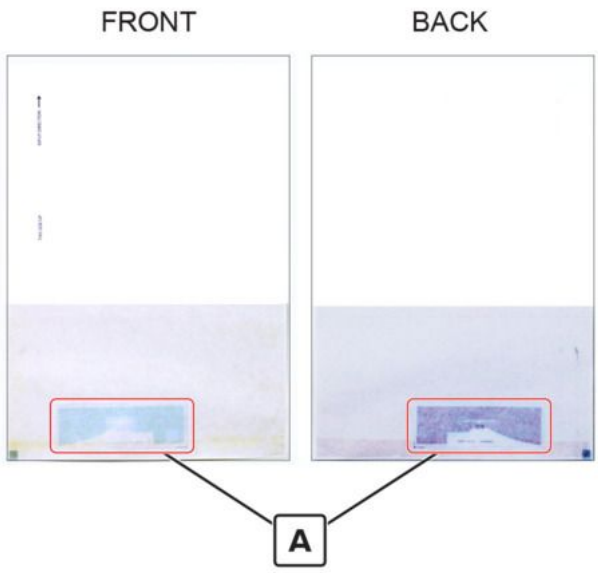
- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

RFID tag silhouette on prints check



1. Make sure that the image on your original document does not print directly over the area where the tag (A) is present.
   - **Sample RFID media**

Note: This image shows a typical RFID tag. The actual tag varies in size, shape, and appearance, as well as position and orientation on the page.



Note: The presence of the RFID tag on the media may cause some slight print quality defects that are expected. Black and white print is normally unaffected, but printing grayscale or color images over the tag location may show an outline or silhouette of the tag shape.

Does the problem remain?

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

2. Make sure that the RFID tag is not thick and that it has an even contour.

   Does the problem remain?

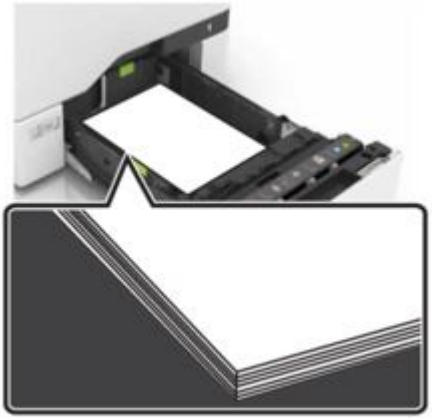
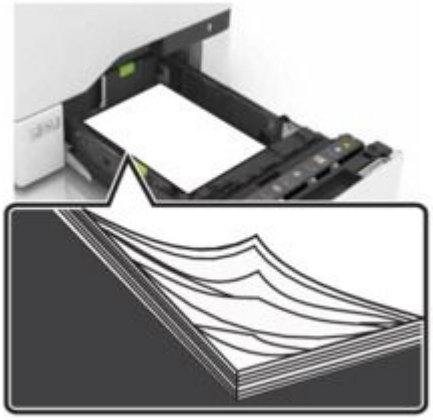
   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Paper jams

Avoiding jams

Load paper properly

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

Correct loading of paper	Incorrect loading of paper
	

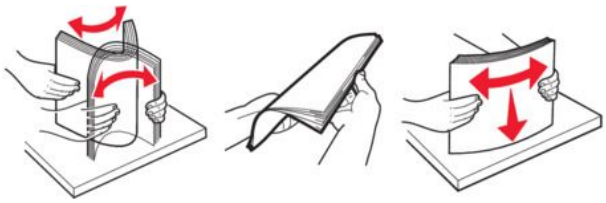
- Do not load or remove a tray while the printer is printing.
- Do not load too much paper. Make sure that the stack height is below the maximum paper fill indicator.
- Do not slide paper into the tray. Load paper as shown in the illustration.



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

Use recommended paper

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



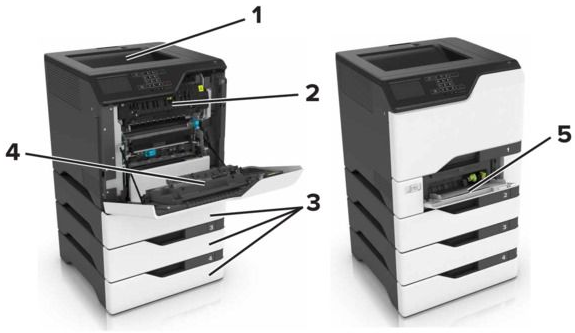
- Do not use paper that has been cut or trimmed by hand.

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

Identifying jam locations

Note:

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



	Jam locations
1	Standard bin
2	Fuser
3	Trays
4	Duplex unit
5	Multipurpose feeder

Paper jam in trays

1. Pull out the tray.



Warning—Potential Damage
A sensor inside the optional tray is easily damaged by static electricity. Touch a metal surface before removing the jammed paper in the tray.

2. Remove the jammed paper.

Note: Make sure that all paper fragments are removed.

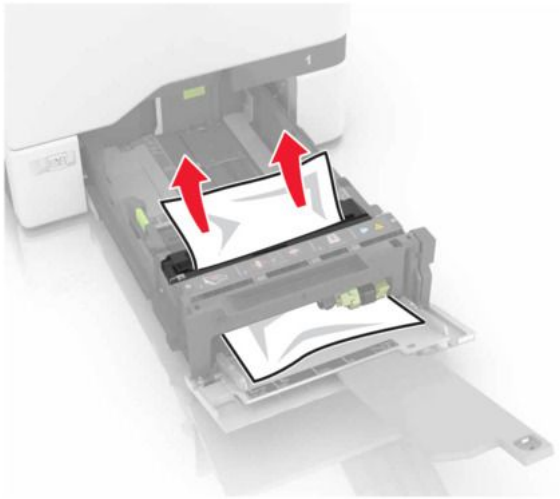


3. Insert the tray.

Paper jam in the multipurpose feeder

1. Remove paper from the multipurpose feeder.
2. Pull out the tray.
3. Remove the jammed paper.

   Note: Make sure that all paper fragments are removed.



4. Insert the tray.

Paper jam in the standard bin

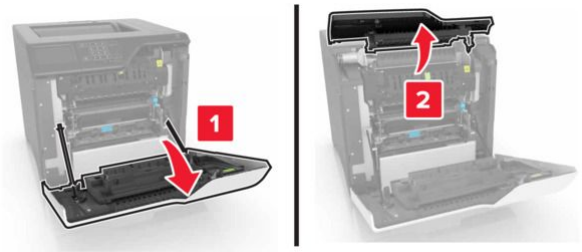
1. Remove the jammed paper.

   Note: Make sure that all paper fragments are removed.



2. Open doors A and D, and then remove any paper fragments.

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



3. Close doors D and A.

Paper jam in door A

Paper jam in the fuser

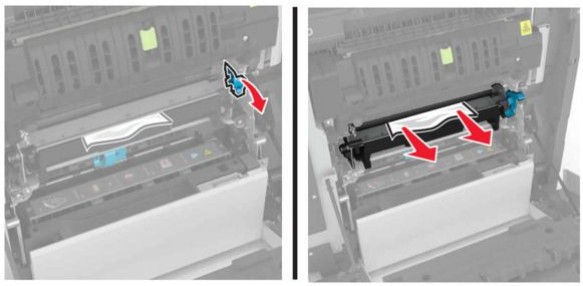
1. Open door A.

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

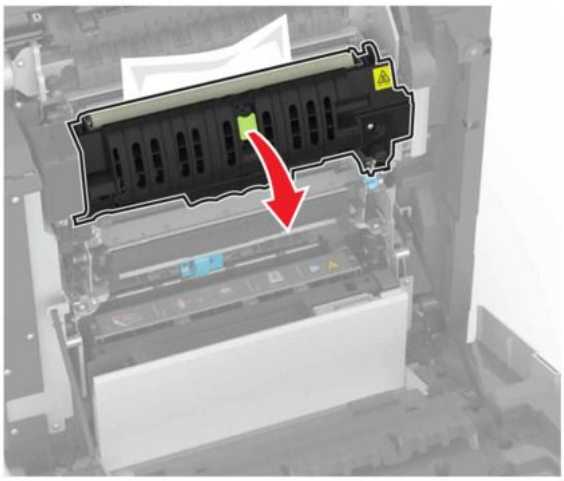


2. Remove the jammed paper.

> **Note:** Make sure that all paper fragments are removed.

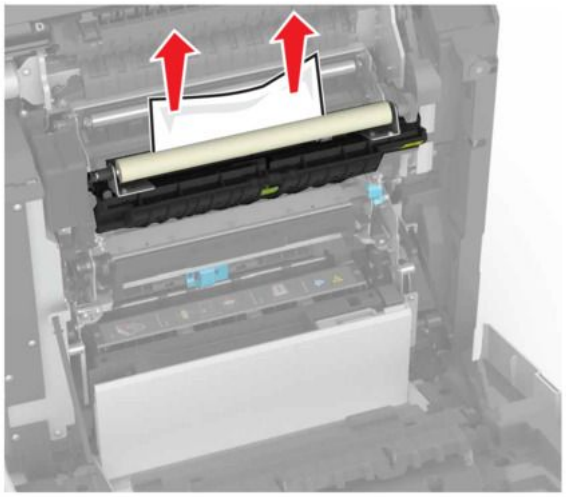


3. Open the fuser access door.



4. Remove the jammed paper.

> **Note:** Make sure that all paper fragments are removed.



5. Close door A.

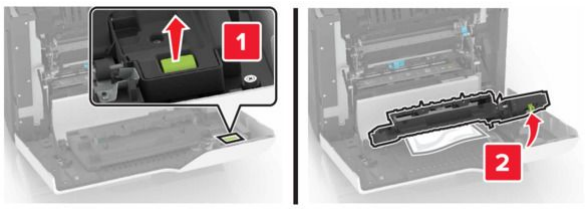
Paper jam in the duplex unit

1. Open door A.

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

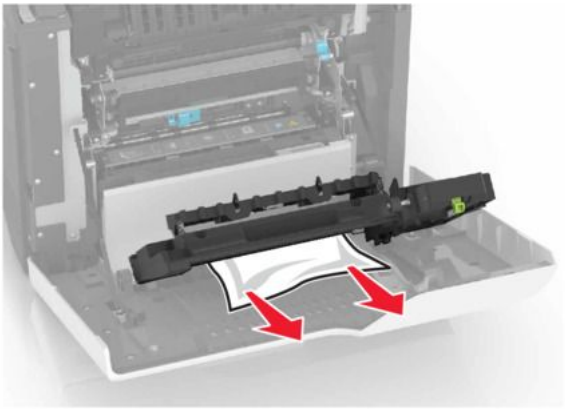


2. Open the duplex cover.



3. Remove the jammed paper.

Note: Make sure that all paper fragments are removed.



4. Close the duplex cover and door A.

200 paper jams

200 paper jam messages

Error code	Description	Action
200.05	Paper fed from the MPF never cleared the sensor (input).	See Sensor (input): Paper failed to clear service check on page 103.
200.12	Paper fed from tray 1 was detected earlier than expected at the sensor (input).	See Sensor (input): Paper arrived too early service check on page 99.
200.13	Paper fed from tray 1 never arrived at the sensor (input).	See Sensor (input): Paper failed to arrive service check on page 101.
200.14	Paper fed from tray 1 cleared the sensor (input) earlier than expected.	See Sensor (input): Paper cleared too early service check on page 105.
200.15	Paper fed from tray 1 never cleared the sensor (input).	See Sensor (input): Paper failed to clear service check on page 103.
200.22	Paper fed from tray 2 was detected earlier than expected at the sensor (input).	See Sensor (input): Paper arrived too early service check on page 99.
200.23	Paper fed from tray 2 did not reach the sensor (input).	See Sensor (input): Paper failed to arrive service check on page 101.

Error code	Description	Action
200.24	Paper fed from tray 2 cleared the sensor (input) earlier than expected.	See Sensor (input): Paper cleared too early service check on page 105.
200.25	Paper fed from tray 2 never cleared the sensor (input).	See Sensor (input): Paper failed to clear service check on page 103.
200.32	Paper fed from tray 3 was detected earlier than expected at the sensor (input).	See Sensor (input): Paper arrived too early service check on page 99.
200.33	Paper fed from tray 3 did not reach the sensor (input).	See Sensor (input): Paper failed to arrive service check on page 101.
200.34	Paper fed from tray 3 cleared the sensor (input) earlier than expected.	See Sensor (input): Paper cleared too early service check on page 105.
200.35	Paper fed from tray 3 never cleared the sensor (input).	See Sensor (input): Paper failed to clear service check on page 103.
200.42	Paper fed from tray 4 was detected earlier than expected at the sensor (input).	See Sensor (input): Paper arrived too early service check on page 99.
200.43	Paper fed from tray 4 did not reach the sensor (input).	See Sensor (input): Paper failed to arrive service check on page 101.
200.44	Paper fed from tray 4 cleared the sensor (input) earlier than expected.	See Sensor (input): Paper cleared too early service check on page 105.
200.45	Paper fed from tray 4 never cleared the sensor (input).	See Sensor (input): Paper failed to clear service check on page 103.
200.91	Paper remains detected at the sensor (input) after the printer is turned on.	See Sensor (input) static jam service check on page 107.

Sensor (input): Paper arrived too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 3.

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the tray for overfilling.

   Is the tray overfilled?

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

4. Remove the excess paper from the tray.

   Does the problem remain?

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

5. Check the paper path along the tray exit.

   Is the paper path free of fragments and contamination?

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

6. Clean the paper path.

   Does the problem remain?

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

7. Perform a print job.

   Does the problem remain?

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

Sensor (input): Paper failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper type and size settings match the paper type and size set on the tray.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for paper jams and fragments.

   Is the paper path free of jams and fragments?

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

4. Remove the jams and fragments.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Input).

   Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

7. Check the sensor for damage, and replace if necessary.

   Does the problem remain?

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

8. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments > Motor tests > Isolation**
   b. Touch **Start**, and then listen to the sound of the motor.
   c. Check if the sound of the motor (isolation) is similar to this: https://contentdelivery.lexmark.com/webcontent/kbase/articles/SO8339/Bad_Isolation_Motor.mp3.

   Does the isolation motor create a similar grinding sound?

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

9. Replace the isolation unit. See Isolation unit removal on page 490.

   Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Deskew

    b. Touch **Start**.

    Does the motor run?

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

11. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

12. Replace the motor (registration).

    Does the problem remain?

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

Sensor (input): Paper failed to clear service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

4. Remove the jams and obstructions.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Input).

   Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

7. Check the sensor for damage, and replace if necessary.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Motor tests > Deskew

   b. Touch **Start**.

   Does the motor run?

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

9. Check the motor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:

Go to the next step.

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

10. Perform the following tests:
    a. Replace the motor (registration).
    b. Perform a print job.

    Does the problem remain?

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

Sensor (input): Paper cleared too early service check

1. Perform the following tests:
    a. From the home screen, touch **Settings > Device > Preferences**.
    b. Check if the paper size matches the size set on the tray guides.

    Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

    Does the problem remain?

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

3. Check the tray for overfilling.

    Is the tray overfilled?

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

4. Remove the excess paper from the tray.

    Does the problem remain?

    - **Yes**:

Go to the next step.

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

5. Check the paper condition in the tray.

   Is the paper crumpled or damaged?

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

6. Replace the crumpled or damaged paper.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Input).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 9.
   - **No**:
     The problem is solved.

8. Check the sensor cable for proper connection, and then reseat if necessary.

   Does the problem remain?

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

9. Replace the sensor. See Sensor (input) removal on page 466.

   Does the problem remain?

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

10. Perform a print job.

Does the problem remain?

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

Sensor (input) static jam service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

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

4. Remove the partially fed or jammed paper.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

b. Find the sensor (Input).

Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

7. Check the sensor for damage, and replace if necessary.

   Does the problem remain?

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

8. Perform a print job.

   Does the problem remain?

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

201 paper jams

201 paper jam messages

Error code	Description	Action
201.91	Paper remains detected at the sensor (fuser buckle).	See Sensor (fuser buckle) jam service check on page 108.

Sensor (fuser buckle) jam service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.

b. Check if the paper size matches the size set on the tray guides.

Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

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

4. Remove the partially fed or jammed paper.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Fuser buckle).

   Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

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

7. Perform the following tests:
   a. Check the sensor for damage, and replace if necessary.
   b. Perform a print job.

   Does the problem remain?

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

202 paper jams

202 paper jam messages

Error code	Description	Action
202.12	Paper fed from tray 1 was detected earlier than expected at the sensor (fuser exit).	See Sensor (fuser exit): Paper arrived too early service check on page 111.
202.13	Paper fed from tray 1 never arrived at the sensor (fuser exit).	See Sensor (fuser exit): Paper failed to arrive service check on page 112.
202.14	Paper fed from tray 1 cleared the sensor (fuser exit) earlier than expected.	See Sensor (fuser exit): Paper cleared too early service check on page 118.
202.15	Paper fed from tray 1 never cleared the sensor (fuser exit).	See Sensor (fuser exit): Paper failed to clear service check on page 116.
202.22	Paper fed from tray 2 was detected earlier than expected at the sensor (fuser exit).	See Sensor (fuser exit): Paper arrived too early service check on page 111.
202.23	Paper fed from tray 2 never arrived at the sensor (fuser exit).	See Sensor (fuser exit): Paper failed to arrive service check on page 112.
202.24	Paper fed from tray 2 cleared the sensor (fuser exit) earlier than expected.	See Sensor (fuser exit): Paper cleared too early service check on page 118.
202.25	Paper fed from tray 2 never cleared the sensor (fuser exit).	See Sensor (fuser exit): Paper failed to clear service check on page 116.

Error code	Description	Action
202.32	Paper fed from tray 3 was detected earlier than expected at the sensor (fuser exit).	See Sensor (fuser exit): Paper arrived too early service check on page 111.
202.33	Paper fed from tray 3 never arrived at the sensor (fuser exit).	See Sensor (fuser exit): Paper failed to arrive service check on page 112.
202.34	Paper fed from tray 3 cleared the sensor (fuser exit) earlier than expected.	See Sensor (fuser exit): Paper cleared too early service check on page 118.
202.35	Paper fed from tray 3 never cleared the sensor (fuser exit).	See Sensor (fuser exit): Paper failed to clear service check on page 116.
202.42	Paper fed from tray 4 was detected earlier than expected at the sensor (fuser exit).	See Sensor (fuser exit): Paper arrived too early service check on page 111.
202.43	Paper fed from tray 4 never arrived at the sensor (fuser exit).	See Sensor (fuser exit): Paper failed to arrive service check on page 112.
202.44	Paper fed from tray 4 cleared the sensor (fuser exit) earlier than expected.	See Sensor (fuser exit): Paper cleared too early service check on page 118.
202.45	Paper fed from tray 4 never cleared the sensor (fuser exit).	See Sensor (fuser exit): Paper failed to clear service check on page 116.
202.91	Paper remains detected at the sensor (fuser exit) after the printer is turned on.	See Sensor (fuser exit) static jam service check on page 120.

Sensor (fuser exit): Paper arrived too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:

Go to the next step.

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

3. Check the paper path just before the fuser for paper jams and fragments.

   Is the paper path free of fragments and contamination?

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

4. Remove the paper jams and fragments.

   Does the problem remain?

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

5. Check the fuser rollers for damage.

   Are the rollers free of damage?

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

6. Replace the fuser. See Fuser removal on page 459.

   Does the problem remain?

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

7. Perform a print job.

   Does the problem remain?

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

Sensor (fuser exit): Paper failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.

b. Check if the paper size matches the size set on the tray guides.

Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for paper jams and fragments.

   Is the paper path free of jams and fragments?

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

4. Remove the jams and fragments.

   Does the problem remain?

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

5. Check the fuser for obstructions.

   Is the fuser free from obstructions?

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

6. Remove the obstructions in the fuser area.

   Does the problem remain?

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

7. Check the fuser for damage or life expiration, and replace if necessary. See Fuser removal on page 459.

Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Fuser exit).

   Does the sensor status change while toggling the sensor?

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

9. Perform the following tests:
   a. Make sure that the fuser is properly seated.
   b. Check the cable on the JFSNS connector on the controller board for proper connection, and reseat if necessary.

   Does the problem remain?

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

10. Check the sensor for damage, and replace if necessary.

    Does the problem remain?

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

11. Check the transfer belt for damage and replace if necessary. See Transfer module removal on page 460.

    Does the problem remain?

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

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

Printer diagnostics & adjustments > Motor tests > Fuser

b. Select a setting, and then touch **Start**.

Does the motor run?

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

13. Check the cable on the JFUSED1 connector on the controller board for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

14. Perform the following tests:
    a. Replace the motor. See Fuser removal on page 459.
    b. Perform a print job.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > K developer-transfer

    b. Touch **Start**.

    Does the motor run?

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

16. Check the cable on the JCARTK connector on the controller board for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

The problem is solved.

17. Perform the following tests:
    a. Replace the motor (K cartridge). See Motor (EP drive) removal on page 431.
    b. Perform a print job.

    Does the problem remain?

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

Sensor (fuser exit): Paper failed to clear service check

1. Perform the following tests:
    a. From the home screen, touch **Settings > Device > Preferences**.
    b. Check if the paper size matches the size set on the tray guides.

    Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

    Does the problem remain?

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

3. Check the redrive paper path for paper jams and fragments.

    Is the paper path free of jams and fragments?

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

4. Remove the jams and fragments.

    Does the problem remain?

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

The problem is solved.

5. Check the fuser for obstructions.

   Is the fuser free from obstructions?

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

6. Remove the obstructions in the fuser area.

   Does the problem remain?

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

7. Check the fuser for damage or life expiration, and replace if necessary. See Fuser removal on page 459.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Fuser exit).

   Does the sensor status change while toggling the sensor?

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

9. Perform the following tests:
   a. Make sure that the fuser is seated properly.
   b. Check the cable on the JFSNS connector on the controller board for proper connection, and reseat if necessary.

   Does the problem remain?

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

10. Check the sensor for damage, and replace if necessary.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Fuser

    b. Select a setting, and then touch **Start**.

    Does the motor run?

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

12. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

13. Perform the following tests:
    a. Replace the motor. See Fuser removal on page 459.
    b. Perform a print job.

    Does the problem remain?

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

Sensor (fuser exit): Paper cleared too early service check

1. Perform the following tests:
    a. From the home screen, touch **Settings > Device > Preferences**.
    b. Check if the paper size matches the size set on the tray guides.

    Does the paper size match the size set on the tray?

    - **Yes**:

Go to step 3.

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the fuser rollers for damage.

   Are the rollers free of damage?

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

4. Replace the fuser. See Fuser removal on page 459.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Fuser exit).

   Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection, and then reseat if necessary.

   Does the problem remain?

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

7. Replace the fuser. See Fuser removal on page 459.

Does the problem remain?

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

8. Perform a print job.

   Does the problem remain?

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

Sensor (fuser exit) static jam service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

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

4. Remove the partially fed or jammed paper.

   Does the problem remain?

   - **Yes**:

Go to the next step.

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Fuser exit).

   Does the sensor status change while toggling the sensor?

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

6. Perform the following tests:
   a. Make sure that the fuser is properly seated.
   b. Check the cable on the JFSNS connector on the controller board for proper connection, and reseat if necessary.

   Does the problem remain?

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

7. Perform the following tests:
   a. Check the sensor for damage, and replace if necessary.
   b. Perform a print job.

   Does the problem remain?

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

203 paper jams

203 paper jam messages

Error code	Description	Action
203.91	Paper remains detected at the sensor (bin full) after the printer is turned on.	See Sensor (output bin full) static jam service check on page 122.

Sensor (output bin full) static jam service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

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

4. Remove the partially fed or jammed paper.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Output bin full).

   Does the sensor status change while toggling the sensor?

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

6. Check the cable on the JDSNS connector on the controller board for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

7. Perform the following tests:
   a. Check the sensor for damage, and replace if necessary.
   b. Perform a print job.

   Does the problem remain?

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

211 paper jams

211 paper jam messages

Error code	Description	Action
211.91	Paper remains detected at the sensor (narrow media) after the printer is turned on.	See Sensor (narrow media) static jam service check on page 123.

Sensor (narrow media) static jam service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

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

4. Remove the partially fed or jammed paper.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Narrow media).

   Does the sensor status change while toggling the sensor?

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

6. Check the cable on the JMSNS connector on the controller board for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

7. Perform the following tests:
   a. Check the sensor for damage, and replace if necessary.

   b. Perform a print job.

   Does the problem remain?

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

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

221 paper jams

221 paper jam messages

Error code	Description	Action
221.xx	Paper in the paper path of the redrive area remains detected at the sensor (duplex path 1) when the printer is turned on.	See Sensor (duplex path 1) static jam service check on page 125.

Sensor (duplex path 1) static jam service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

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

4. Remove the partially fed or jammed paper.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Duplex path 1).

   Does the sensor status change while toggling the sensor?

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

6. Check the cable on the JDSNS connector on the controller board for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

7. Perform the following tests:
   a. Check the sensor for damage, and replace if necessary. See .Sensor (redrive) removal on page 474

   b. Perform a print job.

   Does the problem remain?

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

230 paper jams

230 paper jam messages

Error code	Description	Action
230.12	Paper fed from tray 1 was detected earlier than expected at the sensor (duplex path 1).	See Sensor (duplex path 1): Paper arrived too early service check on page 128.

Error code	Description	Action
230.13	Paper fed from tray 1 never arrived at the sensor (duplex path 1).	See Sensor (duplex path 1): Paper failed to arrive service check on page 129.
230.14	Paper fed from tray 1 cleared the sensor (duplex path 1) earlier than expected.	See Sensor (duplex path 1): Paper cleared too early service check on page 134.
230.15	Paper fed from tray 1 never cleared the sensor (duplex path 1).	See Sensor (duplex path 1): Paper failed to clear service check on page 131.
230.22	Paper fed from tray 2 was detected earlier than expected at the sensor (duplex path 1).	See Sensor (duplex path 1): Paper arrived too early service check on page 128.
230.22	All motor errors are reported as paper jam.	
230.23	Paper fed from tray 2 never arrived at the sensor (duplex path 1).	See Sensor (duplex path 1): Paper failed to arrive service check on page 129.
230.24	Paper fed from tray 2 cleared the sensor (duplex path 1) earlier than expected.	See Sensor (duplex path 1): Paper cleared too early service check on page 134.
230.25	Paper fed from tray 2 never cleared the sensor (duplex path 1).	See Sensor (duplex path 1): Paper failed to clear service check on page 131.
230.32	Paper fed from tray 3 was detected earlier than expected at the sensor (duplex path 1).	See Sensor (duplex path 1): Paper arrived too early service check on page 128.
230.33	Paper fed from tray 3 never arrived at the sensor (duplex path 1).	See Sensor (duplex path 1): Paper failed to arrive service check on page 129.
230.34	Paper fed from tray 3 cleared the sensor (duplex path 1) earlier than expected.	See Sensor (duplex path 1): Paper cleared too early service check on page 134.
230.35	Paper fed from tray 3 never cleared the sensor (duplex path 1).	See Sensor (duplex path 1): Paper failed to clear service check on page 131.
230.42	Paper fed from tray 4 was detected earlier than expected at the sensor (duplex path 1).	See Sensor (duplex path 1): Paper arrived too early service check on page 128.
230.43	Paper fed from tray 4 never arrived at the sensor (duplex path 1).	See Sensor (duplex path 1): Paper failed to arrive service check on page 129.
230.44	Paper fed from tray 4 cleared the sensor (duplex path 1) earlier than expected.	See Sensor (duplex path 1): Paper cleared too early service check on page 134.

Error code	Description	Action
230.45	Paper fed from tray 4 never cleared the sensor (duplex path 1).	See Sensor (duplex path 1): Paper failed to clear service check on page 131.
230.91	Paper remains detected at the sensor (duplex path 1) after the printer is turned on.	See Sensor (duplex path 1) static jam service check on page 125.

Sensor (duplex path 1): Paper arrived too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path entering the duplex path for paper jams and fragments.

   Is the paper path free of fragments and contamination?

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

4. Remove the paper jams and fragments.

   Does the problem remain?

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

5. Perform a print job.

   Does the problem remain?

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

Sensor (duplex path 1): Paper failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the redrive paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

4. Remove the jams and obstructions.

   Does the problem remain?

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

5. Check the duplex paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

Go to the next step.

6. Remove the jams and obstructions.

   Does the problem remain?

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

7. Inspect the ribs on the control panel base cover for wear, nicks, or other damage that could obstruct the paper path.

   Is there any damage?

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

8. Replace the control panel base cover. See Control panel base cover removal on page 425.

   Does the problem remain?

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

9. Check the diverter for smooth movement.

   Does the diverter freely move witthout interference?

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

10. Replace the diverter. See Diverter removal on page 472.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Sensor tests

    b. Find the sensor (Duplex path 1).

    Does the sensor status change while toggling the sensor?

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

12. Replace the sensor.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Redrive

    b. Select a setting, and then touch **Start**.

    Does the motor run?

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

14. Check the cable on the JOUTDC connector on the controller board for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

15. Replace the motor (output). See Motor (output) removal on page 433.

    Does the problem remain?

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

Sensor (duplex path 1): Paper failed to clear service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

4. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

5. Check the paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

6. Remove the jams and obstructions.

   Does the problem remain?

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

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

Printer diagnostics & adjustments > Sensor tests

b. Find the sensor (Duplex path 1).

Does the sensor status change while toggling the sensor?

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

8. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

9. Check the sensor for damage, and replace if necessary.

   Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Duplex/MPF

    b. Select a setting, and then touch **Start**.

    Does the motor run?

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

11. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

12. Perform the following tests:
    a. Replace the motor. See Motor (duplex/MPF) removal on page 446.

b. Perform a print job.

Does the problem remain?

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

Sensor (duplex path 1): Paper cleared too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the duplex rollers for damage.

   Are the rollers free of damage?

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

4. Replace the duplex assembly.

   Does the problem remain?

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

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

Printer diagnostics & adjustments > Sensor tests

b. Find the sensor (Duplex path 1).

Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection, and then reseat if necessary.

   Does the problem remain?

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

7. Replace the sensor.

   Does the problem remain?

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

8. Perform a print job.

   Does the problem remain?

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

231 paper jams

231 paper jam messages

Error code	Description	Action
231.12	Paper fed from tray 1 was detected earlier than expected at the sensor (duplex path 2).	See Sensor (duplex path 2): Paper arrived too early service check on page 136.
231.13	Paper fed from tray 1 never arrived at the sensor (duplex path 2).	See Sensor (duplex path 2): Paper failed to arrive service check on page 138.

Error code	Description	Action
231.14	Paper fed from tray 1 cleared the sensor (duplex path 2) earlier than expected.	See Sensor (duplex path 2): Paper (duplex job) cleared too early service check on page 142.
231.15	Paper fed from tray 1 never cleared the sensor (duplex path 2).	See Sensor (duplex path 2): Paper failed to clear service check on page 140.
231.22	Paper fed from tray 2 was detected earlier than expected at the sensor (duplex path 2).	See Sensor (duplex path 2): Paper arrived too early service check on page 136.
231.23	Paper fed from tray 2 never arrived at the sensor (duplex path 2).	See Sensor (duplex path 2): Paper failed to arrive service check on page 138.
231.24	Paper fed from tray 2 cleared the sensor (duplex path 2) earlier than expected.	See Sensor (duplex path 2): Paper (duplex job) cleared too early service check on page 142.
231.32	Paper fed from tray 3 was detected earlier than expected at the sensor (duplex path 2).	See Sensor (duplex path 2): Paper arrived too early service check on page 136.
231.33	Paper fed from tray 3 never arrived at the sensor (duplex path 2).	See Sensor (duplex path 2): Paper failed to arrive service check on page 138.
231.34	Paper fed from tray 3 cleared the sensor (duplex path 2) earlier than expected.	See Sensor (duplex path 2): Paper (duplex job) cleared too early service check on page 142.
231.42	Paper fed from tray 4 was detected earlier than expected at the sensor (duplex path 2).	See Sensor (duplex path 2): Paper arrived too early service check on page 136.
231.43	Paper fed from tray 4 never arrived at the sensor (duplex path 2).	See Sensor (duplex path 2): Paper failed to arrive service check on page 138.
231.44	Paper fed from tray 4 cleared the sensor (duplex path 2) earlier than expected.	See Sensor (duplex path 2): Paper (duplex job) cleared too early service check on page 142.
231.91	Paper remains detected at the sensor (duplex path 2) after the printer is turned on.	See Sensor (duplex path 2) static jam service check on page 144.

Sensor (duplex path 2): Paper arrived too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size settings in the tray.

   Does the problem remain?

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

3. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper settings matches the paper in the tray guides.

   Do the paper settings match the paper in the tray?

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

4. Change the paper settings to match the paper in the tray.

   Does the problem remain?

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

5. Check the duplex paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

6. Remove the jams and obstructions.

   Does the problem remain?

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

Sensor (duplex path 2): Paper failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the duplex paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

4. Remove the jams and obstructions.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Duplex path 2).

   Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

7. Check the sensor for damage, and replace if necessary.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Motor tests > Duplex/MPF

   b. Select a setting, and then touch **Start**.

   Does the motor run?

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

9. Check the motor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

10. Perform the following tests:
    a. Replace the motor. See Motor (duplex/MPF) removal on page 446.

    b. Perform a print job.

    Does the problem remain?

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

11. Check the duplex drive gears in the printer for damage, and replace if necessary.

    Does the problem remain?

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

12. Perform the following tests:
    a. In the duplex inner guide, check the drive gears, belts, and pinch rollers for damage. Replace the duplex inner guide if necessary. See Duplex inner guide removal on page 427.
    b. Perform a print job.

    Does the problem remain?

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

Sensor (duplex path 2): Paper failed to clear service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

4. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

5. Check the paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

6. Remove the jams and obstructions.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Duplex path 2).

   Does the sensor status change while toggling the sensor?

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

8. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

9. Check the sensor for damage, and replace if necessary.

   Does the problem remain?

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

10. Perform the following tests:

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

Printer diagnostics & adjustments > Motor tests > Isolation

b. Touch **Start**.

Does the motor run?

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

11. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

12. Perform the following tests:
    a. Replace the isolation unit. See Isolation unit removal on page 490.
    b. Perform a print job.

    Does the problem remain?

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

Sensor (duplex path 2): Paper (duplex job) cleared too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the duplex rollers for damage.

   Are the rollers free of damage?

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

4. Replace the duplex.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Duplex path 2).

   Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection, and then reseat if necessary.

   Does the problem remain?

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

7. Check the sensor for damage, and replace if necessary.

   Does the problem remain?

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

8. Perform a print job.

Does the problem remain?

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

Sensor (duplex path 2) static jam service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

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

4. Remove the partially fed or jammed paper.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

b. Find the sensor (Duplex path 2).

Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

7. Perform the following tests:
   a. Check the sensor for damage, and replace if necessary.
   b. Perform a print job.

   Does the problem remain?

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

232 paper jams

232 paper jam messages

Error code	Description	Action
232.x3	Paper fed from the duplex never arrived at the sensor (MPF/ pass-through) during a duplex print job.	See Sensor (MPF/ pass-through): Paper (duplex job) failed to arrive service check on page 146.
232.x4	Paper fed from the duplex cleared the sensor (MPF/ pass-through) earlier than expected during a duplex print job.	See Sensor (MPF/ pass-through): Paper (MPF/ pass-through) cleared too early service check on page 151.
232.x5	Paper fed from the duplex never cleared the sensor (MPF/ pass-through) during a duplex print job.	See Sensor (MPF/ pass-through): Paper (duplex job) failed to clear service check on page 149.

Error code	Description	Action
232.91	Paper remains detected at the sensor (duplex path 2) after the printer is turned on.	See Sensor (duplex path 2) static jam service check on page 144.

Sensor (MPF/pass-through): Paper (duplex job) failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the duplex paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

4. Remove the jams and obstructions.

   Does the problem remain?

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

5. Check the tray for damage, and replace if necessary.

   Does the problem remain?

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

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

6. Check the sensor (MPF/pass-through) area for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

7. Remove the jams and obstructions.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (MPF/pass-through).

   Does the sensor status change while toggling the sensor?

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

9. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

10. Replace the isolation unit. See Isolation unit removal on page 490.

    Does the problem remain?

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

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

Printer diagnostics & adjustments > Motor tests > Duplex/MPF

b. Select a setting, and then touch **Start**.

Does the motor run?

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

12. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

13. Perform the following tests:
    a. Replace the motor. See Motor (duplex/MPF) removal on page 446.
    b. Perform a print job.

    Does the problem remain?

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

14. Check the duplex drive gears in the printer for damage, and replace if necessary.

    Does the problem remain?

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

15. Perform the following tests:
    a. In the duplex inner guide, check the drive gears, belts, and pinch rollers for damage. Replace the duplex inner guide if necessary. See Duplex inner guide removal on page 427.
    b. Perform a print job.

    Does the problem remain?

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

Sensor (MPF/pass-through): Paper (duplex job) failed to clear service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

4. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

5. Check the paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

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

6. Remove the jams and obstructions.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (MPF/pass-through).

   Does the sensor status change while toggling the sensor?

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

8. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

9. Check the isolation unit for damage, and replace if necessary. See Isolation unit removal on page 490.

   Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Deskew

    b. Touch **Start**.

    Does the motor run?

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

11. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

    - **Yes**:

Go to the next step.

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

12. Perform the following tests:
    a. Replace the motor (registration).
    b. Perform a print job.

    Does the problem remain?

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

Sensor (MPF/pass-through): Paper (MPF/pass-through) cleared too early service check

1. Perform the following tests:
    a. From the home screen, touch **Settings > Device > Preferences**.
    b. Check if the paper size matches the size set on the tray guides.

    Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

    Does the problem remain?

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

3. Check the duplex rollers for damage.

    Are the rollers free of damage?

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

4. Replace the duplex.

    Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Input).

   Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection, and then reseat if necessary.

   Does the problem remain?

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

7. Replace the isolation unit. See Isolation unit removal on page 490.

   Does the problem remain?

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

8. Perform a print job.

   Does the problem remain?

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

240 paper jams

240 paper jam messages

Error code	Description	Action
240.06	Paper never arrived at the sensor (MPF/pass-through).	See Sensor (MPF/pass-through): Paper (MPF tray) failed to arrive service check on page 155.
240.23	Paper fed from tray 2 was picked but it never arrived at the sensor (MPF/pass-through).	See Sensor (MPF/pass-through): Paper (tray 2) failed to arrive service check on page 159.
240.33	Paper fed from tray 3 was picked but it never arrived at the sensor (MPF/pass-through).	See Sensor (MPF/pass-through): Paper (tray 3) failed to arrive service check on page 162.
240.43	Paper fed from tray 4 was picked but it never arrived at the sensor (MPF/pass-through).	See Sensor (MPF/pass-through): Paper (tray 4) failed to arrive service check on page 164.
240.15	Paper fed from tray [x] never cleared the sensor (MPF/pass-through).	See Sensor (MPF/pass-through): Paper failed to clear service check on page 153.
240.25		
240.35		
240.45		
240.82	The motor (duplex/MPF) has stalled.	See Motor (duplex/MPF) jam service check on page 169.
240.84	The motor (duplex/MPF) failed to achieve expected speed or has stalled.	
240.91	Paper remains detected at the sensor (MPF/pass-through) after the printer is turned on.	See Sensor (MPF/pass-through) static jam service check on page 168.

Sensor (MPF/pass-through): Paper failed to clear service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:

Go to step 3.

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the duplex and MPF paper paths for paper jams and obstructions.

   Are the paper paths free of jams and obstructions?

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

4. Remove the paper jams and obstructions.

   Does the problem remain?

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

5. Check the tray paper path and drive gears for damage, and replace the tray if necessary.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (MPF/pass-through).

   Does the sensor status change while toggling the sensor?

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

7. Check the sensor cable for proper connection and damage, and replace if necessary.

Does the problem remain?

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

8. Check the sensor and sensor flag for damage.

   Is the sensor or sensor flag damaged?

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

9. Replace the isolation unit. See Isolation unit removal on page 490.

   Does the problem remain?

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

Sensor (MPF/pass-through): Paper (MPF tray) failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the tray for overfilling.

   Is the paper tray overfilled?

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

4. Remove the excess paper from the MPF tray.

   Does the problem remain?

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

5. Check the paper condition in the MPF tray.

   Is the paper crumpled or damaged?

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

6. Replace the crumpled or damaged paper.

   Does the problem remain?

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

7. Check the condition of the MPF pick rollers.

   Are the pick rollers free from excess wear, contamination, and damage?

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

8. Replace the pick rollers.

   Does the problem remain?

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

9. Perform the following tests:
   a. Check the pick rollers for proper installation.
   b. Firmly press the pick roller assembly upward to make sure that it is properly engaged to the shaft.

   Is the pick roller assembly properly installed?

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

10. Reinstall the pick roller assembly.

    Does the problem remain?

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

11. Check the paper path exiting the tray.

    Is the paper path free of fragments and contamination?

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

12. Clean the paper path.

    Does the problem remain?

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

13. Check the tray paper path and drive gears for damage, and replace the tray if necessary.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Sensor tests

    b. Find the sensor (MPF/pass-through).

    Does the sensor status change while toggling the sensor?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

15. Check the sensor cable for proper connection and damage, and replace if necessary.

Does the problem remain?

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

16. Check the sensor for damage, and replace if necessary.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Duplex/MPF

    b. Select a setting, and then touch **Start**.

    Does the motor run?

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

18. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

19. Perform the following tests:
    a. Replace the motor. See Motor (duplex/MPF) removal on page 446.

    b. Perform a print job.

    Does the problem remain?

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

Sensor (MPF/pass-through): Paper (tray 2) failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the tray for overfilling.

   Is the tray overfilled?

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

4. Remove the excess paper from the tray.

   Does the problem remain?

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

5. Check the paper condition in the tray.

   Is the paper crumpled or damaged?

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

6. Replace the crumpled or damaged paper.

   Does the problem remain?

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

7. Check the condition of the tray 2 pick rollers.

   Are the pick rollers free from excess wear, contamination, and damage?

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

8. Replace the pick rollers.

   Does the problem remain?

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

9. Perform the following tests:
   a. Check the pick rollers for proper installation.
   b. Firmly press the pick roller assembly upward to make sure that it is properly engaged to the shaft.

   Is the pick roller assembly properly installed?

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

10. Reinstall the pick roller assembly.

    Does the problem remain?

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

11. Check the paper path exiting the tray.

    Is the paper path free of fragments and contamination?

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

12. Clean the paper path.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Sensor tests

    b. Find the sensor (MPF/pass-through).

    Does the sensor status change while toggling the sensor?

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

14. Check the sensor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

15. Check the sensor for damage, and replace if necessary.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Pick (tray 2)

    b. Select a setting, and then touch **Start**.

    Does the motor run?

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

17. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

    - **Yes**:

Go to the next step.

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

18. Perform the following tests:
    a. Replace the motor (550-sheet tray pass-through). See Motor (550-sheet tray pass-through) removal on page 495.
    b. Perform a print job.

    Does the problem remain?

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

19. Perform the following tests:
    a. Replace the media feeder. See Media feeder removal on page 492.
    b. Perform a print job.

    Does the problem remain?

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

Sensor (MPF/pass-through): Paper (tray 3) failed to arrive service check

1. Perform the following tests:
    a. From the home screen, touch **Settings > Device > Preferences**.
    b. Check if the paper size matches the size set on the tray guides.

    Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

    Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (MPF/pass-through).

   Does the sensor status change while toggling the sensor?

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

4. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

5. Check the sensor for damage and replace if necessary.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Pass-through (tray 2)).

   Does the sensor status change while toggling the sensor?

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

7. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

8. Check the sensor for damage and replace if necessary. See Sensor (550-sheet tray pass-through) removal on page 497.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Motor tests > Pass-through (tray 2)

   b. Select a setting, and then touch **Start**.

   Does the motor run?

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

10. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

11. Perform the following tests:
    a. Replace the motor (550-sheet tray pass-through). See Motor (550-sheet tray pass-through) removal on page 495.

    b. Perform a print job.

    Does the problem remain?

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

Sensor (MPF/pass-through): Paper (tray 4) failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.

   b. Check if the paper size matches the size set on the tray guides.

Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path in tray 3 for paper jams and fragments.

   Is the paper path free of jams and fragments?

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

4. Remove the paper jams and fragments.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (MPF/pass-through).

   Does the sensor status change while toggling the sensor?

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

6. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

The problem is solved.

7. Check the sensor for damage and replace if necessary.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Pass-through (tray 2)).

   Does the sensor status change while toggling the sensor?

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

9. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

10. Check the sensor for damage and replace if necessary. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Sensor tests

    b. Find the sensor (Pass-through (tray 3)).

    Does the sensor status change while toggling the sensor?

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

Go to the next step.

12. Check the sensor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

13. Check the sensor for damage and replace if necessary. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Pass-through (tray 2)

    b. Touch **Start**.

    Does the motor run?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

15. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

16. Perform the following tests:
    a. Replace the motor (550-sheet tray pass-through). See Motor (550-sheet tray pass-through) removal on page 495.

    b. Perform a print job.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Pass-through (tray 3)

    b. Touch **Start**.

    Does the motor run?

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

18. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

19. Perform the following tests:
    a. Replace the motor (550-sheet tray pass-through). See Motor (550-sheet tray pass-through) removal on page 495.
    b. Perform a print job.

    Does the problem remain?

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

Sensor (MPF/pass-through) static jam service check

1. Perform the following tests:
    a. From the home screen, touch **Settings > Device > Preferences**.
    b. Check if the paper size matches the size set on the tray guides.

    Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

    Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (MPF/pass-through).

   Does the sensor status change while toggling the sensor?

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

4. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

5. Perform the following tests:
   a. Check the isolation unit for damage, and replace if necessary. See Isolation unit removal on page 490.
   b. Perform a print job.

   Does the problem remain?

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

Motor (duplex/MPF) jam service check

1. Check if this is a duplex issue.

   Is this a duplex issue?

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

2. Check the MPF tray for overfilling.

Is the tray overfilled?

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

3. Remove the excess paper from the tray.

   Does the problem remain?

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

4. Check the paper condition in the MPF tray.

   Is the paper crumpled or damaged?

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

5. Replace the crumpled or damaged paper.

   Does the problem remain?

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

6. Check the duplex and MPF paper path exiting tray 1.

   Is the paper path free of fragments and contamination?

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

7. Clean the paper path.

   Does the problem remain?

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

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

Printer diagnostics & adjustments > Motor tests > Duplex/MPF

b. Select a setting, and then touch **Start**.

Does the motor run?

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

9. Check the cable on the JMTR1 connector on the controller board for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

10. Perform the following tests:
    a. Replace the motor (duplex/MPF). See Motor (duplex/MPF) removal on page 446.
    b. Perform a duplex or MPF feed test.

    Does the problem remain?

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

241 paper jams

241 paper jam messages

Error code	Description	Action
241.12	Paper fed from tray 1 covered the sensor (tray 1 pick) earlier than expected.	See Sensor (tray 1 pick): Paper arrived too early service check on page 178.
241.14	Paper fed from tray 1 cleared the sensor (tray 1 pick) earlier than expected.	See Sensor (tray 1 pick): Paper arrived too early service check on page 178.
241.15	Paper fed from tray 1 never cleared the sensor (tray 1 pick).	See Sensor (tray 1 pick): Paper failed to clear service check on page 172.

Error code	Description	Action
241.16	Paper fed from tray 1 was never detected by the sensor (tray 1 pick).	See Sensor (tray 1 pick): Paper failed to arrive service check on page 174.
241.82 241.83	The motor (tray 1 pick) failed to achieve expected speed or has stalled.	See Motor (tray 1 pick) jam service check on page 182.
241.84	Failed to pick last sheet of paper.	See Tray actuator and spring service check on page 183.
241.91	Paper remains detected at the sensor (tray 1 pick) after the printer is turned on.	See Sensor (tray 1 pick) static jam service check on page 181.

Sensor (tray 1 pick): Paper failed to clear service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the paper path for paper jams and fragments.

   Is the paper path free of jams and fragments?

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

4. Remove the paper jams and fragments.

   Does the problem remain?

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

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

5. Check the tray paper path and drive gears for damage, and replace the tray if necessary.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Input).

   Does the sensor status change while toggling the sensor?

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

7. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

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

8. Check the sensor for damage and replace if necessary. See Sensor (input) removal on page 466.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Motor tests > Isolation

   b. Touch **Start**.

   Does the motor run?

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

Go to the next step.

10. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

11. Perform the following tests:
    a. Replace the isolation unit. See Isolation unit removal on page 490.
    b. Perform a print job.

    Does the problem remain?

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

Sensor (tray 1 pick): Paper failed to arrive service check

1. Perform the following tests:
    a. From the home screen, touch **Settings > Device > Preferences**.
    b. Check if the paper size matches the size set on the tray guides.

    Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

    Does the problem remain?

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

3. Check the tray for overfilling.

    Is the tray overfilled?

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

Go to step 5.

4. Remove the excess paper from the tray.

   Does the problem remain?

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

5. Check the paper condition in tray 1.

   Is the paper crumpled or damaged?

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

6. Replace the crumpled or damaged paper.

   Does the problem remain?

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

7. Check the condition of the pick rollers.

   Are the pick rollers free from excess wear, contamination, and damage?

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

8. Replace the pick rollers.

   Does the problem remain?

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

9. Perform the following tests:
   a. Check the pick rollers for proper installation.
   b. Firmly press the pick roller assembly upward to make sure that it is properly engaged to the shaft.

   Is the pick roller assembly properly installed?

   - **Yes**:
     Go to step 11.

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

10. Reinstall the pick roller assembly.

    Does the problem remain?

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

11. Check the paper path exiting the paper tray.

    Is the paper path free of fragments and contamination?

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

12. Clean the paper path.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Sensor tests

    b. Find the sensor (Input).

    Does the sensor status change while toggling the sensor?

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

14. Check the sensor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

15. Check the sensor for damage, and replace if necessary. See Sensor (input) removal on page 466.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests > Pick (tray 1)

    b. Select a setting, and then touch **Start**.

    Does the motor run?

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

17. Check the motor cable for proper connection and damage, and replace if necessary.

    Does the problem remain?

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

18. Perform the following tests:
    a. Replace the motor (tray 1 pick).
    b. Perform a print job.

    Does the problem remain?

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

19. Perform the following tests:
    a. Replace the media feeder. See Media feeder removal on page 492.
    b. Perform a print job.

    Does the problem remain?

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

Sensor (tray 1 pick): Paper arrived too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the tray for overfilling.

   Is the tray overfilled?

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

4. Remove the excess paper from the tray.

   Does the problem remain?

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

5. Check the paper path along the tray exit.

   Is the paper path free of fragments and contamination?

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

6. Clean the paper path.

   Does the problem remain?

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

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

7. Perform a print job.

   Does the problem remain?

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

Sensor (tray 1 pick): Paper cleared too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

3. Check the tray for overfilling.

   Is the tray overfilled?

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

4. Remove the excess paper from the tray.

   Does the problem remain?

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

5. Check the paper condition in the tray.

Is the paper crumpled or damaged?

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

6. Replace the crumpled or damaged paper.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Input).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 9.
   - **No**:
     The problem is solved.

8. Check the sensor cable for proper connection, and then reseat if necessary.

   Does the problem remain?

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

9. Replace the sensor. See Sensor (input) removal on page 466.

   Does the problem remain?

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

10. Perform a print job.

    Does the problem remain?

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

The problem is solved.

Sensor (tray 1 pick) static jam service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

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

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Tray 1 pick).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

4. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Check the sensor (Tray 1 pick) for damage. If necessary, replace the isolation unit. See Isolation unit removal on page 490.
   b. Perform a print job.

Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Motor (tray 1 pick) jam service check

1. Check the tray for overfilling.

   Is the tray overfilled?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.

2. Remove the excess paper from the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the paper condition in the tray.

   Is the paper crumpled or damaged?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

4. Replace the crumpled or damaged paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the paper path exiting the tray.

   Is the paper path free of fragments and contamination?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Clean the paper path.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Motor tests > Pick (tray 1)

   b. Select a setting, and then touch **Start**.

   Does the motor run?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

8. Check the motor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. Replace the motor (tray 1 pick).
   b. Perform a print job.

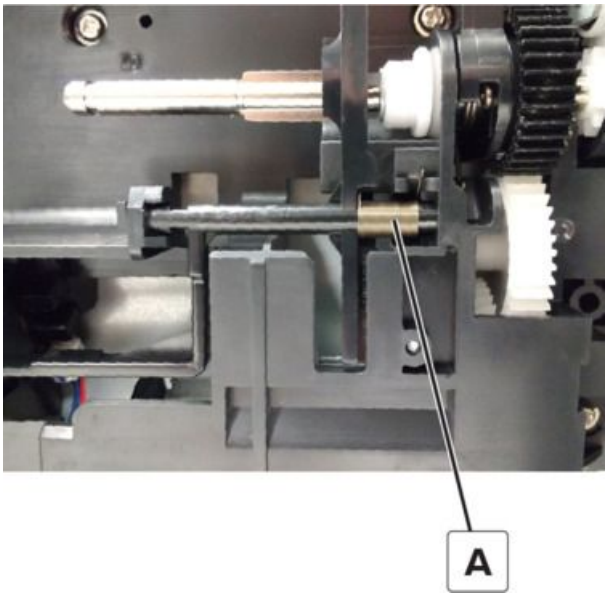
   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Tray actuator and spring service check

1. Perform the following tests:
   a. Remove the imaging kit.
   b. Remove the affected tray insert.
   c. Remove the pick roller from the tray.
   d. Place the printer on its side.

e. Check if the spring (A) on the flag is installed properly.



Is the spring installed properly?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

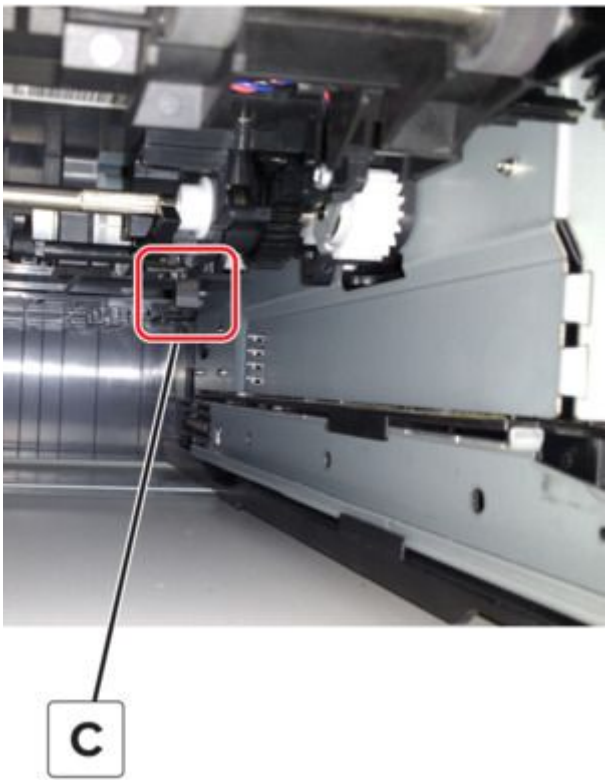
2. Perform the following tests:
   a. Remove the tray empty sensor actuator. See 550-sheet tray empty sensor actuator removal on page 501.
   b. Reseat the spring (B) on the flag as shown.



c. Reinstall the flag.

d. Reseat the media feeder. See Media feeder removal on page 492.

e. Press the media feeder actuator (C), and then check if the flag drops.



Did the flag drop?

- **Yes**:
  Go to step 4.
- **No**:
  Go to the next step.

3. Perform the following tests:
   a. Replace the media feeder. See Media feeder removal on page 492.
   b. Perform a feed test until the tray is out of paper.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

4. Perform a feed test until the tray is out of paper.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

242–244 paper jams

242 paper jam messages

Error code	Description	Action
242.xx	Paper fed from tray 3 or tray 4 remains at Tray 2 (RFID Option) for a longer period of time.	See RFID Option jam service check on page 223.
242.21	Paper fed from tray 2 remains detected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge) after the printer is turned on.	See Sensors (tray [x] trailing edge and pass-through) static jam service check on page 193.
242.22	Paper fed from tray 2 was detected earlier than expected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check on page 195.
242.24	Paper fed from tray 2 cleared the sensor (tray 2 pass-through) or the sensor (tray 2 trailing edge) earlier than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check on page 205.
242.25	Paper fed from tray 2 cleared the sensor (tray 2 pass-through) or the sensor (tray 2 trailing edge) later than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check on page 208.
242.26	Paper fed from tray 2 was picked but it never arrived at the sensor (tray 2 trailing edge).	See Sensor (tray [x] pass-through): Tray [x] failed to pick service check on page 211.
242.27	Paper fed from tray 2 never cleared the sensor (tray 2 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check on page 215.
242.28	Paper fed from tray 2 was detected later than expected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check on page 218.
242.31	Paper fed from tray 3 remains detected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge) after the printer is turned on.	See Sensors (tray [x] trailing edge and pass-through) static jam service check on page 193.
242.32	Paper fed from tray 3 was detected earlier than expected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check on page 195.

Error code	Description	Action
242.33	Paper fed from tray 3 never arrived at the sensor (tray 2 pass-through).	See Sensor (tray 2 pass-through): Paper failed to arrive service check on page 198.
242.34	Paper fed from tray 3 cleared the sensor (tray 2 pass-through) or the sensor (tray 2 trailing edge) earlier than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check on page 205.
242.35	Paper fed from tray 3 cleared the sensor (tray 2 pass-through) or the sensor (tray 2 trailing edge) later than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check on page 208.
242.37	Paper fed from tray 3 never cleared the sensor (tray 2 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check on page 215.
242.38	Paper fed from tray 3 was detected later than expected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check on page 218.
242.41	Paper fed from tray 4 remains detected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge) after the printer is turned on.	See Sensors (tray [x] trailing edge and pass-through) static jam service check on page 193.
242.42	Paper fed from tray 4 was detected earlier than expected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check on page 195.
242.43	Paper fed from tray 4 never arrived at the sensor (tray 2 pass-through).	See Sensor (tray 2 pass-through): Paper failed to arrive service check on page 198.
242.44	Paper fed from tray 4 cleared the sensor (tray 2 pass-through) or the sensor (tray 2 trailing edge) earlier than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check on page 205.
242.45	Paper fed from tray 4 cleared the sensor (tray 2 pass-through) or the sensor (tray 2 trailing edge) later than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check on page 208.
242.47	Paper fed from tray 4 never cleared the sensor (tray 2 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check on page 215.

Error code	Description	Action
242.48	Paper fed from tray 4 was detected later than expected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check on page 218.
242.84	Failed to pick last sheet of paper.	See Tray actuator and spring service check on page 183.
242.91	Paper remains detected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge) after the printer is turned on. Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through) static jam service check on page 193.
242.92	Paper was detected earlier than expected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge). Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check on page 195.
242.93	Paper never arrived at the sensor (tray 2 pass-through). Paper source is undetermined.	See Sensor (tray 2 pass-through): Paper failed to arrive service check on page 198.
242.94	Paper cleared the sensor (tray 2 pass-through) or the sensor (tray 2 trailing edge) earlier than expected. Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check on page 205.
242.95	Paper cleared the sensor (tray 2 pass-through) or the sensor (tray 2 trailing edge) later than expected. Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check on page 208.
242.96	Paper was picked but it never arrived at the sensor (tray 2 trailing edge). Paper source is undetermined.	See Sensor (tray [x] pass-through): Tray [x] failed to pick service check on page 211.
242.97	Paper never cleared the sensor (tray 2 trailing edge). Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check on page 215.
242.98	Paper was detected later than expected at the sensor (tray 2 pass-through) or at the sensor (tray 2 trailing edge). Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check on page 218.

243 paper jam messages

Error code	Description	Action
243.31	Paper fed from tray 3 remains detected at the sensor (tray 3 pass-through) or at the sensor (tray 3 trailing edge) after the printer is turned on.	See Sensors (tray [x] trailing edge and pass-through) static jam service check on page 193 .
243.32	Paper fed from tray 3 was detected earlier than expected at the sensor (tray 3 pass-through) or at the sensor (tray 3 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check on page 195.
243.34	Paper fed from tray 3 cleared the sensor (tray 3 pass-through) or the sensor (tray 3 trailing edge) earlier than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check on page 205.
243.35	Paper fed from tray 3 cleared the sensor (tray 3 pass-through) or the sensor (tray 3 trailing edge) later than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check on page 208.
243.36	Paper fed from tray 3 was picked but it never arrived at the sensor (tray 3 trailing edge).	See Sensor (tray [x] pass-through): Tray [x] failed to pick service check on page 211.
243.37	Paper fed from tray 3 never cleared the sensor (tray 3 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check on page 215.
243.38	Paper fed from tray 3 was detected later than expected at the sensor (tray 3 pass-through) or at the sensor (tray 3 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check on page 218.
243.41	Paper fed from tray 4 remains detected at the sensor (tray 3 pass-through) or at the sensor (tray 3 trailing edge) after the printer is turned on.	See Sensors (tray [x] trailing edge and pass-through) static jam service check on page 193 .
243.42	Paper fed from tray 4 was detected earlier than expected at the sensor (tray 3 pass-through) or at the sensor (tray 3 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check on page 195.
243.43	Paper fed from tray 4 never arrived at the sensor (tray 3 pass-through).	See Sensor (tray 3 pass-through): Paper failed to arrive service check on page 201.

Error code	Description	Action
243.44	Paper fed from tray 4 cleared the sensor (tray 3 pass-through) or the sensor (tray 3 trailing edge) earlier than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check on page 205.
243.45	Paper fed from tray 4 cleared the sensor (tray 3 pass-through) or the sensor (tray 3 trailing edge) later than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check on page 208.
243.47	Paper fed from tray 4 never cleared the sensor (tray 3 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check on page 215.
243.48	Paper fed from tray 4 was detected later than expected at the sensor (tray 3 pass-through) or at the sensor (tray 3 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check on page 218.
243.84	Failed to pick last sheet of paper.	See Tray actuator and spring service check on page 183.
243.91	Paper remains detected at the sensor (tray 3 pass-through) or at the sensor (tray 3 trailing edge) after the printer is turned on. Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through) static jam service check on page 193 .
243.92	Paper was detected earlier than expected at the sensor (tray 3 pass-through) or at the sensor (tray 3 trailing edge). Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check on page 195.
243.93	Paper never arrived at the sensor (tray 3 pass-through). Paper source is undetermined.	See Sensor (tray 3 pass-through): Paper failed to arrive service check on page 201.
243.94	Paper cleared the sensor (tray 3 pass-through) or the sensor (tray 3 trailing edge) earlier than expected. Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check on page 205.
243.95	Paper cleared the sensor (tray 3 pass-through) or the sensor (tray 3 trailing edge) later than expected. Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check on page 208.
243.96	Paper was picked but it never arrived at the sensor (tray 3 trailing edge). Paper source is undetermined.	See Sensor (tray [x] pass-through): Tray [x] failed to pick service check on page 211.

Error code	Description	Action
243.97	Paper never cleared the sensor (tray 3 trailing edge). Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check on page 215.
243.98	Paper was detected later than expected at the sensor (tray 3 pass-through) or at the sensor (tray 3 trailing edge). Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check on page 218.

244 paper jam messages

Error code	Description	Action
244.41	Paper fed from tray 4 remains detected at the sensor (tray 4 pass-through) or at the sensor (tray 4 trailing edge) after the printer is turned on.	See Sensors (tray [x] trailing edge and pass-through) static jam service check on page 193 .
244.42	Paper fed from tray 4 was detected earlier than expected at the sensor (tray 4 pass-through) or at the sensor (tray 4 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check on page 195.
244.44	Paper fed from tray 4 cleared the sensor (tray 4 pass-through) or the sensor (tray 4 trailing edge) earlier than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check on page 205.
244.45	Paper fed from tray 4 cleared the sensor (tray 4 pass-through) or the sensor (tray 4 trailing edge) later than expected.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check on page 208.
244.46	Paper fed from tray 4 was picked but it never arrived at the sensor (tray 4 trailing edge).	See Sensor (tray [x] pass-through): Tray [x] failed to pick service check on page 211.
244.47	Paper fed from tray 4 never cleared the sensor (tray 4 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check on page 215.
244.48	Paper fed from tray 4 was detected later than expected at the sensor (tray 4 pass-through) or at the sensor (tray 4 trailing edge).	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check on page 218.
244.84	Failed to pick last sheet of paper.	See Tray actuator and spring service check on page 183.

Error code	Description	Action
244.91	Paper remains detected at the sensor (tray 4 pass-through) or at the sensor (tray 4 trailing edge) after the printer is turned on. Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through) static jam service check on page 193 .
244.92	Paper was detected earlier than expected at the sensor (tray 4 pass-through) or at the sensor (tray 4 trailing edge). Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check on page 195.
244.94	Paper cleared the sensor (tray 4 pass-through) or the sensor (tray 4 trailing edge) earlier than expected. Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check on page 205.
244.95	Paper cleared the sensor (tray 4 pass-through) or the sensor (tray 4 trailing edge) later than expected. Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check on page 208.
244.96	Paper was picked but it never arrived at the sensor (tray 4 trailing edge). Paper source is undetermined.	See Sensor (tray [x] pass-through): Tray [x] failed to pick service check on page 211.
244.97	Paper never cleared the sensor (tray 4 trailing edge). Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check on page 215.
244.98	Paper was detected later than expected at the sensor (tray 4 pass-through) or at the sensor (tray 4 trailing edge). Paper source is undetermined.	See Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check on page 218.

Sensors (tray [x] trailing edge and pass-through) static jam service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 3.
   - **No**:

Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Remove the partially fed or jammed paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Sensor tests

   b. Find the sensor (Trailing edge (tray [x])).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

6. Reseat the sensor cable, and then check the sensor for misalignment and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Reinstall or replace the sensor. See Sensor (550-sheet tray trailing edge) removal on page 498.

   Does the problem remain?

   - **Yes**:

Go to the next step.

- **No**:
  The problem is solved.

8. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Sensor tests

   b. Find the sensor (Pass-through (tray [x])).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

9. Reseat the sensor cable, and then check the sensor for misalignment and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Reinstall or replace the sensor. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

Does the paper size match the size set on the tray?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Remove the partially fed or jammed paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Sensor tests

   b. Find the sensor (Trailing edge (tray [x])).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

6. Reseat the sensor cable, and then check the sensor for misalignment and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:

Go to the next step.

7. Reinstall or replace the sensor. See Sensor (550-sheet tray trailing edge) removal on page 498.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Sensor tests

   b. Find the sensor (Pass-through (tray [x])).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

9. Reseat the sensor cable, and then check the sensor for misalignment and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Reinstall or replace the sensor. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensor (tray 2 pass-through): Paper failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the paper or change the paper size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the paper tray for overfilling.

   Is the paper tray overfilled?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Remove the excess paper from the tray.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

7. Check the paper condition in the tray.

   Is the paper crumpled or damaged?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 9.

8. Replace the crumpled or damaged paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Remove the partially fed or jammed paper.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Sensor tests

    b. Find the sensor (Pass-through (tray 2)).

    Does the sensor status change while toggling the sensor?

    - **Yes**:
      Go to step 14.
    - **No**:
      Go to the next step.

12. Reseat the sensor cable, and then check the sensor for misalignment and damage.

Is the sensor properly installed and free of damage?

- **Yes**:
  Go to step 14.
- **No**:
  Go to the next step.

13. Reinstall or replace the sensor. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

14. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Motor tests

    b. Find the motor (Pass-through (tray 2)), and then touch **Start**.

    Does the motor run?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

15. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

16. Reinstall or replace the motor. See Motor (550-sheet tray pass-through) removal on page 495.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

17. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Motor tests

    b. Find the motor (Pass-through (tray 3)), and then touch **Start**.

Does the motor run?

- **Yes**:
  Go to step 20.
- **No**:
  Go to the next step.

18. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:
      Go to step 20.
    - **No**:
      Go to the next step.

19. Reinstall or replace the motor. See Motor (550-sheet tray pass-through) removal on page 495.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

20. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensor (tray 3 pass-through): Paper failed to arrive service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

3. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the paper or change the paper size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the paper tray for overfilling.

   Is the paper tray overfilled?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Remove the excess paper from the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the paper condition in the tray.

   Is the paper crumpled or damaged?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 9.

8. Replace the crumpled or damaged paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

9. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Remove the partially fed or jammed paper.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Sensor tests

    b. Find the sensor (Pass-through (tray 3)).

    Does the sensor status change while toggling the sensor?

    - **Yes**:
      Go to step 14.
    - **No**:
      Go to the next step.

12. Reseat the sensor cable, and then check the sensor for misalignment and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Go to step 14.
    - **No**:
      Go to the next step.

13. Reinstall or replace the sensor. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

14. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

Additional input tray diagnostics > Motor tests

b. Find the motor (Pass-through (tray 3)), and then touch **Start**.

Does the motor run?

- **Yes**:
  Go to step 17.
- **No**:
  Go to the next step.

15. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

16. Reinstall or replace the motor. See Motor (550-sheet tray pass-through) removal on page 495.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

17. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Motor tests

    b. Find the motor (Pass-through (tray 4)), and then touch **Start**.

    Does the motor run?

    - **Yes**:
      Go to step 20.
    - **No**:
      Go to the next step.

18. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:
      Go to step 20.
    - **No**:
      Go to the next step.

19. Reinstall or replace the motor. See Motor (550-sheet tray pass-through) removal on page 495.

    Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

20. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the paper or change the paper size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

5. Check the paper tray for overfilling.

   Is the paper tray overfilled?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Remove the excess paper from the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the paper condition in the tray.

   Is the paper crumpled or damaged?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 9.

8. Replace the crumpled or damaged paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Sensor tests

   b. Find the sensor (Trailing edge (tray [x])).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 12.
   - **No**:
     Go to the next step.

10. Reseat the sensor cable, and then check the sensor for misalignment and damage.

    Is the sensor properly installed and free of damage?

- **Yes**:
  Go to step 12.
- **No**:
  Go to the next step.

11. Reinstall or replace the sensor. See Sensor (550-sheet tray trailing edge) removal on page 498.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

12. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Sensor tests

    b. Find the sensor (Pass-through (tray [x])).

    Does the sensor status change while toggling the sensor?

    - **Yes**:
      Go to step 15.
    - **No**:
      Go to the next step.

13. Reseat the sensor cable, and then check the sensor for misalignment and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Go to step 15.
    - **No**:
      Go to the next step.

14. Reinstall or replace the sensor. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

15. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the paper or change the paper size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the primary paper path for paper jams and obstructions.

   Is the paper path free of jams and obstructions?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Remove the paper jams and obstructions.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

7. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Sensor tests

   b. Find the sensor (Trailing edge (tray [x])).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

8. Reseat the sensor cable, and then check the sensor for misalignment and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Reinstall or replace the sensor. See Sensor (550-sheet tray trailing edge) removal on page 498.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Printer diagnostics & adjustments > Motor tests

    b. Find the motor (Duplex/MPF), and then touch **Start**.

    Does the motor run?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

11. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:

Go to step 13.

- **No**:
  Go to the next step.

12. Reinstall or replace the motor. See Motor (duplex/MPF) removal on page 446.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Sensor tests

    b. Find the sensor (Pass-through (tray [x])).

    Does the sensor status change while toggling the sensor?

    - **Yes**:
      Go to step 16.
    - **No**:
      Go to the next step.

14. Reseat the sensor cable, and then check the sensor for misalignment and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Go to step 16.
    - **No**:
      Go to the next step.

15. Reinstall or replace the sensor. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

16. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Motor tests

    b. Find the motor (Pass-through (tray [x])), and then touch **Start**.

    Does the motor run?

    - **Yes**:
      Go to step 19.

- **No**:
  Go to the next step.

17. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:
      Go to step 19.
    - **No**:
      Go to the next step.

18. Reinstall or replace the motor. See Motor (550-sheet tray pass-through) removal on page 495.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

19. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensor (tray [x] pass-through): Tray [x] failed to pick service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the paper or change the paper size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the paper tray for overfilling.

   Is the paper tray overfilled?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Remove the excess paper from the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the paper condition in the tray.

   Is the paper crumpled or damaged?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 9.

8. Replace the crumpled or damaged paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. Check the pick rollers for proper installation.

b. Fully press the pick roller assembly upward to make sure that the mounting latches are properly engaging the slot on the shaft.

Is the pick roller assembly properly installed?

- **Yes**:
  Go to step 11.
- **No**:
  Go to the next step.

10. Reinstall the pick roller assembly.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Check the condition of the pick rollers.

    Are the pick rollers free from excess wear, contamination, and damage?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Replace the pick rollers.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Check the paper path exiting the paper tray.

    Is the paper path free of fragments and contamination?

    - **Yes**:
      Go to step 15.
    - **No**:
      Go to the next step.

14. Clean the paper path.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

15. Perform the following tests:

a. Enter the Diagnostics menu, and then navigate to:

Additional input tray diagnostics > Sensor tests

b. Find the sensor (Trailing edge (tray [x])).

Does the sensor status change while toggling the sensor?

- **Yes**:
  Go to step 18.
- **No**:
  Go to the next step.

16. Reseat the sensor cable, and then check the sensor for misalignment and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Go to step 18.
    - **No**:
      Go to the next step.

17. Reinstall or replace the sensor. See Sensor (550-sheet tray trailing edge) removal on page 498.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

18. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

    Additional input tray diagnostics > Motor tests > Motor tests > Pick (tray [x])

    b. Select a setting, and then touch **Start**.

    Does the motor run?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.

19. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.

20. Reinstall or replace the motor. See 550-sheet tray paper feeder removal on page 496.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

21. Replace the media feeder. See Media feeder removal on page 492.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

22. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the paper path for partially fed or jammed paper.

   Is the paper path free of partially fed or jammed paper?

- **Yes**:
  Go to step 5.
- **No**:
  Go to the next step.

4. Remove the partially fed or jammed paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Sensor tests

   b. Find the sensor (Trailing edge (tray [x])).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

6. Reseat the sensor cable, and then check the sensor for misalignment and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Reinstall or replace the sensor. See Sensor (550-sheet tray trailing edge) removal on page 498.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests

   b. Find the motor (Duplex/MPF), and then touch **Start**.

   Does the motor run?

   - **Yes**:

Go to step 11.

- **No**:
  Go to the next step.

9. Reseat the motor cable, and then check the motor for misalignment and damage.

   Is the motor properly installed and free of damage?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Reinstall or replace the motor. See Motor (duplex/MPF) removal on page 446.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Sensor tests

    b. Find the sensor (Pass-through (tray [x])).

    Does the sensor status change while toggling the sensor?

    - **Yes**:
      Go to step 14.
    - **No**:
      Go to the next step.

12. Reseat the sensor cable, and then check the sensor for misalignment and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Go to step 14.
    - **No**:
      Go to the next step.

13. Reinstall or replace the sensor. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

14. Perform the following tests:

a. Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > Motor tests

b. Find the motor (Pass-through (tray [x])), and then touch **Start**.

Does the motor run?

- **Yes**:
  Go to step 17.
- **No**:
  Go to the next step.

15. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

16. Reinstall or replace the motor. See Motor (550-sheet tray pass-through) removal on page 495.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

17. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 3.
   - **No**:

Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the paper or change the paper size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the paper tray for overfilling.

   Is the paper tray overfilled?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Remove the excess paper from the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the paper condition in the tray.

   Is the paper crumpled or damaged?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 9.

8. Replace the crumpled or damaged paper.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

9. Check the tray separator pad for proper installation and damage.

   Is the separator pad properly installed and free of damage?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Reinstall or replace the separator pad.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Check the condition of the tray pick rollers.

    Are the pick rollers free from excess wear, contamination, and damage?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Replace the pick rollers.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Check the paper path exiting the paper tray.

    Is the paper path free of fragments and contamination?

    - **Yes**:
      Go to step 15.
    - **No**:
      Go to the next step.

14. Clean the paper path.

    Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

15. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Sensor tests

    b. Find the sensor (Trailing edge (tray [x])).

    Does the sensor status change while toggling the sensor?

    - **Yes**:
      Go to step 18.
    - **No**:
      Go to the next step.

16. Reseat the sensor cable, and then check the sensor for misalignment and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Go to step 18.
    - **No**:
      Go to the next step.

17. Reinstall or replace the sensor. See Sensor (550-sheet tray trailing edge) removal on page 498.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

18. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Motor tests > Pick (tray [x])

    b. Select a setting, and then touch **Start**.

    Does the motor run?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.

19. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:

Go to step 21.

- **No**:
  Go to the next step.

20. Reinstall or replace the motor. See 550-sheet tray paper feeder removal on page 496.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

21. Replace the media feeder. See Media feeder removal on page 492.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

22. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Sensor tests

    b. Find the sensor (Pass-through (tray [x])).

    Does the sensor status change while toggling the sensor?

    - **Yes**:
      Go to step 25.
    - **No**:
      Go to the next step.

23. Reseat the sensor cable, and then check the sensor for misalignment and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Go to step 25.
    - **No**:
      Go to the next step.

24. Reinstall or replace the sensor. See Sensor (550-sheet tray pass-through) removal on page 497.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

25. Perform the following tests:

a. Enter the Diagnostics menu, and then navigate to:

Additional input tray diagnostics > Motor tests

b. Find the motor (Pass-through (tray [x])), and then touch **Start**.

Does the motor run?

- **Yes**:
  Go to step 28.
- **No**:
  Go to the next step.

26. Reseat the motor cable, and then check the motor for misalignment and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:
      Go to step 28.
    - **No**:
      Go to the next step.

27. Reinstall or replace the motor. See Motor (550-sheet tray pass-through) removal on page 495.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

28. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

RFID Option jam service check

1. Remove Tray 1 insert, and then check if you can pull the media out of the RFID Option.

   Can you remove the media from the RFID Option?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.

2. Remove the jammed media.

   Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

3. Perform the following tests:
   a. Reinstall Tray 1 insert, and then remove Tray 3 insert.
   b. Pull the jammed media out of the RFID Option.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

User attendance messages

Non-Lexmark supply

The printer has detected a non-Lexmark supply or part installed in the printer.
The Lexmark printer is designed to function best with genuine Lexmark supplies and parts. Use of third-party supplies or parts may affect the performance, reliability, or life of the printer and its imaging components.
All life indicators are designed to function with Lexmark supplies and parts and may deliver unpredictable results if third-party supplies or parts are used. Imaging component usage beyond the intended life may damage the Lexmark printer or associated components.

Warning—Potential Damage
Use of third-party supplies or parts can affect warranty coverage. Damage caused by the use of third-party supplies or parts may not be covered by the warranty.

If a customer accepts any and all of these risks and proceeds with the use of non-genuine supplies or parts in the printer, then instruct the customer to press and hold **X** and # simultaneously from the control panel for 15 seconds. Do not perform this action yourself.
If a customer does not want to accept these risks, then remove the third-party supply or part from the printer and install a genuine Lexmark supply or part. For more information, see Using genuine Lexmark parts and supplies.
If the printer does not print after pressing and holding **X** and # simultaneously for 15 seconds, then instruct the customer to reset the supply usage counter.

1. From the control panel, navigate to:

   Settings > Device > Maintenance > Configuration Menu > Supply Usage And Counters
2. Select the part or supply to reset, and then select **Start**.
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 should return the item to the place of purchase.

31 user attendance errors

31 user attendance error messages

Error code	Description	Action
31.40z	Smart chip communications problem. Reinstall the missing or unresponsive black cartridge.	See Missing toner, developer, or photoconductor service check on page 227.
31.41z	Smart chip communications problem. Reinstall the missing or unresponsive cyan cartridge.	
31.42z	Smart chip communications problem. Reinstall the missing or unresponsive magenta cartridge.	
31.43z	Smart chip communications problem. Reinstall the missing or unresponsive yellow cartridge.	
31.30'	Motor (black only retract) failed to stall. Reinstall the missing transfer module.	
31.35	Analog sensor out of range. Reinstall the missing waste toner bottle.	See Waste toner bottle service check on page 235.
31.50z	Smart chip communications problem. Reinstall the missing or unresponsive black developer.	See Missing toner, developer, or photoconductor service check on page 227.
31.64z	Smart chip communications problem. Reinstall the missing or unresponsive color imaging unit.	
31.80'	All fuser sensors are out of range. Reinstall the fuser.	See Fuser service check on page 278.

Z code:

- 31.xxN— Non-genuine Lexmark supply

32 user attendance errors

32 user attendance error messages

Error code	Description	Action
32.40z	Cartridge compatibility problem. Replace the unsupported black cartridge.	See Missing toner, developer, or photoconductor service check on page 227.
32.41z	Cartridge compatibility problem. Replace the unsupported cyan cartridge.	
32.42z	Cartridge compatibility problem. Replace the unsupported magenta cartridge.	
32.43z	Cartridge compatibility problem. Replace the unsupported yellow cartridge.	
32.50z	Developer compatibility problem. Replace the unsupported black developer.	
32.64z	Color imaging unit compatibility problem. Replace the unsupported color imaging unit.	
32.80'	Printer and fuser ID mismatch. Replace the unsupported fuser.	

Z codes:

- 32.xxA— Cartridge fails the OEM_ID test
- 32.xxB— Cartridge is not compatible with the printer
- 32.xxC— Printer is not compatible with the cartridge
- 32.xxD— SWE supply reject ID mismatch
- 32.xxE— SWE reject cartridge married
- 32.xxF— Black developer fails the OEM_ID test
- 32.xxG— Color imaging unit fails the OEM_ID test
- 32.xxH— Black developer is not compatible with the printer
- 32.xxJ— Color imaging unit is not compatible with the printer
- 32.xxK— Printer is not compatible with the black imaging unit (developer and PCU)
- 32.xxL— Printer is not compatible with the color imaging kit (color developers, PCU, basket)
- 32.xxN— Non-genuine Lexmark supply

33 user attendance errors

33 user attendance error messages

Note: See Non-Lexmark supply on page 224.

Error code	Description	Action
33.40z	Non-Lexmark black cartridge. The smart chip contents have been manipulated by a third party manufacturer.	See Missing toner, developer, or photoconductor service check on page 227.
33.41z	Non-Lexmark cyan cartridge. The smart chip contents have been manipulated by a third party manufacturer.	
33.42z	Non-Lexmark magenta cartridge. The smart chip contents have been manipulated by a third party manufacturer.	
33.43z	Non-Lexmark yellow cartridge. The smart chip contents have been manipulated by a third party manufacturer.	
33.50z	Non-Lexmark black developer. The smart chip contents have been manipulated by a third party manufacturer.	
33.64z	Non-Lexmark color imaging unit. The smart chip contents have been manipulated by a third party manufacturer.	

Z codes:

- 33.xxA— Non-genuine Lexmark supply
- 33.xxB— Supply exposed

Missing toner, developer, or photoconductor service check

1. Perform the following tests:
   a. Make sure that the cartridge or photoconductor is properly installed.
   b. Check the error code on the display, and then verify if the cartridge, developer, or photoconductor is supported.
   c. Replace the unsupported supply.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Make sure that the printer model matches with the settings. Do the following:
   a. From the home screen, navigate to **Settings › Reports › Menu Settings Page**
   b. Compare the printer model with the model indicated in the Menu Settings Page.

   Does the printer model match with the settings?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

3. Perform the following tests:
   a. Remove the imaging kit, and then inspect the springs for damage or improper contact. If necessary, reposition the springs.
   b. Check cables for poor connection. If necessary, reconnect the cables.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Replace the imaging kit. Reuse the current supplies.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the HVPS and pogo pin cables for proper connection, and reseat if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the pogo pin contacts for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

7. Check the pogo pin contacts for dust or debris.

   Are the contacts free of dust or debris?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

8. Remove the dust or debris.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Toner meter).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

10. Replace the TMC card. See TMC card removal on page 446.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

42 user attendance errors

42 user attendance error messages

Error code	Description	Action
42.xyK	Printer and cartridge region mismatch. Replace the black cartridge.	See Region mismatch service check on page 231.
42.xyC	Printer and cartridge region mismatch. Replace the cyan cartridge.	
42. xyM	Printer and cartridge region mismatch. Replace the magenta cartridge.	
42. xyY	Printer and cartridge region mismatch. Replace the yellow cartridge.	
42.60	Toner cartridge region does not match the printer region.	See Toner cartridge service check on page 231.
42.60K		
42.61		
42.61K		
42.62		
42.62K		
42.63		
42.63K		
42.64		
42.64K		

xyz codes:

- x— Printer region
- y— Cartridge region
- z— Color (CMYK)

Region codes:

- 0— World Wide (WW)
- 1— North America (NA)
- 2— Europe Economic Area + extras (EEA+)
- 5— Rest of Europe, Middle East, Africa (RoEMEA)
- 7— Latin America, Asia Pacific (LAD / AP) (+Aus/ NZ)

Region mismatch service check

1. Check the region number of the cartridge and the printer.

   Do the numbers match?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

2. Install the appropriate cartridge.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Toner cartridge service check

1. Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Shake the toner cartridge.
   b. Clean the toner cartridge smart chip contacts, and then check the contacts for damage.
   c. Clean the toner cartridge spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Make sure that the toner cartridge is changed from shipped with equipment (SWE) toner to a compatible toner.

   Does the problem remain?

   - **Yes**:

Go to the next step.

- **No**:
  The problem is solved.

4. Reset the printer configuration. See Restoring the printer configuration on page 393.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

43 user attendance errors

43 user attendance error messages

Error code	Description	Action
43.41z	Cyan bottle TMC error.	See Toner meter cycle (TMC) card service check on page 356.
43.42z	Magenta bottle TMC error.	
43.43z	Yellow bottle TMC error.	

z codes:

- Y— First error, recoverable
- Z— Second error, non-recoverable

71 user attendance errors

71 user attendance messages

Error code	Description	Action
71.03	The analog line is not detected.	See Fax failure service check on page 232.

Fax failure service check

1. Turn off the printer, wait for about 10 seconds, and then turn on the printer.

   Does the problem remain?

   - **Yes**:

Go to the next step.

- **No**:
  The problem is solved.

2. Perform the following tests:
   a. Make sure that the telephone cable is properly connected to the line port of the printer.
   b. Make sure that the other end of the cable is connected to an active analog wall jack. Contact the analog phone service provider if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the line port connector pins of the fax card for corrosion and damage.

   Note: The telephone cable must properly fit with the line port.

   Is the fax card connector free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the firmware version.

   Is the firmware updated to the latest version?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Update the firmware.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Make sure that the controller board is properly installed. Reseat all the cables on the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the controller board and its connector pins for damage.

   Are the controller board and its connectors free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

8. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

80 user attendance errors

80 user attendance error messages

Error code	Description	Action
80.01	The maintenance kit is nearly low. The backup roll or fuser page count threshold has been reached.	See Maintenance kit service check on page 235.
80.09	The maintenance kit is nearly low. The user-selected EWS set point has been reached.	
80.11	The maintenance kit is low. The backup roll or fuser page count threshold has been reached.	
80.19	The maintenance kit is low. The user-selected EWS set point has been reached.	
80.21	The maintenance kit is very low. The backup roll or fuser page count threshold has been reached.	
80.29	The maintenance kit is very low. The user-selected EWS set point has been reached.	
80.31	Replace the maintenance kit. The backup roll or fuser page count threshold has been reached. The fuser may continue to function beyond end of life.	

Error code	Description	Action
80.39	Replace the maintenance kit. The user-selected EWS set point has been reached. The fuser may continue to function beyond end of life.	

Maintenance kit service check

1. Perform the following tests:
   a. Replace the required maintenance kit.
   b. Reset the maintenance counter. See Resetting the maintenance counter on page 523.

   a. Replace the required maintenance kit.
   b. Reset the maintenance counter. See Resetting the maintenance counter on page 523.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

82 user attendance errors

82 user attendance error messages

Error code	Description	Action
82.11	The waste toner bottle is nearly full. The sensor threshold has been reached.	See Waste toner bottle service check on page 235.
82.19	The waste toner bottle is nearly full. The user-selected EWS set point has been reached.	
82.31	Replace the waste toner bottle. The sensor end of life threshold has been reached.	

Waste toner bottle service check

1. Reseat the waste toner bottle.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Check if the printer is placed on a flat surface.

   Is the printer placed on a flat surface?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Place the printer on a flat surface.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the waste toner bottle contacts and waste toner contact block contacts for dust or debris.

   Are the contacts free of dust or debris?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Remove the dust or debris.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the waste toner contact block for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

83 user attendance errors

83 user attendance error messages

Error code	Description	Action
83.01	The transfer module is nearly low. The transfer module page count threshold has been reached.	
83.09	The transfer module is nearly low. The user-selected EWS set point has been reached.	
83.11	The transfer module is low. The transfer module page count threshold has been reached.	
83.19	The transfer module is low. The user-selected EWS set point has been reached.	
83.21	The transfer module is very low. The transfer module page count threshold has been reached.	
83.29	The transfer module is very low. The user-selected EWS set point has been reached.	
83.31	Replace the transfer module. The transfer module page count threshold has been reached. The transfer module may continue to function beyond end of life.	
83.39	Replace the transfer module. The user-selected EWS set point has been reached. The transfer module may continue to function beyond end of life.	

84 user attendance errors

84 user attendance error messages

Error code	Description	Action
84.01	The imaging kit is nearly low. The photoconductor threshold has been reached.	See Cartridge or photoconductor error service check on page 240.

Error code	Description	Action
84.09	The imaging kit is nearly low. The user-selected EWS set point has been reached.	
84.11	The imaging kit is low. The photoconductor threshold has been reached.	
84.19	The imaging kit is low. The user-selected EWS set point has been reached.	
84.21	The imaging kit is very low. The photoconductor threshold has been reached.	
84.29	The imaging kit is very low. The user-selected EWS set point has been reached.	
84.31	Replace the imaging kit. The imaging kit has exceeded its recommended life span. The imaging kit may continue to function beyond end of life.	
84.39	Replace the imaging kit. The imaging kit has exceeded its recommended life span. The user-selected EWS set point has been reached. The imaging kit may continue to function beyond end of life.	
84.41	Replace the imaging kit to resume printing. The photoconductor threshold for “Absolute End of Life” has been reached.	

85 user attendance errors

85 user attendance error messages

Error code	Description	Action
85.01	The black imaging unit is nearly low. The photoconductor threshold has been reached.	See Cartridge or photoconductor error service check on page 240.
85.09	The black imaging unit is nearly low. The user-selected EWS set point has been reached.	

Error code	Description	Action
85.11	The black imaging unit is low. The photoconductor threshold has been reached.	
85.19	The black imaging unit is low. The user-selected EWS set point has been reached.	
85.21	The black imaging unit is very low. The photoconductor threshold has been reached.	
85.29	The black imaging unit is very low. The user-selected EWS set point has been reached.	
85.31	Replace the black imaging unit. The black imaging unit has exceeded its recommended life span. The photoconductor threshold for “End of Life” has been reached. The black developer may continue to function beyond end of life.	
85.39	Replace black imaging unit. The black imaging unit has exceeded its recommended life span. The user-selected EWS set point has been reached. The black developer may continue to function beyond end of life.	
85.41	Replace black imaging unit to resume printing. The photoconductor threshold for “Absolute End of Life” has been reached.	

88 user attendance errors

88 user attendance error messages

Error code	Description	Action
88.01z	The cartridge is nearly low. The TMC threshold has been reached.	See Cartridge or photoconductor error service check on page 240.
88.09z	The cartridge is nearly low. The user-selected EWS set point has been reached.	

Error code	Description	Action
88.11z	The cartridge is low, and [x] estimated pages remain. The TMC threshold has been reached.	
88.19z	The cartridge is low, and [x] estimated pages remain. The user-selected EWS set point has been reached.	
88.21z	The cartridge is very low, and [x] estimated pages remain. The TMC threshold has been reached.	
88.29z	The cartridge is very low, and [x] estimated pages remain. The user-selected EWS set point has been reached.	
88.31z	The cartridge is empty. Replace the cartridge to continue printing. The TMC threshold has been reached.	
88.38z	The cartridge is empty. Replace the cartridge to continue printing. “Secure quanta expired” was declared.	
88.39z	The cartridge is empty. Replace the cartridge to continue printing. The user-selected EWS set point has been reached.	

Z codes:

- z— Color (CMYK)

Cartridge or photoconductor error service check

1. Perform the following tests:
   a. Make sure that the cartridge or photoconductor is installed.
   b. Check if the cartridge or photoconductor is supported, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:

a. Make sure that the cartridge or photoconductor is properly installed.

b. Make sure that the cartridge or photoconductor cables are properly connected.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

3. Check the cartridge or photoconductor contacts for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the controller board pins for damage, and replace if necessary. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Non-supply user attendance errors

Non-supply user attendance error messages

Error code	Description	Action
34	Short paper.	See Mismatched paper size service check on page 242.
35	Insufficient memory.	See .Insufficient memory service check on page 243
36	The resolution is reduced.	
37	No memory for collation, defrag, or held jobs.	See .Insufficient memory service check on page 243
38	Memory is full.	See .Insufficient memory service check on page 243
39	Complex page.	See .Complex page service check on page 244
44.01	Error on every page. Printer fails to program RFID tag.	See Error on every page service check on page 245.

Error code	Description	Action
44.01	Error on some pages. Printer fails to program RFID tag.	See Error on some pages service check on page 247.
44.10–44.36	Error with the incoming RFID print job data stream.	See RFID data within print job is invalid service check on page 250.
51	Defective flash memory.	See .Flash memory failure service check on page 253
52	Flash memory is full.	See .Insufficient flash memory service check on page 254
53	Unformatted flash memory.	See .Flash memory failure service check on page 253
54	Serial port or network error.	See .Flash memory failure service check on page 253
55	Unsupported option.	See Unsupported internal option service check on page 254
56	Parallel, serial, or USB port disabled.	See Disabled port service check on page 255.
57	Configuration changed – held jobs lost.	--
58	Too many flash options or trays.	See Excess options service check on page 256.
58.xx	Optional tray is defective or incorrectly installed.	See Hardware failure service check on page 251.
59	Incompatible option or tray.	See Incompatible hardware option service check on page 258.
61	Defective hard disk.	See .Hard disk failure service check on page 258
62	Hard disk is full.	See .Hard disk failure service check on page 258
63	Unformatted hard disk.	Format the hard disk.
64	Unsupported hard disk format.	Format the hard disk.

Mismatched paper size service check

1. Perform the following tests:
   a. From the home screen, touch **Settings > Device > Preferences**.
   b. Check if the paper size matches the size set on the tray guides.

   Does the paper size match the size set on the tray?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

2. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the controller board pins for damage, and replace if necessary. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Insufficient memory service check

1. Reset the printer, and then navigate to:

   Paper Menu > Print Settings > Download Target > Disk

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. If applicable, install extra memory card.

   If applicable, make sure that the additional memory card is properly installed.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the controller board pins for damage, and replace if necessary. See Controller board removal on page 477.

   Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Complex page service check

1. Reset the printer, and then navigate to:

   Paper Menu > Print Settings > Download Target > Disk

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Enter the Diagnostics menu, and then navigate to:

   PRINTER TESTS > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. If applicable, install extra memory card.

   If applicable, make sure that the additional memory card is properly installed.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the controller board pins for damage, and replace if necessary. See Controller board removal on page 477.

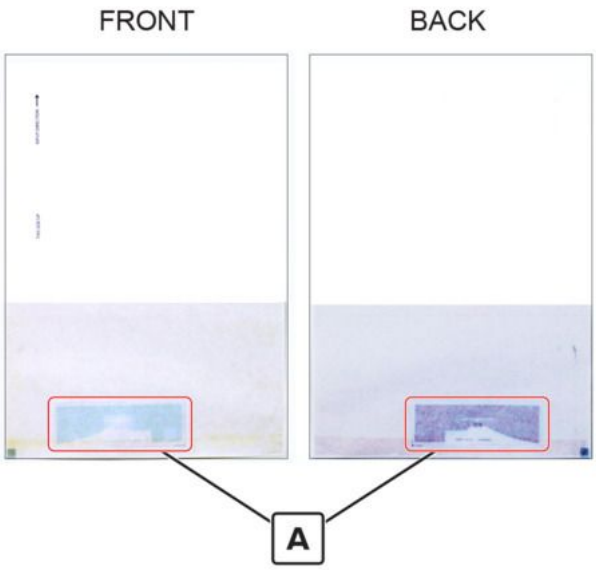
   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Error on every page service check

1. Check if the media loaded has an RFID tag (A) attached or embedded.
    - **Sample RFID media**

      Note: This image shows a typical RFID tag. The actual tag varies in size, shape, and appearance, as well as position and orientation on the page.



      Note: This error indicates that the printer attempted to program an RFID tag and failed to do so. To disable the printer from programming the RFID tag, navigate to **Settings > RFID**, and then set Stop on Error to YES. You can also modify by the Retry Count setting. Navigate to **Settings > RFID > Retry Count**, and then assign a value except 0.

    Is the tray loaded with an RFID media?

    - **Yes**:
      Go to step 3.
    - **No**:
      Go to the next step.

2. Load the tray with an RFID media.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

3. Check if the RFID media is loaded in Tray or Tray 4.

Note: Because the RFID Option is installed in the Tray 2 position, RFID media loaded in Tray 1 cannot pass through the Option and cannot be programmed. Thus, load RFID media only into Tray 3 or Tray 4.

Is the RFID media loaded in Tray 3 or Tray 4?

- **Yes**:
  Go to step 5.
- **No**:
  Go to the next step.

4. Load the RFID media into Tray 3 or Tray 4.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check if the printer, driver, or job settings are selecting the tray that holds the RFID media.

   Do the settings specify Tray 3 or Tray 4?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Configure the printer, driver, or job settings to specify the tray that holds the RFID media.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check if the RFID media is rotated to the correct orientation for the user’s application.

   Note: The orientation of the media loaded in the tray should match the orientation specified by the user's RFID system design.

   Is the RFID media rotated to the correct orientation?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.

8. Rotate the media to the correct orientation for the user's application.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

9. The RFID media could be damaged or faulty. If necessary, ask the user to read and/or write the tags with a desktop or handheld RFID reader.

   Are the tags readable?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

10. Replace the RFID media.

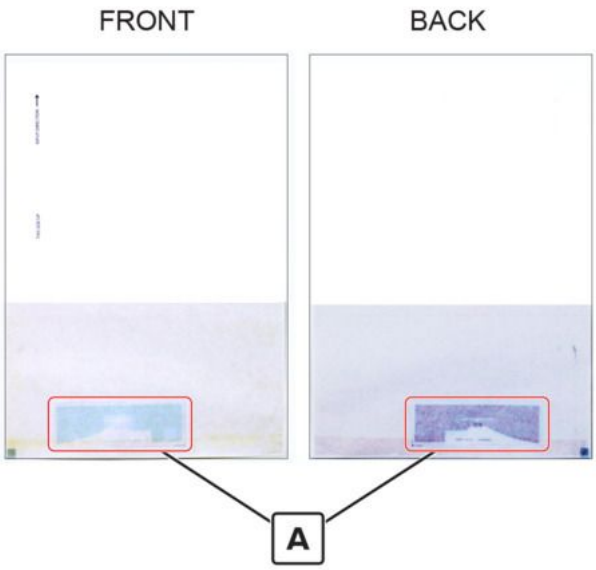
    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Error on some pages service check

1. Check if the media loaded has an RFID tag (A) attached or embedded.
   - **Sample RFID media**

     Note: This image shows a typical RFID tag. The actual tag varies in size, shape, and appearance, as well as position and orientation on the page.



Is the tray loaded with an RFID media?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

2. Load the tray with an RFID media.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the RFID media is loaded in Tray or Tray 4.

   Note: Because the RFID Option is installed in the Tray 2 position, RFID media loaded in Tray 1 cannot pass through the Option and cannot be programmed. Thus, load RFID media only into Tray 3 or Tray 4.

   Is the RFID media loaded in Tray 3 or Tray 4?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Load the RFID media into Tray 3 or Tray 4.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check if the printer, driver, or job settings are selecting the tray that holds the RFID media.

   Do the settings specify Tray 3 or Tray 4?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Configure the printer, driver, or job settings to specify the tray that holds the RFID media.

   Note: This error indicates that the printer attempted to program an RFID tag and failed to do so. To disable the printer from programming the RFID tag, navigate to **Settings > RFID**, and then set Stop on Error to YES. You can also modify by the Retry Count setting. Navigate to **Settings > RFID > Retry Count**, and then assign a value except 0.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

7. Perform the following tests:
   a. Check if the Retry Count setting is greater than zero.

      From the home screen, navigate to:

      Settings > RFID > Retry Count

   b. Check if the error happens every *N* pages.

   Is the Retry Count setting greater than 0 and happens every *N* pages?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 12.

8. Check if the RFID media is rotated to the correct orientation for the user's application.

   Note: The orientation of the media loaded in the tray should match the orientation specified by the user's RFID system design.

   Is the RFID media rotated to the correct orientation?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 10.

9. Rotate the media to the correct orientation for the user's application.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Check whether the failed pages are oriented opposite the "good" pages.

    Note: Due to the way RFID media is packaged, some sheets in the input stack may be rotated, which may cause them to fail the program.

    Are the failed pages oriented opposite the good pages?

    - **Yes**:

Go to the next step.

- **No**:
  Go to step 12.

11. Make sure that all pages are in the correct and similar orientation.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

12. Replace the RFID media.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

RFID data within print job is invalid service check

1. Check if the RFID job data, including the RFID data, has correctly formatted.

   > **Note:** These errors do not indicate problems with the hardware or RFID media.

   Has the RFID job data correctly formatted?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Reformat the RFID job data.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Clear any existing error code. See the *RFID Programmer's Guide*.

   > **Note:** Each specific error code indicates a specific type of problem with the RFID data.

   Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Hardware failure service check

1. Perform the following tests:
   a. Check if the RFID Option is installed immediately below the base printer and in the "Tray 2" position.
   b. Check if there is at least one optional tray installed below the RFID option.

   Is the RFID Option positioned as Tray 2 and is there at least one optional tray installed below it?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Perform the following tests:
   a. Install the RFID Option in a Tray 2 position.
   b. Install at least one optional tray below the RFID option.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if there are more than two optional trays installed below the RFID option.

   Are there more than two trays installed below the RFID Option?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

4. Remove the extra tray or trays.

   > **Note:** With the RFID Option installed, the printer can only support two more optional trays.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Remove Trays 3 and 4.
   b. Remove the RFID Option, but keep the USB cable from the RFID Option connected to the printer.
   c. Reinstall Tray 3.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Replace the optional tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Remove Tray 3, and then reinstall Tray 4.

   > **Note:** The USB cable from the RFID Option must still be connected to the printer at this time.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 9.

8. Replace the optional tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Remove Tray 4, and then reinstall the RFID Option.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

10. Perform the following tests:

Replace the RFID Option.

- 41X1379 (low voltage, North America)
- 41X1613 (high voltage, EMEA)

Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Flash memory failure service check

1. Navigate to **Settings > Print settings > Job Accounting Menu Settings > Log Near Full Level**. Make sure that the value is set to maximum.

   Does the problem remain?

   - **Yes**:
     Go to step 2.
   - **No**:
     The problem is solved.

2. If applicable, make sure that the optional memory card is supported.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the controller board pins for damage, and replace if necessary. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Make sure that the firmware version is the latest, and update if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Insufficient flash memory service check

1. Navigate to **Settings > Print settings > Utilities Menu > Format Flash > Yes**.

   Does the problem remain?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Navigate to **Settings > Print > Job Accounting > Log Near Full Level**. Make sure that the value is set to maximum.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. If applicable, make sure that the optional memory card is supported.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the controller board pins for damage, and replace if necessary. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Make sure that the firmware version is the latest, and update if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Unsupported internal option service check

1. If applicable, make sure that the option cards are supported.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Check the controller board pins for damage.

   Are the pins free of damage?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Make sure that the printer is using the latest firmware version, and update if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Disabled port service check

1. Perform the following tests:
   a. Make sure that the cables connected to the ports are properly installed.
   b. Check the cables for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Enter the Network/Ports menu and make sure that the applicable port settings are enabled.

   Does the problem remain?

   - **Yes**:

Go to the next step.

- **No**:
  The problem is solved.

3. If applicable, make sure that the option card is supported.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the controller board pins for damage.

   Are the pins free of damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Make sure that the printer is using the latest firmware version, and update if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Excess options service check

1. Perform a POR, and then resend the print job.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. If applicable, make sure that the internal option is supported.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

3. Perform the following tests:
   a. If applicable, remove all internal options.
   b. Perform a POR, and then resend the print job.

   Does the problem remain?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

4. Check if the number of internal options installed is allowed, and then remove the excess option.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the number of input options allowed, and then remove the excess input options.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the controller board pins for damage.

   Are the pins free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

7. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Incompatible hardware option service check

1. Perform the following tests:
   a. Reseat the hardware option cables.
   b. Check the cables for damage, and replace if necessary.

   a. Reseat the hardware option cables.
   b. Check the cables for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check if the firmware version of the hardware option is supported by the engine firmware, and update the firmware if necessary.

   Note: Contact the next level of support for the correct firmware version.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the hardware option controller board pins for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Hard disk failure service check

1. Perform the following tests:
   a. From the home screen, navigate to **Settings > Device > Maintenance > Out-of-Service Erase > Erase Hard Disk > Sanitize all information on hard disk**.
   b. Select **Erase downloads (Erase all macros, fonts, PFOs, etc)**, **Erase buffered jobs**, and **Erase held jobs > All held jobs**.
   c. Touch **Erase**.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Make sure that the printer is using the latest firmware version.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Make sure that the hard disk cable is properly installed.
   b. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Make sure that the hard disk is properly installed.
   b. Check the hard disk for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the controller board pins for damage.

   Are the pins free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

6. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.

- **No**:
  The problem is solved.

Printer hardware errors

100 errors

100 error messages

Error code	Description	Action
100.01	The weather station data is not valid.	See Sensor (weather station) service check on page 261.
100.04D	The printhead thermistor reading is out of range.	See Printhead service check on page 270.
100.05A	The fuser exit sensor cable is unplugged.	See Fuser sensors service check on page 261.
100.05B	The fuser nip sensor cable is unplugged.	
100.25	The transfer module thermistor reading is out of range.	See Transfer module thermistor service check on page 262.
100.27	The tray 1 paper exit sensor cable is unplugged.	See Tray 1 sensor (media out) cable is unplugged service check on page 263.
100.32	The duplex path 1 sensor cable is unplugged.	See Upper paper path sensors service check on page 263.
100.33	The output bin full sensor cable is unplugged.	
100.35	The following sensors appear to be disconnected: 1. Sensor (MPF paper present) 2. Sensor (duplex path 2) 3. Sensor (fuser buckle) 4. Sensor (narrow media)	See Sensor (duplex/MPF input) service check on page 266.
100.36	The MPF paper present sensor is unplugged.	
100.37	The duplex path 2 sensor is unplugged.	

Error code	Description	Action
100.38	The fuser buckle sensor is unplugged.	
100.39	The narrow media sensor cable is unplugged.	
100.41	The following sensors are unplugged: 1. Sensor (MPF-pass through) 2. Sensor (input) 3. Sensor (tray 1 pick)	See Lower paper path sensors service check on page 264.
100.42	The tray 1 pick sensor is unplugged.	
100.43	The MPF pass-through sensor is unplugged.	
100.44	The input sensor cable is unplugged.	

Sensor (weather station) service check

1. Check the sensor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Replace the sensor. See .Sensor (weather station) removal on page 443

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Fuser sensors service check

1. Check the error that appeared.

   Is the error 100.4?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 3.

2. Check the sensor (fuser nip) for proper connection, and reseat if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the sensor (fuser exit) for proper connection, and reseat if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the cable on the JFSNS1 connector on the controller board for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the fuser. See Fuser removal on page 459.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Transfer module thermistor service check

1. Check the cable on the JTHM1 connector on the controller board for proper connection, and reseat if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Replace the sensor (TPS). See Sensor (TPS) removal on page 453.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Tray 1 sensor (media out) cable is unplugged service check

1. Check the cable on the JMTR1 connector on the controller board for proper connection, and reseat if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove the media feeder. See Media feeder removal on page 492.
   b. Check the cable on the sensor (media out), and reseat if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the media feeder. See Media feeder removal on page 492.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Upper paper path sensors service check

1. Perform the following tests:

   Check the following sensors for proper connection, and reseat if necessary:

   - Sensor (output)
   - Sensor (bin full)

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Check the sensor cables for proper connection on the sensors and on the JDSNS1 connector on the controller board.

   Are the cables properly connected at both ends?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Reconnect the cables.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the sensors for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Lower paper path sensors service check

1. Check the error that appeared.

   Is the error 100.41?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Check the error that appeared.

   Is the error 100.44?

   - **Yes**:
     Go to step 10.
   - **No**:

Go to the next step.

3. Check the cable on the JPKSNS1 connector on the controller board for proper connection.

   Is the cable properly connected?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the error that appeared.

   Is the error 100.42 or 100.43?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 10.

6. Check the sensor cables in the isolation unit for proper connection.

   Are the cables properly connected?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Reconnect the cables.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check the green, yellow, and blue cables connecting the JPKSNS1 connector to the blue and green cables on the isolation unit for proper connection and damage. Replace the cables if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Replace the isolation unit. See Isolation unit removal on page 490.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

10. Check the red cables connecting the JPKSNS1 connector to the sensor (input) for proper connection and damage, and replace if necessary.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Replace the sensor (input). See Sensor (input) removal on page 466.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensor (duplex/MPF input) service check

1. Check the error that appeared.

   Is the error 100.35?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

2. Perform the following tests:
   a. Remove the cable cover from the front door.
   b. Check if the cable is properly connected to the door and to the JMSNS1 connector on the controller board.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Reconnect the cable.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

4. Replace the cable.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

5. Perform the following tests:

   Check the following sensors for proper connection, and reseat if necessary:

   - Sensor (MPF empty)
   - Sensor (duplex path 1)
   - Sensor (fuser buckle)
   - Sensor (narrow media)

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the sensors for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

102 errors

102 error messages

Error code	Description	Action
102.20	Tray 2 product ID is invalid.	See Invalid input option type or ID is detected service check on page 268.
102.21	Tray 2 board ID is invalid.	

Error code	Description	Action
102.22	Tray 2 type is invalid.	
102.30	Tray 3 product ID is invalid.	
102.31	Tray 3 board ID is invalid.	
102.32	Tray 3 type is invalid.	
102.40	Tray 4 product ID is invalid.	
102.41	Tray 4 board ID is invalid.	
102.42	Tray 4 type is invalid.	

Invalid input option type or ID is detected service check

1. Perform the following tests:
   a. Make sure that the latest firmware is installed.
   b. Make sure that the options configuration is supported. See the *Printer, Option, and Stand Compatibility Guide*.
   c. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Reseat the interface cable, and then check the cable for damage.

   Is the cable free of damage?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Replace the cable. See 550-sheet tray interface cable removal on page 500.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the printer interface cable and adjacent options for damage.

   Are the cable and options free of damage?

   - **Yes**:

Go to step 6.

- **No**:
  Go to the next step.

5. Replace the cable and options.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the input option controller board. See 550-sheet tray controller board assembly removal on page 500.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

110 errors

110 error messages

Error code	Description	Action
110.20	The printhead error was detected before the motor was turned on.	See Printhead service check on page 270.
110.21	The printhead power was off when the laser servo started.	
110.31	The printhead error (no first Hysnc) was detected.	
110.32	The printhead error (lost first Hysnc) was detected.	

Error code	Description	Action
110.33	The printhead error (lost first Hysnc) was detected during servo.	
110.34	The printhead error (mirror motor lost lock) was detected.	
110.35	The printhead error (mirror motor no first lock) was detected.	
110.36	The printhead error (mirror motor never stabilized) was detected.	
110.41	The printhead NVRAM read failure occurred.	
110.70	The printhead NVRAM values were incorrect.	
110.71	The printhead timing measurement error was detected.	
110.90	The video cable was unplugged.	
110.91	The printhead timing reading error was detected.	
110.92	The printhead NVRAM checksum mismatch occurred.	

Printhead service check

1. Perform a POR.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check the cables on the printhead and on the JMIRR1 and JPH1 connectors on the controller board for proper connection.

   Are the cables properly connected?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Reconnect the cables.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

4. Check the printhead cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the printhead. See .Printhead removal on page 480

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

120 errors

120 error messages

Error code	Description	Action
120.80	The motor (fuser) did not turn on.	See Motor (fuser) service check on page 272.
120.81	The motor (fuser) did not turn off.	
120.82	The motor (fuser) speed did not ramp up to the required level.	
120.83	The motor (fuser) stalled.	
120.84	The motor (fuser) ran too slow.	
120.85	The motor (fuser) ran too fast.	

Error code	Description	Action
120.86	The motor (fuser) did not run at the correct timing.	

Motor (fuser) service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check the fuser for damage or life expiration, and replace if necessary. See Fuser removal on page 459.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 4.

3. Check the motor cable on the JFUSED1 connector on the controller board for proper connection.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Remove the fuser, and then manually turn the fuser drive gear.

Does the gear freely turn?

- **Yes**:
  Go to step 8.
- **No**:
  Go to the next step.

7. Replace the fuser drive gear.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Replace the motor (fuser). See Fuser removal on page 459.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

121 errors

121 error messages

Error code	Description	Action
121.00	Fuser failed to reach the temperature during warm-up.	See Fuser service check on page 278.
121.01	There was an attempt to heat fuser, but it was not installed.	
121.02	Fuser went over the required temperature during EWC/line voltage detection.	
121.03	Fuser hardware and driver mismatch.	

Error code	Description	Action
121.04	There was an attempt to heat fuser, but fuser relay was open and fuser PIC microcontroller did not report an error or did not respond.	
121.05	There was an attempt to heat fuser, but fuser relay was open and fuser PIC microcontroller reported an error.	
121.06	Fuser power is at 100% but did not reach the required temperature.	
121.08	Fuser did not reach the required temperature while the page is in the fuser.	
121.09	Fuser did not reach the required temperature for motors. **Note:** Not applicable to standby mode.	
121.10	Fuser did not reach the required temperature during start of EWC/line voltage detection.	
121.11	Fuser reached the required temperature during final EWC/line voltage detection too late.	
121.12	Fuser did not reach the required temperature during final EWC/line voltage detection.	
121.13	Fuser reached the required temperature during final EWC/line voltage detection too fast.	
121.19	Fuser high power trace reached the required temperature during final EWC/line voltage detection too fast.	

Error code	Description	Action
121.20	Fuser did not reach the required temperature during steady state control.	See Fuser service check on page 278.
121.21	Fuser low power trace heating rate exceeded error threshold.	
121.22	Open fuser relay was detected.	

Error code	Description	Action
121.23	Fuser reached the required temperature during final EWC/ line voltage detection too late.	
121.24	Fuser did not reach the required temperature during final EWC/ line voltage detection.	
121.25	Control did not roll over to steady state control after line voltage detection.	
121.26	Fuser did not reach the required temperature during warm up.	
121.28	Fuser did not reach the required temperature during EP warm up.	
121.31	Fuser too hot.	
121.32	Fuser did not reach the required temperature at 100% power.	
121.33	Fuser did not reach the required temperature while the page is in the fuser.	
121.34	Fuser did not reach the required temperature during steady state control.	
121.35	Fuser too warm to power up and execute EWC/line voltage detection after a wrong fuser was installed.	
121.36	Open fuser relay was detected in very cold or unknown ambient temperature.	
121.37	Fuser heated too fast during final EWC/lline voltage detection.	

Error code	Description	Action
121.41	Fuser mechanism did not detect the expected cam sensor signal.	See Fuser service check on page 278.
121.42	Fuser gate time is increasingly out of range.	
121.48	Fuser type does not match the fuser driver.	
121.50	Fuser went over the required temperature during global over temperature check.	

Error code	Description	Action
121.51	Fuser secondary heater is too hot.	
121.52	Fuser main heater thermistor temperature is out of range.	
121.53	Fuser main heater thermistor temperature change rate is out of range.	
121.54	Fuser secondary heater thermistor temperature is out of range.	
121.55	Fuser secondary heater thermistor temperature change rate is out of range.	
121.56	Fuser middle heater thermistor temperature is out of range.	
121.57	Fuser middle heater thermistor temperature change rate is out of range.	
121.58	Fuser edge thermistor temperature is out of range.	
121.59	Fuser edge thermistor temperature change rate is out of range.	

Error code	Description	Action
121.60	Contact belt thermistor temperature is out of range.	See Fuser service check on page 278.
121.61	Contact belt thermistor temperature change rate is out of range.	
121.62	Non-contact belt thermistor temperature is out of range.	
121.63	Non-contact belt thermistor temperature change rate is out of range.	
121.67	Fuser narrow media backup roll thermistor temperature change rate is out of range.	
121.71	Open fuser main heater thermistor was detected.	
121.72	Open fuser secondary heater thermistor was detected.	

Error code	Description	Action
121.73	Open fuser middle heater thermistor was detected.	
121.74	Open fuser edge thermistor was detected.	
121.76	Open contact belt thermistor was detected.	

Error code	Description	Action
121.81	Open fuser backup roll thermistor was detected.	See Fuser service check on page 278.
121.82	Open fuser second backup roll thermistor was detected.	
121.83	Open fuser narrow media backup roll thermistor was detected.	
121.84	Non-contact sensor (BUR) is missing.	
121.86	Fuser backup roll thermistor temperature is out of range.	
121.87	Fuser backup roll thermistor temperature change rate is out of range.	
121.88	Fuser second backup roll thermistor temperature is out of range.	
121.89	Fuser second backup roll thermistor temperature change rate is out of range.	
121.90	Fuser non-contact backup roll thermistor temperature is out of range.	
121.91	Fuser non-contact backup roll thermistor temperature change rate is out of range.	

Fuser temperature error service check

1. Make sure that the printer is placed in a location with the following temperature and humidity:
    - 60°F to 90°F temperature range
    - 8% to 80% relative humidity
2. If the printer must be placed in a below freezing environment, then do the following:

a. Remove the fuser, and then allow it to slowly warm above freezing temperature.

b. Reinstall the fuser, and then turn on the printer.

c. Increase the timeout value for sleep mode to 114. From the home screen, touch **Settings › Device › Power Management › Timeouts › Sleep Mode**.

> **Note:** 114 minutes is the maximum acceptable timeout value.

3. Make sure the wall outlet where the printer is connected provides >95% of rated voltage when printer is in "Ready State" (>109 VAC U.S., >218 VAC for HV Geos, >95 VAC for Japan).

> **Note:**
> - Do not use this product with extension cords, multioutlet power strips, multioutlet extenders, or UPS devices. The power capacity of these types of accessories can be easily overloaded by a laser printer. This can result in a risk of fire, property damage, or poor printer performance.
> - Power strips and uninterrupted power supplies can cause a low amperage condition to occur within the printer, which in turn may trigger a false fuser error.
> - Make sure that the printer is plugged into an appropriate rate and properly grounded electrical out let or supported Inline Surge Protector.

4. Perform a POR.
5. Make sure that the correct voltage is supplied to the fuser from the power supply. For more information, see the Wiring diagram and LVPS removal on page 438.
6. Make sure that the connections between the controller board and the fuser are properly connected.
7. Check the fuser for damage, contamination, and improper installation. For more information, see Fuser removal on page 459.

Most likely parts to replace

- Fuser
  - For the part number, go to Fuser on page 533.
  - For the removal procedure, go to Fuser removal on page 459.
- Power supply
  - For the part number, go to Electrical on page 543.
  - For the removal procedure, go to LVPS removal on page 438.

Fuser service check

> **Note:** Make sure the wall outlet where the printer is connected provides >95% of rated voltage when the printer is in Ready state (>109V AC for US; >95V AC for Japan and; >218V AC for HV geographies).

1. Check the fuser for proper installation.

   Is the fuser properly installed?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

2. Reinstall the fuser.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the LVPS cable on the LVPS and on the JFSNS connector on the controller for proper connection.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the fuser cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Replace the fuser. See Fuser removal on page 459.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

8. Replace the LVPS. See LVPS removal on page 438.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

126-127 errors

126 and 127 error messages

Error code	Description	Action
126.06	LVPS 25V line error was detected.	See LVPS service check on page 280.
126.07	LVPS 5V rail was down during POR.	
126.10	No line frequency was detected.	
126.11	Line frequency has gone outside the operating range.	
127.01	HVPS primary power supply was not detected.	See HVPS service check on page 281.
127.02	HVPS secondary power supply was not detected.	

LVPS service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

2. Check the LVPS cable on the JLVPS connector on the controller board for proper connection.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the LVPS. See LVPS removal on page 438.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

HVPS service check

1. Reset the printer.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Check the HVPS cable on the JHVPS connector on the controller board for proper connection.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the HVPS. See HVPS removal on page 448.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

128 errors

128 error message

Error code	Description	Action
128.00	TPS communications error	See TPS communications service check on page 283.

TPS communications service check

1. Check the TPS cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check the cable on the JTPSAA1 connector on the controller board and sensor for proper connection.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Replace the sensor (TPS). See Sensor (TPS) removal on page 453.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:

Contact the next level of support.

- **No**:
  The problem is solved.

142 errors

142 error messages

Error code	Description	Action
142.80	The motor (CM developer) did not turn on.	See Motor (CM developer) service check on page 284.
142.81	The motor (CM developer) did not turn off.	
142.82	The motor (CM developer) speed did not ramp up to the required level.	
142.83	The motor (CM developer) stalled.	
142.84	The motor (CM developer) ran too slow.	
142.85	The motor (CM developer) ran too fast.	
142.86	The motor (CM developer) did not run at the correct timing.	

Motor (CM developer) service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove the imaging kit, and then remove the transfer module. See Transfer module removal on page 460.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests > CM developer

c. Touch **Start**.

Does the motor run?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 6.

3. Manually turn the drive gears.

   Do the black developer and transfer module drive gears freely turn?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the motor (EP drive). See Motor (EP drive) removal on page 431.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the imaging kit components and transfer module for damage or life expiration, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

6. Check the cables on the motor and on the JCARTP and JCARTS connectors on the controller board for proper connection.

   Are the cables properly connected at both ends?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Reconnect the cables.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check the cables for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Replace the motor (CM developer). See Motor (EP drive) removal on page 431.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

144 errors

144 error messages

Error code	Description	Action
144.80	The motor (Y developer) did not turn on.	See Motor (Y developer) service check on page 287.
144.81	The motor (Y developer) did not turn off.	
144.82	The motor (Y developer) speed did not ramp up to the required level.	
144.83	The motor (Y developer) stalled.	
144.84	The motor (Y developer) ran too slow.	
144.85	The motor (Y developer) ran too fast.	
144.86	The motor (Y developer) did not run at the correct timing.	

Motor (Y developer) service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove the imaging kit, and then remove the transfer module. See Transfer module removal on page 460.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests > Y developer

   c. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 6.

3. Manually turn the drive gears.

   Do the black developer and transfer module drive gears freely turn?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the motor (EP drive). See Motor (EP drive) removal on page 431.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the imaging kit components and transfer module for damage or life expiration, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

6. Check the cables on the motor and on the JCARTP and JCARTS connectors on the controller board for proper connection.

   Are the cables properly connected at both ends?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Reconnect the cables.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check the cables for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Replace the motor (Y developer). See Motor (EP drive) removal on page 431.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

145 errors

145 error messages

Error code	Description	Action
145.80	The motor (BOR) did not turn on.	See Motor (BOR) service check on page 289.
145.81	The motor (BOR) did not turn off.	
145.82	The motor (BOR) speed did not ramp up to the required level.	
145.83	The motor (BOR) stalled.	
145.84	The motor (BOR) ran too slow.	
145.85	The motor (BOR) ran too fast.	
145.86	The motor (BOR) did not run at the correct timing.	

Motor (BOR) service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove the transfer module. See Transfer module removal on page 460.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests > Black only retract

   c. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

3. Manually turn the BOR gear on the transfer module.

   Does the gear freely turn?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

4. Replace the transfer module. See Transfer module removal on page 460.

   Does the problem remain?

   - **Yes**:
     Go to step 9.
   - **No**:
     The problem is solved.

5. Check the cable on the motor and on the JBOR1 connector on the controller board for proper connection.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Replace the motor. See Motor (black only retract) removal on page 442.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.

- **No**:
  The problem is solved.

147 errors

147 error messages

Error code	Description	Action
147.80	The motor (deskew) did not turn on.	See Motor (deskew) service check on page 291.
147.81	The motor (deskew) did not turn off.	
147.82	The motor (deskew) speed did not ramp up to the required level.	
147.83	The motor (deskew) stalled.	
147.84	The motor (deskew) ran too slow.	
147.85	The motor (deskew) ran too fast.	
147.86	The motor (deskew) did not run at the correct timing.	

Motor (deskew) service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests > Deskew

   b. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Go to the next step.

- **No**:
  Go to step 5.

3. Turn the aligner and registration rollers.

   Is there binding or uneven movement when turning the rollers?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

4. Check the aligner roller gears for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the cable on the motor and on the JMTR1 connector on the controller board for proper connection.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Replace the motor. See Motor (deskew) removal on page 434.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

149 errors

149 error messages

Error code	Description	Action
149.80	The motor (output) did not turn on.	See Motor (output) service check on page 293.
149.81	The motor (output) did not turn off.	
149.82	The motor (output) speed did not ramp up to the required level.	
149.83	The motor (output) stalled.	
149.84	The motor (output) ran too slow.	
149.85	The motor (output) ran too fast.	
149.86	The motor (output) did not run at the correct timing.	

Motor (output) service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check the cable on the motor (output) and on the JOUTDC connector on the controller board for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

3. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Replace the motor. See Motor (output) removal on page 433.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

150 and 160 errors

150 and 160 error messages

Error code	Description	Action
150.80	The motor (duplex/MPF) did not turn on.	See Motor (duplex/MPF) service check on page 295.
160.80	The motor (duplex/MPF) did not turn on.	
150.81	The motor (duplex/MPF) did not turn off.	

Error code	Description	Action
160.81	The motor (duplex/MPF) did not turn off.	
150.82	The motor (duplex/MPF) speed did not ramp up to the required level.	
160.82	The motor (duplex/MPF) speed did not ramp up to the required level.	
150.83	The motor (duplex/MPF) stalled.	
160.83	The motor (duplex/MPF) stalled.	
150.84	The motor (duplex/MPF) ran too slow.	
160.84	The motor (duplex/MPF) ran too slow.	
150.85	The motor (duplex/MPF) ran too fast.	
150.86	The motor (duplex/MPF) did not run at the correct timing.	
160.86	The motor (duplex/MPF) did not run at the correct timing.	

Motor (duplex/MPF) service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests > Duplex/MPF

   b. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

3. Open the front door, and then manually turn the duplex/MPF drive gears.

   Is there binding in the gears?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

4. Replace the motor. See Motor (duplex/MPF) removal on page 446.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the motor cable for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

151 errors

151 error messages

Error code	Description	Action
151.80	The motor (K developer) did not turn on.	See Motor (K developer) service check on page 297.
151.81	The motor (K developer) did not turn off.	
151.82	The motor (K developer) speed did not ramp up to the required level.	
151.83	The motor (K developer) stalled.	

Error code	Description	Action
151.84	The motor (K developer) ran too slow.	
151.85	The motor (K developer) ran too fast.	
151.86	The motor (K developer) did not run at the correct timing.	

Motor (K developer) service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove the imaging kit, and then remove the transfer module. See Transfer module removal on page 460.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests > K developer

   c. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 6.

3. Manually turn the drive gears.

   Do the black developer and transfer module drive gears freely turn?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the motor (EP drive). See Motor (EP drive) removal on page 431.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

The problem is solved.

5. Check the imaging kit components and transfer module for damage or life expiration, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

6. Check the cable on the motor and on the JCARTK connector on the controller board for proper connection.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Replace the motor (K developer). See Motor (EP drive) removal on page 431.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:

The problem is solved.

153 errors

153 error messages

Error code	Description	Action
153.80	The isolation unit did not turn on.	See Isolation unit service check on page 299.
153.81	The isolation unit did not turn off.	
153.82	The isolation unit speed did not ramp up to the required level.	
153.83	The isolation unit stalled.	
153.84	The isolation unit ran too slow.	
153.85	The isolation unit ran too fast.	
153.86	The isolation unit did not run at the correct timing.	

Isolation unit service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests > Isolation

   b. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

3. Manually turn the isolation unit input rollers.

Is there binding or uneven movement when turning the rollers?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 5.

4. Replace the isolation unit. See Isolation unit removal on page 490.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the cable on the motor and on the JMTR1 connector on the controller board for proper connection.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

161-164 errors

161 error messages

Error code	Description	Action
161.80	The motor (tray 1 pick) did not turn on.	See Motor (tray 1 pick) lifting error service check on page 302.
161.81	The motor (tray 1 pick) did not turn off.	
161.82	The motor (tray 1 pick) speed did not ramp up to the required level.	
161.83	The motor (tray 1 pick) stalled.	
161.84	The motor (tray 1 pick) ran too slow.	
161.85	The motor (tray 1 pick) ran too fast.	
161.86	The motor (tray 1 pick) did not run at the correct timing.	

162 error messages

Error code	Description	Action
162.80	The motor (tray 2 pick) did not turn on.	See Tray pick roller assembly and lift motor service check on page 305.
162.81	The motor (tray 2 pick) did not turn off.	
162.82	The motor (tray 2 pick) speed did not ramp up to the required level.	
162.83	The motor (tray 2 pick) stalled.	
162.84	The motor (tray 2 pick) ran too slow.	
162.85	The motor (tray 2 pick) ran too fast.	
162.86	The motor (tray 2 pick) did not run at the correct timing.	

163 and 164 error messages

Error code	Description	Action
163.80	The motor (tray 3 pick) did not turn on.	See Tray pick roller assembly and lift motor service check on page 305.
163.81	The motor (tray 3 pick) did not turn off.	
163.82	The motor (tray 3 pick) speed did not ramp up to the required level.	
163.83	The motor (tray 3 pick) stalled.	
163.84	The motor (tray 3 pick) ran too slow.	
163.85	The motor (tray 3 pick) ran too fast.	
163.86	The motor (tray 3 pick) did not run at the correct timing.	
164.80	The motor (tray 4 pick) did not turn on.	
164.81	The motor (tray 4 pick) did not turn off.	
164.82	The motor (tray 4 pick) speed did not ramp up to the required level.	
164.83	The motor (tray 4 pick) stalled.	
164.84	The motor (tray 4 pick) ran too slow.	
164.85	The motor (tray 4 pick) ran too fast.	
164.86	The motor (tray 4 pick) did not run at the correct timing.	

Motor (tray 1 pick) lifting error service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Make sure that the tray insert is properly seated or fully inserted.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Pick roller index (tray 1)).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

4. Check the cable that connects the sensor (tray 1 pick roller index) to the controller board.

   Are both ends of the cable properly seated?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Reseat the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the sensor cable for damage.

   Is the cable free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 12.

7. Replace the sensor. See Sensor (550-sheet tray index) removal on page 502.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

8. Check the cable that connects the motor (tray 1 pick) to the controller board.

   Are both ends of the cable properly seated?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Reseat the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Perform the following tests:
    a. Remove the tray insert.
    b. Enter the Diagnostics menu, and then navigate to:

       Printer diagnostics & adjustments > Motor tests > Pick (tray 1)

    c. Select **Pick (tray 1) lifting**, and then touch **Start**.

    Does the motor run or does it sound normal?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

11. Check the motor cable for damage.

    Is the cable free of damage?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Replace the paper feeder. See Media feeder removal on page 492.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Reset the printer.

Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Tray pick roller assembly and lift motor service check

1. Check the pick roller for misalignment and damage.

   Is the pick roller properly installed and free of damage?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Reinstall or replace the pick roller.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the cable for socket "INDEX/PAP OUT/PICK MTR" on the controller board for misalignment and damage.

   Is the cable properly seated and free of damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Reseat or replace the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

The problem is solved.

6. Replace the media feeder. See Media feeder removal on page 492.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

166-169 errors

166–169 error messages

Error code	Description	Action
166.80	The motor (tray 2 pass-through) did not turn on.	See Motor (transport) failure on page 309.
166.81	The motor (tray 2 pass-through) did not turn off.	See Motor (tray [x] transport) failure service check on page 308.
166.82	The motor (tray 2 pass-through) speed did not ramp up to the required level.	
166.83	The motor (tray 2 pass-through) stalled.	
166.84	The motor (tray 2 pass-through) ran too slow.	
166.85	The motor (tray 2 pass-through) ran too fast.	
166.86	The motor (tray 2 pass-through) did not run at the correct timing.	
167.80	The motor (tray 3 pass-through) did not turn on.	See Motor (transport) failure on page 309.
167.81	The motor (tray 3 pass-through) did not turn off.	See Motor (tray [x] transport) failure service check on page 308.

Error code	Description	Action
167.82	The motor (tray 3 pass-through) speed did not ramp up to the required level.	
167.83	The motor (tray 3 pass-through) stalled.	
167.84	The motor (tray 3 pass-through) ran too slow.	
167.85	The motor (tray 3 pass-through) ran too fast.	
167.86	The motor (tray 3 pass-through) did not run at the correct timing.	
168.80	The motor (tray 4 pass-through) did not turn on.	See Motor (transport) failure on page 309.
168.81	The motor (tray 4 pass-through) did not turn off.	See Motor (tray [x] transport) failure service check on page 308.
168.82	The motor (tray 4 pass-through) speed did not ramp up to the required level.	
168.83	The motor (tray 4 pass-through) stalled.	
168.84	The motor (tray 4 pass-through) ran too slow.	
168.85	The motor (tray 4 pass-through) ran too fast.	
168.86	The motor (tray 4 pass-through) did not run at the correct timing.	
169.80	The motor (tray 5 pass-through) did not turn on.	See Motor (transport) failure on page 309.
169.81	The motor (tray 5 pass-through) did not turn off.	See Motor (tray [x] transport) failure service check on page 308.
169.82	The motor (tray 5 pass-through) speed did not ramp up to the required level.	
169.83	The motor (tray 5 pass-through) stalled.	
169.84	The motor (tray 5 pass-through) ran too slow.	
169.85	The motor (tray 5 pass-through) ran too fast.	
169.86	The motor (tray 5 pass-through) did not run at the correct timing.	

Motor (tray [x] transport) failure service check

1. Reset the printer

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check the connections between the motor (tray [x] transport) and controller board.

   Is the motor properly connected?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Reseat the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the motor (tray [x] transport) cable for damage.

   Is the cable free of damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Replace the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Replace the motor (tray [x] transport).

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Replace the controller board.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Motor (transport) failure

Issue description

Applicable error codes: 166.80, 167.80, 168.80, 169.80

Customer resolution

Perform a Power-On-Reset on the printer. Do the following:

1. Turn off the printer, and then unplug the power cord.
2. Wait 30 seconds to discharge electrical energy and clear buffered data.
3. Connect the power cord, and then turn on the printer.
4. Wait for the printer to fully initialize before sending a job.

Remote resolution

Make sure that the user performs all the steps in the **Customer resolution** section.

Initial parts replacement

Send the following field replaceable units to the field technician:

- Motor (transport) for 550 sheet tray—For the part number, see 550-sheet tray option 2 on page 548.

Detailed diagnostics

Applicable error codes	Affected area
166.80	Motor (pass-through) tray 2
167.80	Motor (pass-through) tray 3
168.80	Motor (pass-through) tray 4
169.80	Motor (pass-through) tray 5

Make sure that the motor (transport) for the applicable tray is functional. Do the following:

1. Open or remove the applicable tray.
2. Enter the **Diagnostics** menu, and then navigate to **Additional input tray diagnostics › Motor tests**.
3. Select **Transport**.
4. Select **Start**.

If the test fails, then make sure that the cable and connector between the applicable motor (transport) and the controller board are properly connected and not damaged. For more information, see Wiring Diagram.

17y errors

17y error messages

Error code	Description	Action
171.82	The main fan speed did not ramp up to the required level.	See Main fan service check on page 312.
171.83	The main fan stalled.	
171.84	The main fan ran too slow.	
171.85	The main fan ran too fast.	
172.82	The LVPS fuser fan speed did not ramp up to the required level.	See LVPS fuser fan service check on page 311.
172.83	The LVPS fuser fan stalled.	
172.84	The LVPS fuser fan ran too slow.	

Error code	Description	Action
172.85	The LVPS fuser fan ran too fast.	

LVPS fuser fan service check

1. Check the fuser fan area for obstructions.

   Is the fan area free from obstructions?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Remove the obstructions.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the cable on the JFAN1 connector on the controller board for proper connection.

   Is the cable properly connected?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the fuser fan. See Fuser fan removal on page 434.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Main fan service check

1. Check the main fan area for obstructions.

   Is the fan area free from obstructions?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Remove the obstructions.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the cable on the JFAN2 connector on the controller board for proper connection.

   Is the cable properly connected?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the main fan. See Main fan removal on page 435.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the controller board. See Controller board removal on page 477.

Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

600-611 errors

600–611 error messages

Error code	Description	Action
602.19	Tray 1 was unable to be ready for picking.	For more information, see Tray not ready to feed on page 313.
602.29	Tray 2 was unable to be ready for picking.	
602.39	Tray 3 was unable to be ready for picking.	
602.49	Tray 4 was unable to be ready for picking.	
602.59	Tray 5 was unable to be ready for picking.	
611.32	Lost HSYNC errors were detected. Laser safety interlock system may be the cause.	For more information, see Printhead service check on page 270.
611.34	A mirror motor lock error was detected.	
611.72	A facet map failure error occurred.	

Tray not ready to feed

Issue description

Applicable error codes: 602.19, 602.29, 602.39, 602.49, 602.59

Customer resolution

1. Make sure that the paper is loaded properly in the tray and the guides are adjusted to match the size of the paper loaded. Make sure that the stack height is below the maximum fill line. For more information, see Loading Trays.
2. Make sure that the tray is installed properly and free from obstructions and damage. Verify that the side guides can move freely and are not broken. If there are signs of damage, then contact customer support.
3. Check the paper loaded for the following:
   - The paper matches the paper size and type set in the printer. For more information, see Setting the paper size and type.
   - The paper size, paper type, and paper weight loaded are supported. For more information, see Supported paper sizes on page 29 and Supported paper types and weights on page 30.
4. Remove paper from the tray or feeder and inspect for damage or defects. Fan the paper, flip it, and then reload. If the paper is damp, damaged, wavy, or curled, then replace it.

Remote resolution

Make sure that the user performs all the steps in the **Customer resolution** section.

Initial parts replacement

No part replacement is needed. This issue can be resolved using the preceding steps. If the issue persists, then contact the next level of support.

Detailed diagnostics

No additional diagnosis is available. The issue can be resolved using the preceding steps. If the issue persists, then contact the next level of support.

621 errors

621 error messages

Error code	Description	Action
621.01	The printer registers a **621.01** fuser error which is due to the temperature not being reached during the printing process.	See Fuser service check on page 278.

647 errors

647 error messages

Error code	Description	Action
647.80	The motor (deskew) did not turn on.	See Motor (deskew) service check on page 291.
647.81	The motor (deskew) did not turn off.	
647.82	The motor (deskew) speed did not ramp up to the required level.	
647.83	The motor (deskew) stalled.	
647.84	The motor (deskew) ran too slow.	
647.85	The motor (deskew) ran too fast.	
647.86	The motor (deskew) did not run at the correct timing.	

649 errors

649 error messages

Error code	Description	Action
649.80	The motor (redrive) did not turn on.	See Motor (output) service check on page 293.
649.81	The motor (redrive) did not turn off.	
649.82	The motor (redrive) speed did not ramp up to the required level.	
649.83	The motor (redrive) stalled.	
649.84	The motor (redrive) ran too slow.	
649.85	The motor (redrive) ran too fast.	
649.86	The motor (redrive) did not run at the correct timing.	

650 errors

650 error messages

Error code	Description	Action
650.80	The motor (duplex/MPF) did not turn on.	See Motor (duplex/MPF) service check on page 295.
650.81	The motor (duplex/MPF) did not turn off.	
650.82	The motor (duplex/MPF) speed did not ramp up to the required level.	
650.83	The motor (duplex/MPF) stalled.	
650.84	The motor (duplex/MPF) ran too slow.	
650.85	The motor (duplex/MPF) ran too fast.	
650.86	The motor (duplex/MPF) did not run at the correct timing.	

653 errors

653 error messages

Error code	Description	Action
653.80	The motor (ISO) did not turn on.	See Isolation unit service check on page 299.
653.81	The motor (ISO) did not turn off.	
653.82	The motor (ISO) speed did not ramp up to the required level.	
653.83	The motor (ISO) stalled.	
653.84	The motor (ISO) ran too slow.	
653.85	The motor (ISO) ran too fast.	
653.86	The motor (ISO) did not run at the correct timing.	

660 errors

660 error messages

Error code	Description	Action
660.80	The motor (MPF) did not turn on.	See Motor (duplex/MPF) service check on page 295.
660.81	The motor (MPF) did not turn off.	
660.82	The motor (MPF) speed did not ramp up to the required level.	
660.83	The motor (MPF) stalled.	
660.84	The motor (MPF) ran too slow.	
660.85	The motor (MPF) ran too fast.	
660.86	The motor (MPF) did not run at the correct timing.	

661-668 errors

661–668 error messages

Error code	Description	Action
661.13	The tray 1 lift plate failed to lift.	See Motor (tray 1 pick) lifting error service check on page 302.
662.23	The tray 2 lift plate failed to lift.	See Motor (option tray pick) lifting error service check on page 318.
663.33	The tray 3 lift plate failed to lift.	
664.43	The tray 4 lift plate failed to lift.	
666.83	The motor (tray 2 pass-through) stalled.	See Motor (tray [x] pass-through) stalled service check on page 320.
666.84	The motor (tray 2 pass-through) did not reach the required speed.	
667.83	The motor (tray 3 pass-through) stalled.	
668.83	The motor (tray 4 pass-through) stalled.	

Motor (option tray pick) lifting error service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Make sure that the tray insert is properly seated or fully inserted.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Sensor tests

   b. Find the sensor (Pick roller index (tray [x])).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

4. Check the cable that connects the sensor (tray [x] pick roller index) to the controller board.

   Are both ends of the cable properly seated?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Reseat the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the sensor cable for damage.

   Is the cable free of damage?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 12.

7. Replace the sensor. See Sensor (550-sheet tray index) removal on page 502.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check the cable that connects the motor (tray [x] pick) to the controller board.

   Are both ends of the cable properly seated?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Reseat the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Perform the following tests:
    a. Remove the tray insert.
    b. Enter the Diagnostics menu, and then navigate to:

       Additional input tray diagnostics > Motor tests > Pick (tray [x])

    c. Select **Pick (tray [x]) lifting**, and then touch **Start**.

    Does the motor run or does it sound normal?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

11. Check the motor cable for damage.

    Is the cable free of damage?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Replace the paper feeder. See Media feeder removal on page 492.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Reset the printer.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Motor (tray [x] pass-through) stalled service check

1. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Motor tests > Pass-through (tray [x])

   b. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

2. Check the motor cable for proper connection, and reseat if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the motor. See Motor (550-sheet tray pass-through) removal on page 495.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the motor for noise.

Does the motor sound abnormal or do the gears make a grinding sound?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

5. Perform a print job.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the controller board. See 550-sheet tray controller board assembly removal on page 500.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Procedure before starting the 9yy service checks

Retrieve certain information that helps your next level of support in diagnosing the problem before replacing the controller board.

Warning—Potential Damage
Do not replace the controller board unless instructed by your next level of support.

1. Collect the history information and firmware logs (Fwdebug and logs.tar.gz) from the SE menu.
2. Collect the settings from the Menu Settings Page.
3. Collect information from the user.

Note: Not all of the items are retrievable from the printer that you are working on.

A. Collecting the history information from the SE menu

Note: Make sure that your printer is connected to a network or to a print server.

1. Open a web browser, type **`http://printer_IP_address/se`**, and then press **Enter**.

Note:

- **`printer_IP_address`** is the TCP/IP address of the printer.
- **`se`** is required to access the printer diagnostic information.

2. Click **History Information**, copy all information, and then save it as a text file.
3. Email the text file to your next level of support.

B. Collecting the firmware logs (Fwdebug and logs.tar.gz) from the SE menu

Note:

- Make sure that your printer is connected to a network or to a print server.
- Some printers are designed to restart automatically after a 9yy error. On these printers, you can retrieve the secondary crash code information using the SE menu.

1. Open a web browser, type **`http://printer_IP_address/se`**, and then press **Enter**.
2. Click **Logs Gzip Compressed**.

Note: A logs.tar.gz file is saved to the Downloads folder. The file may take several minutes to save. You may rename the file if a logs.tar.gz already exists in the Downloads folder.

3. Email the logs to your next level of support.

Note: To download the FWdebug log to a flash drive, see General SE on page 388.

C. Collecting the settings from the Menu Settings Page

Note: The Menu Settings Page is different for each printer. For more information, see the *User's Guide*. Your next level of support will tell you which page they want to see.

Copying the Menu Settings Page from the Embedded Web Server (EWS)

Note: Make sure that your printer is connected to a network or to a print server.

1. Open a web browser, type **`http://printer_IP_address`**, and then press **Enter**.
2. Click **Settings**, and then select one of the settings pages from the links shown on the page.
3. Copy all the information, and then save it as a text file.
4. Email the text file to your next level of support.

Printing the Menu Settings Page

1. From the home screen, navigate to:

   Reports > Menu Settings Page

2. Print the Menu Settings Page, and then email a scanned copy of the page to your next level of support.

D. Collecting information from the user

Ask the user for information about the following:

- Print job being run
- Operating system being used
- Print driver being used
- Other information on what was happening when the 9yy error occurred

900 errors

900 error messages

Error code	Description	Action
900.xx	Unrecoverable RIP software error/illegal trap.	See 900 error service check on page 323.

900 error service check

1. Perform the following tests:
   a. Perform a POR.
   b. Check if a 900.xx error code appears on the display.

   Does a 900.xx error code appear?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

2. Check if another type of error code appears instead of the 900.xx error code.

   Does a different error code appear?

   - **Yes**:
     Go to the next step.
   - **No**:

Go to step 4.

3. See the error code and its service instructions in the printer *Service Manual*.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Turn off the printer.
   b. At the rear of the printer, disconnect the network cable, USB cable, and fax line.
   c. Turn on the printer.

   Does the problem remain?

   - **Yes**:
     Go to step 12.
   - **No**:
     Go to the next step.

5. Perform the following tests:
   a. From the control panel, navigate to the **Reports** menu.
   b. Select **Device Statistics** and **Device Settings**.

   Does the problem remain?

   - **Yes**:
     Go to step 12.
   - **No**:
     Go to the next step.

6. Check if the printer has a scanner.

   Does the printer have a scanner?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 8.

7. Using the scanner, perform a one-page copy job in color.

   Does the problem remain?

   - **Yes**:
     Go to step 12.
   - **No**:
     Go to the next step.

8. Perform the following tests:
   a. Turn off the printer.

b. At the rear of the printer, connect the network cable, USB cable, and fax line.

c. Turn on the printer.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 10.

9. Perform the following tests:
   a. Start the printer in **Invalid engine mode**. See Entering Invalid engine mode on page 387.
   b. Check if an **`Invalid Engine Code`** message appears.

   Does an **`Invalid Engine Code`** message appear?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

10. Using the Device Settings report that is printed in step 5, check if the firmware level is older than the latest available version.

    Is the firmware version older, and does the customer agree to update the firmware?

    - **Yes**:
      Go to the next step.
    - **No**:
      Contact the next level of support.

11. Update the firmware to the latest version.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

12. Perform the following tests:
    a. Turn off the printer.
    b. Reseat all FFC type cables on the controller board, and then make sure that the cables are properly connected.
    c. Make sure that all the cables on the controller board and scanner are properly connected.
    d. Turn on the printer.
    e. From the control panel, navigate to the **Reports** menu, and then select **Device Statistics** and **Device Settings**.
    f. For MFPs, perform a one-page copy and scan job in color.

    Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

13. Check if a hard disk is installed.

    Is a hard disk installed?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 17.

14. Perform the following tests:
    a. Check for buffered print jobs, and then delete them. See .Hard disk failure service check on page 258
    b. Perform a POR.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

15. Perform the following tests:
    a. Turn off the printer.
    b. Uninstall the hard disk.
    c. Perform a POR.

    Does the problem remain?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

16. Replace the hard disk.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

17. Perform the following tests:

    Check if the printer has any of the following components installed:

    - Memory options

- Fax card
- Modem
- Wireless and network option cards

Is any of the components installed?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 21.

18. Perform the following tests:
    a. Turn off the printer.
    b. Remove all the installed components.
    c. Turn on the printer.

    Does the problem remain?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.

19. Perform the following tests:
    a. Turn off the printer.
    b. Install the following components one at a time:
        - Memory options
        - Fax card
        - Modem
        - Wireless and network option cards

    > **Note:** Make sure to perform a POR after installing each component.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

20. Perform the following tests:
    a. Turn off the printer.
    b. Replace the components that caused the error.
    c. Turn on the printer.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

21. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

91y errors

91y error messages

Error code	Description	Action
910.xx	General engine software error.	See 91x.xx (910.xx-919.xx) Engine software service check on page 328.
911.xx		
912.xx		
913.xx	General engine software error.	See 913.xx error code check on page 330.
914.xx	General engine software error.	See 91x.xx (910.xx-919.xx) Engine software service check on page 328.
915.xx		
916.xx		
917.xx		
918.xx		
919.xx		

91x.xx (910.xx-919.xx) Engine software service check

1. Perform the following tests:
   a. Remove the controller board shield. See Controller board shield removal on page 475.
   b. Check the cables on the controller board for proper connection.

   Are the cables properly connected?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 3.

2. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Go to step 4.
   - **No**:
     The problem is solved.

3. Reconnect the cables on the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Remove all supplies, and then reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 6.

5. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

6. Check if a 31.xx error appears?

   Did a 31.xx error appear?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Replace the supplies.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

8. Check the continuity of the supplies and imaging unit cables.

   Do the cables have continuity?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

9. Replace the defective cable.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

913.xx error code check

1. Perform the following tests:
   a. Turn the printer off, and remove the controller board shield. See Controller board shield removal on page 475.
   b. Check the cable connections. See Controller board removal on page 477 for proper disconnecting and connecting of cables from controller board.

   Are all cable connections secure?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Perform the following tests:
   a. Reconnect any loose connections.
   b. Print multiple print tests.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the fuser drive motor.

   Does the problem remain?

   - **Yes**:

Go to the next step.

- **No**:
  The problem is solved.

4. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

938 errors

938 error messages

Error code	Description	Action
938.01	The board level was not obtained.	See Controller board removal on page 477.
938.02	Timed out while waiting for the bullet serial data to be updated.	
938.03	The NVM_OK was not received from the NV2 server for a successfully submitted request.	
938.04	An over temperature condition is detected.	

95y errors

95y error messages

Error code	Description	Action
950.xx	There is a mismatch between controller EEPROM and mirror. • 950.00 through 950.29 codes: mismatch between controller and mirror • 950.30 through 950.60 codes: mismatch between secure and controller	Go to NVRAM mismatch failure service check on page 334.
950.10	An NVRAM mismatch error occurred.	
951.xx	Error NV part on system board.	Go to Controller board removal on page 477.
952.xx	A recoverable MVRAM Cyclic Redundancy Check (CRC) error occurred. *n* is the offset at which the error occurred.	Performing a POR will clear this error.
953.xx	NVRAM chip failure with mirror. 1. POR the printer. 2. If the problem persists, replace the UICC card.	Go to Control panel front cover removal on page 419.
953.99	A control panel NVRAM error occurred.	Go to NVRAM mismatch failure service check on page 334.
954.xx	The NVRAM chip failure with controller part.	

Error code	Description	Action
955.xx	The Code ROM or NAND flash failed the Cyclic Redundancy Check (CRC) check or the NAND experienced an uncorrectable multi-bit failure. <*loc*> indicates the source of the failure and has one of the following values: • CRC Failure: The source is a failing package indicated by P*n* where *n* is the package number. This error could occur on a controller with ROM or NAND flash and could occur as a result of the CRC check done when the machine is powered on. The range of package numbers is from 0 to 15. • Error Correction Code (ECC) Failure: The source is a failing page indicated by B*n* where "*n*" is the page number. This error occurs only if a multi-bit failure is detected during the ECC execution. Single bit failures will be corrected automatically and will not result in a service error. The range of page numbers is from 0 to 1023.	
956.xx	Controller board failure. Processor failure. Check on .02 for fan error.	
957.xx	Controller board failure. ASIC failure.	
958.xx	Printer has performed more than 100 "shift and reflash" operations as a result of ECC bit corrections.	
959.xx	Controller verification failure of system boot code.	Go to Invalid firmware/controller board service check on page 335.
959.0x	System hardware failure.	Go to Controller board removal on page 477.

NVRAM mismatch failure service check

Warning—Potential Damage
To avoid NVRAM mismatch issues, replace only one of the following components at a time:

- Control panel
- Controller board

To replace a component and to test whether the problem is resolved:

1. Replace the affected component.

   Warning—Potential Damage
   Do not perform a Power-On Reset (POR) until the problem is resolved. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

2. Enter the Diagnostics menu. The Diagnostics menu allows you to use temporarily the replacement part.

   Warning—Potential Damage
   Some printers perform automatically a POR if the Diagnostics menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

3. Use the Diagnostics menu to test the replacement part. Perform a feed test to check if the problem is resolved.
   - If the problem is not resolved—Turn off the printer, and then install the old part.
   - If the problem is resolved—Perform a POR.

1. Check if the control panel was recently replaced.

   Was the control panel recently replaced?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 4.

2. Replace the current control panel with the original control panel. See Control panel front cover removal on page 419.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the original control panel with a new control panel.

   Note: Make sure that the new control panel is not previously installed from another printer.

Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

4. Check if the controller board was recently replaced.

   Was the controller board recently replaced?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

5. Replace the current controller board with the original controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the original controller board with a new controller board.

   > **Note:** Make sure that the new controller board is not previously installed from another printer.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Invalid firmware/controller board service check

1. Update the firmware.

   > **Note:** Contact the next level of support for the correct firmware level.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

96y errors

96y error messages

Error code	Description	Action
960.xx	RAM memory error: RAM soldered on the board is bad.	See Controller board removal on page 477.
961.xx	RAM memory error: slot 1 RAM is bad.	See .Flash memory failure service check on page 253
964.xx	Download emulation cyclic redundancy check (CRC) failure has occurred. A checksum failure detected in the emulation header or emulation file.	See Download emulation cyclic redundancy service check on page 337.

Memory failure service check

1. Check the memory module on the controller board for proper installation and damage, and reseat if necessary.

   Is the memory module properly installed and free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.

2. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the memory module.

   Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Download emulation cyclic redundancy service check

1. Disable the download emulation, and then program the download emulation into the firmware card again.

   Does the error remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Replace the firmware card and download the emulation to the new card.

   Does the error remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

97y errors

97y error messages

Error code	Description	Action
975.xx 975.xx	Network error—Unrecognizable network port.	Replace the standard network card, or the card in the specified slot.
976.xx	Unrecoverable software or error in the network or network card [x].	See Standard network/network card error service check on page 338.
978.xx	Bad checksum while programming the standard network or network card [x] port.	See Standard network/network card programming error service check on page 338.
979.xx	Flash parts failed while programming the standard network or network card [x] port.	See Standard network/network card error service check on page 338.

Standard network/network card error service check

1. Check if the network card is installed.

   Is the network card installed?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.

2. Make sure that the network card is properly installed.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

3. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Standard network/network card programming error service check

1. Make sure that you downloaded the code in binary mode and not in ASCII, and then reprogram the network card.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check if the network card is installed.

   Is the network card installed?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 4.

3. Make sure that the network card is properly installed.

Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

4. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

980-984 errors

980–984 error messages

Error code	Description	Action
980.xx	Engine experiencing unreliable communication with the specified device. **Note:** <*device*> can be one of the following: • Tray 2 • Tray 3 • Tray 4	See Options communication error service check on page 342.
981.xx	Engine protocol violation detected by the specified device. **Note:** <*device*> can be one of the following: • Tray 2 • Tray 3 • Tray 4	

Error code	Description	Action
982.xx	Communications error detected by the specified device. **Note:** <*device*> can be one of the following: • Tray 2 • Tray 3 • Tray 4	
983.xx	Invalid command received by the specified device. **Note:** <*device*> can be one of the following: • Tray 2 • Tray 3 • Tray 4	
984.xx	Invalid command parameter received by the specified device. **Note:** <*device*> can be one of the following: • Tray 2 • Tray 3 • Tray 4	

985 errors

985 error messages

Error code	Description	Action
985.02–985.03	Communications problem between the base printer and the RFID Option.	See RFID Option communication error service check on page 341.
985.04–985.07	Connections problem between the base printer and the RFID Option, or a hardware problem within the RFID Option.	See RFID Option connection error service check on page 341.

RFID Option communication error service check

1. Check if the USB cable from the RFID Option is plugged into the USB Host Port on the back of the printer.

   Is the RFID Option cable plugged into the USB Host Port?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

2. Perform the following tests:
   a. Turn off the printer.
   b. Plug the RFID Option cable into the USB Host Port.
   c. Turn on the printer.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

RFID Option connection error service check

1. Make sure that the RFID Option cable is plugged into the USB Host Port on the back of the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Make sure that the RFID Option is installed immediately below the base printer and above one or two optional trays.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Turn off the printer, and then turn it on.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:

The problem is solved.

99y errors

99y error messages

Error code	Description	Action
990.xx	An equipment check condition occurred, but the exact component failure was not determined.	See Options communication error service check on page 342.
991.xx	An equipment check condition occurred in the controller card.	
992.xx	General software error.	

Options communication error service check

1. Perform the following tests:
   a. Check if the firmware is updated, and then update the firmware if necessary.
   b. Make sure that the printer supports the option. See the *Printer, Option, and Stand Compatibility Guide*.
   c. Make sure that the option is properly attached to the printer or adjacent option.
   d. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Reseat the printer interface cable on the printer controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Reinstall the option.
   b. Print a test page, and then check if the option is defective.

Are all options properly working?

- **Yes**:
  Go to the next step.
- **No**:
  Contact the next level of support

4. Reseat the option interface cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the option interface cable for damage.

   Is the cable free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Replace the option interface cable. See 550-sheet tray interface cable removal on page 500.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Replace the option controller board. See 550-sheet tray controller board assembly removal on page 500.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support
   - **No**:
     The problem is solved.

Other symptoms

Base printer symptoms

Symptom	Action
Printer has no power.	See .Dead machine service check
Control panel not functioning.	See .Control panel service check on page 344

Symptom	Action
False values for the front door appear on the display.	See Interlock switch service check on page 346.
NFC communications failure.	See Mobile solutions module NFC service check on page 349.
Toner out displays.	See Toner meter cycle (TMC) card service check on page 356.
Printer not communicating with host (USB).	See USB service check on page 356.
Printer not communicating with host (network).	See Network service check on page 352.
Paper jam in the output bin.	See Sensor (output bin full) static jam service check on page 122.

Control panel service check

1. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check the blue LED on the control panel.

   Is the LED on?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 4.

3. Check the Ethernet and controller board LEDs on the control panel.

   Are the LEDs on?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 9.

4. Check the ribbon cable connection on the control panel and controller board.

   Is the cable properly connected at both ends?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the cable for damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Replace the control panel cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Replace the control panel. See Control panel front cover removal on page 419.

   Does the problem remain?

   - **Yes**:
     Go to step 12.
   - **No**:
     The problem is solved.

9. Disconnect the LVPS cable from the controller board, and then measure the voltages of the red and orange wires.

   Is the reading on the red wire +6.5 V, and the orange wire +25 V?

   - **Yes**:
     Go to step 12.
   - **No**:
     Go to the next step.

10. Replace the LVPS cable.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Replace the LVPS. See LVPS removal on page 438.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

12. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Interlock switch service check

1. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Door interlock).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     The problem is solved.
   - **No**:
     Go to the next step.

2. Check the sensor cable for proper connection.

   Is the cable properly connected?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Remove the motor cover, and then check the interlock cable relay for proper connection.

   Is the cable properly connected?

- **Yes**:
  Go to step 6.
- **No**:
  Go to the next step.

5. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the front door interlock switch actuator for damage.

   Is the actuator free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Replace the duplex outer guide. See .Duplex outer guide removal on page 426

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check the toner door interlock switch actuator for damage.

   Is the actuator free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Replace the toner door. See .Toner door removal on page 417

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the motor cover. See Motor cover removal on page 415.

    Does the problem remain?

    - **Yes**:
      Go to the next step.

- **No**:
  The problem is solved.

11. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensor (narrow media) and sensor (fuser buckle) service check

1. Check the sensor (narrow media) and sensor (fuser buckle) for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Fuser buckle) and sensor (Narrow media).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Check the sensor cables for proper connection and damage, and replace if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Replace the sensors.

   Does the problem remain?

   - **Yes**:

Contact the next level of support.

- **No**:
  The problem is solved.

Dead machine service check

1. Make sure that the electrical outlet is not turned off by a switch or breaker.
2. Plug another device into the outlet to confirm that it is working.
3. Check the printer label to confirm its required voltage, and then ensure the electrical outlet you are using provides the same voltage.

   Note: Using power strips or uninterruptible power supplies can cause low amperage inside the printer, which may trigger a false fuser error.

4. Make sure that the LVPS is not damaged. Do the following:
   a. Inspect for burnt, discolored, or melted circuit components.
   b. Check LVPS cables for cracks, dents, or other deformations in components or connectors.
   c. Reseat all cables connected to the LVPS.
   d. Make sure that the cable and connector between the LVPS and the controller board are properly connected and not damaged. For more information, see Wiring Diagram.
5. Make sure that the cable between the controller board, the control panel and the control panel card are connected properly and free of damage. For more information, see Wiring Diagram.

Mobile solutions module NFC service check

1. Check if the control panel is functioning properly.

   Is the control panel functioning properly?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Replace the control panel.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Verify if the mobile device is an Android device that supports NFC and can read passive NFC tags.

   Does the device support NFC and can it read passive NFC tags?

- **Yes**:
  Go to step 5.
- **No**:
  Go to the next step.

4. Use a mobile device that supports NFC.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Make sure that the latest version of the Lexmark Mobile Printing application is installed on the Android device.

   Is the latest version of the application installed?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Install the latest version of the Lexmark Mobile Printing application on the mobile device.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check if the printer has a wireless ISP installed and if it is functioning properly.

   Is the wireless ISP installed and functioning properly?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.

8. Install or reinstall the wireless ISP in the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Verify if WiFi Direct is enabled in the printer.

   Is WiFi Direct enabled?

   - **Yes**:

Go to step 11.

- **No**:
  Go to the next step.

10. Enable WiFi direct in the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Verify that the NFC tap sticker is in the proper place on the control panel.

    Is the NFC tap sticker properly located on the control panel?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Using a template, reposition the tap sticker.

    > **Note:** The sticker should be placed over the NFC antenna on the mobile solutions module.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Check if the mobile solutions module is properly installed on the control panel assembly.

    Is the mobile solutions module properly installed?

    - **Yes**:
      Go to step 15.
    - **No**:
      Go to the next step.

14. Reinstall the mobile solutions module on the control panel assembly.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

15. Install a new NFC card.

    Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Network service check

Note:

- Before starting this service check, print out the network setup page. From the home screen, touch **Settings > Reports > Network > Network Setup Page**.
- Consult the network administrator to verify that the physical and wireless network settings displayed on the network settings page for the device are properly configured.
- If a wireless network is used, then verify that the printer is in range of the host computer or wireless access point, and there is no electronic interference.
- Have the network administrator verify that the device is using the correct SSID, and wireless security protocols.
- For more network troubleshooting information, consult the Lexmark Network Setup Guide.

1. If the printer is physically connected to the network, make sure that the Ethernet cable is properly connected on both ends.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. If the network is wireless, check the online status of the printer under Printers and Faxes on the host computer. Delete all print jobs in the print queue.

   Is the printer online and in Ready state?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Change the printer status to online.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the IP address displayed on the network settings page.

Does it match the IP address in the port of the drivers using the printer?

- **Yes**:
  Go to step 9.
- **No**:
  Go to the next step.

5. Perform the following tests:

   > **Note:** A printer should use a static IP address on a network.

   Does the LAN use DHCP?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 8.

6. Check the first two segments of the IP address.

   Does the IP address start with 169.254?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 8.

7. Reset the printer.

   Does the problem remain?

   - **Yes**:
     Go to step 9.
   - **No**:
     The problem is solved.

8. Reset the address on the printer to match the IP address on the driver.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Have the network administrator check if the printer and computer IP address have identical subnet addresses.

   Are the subnet addresses the same?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Using the subnet address supplied by the network administrator, assign a unique IP address to the printer.

    Note: The printer IP address should match the IP address on the print driver.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Perform the following tests:

    Is the printer physically connected (Ethernet cable) to the network?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 15.

12. Try using a different Ethernet cable.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Have the network administrator check the network drop for activity.

    Is the network drop functioning properly?

    - **Yes**:
      Go to the next step.
    - **No**:
      Contact the network administrator.

14. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

15. Perform the following tests:

    Is the printer on the same wireless network as the other devices?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

16. Assign the correct wireless network to the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

17. Perform the following tests:

    Are the other devices on the wireless network communicating properly?

    - **Yes**:
      Go to the next step.
    - **No**:
      Contact the network administrator.

18. Make sure that the wireless card on the controller board is properly installed.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

19. If there is an attached antenna, check it for damage, and replace if necessary.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

20. Make sure that the antenna is properly connected to the wireless card.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

21. Replace the wireless card.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

22. Replace the controller board. See Controller board removal on page 477.

    Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Toner meter cycle (TMC) card service check

1. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (Toner meter).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.

2. Replace the toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the TMC card. See TMC card removal on page 446.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

USB service check

1. Is the USB cable properly connected to the printer and host PC?
   - **Yes**:
     Go to the next step.
   - **No**:
     Properly connect the cable at both ends.

2. Try a different USB cable.

   Does this fix the issue?

- **Yes**:
  Issue fixed.
- **No**:
  Go to the next step.

3. Connect a different device to the USB cable.

   Did the host PC see the device?

   - **Yes**:
     Replace the controller board. See Controller board removal on page 477.
   - **No**:
     There is an issue with the host machine.

Control panel USB cable service check

1. Perform the following tests:
   a. Remove the controller board shield. See Controller board shield removal on page 475.
   b. Check the USB cable on the JPFUSB1 connector on the controller board for proper connection.

   Is the cable properly connected?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Reconnect the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Replace the controller board. See Controller board removal on page 477.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:

The problem is solved.

Toner patch sensing service check

Pre-check procedure

1. Open and close the toner door a few times to clean the sensor (TPS) lenses.
2. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Color alignment adjust
3. On the AA adjustment row, touch **Start**.

   Note: This triggers the auto align routine which performs the color alignment error corrections (0.42 mm, 0.84 mm, and 3 mm range).

   Note: If the AA adjustment is successful, an **`AA adjustment passed`** message appears on the screen. If an **`AA adjustment passed`** message does not appear, skip the next pre-check step, and then go directly to step 4 in the service check.
4. Enter the Diagnostics menu, and then navigate to:

   Printer setup > EP setup > Toner patch sensor adjust > Full calibration

   Note: This triggers the auto align routine (0.42 mm range only).

1. Perform the following tests:
   a. From the home screen, touch **Settings > Reports > Print Quality Pages**.
   b. On the Device information section of the print quality test page, check the CalSet values of the following:
      - C Developer operating point
      - C Laser operating point
      - C Linearization stat
      - M Developer operating point
      - M Laser operating point
      - M Linearization stat
      - Y Developer operating point
      - Y Laser operating point
      - Y Linearization stat
      - K Developer operating point
      - K Laser operating point
      - K Linearization stat

Are the values 0?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Perform the blank or white pages service check. See Blank or white pages check on page 45.

   Was an issue found and resolved?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 4.

3. Perform the auto alignment service check. See Auto alignment service check on page 360.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer setup > EP setup > Toner patch sensor adjust

   b. On the sensor gain characterization row, touch **Start**.
   c. On the sensor gain verification row, touch **Start**.
   d. On the sensor gain verification section of the test page, check the average signal values of the patch number.

   Are the values within the requirement?

   - **Yes**:
     The problem is solved.
   - **No**:
     Go to the next step.

5. Perform the following tests:
   a. Remove the imaging kit.
   b. Move the TPS wiper mechanism lever up and down.

   Does the wiper mechanism properly move?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

6. Perform the following tests:
   a. Reinstall, repair, or replace the TPS sled and wiper mechanism.

b. Perform the auto alignment service check. See Auto alignment service check on page 360.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

7. Check the cable on the sensor (TPS) and on the JTPSAA1 connector on the controller board for proper connection, and reseat if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Perform the following tests:
   a. Replace the sensor (TPS). See Sensor (TPS) removal on page 453.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer setup > EP setup > Toner patch sensor adjust

   c. On the sensor gain characterization row, touch **Start**.
   d. On the sensor gain verification row, touch **Start**.
   e. On the sensor gain verification section of the test page, check the average signal values of the patch number.

   Are the values within the requirement?

   - **Yes**:
     The problem is solved.
   - **No**:
     Contact the next level of support.

Auto alignment service check

Pre-check procedure

1. Open and close the toner door a few times to clean the sensor (TPS) lenses.
2. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Color alignment adjust

3. On the AA adjustment row, touch **Start**.

> **Note:** This triggers the auto align routine which performs the color alignment error corrections (0.42 mm, 0.84 mm, and 3 mm range).

Note: If the AA adjustment is successful, an **AA adjustment passed** message appears on the screen. If an **AA adjustment passed** message does not appear, skip the next pre-check step, and then go directly to step 3 in the service check.

4. Enter the Diagnostics menu, and then navigate to:

   Printer setup > EP setup > Toner patch sensor adjust > Full calibration

   Note: This triggers the auto align routine (0.42 mm range only).

1. Perform the following tests:
   a. From the home screen, touch **Settings > Reports > Print Quality Pages**.
   b. On the CalSet section of the test page, check the color alignment stat value.

   Is the value 0?

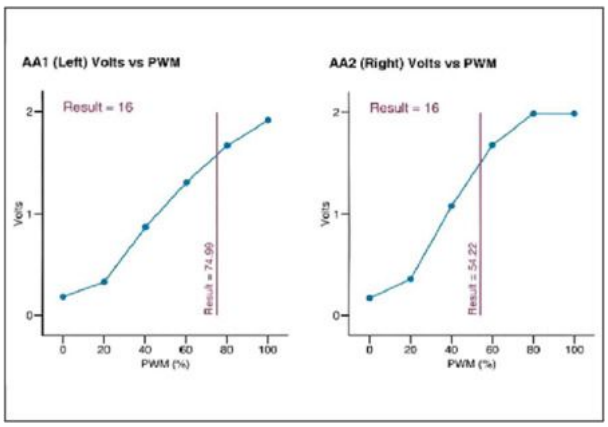
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Perform the blank or white pages service check or missing color service check. See Blank or white pages check on page 45 or Missing color check on page 70.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer setup > EP setup > Toner patch sensor adjust

   c. On the sensor gain characterization row, touch **Start**.
   d. On the sensor gain verification row, touch **Start**.
   e. Check the graph in the printout.

      This sample graph shows good values:



Note: The normal range of the sensor voltage is 1.5–2.0 volts.

Does the graph show good values?

- **Yes**:
  The problem is solved.
- **No**:
  Go to the next step.

3. Perform the following tests:
   a. Remove the imaging kit.
   b. Move the TPS wiper mechanism lever up and down.

   Does the wiper mechanism properly move?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Check the TPS sled and TPS wiper mechanism for proper installation.

   Are the TPS sled and TPS wiper mechanism properly installed?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Reinstall, repair, or replace the TPS sled and TPS wiper mechanism. See TPS sled removal on page 455 and .TPS wiper mechanism removal on page 457

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the cables on the sensor (auto alignment) and on the JTPSAA1 connector on the controller board for proper connection, and reseat if necessary.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Perform the following tests:
   a. Replace the sensor (TPS). See Sensor (TPS) removal on page 453.
   b. Enter the Diagnostics menu, and then navigate to:

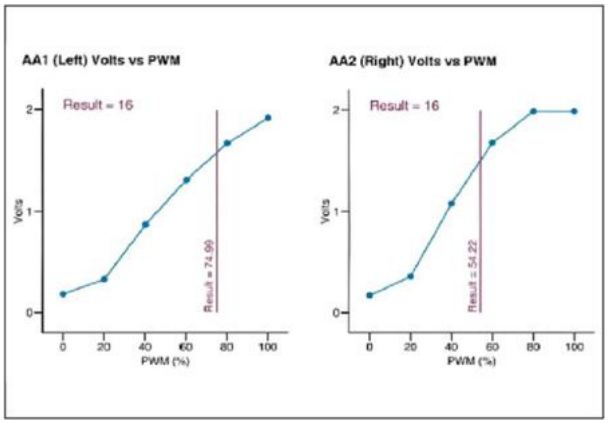
      Printer setup > EP setup > Toner patch sensor adjust

   c. On the sensor gain characterization row, touch **Start**.

d. On the sensor gain verification row, touch **Start**.

e. Check the graph in the printout.

This sample graph shows good values:



> **Note:** The normal range of the sensor voltage is 1.5–2.0 volts.

Does the graph show good values?

- **Yes**:
  The problem is solved.
- **No**:
  Contact the next level of support.

Printer fails to program RFID tags service check

> **Note:** This applies only to a printer that has an RFID Option installed.

1. Perform the following tests:
   a. From the home screen, navigate to:

   Settings > RFID

   b. Check the values of the following settings:
      - Stop on Error
      - Mark on Error
      - Retry Count

   c. If the values of the settings match any of the following combinations, then modify the settings.

Stop on Error	Mark on Error	Retry Count
NO	NO	0

Stop on Error	Mark on Error	Retry Count
NO	NO	*N* > 0

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Check whether the actual behavior matches the intended behavior for the RFID menu settings. See Behavioral issues (without error codes) of printers with RFID Option on page 367.

   Does the behavior match the intended behavior for the RFID menu settings?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 4.

3. Perform the following tests:
   a. Load plain paper (non-RFID) into the tray.
   b. From the home screen, navigate to **Settings > RFID**, and then make sure that Stop on Error is set to ON and Retry Count is set to 0.
   c. Resend the print job.

   > **Note:** If the job prints without error, then there is no RFID content in the job.

   To check whether the print job includes RFID content:

   a. Load plain paper (non-RFID) into the tray.
   b. From the home screen, navigate to **Settings > RFID**, and then make sure that Stop on Error is set to ON and Retry Count is set to 0.
   c. Resend the print job.

   > **Note:** If the job prints without error, then there is no RFID content in the job.

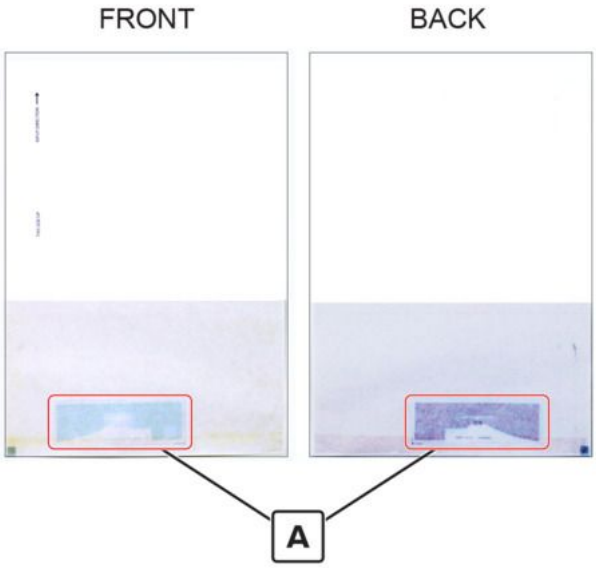
   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check if the media loaded has an RFID tag (A) attached or embedded.

- **Sample RFID media**

  Note: This image shows a typical RFID tag. The actual tag varies in size, shape, and appearance, as well as position and orientation on the page.



Is the tray loaded with an RFID media?

- **Yes**:
  Go to step 6.
- **No**:
  Go to the next step.

5. Load the tray with RFID media.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check if the RFID media is loaded in Tray 3 or Tray 4.

   Note: Because the RFID Option is installed in the Tray 2 position, RFID media loaded in Tray 1 cannot pass through the Option and cannot be programmed. Thus, load RFID media only into Tray 3 or Tray 4.

   Is the RFID media loaded in Tray 3 or Tray 4?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Load the RFID media into Tray 3 or Tray 4.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

8. Check if the printer, driver, or job settings are selecting the tray that holds the RFID media.

   Do the settings specify Tray 3 or Tray 4?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Configure the printer, driver, or job settings to specify the tray that holds the RFID media.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Check if the RFID media is rotated to the correct orientation for the user’s application.

    > **Note:** The orientation of the media loaded in the tray should match the orientation specified by the user's RFID system design.

    Is the RFID media rotated to the correct orientation?

    - **Yes**:
      Go to step 12.
    - **No**:
      Go to the next step.

11. Rotate the media to the correct orientation for the user's application.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

12. The RFID media could be damaged or faulty. If necessary, ask the user to read and/or write the tags with a desktop or handheld RFID reader.

    Are the tags readable?

    - **Yes**:
      Contact the next level of support.
    - **No**:

Go to the next step.

13. Replace the RFID media.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Behavioral issues (without error codes) of printers with RFID Option

The following table details the actual behavior of the printer to every possible RFID setting combinations. To access the RFID menu:

1. From the home screen, touch **Settings**.



2. Select **RFID**, and then configure the settings.



Note: If the printer continues to behave inconsistently with the menu settings as indicated below, this may indicate a hardware problem. Contact the next level of support.

Setting combination		Actual behavior	
Stop on Error	Mark on Error	Retry Count	
Yes	Yes	0	(Default) All failed pages will be marked and a **44.01** error will be posted.

Setting combination		Actual behavior
Stop on Error	Mark on Error	Retry Count
Yes	No	0	**44.01** error will be posted on all failed pages.
No	Yes	0	Failed pages will be marked, but no **44.01** error will be posted.
Yes	No	Any number greater than 0	Failed page will be reprinted up to *N* times before **44.01** error is posted. Failed pages will not be marked.
Yes	Yes	Any number greater than 0	Failed pages will be reprinted up to *N* times. Each failed page will be marked. After *N* retries, **44.01** error will be posted.
No	Yes	Any number greater than 0	Failed pages will be reprinted up to N times. Each failed page will be marked. After *N* retries, the printer will move to the next page in the job. **44.01** error will not be posted.
No	No	0	There will be no indication of failed pages.
No	No	Any number greater than 0	A failed page will be reprinted up to *N* times. Failed pages will not be marked. The printer will resume printing with next page with no error indication after *N* retries.

Note:

- *N* is any number greater than 0 as specified in the Retry Count setting.
- We do not recommend using the last two combination of settings. These settings allow unprogrammed or failed tags into the output with no indication of failure.

The printer runs slow service check

1. Make sure that the paper setting on the printer matches the paper used.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Perform the following tests:
   a. Enter the Configuration menu, and then navigate to:

      Device Operations > Automatic Media Type Detection

   b. Select **Off**.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Contacting customer support

Contacting customer support

To accurately diagnose your issue, our support agents must perform diagnostic troubleshooting with you during your call. Make sure you are near your device so you can follow the on-screen or spoken instructions.

If you are not near your device, you can call us back when you are ready.

Have the following information ready when you contact support:

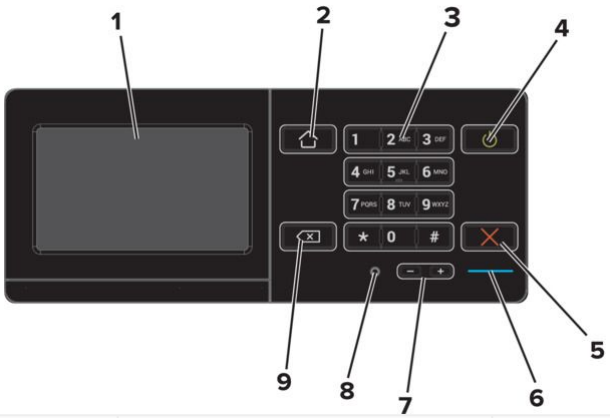
- Printer model and serial number
- A brief description of the issue
- Any error messages (if applicable)

Technical support via telephone is also available. In the U.S. or Canada, call **1-800-539-6257**. For other countries or regions, go to www.lexmark.com/supportdirectory.

Service menus

Understanding the printer control panel

Using the control panel



#	Use the	To
1	Display	• View the printer messages and supply status. • Set up and operate the printer.
2	Home button	Go to the home screen.
3	Keypad	Enter numbers or symbols in an input field.
4	Power button	• Turn on or turn off the printer. **Note:** To turn off the printer, press and hold the power button for five seconds. • Set the printer to Sleep or Hibernate mode. • Wake the printer from Sleep or Hibernate mode.

#	Use the	To
5	Stop or Cancel button	Stop the current job.
6	Indicator light	Check the status of the printer.
7	Volume buttons	Adjust the volume of the headset or speaker.
8	Headset or speaker port	Attach a headset or speaker.
9	Backspace button	Move the cursor backward and delete a character in an input field.

Understanding the status of the power button and indicator light

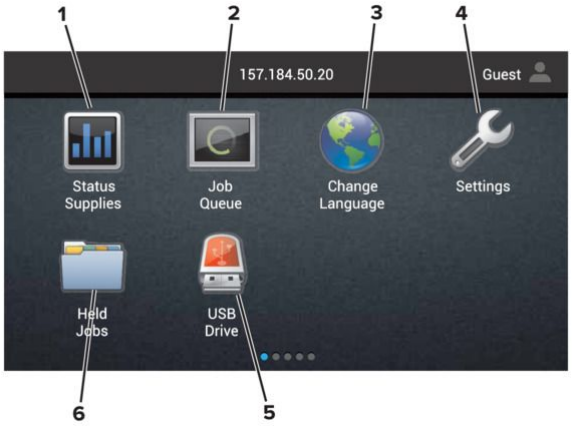
Indicator light	Printer status
Off	The printer is off or in Hibernate mode.
Blue	The printer is ready or processing data.
Red	The printer requires user intervention.

Power button light	Printer status
Off	The printer is off, ready, or processing data.
Solid amber	The printer is in sleep mode.
Blinking amber	The printer is in hibernate mode.

Using the home screen

When the printer is turned on, the display shows the home screen. Use the home screen buttons and icons to initiate an action.

Note: Your home screen may vary depending on your home screen customization settings, administrative setup, and active embedded solutions.



#	Touch	To
1	Status/Supplies	• Show a printer warning or error message whenever the printer requires intervention to continue processing. • View more information on the printer warning or message, and on how to clear it. **Note:** You can also access this setting by touching the top section of the home screen.
2	Job Queue	Show all the current print jobs. **Note:** You can also access this setting by touching the top section of the home screen.
3	Change Language	Change the language on the printer display.
4	Settings	Access the printer menus.
5	USB Drive	View, select, or print photos and documents from a flash drive.
6	Held Jobs	Show all the current held print jobs.

Touch	To
Bookmarks	Access bookmarks.

Touch	To
App Profiles	Access application profiles.
Lock Device	Prevent users from accessing any printer functions from the home screen.

Menus list

Device	Print	Paper	Network/Ports	USB Drive
Preferences Notifications Group Lists Alert Types Anti-Spam Logic Description Suppressing Duplicate Alerts Power Management Information Sent to Lexmark Accessibility Restore Factory Defaults Maintenance Remote Operator Panel Visible Home Screen Icons Site Map Update Firmware About This Printer	Layout Setup Quality Job Accounting Image XPS PDF HTML PostScript PCL PPDS	Tray Configuration Media Configuration Bin Configuration	Network Overview Wireless AirPrint Ethernet TCP/IP IPv6 SNMP 802.1x IPSec LPD Configuration HTTP/FTP Settings ThinPrint USB Parallel [x] Serial Wi-Fi Direct	Flash Drive Print
Security	Option Card Menu	Reports	Help	

Login Methods Certificate Management Schedule USB Devices Security Audit Log Login Restrictions Confidential Print Setup Disk Encryption Erase Temporary Data Files Solutions LDAP Settings Miscellaneous	**Note:** This setting appears only when an optional card is installed.	Menu Settings Page Print Quality Pages Device Print Shortcuts Network	Print All Guides Color Quality Guide Connection Guide Information Guide Media Guide Moving Guide Print Quality Guide Supplies Guide	

Configuring the door interlock bypass jumpers

Note: The interlock bypass jumpers are only used with the following motors:

- Motor (fuser)
- Motor (K developer)
- Motor (transfer module)
- Motor (duplex/MPF)

The controller board has two door interlock bypass jumpers. These jumpers allow you to remove the motor cover and open the toner door to see the motors in operation while being tested in diagnostics mode. The JMTREN1 jumper connector allows you to bypass the interlock switches, and test the motor (fuser) and motor (K developer/transfer module). The JMTREN2 jumper connector allows you to bypass the interlock switches, and test the motor (duplex/MPF).

Note: If the jumpers are not set to the bypass position, and a motor test is performed while the toner door is open, then a 1yy.80 error occurs.

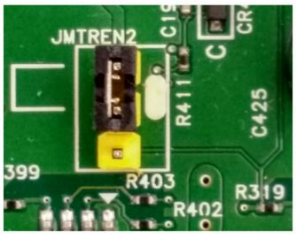
The following are the jumper configurations:



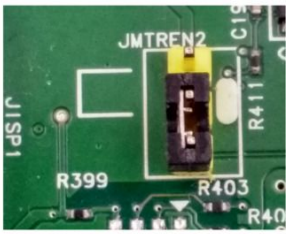
Interlock bypass disabled (default)



Interlock bypass enabled



Interlock bypass disabled (default)



Interlock bypass enabled

To set the jumpers:

1. Turn off the printer.
2. Remove the controller board shield. See Controller board shield removal on page 475.
3. Remove the inner controller board shield. See Controller board shield removal on page 475.
4. Locate the jumper connectors on the controller board.
5. Move the jumper of the motor being tested to the bypass position.
6. Press and hold the **3** and **6** buttons while turning on the printer to enter the Diagnostics menu.
7. Touch **Printer diagnostics & adjustments > Motor tests**.
8. Select a motor, and then touch **Start**.
9. After the test, turn off the printer, and then move the jumpers back to the default position.

> **Note:** If the jumpers are not moved to the default position, then a **`false door open`** message appears on the screen.

Diagnostics menu

Entering the Diagnostics menu

The Diagnostics menu contains tests that are used to help isolate issues with the printer. To access some of these tests, avoid POST tests that run at POR. Some POST tests can generate errors that prevent a diagnostic test from running.
To access the Diagnostics menu from the home screen, press *** * 3 6** on the control panel.
For 2-line control panels, press the left arrow button twice, press **OK**, and then press the right arrow button.

Event Log

Display Log

This setting displays the panel text that appears when the event occurs.
Enter the Diagnostics menu, and then navigate to:
Event Log > Display Log

Print Log

This setting lists an extended version of the various printer events.

1. Enter the Diagnostics menu, and then navigate to:

   Event Log > Print Log
2. Touch **Start**.

Note: The events that appear in the report vary depending on the operational history of the printer.

Print Log Summary

This setting lists a brief summary of the various printer events.

1. Enter the Diagnostics menu, and then navigate to:

   Event Log > Print Log Summary
2. Touch **Start**.

Note: The events that appear in the report vary depending on the operational history of the printer.

Mark Log

This setting allows you to create a service, maintenance, or custom log entry. Each log entry is added in the printer event log.

1. Enter the Diagnostics menu, and then navigate to:

   Event Log > Mark Log
2. Select a log that you want to create, and then touch **Start**.

Reports

Device Settings

This report lists all the current printer settings.
Enter the Diagnostics menu, and then navigate to:
Reports > Device Settings

Installed Licenses

This setting lists all the installed licenses and their feature data.
Enter the Diagnostics menu, and then navigate to:
Reports > Installed Licenses

Advanced Print Quality Samples

This setting prints a list of the printer settings and sample pages to check print quality.
Enter the Diagnostics menu, and then navigate to:
Advanced Print Quality Samples > Advanced Print Quality Samples

Input tray quick print

This setting lets you print a single or continuous Quick Test page in either duplex or simplex mode.

1. Enter the Diagnostics menu, and then touch **Input tray quick print**.
2. Select where you want to print the pages from.
3. Select whether to print a single or continuous test page, and then touch **Start**.

Printer Setup

Printed page count (mono)

This setting displays the amount of pages printed in mono.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the printed page count for mono.

Printed page count (color)

This setting displays the amount of pages printed in color.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.

2. View the printed page count for color.

Permanent page count

This setting displays the total number of pages printed in mono and color. After all the print tests are completed, this value resets to zero.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the permanent page count.

Processor ID

This setting indicates the ID of the processor on the controller board.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the processor ID.

Serial number

This setting displays a read-only value of the serial number.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the serial number.

Model name

This setting displays the model name of the printer.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the model name.

Engine setting [x]

> **Warning—Potential Damage**
> Do not change this setting without specific instructions from the next level of support.

This setting allows you to select a printer engine setting. Possible values are 0–255. 0 is the default.

1. Enter the Diagnostics menu, and then navigate to:

   Printer Setup > Engine setting [x]
2. Select a setting, enter a value, and then touch **OK**.

EP setup

Warning—Potential Damage
Do not change this setting without specific instructions from the next level of support.

This setting allows you to adjust the EP setup of the printer.

1. Enter the Diagnostics menu, and then navigate to:

   Printer Setup > EP setup

2. Select a setting.

Printer diagnostics and adjustments

Sensor tests

1. Enter the Diagnostics menu, and then touch **Printer diagnostics & adjustments**.
2. From the Sensor tests section, touch **Start**.

   A dialog listing the sensor tests appears.

3. Find, and then manually toggle the sensor.

   Note:
   - The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
   - If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.

Motor tests

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Motor tests

2. Select a motor, and then touch **Start**.

Note:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation in order to avoid secondary issues such as possible damage and contamination.
- Some tests require a special action to activate a motor such as removing a major component.
- If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.

Registration adjust

This setting lets you adjust the skew, margins, or perform a Quick Test. For more information, see Registration adjustment on page 406.

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Registration adjust
2. Select a setting to adjust.

Memory tests

This setting lets you test or flash the printer memory or test or format the printer hard disk.

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Memory tests
2. Select a setting.

Color alignment adjust

This setting allows you to adjust the color alignments and to print or reset the default settings.

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Color alignment adjust.

   In the AA Adjustment menu, select **OK** or **Start**.

   > **Note:** Color alignment is performed for cyan, magenta, and yellow.

2. For each color, do the following:

   a. Navigate to: **Printer diagnostics & adjustments > Color alignment adjust > Cyan > Quick test**

   b. Check the alignment markings on the test page generated.

   c. Follow the instructions on the test page to correct the color misalignment.

3. If color misalignment persists, repeat step 1 and step 2.

Supply reset

The setting resets the ITM counter values to zero.

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Supply reset
2. Select a setting, and then touch **Start**.

Add-on cards tests

This setting allows you to test the add-on cards installed on the printer.

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Add-on cards tests
2. Select a card.

Printhead diagnostics

This setting allows you to test the printhead.

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Printhead diagnostics
2. Select a test, and then touch **Start**.

Weather station

This setting lets you view the temperature of the weather station sensor.

1. Enter the Diagnostics menu, and then touch **Printer diagnostics & adjustments**.
2. From the Weather station section, touch **Start**.

Fuser temperature

This setting lets you view the fuser temperature.

1. Enter the Diagnostics menu, and then touch **Printer diagnostics & adjustments**.
2. From the Fuser temperature section, touch **Start**.

Additional input tray diagnostics

Sensor tests

1. Enter the Diagnostics menu, and then touch **Additional input tray diagnostics**.
2. From the Sensor tests section, touch **Start**.

   A dialog listing the sensor tests appears.
3. Find, and then manually toggle the sensor.

Note:

- The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
- If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.

Motor tests

1. Enter the Diagnostics menu, and then navigate to:

   Additional input tray diagnostics > Motor tests

2. Select a motor, and then touch **Start**.

Note:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation in order to avoid secondary issues such as possible damage and contamination.
- Some tests require a special action to activate a motor such as removing a major component.
- If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.

Configuration Menu

Menu item	Description
USB Configuration USB PnP 1* 2 USB Scan to Local Off On* USB Speed Full Auto*	Configure the USB settings.
Tray Configuration Size Sensing Tray [x] Sensing	Set the printer to detect the size of the paper loaded in the tray. **Note:** This menu item appears only in trays with size-sensing mechanism.

Menu item	Description
Tray Configuration Tray Linking Automatic* Off	Set the printer to link the trays that have the same paper type and paper size settings.
Tray Configuration Tray Insert Message Delay Off* On	Set the printer to display the **`Tray Insert`** message after the user has inserted a tray.
Tray Configuration A5 Loading Short Edge Long Edge*	Specify the page orientation when loading A5 paper size.
Tray Configuration Paper Prompts Auto* Multipurpose Feeder Manual Paper Envelope Prompts Auto* Multipurpose Feeder Manual Paper	Set the paper source that the user will fill when a prompt appears to load paper or envelope. **Note:** For Multipurpose Feeder to appear, set Configure MP to Cassette from the Paper menu.
Tray Configuration Action for Prompts Prompt user* Continue Use current	Set the printer to resolve paper- or envelope-related change prompts.
Reports Menu Settings Page Event Log Event Log Summary Health Check Statistics	Print reports about printer menu settings, status, and event logs.
Supply Usage And Counters Clear Supply Usage History Reset [color] Cartridge Counter Reset [color] Imaging Unit Counter Reset [color] Developer Unit Counter Reset Color Imaging Kit Counter Tiered Coverage Ranges	Reset the supply page counter or view the total printed pages.
Clear all remotely-installed messages	Delete all logs created during remote installation.

Menu item	Description
Printer Emulations PPDS Emulation Off* On	Set the printer to use the PPDS data stream.
Print Configuration Black Only Mode Off* On	Print color content in grayscale.
Print Configuration Color Trapping Off 1 2* 3 4 5	Enhance the printed output to correct misregistration in the printer.
Print Configuration Font Sharpening 0–150 (24*)	Adjust the value of the high frequency screens used for font data.
Print Configuration Print Density 0–5 (3*)	Adjust the toner density when printing documents.
Print Configuration Quiet Mode Off* On	Reduce the amount of noise that the printer makes when printing.
Device Operations Panel Menus Off On*	Set the printer to show the control panel menus.
Device Operations Safe Mode Off* On	Set the printer to operate in a special mode, in which it attempts to continue offering as much functionality as possible, despite known issues.
Device Operations Clear Custom Status	Erase all custom messages.

Menu item	Description
Device Operations Automatically Display Error Screens Off On*	Show existing error messages on the display when the printer returns to an active state.
Device Operations Clean sensing and laser optics	Set the printer to run its wipers and clean the sensing and laser optics. **Note:** This setting is available only in some printer models.
Device Operations Calibration frequency preference Disabled* Fewest color adjustments Fewer color adjustments Normal Better color accuracy Best color accuracy	Set the printer to put down the correct amount of toner to maintain color consistency.
Device Operations Automatic Media Type Detection Off On*	Set the printer to detect the paper type being loaded.
Device Operations Custom Supply Levels Off* On	Set supply levels.
Toner patch sensor setup Calibration frequency preference	Set the printer to put down the correct amount of toner to maintain color consistency.
Toner patch sensor setup Full calibration	Run the full color calibration.
Toner patch sensor setup Print TPS information page	Print a diagnostic page that contains toner patch sensor calibration.
App Configuration LES Applications Off On*	Enable the Lexmark Embedded Solutions (LES) applications. **Note:** This setting does not affect built-in applications.

Note: An asterisk (*) next to a value indicates the factory default setting.

Entering Recovery mode

This mode allows the printer to boot from a secondary set of instructions and flash firmware code. While in this mode, you can only flash firmware code through a USB cable directly connected to a PC.
Depending on your printer model, do any of the following:

For LED display

1. Turn off the printer.
2. Open the front door.
3. Press and hold the **Stop** button.
4. Turn on the printer.
5. When all the icons flash, release the button.

For 2-line display

1. Turn off the printer.
2. Press and hold the **OK** and **Back** buttons.
3. Turn on the printer.
4. When the display shows the following icon, release the buttons.



For 2.4-, 4.3-, 7-, and 10-inch displays with number pads

1. Turn off the printer.
2. Press and hold the **2**, **7**, and **8** buttons.
3. Turn on the printer.
4. When the display shows the following icon, release the buttons.



For 2.8-, 4.3-, 7-, and 10-inch displays without number pads

1. Turn off the printer.
2. Open tray 1.

   Note: Make sure that paper is loaded in the tray.

3. Turn on the printer.
4. When an ellipses appears on the upper-left corner of the display, close tray 1.

   Note: If tray 1 is not closed, then the printer boots normally.

Service Engineer menu

Entering Invalid engine mode

This mode allows the printer to load the correct firmware code.

1. Turn off the printer.
2. From the control panel, press and hold the **3**, **4**, and **6** while turning on the printer.
3. Release the buttons after 10 seconds.

Entering the Service Engineer (SE) menu

To access the Service Engineer (SE) menu:

1. Turn on the printer.
2. When the home screen appears, press *** * 411** on the control panel.

   For 2-line control panels, press the right arrow button twice, press **OK**, and then press the left arrow button.

General SE

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 touch **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	• Print History • Mark History
MAC	• Set Card Speed • LAA • Keep Alive
NPAP	Print Alerts
TCP/IP	• netstat • arp • Allow SNMP Set • MTU • Meditech Mode • RAW LPR Mode
Wireless	Enable Wi-Fi Direct Sigma Control Agent
Ping Test	• Ping • Ping6
Other Actions	• ifconfig • IPtables [Firewall Dump] • IP6tables [Firewall Dump] • IPsec Dump

Reset Device

Erase nonvolatile memory, device and network settings, security settings, and embedded solutions.

Notes

- This menu is available only in FW 221.112 or later.
- To enable the menu, set **Reset Device Modes** to **Allow with FAC** or **Allow**. From the control panel, navigate to **Settings › Security › Miscellaneous › Reset Device Modes**.

Depending on your printer model, do any of the following to enter the menu and reset the printer.

- For 2.4-, 4.3-, 7-, or 10-inch display, select *** * 7 3**, select **OK**, and then select **Out of Service Erase**.
- For 2.8-inch display, select the **Back, Back, Home, Start** buttons in sequence, and then select **Out of Service Erase**.
- For 2-line display, select the **Back, Left, Back, Right** buttons in sequence, and then select **Out of Service Erase**.

Parts removal

Important removal information

Removal precautions

CAUTION—SHOCK HAZARD
The low-voltage power supply (LVPS) and the high-voltage power supply (HVPS) may have residual voltage present. To avoid the risk of electrical shock, do not touch their circuit components or the solder side of the board. Only handle them by their outer edges or metal housing.

CAUTION—SHOCK HAZARD
This product uses an electronic power switch. It does not physically disconnect the input AC voltage. To avoid the risk of electrical shock, always remove the power cord from the printer when removal of the input AC voltage is required.

CAUTION—SHOCK HAZARD
To avoid the risk of electrical shock and to prevent damage to the printer, remove the power cord from the electrical outlet and disconnect all connections to any external devices before you connect or disconnect any cable, electronic board, or assembly.

CAUTION—HOT SURFACE
The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching it.

CAUTION—PINCH HAZARD
To avoid the risk of a pinch injury, use caution in areas marked with this label. Pinch injuries may occur around moving parts, such as gears, doors, trays, and covers.

Précautions de retrait

CAUTION—SHOCK HAZARD
Une tension résiduelle peut être présente dans le bloc d'alimentation basse tension (LVPS) et le bloc d'alimentation haute tension (HVPS). Pour éviter tout risque d'électrocution, ne touchez pas les composants du circuit ou le côté soudure de la carte. Tenez-les uniquement par leurs extrémités ou le boîtier en métal.

CAUTION—SHOCK HAZARD
Ce produit utilise un commutateur d'alimentation électronique. Il ne déconnecte pas physiquement la tension d'alimentation CA. Pour éviter tout risque d'électrocution, débranchez toujours le cordon d'alimentation de l'imprimante lorsque vous devez déconnecter la tension d'alimentation CA.

CAUTION—SHOCK HAZARD
Pour éviter tout risque d'électrocution et éviter d'endommager l'imprimante, débranchez le cordon d'alimentation de la prise électrique et déconnectez toute connexion à tout périphérique externe avant de brancher ou débrancher des câbles ou circuits et assemblages électroniques.

CAUTION—HOT SURFACE
L'intérieur de l'imprimante risque d'être brûlant. pour réduire le risque de brûlure, laissez la surface ou le composant refroidir avant d'y toucher.

CAUTION—PINCH HAZARD
Pour éviter tout risque de blessure par pincement, agissez avec précaution au niveau des zones signalées par cette étiquette. Les blessures par pincement peuvent se produire autour des pièces mobiles telles que les engrenages, portes, tiroirs et capots.

Precauciones durante la extracción

CAUTION—SHOCK HAZARD
La fuente de alimentación de bajo voltaje (LVPS) y la fuente de alimentación de alto voltaje (HVPS) pueden presentar voltaje residual. Para evitar el riesgo de descarga eléctrica, no toque los componentes del circuito ni el lateral soldado de la placa. Manipule solo los bordes exteriores o la carcasa metálica.

CAUTION—SHOCK HAZARD
Este producto utiliza un interruptor de corriente electrónico. No desconecta físicamente la entrada de voltaje de CA. Para evitar el riesgo de descarga eléctrica, desenchufe siempre el cable de alimentación de la impresora cuando sea necesario retirar la entrada de voltaje de CA.

CAUTION—SHOCK HAZARD
Para evitar el riesgo de descargas eléctricas y daños en la impresora, retire el cable de alimentación de la toma eléctrica y desconecte todas las conexiones a dispositivos externos antes de conectar o desconectar cualquier cable, placa electrónica o conjunto.

CAUTION—HOT SURFACE
El interior de la impresora podría estar caliente. Para evitar el riesgo de heridas producidas por el contacto con un componente caliente, deje que la superficie se enfríe antes de tocarlo.

CAUTION—PINCH HAZARD
Para evitar el riesgo de lesión por atrapamiento, preste atención en las áreas marcadas con esta etiqueta. Las lesiones por atrapamiento se pueden producir en torno a partes móviles, tales como engranajes, puertas, bandejas y cubiertas.

Vorsichtsmaßnahmen bei der Demontage

CAUTION—SHOCK HAZARD
Im Niederspannungsnetzteil (LVPS) und Hochspannungsnetzteil (HVPS) liegt unter Umständen Restspannung vor. Um das Risiko eines elektrischen Schlags zu vermeiden, berühren Sie keine umliegenden Bauteile oder die Lötseite der Platine. Fassen Sie sie nur an den Außenkanten oder am Metallgehäuse an.

CAUTION—SHOCK HAZARD
Dieses Produkt verwendet einen elektronischen Leistungsschalter. Er trennt die Eingangswechselspannung nicht physikalisch. Um das Risiko eines elektrischen Schlags zu vermeiden, ziehen Sie stets das Netzkabel vom Drucker ab, wenn eine Abtrennung der Eingangswechselspannung erforderlich ist.

CAUTION—SHOCK HAZARD
Um das Risiko eines elektrischen Schlags und Schäden am Drucker zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose und trennen Sie alle Verbindungen zu jeglichen externen Geräten, bevor Sie Kabel, Elektronikplatinen oder Baugruppen einstecken oder abziehen.

CAUTION—HOT SURFACE
Das Innere des Druckers kann sehr heiß sein. Vermeiden Sie Verletzungen, indem Sie heiße Komponenten stets abkühlen lassen, bevor Sie ihre Oberfläche berühren.

CAUTION—PINCH HAZARD
Um das Risiko einer Quetschung zu vermeiden, gehen Sie in Bereichen, die mit diesem Etikett gekennzeichnet sind, mit Vorsicht vor. Quetschungen können im Bereich von beweglichen Komponenten auftreten, wie z. B. Zahnrädern, Klappen, Fächern und Abdeckungen.

Handling ESD-sensitive parts

To prevent damage to the electrostatic discharge (ESD)-sensitive parts in the printer, do the following:

- Turn off the printer before removing logic boards.
- Keep the parts in their original packing material until you are ready to install them into the printer.
- Make the least-possible movements with your body to prevent an increase of static electricity from clothing fibers, carpets, and furniture.
- Use the ESD wrist strap. Connect the wrist band to the system ground point. This action discharges any static electricity in your body to the printer.
- Hold the parts by their edge connector shroud. Do not touch its pins. If you are removing a pluggable module, then use the correct tool.
- If possible, keep all parts in a grounded metal cabinet.
- Do not place the parts on the printer cover or on a metal table. If you need to put down the parts, then put them in their packing material.
- Prevent parts from being accidentally touched by other personnel. Cover the printer when you are not working on it.
- Be careful while working with the parts when cold-weather heating is used. Low humidity increases static electricity.

Critical information for controller board or control panel replacement

CAUTION—POTENTIAL INJURY
The lithium battery in this product is not intended to be replaced. There is a danger of explosion if a lithium battery is incorrectly replaced. Do not recharge, disassemble, or incinerate a lithium battery. Discard used lithium batteries according to the manufacturer's instructions and local regulations.

CAUTION—POTENTIAL INJURY
La batterie lithium de ce produit n'est pas destinée à être remplacée. Il existe un risque d'explosion si une batterie lithium est placée de façon incorrecte. Ne rechargez pas, ne démontez pas et n’incinérez pas une batterie lithium. Mettez les batteries lithium usagées au rebut selon les instructions du fabricant et les réglementations locales.

CAUTION—POTENTIAL INJURY
La batería de litio de este producto no debe reemplazarse. Existe riesgo de explosión si se sustituye incorrectamente una batería de litio. No recargue, desmonte ni incinere una batería de litio. Deseche las baterías de litio según las instrucciones del fabricante y las normativas locales.

CAUTION—POTENTIAL INJURY
Die Lithiumbatterie in diesem Produkt darf nicht ausgetauscht werden. Wird eine Lithiumbatterie nicht ordnungsgemäß ausgetauscht, besteht Explosionsgefahr. Lithiumbatterien dürfen auf keinen Fall wieder aufgeladen, auseinander genommen oder verbrannt werden. Befolgen Sie zum Entsorgen verbrauchter Lithiumbatterien die Anweisungen des Herstellers und die örtlichen Bestimmungen.

Warning—Potential Damage
Observe all precautions when handling ESD sensitive parts. See Handling ESD-sensitive parts on page 392.

Warning—Potential Damage
Carefully remove cables and connectors. Make sure they are not damaged.

Note: Some models have eSF solutions, it is recommended to back up the eSF solutions and settings before replacing the controller board. See Backing up eSF solutions and settings on page 403.

Warning—Potential Damage
To avoid damaging the part or experience NVRAM mismatch issues, replace only one of the following components at a time:

- Control panel
- Controller board

To replace a component and to test whether the problem is resolved:

1. Replace the affected component.

   Warning—Potential Damage
   Do not perform a Power-On Reset (POR) until the problem is resolved. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

2. Enter the Diagnostics Menu. The Diagnostics Menu allows you to temporarily use the replacement part.

   Warning—Potential Damage
   Some printers will perform a POR automatically if the Diagnostics Menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

3. Use the Diagnostics Menu to test the replacement part. Do a feed test to check if the problem is resolved.
   - If the problem is not resolved—Turn off the printer, and then reinstall the old part.
   - If the problem is resolved—Perform a POR.
   - If NVRAM error occurs during the replacement, go to NVRAM mismatch failure service check on page 334

Restoring the printer configuration

Restore the printer to its correct configuration to complete the replacement service. Use the Service Restore Tool utility to download the software bundle, and then flash the printer settings and embedded solutions.

Notes

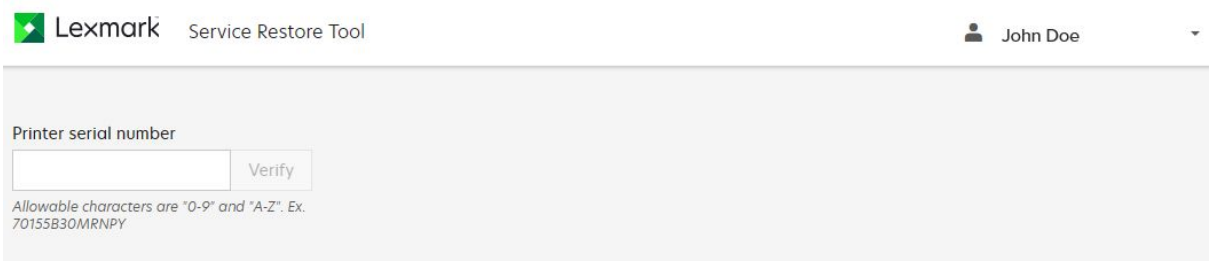
- If you do not have access to the Service Restore Tool, then contact your next level of support.
- The software bundle contains the latest version of the firmware, applications, and software licenses from the Lexmark CFM and Package Builder. The printer firmware may be at a different level from what is used before replacement of the part.

Using the Service Restore Tool

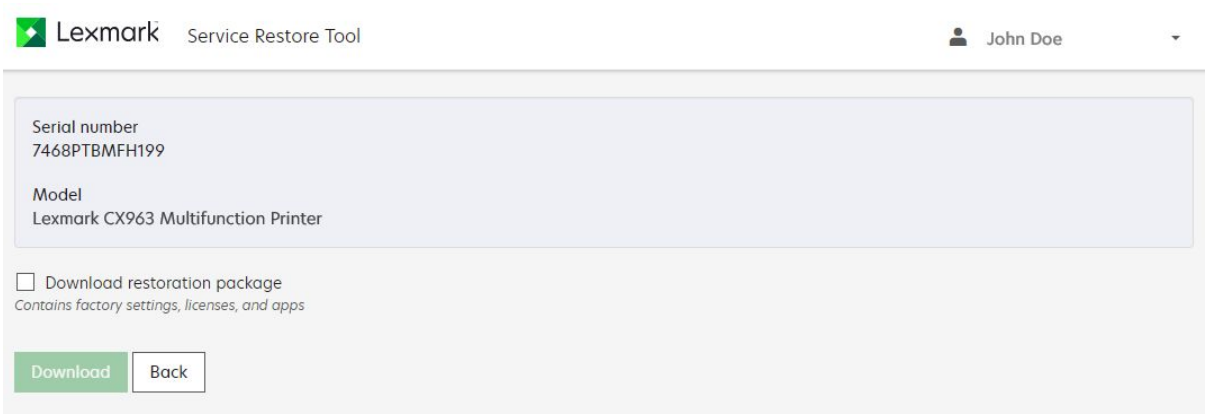
1. Go to https://iss.lexmark.com/cdp/service-restore-tool/.
2. Log in using your Lexmark or partner login.

   If your login fails, then contact your next level of support.

3. Enter the printer serial number, and then submit the information.

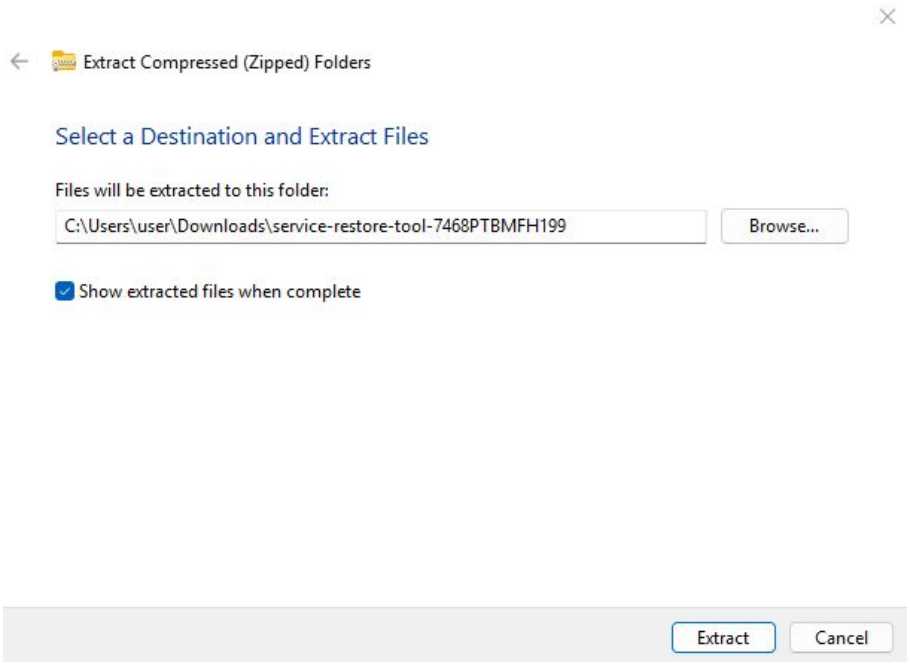


Note: Make sure that the model name and serial number that appear on the verification screen is correct.



4. Click **Download restoration package**, and then click **Download**.
5. Save the zip file.

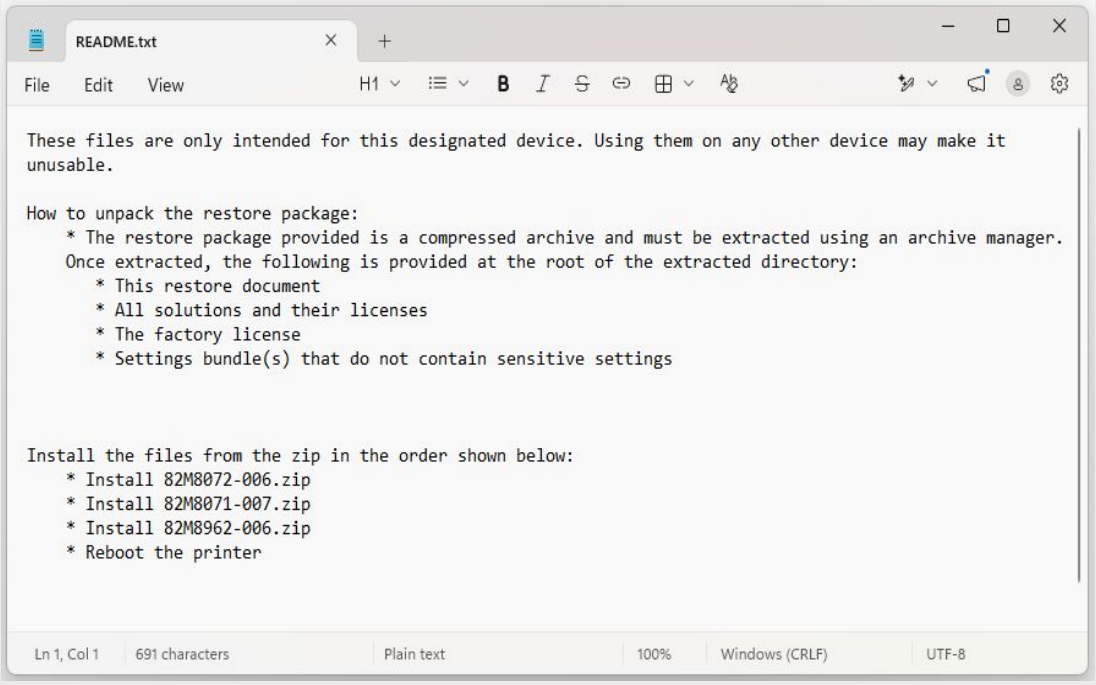
Note: Make sure that the serial number in the zip file matches the serial number of the printer being restored.



6. Extract the contents of the service restore tool, open the *Readme* file, and then follow the instructions in the file.

Notes

- Perform the install instructions on the *Readme* file in the exact order shown. Restart the printer only if the file says so.



- To load the zip files that are extracted from Service Restore Tool, see Restoring solutions, licenses, and configuration settings on page 396.

7. If the printer had Lexmark eSF apps previously installed, then confirm from the customer if all the eSF apps have been installed after performing the installation instructions in the *Readme* file.

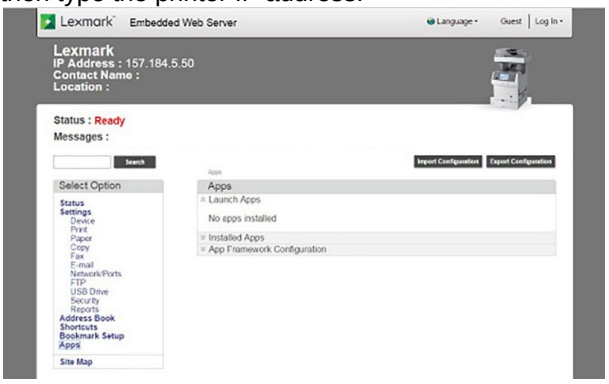
Notes

- If you are unable to access the administrative menus to verify that the printer is restored, then ask the customer for access rights.
- If a 10.00 error appears after you restart the printer, then contact the next level of support.

Restoring solutions, licenses, and configuration settings

To load extracted files from the Service Restore Tool, do the following:

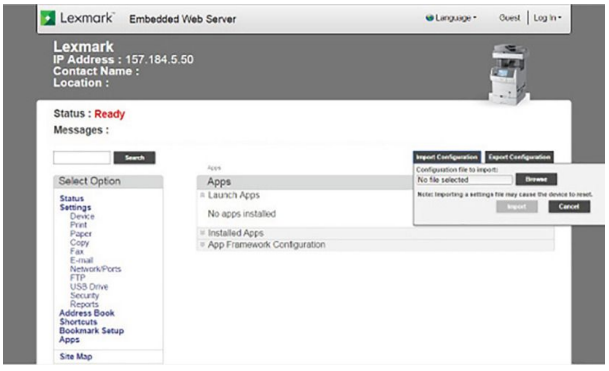
1. Open a web browser, and then type the printer IP address.



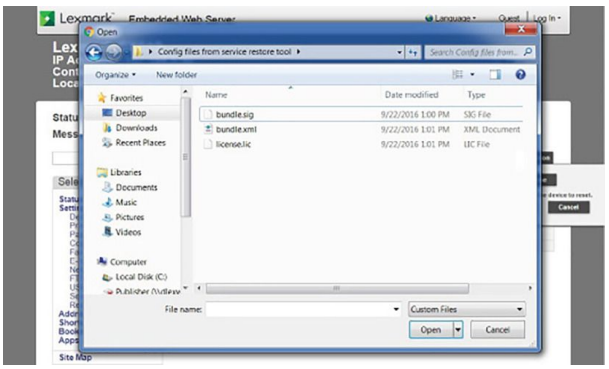
Notes

- You can find the IP address at the top of the printer display.
- Make sure that the printer and computer are connected to the same network.

2. Click **Import Configuration**, and then click **Browse**.



3. Navigate to the folder that contains the extracted files from the Service Restore Tool.



4. Select a file, and then click **Import**.
5. Repeat step 2 through step 4 for the remaining files.

Importing a configuration file

Importing a configuration file lets you apply previously saved settings to your printer. This is useful when restoring a backup or setting up another printer with the same configuration.

1. Open a web browser, and then type the printer IP address in the address field.

   Notes
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. In the Embedded Web Server, click **Import Configuration**.
3. Browse to the location where the file is saved.

   Note: Depending on the configuration that you selected, the files are saved in either ZIP or CSV format.

4. Click **Import**.

Exporting a configuration file

Exporting a configuration file lets you save the current settings of your printer to a file, which you can use as a backup or apply to another printer.

1. Open a web browser, and then type the printer IP address in the address field.

   Notes
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. In the Embedded Web Server, click **Export Configuration**.
3. Select a configuration to export.

   Note: Depending on the configuration that you selected, the files are exported in either ZIP or CSV format.

Printer firmware instructions

Checking the printer firmware version

Using the Embedded Web Server

1. Open a web browser, and then type the printer IP address in the address field.

   Notes
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. Click **Reports › Device › Device Information**.
3. Look for **Base**.

   Note: The firmware version appears as sets of letters and numbers separated by periods. For example, ABCDE.123.123.

Using the control panel

1. From the control panel, navigate to **Settings › Device › About this Printer**.
2. Look for **Firmware Version**.

   Note: The firmware version appears as sets of letters and numbers separated by periods. For example, ABCDE.123.123.

Downloading the printer firmware

Note: Download the firmware only if you plan to update it using the Embedded Web Server with a firmware flash file or a flash drive.

1. Go to www.lexmark.com/downloads, and then click **Drivers & downloads**.
2. In the **Search by Device Model** field, type the printer model, and then click **Find Drivers & Downloads**.
3. In the **Recommended Firmware** section, **Download Firmware Package**.
4. Accept the End-User License Agreement, and then click **Start Download**.

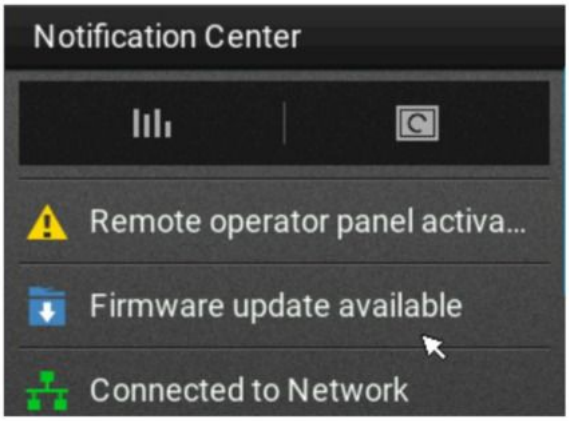
Updating firmware

Updating the firmware using the control panel

Keeping your printer firmware updated helps it run efficiently and securely. Firmware updates can improve performance, add new features, fix firmware or hardware issues, and enhance the security of your printer and network.

Using Notification Center

1. From the home screen, select the notification icon to go to the Notification Center screen.
2. Select **Firmware update available**.



3. Select **Install now**.



The printer restarts automatically after the update.

Using the Settings menu

1. From the control panel, navigate to **Settings › Device**.
2. Depending on your printer model, do either of the following:

- Select **Firmware Update › Check for updates**.
- Select **Update firmware › Check for updates now**.

3. If an update is available, then select **Install now**.

The printer restarts automatically after the update.

Updating the firmware using the Embedded Web Server

Keeping your printer firmware up-to-date helps it runs efficiently and securely. Firmware updates can improve performance, add new features, fix firmware or hardware issues, and enhance the security of your printer and network.

Using the update button

1. Open a web browser, and then type the printer IP address in the address field.

   Notes
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. Click **Device**.
3. Depending on your printer model, do either of the following:
   - Select **Firmware Update › Check for updates**.
   - Select **Update firmware › Check for updates now**.

   Note: If **Firmware Update** or **Update firmware** does not appear, make sure that you are logged in to the printer as an administrator.

4. If an update is available, then select **Install now**.

The printer restarts automatically after the update.

Using the firmware flash file (.fls)

Before you begin, make sure that:

- The printer and computer are connected to the same network.
- You have downloaded the firmware file (.fls). For more information, see Downloading the printer firmware on page 398.

1. Open a web browser, and then type the printer IP address in the address field.

Notes

- You can find the IP address at the top of the printer display.
- Make sure that the printer and computer are connected to the same network.

2. Click **Device**.
3. Click **Firmware Update**.

Note: If **Firmware Update** or **Update firmware** does not appear, make sure that you are logged in to the printer as an administrator.

4. In the **Update Firmware from File** section, click **Browse**.
5. Search, and then select the **.fls** file.
6. Click **Upload**.

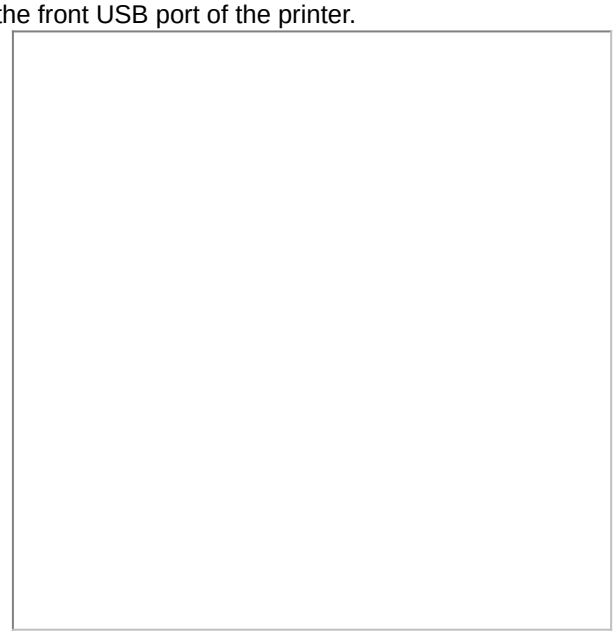
The printer restarts automatically after the update.

Updating the firmware using a flash drive

Before you begin, make sure that:

- You have downloaded the firmware to the flash drive. For more information, see Downloading the printer firmware on page 398.
- The flash drive is formatted to FAT32.

1. Insert the flash drive into the front USB port of the printer.



The flash drive contents appear automatically on the display. If they do not, select **USB Drive** on the control panel.

2. Locate and select the **.fls** file.
3. Select **Update Code**.

The printer restarts automatically after the update.

Flashing the printer firmware

Warning—Potential Damage
Download the correct firmware file for the printer model. Flashing an incorrect file in **Recovery** or **Invalid Engine** mode can damage the printer and prevent it from starting.

Note: To download the firmware, see **conkeyref: xref/downloading-the-printer-firmware**.

For a Windows computer and a network-connected printer

The printer must be connected to the network using an Ethernet cable.

1. Restart the printer in **Recovery Mode**. For more information, see .

   Note: These instructions also apply to printers in **Invalid Engine** mode.

2. Obtain the printer IP address.

   Notes
   - The printer may take time to obtain an IP address.
   - The IP address may differ from the previously assigned address.

3. Download winbidi.exe and save it to the same location as the firmware file.
4. Open the command prompt on the computer.
5. Change to the directory that contains the firmware file, and then type **`winbidi.exe <printer_ip_address:9400> <firmware_file>`**.

   Note: This command uses **winbidi.exe** to send the firmware file through port **9400**.

   For example, **`winbidi.exe 192.168.100.100:9400 CSTZJ.223.308.fls`**, where:
   - ***`192.168.100.100`*** is the printer IP address.
   - ***`CSTZJ.223.308.fls`*** is the firmware file.

The printer display shows that the printer is reading the firmware file. The printer restarts automatically after receiving the complete file.

For a Windows computer and a USB-connected printer

The printer must be connected to the computer using a USB cable.

1. Restart the printer in **Recovery Mode**. For more information, see .

   Note: These instructions also apply to printers in **Invalid Engine** mode.

2. Download winbidi.exe and save it to the same location as the firmware file.
3. From the computer, open the command prompt.

4. Change to the directory that contains the firmware file, and then type **`winbidi.exe <printer_port> <firmware_file>`**.

   Note: This command uses **winbidi.exe** to send the firmware file through the printer port, usually **USB1**.

   For example, **`winbidi.exe USB1 CSTZJ.223.308.fls`**, where:
   - ***`USB1`*** is the printer port.
   - ***`CSTZJ.223.308.fls`*** is the firmware file.

The printer display shows that the printer is reading the firmware file. The printer restarts automatically after receiving the complete file.

For a Mac or Linux computer and a network-connected printer

The printer must be connected to the network using an Ethernet cable.

1. Restart the printer in **Recovery Mode**. For more information, see .

   Note: These instructions also apply to printers in **Invalid Engine** mode.

2. Obtain the printer IP address.

   Notes
   - The printer may take time to obtain an IP address.
   - The IP address may differ from the previously assigned address.

3. Open the command prompt on the computer.
4. Change to the directory that contains the firmware file, and then type **`nc <printer_ip> 9400 < <firmware_file>`**.

   Note: This command uses Netcat, which is installed on Linux and Mac by default, to send the firmware file through port **9400**.

   For example, **`nc 192.168.100.100 9400 < CSTZJ.076.308.fls`**, where:
   - ***`192.168.100.100`*** is the printer IP address.
   - ***`CSTZJ.076.308.fls`*** is the firmware file.

The printer display shows that the printer is reading the firmware file. The printer restarts automatically after receiving the complete file.

Backing up eSF solutions and settings

Note: Export the eSF solutions and settings from the printer before replacing the controller board.

Exporting eSF solutions and settings file

1. Reset the printer into Invalid engine mode. See Entering Invalid engine mode on page 387.
2. Open a web browser, and then type the printer IP address.

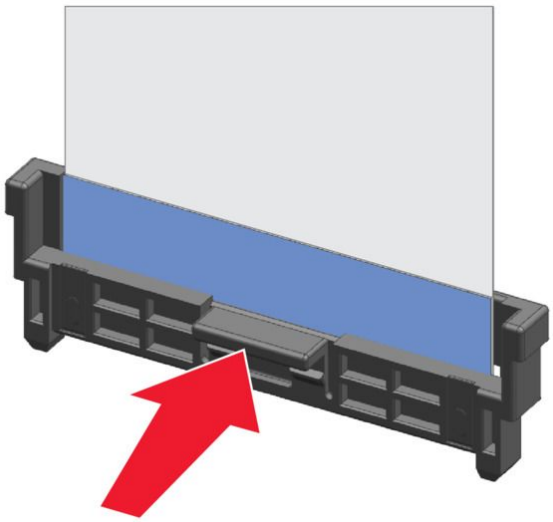
> **Note:** If the web page cannot be accessed or an error occurs when starting the printer into Invalid engine mode, then data backup is not an option. Inform the customer that the data cannot be saved.

3. Click **Apps**, click **Export Configuration**, and then select one of the options in the dropdown menu.
4. Click **Export**.

> **Note:** The size limit of the export file is 128 KB.

Disconnecting ribbon cables

> **Warning—Potential Damage**
> The ribbon cable and its socket may get damaged if it is not properly disconnected. When disconnecting the cable, hold its connector and press its tab before unplugging it.



Adjustments

Printhead alignment adjustment

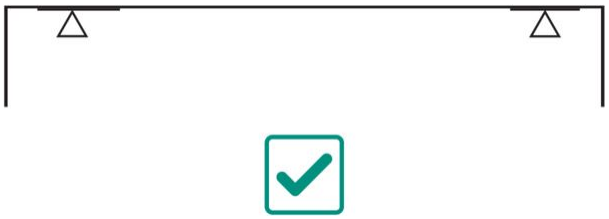
Printhead misalignment may cause crooked or skewed print. Perform this procedure after replacing the printhead or if there are skewed print issues.

Checking the test page for alignment

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Registration adjust > Quick test
2. Check the test page.

The following test page result shows a properly aligned printhead:

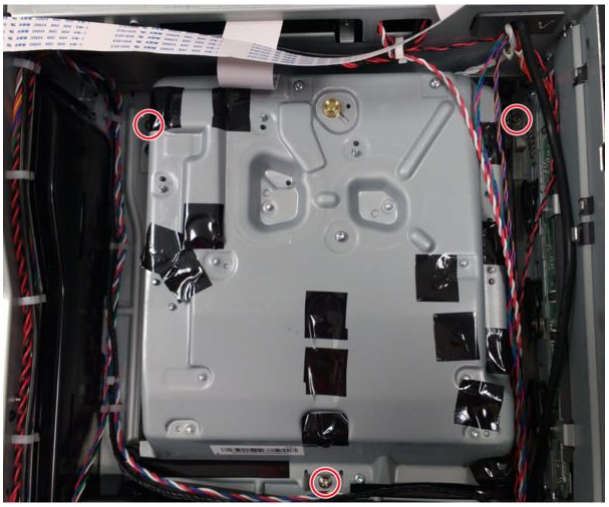


Aligning a printhead skewed in the counterclockwise direction

In most cases, the printhead is skewed counterclockwise, as shown in the following test page result.



1. Remove the top cover. See Top cover removal on page 411.
2. Loosen the three screws.



3. Adjust the printhead until the bottom left corner of the printhead touches the alignment pin (A).



4. Print another test page, and then check if the printhead is aligned.
5. Repeat steps 4 and 5 until the printhead is aligned.
6. Tighten the three screws.

Registration adjustment

Image misalignments can occur after printhead replacement. Perform this procedure to correct the position of the image relative to the paper edges.

Note: You cannot perform mechanical registration or skew adjustments on this printhead.

Before performing the procedure, make sure that the tray guides are properly set and the paper settings on the printer match the paper size loaded in the tray.

Adjusting the skew

The skew adjustment changes the angle of the horizontal lines so that the lines can be aligned with the leading edge of the page. As the skew setting is changed, the top line on the test page stays in place at the left end, while its right end tilts up or down. All horizontal lines on the page will tilt at that same angle while the vertical lines will remain vertical. Changing the skew setting moves the right edge of the page up and down, and changes the angle of the top and bottom lines. If the skew is properly adjusted, the horizontal lines at the top of the page will be parallel to the leading edge of the page.

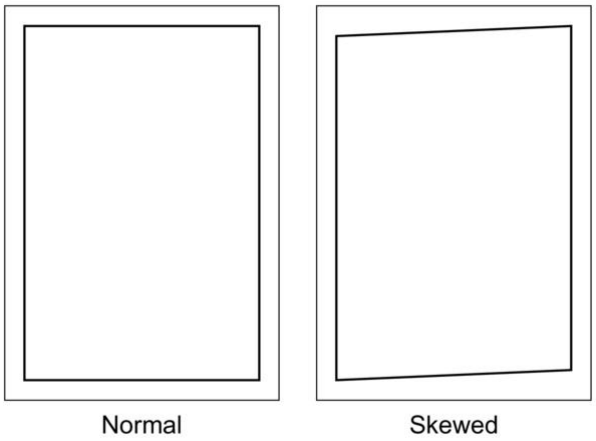
To check for skew:

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Registration adjust

2. Select **Quick Test**, and then press **OK** or touch **Start**.

   The printer prints a test page.



Note: If there is no skew on the page, go to Adjusting the margins. See Registration adjustment on page 406.

To adjust the skew:

1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Registration adjust > Skew

2. Specify the value. The value range is from -100 to 100.

   Note:
   - For 2-line LCD screens, use the left or right arrow buttons to increase or decrease the value.
   - Raising the value of the skew rotates the horizontal lines clockwise. The left end of the line remains in the same place and the right end moves downward.
   - Decreasing the value of the skew rotates the horizontal lines counterclockwise. The left end of the line remains in the same place and the right end moves upward.

3. Select **OK**.
4. Print a Quick test page to verify the change.
5. Repeat steps 1 to 4 until the horizontal line is properly aligned with the leading edge of the page.
6. Check for proper margin alignment. See Registration adjustment on page 406.

Adjusting the margins

To check for proper margin alignment:

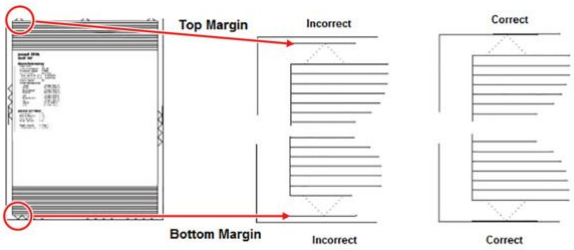
1. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Registration adjust

2. Select **Quick Test**, and then press **OK** or touch **Start**.

   The printer prints a test page.

3. Check the top and bottom margins of the test page for proper alignment.



To adjust the margins:

1. Refer to the test page, and then check the arrows along the margins.

   Note:
   - The arrows should be completely visible along the edges.
   - The tip of the arrows should point to the edges of the paper.

2. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > Registration adjust

3. Select the field of the margin to adjust.
4. Specify value. The value range is from -80 to 80.

   Note:
   - For 2-line LCD screens, use the left or right arrow buttons to increase or decrease the value.
   - Raising the value of the top margin setting pushes the top edge of the image downward.
   - Raising the value of the bottom margin setting pushes the bottom edge of the image upward.
   - Raising the value of the left margin setting pushes the left margin to the right.
   - Raising the value of the right margin setting pushes the right margin to the left.

5. Select **OK**.
6. Print a Quick test page to verify the change.
7. Repeat step 3 through to step 6 until the margins are properly adjusted.
8. Check for proper color alignment. See Registration adjustment on page 406.

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.

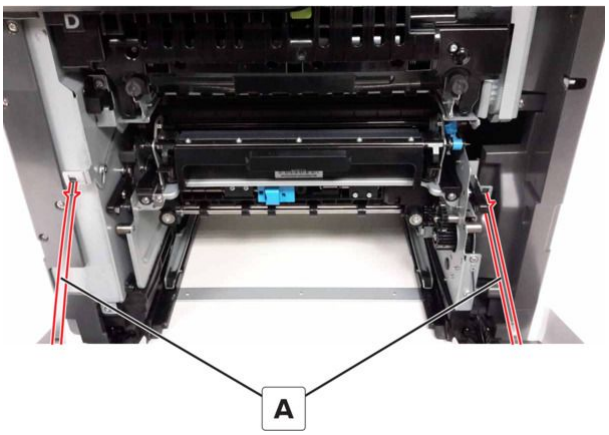
- Remove the toner cartridges, imaging unit, and media tray before removing other printer parts. The imaging unit should be carefully set on a clean, smooth, and flat surface. It should also be protected from light while out of the device.
- Disconnect all external cables from the printer to prevent 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.

Cover removals

Front cover removal

1. Open the front door, and then disconnect the two straps (A).

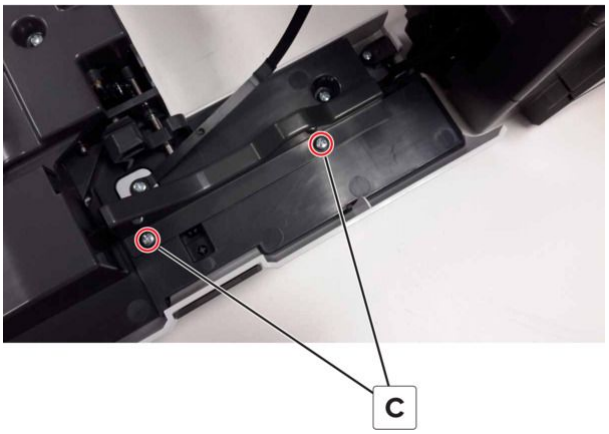
   CAUTION—POTENTIAL INJURY
   Make sure that the front door has support after the straps are removed to avoid damage.

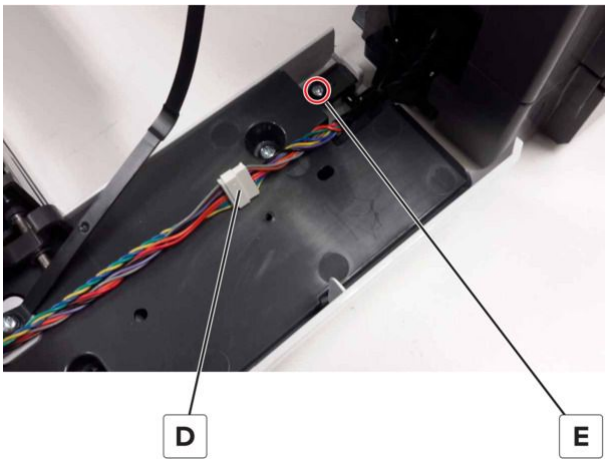
2. Remove the screw (B) securing the ground cables.



3. Remove the two screws (C).



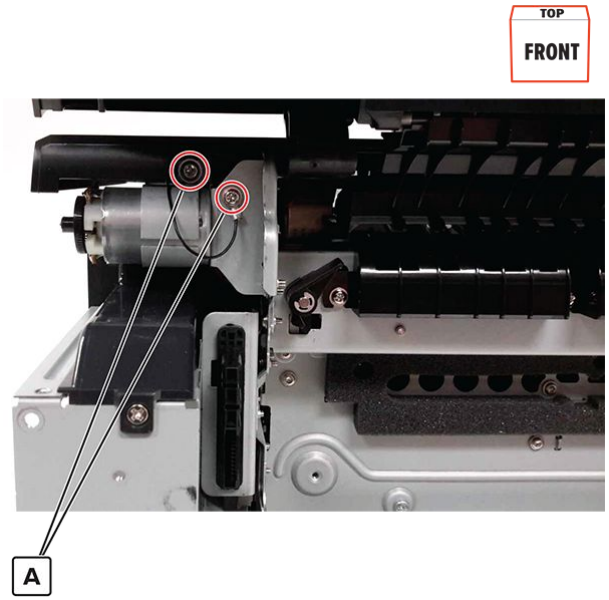
4. Disconnect the cable (D), and then remove the screw (E).



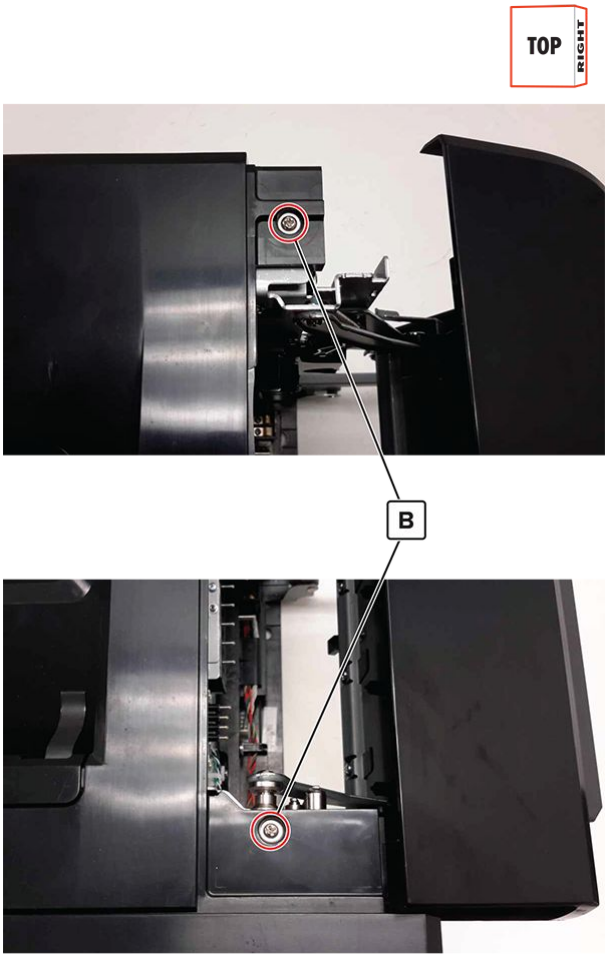
5. Remove the straps from the duplex outer guide.
6. Remove the front cover from the duplex outer guide. See Duplex outer guide removal on page 426.

Top cover removal

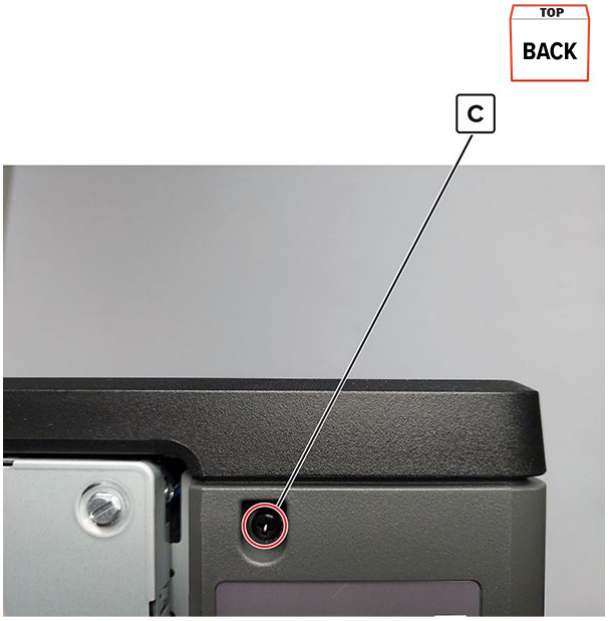
1. Open the toner door cover.
2. Remove the two screws (A) on the upper-left corner of the printer.



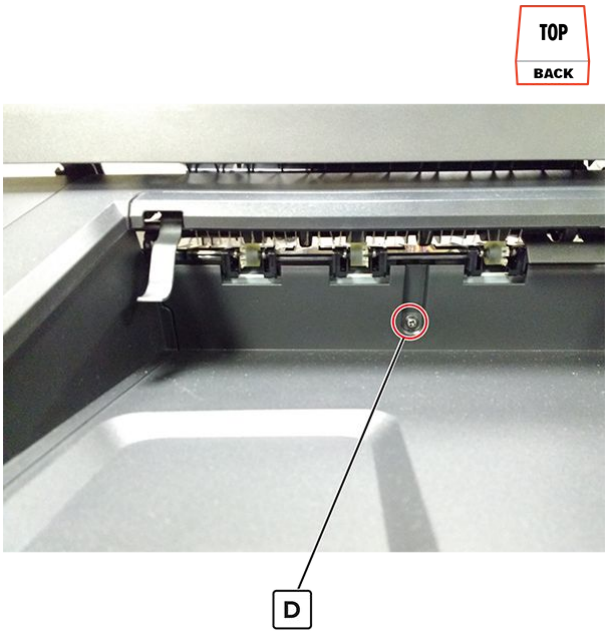
3. Remove the two screws (B) on the top of the printer.



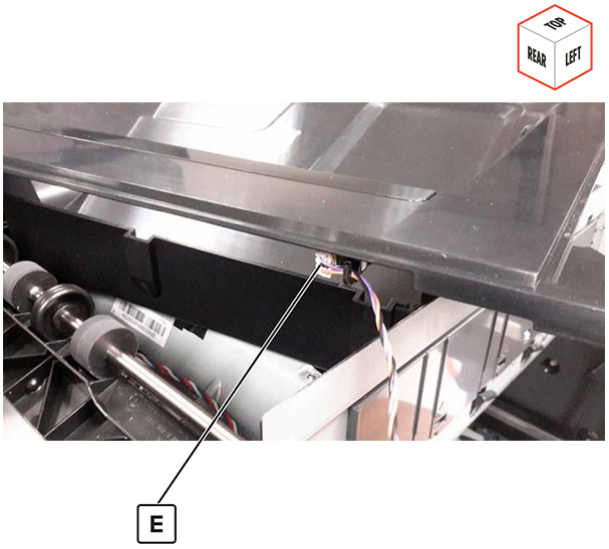
4. Remove the screw (C) from the rear side of the printer.



5. Remove the screw (D) on the output bin.



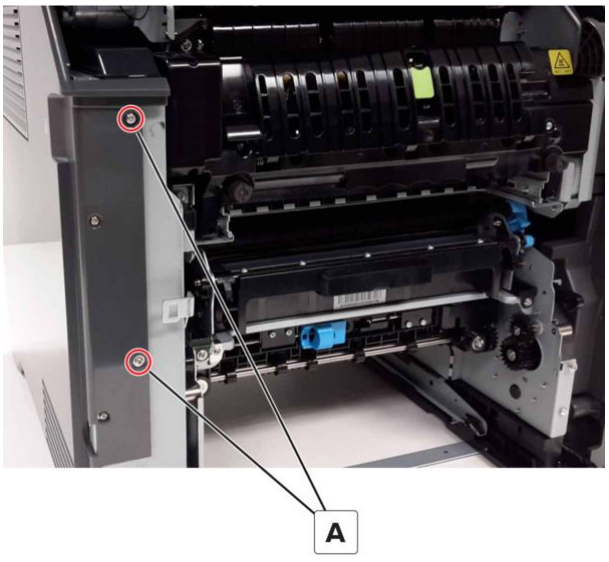
6. Disconnect the sensor cable (E), and then remove the cover.



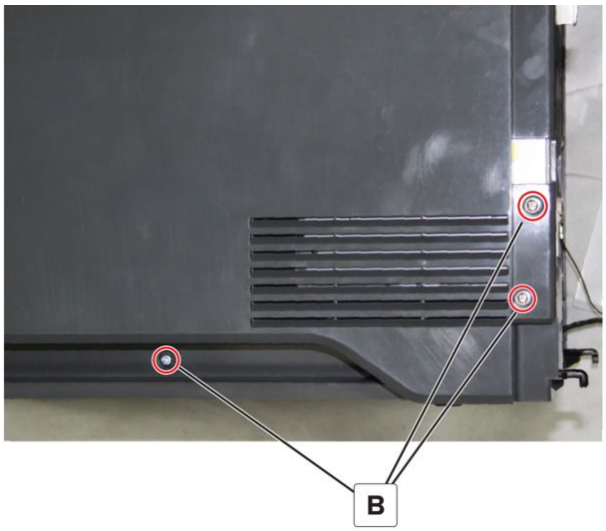
Left cover removal

Note: When reinstalling the left cover, be careful to avoid damage to the output motor with the tab at the top of the cover. Also, avoid hitting the BOR retract motor with the round standoff on the inside of the cover.

1. Open the front door.
2. Remove the two screws (A) on the front of the cover.



3. Remove the three screws (B) on the left side of the cover.

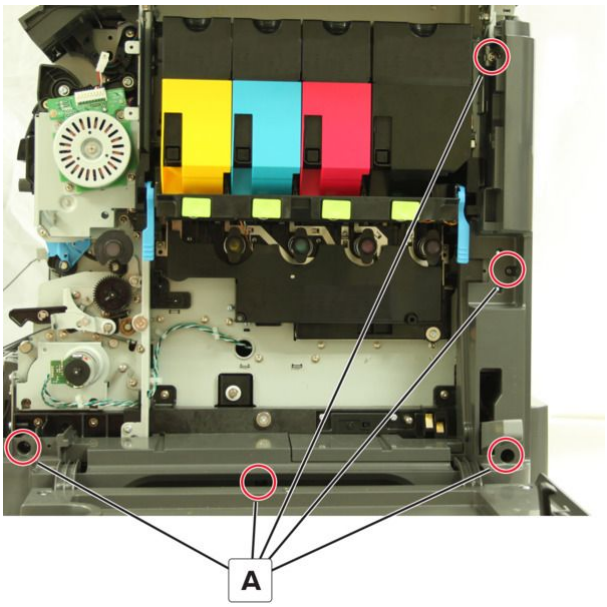


4. Remove the three screws (C) on the rear of the cover, and then remove the cover.



Right cover removal

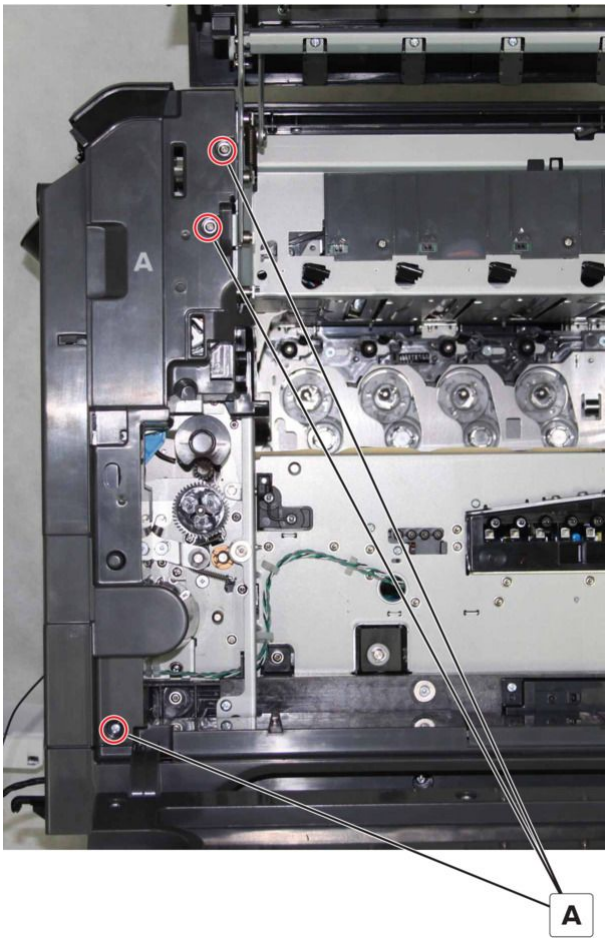
1. Remove the motor cover. See Motor cover removal on page 415.
2. Remove the waste toner bottle.
3. Remove the five screws (A).



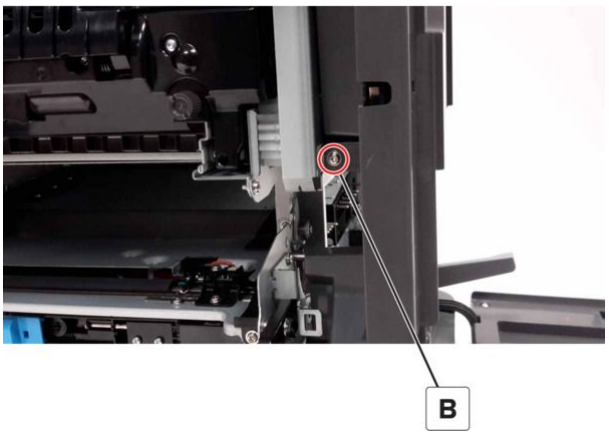
4. Remove the right cover from the printer.
5. Remove the right cover from the imaging unit cover. See Imaging unit cover removal on page 453.

Motor cover removal

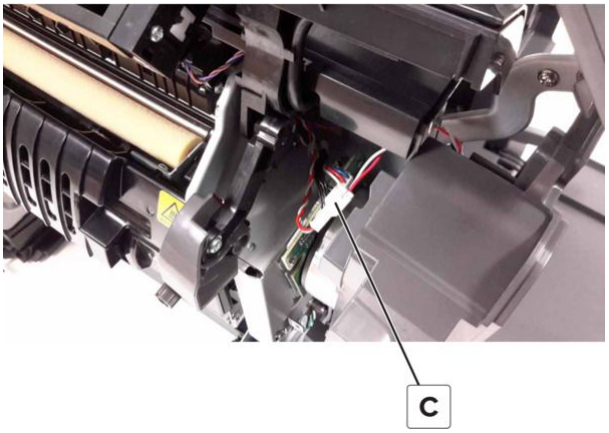
1. Open the toner door.
2. Open the imaging unit cover.
3. Remove the three screws (A).



4. Open the front cover, and then remove the screw (B) from the front of the cover.

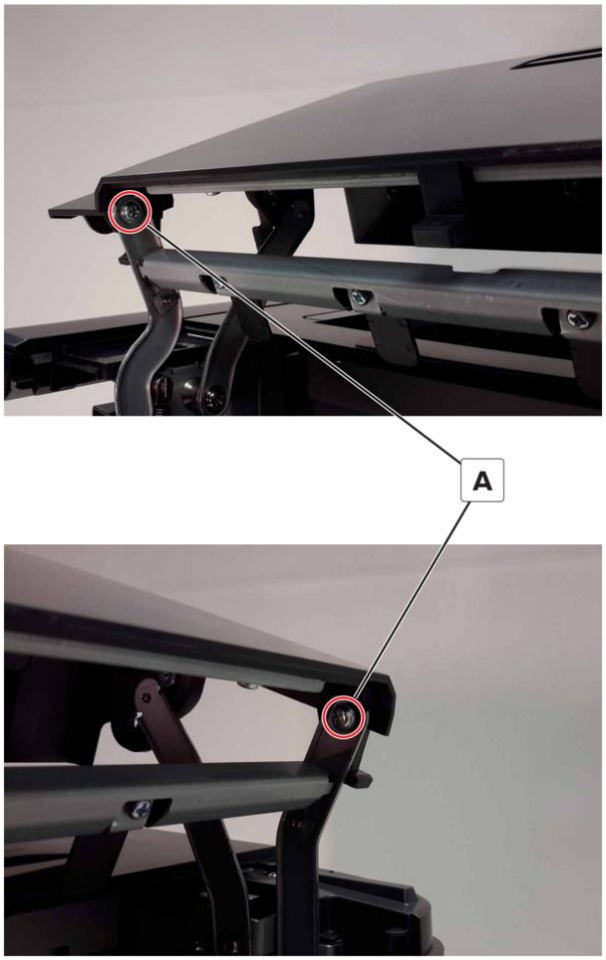


5. Disconnect the cable (C), and then remove the cover.

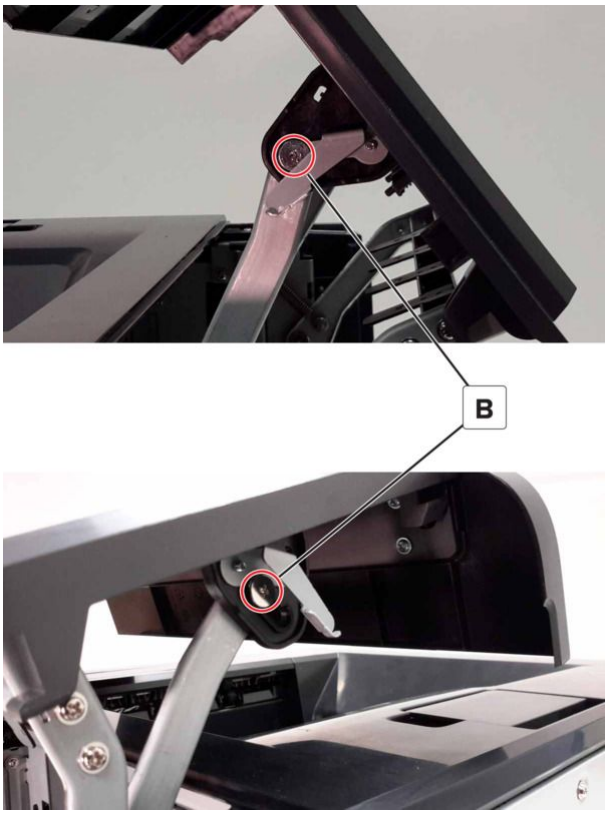


Toner door removal

1. Open the toner door, and then remove the two outer screws (A) from the door bracket.



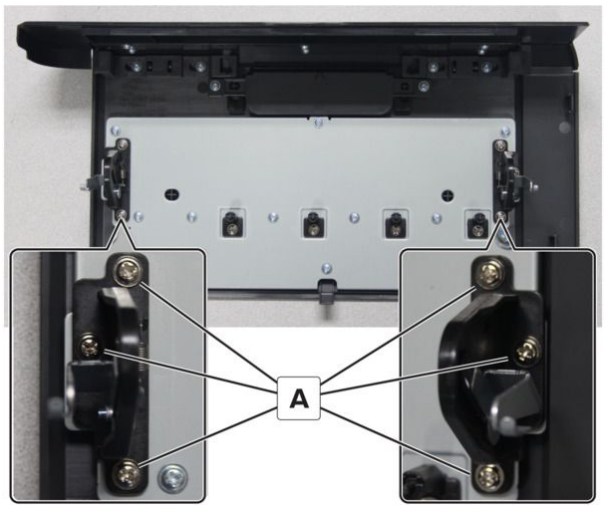
2. Remove the two inner screws (B) from the door bracket.



3. Gently pull the toner door away from the bracket to remove.

Toner door mount bracket removal

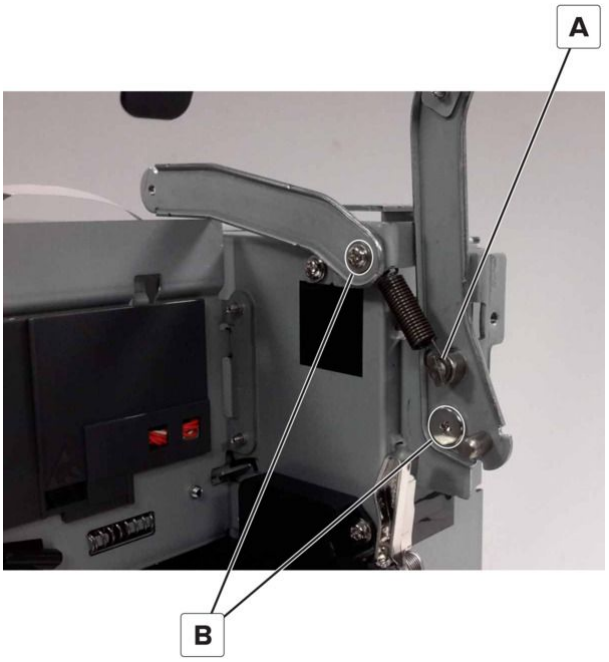
1. Remove the toner door. See Toner door removal on page 417.
2. Remove the six screws (A), and then remove the bracket.



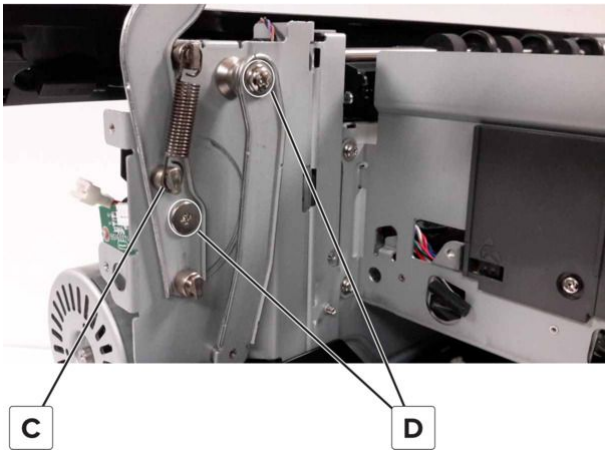
Toner door mount removal

1. Remove the toner door. See Toner door removal on page 417.

2. Unhook the spring (A), and then remove the two screws (B) on the rear side.



3. Unhook the spring (C), and then remove the two screws (D) on the front.



4. Remove the toner door mount from the printer.

Control panel removals

Control panel front cover removal

Critical information for controller board or control panel replacement

Warning—Potential Damage
Replace only one of the following components at a time:

- Control panel

- Controller board

To replace a component and to test whether the problem is resolved:

1. Replace the affected component.

   Warning—Potential Damage
   Do not perform a Power-On Reset (POR) until the problem is resolved. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

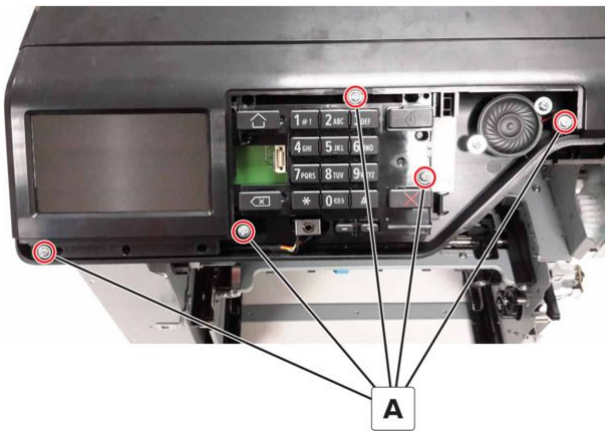
2. Enter the Diagnostics Menu. The Diagnostics Menu allows you to temporarily use the replacement part.

   Warning—Potential Damage
   Some printers will perform a POR automatically if the Diagnostics Menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

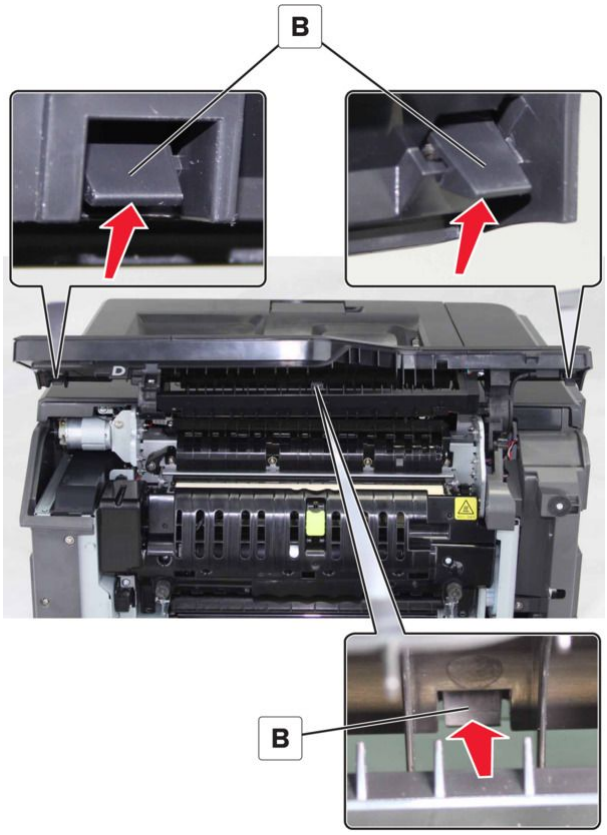
3. Use the Diagnostics Menu to test the replacement part. Do a feed test to check if the problem is resolved.
   - If the problem is not resolved—Turn off the printer, and then reinstall the old part.
   - If the problem is resolved—Perform a POR.
   - If NVRAM error occurs during the replacement, go to NVRAM mismatch failure service check on page 334

Removal procedure

1. Remove the bezel. See Bezel removal on page 422.
2. Remove the number pad cover. See Number pad cover removal on page 422.
3. Remove the five screws (A).

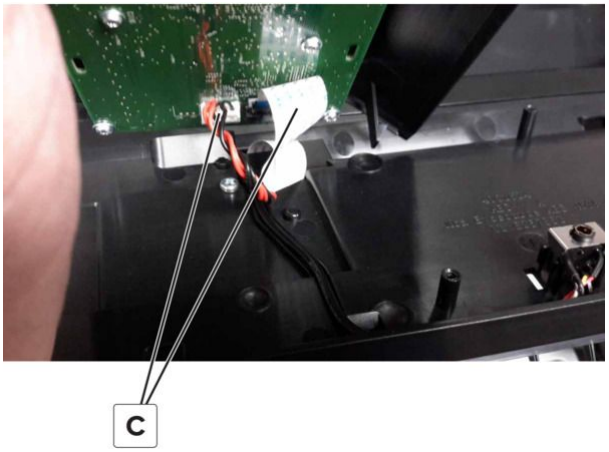


4. Release the three tabs (B) securing the control panel front cover.

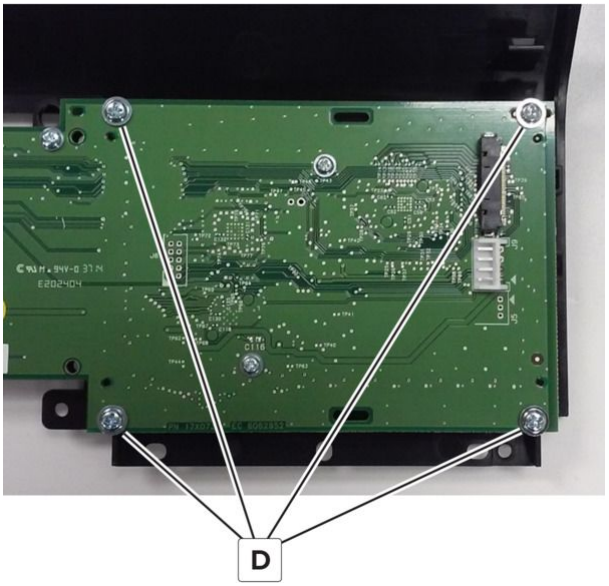


5. Disconnect the two cables (C).

> **Warning—Potential Damage**
> Do not yank the ribbon cable. See Disconnecting ribbon cables on page 404.



6. Remove the four screws (D), and then remove the control panel.



Bezel removal

1. Carefully pull to detach the bezel.



2. Remove the bezel.

Number pad cover removal

1. Remove the bezel. See Bezel removal on page 422.
2. Remove the number pad cover.

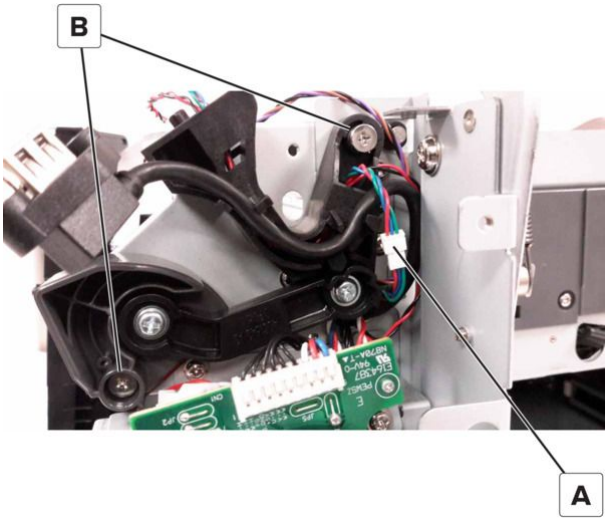




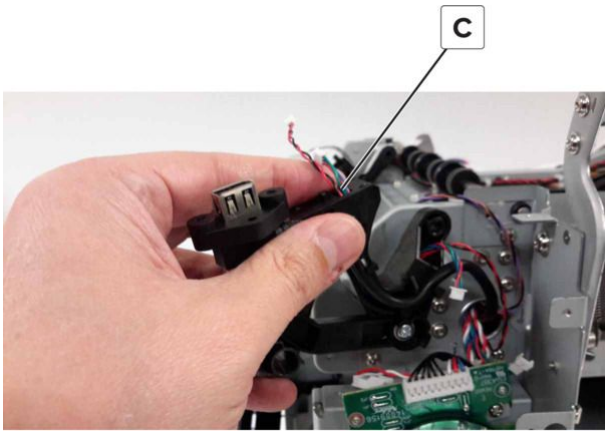
Control panel arms removal

Note: The control panel arms are two separate FRUs. This procedure shows how to remove both arms.

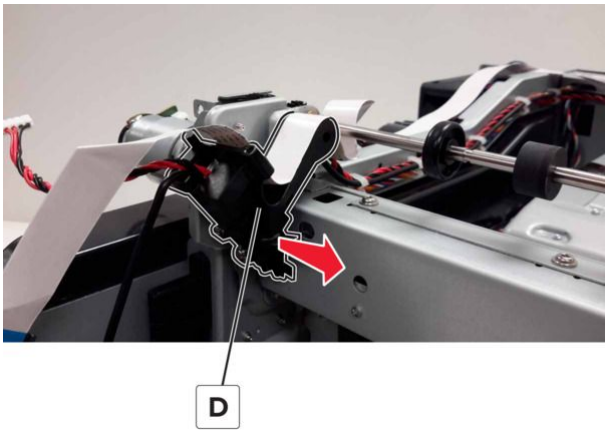
1. Remove the fuser. See Fuser removal on page 459.
2. Remove the redrive guide. See Redrive guide removal on page 474.
3. Remove the control panel base cover. See Control panel base cover removal on page 425.
4. Disconnect the cable (A), and then remove the two screws (B).



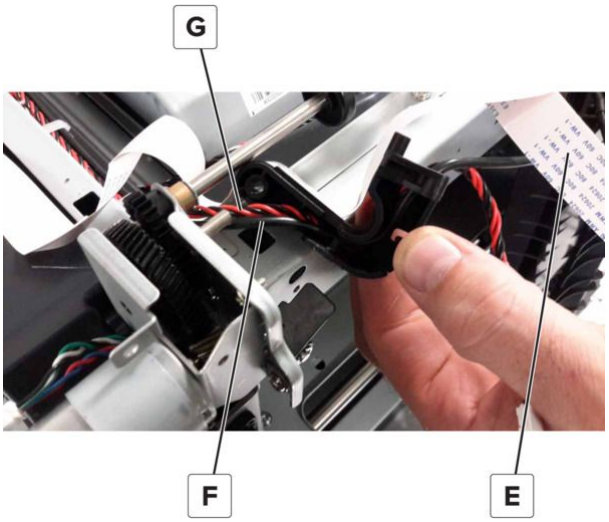
5. Remove the arm, and then route the cables (C) out of the right arm.



6. Remove the left arm (D) from the mounting pin.



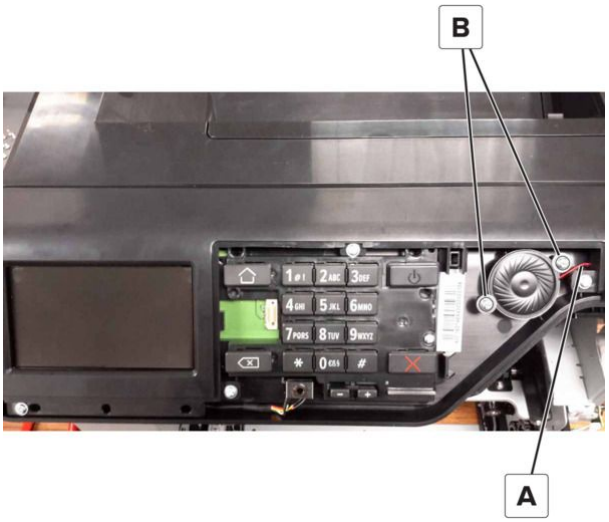
7. Carefully remove the ribbon cable (E), and then route the control panel cable (F) and headphone cable (G) out of the arm.



Speaker removal

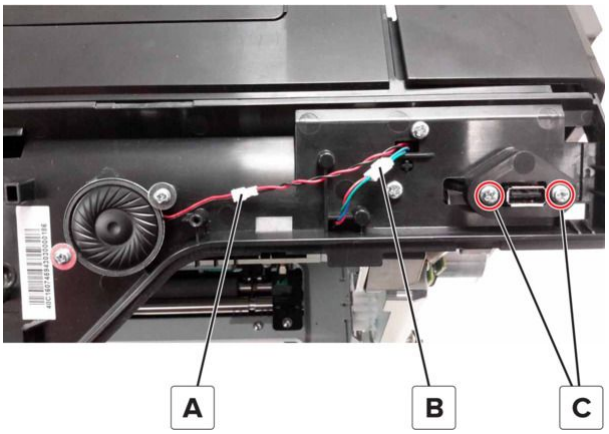
1. Remove the bezel. See Bezel removal on page 422.
2. Remove the number pad cover. See Number pad cover removal on page 422.

3. Disconnect the speaker cable (A), remove the two screws (B), and then remove the speaker.

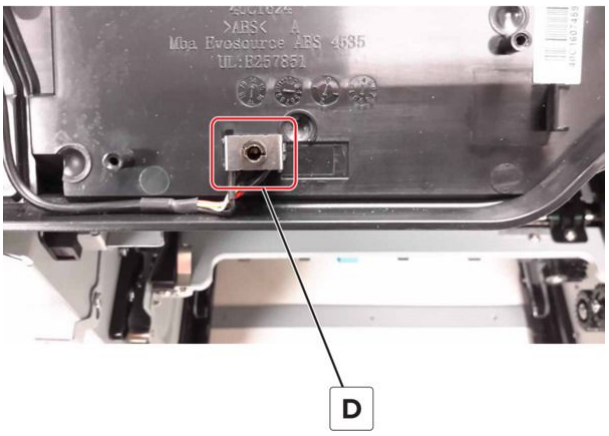


Control panel base cover removal

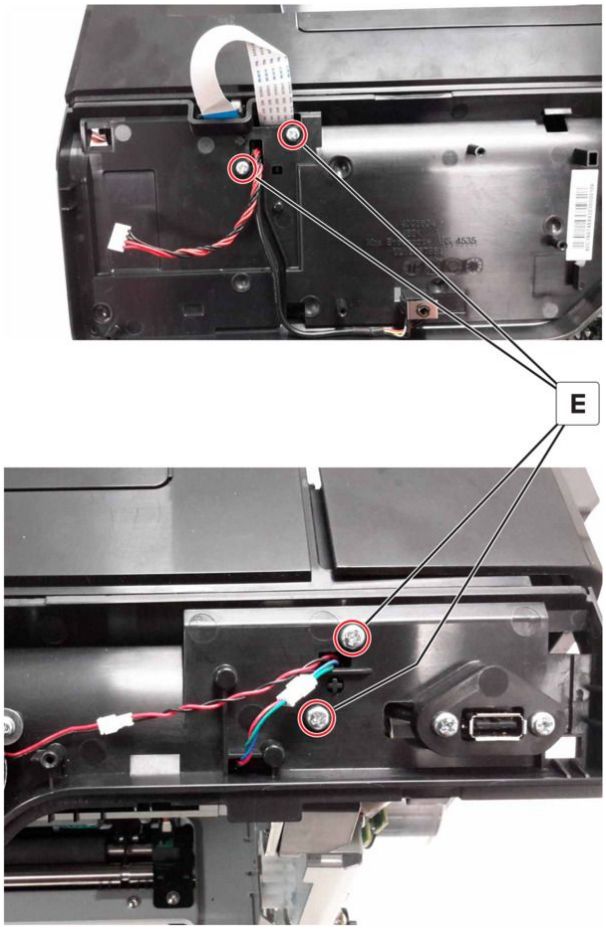
1. Remove the bezel. See Bezel removal on page 422.
2. Remove the number pad cover. See Number pad cover removal on page 422.
3. Remove the control panel front cover. See Control panel front cover removal on page 419.
4. Disconnect the speaker cable (A) and sensor cable (B), and then remove the two screws (C).



5. Remove the headphone port (D).



6. Remove the four screws (E), and then remove the cover.

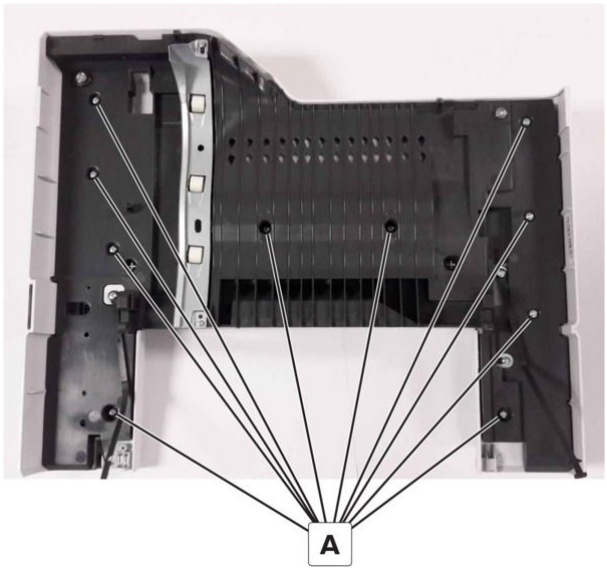


Duplex removals

Duplex outer guide removal

1. Remove the front cover. See Front cover removal on page 409.
2. Remove the pivot shaft. See Pivot shaft removal on page 428.
3. Remove the duplex inner guide. See Duplex inner guide removal on page 427.

4. Remove the ten screws (A).

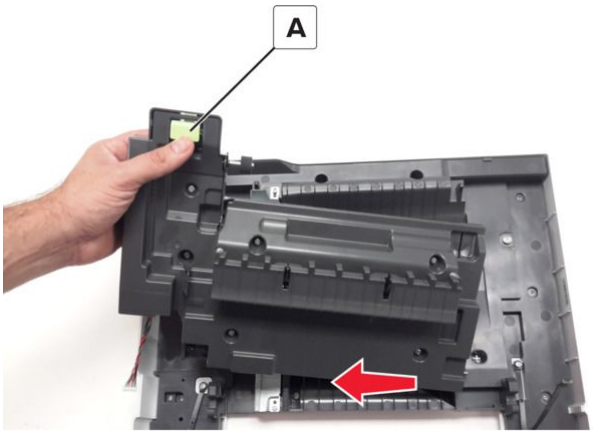


5. Remove the tray indicator (B), and then remove the duplex outer guide.



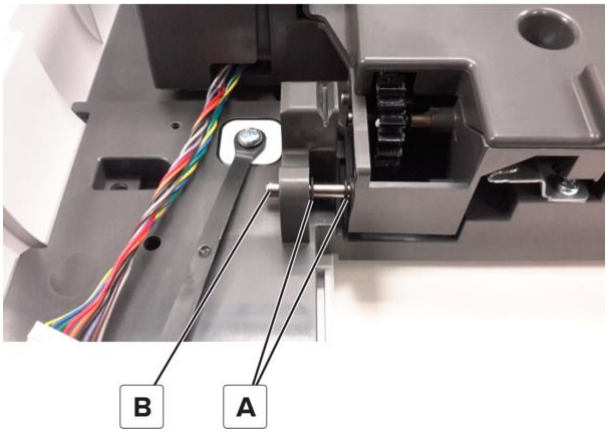
Duplex inner guide removal

1. Remove the pivot shaft. See Pivot shaft removal on page 428.
2. Disconnect the ground cable and the cable bundle from the front cover. See Front cover removal on page 409.
3. Release the latch (A), and then slide the guide to remove.



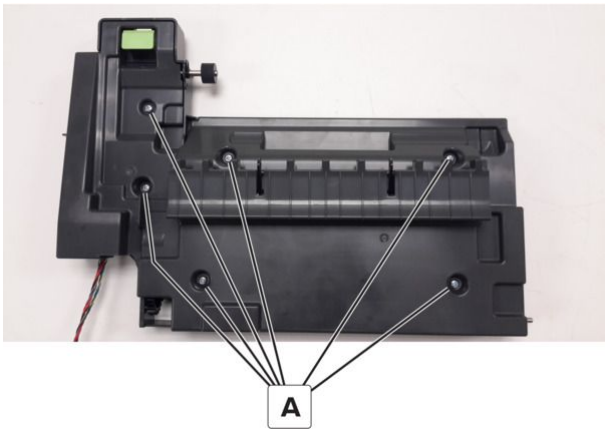
Pivot shaft removal

1. Remove the front cover. See .Control panel front cover removal on page 419
2. Remove the two E-clips (A), and then remove the shaft (B).

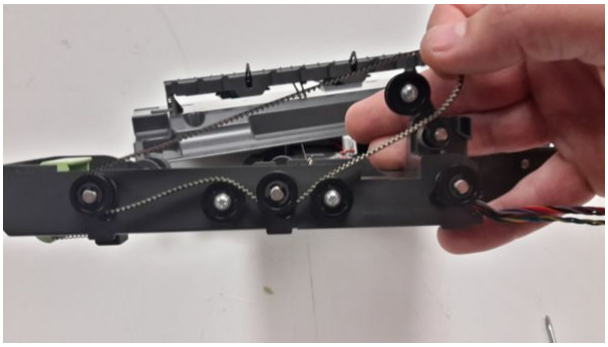


Tensioner belt removal

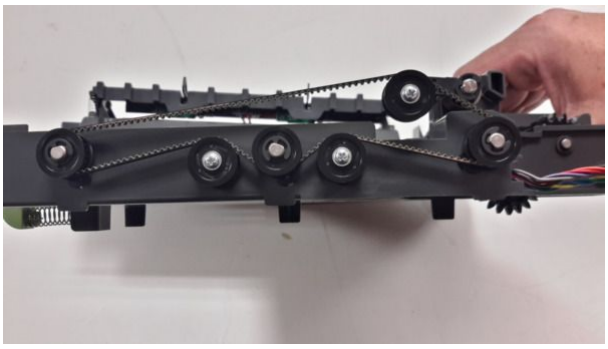
1. Remove the front cover. See .Control panel front cover removal on page 419
2. Remove the duplex inner guide. See Duplex inner guide removal on page 427.
3. Remove the pivot shaft. See Pivot shaft removal on page 428.
4. Remove the six screws (A), and then remove the cover.



5. Remove the belt.

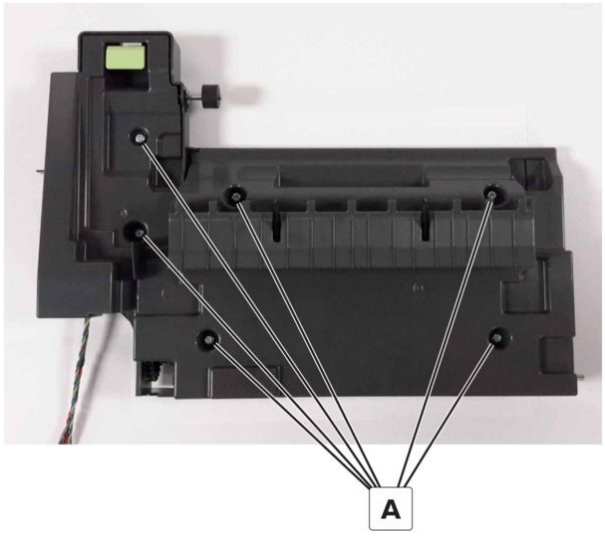


Note: Pay attention to the belt path before removing the belt.

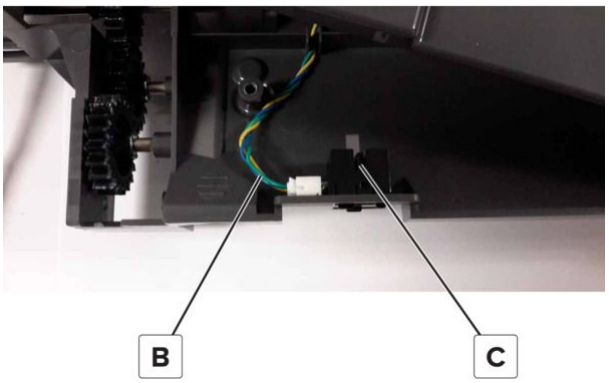


Sensor (duplex) removal

1. Remove the front cover. See .Control panel front cover removal on page 419
2. Remove the duplex inner guide. See Duplex inner guide removal on page 427.
3. Remove the pivot shaft. See Pivot shaft removal on page 428.
4. Remove the six screws (A).

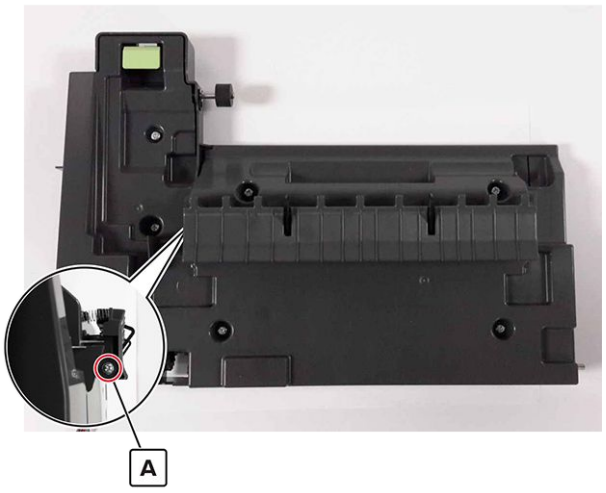


5. Disconnect the sensor cable (B), and then remove the sensor (C).



Sensors (fuser buckle and narrow media) removal

1. Open the front cover.
2. Remove the screw (A).

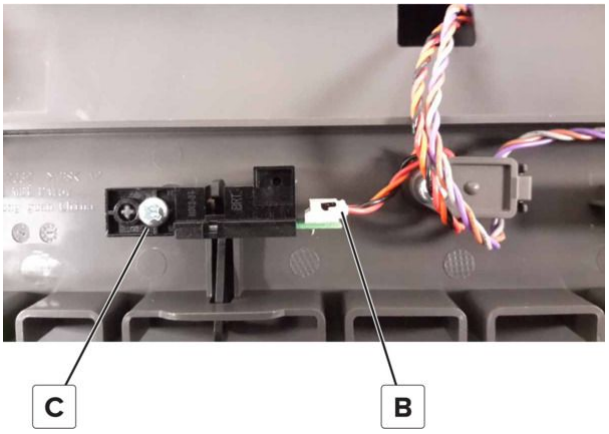


3. Slide the paper guide to the right to remove.



Note: The left sensor is the sensor (fuser buckle). The right sensor is the sensor (narrow media).

4. Disconnect the sensor cable (B), remove the screw (C), and then remove the sensors.

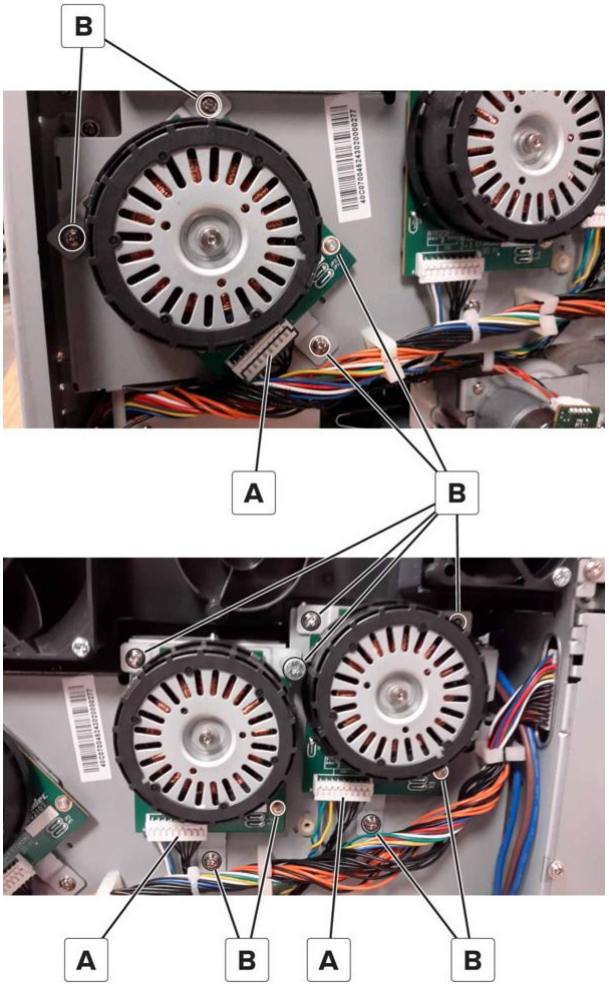


Left removals

Motor (EP drive) removal

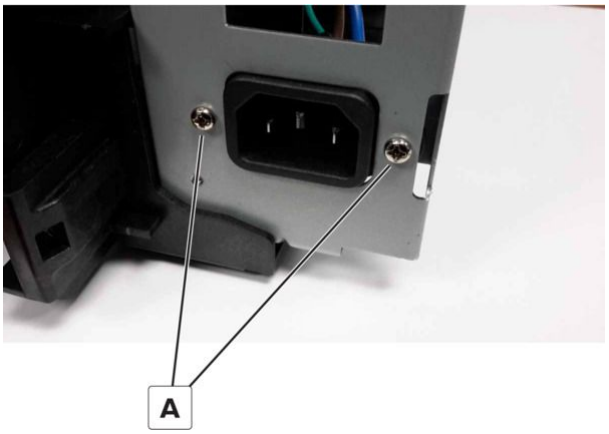
This removal shows how to remove all three motors. The motors can be replaced individually.

1. Remove the left cover. See .Left cover removal on page 413
2. On each of the motor, disconnect the motor cable (A), remove the four screws (B), and then remove the motor.

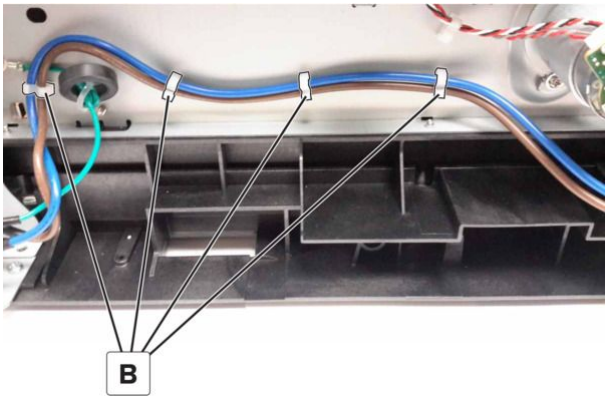


Power cable removal

1. Remove the left cover. See .Left cover removal on page 413
2. Disconnect the power cable from the LVPS.
3. Remove the two screws (A).



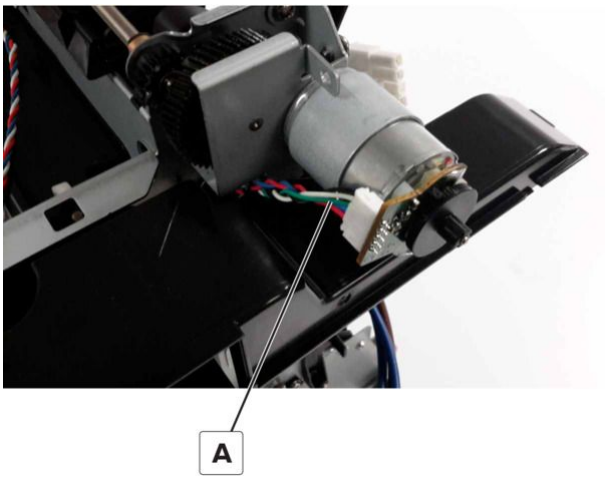
4. Remove the cable from the cable ties (B).



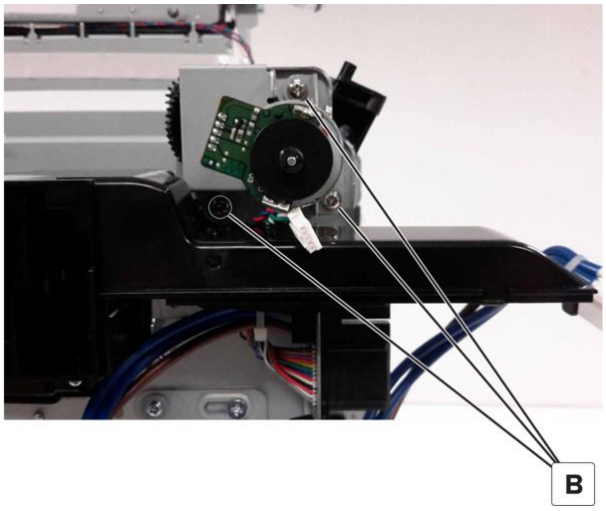
5. Disconnect the cable from the LVPS.

Motor (output) removal

1. Remove the left cover. See .Left cover removal on page 413
2. Remove the top cover. See .Top cover removal on page 411
3. Disconnect the motor cable (A).

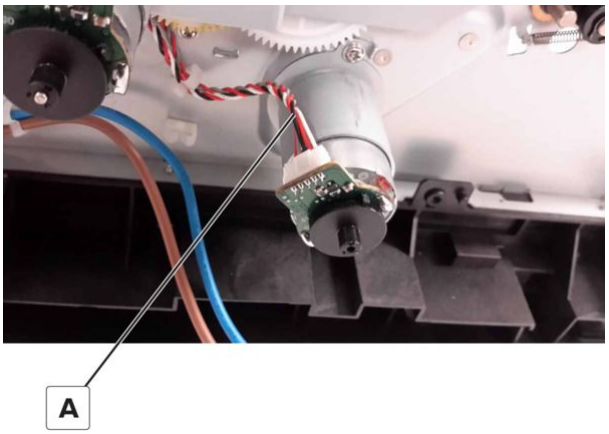


4. Remove the three screws (B), and then remove the motor.

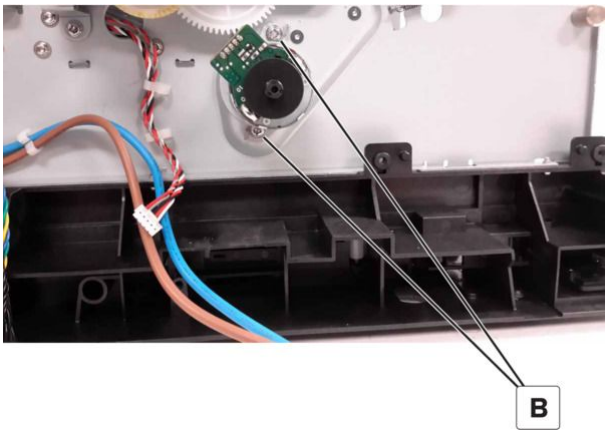


Motor (deskew) removal

1. Remove the left cover. See .Left cover removal on page 413
2. Disconnect the motor cable (A).

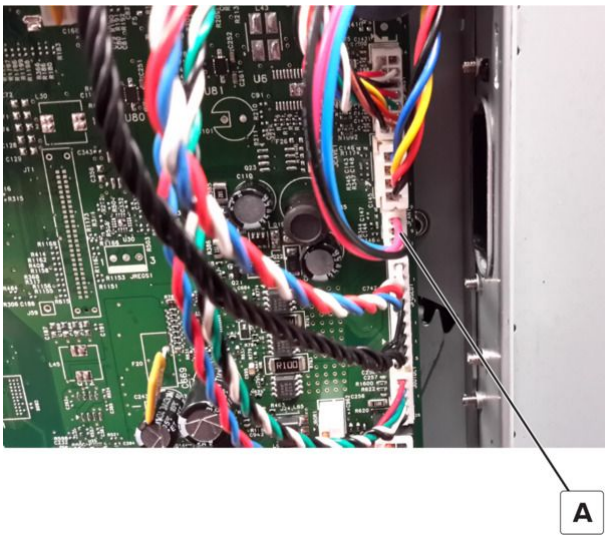


3. Remove the two screws (B), and then remove the motor.

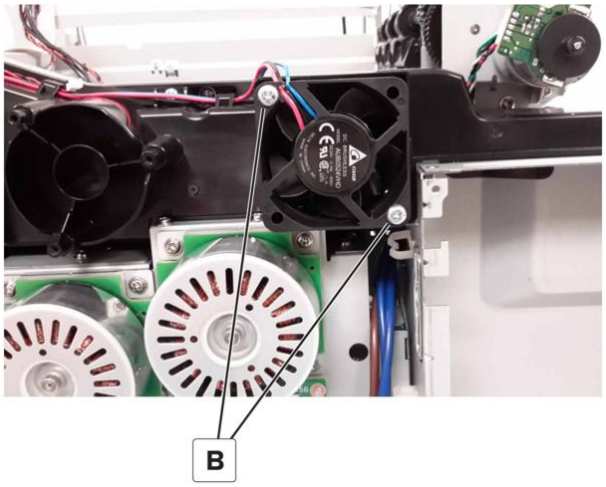


Fuser fan removal

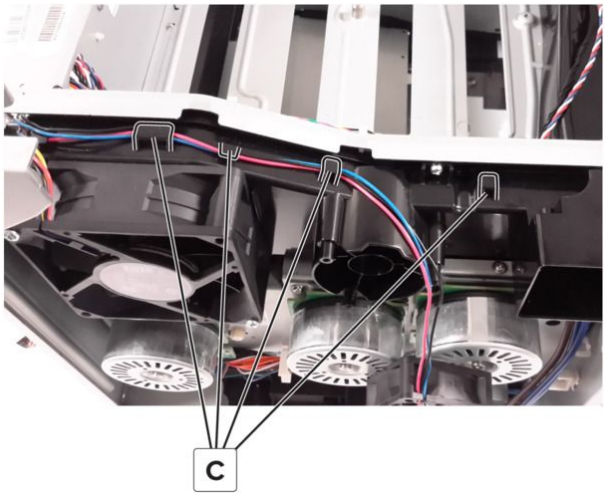
1. Remove the left cover. See .Left cover removal on page 413
2. Remove the controller board shield. See Controller board shield removal on page 475.
3. Remove the inner controller board shield. See Controller board shield removal on page 475.
4. Disconnect the fuser fan cable (A) from the controller board.



5. Remove the two screws (B).



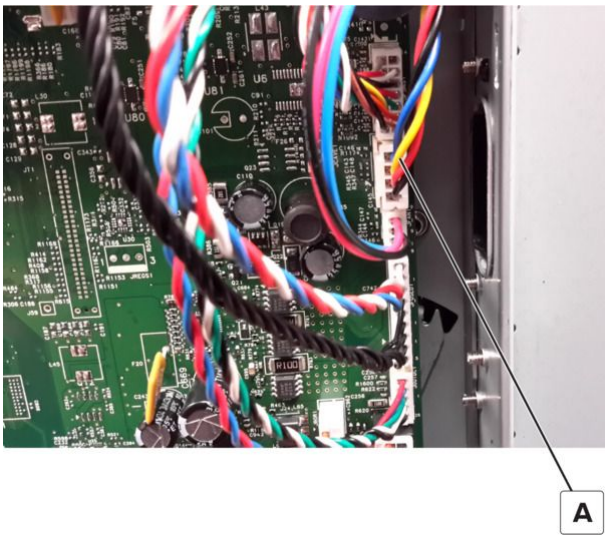
6. Route the fuser fan cable out of the retainers (C), and then remove the fan.



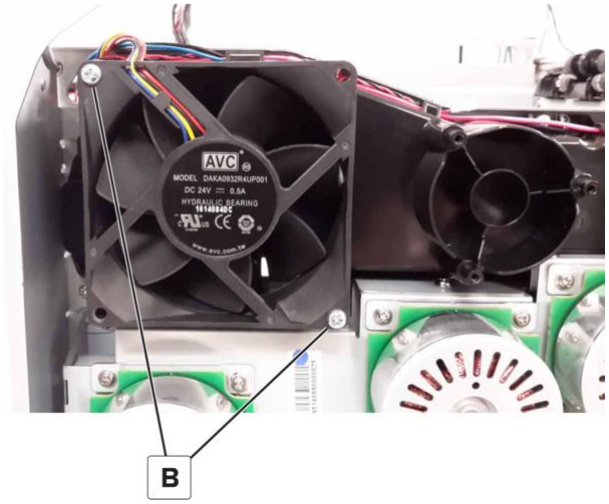
Main fan removal

1. Remove the left cover. See .Left cover removal on page 413

2. Remove the controller board shield. See Controller board shield removal on page 475.
3. Remove the inner controller board shield. See Controller board shield removal on page 475.
4. Disconnect the main fan cable (A) from the controller board.

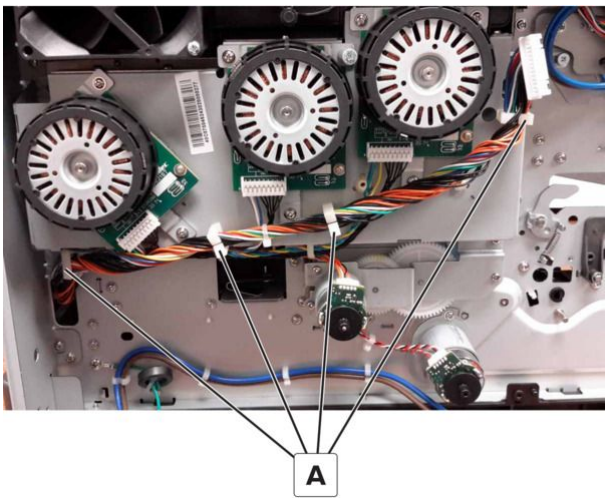


5. Remove the two screws (B), and then route the fan cable through the hole in the frame to remove the fan.

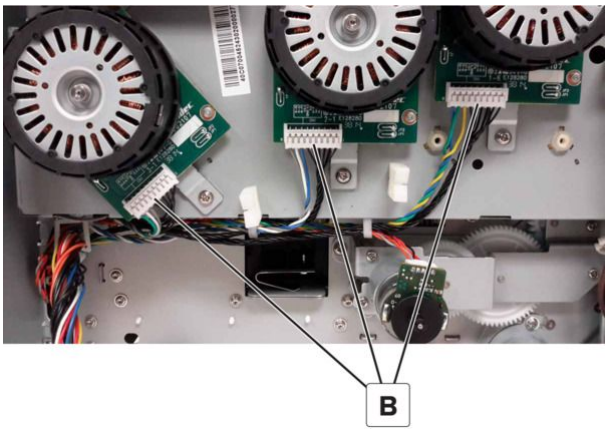


EP gear box removal

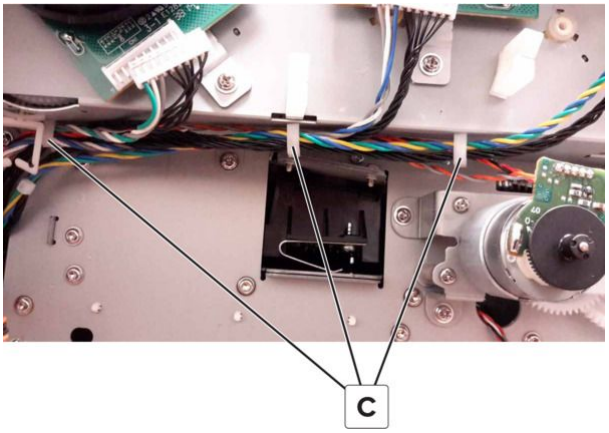
1. Remove the left cover. See .Left cover removal on page 413
2. Route the cable out of the guides (A).



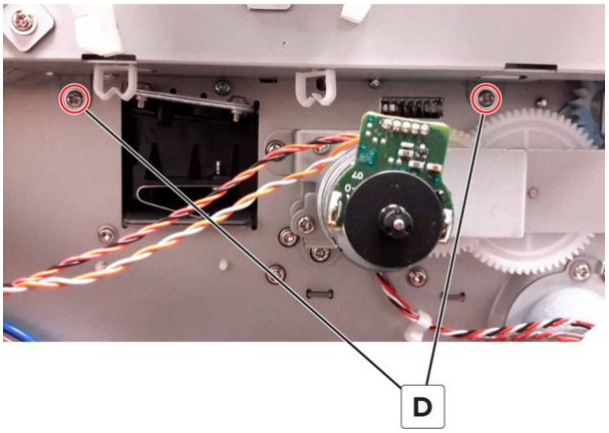
3. Disconnect the three motor cables (B).



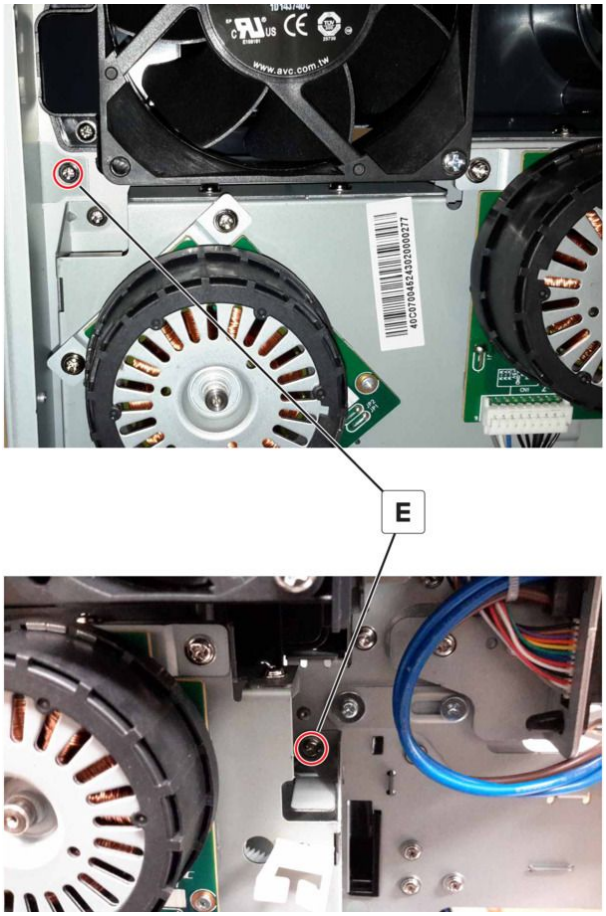
4. Route the motor cables out of the guides (C) from under the gear box.



5. Remove the two screws (D) from under the gear box.



6. Remove the two screws (E) from the top-left and top-right corners of the EP drive, and then remove the gear box.



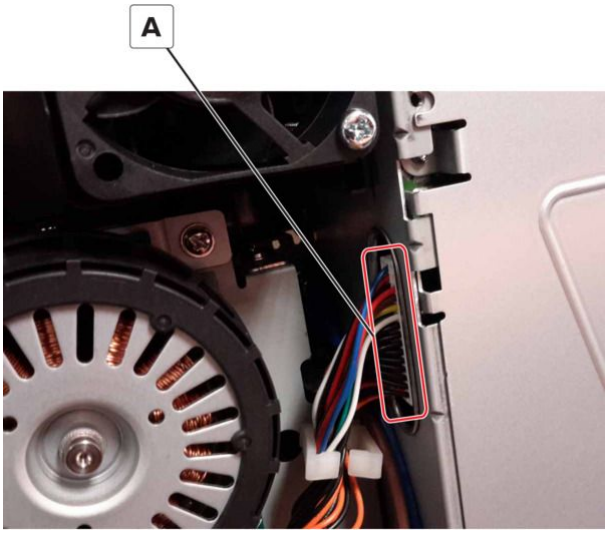
LVPS removal

Note: For a video demonstration, see LVPS removal.

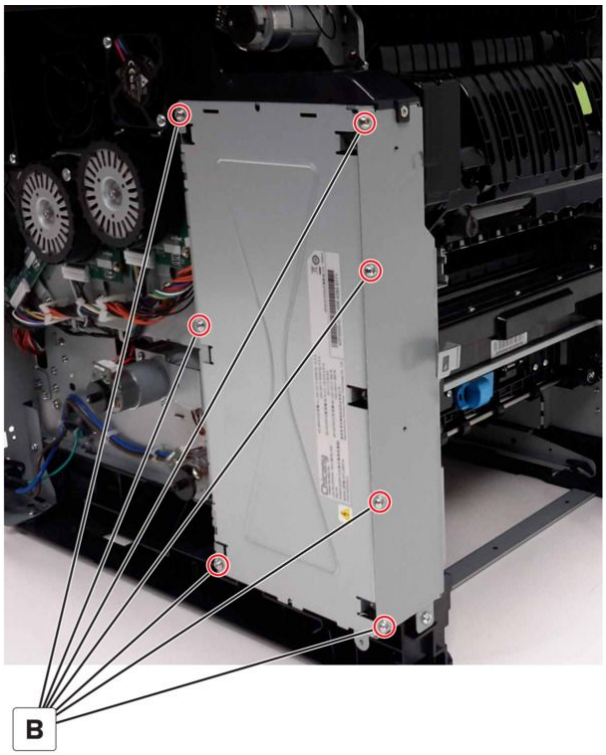
CAUTION—SHOCK HAZARD
The LVPS may have residual voltage present. To avoid the risk of electrical shock, do not touch its circuit components. Only handle it by its outer edges.

1. Open the front door.

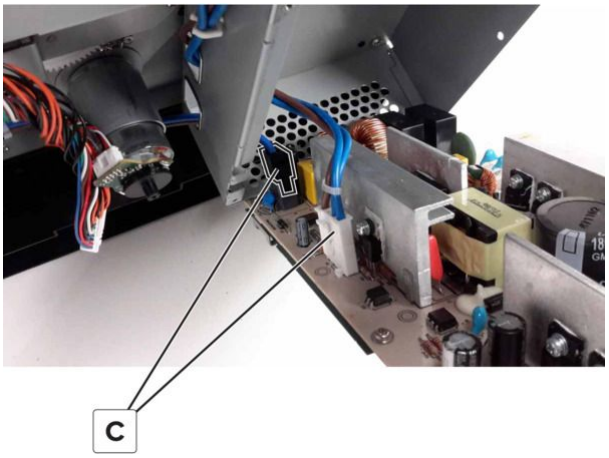
2. Remove the left cover. See .Left cover removal on page 413
3. Disconnect the cable (A) from the LVPS.



4. Remove the seven screws (B).



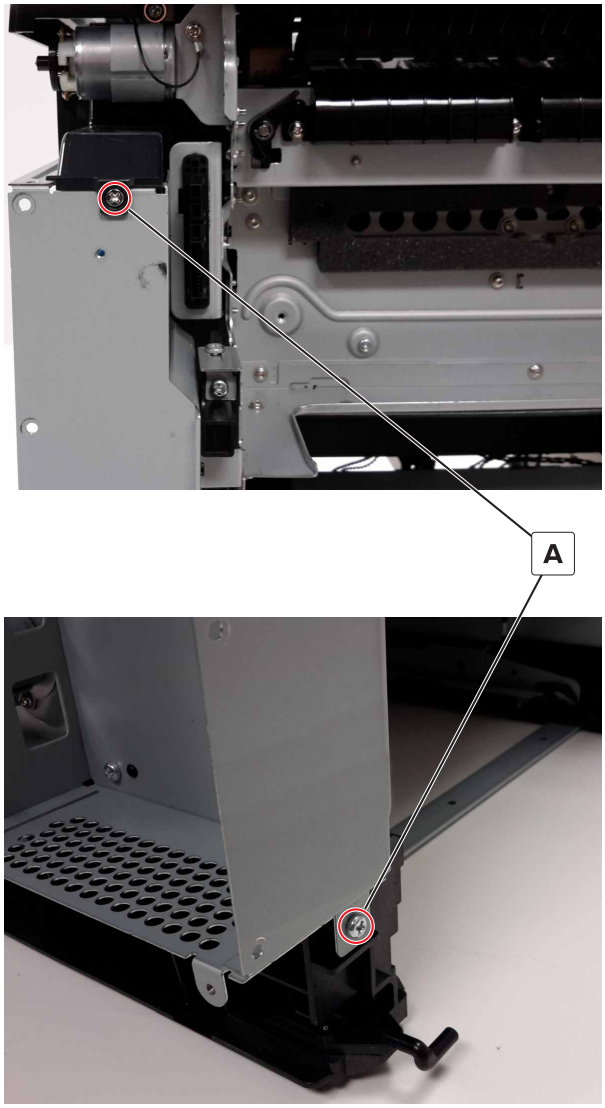
5. Disconnect the two cables (C), and then remove the LVPS.



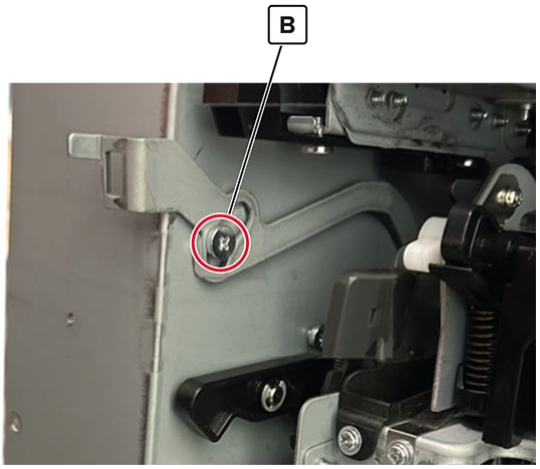
LVPS cage removal

Note: This is not a FRU.

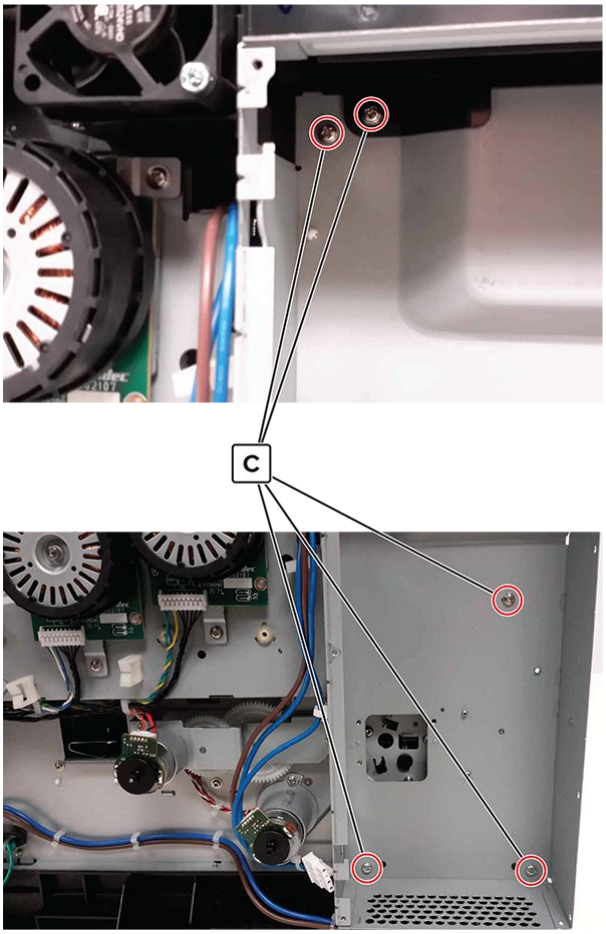
1. Remove the left cover. See Left cover removal on page 413.
2. Remove the LVPS. See LVPS removal on page 438.
3. Remove the two screws (A) from the right side of the cage.



4. Remove the screw (B) from the back of the cage.

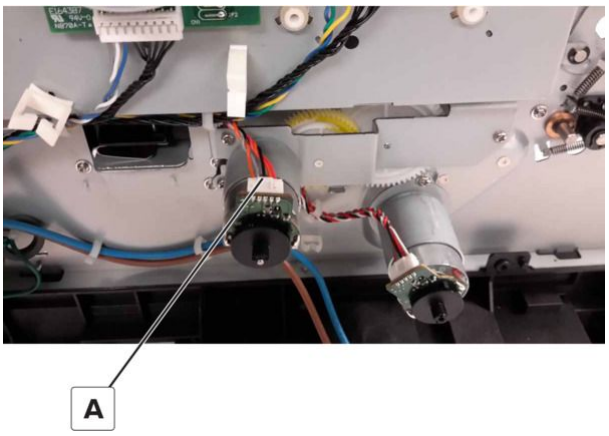


5. Remove the five screws (C) from the inside of the cage, and then remove the cage.

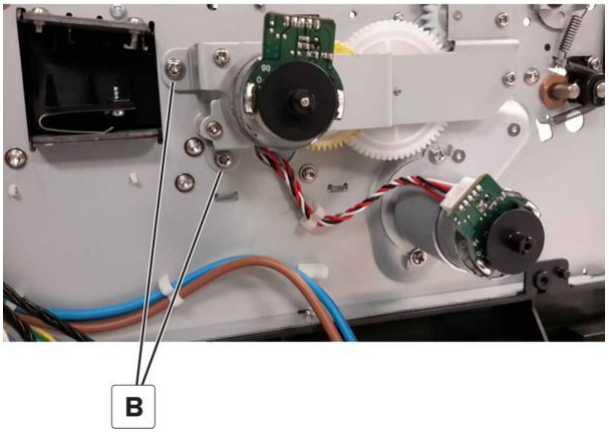


Motor (black only retract) removal

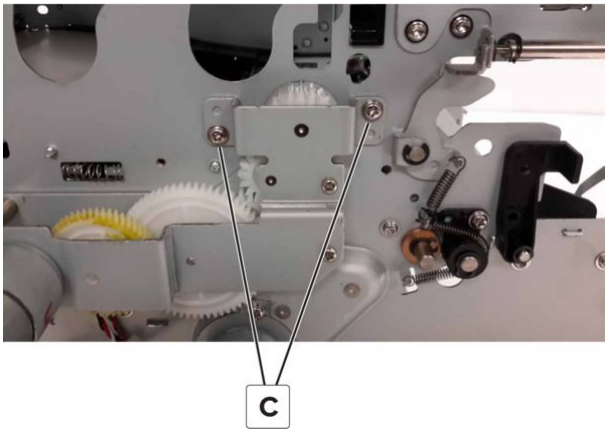
1. Remove the LVPS. See LVPS removal on page 438.
2. Remove the LVPS cage. See LVPS cage removal on page 440.
3. Remove the EP gear box. See EP gear box removal on page 436.
4. Disconnect the black only retract motor cable (A).



5. Remove the two screws (B).



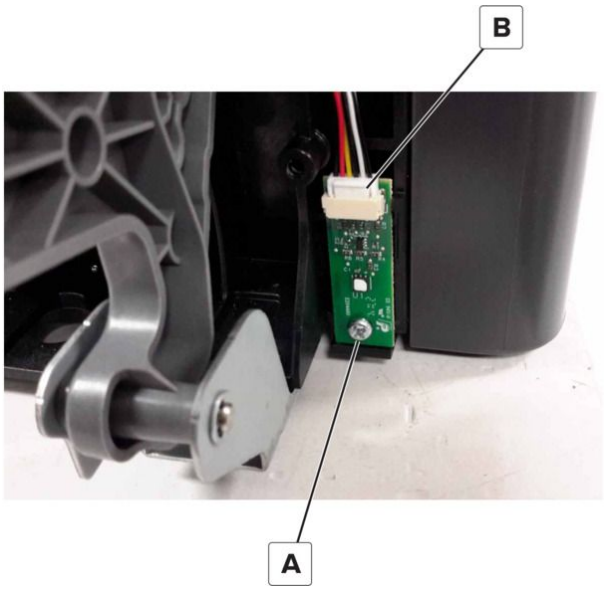
6. Remove the two screws (C), and then remove the motor.



Right removals

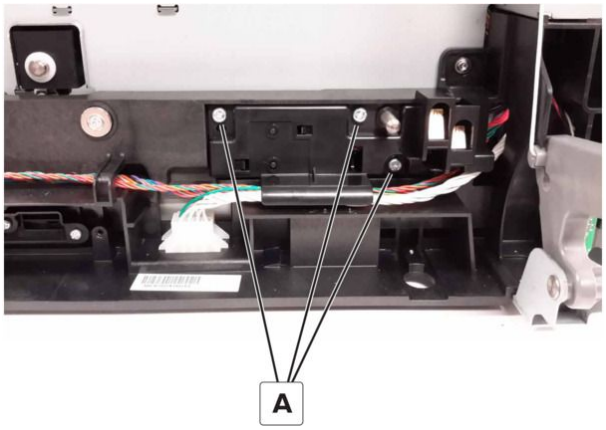
Sensor (weather station) removal

1. Remove the waste toner bottle.
2. Remove the motor cover. See Motor cover removal on page 415.
3. Remove the right cover. See Right cover removal on page 414.
4. Remove the screw (A), disconnect the cable (B), and then remove the sensor.

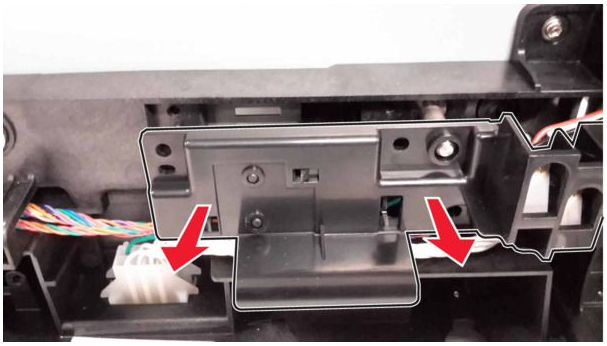


Sensor (paper size) removal

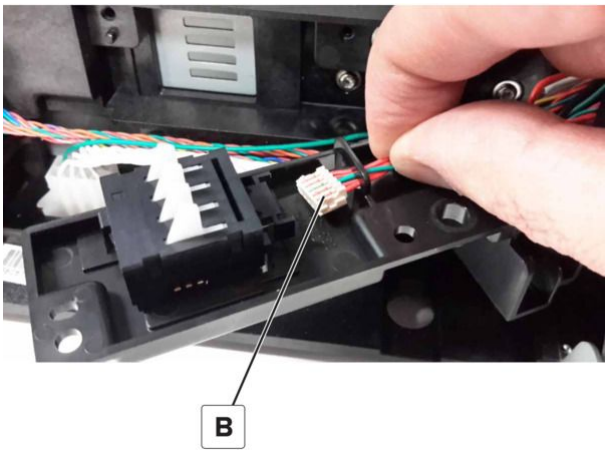
1. Remove the waste toner bottle.
2. Remove the motor cover. See Motor cover removal on page 415.
3. Remove the right cover. See Right cover removal on page 414.
4. Remove the three screws (A).



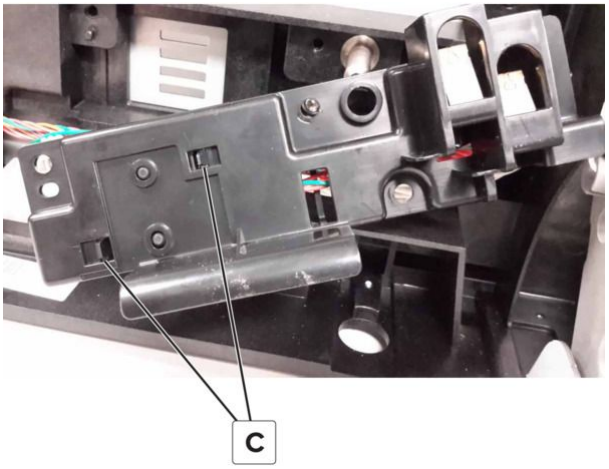
5. Pull the mounting assembly away from the printer.



6. Disconnect the sensor cable (B).



7. Release the two tabs (C) from the mounting assembly, and then remove the sensor.



Sensor (waste toner contact) removal

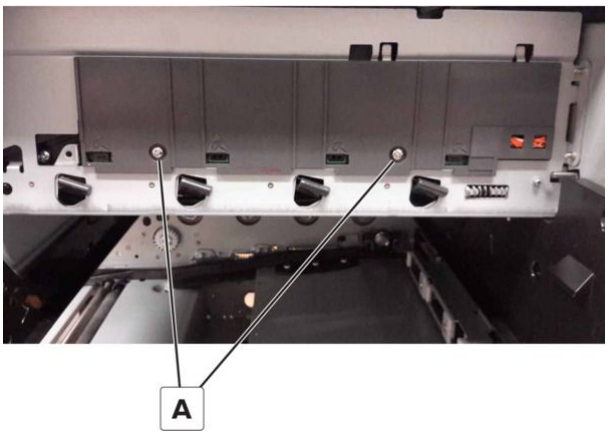
1. Remove the waste toner bottle.
2. Remove the motor cover. See Motor cover removal on page 415.
3. Remove the sensor (paper size). See Sensor (paper size) removal on page 444.
4. Disconnect the waste toner bottle contact cable (A) from the controller board.



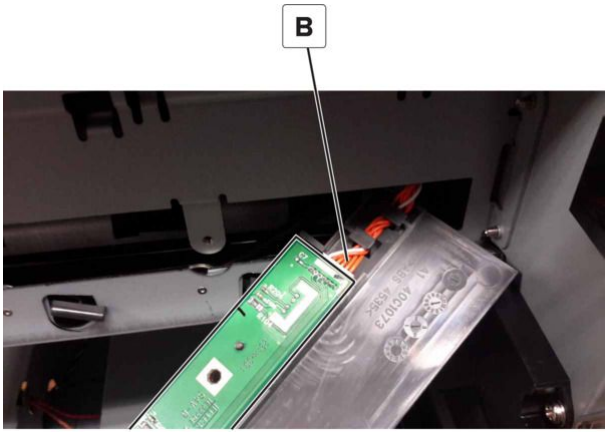
5. Route the cable through the printer, and then remove the sensor contact assembly.

TMC card removal

1. Remove the imaging unit.
2. Remove the two screws (A) securing the TMC cover.

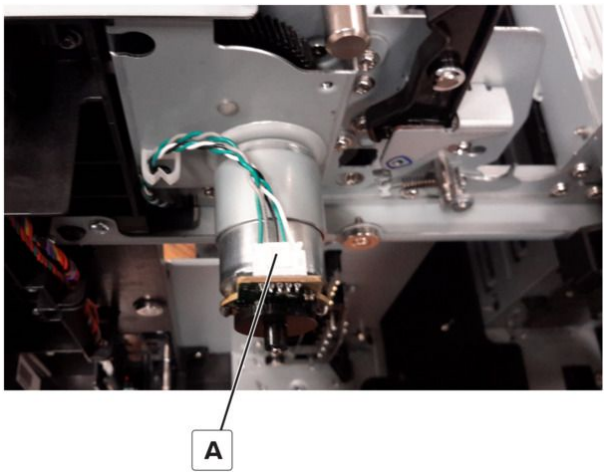


3. Disconnect the cable (B), and then remove the TMC card from the cover.

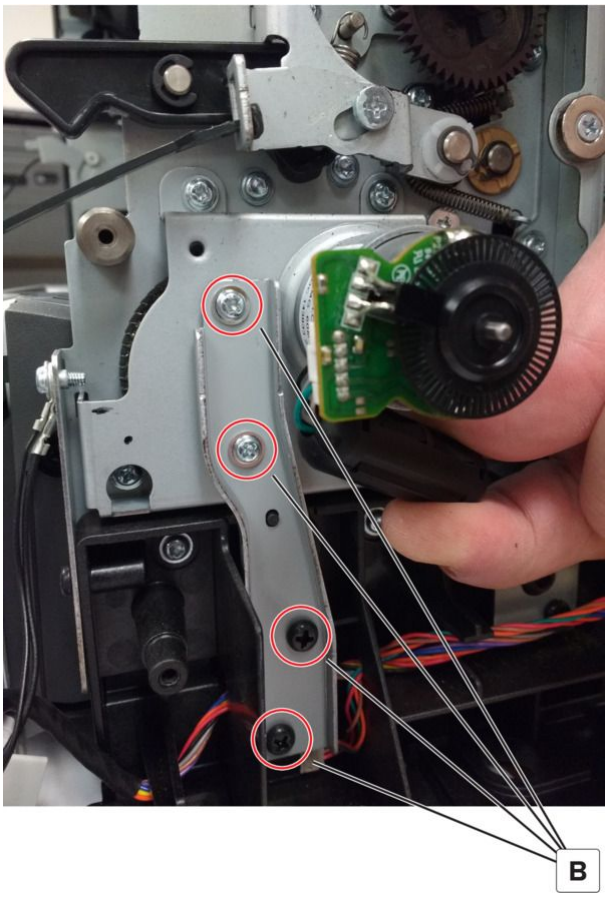


Motor (duplex/MPF) removal

1. Remove the motor cover. See Motor cover removal on page 415.
2. Remove the right cover. See .Right cover removal on page 414
3. Disconnect the cable (A).

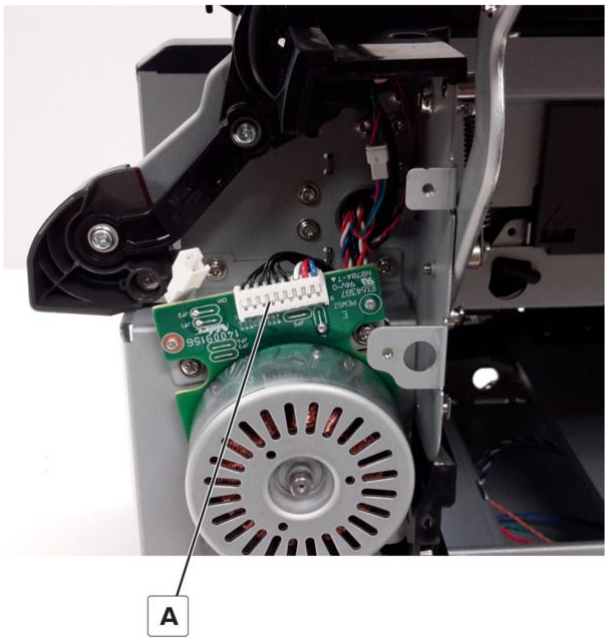


4. Remove the four screws (B), and then remove the motor.

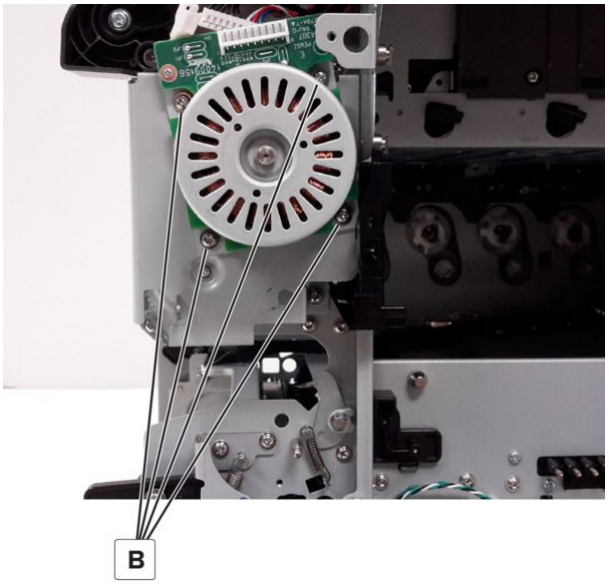


Motor (fuser) removal

1. Remove the motor cover. See Motor cover removal on page 415.
2. Disconnect the motor cable (A).



3. Remove the four screws (B), and then remove the motor.



HVPS removal

Note: For a video demonstration, see HVPS removal.

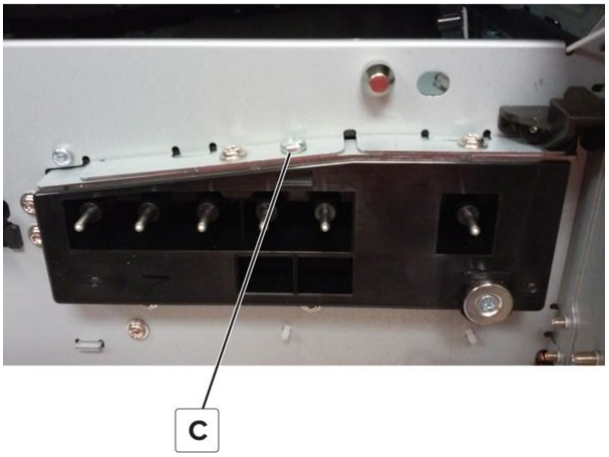
1. Remove the transfer module. See Transfer module removal on page 460.
2. Remove the controller board. See Controller board removal on page 477.
3. Remove the retainer (A).



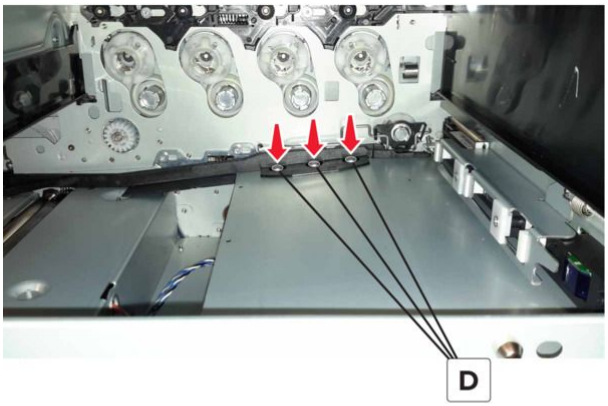
4. Disconnect the cable (B).



5. Remove the screw (C) securing the HVPS.



6. Press the three toner contacts (D) from inside the printer, and then remove the power supply.


D


Danger

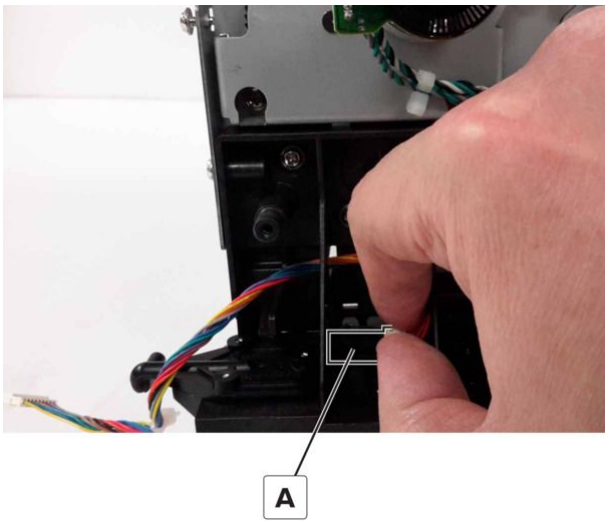
Installation Note

- Make sure that the transfer module guide rail does not block the three toner contacts.
- Make sure that the three toner contacts freely move and are fully extended.
- Make sure that the index pin (A) behind the transfer module retract arm is properly aligned.

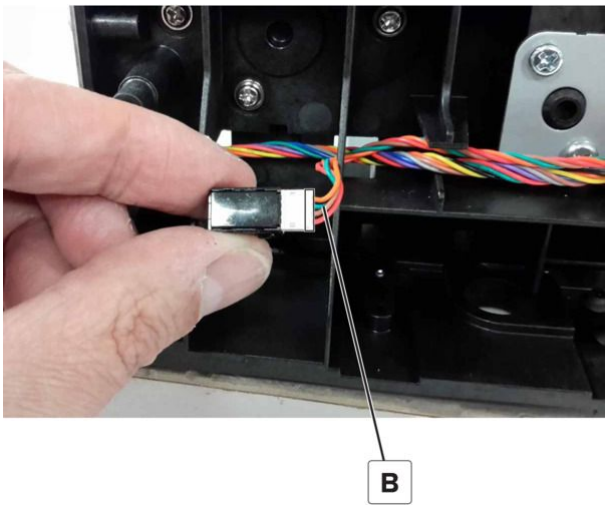


Sensor (MPF paper present) removal

1. Remove the waste toner bottle.
2. Remove the motor cover. See Motor cover removal on page 415.
3. Remove the right cover. See Right cover removal on page 414.
4. Pull the sensor out of the printer.

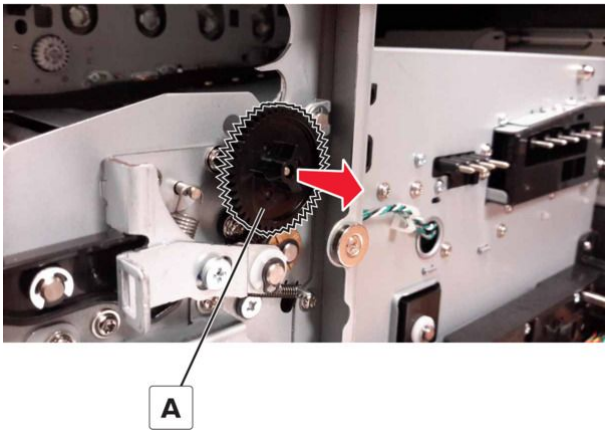


5. Disconnect the sensor cable (A), and then remove the sensor.



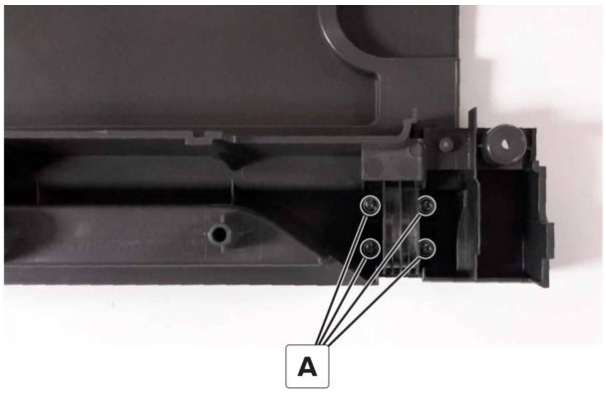
Waste toner bottle idler gear removal

1. Remove the waste toner bottle.
2. Remove the gear.

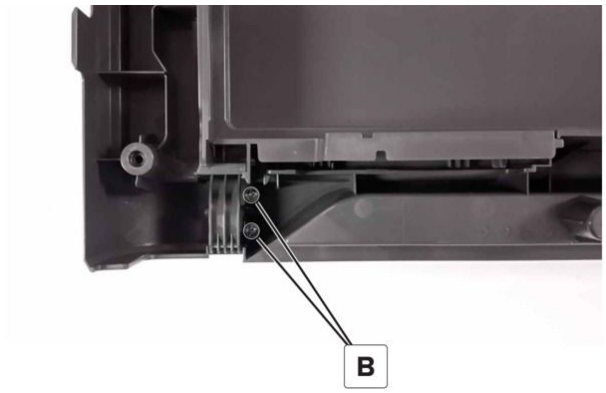


Imaging unit cover removal

1. Remove the waste toner bottle.
2. Remove the motor cover. See Motor cover removal on page 415.
3. Remove the right cover. See Right cover removal on page 414.
4. Remove the four screws (A) securing the imaging unit cover hinges to the front of the right cover.



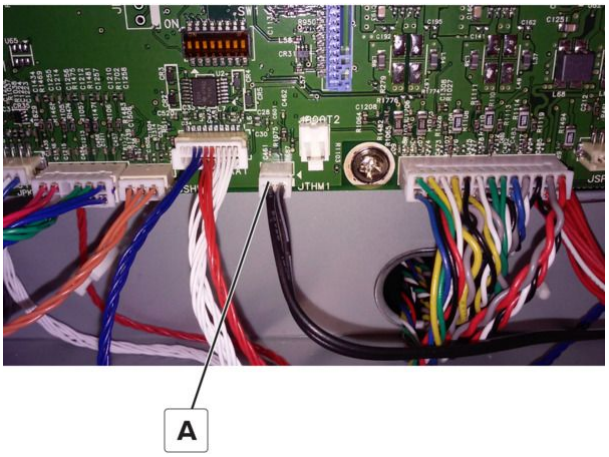
5. Remove the two screws (B) securing the hinges to the rear of the right cover.



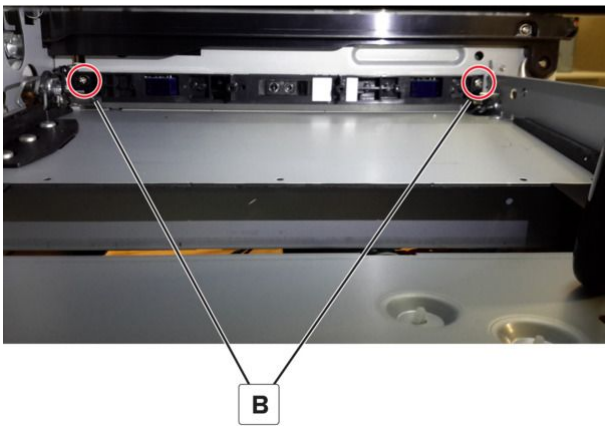
Sensor (TPS) removal

Note: For a video demonstration, see Sensor (TPS) removal.

1. Remove the controller board shield. See Controller board shield removal on page 475.
2. Remove the inner controller board shield. See Controller board shield removal on page 475.
3. Remove the TPS sled. See TPS sled removal on page 455.
4. Disconnect the thermistor cable (A) from the controller board.

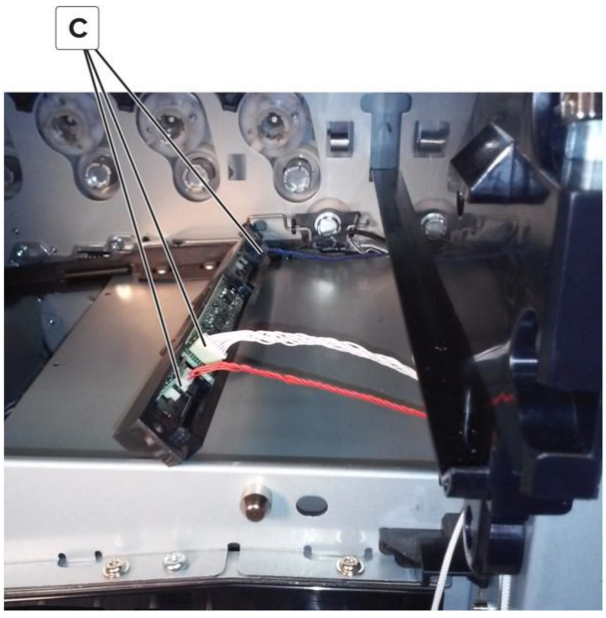


5. Remove the two screws (B).



6. Carefully pull the sensor while guiding the black thermistor cable through the hole at the rear of the printer.
7. Disconnect the three cables (C) from the sensor.

> **Warning—Potential Damage**
> Press the tab on the white cable while disconnecting it to avoid damage.



Installation Note
Remove the protective tape covering the sensor lenses before installing the sensor assembly.

Installation Note

1. After routing the thermistor cable through the hole at the rear of the printer, make sure that the sensor is placed behind the transfer module retract mechanism to avoid interference with the transfer module retract.



2. After installing the sensor to the printer, restart the printer to test the cable connections to the sensor. A **128.xx** error indicates a bad connection at the sensor.
3. Perform the TPS sensor characterization.

   Enter the Diagnostics menu, and then navigate to:

   Printer Diagnostics > Printer Setup > EP setup > Toner patch sensor adjust > Sensor Gain Characterization
4. Perform the TPS sensor calibration.

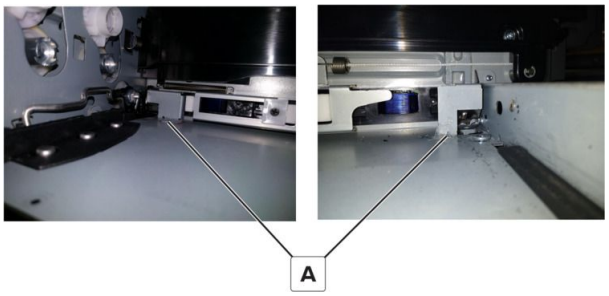
   Enter the Diagnostics menu, and then navigate to:

   Printer Diagnostics > Printer Setup > EP setup > Toner patch sensor adjust > Full Calibration

TPS sled removal

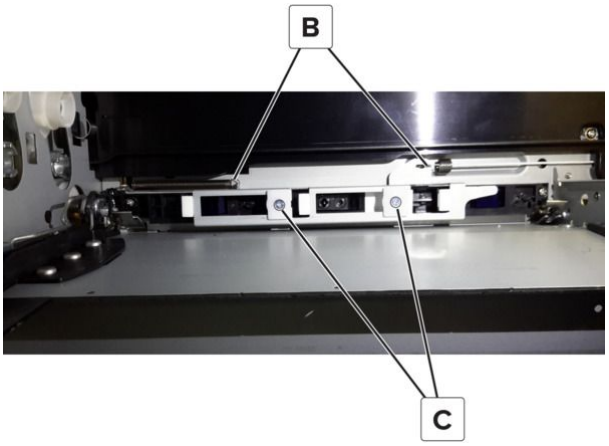
Note: This is not a FRU.

1. Remove the interlocks (A).



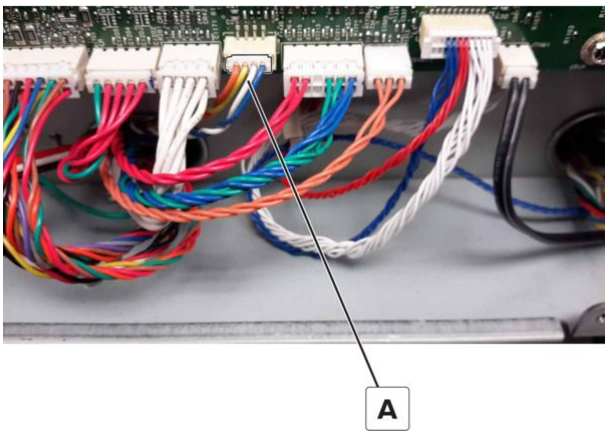
2. Disconnect the two springs (B) from the TPS sled.

3. Remove the two screws (C), and then remove the sled.

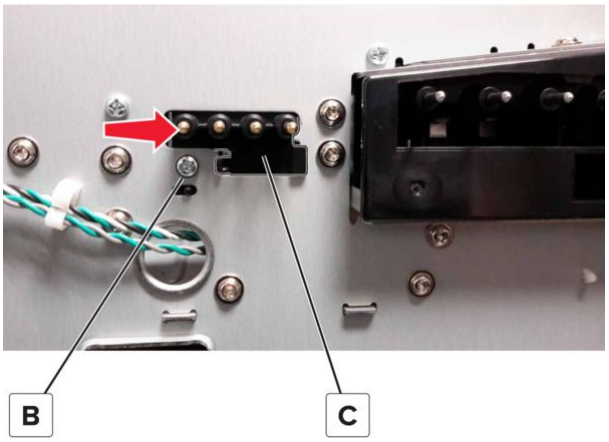


Toner cartridge contacts removal

1. Remove the imaging unit.
2. Remove the controller board shield. See Controller board shield removal on page 475.
3. Disconnect the toner cartridge contacts cable (A) from the controller board.



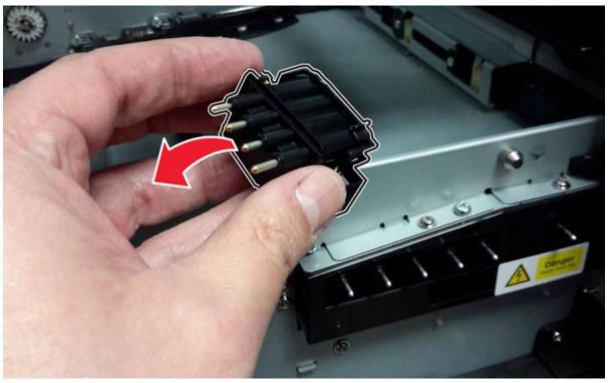
4. Remove the screw (B), and then push the tab (C) to the right.



5. Push the cartridge contacts assembly into the printer.

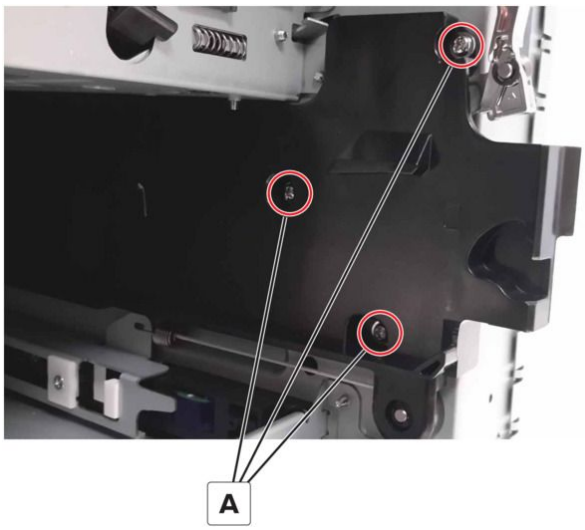


6. Remove the cable from the retainer clips, and then remove the cartridge contacts.

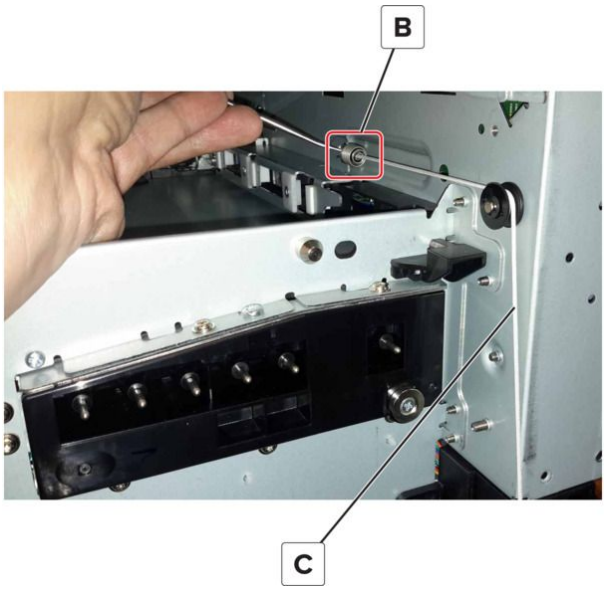


TPS wiper mechanism removal

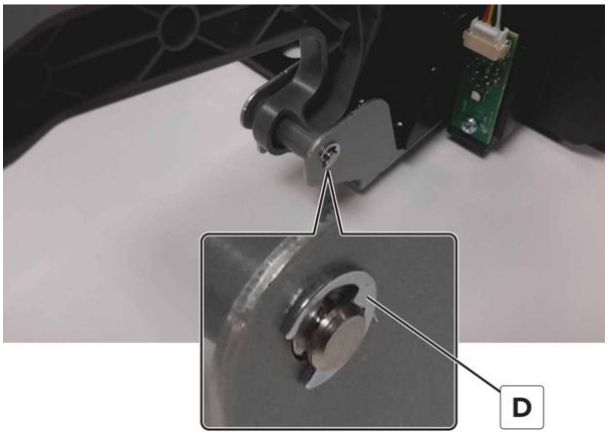
1. Remove the waste toner bottle.
2. Remove the motor cover. See Motor cover removal on page 415.
3. Remove the right cover. See Right cover removal on page 414.
4. Remove the three screws (A).



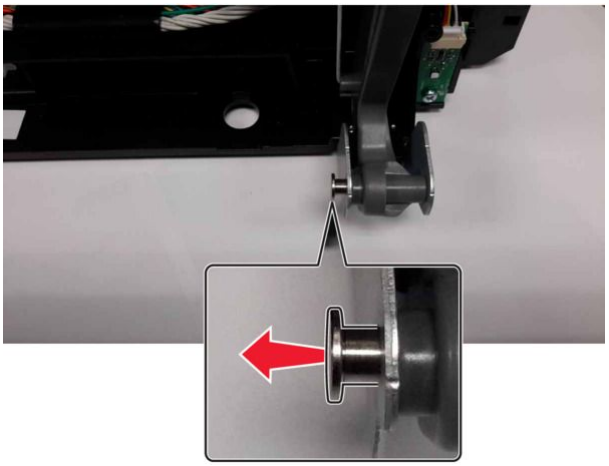
5. Unhook the spring (B) from the sled, and the remove the cord (C) from the pulley.



6. Remove the clip (D).



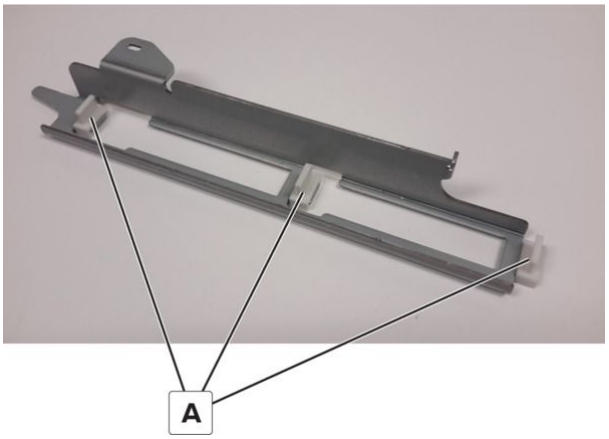
7. Slide the shaft out, and then remove the TPS wiper.



TPS wiper removal

1. Remove the TPS sled. See TPS sled removal on page 455.

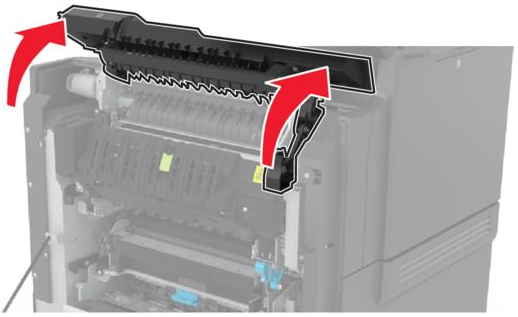
2. Remove the three wipers (A) from the sled.



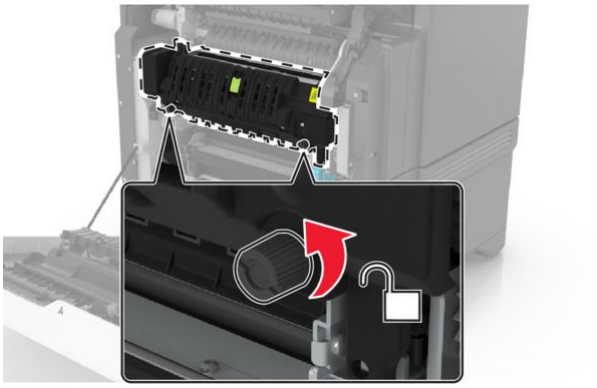
Front removals

Fuser removal

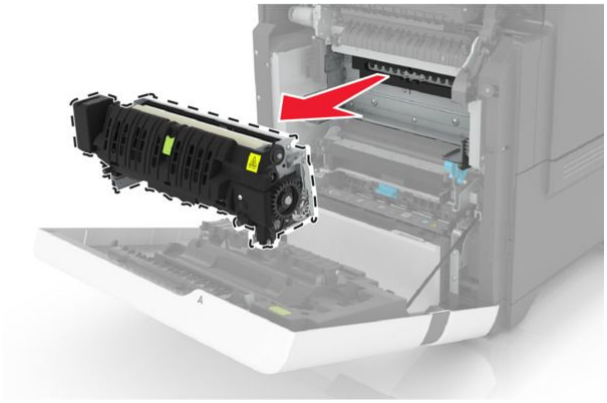
1. Open the front cover.
2. Raise the redrive guide.



3. Turn the fuser lock counterclockwise.

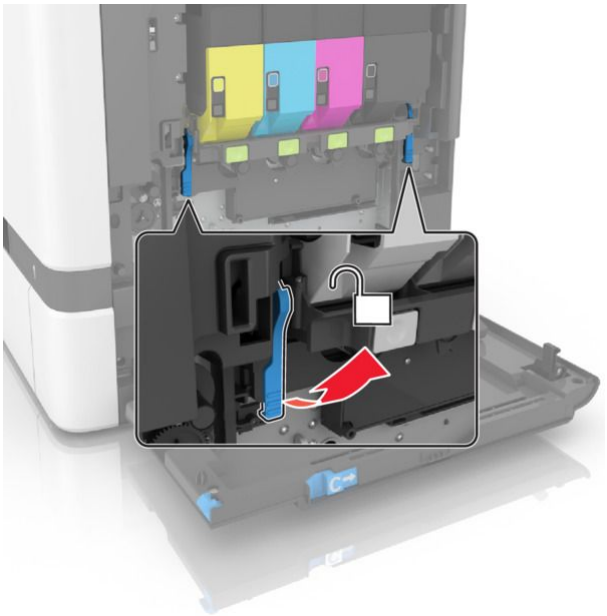


4. Remove the fuser.

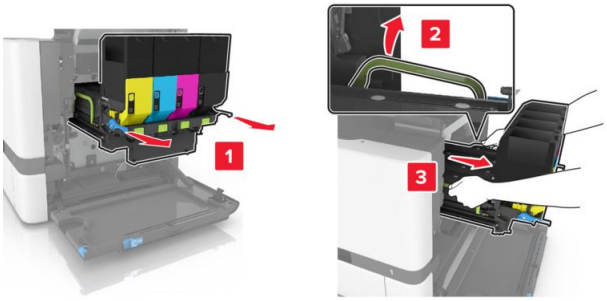


Transfer module removal

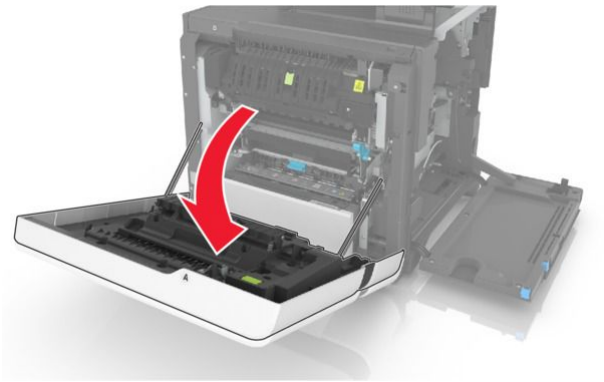
1. Open the toner door.
2. Open the imaging unit cover.
3. Remove the waste toner bottle.
4. Unlock the transfer module.



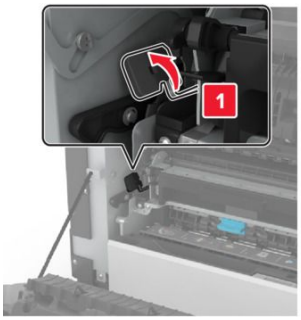
5. Remove the imaging kit.

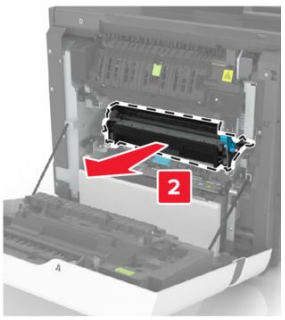


6. Open the front cover.



7. Remove the transfer module.

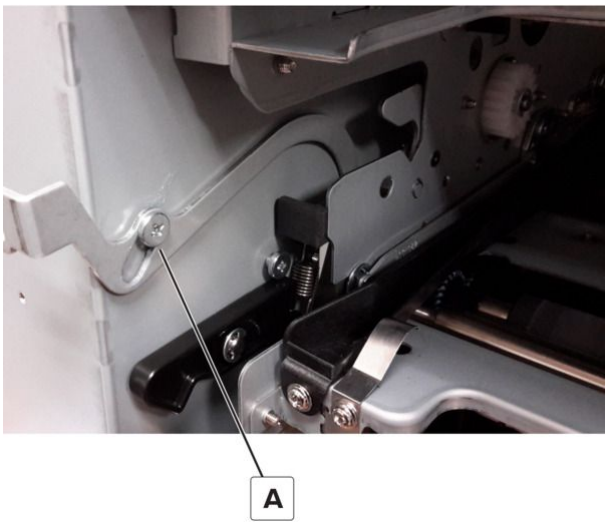




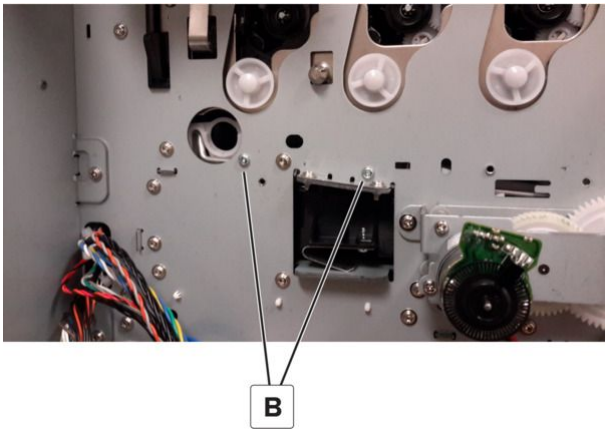
Installation Note
Make sure to reset the transfer module maintenance counter after replacing the transfer module. See Resetting the maintenance counter on page 523.

Transfer module guide rail removal

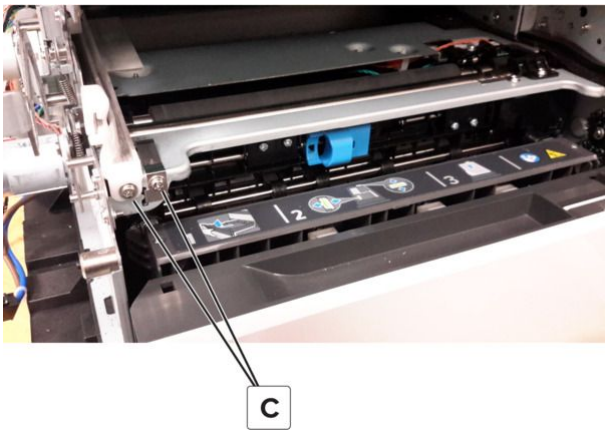
1. Remove the left cover. See .Left cover removal on page 413
2. Remove the LVPS. See LVPS removal on page 438.
3. Remove the screw (A).



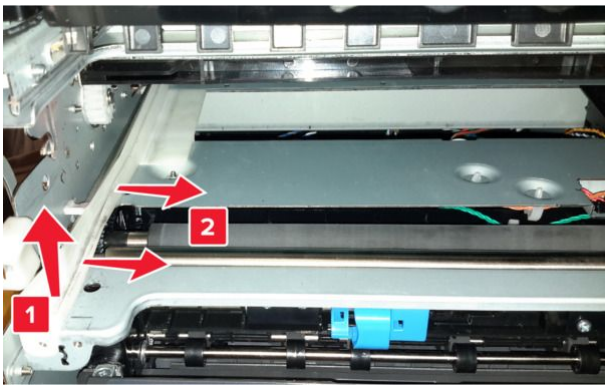
4. Remove the LVPS cage. See LVPS cage removal on page 440.
5. Remove the EP gear box. See EP gear box removal on page 436.
6. Remove the two screws (B).



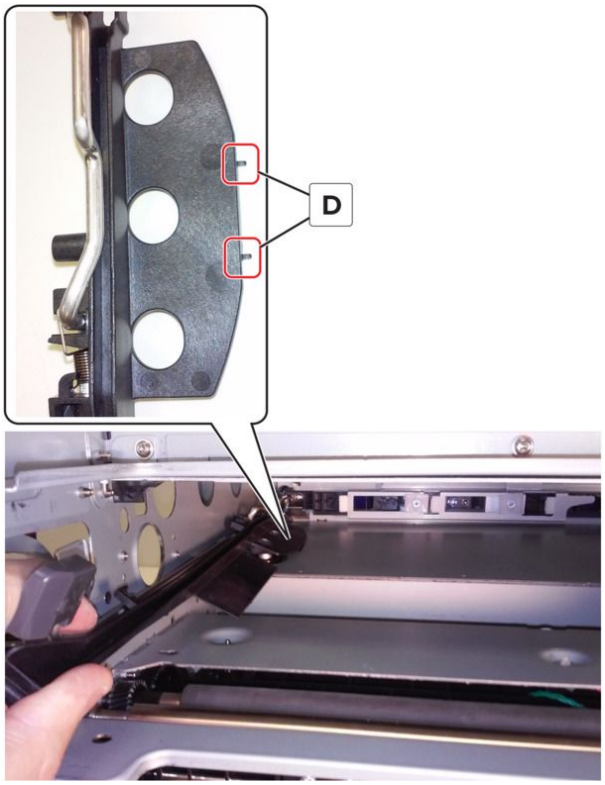
7. Remove the two screws (C), to release the ITU ground spring.



8. Lift the rail, and then move it slightly to the right.

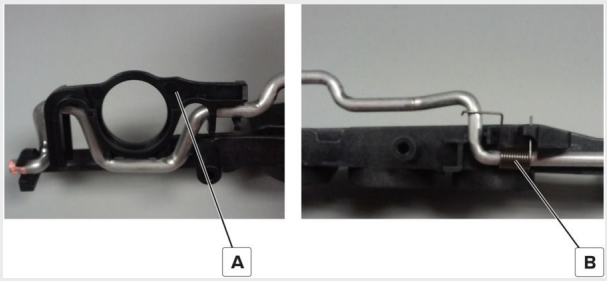


9. Gently twist the rail to release the two tabs (D) from the frame, and then remove it.


D

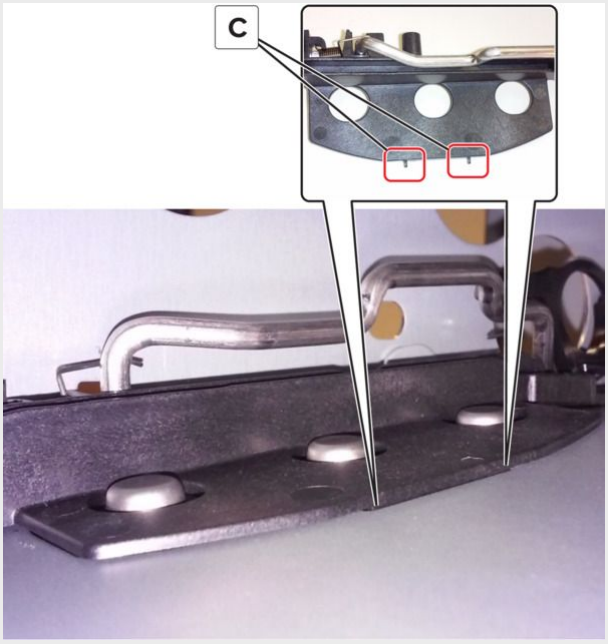
Installation Note

a. Make sure that ITM dog bone retract (A) and the spring (B) on the new rail are securely attached.

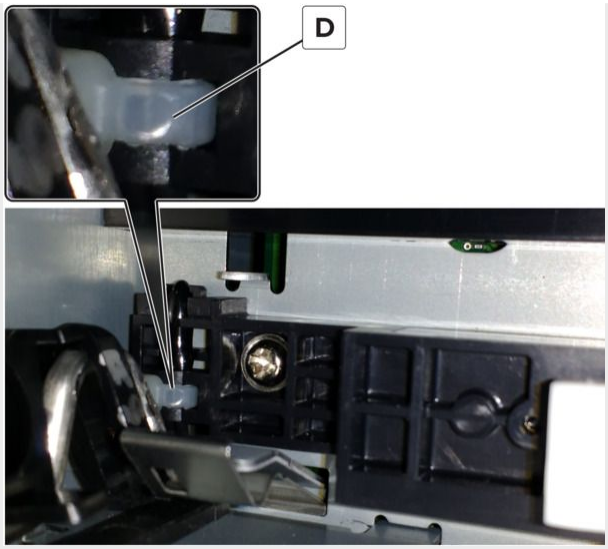


b. When reinstalling the EP gear box, carefully insert the ITM drive shaft through the left side of the frame and rail to avoid damaging the ITM dog bone retract.

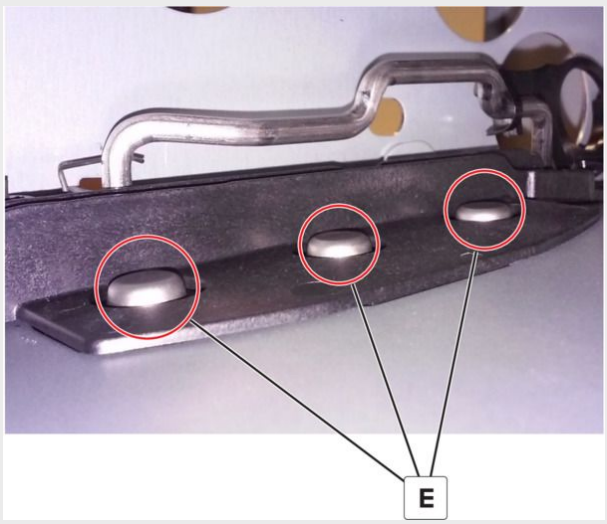
c. Make sure that the tabs (C) are properly inserted into the frame.



d. Make sure to place the rail below the thermistor wire tie (D).



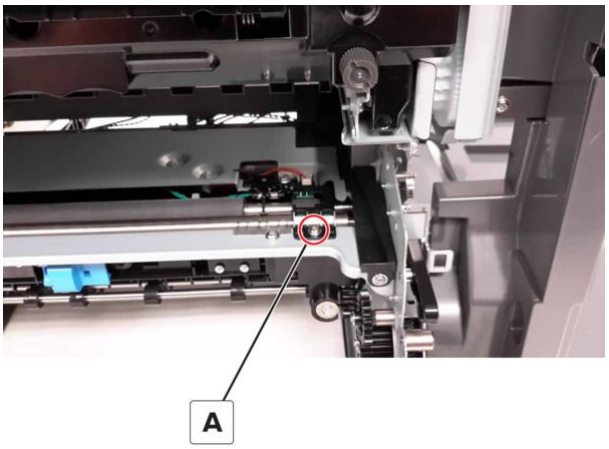
e. Make sure that the three HVPS contacts (E) move freely and are fully extended.



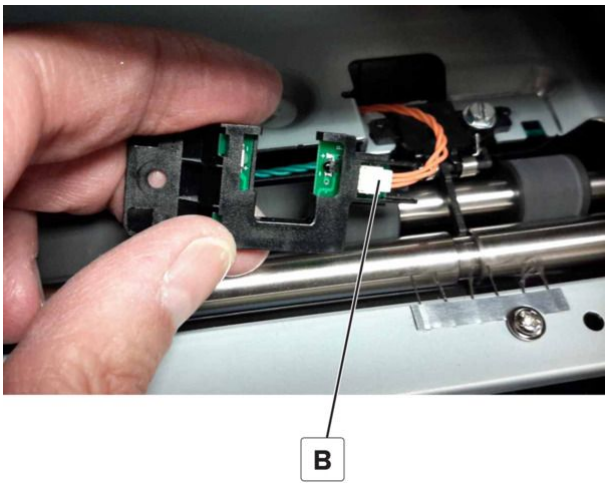
Sensor (media type) removal

Note: The sensor (media type) and its cable are not used on printers with serial number 75288250F2P4Z or greater.

1. Remove the transfer module. See Transfer module removal on page 460.
2. Open the front door.
3. Remove the screw (A).

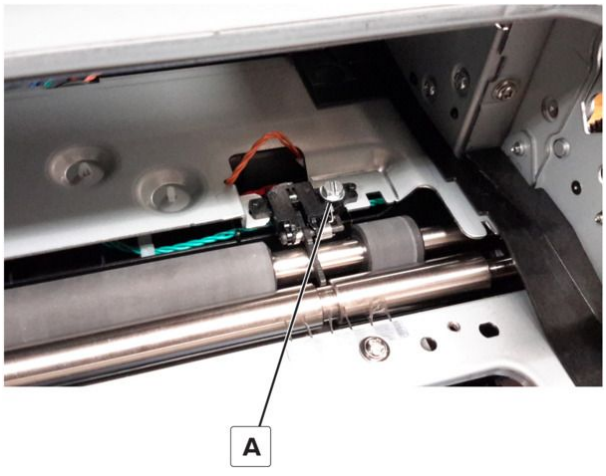


4. Disconnect the sensor cable (B), and then remove the sensor.

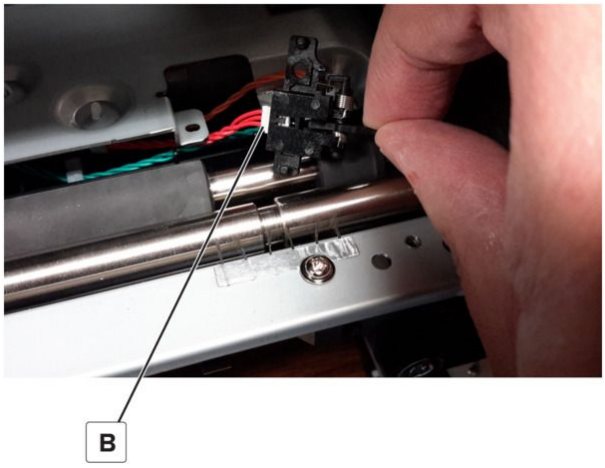


Sensor (input) removal

1. Remove the transfer module. See Transfer module removal on page 460.
2. Open the front door.
3. Remove the sensor (media type). See Sensor (media type) removal on page 465.
4. Remove the screw (A).



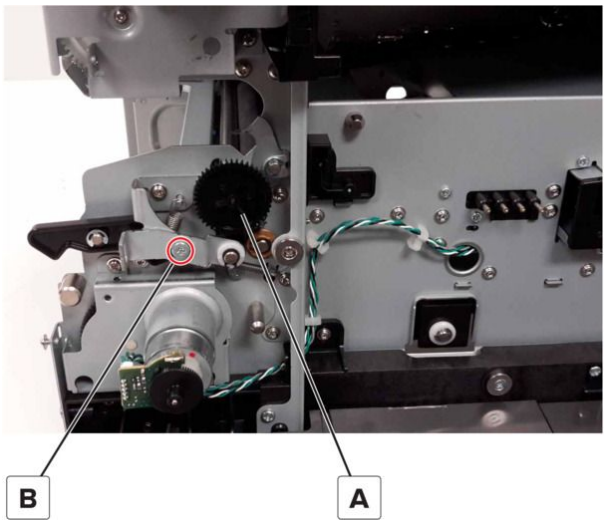
5. Disconnect the sensor cable (B), and then remove the sensor.



Deskew rollers removal

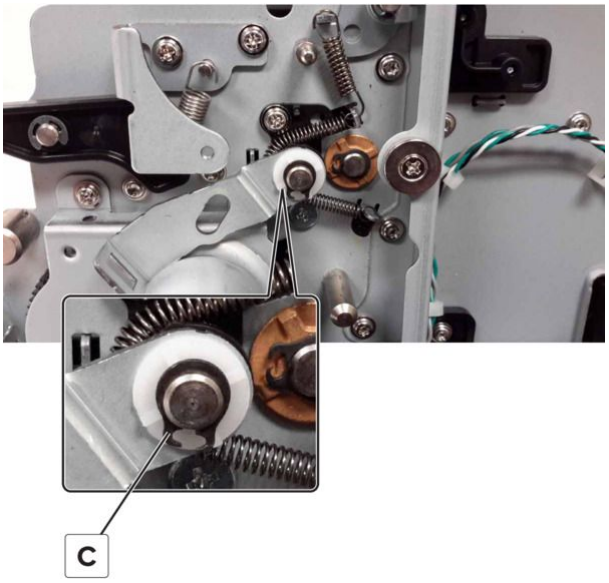
Note: There are two types of deskew rollers used on this printer. The solid rubber roll use C-clips to fasten the deskew roller. Printers using the segmented rubber roller use E-clips to fasten the deskew roller. The parts are not interchangeable. Use both rollers when replacing this part.

1. Open the front door.
2. Remove the right cover. See .Right cover removal on page 414
3. Remove the left cover. See .Left cover removal on page 413
4. Remove the LVPS cage. See LVPS cage removal on page 440.
5. Remove the sensor (media type). See Sensor (media type) removal on page 465.
6. Remove the sensor (input). See Sensor (input) removal on page 466.
7. On the right side of the printer, remove the gear (A), and then remove the screw (B).

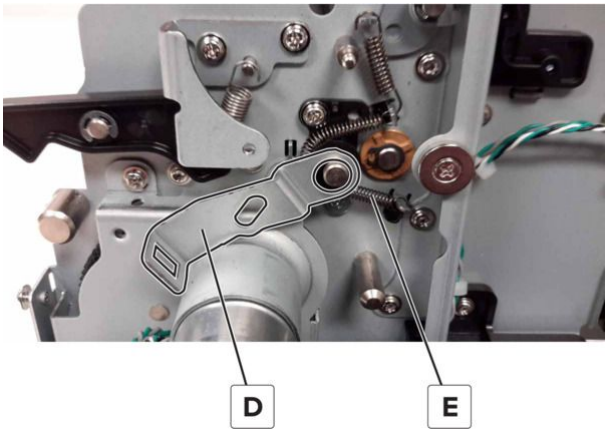


8. Remove the C-clip (C), and then remove the spacer.

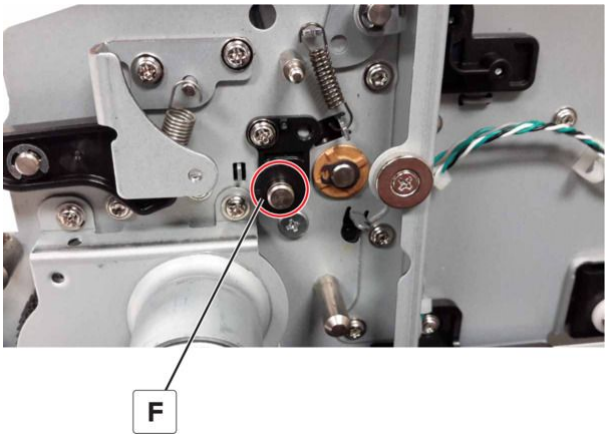
Warning—Potential Damage
Be careful not to over extend the clip when removing or installing to avoid damage.



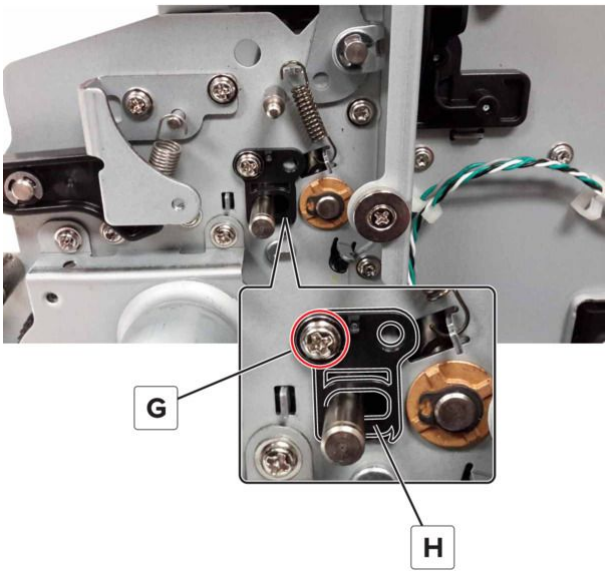
9. Remove the bracket (D), and then unhook the spring (E).



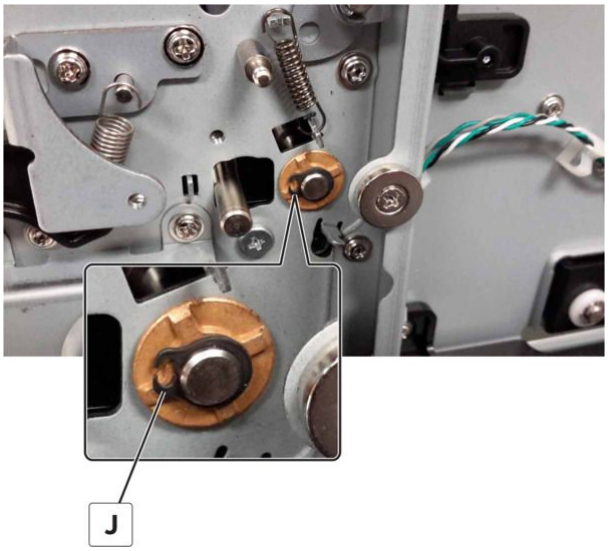
10. Remove the spacer (F).



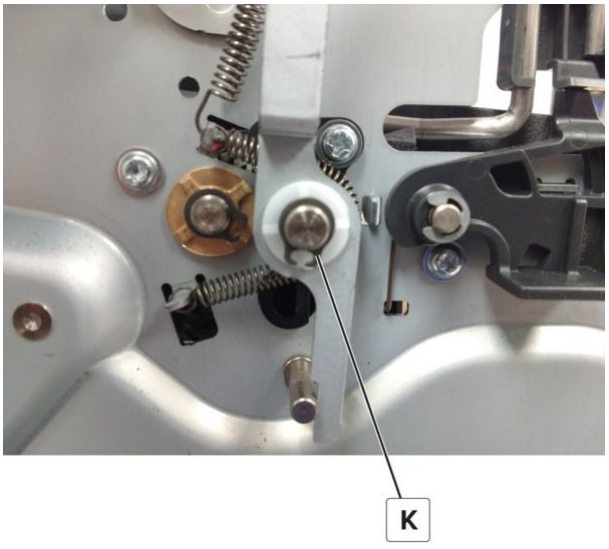
11. Remove the screw (G), and then remove the guide (H).



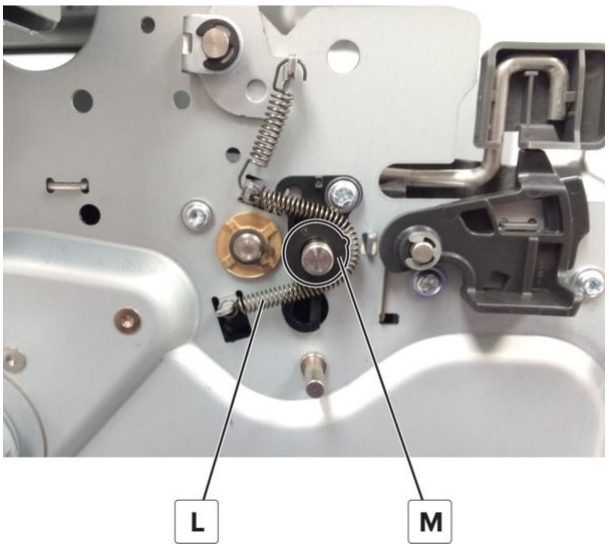
12. Remove the C-clip (J), and then remove the bushing.



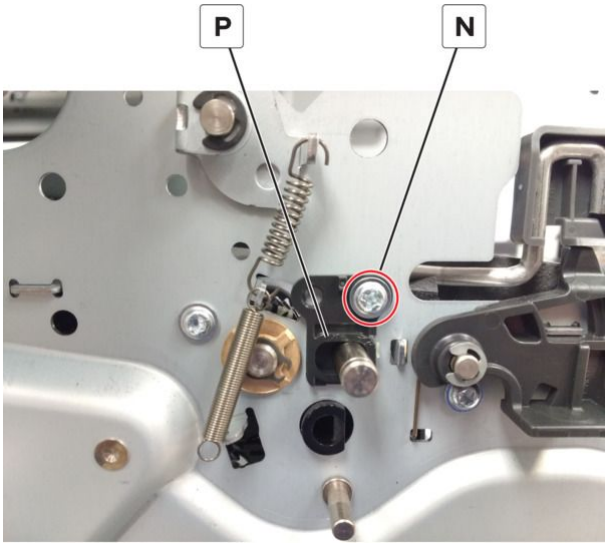
13. Remove the C-clip (K), and then remove the spacer.



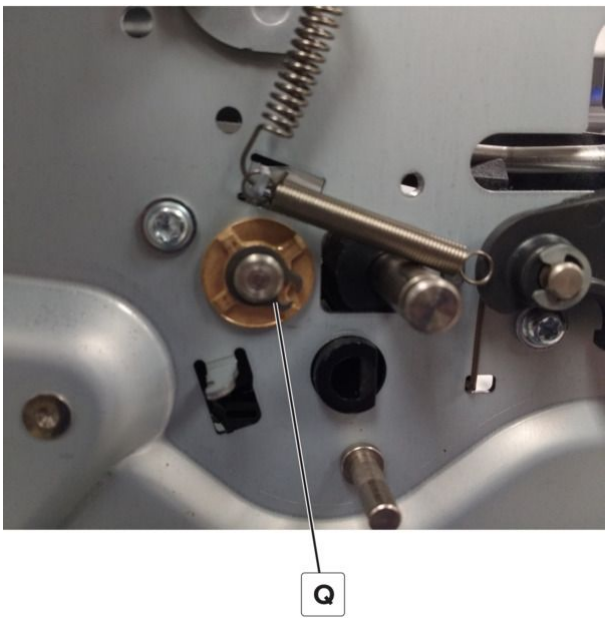
14. Remove the spring (L), and then remove the spacer (M).



15. Remove the screw (N), and then remove the guide (P).

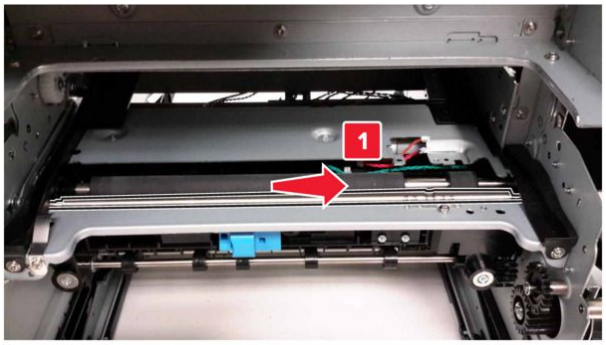


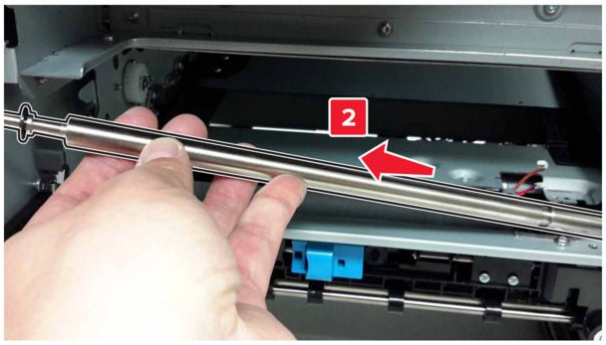
16. Remove the C-clip (Q), and then remove the bushing.



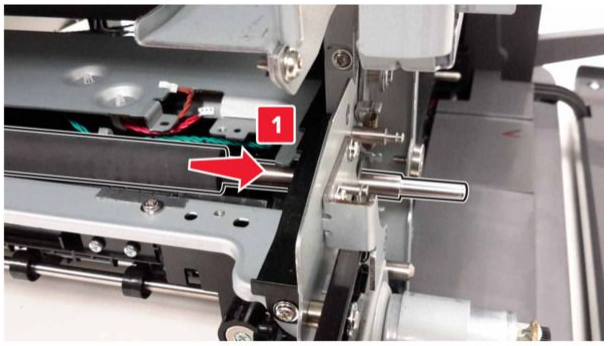
17. Slide the front deskew roller to the right to remove.

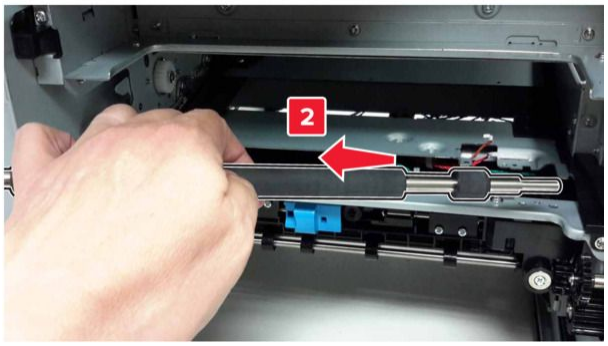
> **Note:** Be careful not to drop or lose the washer on the left side of the shaft.





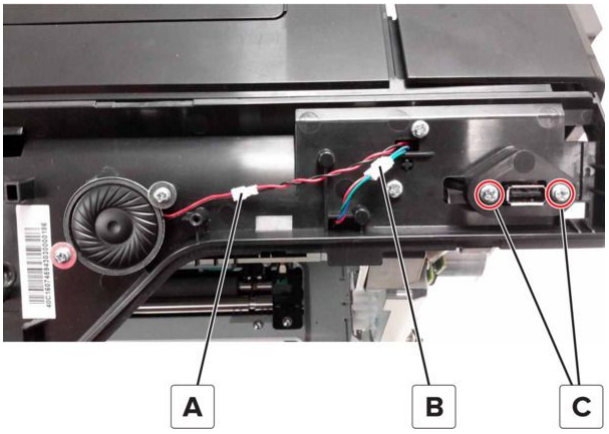
18. Slide the rear deskew roller to the right to remove.



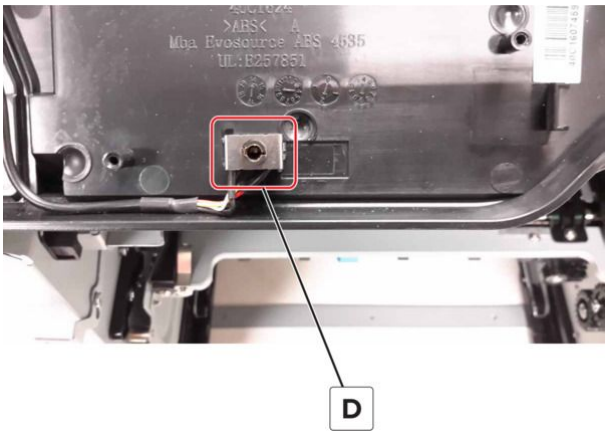


Diverter removal

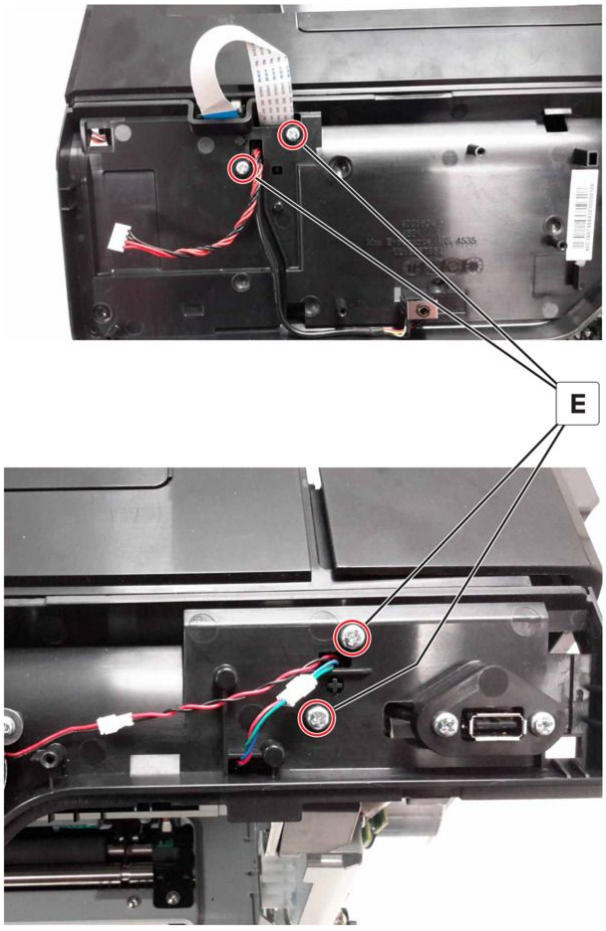
1. Remove the bezel. See Bezel removal on page 422.
2. Remove the number pad cover. See Number pad cover removal on page 422.
3. Remove the control panel front cover. See Control panel front cover removal on page 419.
4. Disconnect the speaker cable (A) and sensor cable (B), and then remove the two screws (C).



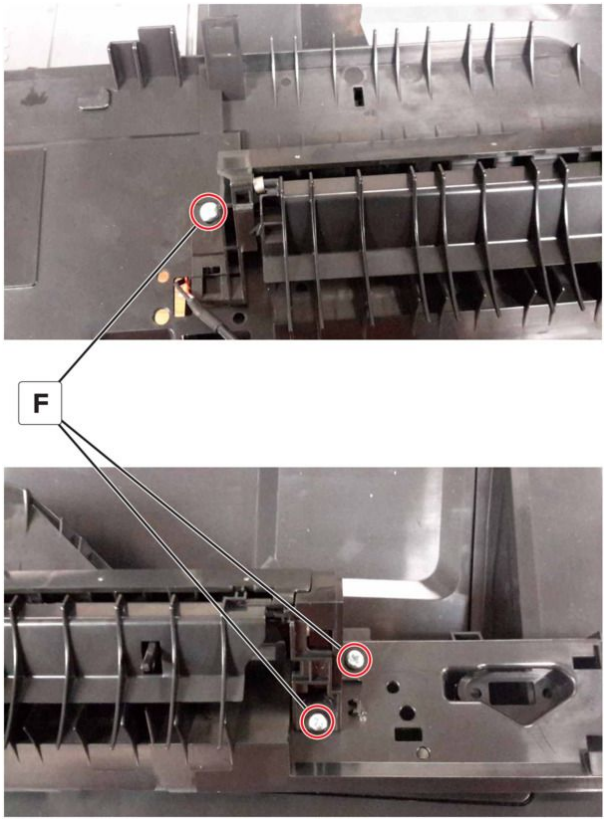
5. Remove the headphone port (D).



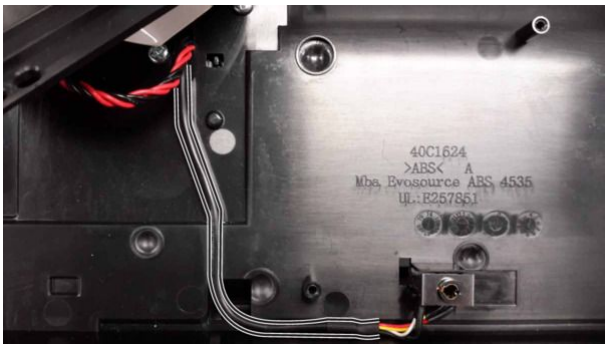
6. Remove the four screws (E).



7. Route the control panel cables, speaker cable, and redrive sensor cable through the tub.
8. Remove the three screws (F), and then remove the diverter.

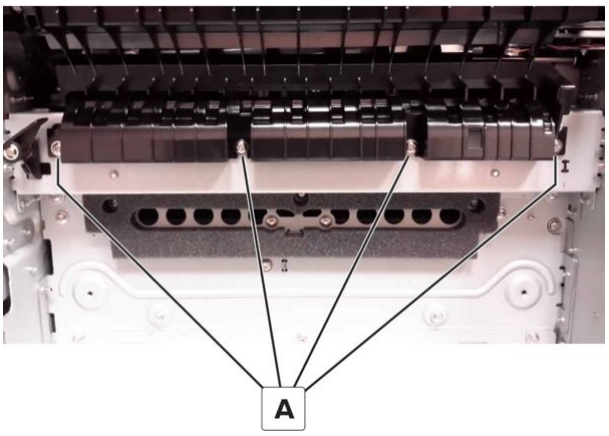


Installation Note
Make sure that the headphone cable is routed properly through its cable guide.

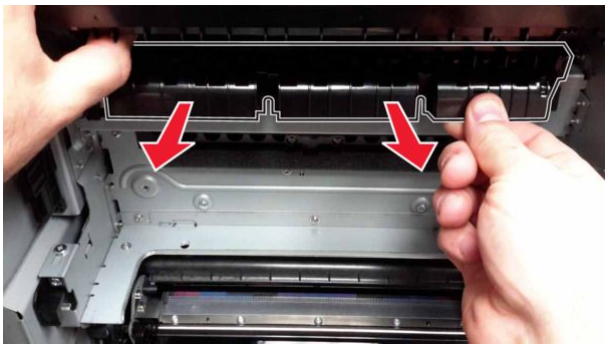


Redrive guide removal

1. Remove the fuser. See Fuser removal on page 459.
2. Remove the four screws (A).



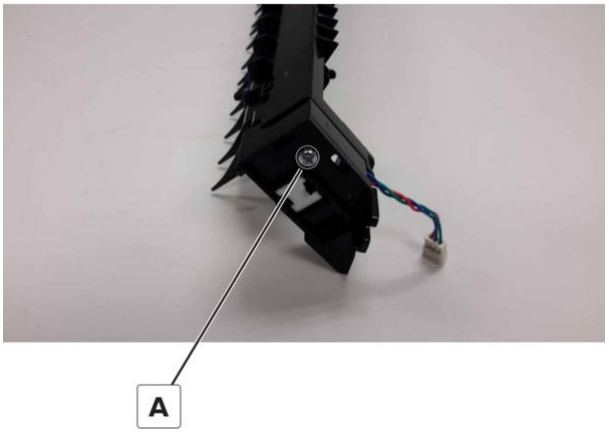
3. Hold the redrive deflector up, and then remove the redrive guide.



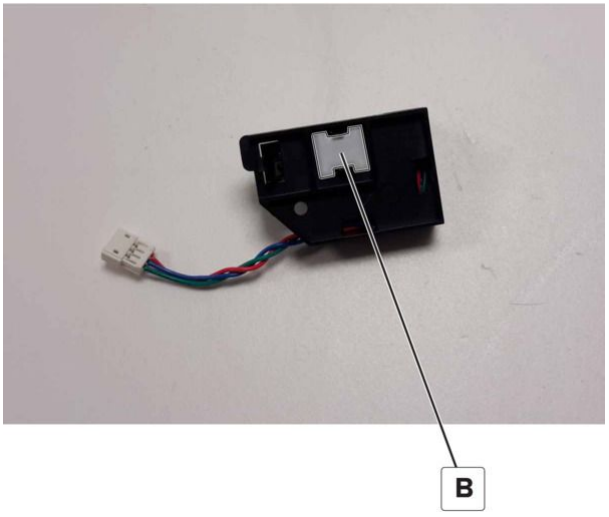
Sensor (redrive) removal

1. Remove the bezel. See Bezel removal on page 422.

2. Remove the number pad cover. See Number pad cover removal on page 422.
3. Remove the control panel front cover. See Control panel front cover removal on page 419.
4. Remove the screw (A).



5. Remove the retainer (B), and then remove the sensor from the bracket.



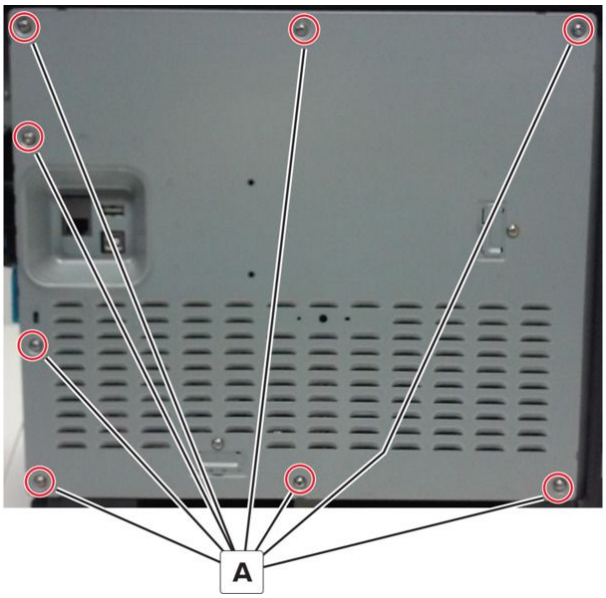
Installation Note
Use the retainer of the old sensor when installing the new sensor.

Rear removals

Controller board shield removal

Note: This is not a FRU.

1. Remove the eight screws (A).

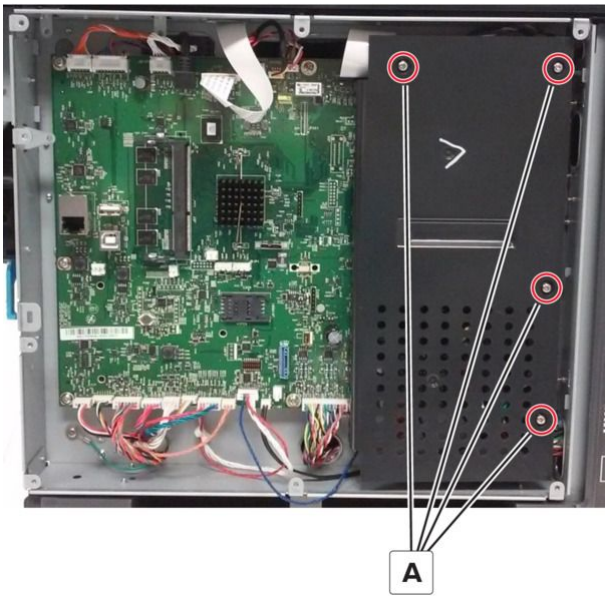


2. Remove the controller board shield.

Inner controller board shield removal

Note: This is not a FRU.

1. Remove the controller board shield. See Controller board shield removal on page 475.
2. Remove the four screws (A), and then remove the inner controller board shield.



Controller board removal

Critical information for controller board or control panel replacement

Warning—Potential Damage
Replace only one of the following components at a time:

- Control panel
- Controller board

To replace a component and to test whether the problem is resolved:

1. Replace the affected component.

   Warning—Potential Damage
   Do not perform a Power-On Reset (POR) until the problem is resolved. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

2. Enter the Diagnostics Menu. The Diagnostics Menu allows you to temporarily use the replacement part.

   Warning—Potential Damage
   Some printers will perform a POR automatically if the Diagnostics Menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

3. Use the Diagnostics Menu to test the replacement part. Do a feed test to check if the problem is resolved.
   - If the problem is not resolved—Turn off the printer, and then reinstall the old part.
   - If the problem is resolved—Perform a POR.
   - If NVRAM error occurs during the replacement, go to NVRAM mismatch failure service check on page 334

Warning—Potential Damage
The controller board may contain a secure element SIM card that must be transferred from the old controller board to the new controller board. This SIM card contains software and security settings that are unique to the printer. See Secure element SIM card removal on page 479.

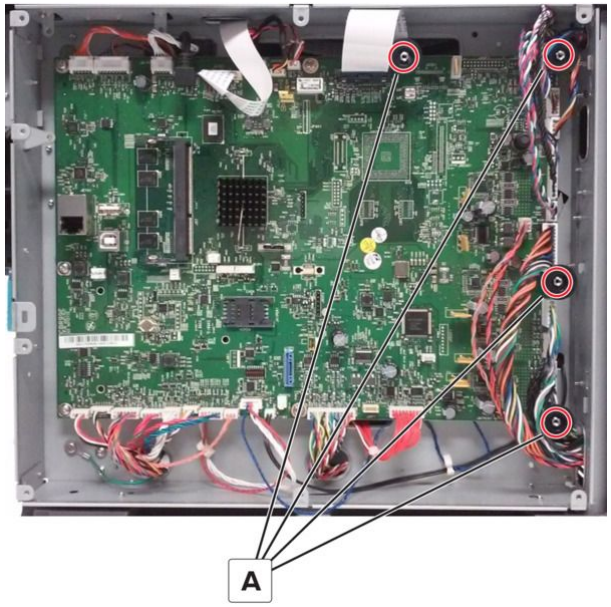
Removal procedure

1. Remove the controller board shield. See Controller board shield removal on page 475.
2. Remove the inner controller board shield. See Controller board shield removal on page 475.
3. Remove all option cards from the controller board.
4. Disconnect all the cables from the controller board.

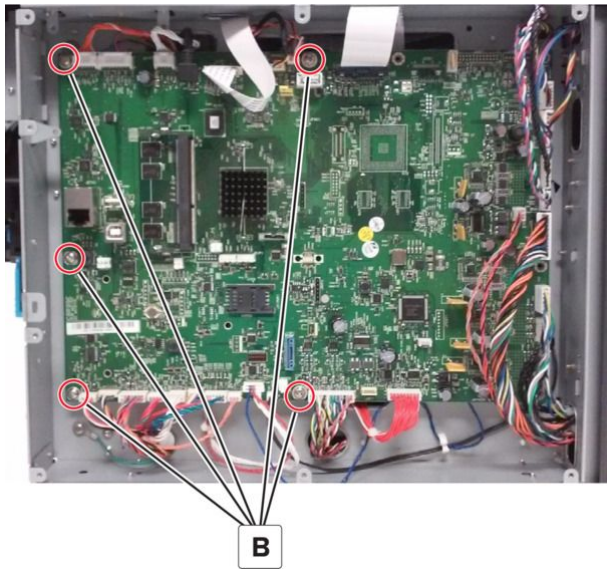
Warning—Potential Damage
When removing the TPS cable from JTPSAA1 connector, gently pry the cable connector from the controller board connector. Do not pull the cable by the wires.

Warning—Potential Damage
Do not yank the ribbon cables. See Disconnecting ribbon cables on page 404.

5. Using a hex wrench or pliers, remove the four hex standoffs (A).



6. Remove the five screws (B), and then remove the controller board.



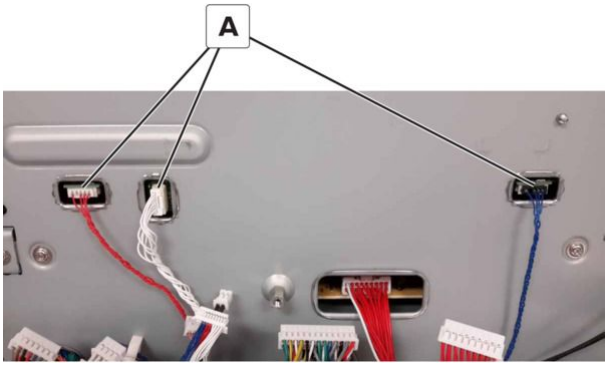
Installation Note
After the new controller board is installed, perform printer configuration restoration. See Restoring the printer configuration on page 393.

TPS cables removal

1. Remove the controller board shield. See Controller board shield removal on page 475.

2. Remove the inner controller board shield. See Controller board shield removal on page 475.
3. Remove the controller board. See Controller board removal on page 477.
4. Disconnect the three cables (A) from the sensor.

> **Warning—Potential Damage**
> Be careful when disconnecting the cables. Press the tab on the white cable while disconnecting to avoid damage.

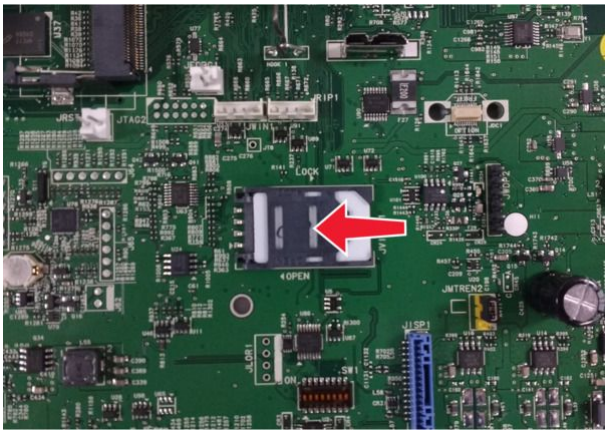


5. Remove the cables.

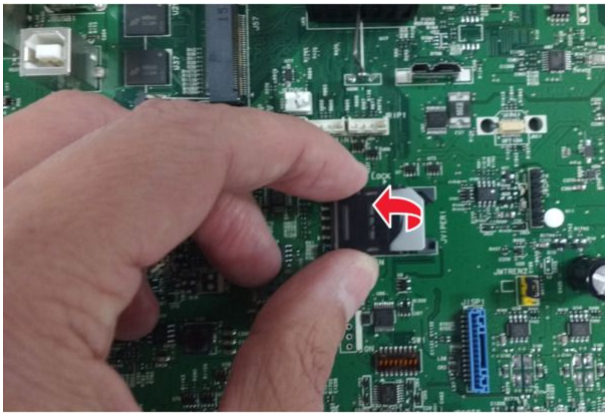
Secure element SIM card removal

> **Warning—Potential Damage**
> The controller board may contain a secure element SIM card that must be transferred from the old controller board to the new controller board. This SIM card contains software and security settings that are unique to the printer.

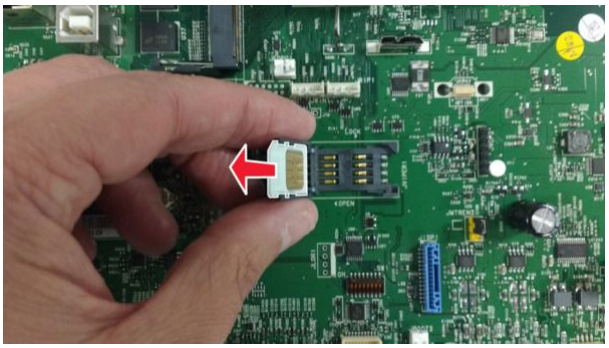
1. Remove the controller board shield. See Controller board shield removal on page 475.
2. Slide the SIM card cover to unlock the SIM card holder.



3. Open the SIM card holder.



4. Remove the SIM card.



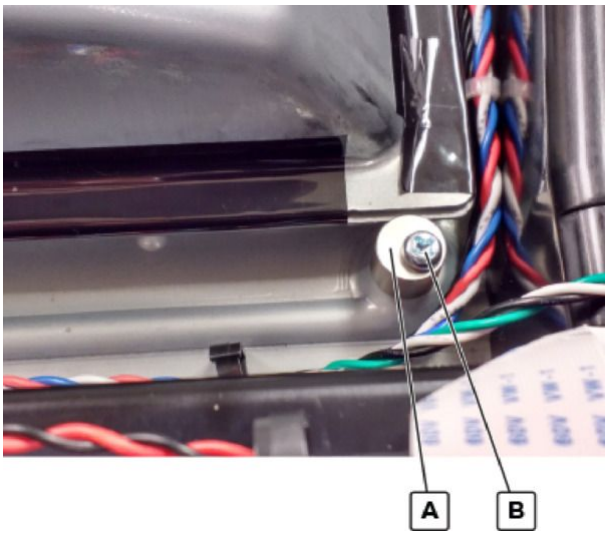
Top removals

Printhead removal

Note: For a video demonstration, see Printhead removal.

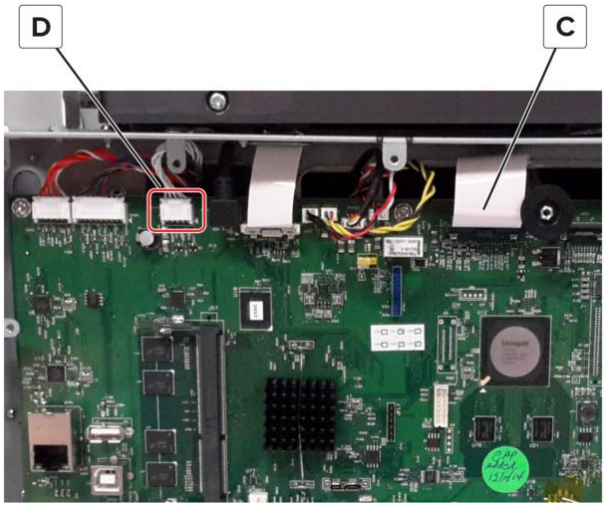
Note: Some printers might not have a printhead stop installed on the front left corner of the printhead. Make sure that the stop is installed before removing the printhead.

1. Remove the top cover. See Top cover removal on page 411.
2. Check the front left corner of the printhead if a printhead stop is installed. If the stop installed, then proceed to step 5. If the stop is not installed, then proceed to the next step.
3. Unpack the printhead stop and screw.
4. Place the stop (A) next to the printhead, and then fasten the stop with the screw (B).

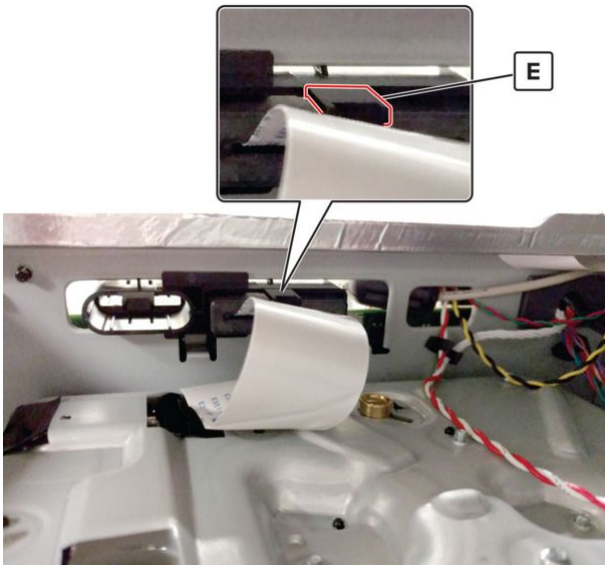


5. Remove the controller board shield. See Controller board shield removal on page 475.
6. Disconnect the ribbon cable (C) and printhead cable (D).

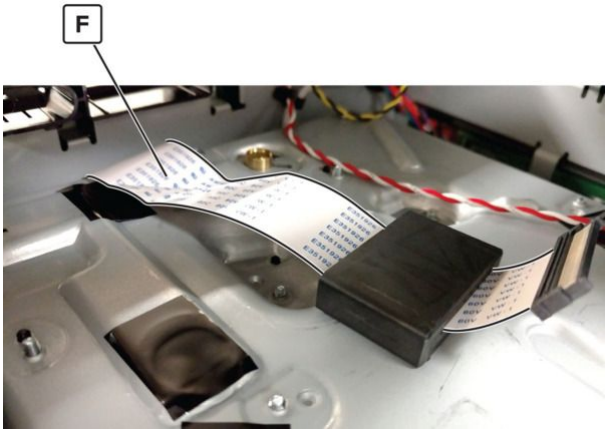
> **Warning—Potential Damage**
> Do not yank the ribbon cable. See Disconnecting ribbon cables on page 404.



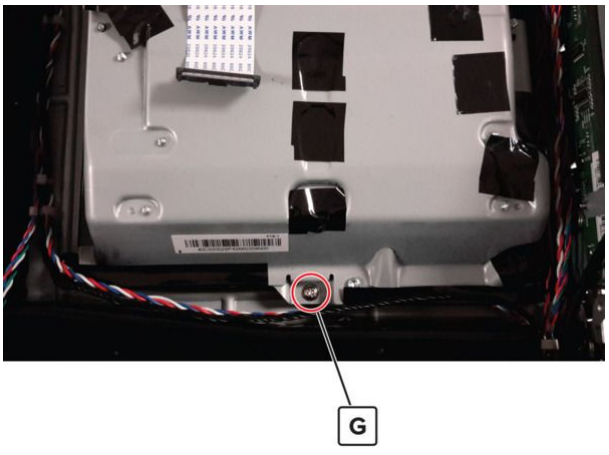
7. Gently pull the ribbon cable to create some slack, and then pull the tab (E) to slide the toroid out of the retainer.



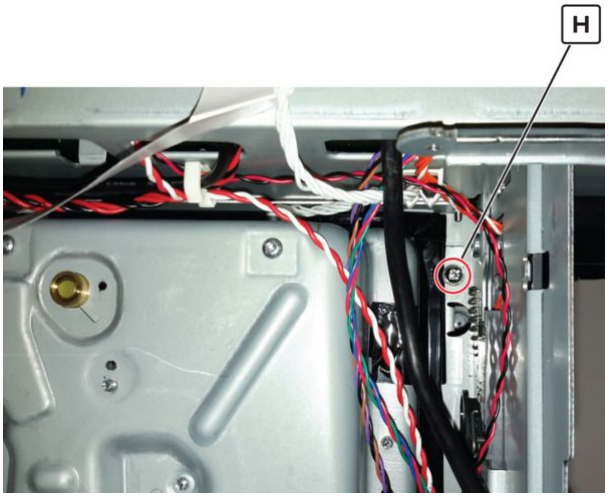
8. Pull the ribbon cable (F) through the retainer.



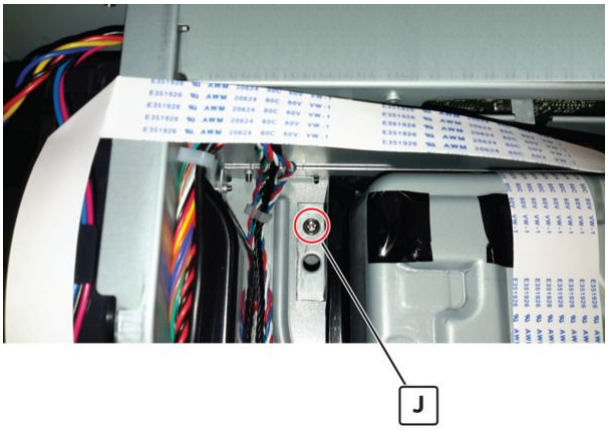
9. Remove the screw (G) from the printhead.



10. Remove the rear right screw (H) from the printhead.



11. Remove the rear left screw (J) from the printhead.



Installation Notes:

1. When installing the printhead, replace the screws but do not tighten them right away. After installing the screws, turn the printhead clockwise until it stops.
2. Enter the Diagnostics menu, and then navigate to:

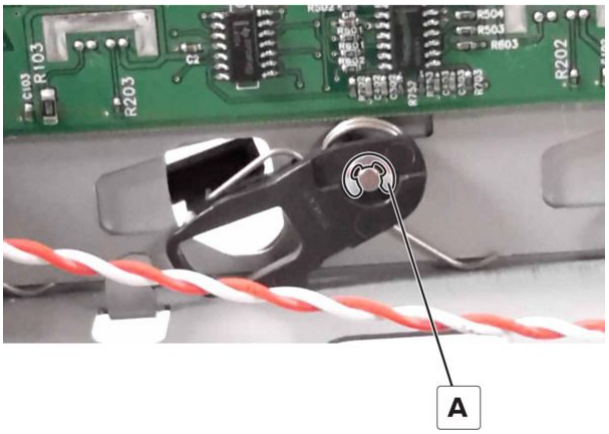
   Printer diagnostics & adjustments > Registration adjust > Quick test

3. If the printhead needs alignment, perform a printhead alignment adjust. See Printhead alignment adjustment on page 404.
4. Tighten the screws.
5. Perform a color alignment adjust. See Color alignment adjust on page 380.

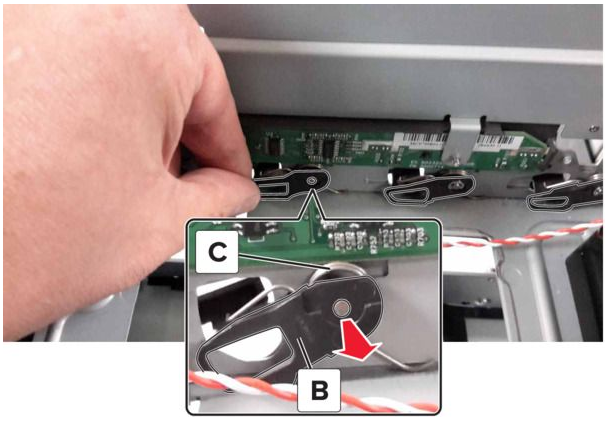
Developer hold down removal

1. Remove the top cover. See Top cover removal on page 411.
2. Remove the controller board shield. See Controller board shield removal on page 475.

3. Remove the printhead. See Printhead removal on page 480.
4. Pull the bell crank and spring off the mounting pin.

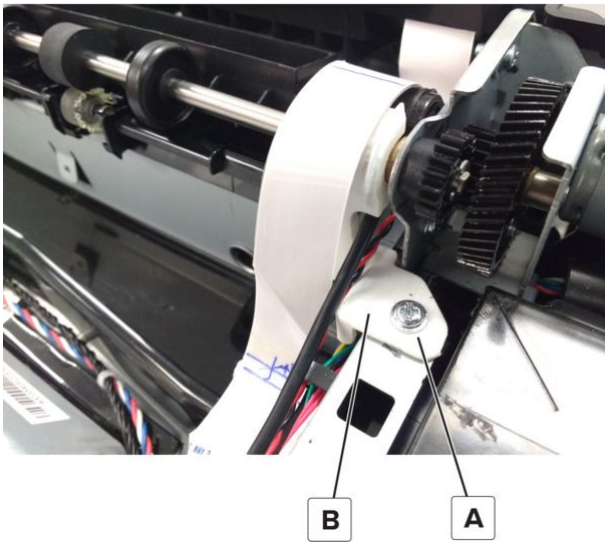


5. Pull the bell crank (B) and spring (C) off the mounting pin.

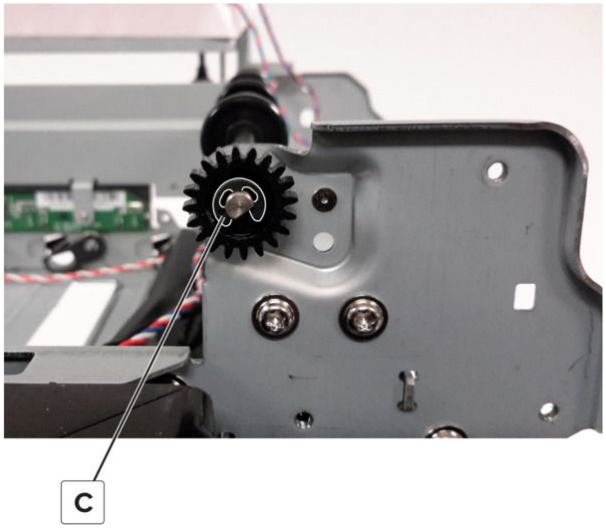


Output roll removal

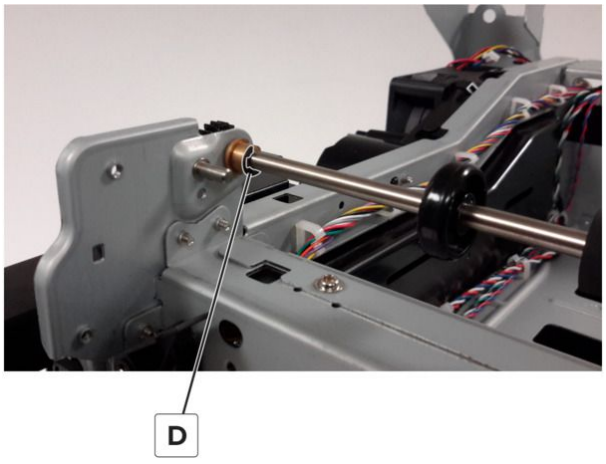
1. Remove the left cover. See Left cover removal on page 413.
2. Remove the fuser. See Fuser removal on page 459.
3. Remove the redrive guide. See Redrive guide removal on page 474.
4. Remove the motor (output). See Motor (output) removal on page 433.
5. Remove the screw (A), and then remove the cable guide (B).



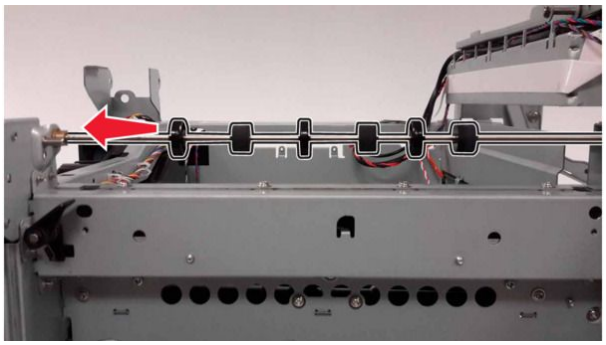
6. Remove the e-clip (C), and then remove the gear.



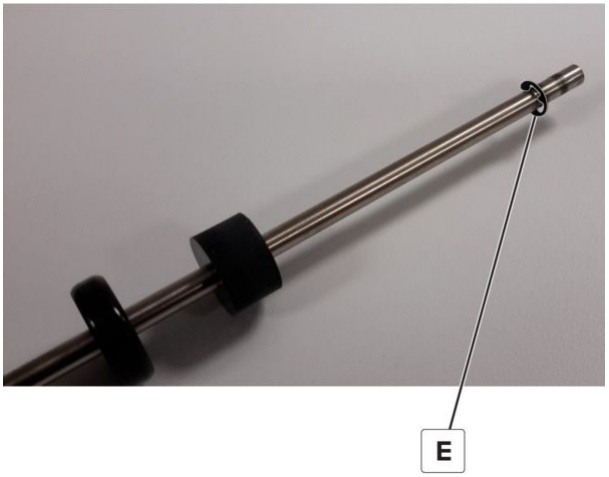
7. Remove the e-clip (D) from inside the frame.



8. Slide the output shaft to the left, and then remove from the printer.



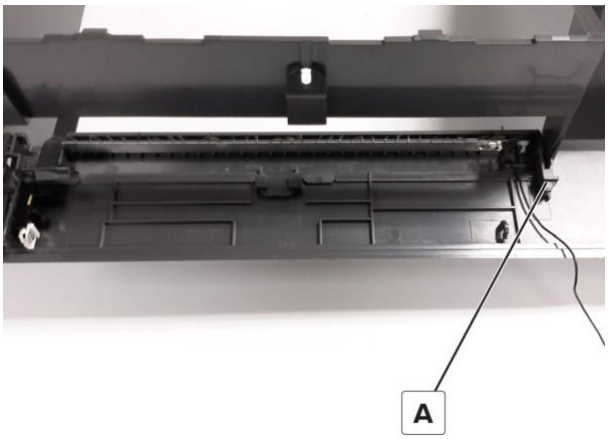
9. Remove the e-clip (E).



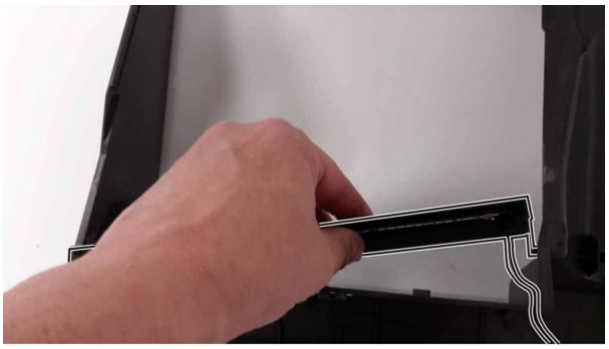
Note: Use the e-clips and bushings on the new shaft.

Output bin exit cover removal

1. Remove the top cover. See Top cover removal on page 411.
2. Disengage the tab (A), and then remove the cable from the tabs.

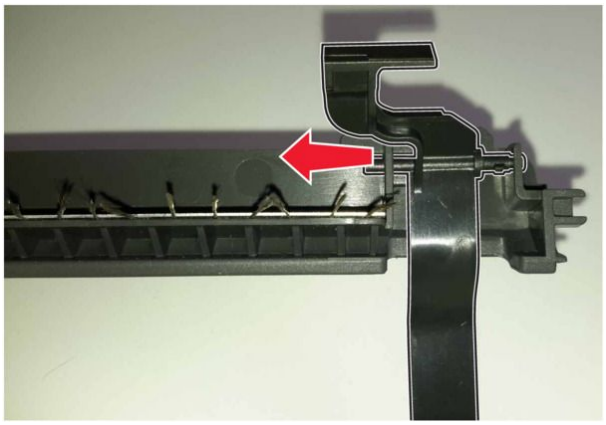


3. Remove the cover.



Output bin flag removal

1. Remove the top cover. See Top cover removal on page 411.
2. Remove the output bin exit cover. See Output bin exit cover removal on page 486.
3. Slide the flag to the left to remove.



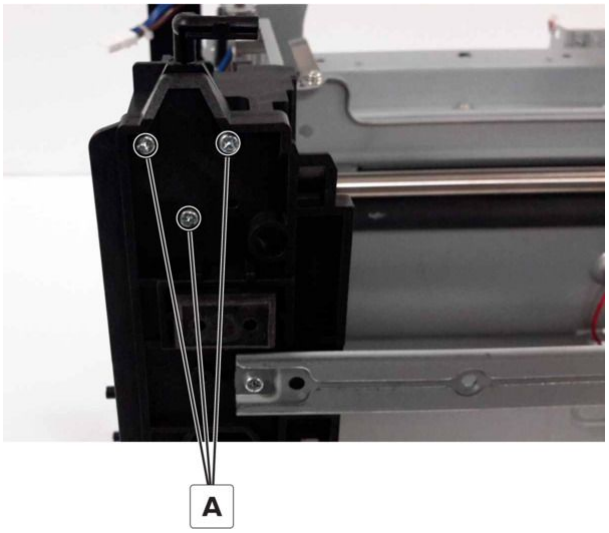
Bottom removals

Front cover hinges removal

Warning—Potential Damage
Remove the waste toner bottle and imaging kit first before removing the hinges. Failure to do this can lead to toner spillage and damage to the printer.

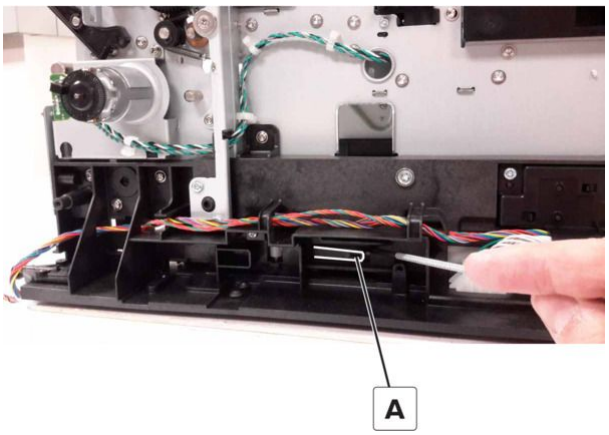
Note: This procedure is applicable to the left and right front cover hinges.

1. Remove the front cover. See .Control panel front cover removal on page 419
2. Place the printer on its side.
3. Remove the three screws (A) securing the hinge, and then remove the hinge.

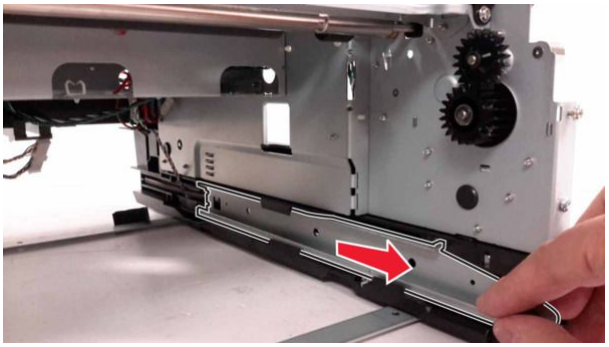


Tray rail removal

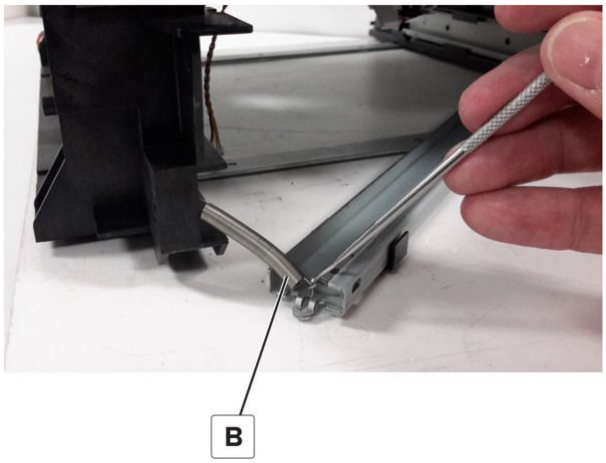
1. Remove the motor cover. See Motor cover removal on page 415.
2. Remove the waste toner bottle.
3. Remove the right cover. See Right cover removal on page 414.
4. Remove the left cover. See Left cover removal on page 413.
5. Pull the tab (A) on the rail.



6. Hold the tab in place, and then slide the rail toward the front of the printer to remove.

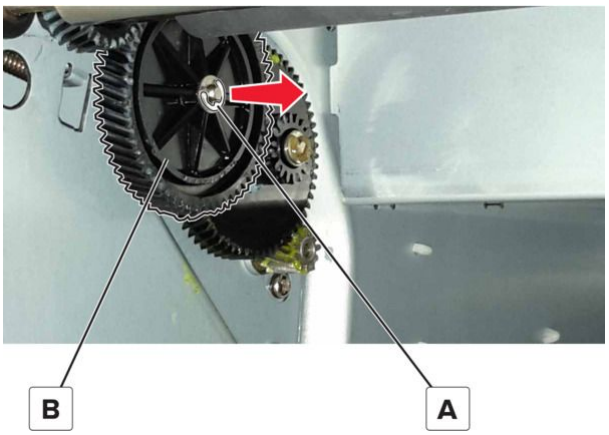


7. Disconnect the spring (B) from the rail.



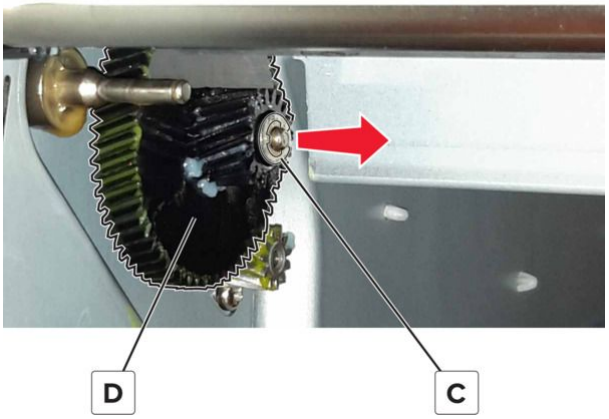
Aligner idler gears removal

1. Remove the imaging kit.
2. Remove the media feeder. See Media feeder removal on page 492.
3. Remove the isolation unit. See Isolation unit removal on page 490.
4. Remove the E-clip (A), and then remove the outer gear (B).



Installation Note
Use the washer in the new gear.

5. Remove the E-clip (C), and then remove the inner gear (D).



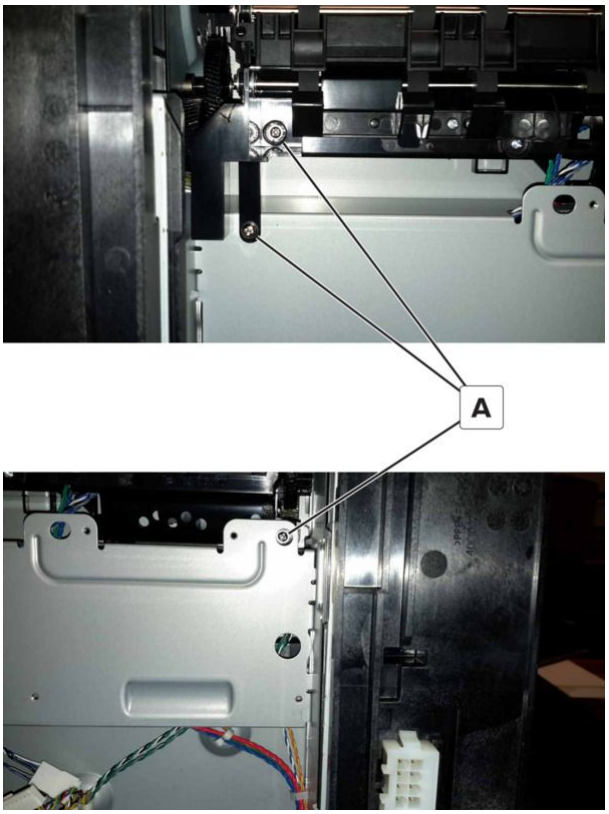
Installation Note
Use the washer in the new gear.

Isolation unit removal

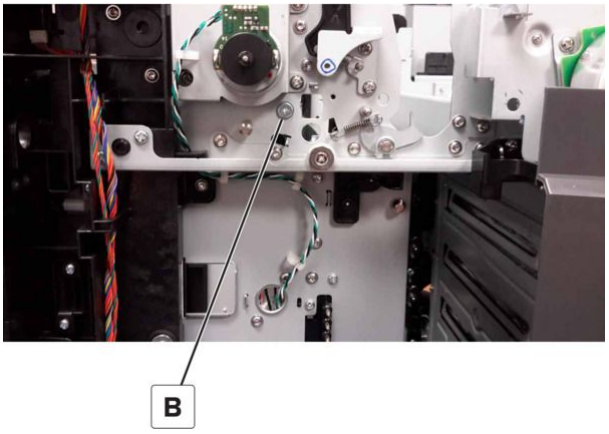
Note: For a video demonstration, see Isolation unit removal.

Warning—Potential Damage
Remove the waste toner bottle and imaging kit first before removing the isolation unit. Failure to do this can lead to toner spillage and damage to the printer.

1. Remove the imaging unit.
2. Remove the media feeder. See Media feeder removal on page 492.
3. Remove the three screws (A) securing the isolation unit.



4. Remove the biasing screw (B).

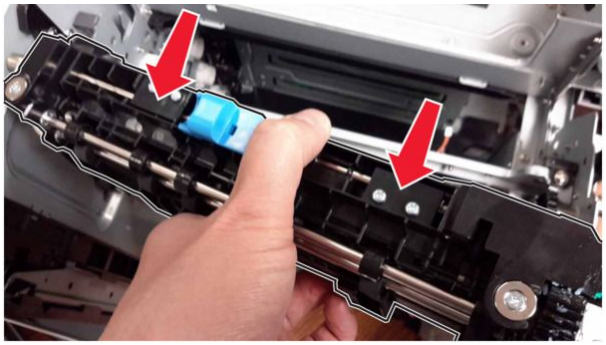


Installation Note
Make sure to replace this screw first before replacing the three screws to secure the unit.

5. Disconnect the motor cable (C) and sensor cable (D).



6. Tilt the right portion of the isolation unit to the front, and then remove the unit.



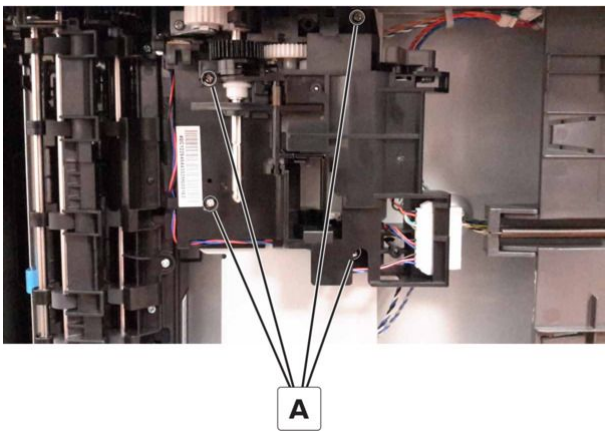
7. Route the isolation unit cables out of the printer.

Media feeder removal

Note: For a video demonstration, see Media feeder removal.

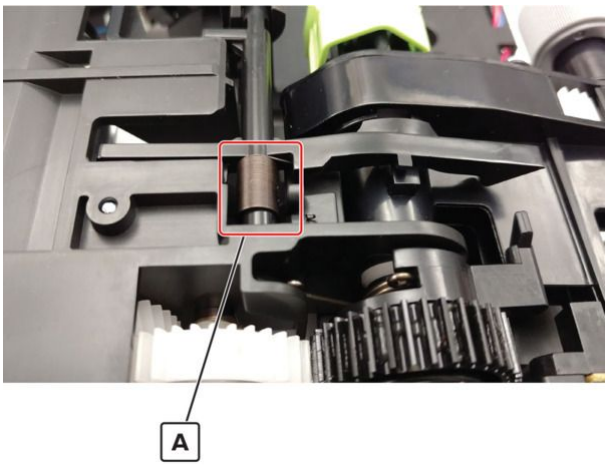
Warning—Potential Damage
Remove the waste toner bottle and imaging kit first before removing the media feeder. Failure to do this can lead to toner spillage and damage to the printer.

1. Remove the imaging unit.
2. Place printer on its back, and then disconnect the cables.
3. Remove the pick roller assembly.
4. Remove the four screws (A), and then remove the media feeder.

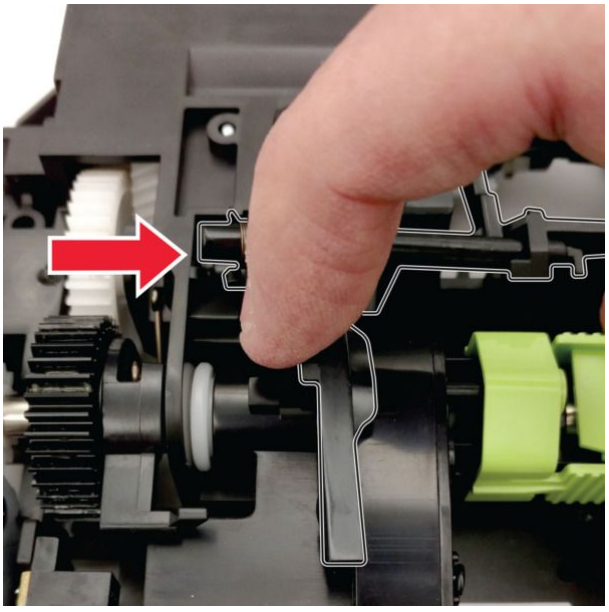


Paper out actuator spring removal

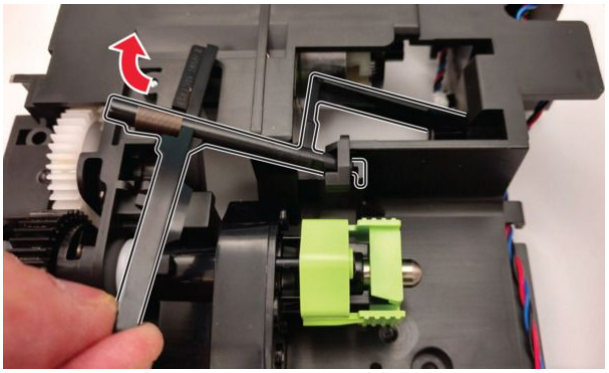
1. Remove the media feeder. See Media feeder removal on page 492.
2. Pay attention to the position of the paper out actuator spring (A).



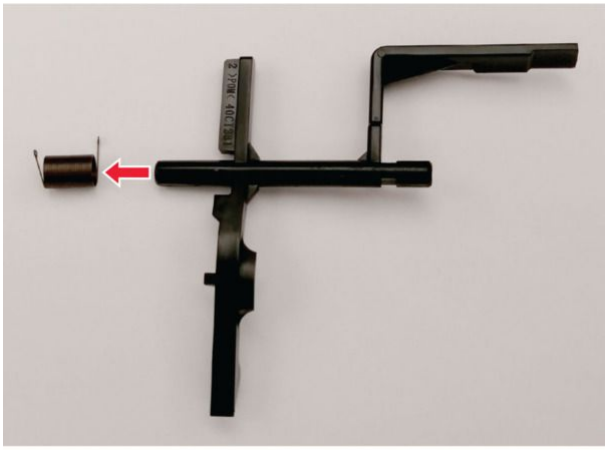
3. Move the actuator to the right, and then release it.



4. Remove the actuator.



5. Remove the spring.

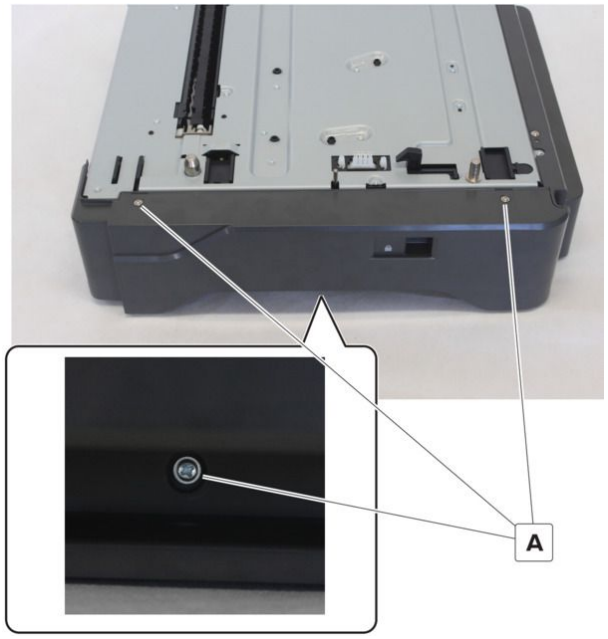


Installation Note
When installing the spring, make sure to install it as shown in step 2.

550-sheet tray removals

550-sheet tray right cover removal

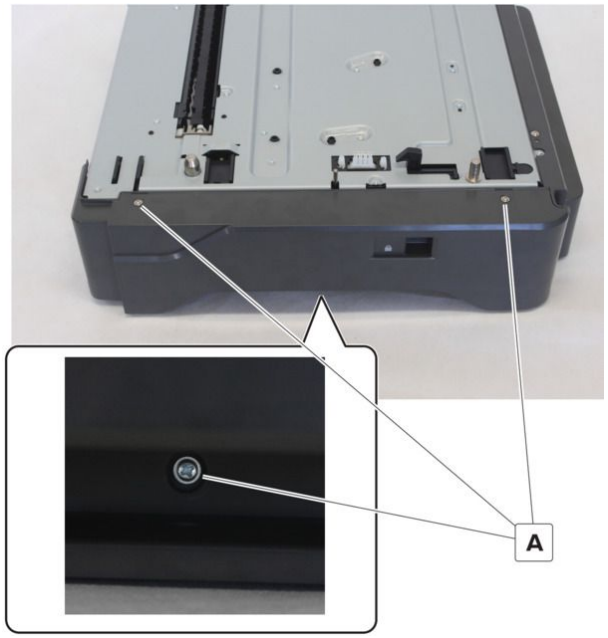
1. Remove the tray insert.
2. Remove the three screws (A).



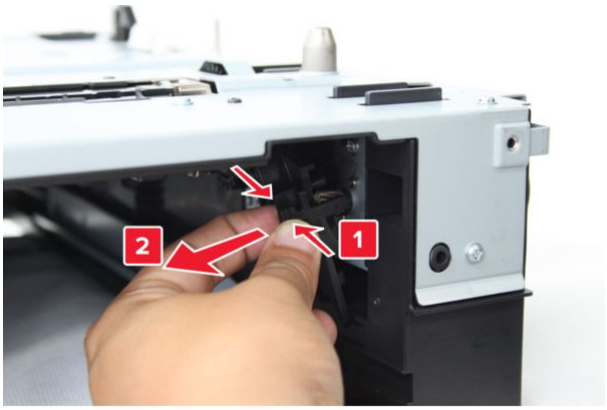
3. Remove the right cover.

Motor (550-sheet tray pass-through) removal

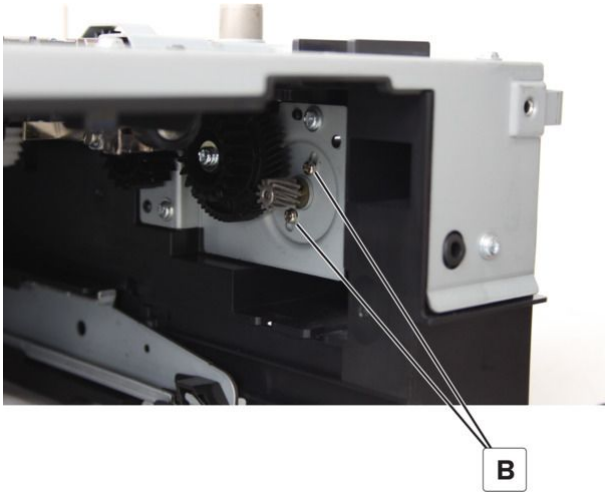
1. Remove the tray insert.
2. Remove the three screws (A).



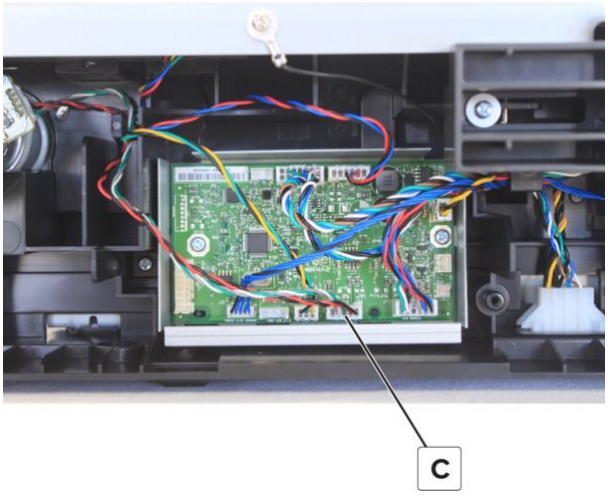
3. Remove the right cover.
4. Remove the motor cover.



5. Remove the two screws (B).



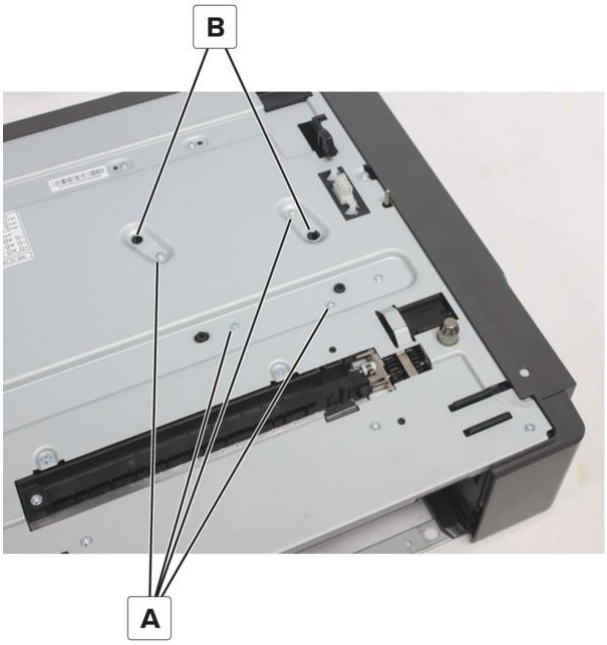
6. Disconnect the cable (C).



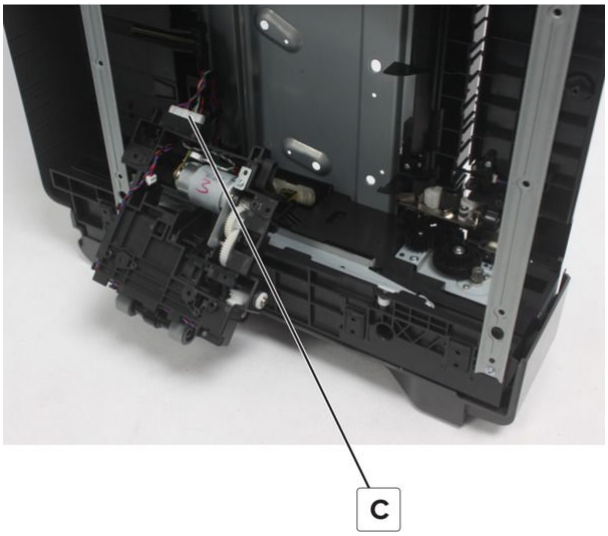
7. Remove the motor.

550-sheet tray paper feeder removal

1. Remove the tray insert.
2. Remove the four screws (A), and then release the two latches (B).



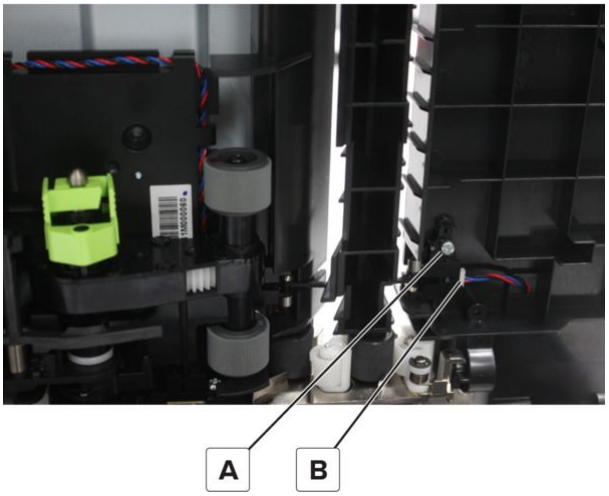
3. Disconnect the cable (C).



4. Remove the paper feeder.

Sensor (550-sheet tray pass-through) removal

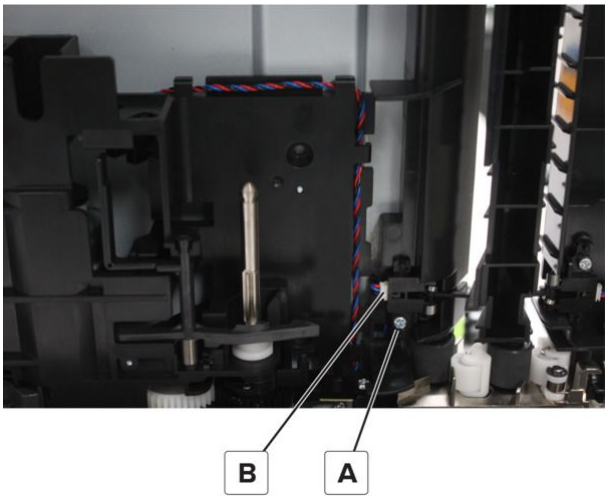
1. Remove the tray insert.
2. Remove the screw (A), and then disconnect the cable (B).



3. Remove the sensor.

Sensor (550-sheet tray trailing edge) removal

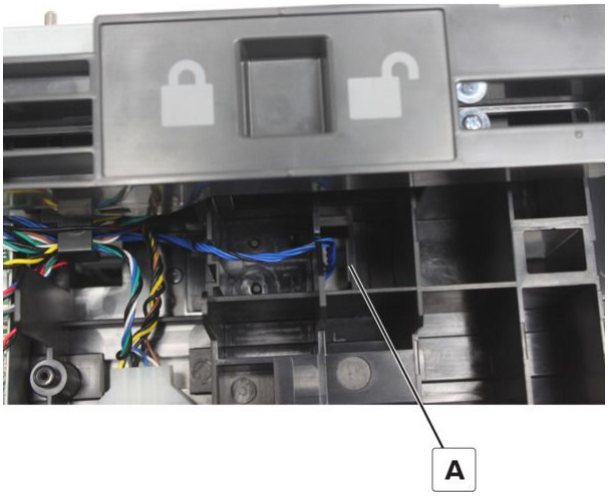
1. Remove the tray insert.
2. Remove the pick roller.
3. Remove the screw (A), and then disconnect the cable (B).



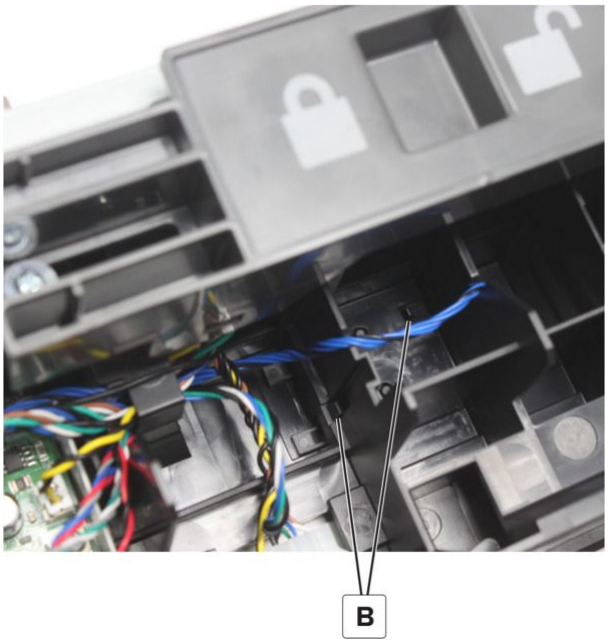
4. Remove the sensor.

Sensor (550-sheet tray paper size) removal

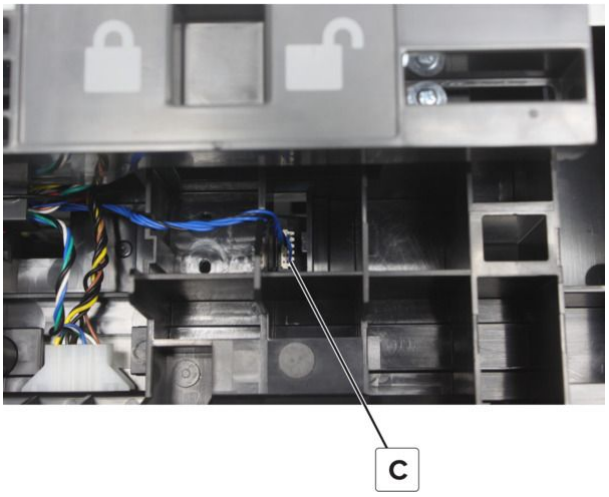
1. Remove the tray insert.
2. Remove the right cover. See 550-sheet tray right cover removal on page 494.
3. Release the latch (A), and then remove the sensor cover.



4. Release the two latches (B).

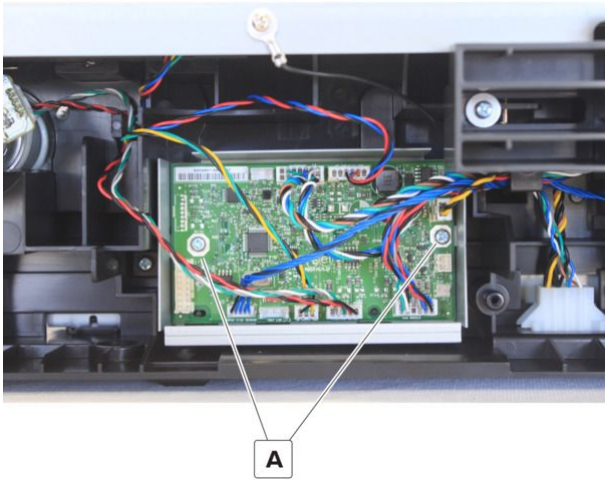


5. Disconnect the cable (C), and then remove the sensor.



550-sheet tray controller board assembly removal

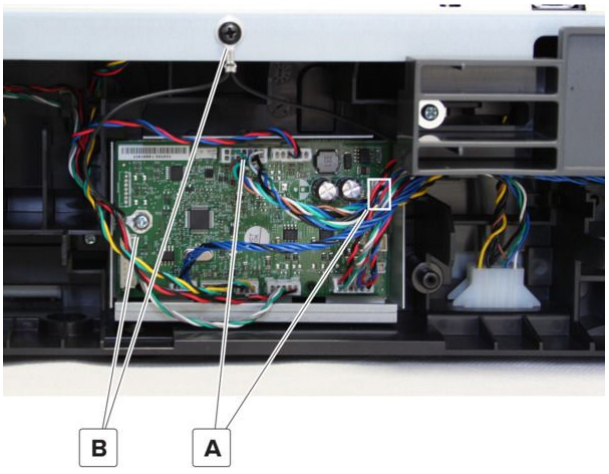
1. Remove the tray insert.
2. Remove the right cover. See 550-sheet tray right cover removal on page 494.
3. Disconnect all cables from the assembly, and then remove the two screws (A).



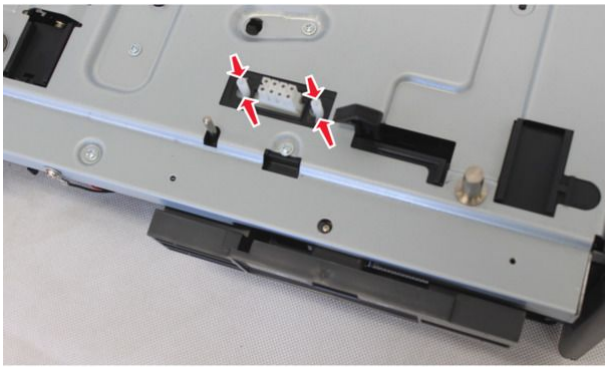
4. Remove the controller board assembly.

550-sheet tray interface cable removal

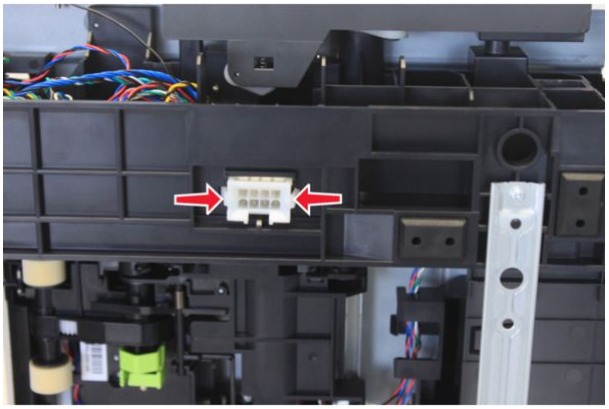
1. Remove the tray insert.
2. Remove the right cover. See 550-sheet tray right cover removal on page 494.
3. Disconnect the two cables (A), and then remove the screws (B).



4. Squeeze, and then push the latches into the tray base to release the cable.

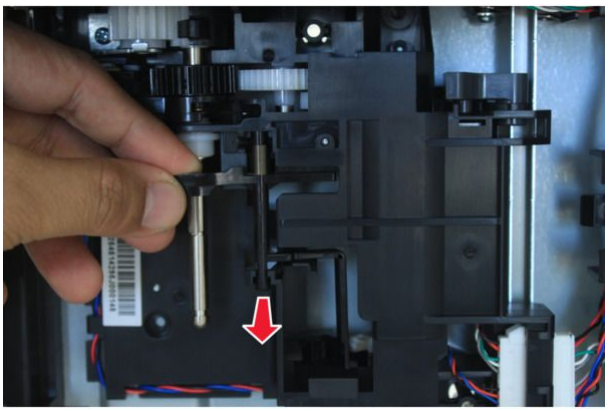


5. Squeeze, and then push the latches into the tray base to release the cable.

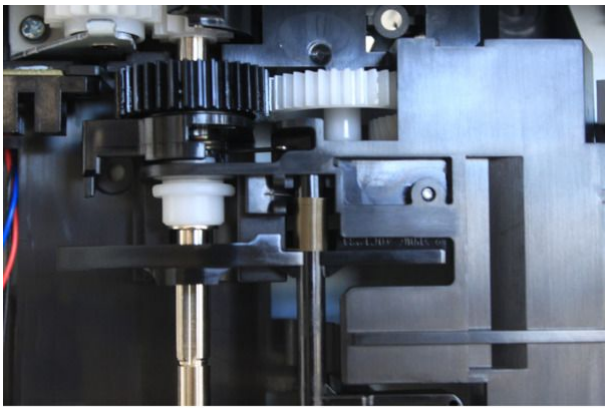


550-sheet tray empty sensor actuator removal

1. Remove the tray insert.
2. Turn over the tray base.
3. Remove the pick roller.
4. Pull out the actuator to release, and then remove the actuator.

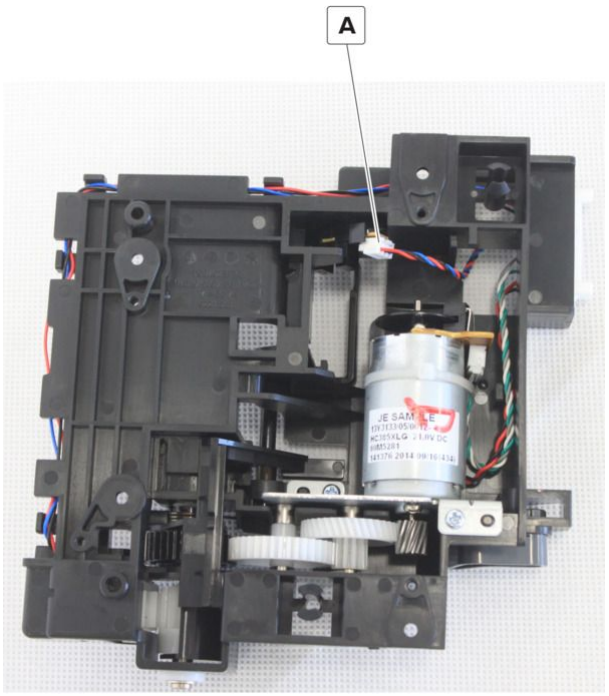


Installation Note
Make sure that the actuator is properly installed as shown.



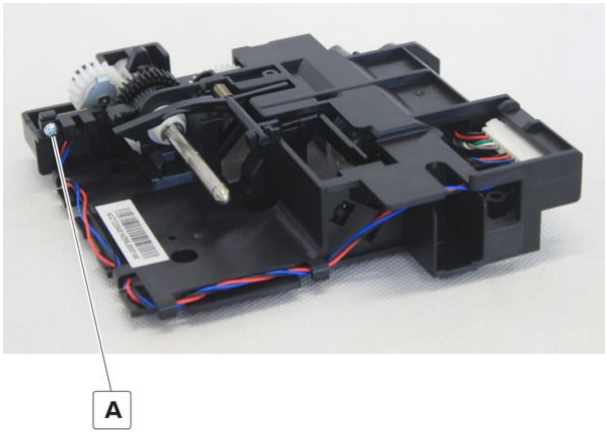
Sensor (550-sheet tray empty) removal

1. Remove the tray insert.
2. Remove the paper feeder. See 550-sheet tray right cover removal on page 494.
3. Disconnect the cable (A), and then remove the sensor.

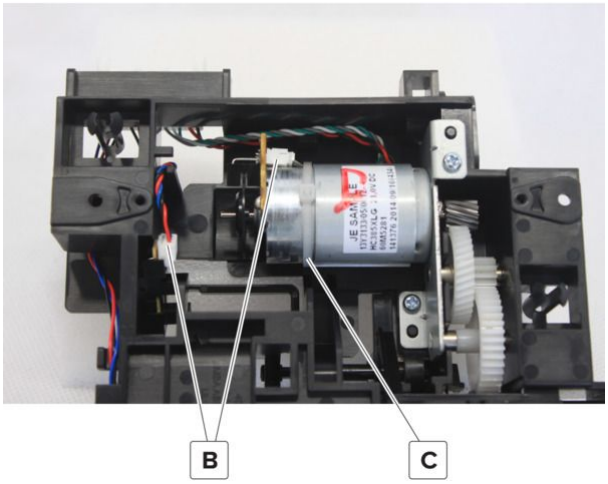


Sensor (550-sheet tray index) removal

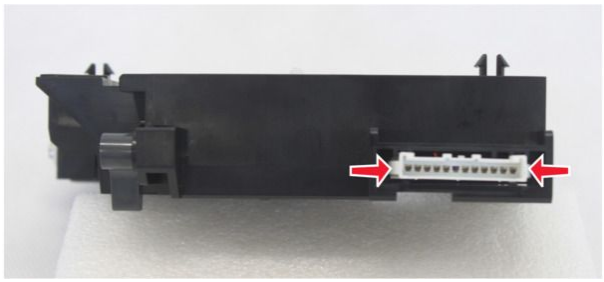
1. Remove the tray insert.
2. Remove the paper feeder. See 550-sheet tray right cover removal on page 494.
3. Remove the screw (A).



4. Disconnect the two cables (B), and then cut the zip tie (C).



5. Squeeze, and then push the latches into the tray base to release the cable.



6. Remove the sensor.

Component locations

Printer configurations

CAUTION—TIPPING HAZARD
Installing one or more options on your printer or MFP may require a caster base, furniture, or other feature to prevent instability causing possible injury. For more information on supported configurations, see www.lexmark.com/multifunctionprinters.

CAUTION—TIPPING HAZARD
Installing one or more options on your printer or MFP may require a caster base, furniture, or other feature to prevent instability causing possible injury. For more information on supported configurations, contact the place where you purchased the printer.

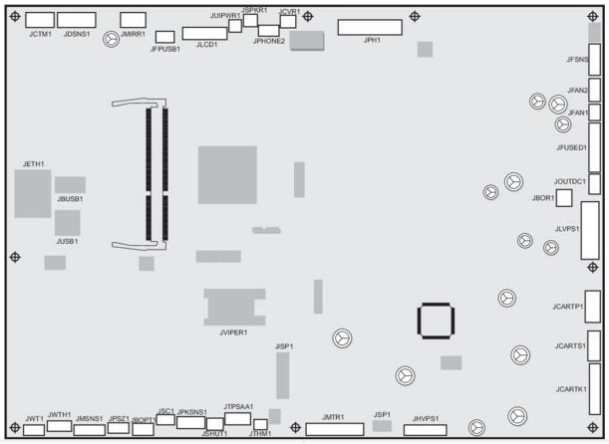
CAUTION—TIPPING HAZARD
To reduce the risk of equipment instability, load each tray separately. Keep all other trays closed until needed.

You can configure your printer by adding three optional 550-sheet trays.



1	Standard bin
2	650-sheet duo tray
3	Optional 550-sheet trays
4	Control panel

Controller board connectors



Connector	Connects to	Pin no.	Signal
JFSNS1	Fuser / LVPS	1	GND
2	S_FBR1_IN		
3	S_FBR2_IN		
4	S_FBLT_SNS		
5	S_FHE1_IN		
6	S_FHE2_IN		
7	S_FHE3_IN		
8	VS10_FNP		
9	S_FNP_IN		
10	GND		
11	VS10_FXP		
12	S_FX_IN		
13	GD_FUSER_ID		
14	GND		
JFAN1	Fuser / LVPS	1	FAN1_FG_IN
2	GND		
3	V25_FAN_OUT		
JFAN2	Fuser / LVPS	1	GND
2	+25V_FAN		
3	FAN2_FG_IN		
4	GR_FAN2_PWM		
JFUSED	Fuser motor	1	HALLF_A_IN

Connector	Connects to	Pin no.	Signal
2	HALLF_B_IN		
3	HALLF_C_IN		
4	FG_F_IN		
5	GND		
6	+5V_SW		
7	V45_FUSER_W		
8	V45_FUSER_V		
9	V45_FUSER_U		
JOUTDC1	Output motor	1	VS10_OUT_LED
2	S_OUT_ENC		
3	GND		
4	V30_OUT_MT-		
5	V30_OUT_MT+		
JBOR	Black only retract	1	VS10_BOR_LED
2	S_BOR_ENC		
3	GND		
4	V30_BOR_MT-		
5	V30_BOR_MT+		
6	GND		
JLVPS1	LVPS	1	PS_ZERO_X
2	PS_HEAT2_ON		
3	PS_HEAT1_ON		
4	GND		
5	V15_RELAY_DRIVE		
6	GND		
7	PS_25V_ON		
8	GND		
9	PS_PM_TX		
10	PS_PM_RX		
11	+6.5V		
12	GND		

Connector	Connects to	Pin no.	Signal
13	+6.5V		
14	GND		
15	+25V_RAW		
16	GND		
17	+25V_RAW		
18	GND		
19	+25V_RAW		
20	GND		
21	+25V_RAW		
22	GND		
23	+25V_RAW		
24	GND		
25	+25V_RAW		
26	GND		
JCARTP1	CM cartridge motor	1	V45_CM_CART_W
2	V45_CM_CART_V		
3	V45_CM_CART_U		
4	V45_Y_CART_W		
5	V45_Y_CART_V		
6	V45_Y_CART_U		
JCARTS1	Y cartridge motor	1	CM_FG
2	CM_HALL_U		
3	+5V_SW		
4	CM_HALL_V		
5	GND		
6	CM_HALL_W		
7	GND		
8	Y_HALL_U		
9	+5V_SW		
10	Y_HALL_V		
11	Y_FG		

Connector	Connects to	Pin no.	Signal
12	Y_HALL_W		
JCARTK1	K cartridge motor	1	K_HALL_U
2	K_HALL_V		
3	K_HALL_W		
4	K_FG		
5	GND		
6	+5V_SW		
7	V45_K_CART_W		
8	V45_K_CART_V		
9	V45_K_CART_U		
JHVPS1	HVPS	1	+5V_HVPS_REF
2	GND		
3	M_DEV_PWM_OUT		
4	K_DEV_PWM_OUT		
5	C_DEV_PWM_OUT		
6	CMY_CHG_PWM_OUT		
7	Y_DEV_PWM_OUT		
8	K_CHG_PWM_OUT		
9	K_TX_PWM_OUT		
10	CMY_TX_PWM_OUT		
11	ITM_TX_PWM_OUT		
12	GND		
13	CMY_SRVO_OUT		
14	K_SRVO_OUT		
15	ITM_SRVO_OUT		
16	GD_HVPS_ID		
17	V_25V_HVPS		
18	GND		
JMTR1	Isolation unit motor and pick motor and sensors	1	VS10_BA_LED
2	V30_BA+		

Connector	Connects to	Pin no.	Signal
3	S_BA_ENC		
4	V30_BA-		
5	GND		
6	GND		
7	VS10_ISO_LED		
8	V30_ISO-		
9	S_ISO_ENC		
10	V30_ISO+		
11	VS10_MPF_LED		
12	S_MPF_ENC		
13	GND		
14	V40_MPF+D		
15	V40_MPF-M		
16	VS10_PE_LED		
17	S_PE_ENC		
18	GND		
19	V40_PE-M		
20	V40_PE+D		
21	VS10_ELEV		
22	S_ELEV_IN		
23	GND		
24	VS10_EMP		
25	S_T1_EMP		
26	GND		
JTHM1	Thermistor	1	S_TT_IN
2	GND		
JTPSAA1	TPS and auto align sensors	1	VS10_TPS1_VDD
2	TPS1_DIFF		
3	TPS1_SPEC		
4	GND		
5	TPS1_SPEC_G		

Connector	Connects to	Pin no.	Signal
6	TPS1_LED_G		
7	I2C_DATA_TPS		
8	I2C_CLK_TPS		
9	VS10_TPS1_VDD		
10	GND		
11	AA1_ADC		
12	AA1_PWM		
13	VS10_TPS1_VDD		
14	GND		
15	AA2_ADC		
16	AA2_PWM		
JSHUT1	Media sensor **Note:** This sensor and its cable are not used on printers with serial number 75288250F2P4Z or greater.	1	VS10_SHTR
2	S_SHTR		
3	GND		
JPKSNS1	Isolation unit sensors	1	VS10_S1
2	S_S1_IN		
3	GND		
4	VS10_S1_ALT		
5	S_S1_ALT_IN		
6	GND		
7	VS10_BAN		
8	S_BAN_IN		
9	GND		
10	VS10_S2		
11	S_S2_IN		
12	GND		
JSC1	Imaging	1	V_FUSE_5V

Connector	Connects to	Pin no.	Signal
2	I2CDATA_AR_R		
3	I2CCLK_AR_R		
4	GND		
JBOPT1	Option trays	1	VS45_INOPT_PWR
2	GND		
3	GND		
4	S1_OPTION		
5	RXD_PTR_IN		
6	BUMPA_ENC_OPT		
7	GND		
8	TXD_PTR_BTM_OUT		
JPSZ1	Paper size sensor	1	PSIZE0
2	PSIZE1		
3	PSIZE2		
4	PSIZE3		
5	GND		
JMSNS1	MFP paper present sensor, bubble / narrow media sensors, and duplex staging sensor	1	VS10_MPP
2	VS10_MPM		
3	S_MPP_IN		
4	GND		
5	VS10_DSS		
6	S_DSS_IN		
7	GND		
8	VS10_BBS		
9	S_BBS_IN		
10	GND		
11	VS10_TRAY_NMS		
12	S_TRAY_NMS		
13	GND		

Connector	Connects to	Pin no.	Signal
14	GND		
JWTH1	Weather station	--	--
JWT1	Waste toner	1	SENSE
2	WT_VREF		
3	VAC		
4	GND		
JISP1	ISP connector	1	GND
2	USBOUT+		
3	USBOUT-		
4	GND		
5	USB_HD1_D+		
6	USB_HD1_D-		
7	GND		
8	+3.3V		
9	ISP_RST_R		
10	+5V_RIP		
11	I2C_DAT_ISP_L		
12	+5V_RIP		
13	I2C_CLK_ISP_L		
14	+5V_RIP		
J61	Hard drive		
JCTM1	TMC	1	+5V_SW
2	-CART_METER_C_IN		
3	-CART_METER_M_IN		
4	-CART_METER_Y_IN		
5	-CART_METER_K_IN		
6	GND		
JSNS1	Bin full / duplex entry sensor		
JMIRR1	Mirror motor	1	MM_REF_CLKC
2	MM_LOCK_IN		
3	MM_START_OUT		

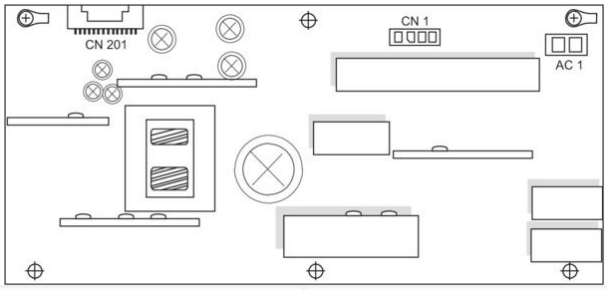
Connector	Connects to	Pin no.	Signal
4	GND		
5	V25_MM_25V		
JPFUSB1	USB port		
JLCD1	LCD display	1	LED_DRV_YLW2
2	+5VL		
3	GSPI_TXD		
4	MIR_SPI_CS		
5	PWR_BUTTON_R2		
6	NC_SPICS_EXPN1		
7	NC_SPICS_EXPN2		
8	GSPI_RXD		
9	V15_UI		
10	GSPI_CLK_UIC		
11	GND		
12	I2CDATA_PANEL		
13	I2CCLK_PANEL		
14	V15_UI		
15	UIPIN24		
16	OP_IRQ_R2-		
17	GND		
18	LVDS_UI_D3R+		
19	LVDS_UI_D3R-		
20	V15_UI		
21	LVDS_UI_CLK_L+		
22	LVDS_UI_CLK_L-		
23	GND		
24	LVDS_UI_D2R+		
25	LVDS_UI_D2R-		
26	V15_UI		
27	LVDS_UI_D1R+		
28	LVDS_UI_D1R-		

Connector	Connects to	Pin no.	Signal
29	GND		
30	LVDS_UI_D0R+		
31	LVDS_UI_D0R-		
32	V15_UI		
MTG1	GND		
MTG2	GND		
JUIPWR1	NFC	1	V15_UI
2	V15_UI		
3	GND		
4	GND		
JSPKR1	Speaker	1	SPEAKER1
2	SPEAKER2		
JPHONE2	Headphone jack	1	HEADPHONE_DET
2	HPL_C		
3	HPR_C		
4	GND		
JCVR1	Interlock switches	1	+25V_RAW
2	+25V_HVPS		
JPH1	Printhead	1	LADJ_D4_OUT
2	I2CDATA_PH		
3	GND		
4	I2CCLK_PH		
5	GND		
6	SHADE_Y_R2		
7	LADJ_D2_OUT		
8	SHADE_C_R2		
9	LENA_CMY-_OUT		
10	LPOW_Y_OUT		
11	GND		
12	LPOW_C_OUT		
13	BOOST_OUT		

Connector	Connects to	Pin no.	Signal
14	SHADE_M_R2		
15	LADJ_D1_OUT		
16	SHADE_K_R2		
17	GND		
18	LPOW_M_OUT		
19	GND		
20	LPOW_K_OUT		
21	LENA_K-_OUT		
22	PH_THERM_ADC		
23	GND		
24	HSYNC_IN		
25	GND		
26	YDATA2-		
27	YDATA2+		
28	GND		
29	YDATA1-		
30	YDATA1+		
JPH1	Printhead	31	GND
32	MDATA2-		
33	MDATA2+		
34	GND		
35	MDATA1-		
36	MDATA1+		
37	GND		
38	CDATA2-		
39	CDATA2+		
40	GND		
41	CDATA1-		
42	CDATA1+		
43	GND		
44	KDATA2-		

Connector	Connects to	Pin no.	Signal
45	KDATA2+		
46	GND		
47	KDATA1-		
48	KDATA1+		
49	GND		
50	LADJ_D3_OUT		
MTG1	GND		
MTG2	GND		

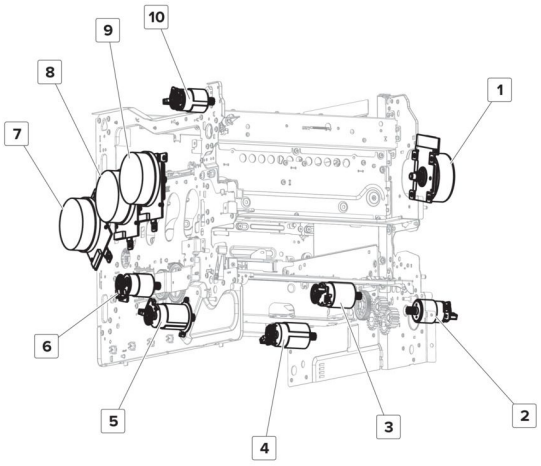
LVPS controller board connectors



Connector	Connects to	Pin no.	Signal
CN201	Controller board	1	+25V
2	GND		
3	+25V		
4	GND		
5	+25V		
6	GND		
7	+25V		
8	GND		
9	+25V		
10	GND		
11	+25V		
12	GND		
13	+25V		
14	GND		
15	+25V		

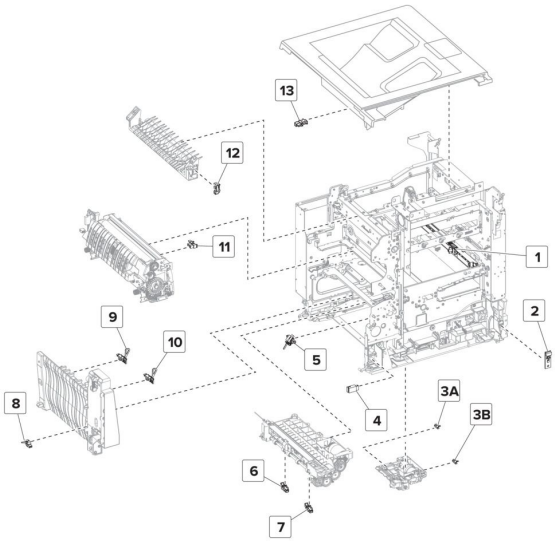
Connector	Connects to	Pin no.	Signal
16	GND		
17	GND		
18	GND		
19	Zero_Cross		
20	Heat_On2		
21	Heat_On1		
22	Main_On_Off		
23	Tx_PwrMtr		
24	Relay_Drive		
25	Ground		
26	+6.5V		
27	+6.5V		
28	+6.5V		
29	Rx_PwrMtr		
30	Heat_On3		
CN1	Fuser	1	AC Common
2	AC Out 3		
3	AC Out 2		
4	AC Out 1		
AC1	AC line in	1	Phase
2	Neutral		

Motor locations



Part	Description
1	Motor (fuser)
2	Motor (duplex/MPF)
3	Motor (isolation)
4	Motor (pick/elevator)
5	Motor (deskew)
6	Motor (BOR)
7	Motor (K developer) Motor (transfer module)
8	Motor (CM developer)
9	Motor (Y developer)
10	Motor (output)

Sensor locations



Part	Description
1	Sensor (TPS)
2	Sensor (weather station)
3A	Sensor (media out)
3B	Sensor (pick roller index)
4	Sensor (MPF paper present)
5	Sensor (input)
6	Sensor (tray 1 pick)
7	Sensor (MPF pass-through)
8	Sensor (duplex path 2)
9	Sensor (narrow media)
10	Sensor (fuser buckle)
11	sensor (fuser exit)
12	sensor (duplex path 1)
13	sensor (bin full)

Maintenance

Inspection guide

The purpose of this Inspection guide is to aid you in identifying the intervals, based on page count, at which parts must be Inspected (for visible physical damage), cleaned, or replaced.
If any unsafe conditions exist, find out how serious the hazard could be and if you can continue before you correct the hazard.
As you service the machine, check for the following:

- Damaged, missing, or altered parts, especially in the area of the On/Off switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top cover and the power supply cover
- Possible safety exposure from any non-Lexmark attachments

Use the following tables to determine when specified parts should be Inspected:

Lexmark CS720, CS725, and C4150	Every service call	Every 150K	Notes
Media tray - All			
Media tray side guides	Inspect	Check for correct positioning	
Media tray length guides	Inspect	Check for correct positioning	
Transfer module (ITM)	Inspect	Replace	Ensure correct installation
Fuser	Inspect	Replace	Ensure correct installation
Media feeders - All			
Media tray pick tires	Inspect and clean if needed	Clean with a damp cloth	
MPF pick tires	Inspect and clean if needed	Clean with a damp cloth	
Paper path			

Lexmark CS720, CS725, and C4150	Every service call	Every 150K	Notes
Duplex path rollers	Inspect	• Check for media fragments and tears • Check for excessive toner build-up on white rollers • Clean with damp cloth if needed	
Miscellaneous			
Toner spillage	Clean	Use a toner vacuum and cloth to remove all toner spillage from the printer	

Scheduled maintenance

Maintenance kits

The printer may stop printing when the fuser rated life is reached. After 150K printed pages (sides) a maintenance kit may be required. The correct fuser maintenance kit must be installed for the type of fuser that is installed in the printer. See Identifying the type of fuser used in the printer on page 523.
The following table shows the error codes that indicate that the fuser is nearing its end of life, and that a maintenance kit is required:

Error code	Description
80.0x	The maintenance kit is nearly low.
80.1x	The maintenance kit is low.
80.2x	The maintenance kit is very low. Only 2000 estimated pages remain.
80.3x	The maintenance kit is low. 0 estimated pages remain.
80.4x	The maintenance kit is very low. 0 estimated pages remain.

The parts are available as a maintenance kit with the following part numbers:

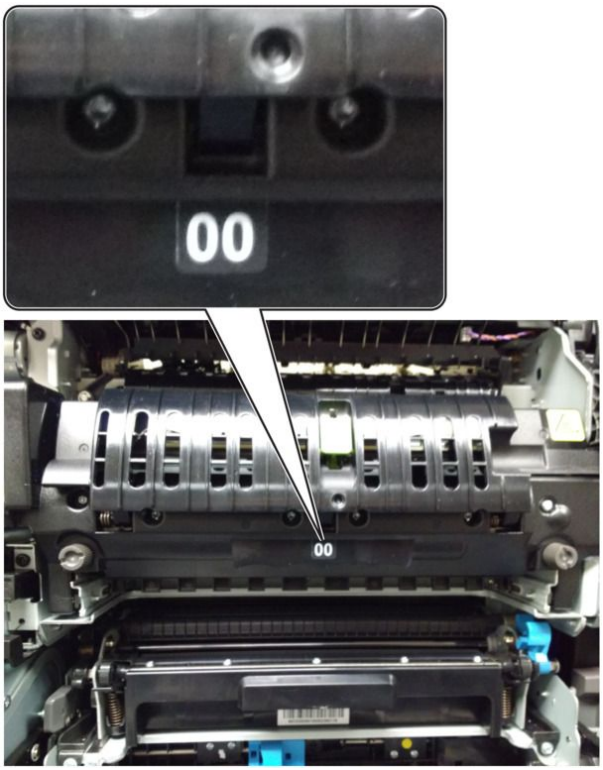
Part number and kit	Contents	Maintenance interval	Action
41X0552—Fuser maintenance kit, type 02, 100V	• 41X0251—Fuser (100V) • 41X0956—Pick roller • 41X0374—Separator pad	150K	Reset the fuser maintenance counter after replacing the fuser maintenance kit. See Resetting the maintenance counter on page 523.
41X0554—Fuser maintenance kit, type 00, 110–120V	• 41X0252—Fuser (110V) • 41X0956—Pick roller • 41X0374—Separator pad	150K	Reset the fuser maintenance counter after replacing the fuser maintenance kit. See Resetting the maintenance counter on page 523.
41X0556—Fuser maintenance kit, type 01, 220–240V	• 41X0253—Fuser (220V) • 41X0956—Pick roller • 41X0374—Separator pad	150K	Reset the fuser maintenance counter after replacing the fuser maintenance kit. See Resetting the maintenance counter on page 523.
40X9929—Transfer module	--	150K	Reset the ITM maintenance counter after replacing the transfer module. See Resetting the maintenance counter on page 523.

When performing the scheduled maintenance procedure, the following areas should be cleaned of media dust and toner contamination:

- Trays
- PC cartridge area
- Developer housings area
- Transfer roll area
- Duplex area
- Standard bin
- Bridge unit area (if equipped)
- Finisher media bins (if equipped)

Identifying the type of fuser used in the printer

1. Open the front cover.
2. Locate the identification number on the fuser.



Resetting the maintenance counter

Fuser reset

1. From the home screen, touch **Settings > Device > Maintenance > Configuration menu > Supply usage and counters**.
2. Select **Fuser Reset**.

ITM reset

1. From the home screen, touch **Settings > Device > Maintenance > Configuration menu > Supply usage and counters**.
2. Select **ITM Reset**.

Cleaning the printer

Cleaning the printer

CAUTION—SHOCK HAZARD
To avoid the risk of electrical shock when cleaning the exterior of the printer, unplug the power cord from the electrical outlet and disconnect all cables from the printer before proceeding.

Note:

- Perform this task after every few months.
- Damage to the printer caused by improper handling is not covered by the printer warranty.

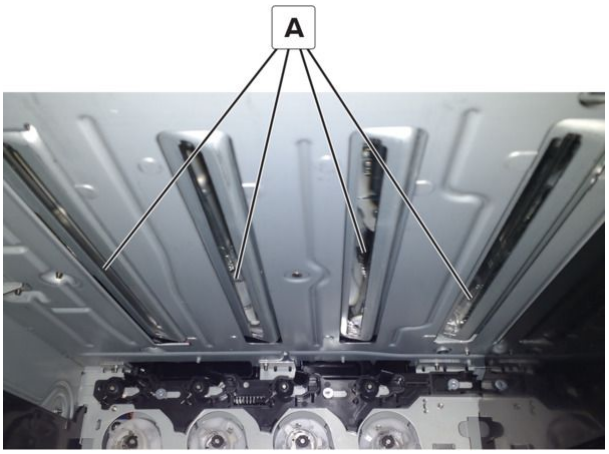
1. Turn off the printer, and then unplug the power cord from the electrical outlet.
2. Remove paper from the standard bin and multipurpose feeder.
3. Remove any dust, lint, and pieces of paper around the printer using a soft brush or vacuum.
4. Wipe the outside of the printer with a damp, soft, lint-free cloth.

   Note:
   - Do not use household cleaners or detergents, as they may damage the finish of the printer.
   - Make sure that all areas of the printer are dry after cleaning.

5. Connect the power cord, and then turn on the printer.

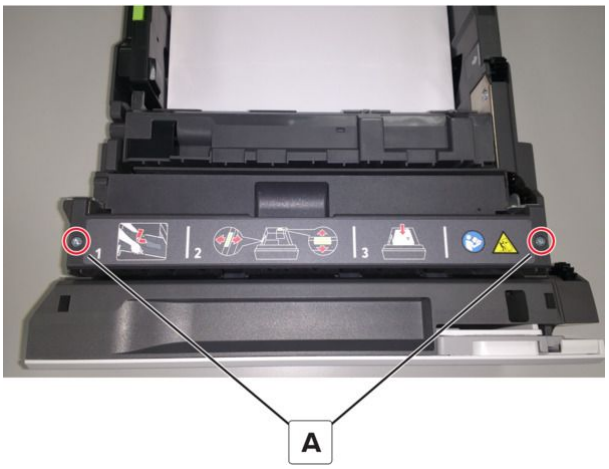
Cleaning the printhead lenses

1. Remove the waste toner bottle.
2. Remove the imaging kit.
3. Using a lint-free cloth, wipe the printhead lenses (A).

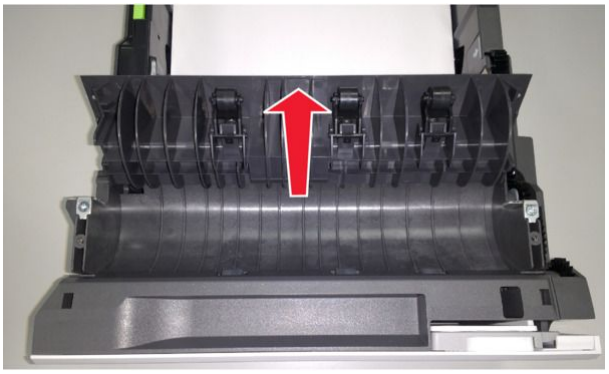


Cleaning the main tray duplex turnaround

1. Remove the two screws (A).



2. Open the turnaround cover.



3. Remove the debris in the duplex turnaround area.
4. Close the cover, and then replace the screws.

Parts catalog

Legend

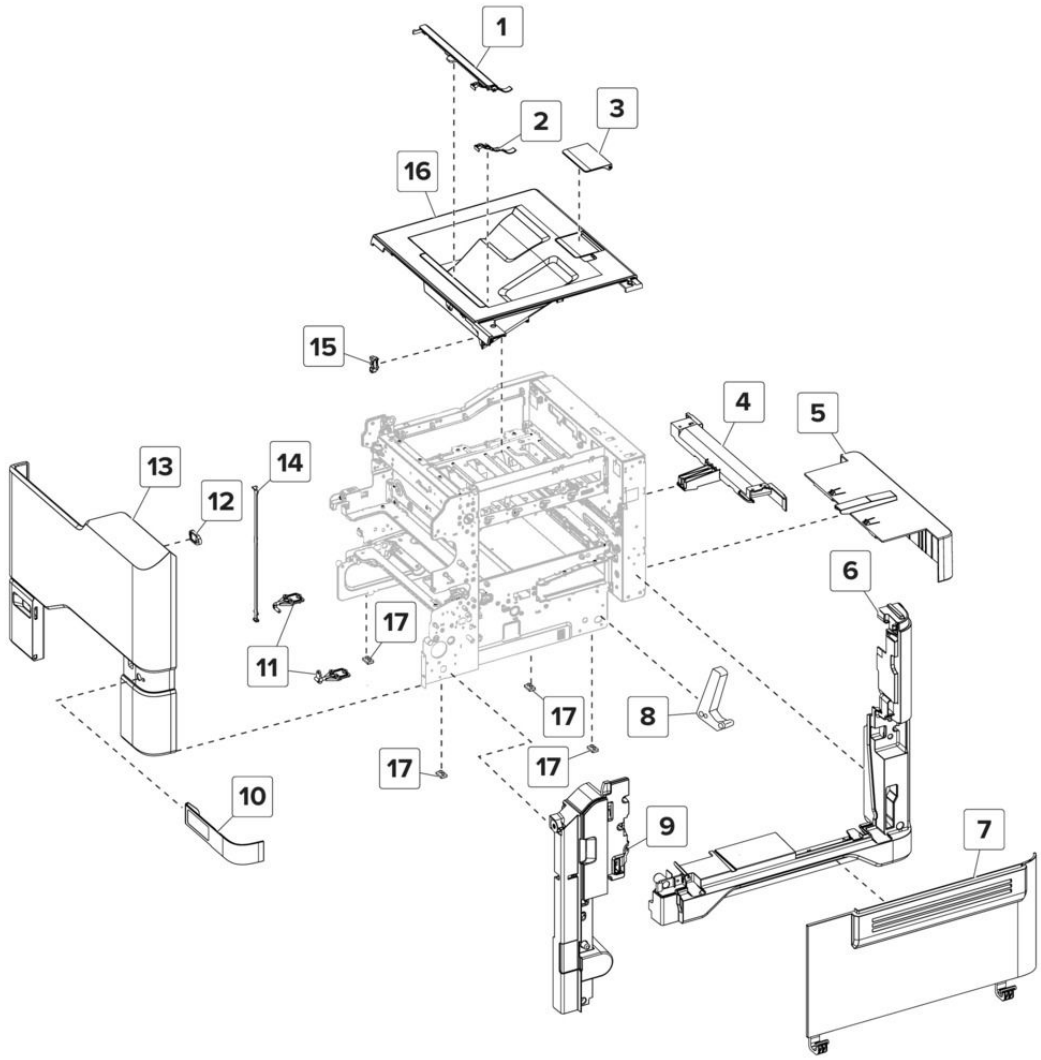
The following column headings are used in the parts catalog:

- **Asm-index**—Identifies the item in the illustration
- **P/N**—Identifies the part number of a FRU
- **Units/mach**—Refers to the number of units in a printer
- **Units/opt**—Refers to the number of units in an option
- **Units/FRU**—Refers to the number of units in a FRU
- **Description**—A brief description of the part

The following abbreviations are used in the parts catalog:

- **NS** (not shown) in the Asm-index column indicates that the part is procurable but is not shown in the illustration.
- **PP** (parts packet) in the Description column indicates that the part is contained in a parts packet.

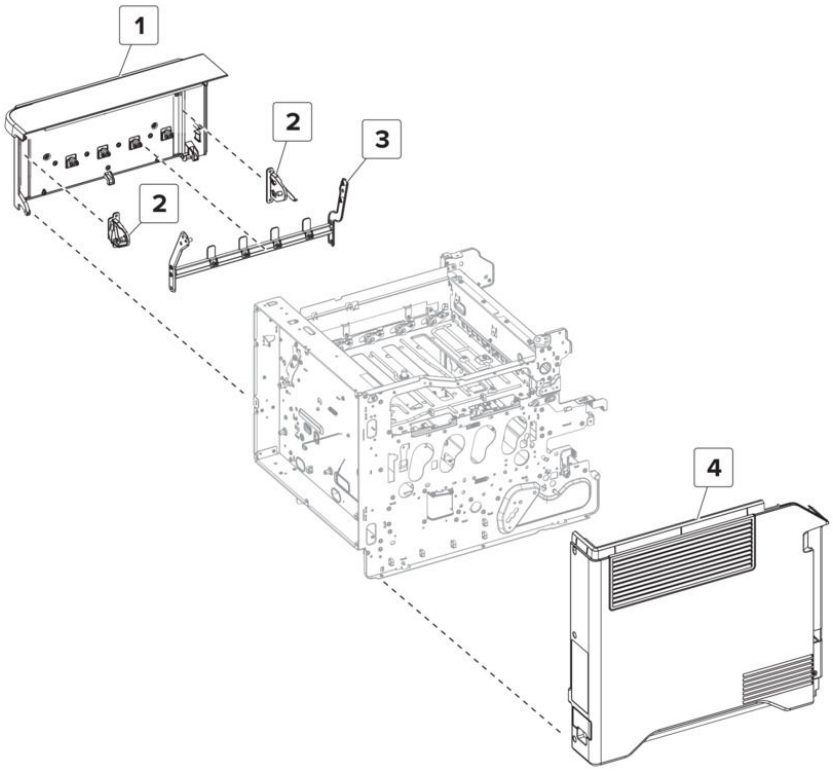
Covers 1



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0773	1	1	Output bin exit cover	Output bin exit cover removal on page 486	
2	41X0772	1	1	Output bin flag	Output bin flag removal on page 487	
3	41X0410	1	1	Bin extender	--	
4	41X0424	1	1	Rear handle cover	--	
5	41X0408	1	1	Rear tray cover	--	
6	41X0419	1	1	Right cover	Right cover removal on page 414	

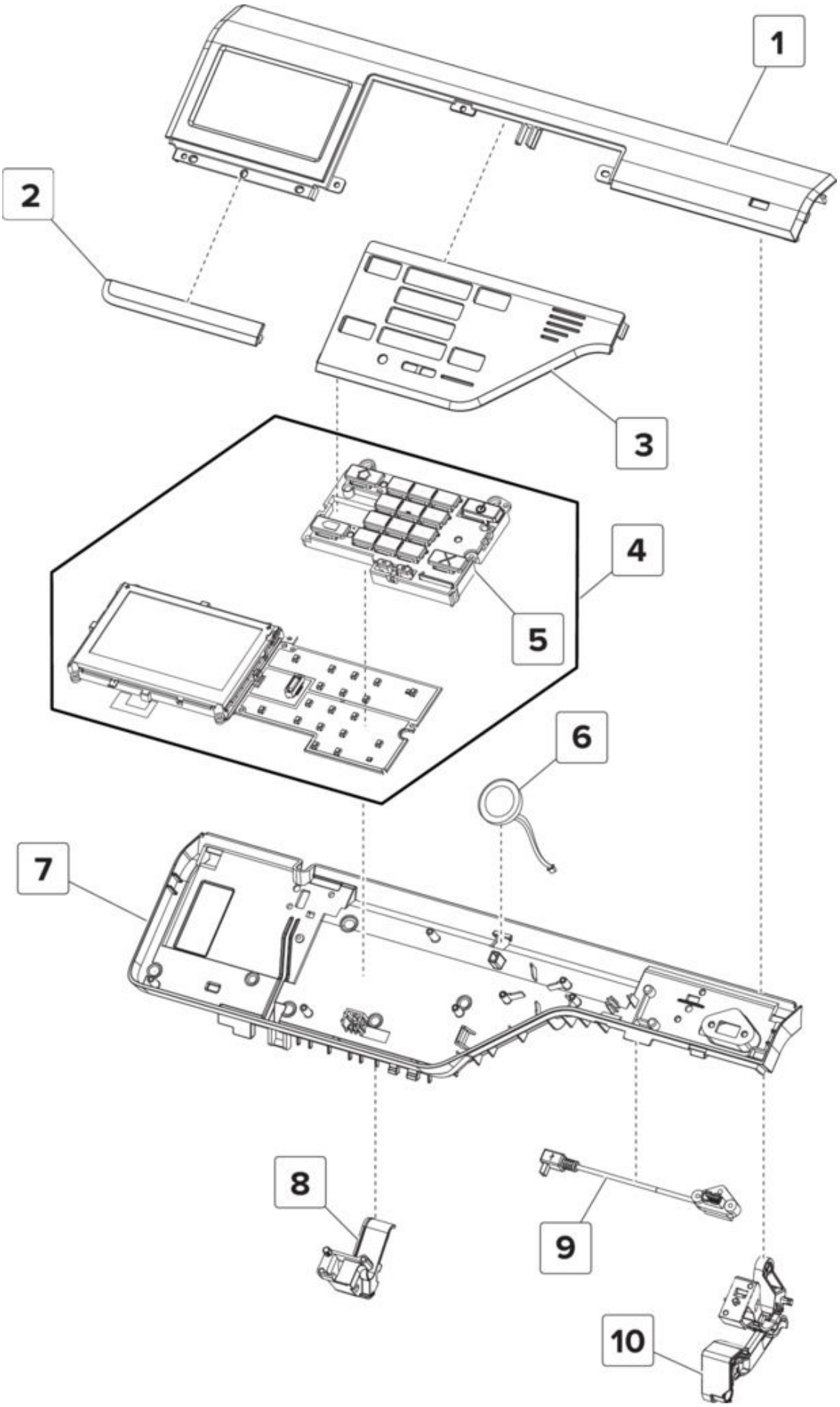
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
7	41X0403	1	1	Imaging unit cover	Imaging unit cover removal on page 453	
8	41X0686	1	1	TPS wiper mechanism	TPS wiper mechanism removal on page 457	
9	41X0421	1	1	Motor cover	Motor cover removal on page 415	
10	41X0401	1	1	Tray indicator cover	--	
11	41X0567	2	1	Front cover hinges	Front cover hinges removal on page 487	
12	41X0560	1	1	Front door bracket	--	
13	41X0411	1	1	Front cover	Front cover removal on page 409	
14	41X0380	2	1	Front door strap	--	
15	41X0570	1	1	Sensor (bin full)	--	
16	41X0409	1	1	Top cover	Top cover removal on page 411	
17	41X2032	4	1	Rubber feet	--	
NS	41X0448	1	1	Sensor (interlock assembly)	--	

Covers 2



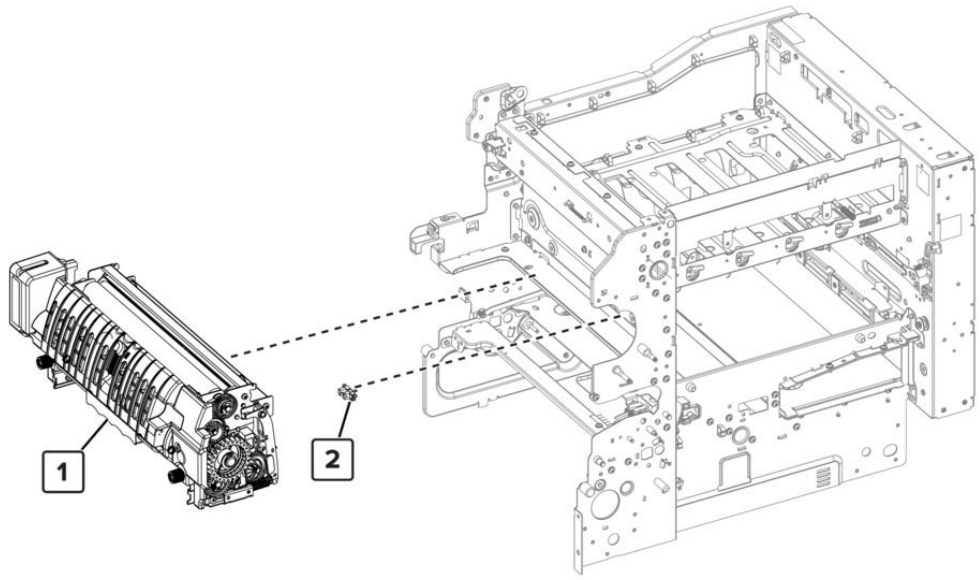
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0414	1	1	Toner door	Toner door removal on page 417	
2	41X0558	1	2	Toner door mount bracket	Toner door mount bracket removal on page 418	
3	41X0415	1	1	Toner door mount	Toner door mount removal on page 418	
4	41X0412	1	1	Left cover	Left cover removal on page 413	

Control panel


1
2
3
4
5
6
7
8
9
10

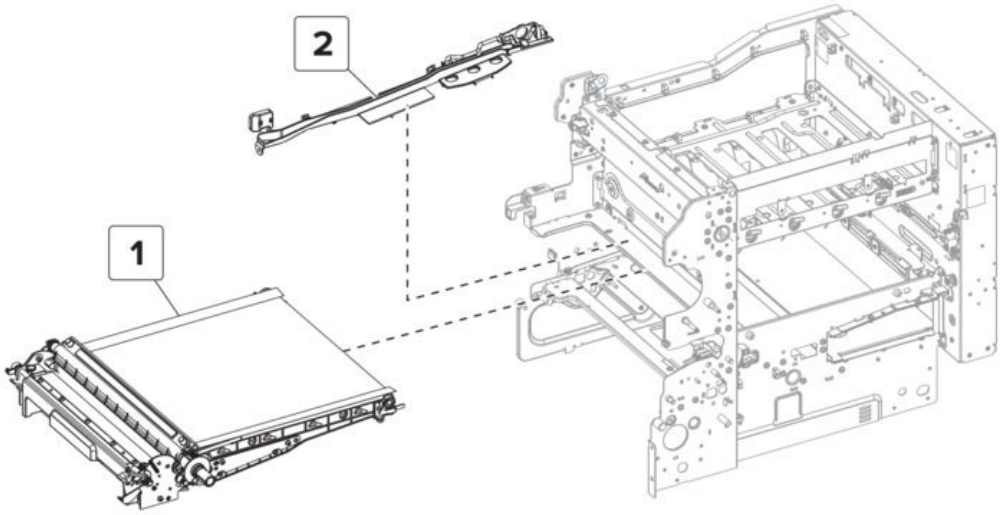
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0416	1	1	Control panel front cover	Control panel front cover removal on page 419	
2	41X0871	1	1	Bezel (CS720)	Bezel removal on page 422	
2	41X2062	1	1	Bezel (CS727)	Bezel removal on page 422	
2	41X0872	1	1	Bezel (CS725)	Bezel removal on page 422	
2	41X2063	1	1	Bezel (CS728)	Bezel removal on page 422	
2	41X0873	1	1	Bezel (C4150)	Bezel removal on page 422	
3	41X0422	1	1	Number pad cover	Number pad cover removal on page 422	
4	41X0050	1	1	4.3-in. control panel	Control panel front cover removal on page 419	
5	41X0191	1	1	Button kit, 4.3-inch control panel	--	
6	41X0399	1	1	Speaker	Speaker removal on page 424	
7	41X0423	1	1	Control panel base cover	Control panel base cover removal on page 425	
8	41X0561	1	1	Left control panel arm	Control panel arms removal on page 423	
9	41X0441	1	1	Control panel USB cable	--	
10	41X0562	1	1	Right control panel arm	Control panel arms removal on page 423	

Fuser



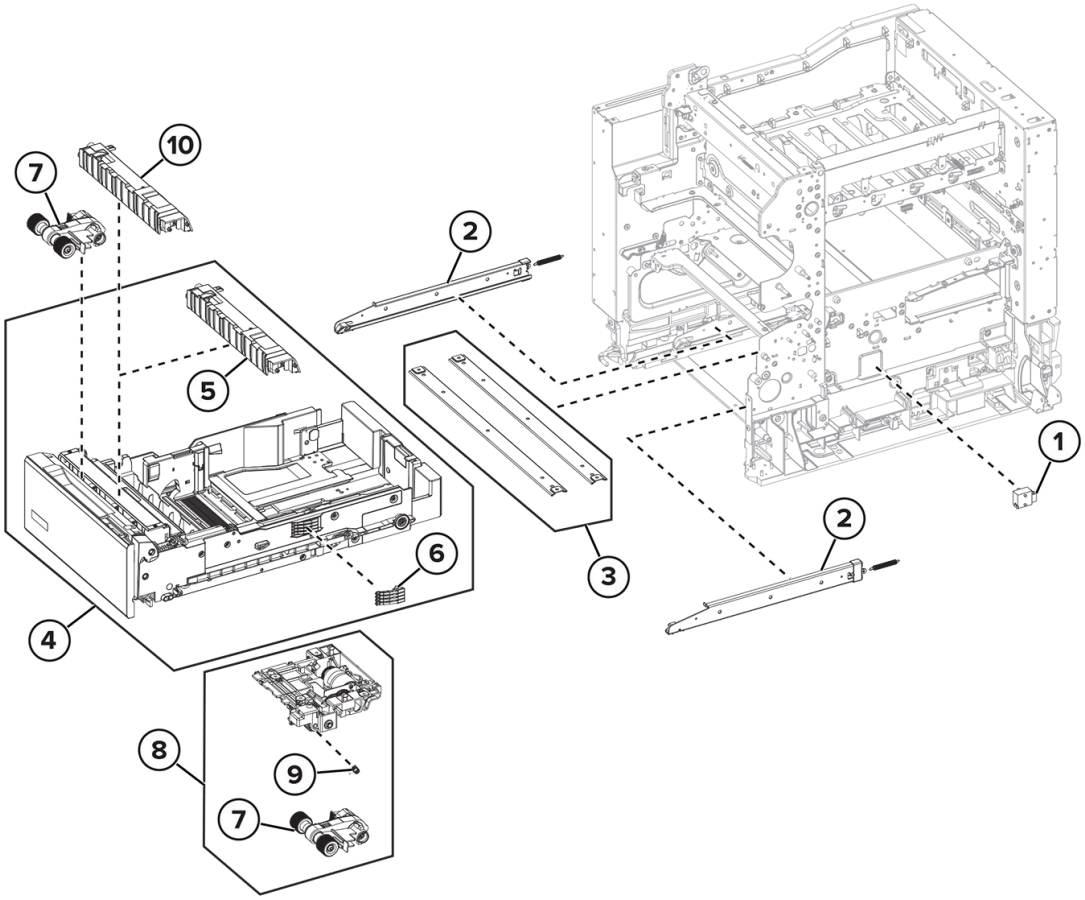
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0251	1	1	CS72x fuser type 02, 100V	Fuser removal on page 459	
1	41X0252	1	1	CS72x fuser type 00, 110-120V	Fuser removal on page 459	
1	41X0253	1	1	CS72x fuser type 01, 220-240V	Fuser removal on page 459	
2	41X1083	1	1	Sensor (fuser nip)	--	

Transfer module



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X9929	1	1	Transfer module	Transfer module removal on page 460	
2	41X0683	1	1	Transfer module guide rail	Transfer module guide rail removal on page 461	

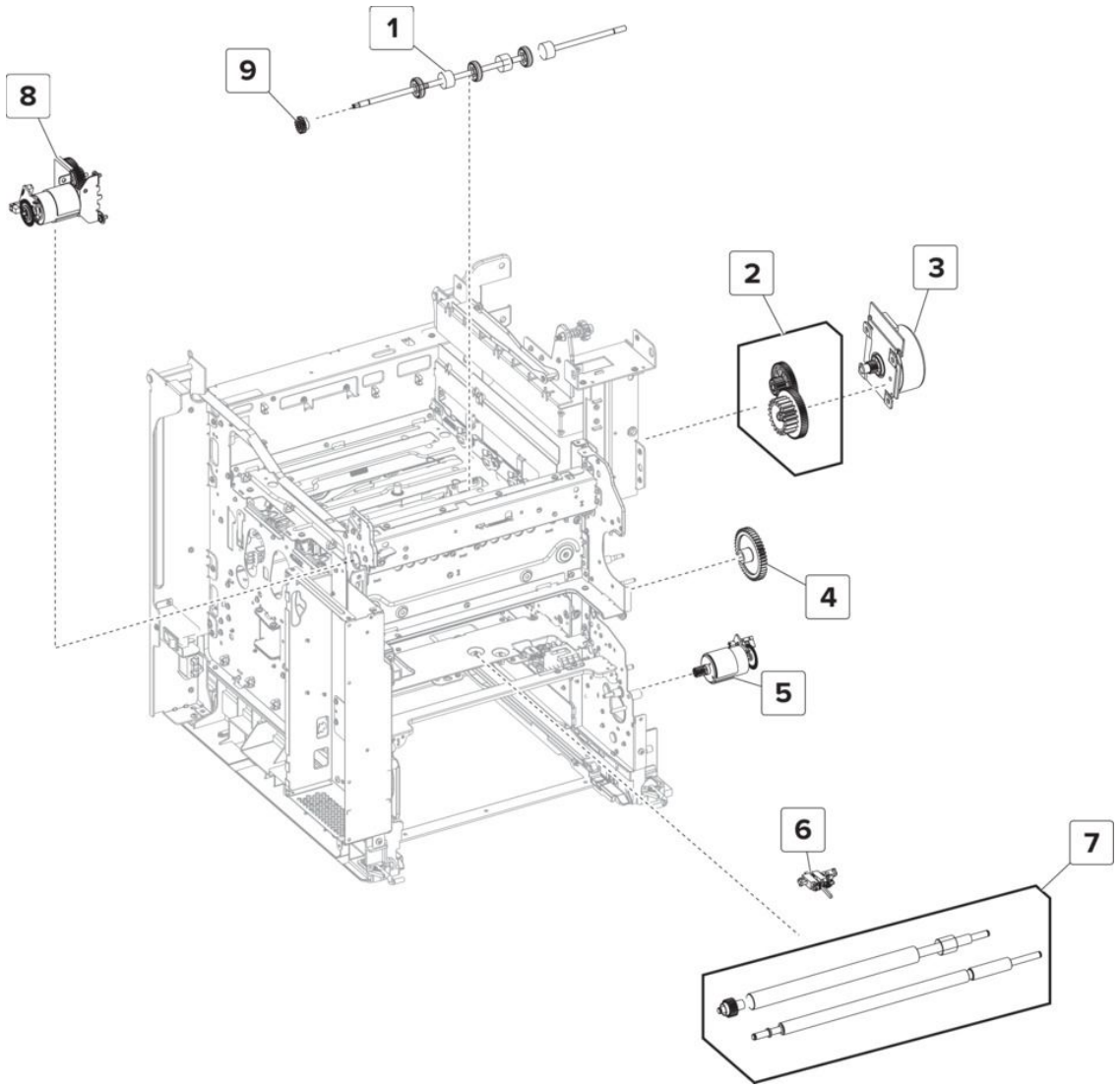
Paper feed



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X7911	1	1	Sensor (paper size)	Sensor (paper size) removal on page 444	
2	41X0372	1	2	Tray rails	Tray rail removal on page 488	
3	41X0825	2	1	Support strap	--	
4	41X0268	1	1	550-sheet tray	--	
5	41X0374	1	1	Separation pad	--	
6	41X0373	1	1	Paper size sensor actuators	--	
7	41X0956	2	1	Pick roller (tray 1 and MPF)	--	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
8	41X0396	1	1	Media feeder	Media feeder removal on page 492	
9	41X2034	2	1	Paper out actuator spring	Paper out actuator spring removal on page 493	
10	41X2868	1	1	Special media separator bracket		

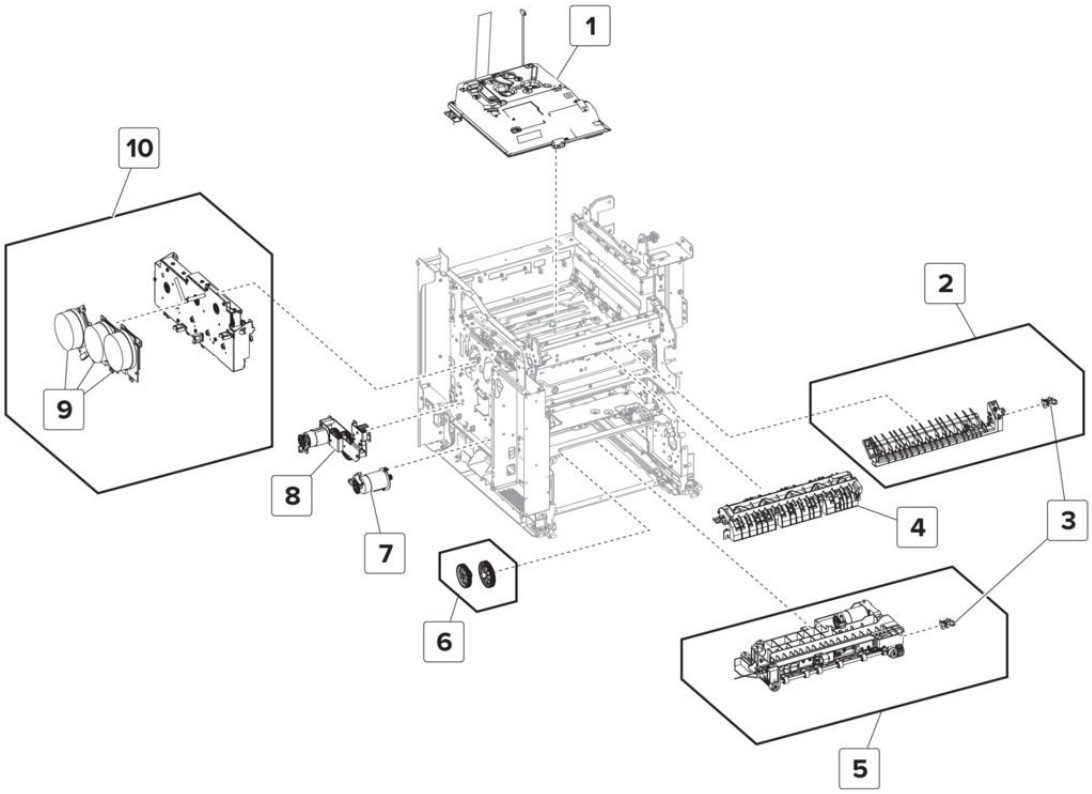
Paper path 1



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0390	1	1	Output roll	Output roll removal on page 484	
2	41X0395	1	1	Fuser drive gear	--	
3	41X1038	1	1	Motor (fuser)	Motor (fuser) removal on page 447	
4	41X0757	1	1	Waste toner bottle idler gear	Waste toner bottle idler gear removal on page 452	
5	41X0381	1	1	Motor (duplex/ MPF)	Motor (duplex/ MPF) removal on page 446	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
6	41X0385	1	1	Sensor (input)	Sensor (input) removal on page 466	
7	41X0386	1	1	Deskew rollers	Deskew rollers removal on page 467	
8	41X0392	1	1	Motor (output)	Motor (output) removal on page 433	
9	41X0391	1	1	Output gear	--	

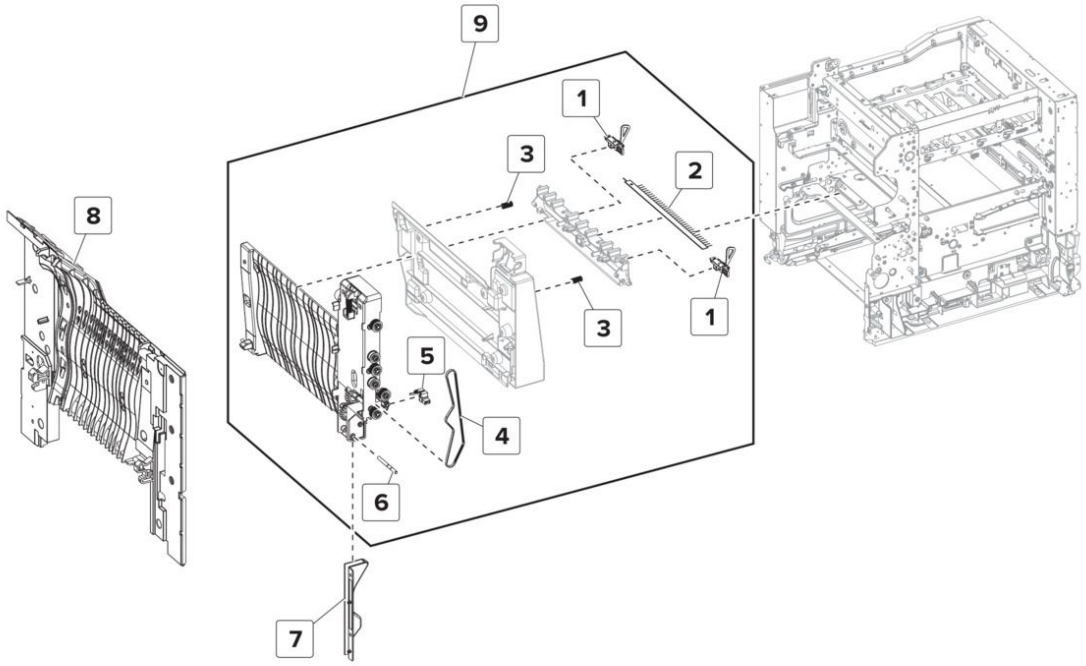
Paper path 2



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0265	1	1	Printhead	Printhead removal on page 480	
2	41X0389	1	1	Diverter	Diverter removal on page 472	
3	41X0570	2	1	Sensor (duplex path 1 / MPF pass-through)	--	
4	41X0388	1	1	Redrive guide	Redrive guide removal on page 474	
5	41X0384	1	1	Isolation unit	Isolation unit removal on page 490	
6	41X0758	1	1	Aligner drivetrain kit	--	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
7	41X0387	1	1	Motor (deskew)	Motor (deskew) removal on page 434	
8	41X0393	1	1	Motor (black only retract)	Motor (black only retract) removal on page 442	
9	41X0564	1	1	Motor (EP drive)	Motor (EP drive) removal on page 431	
10	41X0264	1	1	EP gear box	EP gear box removal on page 436	
NS	41X0897	4	1	Developer hold down arm	Developer hold down removal on page 483	

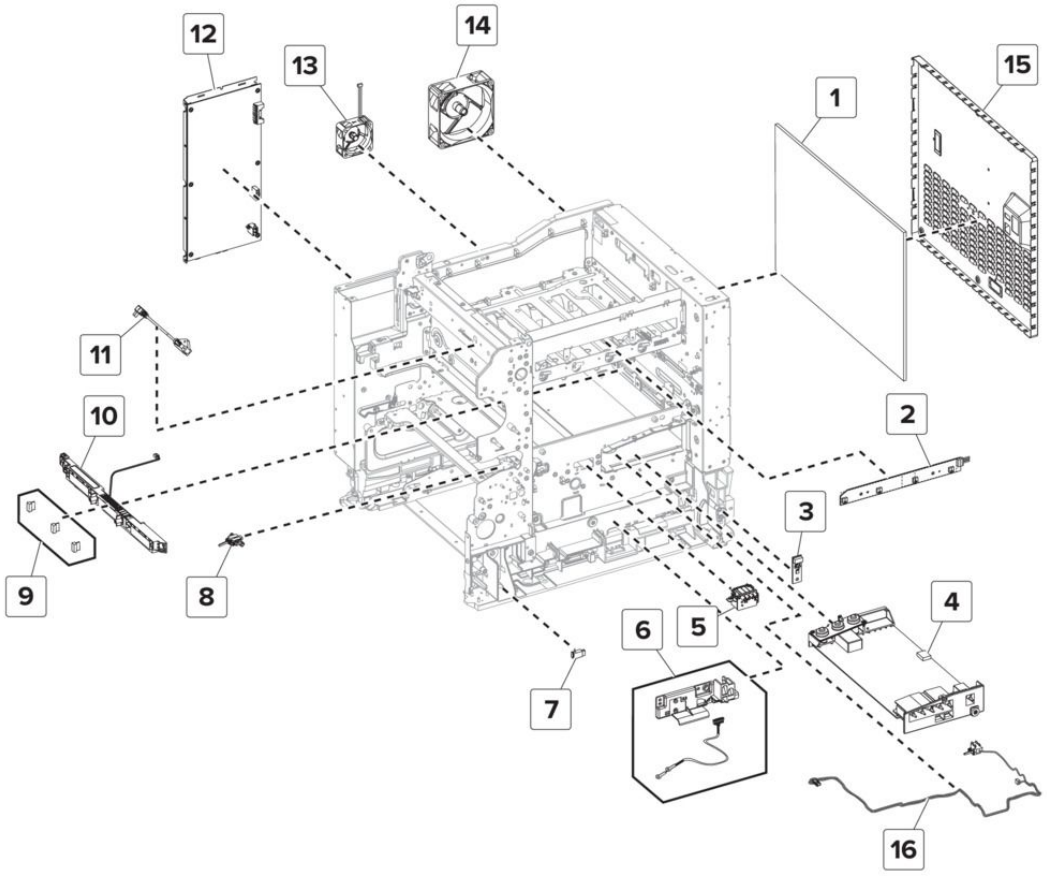
Duplex



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0447	2	1	Sensor (fuser buckle / narrow media)	Sensors (fuser buckle and narrow media) removal on page 430	
2	41X0824	1	1	Static brush	--	
3	41X0379	2	1	Guide spring	--	
4	41X0378	1	1	Tensioner belt	Tensioner belt removal on page 428	
5	41X0446	1	1	Sensor (duplex staging)	--	
6	41X0377	1	1	Pivot shaft	Pivot shaft removal on page 428	
7	41X0400	1	1	Cable cover	--	
8	41X0407	1	1	Duplex outer guide	Duplex outer guide removal on page 426	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
9	41X0376	1	1	Duplex inner guide	Duplex inner guide removal on page 427	

Electrical



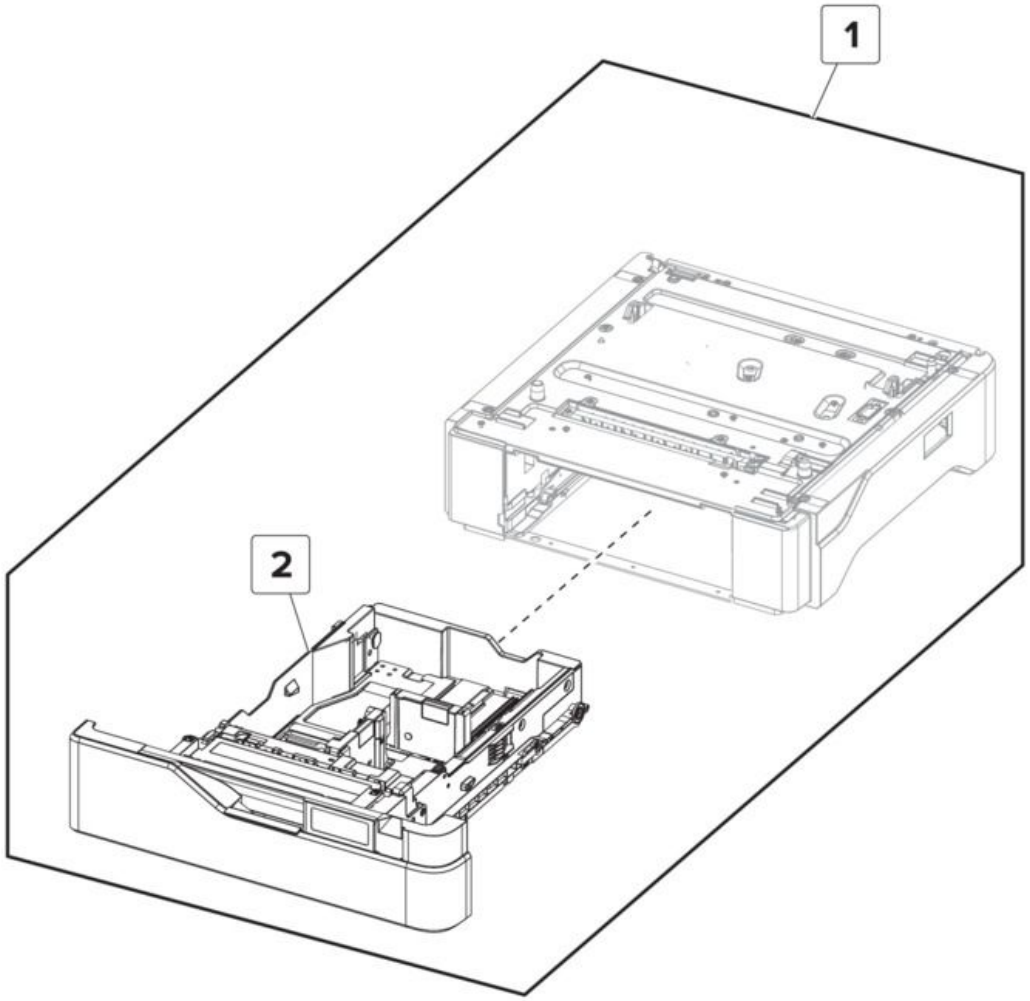
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0267	1	1	Controller board	Controller board removal on page 477	
2	41X0394	1	1	TMC card	TMC card removal on page 446	
3	41X0785	1	1	Sensor (weather station)	Sensor (weather station) removal on page 443	
4	41X0270	1	1	High voltage power supply	HVPS removal on page 448	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
5	41X0382	1	1	Toner cartridge contact	Toner cartridge contacts removal on page 456	
6	41X0486	1	1	Sensor (waste toner contact)	Sensor (waste toner contact) removal on page 445	
7	41X0566	1	1	Sensor (MPF paper present)	Sensor (MPF paper present) removal on page 451	
8	41X0385	1	1	Sensor (input)	Sensor (input) removal on page 466	
9	41X0578	1	3	TPS wipers	TPS wiper removal on page 458	
10	41X0383	1	1	Sensor (TPS)	Sensor (TPS) removal on page 453	
11	41X0441	1	1	Control panel USB cable	--	
12	41X0425	1	1	Low voltage power supply	LVPS removal on page 438	
13	41X0398	1	1	Fuser fan	Fuser fan removal on page 434	
14	41X0397	1	1	Main fan	Main fan removal on page 435	
15	41X1906	1	1	Controller board shield	Controller board shield removal on page 475	
16	41X3710	1	1	Front door and paper size sensor cables	--	
NS	41X0719	1	1	Control panel cable kit	--	
NS	41X0575	1	1	TPS cable	--	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	41X0413	1	1	Cable replacement pack: • Output roll motor cable • Paper path motors cable • CMY cartridge motors cable • Fuser motor cable • K cartridge ITM motor cable • Lower path sensors cable • Upper path sensors cable • Fuser DC cable • Input option cables • HVPS cable • LVPS DC cable • Fuser AC cable • AC line in cable • BOR motor cable	--	

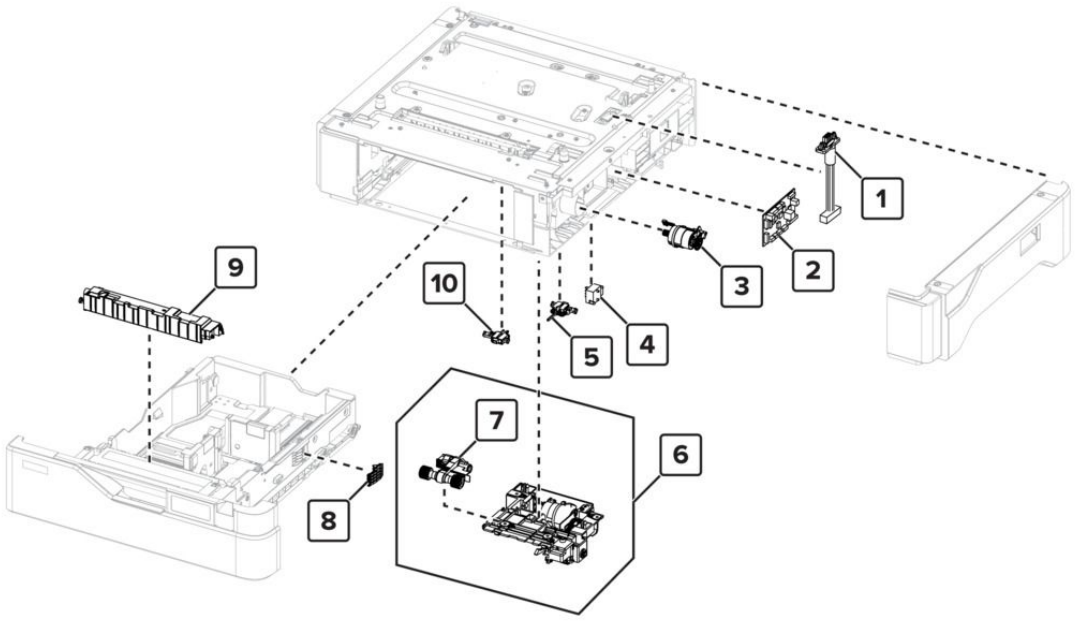
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	41X0418	1	1	Control panel FFC cable	--	
NS	41X0420	1	1	Speaker cable	--	

550-sheet tray option 1



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0271	1	1	550-sheet tray	--	
2	41X0361	1	1	550-sheet tray insert	--	
NS	40X8033	1	1	Lockable tray key	--	

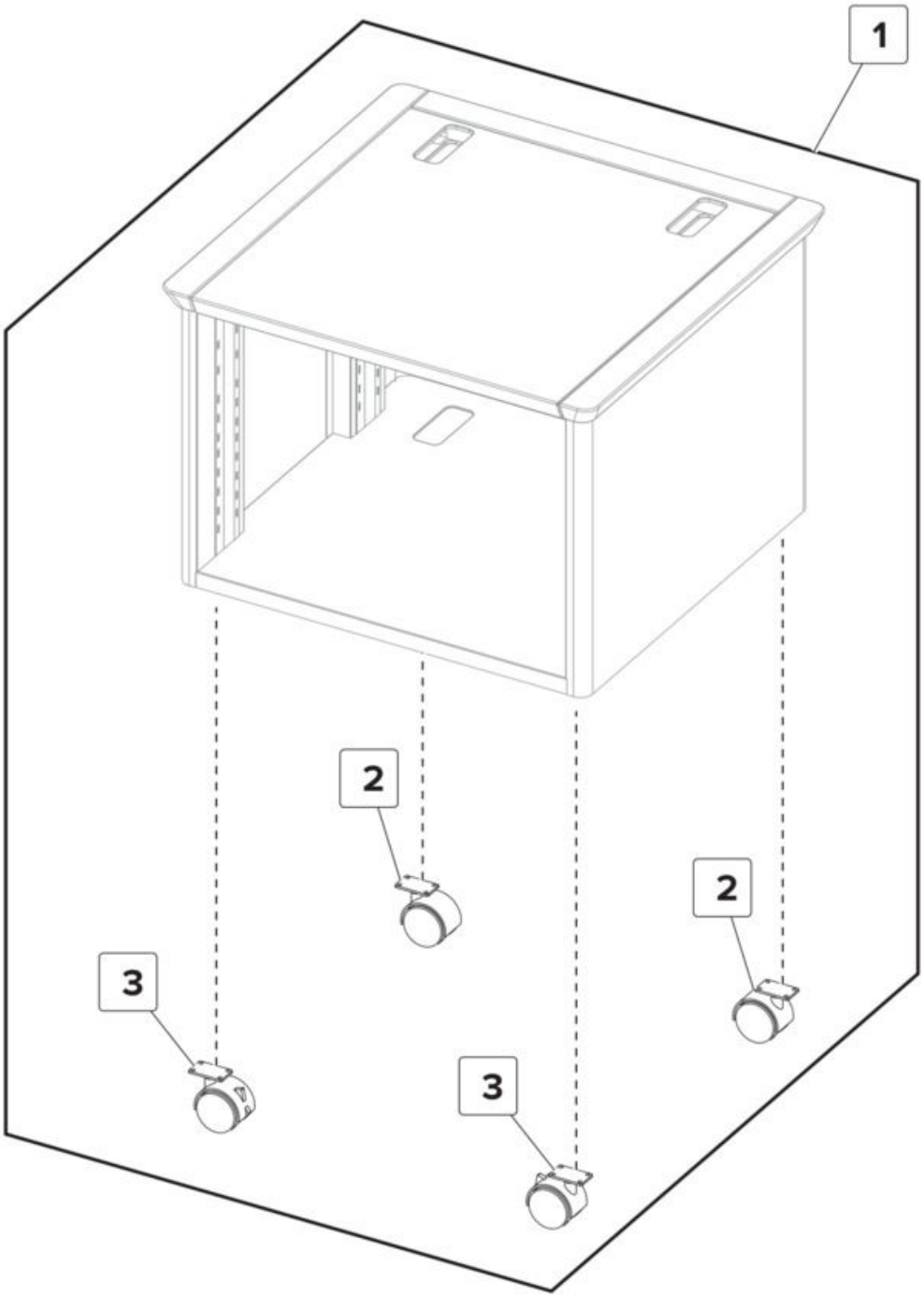
550-sheet tray option 2



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0471	1	1	550-sheet tray interface cable	550-sheet tray interface cable removal on page 500	
2	41X0714	1	1	550-sheet tray controller board	550-sheet tray controller board assembly removal on page 500	
3	41X0466	1	1	Motor (550-sheet tray pass-through)	Motor (550-sheet tray pass-through) removal on page 495	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
4	40X7911	1	1	Sensor (550-sheet tray paper size)	Sensor (550-sheet tray paper size) removal on page 498	
5	41X0468	1	1	Sensor (550-sheet tray trailing edge)	Sensor (550-sheet tray trailing edge) removal on page 498	
6	41X0396	1	1	550-sheet tray paper feeder	550-sheet tray paper feeder removal on page 496	
7	41X0956	1	1	550-sheet tray pick roller	--	
8	41X0373	1	1	550-sheet tray paper size sensor actuator	--	
9	41X0374	1	1	550-sheet tray separator pad	--	
10	41X0334	1	1	Sensor (550-sheet tray pass-through)	Sensor (550-sheet tray pass-through) removal on page 497	

Adjustable stand



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X0764	1	1	Locking caster	--	
2	41X0775	2	1	Nonlocking caster	--	
3	41X0774	2	1	Locking caster	--	

Miscellaneous parts

Asm-index	P/N	Units/mach	Units/FRU	Description	Notes
NS	41X2543	1	1	MarkNet N8370 Wireless Print Server	N/A
NS	40X9652	1	1	Adapter–Fiber gigabit ISP	N/A
NS	41X0028	1	1	DDR3 RAM, (G2) 2GB, 512Mx32, 204 SODIMM, Unbuffered Non-ECC	N/A
NS	41X1011	1	1	Font card, Hebrew	N/A
NS	41X1012	1	1	Font card, Arabic	N/A
NS	41X1013	1	1	Font card, Simplified Chinese	N/A
NS	41X1014	1	1	Font card, Traditional Chinese	**Note:** This part is obsolete.
NS	41X1015	1	1	Font card, Korean	N/A
NS	41X1016	1	1	Font card, Japanese	N/A
NS	41X1002	1	1	Forms bar code card	N/A
NS	41X1006	1	1	Prescribe card	N/A
NS	41X1004	1	1	IPDS SCS TNE card	N/A
NS	41X1010	1	1	Flash card	N/A
NS	40X8671	1	1	Cover kit, removable hard disk drive	N/A
NS	40X9934	1	1	Hard disk drive, 320+ GB	N/A
NS	41X0906	1	1	Screws pack	N/A

Maintenance kits

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	41X0552	1	1	Fuser maintenance kit, type 02, 100 V • Fuser (100 V) • Pick roller • Separator pad	--	
NS	41X0554	1	1	Fuser maintenance kit, type 00, 110–120 V • Fuser (110 V) • Pick roller • Separator pad	--	
NS	41X0556	1	1	Fuser maintenance kit, type 01, 220–240 V • Fuser (220 V) • Pick roller • Separator pad	--	
NS	40X9929	1	1	Transfer module	--	

Power cords

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	40X7104	1	1	US, Canada, Latin America LV	--	
NS	40X0288	1	1	Argentina	--	
NS	40X0259	1	1	Brazil LV	--	
NS	40X0273	1	1	Chile, Uruguay	--	
NS	40X0297	1	1	Bolivia, Peru, Paraguay	--	
NS	40X0301	1	1	Australia, New Zealand	--	
NS	40X3609	1	1	Japan	--	
NS	40X1792	1	1	Korea	--	
NS	40X0303	1	1	PRC	--	
NS	40X1791	1	1	Taiwan	--	
NS	40X0271	1	1	Hong Kong	--	
NS	40X0279	1	1	Philippines, Thailand	--	
NS	40X1767	1	1	Indonesia, Vietnam, Cambodia, Laos	--	
NS	40X1773	1	1	Bangladesh, Nepal, Bhutan	--	
NS	40X0271	1	1	Singapore, Malaysia, Pakistan, Sri Lanka, Myanmar, Brunei, India	--	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	40X1767	1	1	Algeria, Austria, Benelux (Belgium, Luxembourg, Netherlands), Bosnia, Bulgaria, Croatia, Czech Republic, Egypt, Estonia, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Morocco, Poland, Portugal, Romania, Russia (CIS), Serbia, Slovakia, Spain, Turkey	--	
NS	40X1774	1	1	Nordics	--	
NS	40X0275	1	1	Israel	--	
NS	40X1773	1	1	South Africa	--	
NS	40X1772	1	1	Switzerland	--	
NS	40X0271	1	1	UK, Saudi Arabia	--	

Printer specifications

Power consumption

Product power consumption

The following table documents the power consumption characteristics of the product.

Note: Some modes may not apply to your product.

Mode	Description	Power consumption (Watts)
Printing	The product is generating hard-copy output from electronic inputs.	560 (CS720); 680 (CS725); 700 (CX725)
Copy	The product is generating hard-copy output from hard-copy original documents.	N/A
Scan	The product is scanning hard-copy documents.	N/A
Ready	The product is waiting for a print job.	Ready 1: 80 (CS720, CS725); 100 (CX725)
Sleep Mode	The product is in a high-level energy-saving mode.	4 (CS720de, CS720dte, CS725de, CS725dte)
Hibernate	The product is in a low-level energy-saving mode.	1 (CS720de, CS720dte, CS725de, CS725dte)
Off	The product is plugged into an electrical outlet, but the power switch is turned off.	0.2 (CS720de, CS720dte, CS725de, CS725dte)

The power consumption levels listed in the previous table represent time-averaged measurements. Instantaneous power draws may be substantially higher than the average.
Values are subject to change. See www.lexmark.com for current values.

Sleep Mode

This product is designed with an energy-saving mode called **Sleep Mode**. The Sleep Mode saves energy by lowering power consumption during extended periods of inactivity. The Sleep Mode is automatically engaged after this product is not used for a specified period of time, called the **Sleep Mode Timeout**.

Factory default Sleep Mode Timeout for this product (in minutes):	1

By using the configuration menus, the Sleep Mode Timeout can be modified between 1 minute and 120 minutes. Setting the Sleep Mode Timeout to a low value reduces energy consumption, but may increase the response time of the product. Setting the Sleep Mode Timeout to a high value maintains a fast response, but uses more energy.

Hibernate Mode

This product is designed with an ultra-low power operating mode called **Hibernate mode**. When operating in Hibernate Mode, all other systems and devices are powered down safely.
The Hibernate mode can be entered in any of the following methods:

- Using the Hibernate Timeout
- Using the Schedule Power modes
- Using the Sleep/Hibernate button

Factory default Hibernate Timeout for this product in all countries or regions	3 days

The amount of time the printer waits after a job is printed before it enters Hibernate mode can be modified between one hour and one month.

Off mode

If this product has an off mode which still consumes a small amount of power, then to completely stop product power consumption, disconnect the power supply cord from the electrical outlet.

Total energy usage

It is sometimes helpful to calculate the total product energy usage. Since power consumption claims are provided in power units of Watts, the power consumption should be multiplied by the time the product spends in each mode in order to calculate energy usage. The total product energy usage is the sum of each mode's energy usage.

Selecting a location for the printer

When 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.

  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—SHOCK HAZARD
  To avoid the risk of electrical shock, do not place or use this product near water or wet locations.

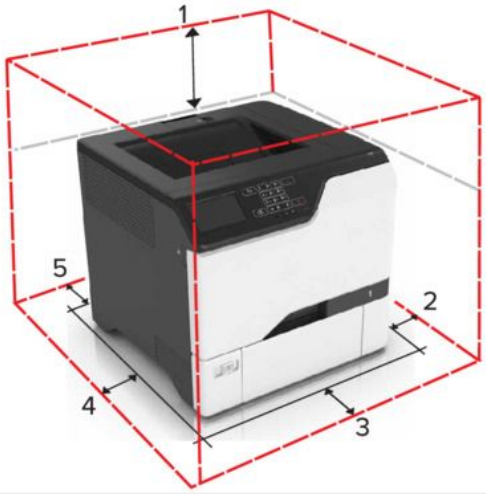
- Make sure that airflow in the room meets the latest revision of the ASHRAE 62 standard or the CEN Technical Committee 156 standard.
- Provide a flat, sturdy, and stable surface.
- Keep the printer:
  - Clean, dry, and free of dust.
  - Away from stray staples and paper clips.

- Away from the direct airflow of air conditioners, heaters, or ventilators.
- Free from direct sunlight and humidity extremes.

- Observe the recommended temperatures and avoid fluctuations:

Ambient temperature	10 to 32.2°C (50 to 90°F)
Storage temperature	-40 to 43°C (-40 to 110°F)

- Allow the following recommended amount of space around the printer for proper ventilation:



1	Top	178 mm (7 in.)
2	Right side	127 mm (5 in.)
3	Front	508 mm (20 in.)
4	Left side	127 mm (5 in.)
5	Rear	76 mm (3 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	54 (one-sided); 55 (two-sided)
Scanning	N/A
Copying	N/A
Ready	16

Values are subject to change. See www.lexmark.com for current values.

Temperature information

Ambient operating temperature	10 to 32.2°C (50 to 90°F)
Shipping temperature	-40 to 43.3°C (-40 to 110°F)
Storage temperature and relative humidity	1 to 35°C (34 to 95°F) 8 to 80% RH

Applicability of Regulation (EU) 2019/2015 and (EU) 2019/2020

Per Commission Regulation (EU) 2019/2015 and (EU) 2019/2020, the light source contained within this product or its component is intended to be used for Image Capture or Image Projection only, and is not intended for use in other applications.

Options and features

Available internal options

- Memory card
  - DDR3 DIMM
  - Flash memory
    - Fonts
  - Application cards
    - Forms and Bar Code
    - PRESCRIBE
    - IPDS
- Lexmark™ Internal Solutions Port (ISP)
  - MarkNet™ N8360 (802.11 b/g/n/a wireless print server bundled with LEX-M06-001 Mobile Solutions Module)
  - IEEE 1284-B Parallel Card
  - RS-232C Serial Card

Installing optional trays

CAUTION—TIPPING HAZARD
Installing one or more options on your printer may require a caster base, furniture, or other feature to prevent instability causing possible injury. For more information on supported configurations, see www.lexmark.com/multifunctionprinters.

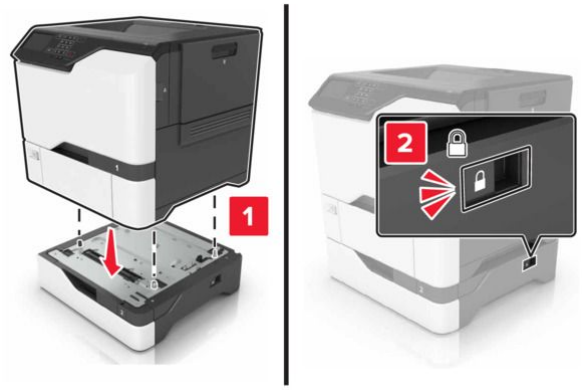
CAUTION—SHOCK HAZARD
To avoid the risk of electrical shock, if you are accessing the controller board or installing optional hardware or memory devices sometime after setting up the printer, then turn the printer off, and unplug the power cord from the electrical outlet before continuing. If you have any other devices attached to the printer, then turn them off as well, and unplug any cables going into the printer.

1. Turn off the printer.
2. Unplug the power cord from the electrical outlet, and then from the printer.
3. Unpack the optional tray, and then remove all packing material.

CAUTION—POTENTIAL INJURY
The printer weight is greater than 18 kg (40 lb) and requires two or more trained personnel to lift it safely. Always use the hand holds on the sides and rear of the printer. Make sure that your fingers are not under the printer when you lift or set the printer down.

Note: If optional trays are already installed, then unlock them from the printer before lifting the printer. Do not try to lift the printer and trays at the same time.

4. Align the printer with the optional tray, and then lower the printer until it clicks into place.



5. Connect the power cord to the printer, and then to the electrical outlet.

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.

6. Turn on the printer.

If necessary, manually add the tray in the print driver to make it available for print jobs. For more information, see Adding available options in the print driver on page 560.

Install the printer and hardware options in the following order:

- Optional 550-sheet tray
- Printer

Adding available options in the print driver

For Windows users

1. Open the printers folder.

2. Select the printer you want to update, and then do either of the following:
    - For Windows 7 or later, select **Printer properties**.
    - For earlier versions, select **Properties**.
3. Navigate to the Configuration tab, and then select **Update Now - Ask Printer**.
4. Apply the changes.

For Macintosh users

1. From System Preferences in the Apple menu, navigate to your printer, and then select **Options & Supplies**.
2. Navigate to the list of hardware options, and then add any installed options.
3. Apply the changes.

Theory of operation

Paper path and transport components

Tray section

Paper size and detection

The paper size is only detected based on the setting of the length guide. The width guides do not provide paper size information to the printer. The length guide can be adjusted to accommodate different paper sizes by moving it to the front or rear of the tray. The length guide should come into contact with the paper and hold it in position. The width guide is designed so that it can adjust to the paper width by moving the guide to the left or right. Both paper guides can be locked to position.

The sensor (550-sheet tray empty) detects paper and the sensor (550-sheet tray paper size) detects the size of paper supplied from each tray assembly. A system of four switches is used to decode the paper size, which is then sent to the controller board.

Paper lift

The sensor (pick roller position) determines if the lift plate in the paper tray is at the optimum position for paper to be properly picked. As paper is fed out, clearance occurs between the paper and the pick rollers. When the sensor determines the specified amount of clearance, the lift plate is raised to position the paper in the optimum position to be picked properly.

Paper pick

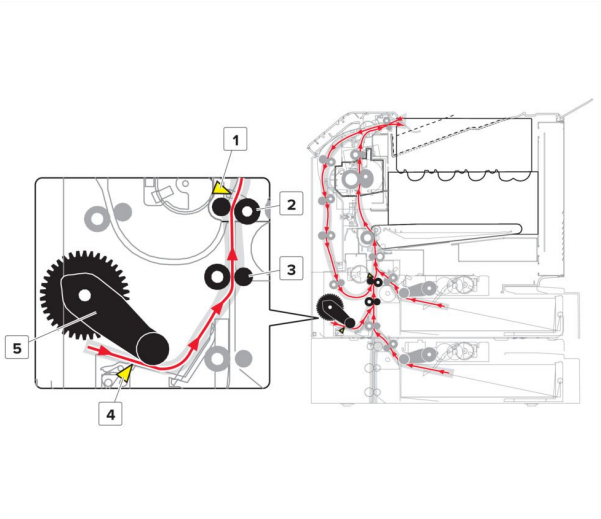
The pick roller assembly is a mechanical unit supplying paper from the tray to the paper path. Three motors move the paper from the tray to the transfer module at the second transfer station. The motor (isolation) feeds the paper from the pick system to the alignment rollers. The leading edge of the paper is aligned to the alignment rollers and then fed into the transfer nip.

The system is timed so that the image is formed and the page is picked to allow the image to be correctly placed on the paper. The sensor (550-sheet tray empty) detects if there is paper present in the tray. If paper is present, the media feeder drives the pick roller which moves the paper from the tray to the isolation unit.

MPF section

The MPF has a sensor (MPF empty) which detects if paper is present. The motor (duplex/MPF) drives the MPF pick assembly. The pick assembly feeds the paper from the MPF tray into the printer through the sensor (MPF/pass-through) and isolator nip at tray 1. The paper is then transported to the aligner roller.

Note: A clutch in the MPF keeps the motor (duplex/MPF) from picking paper when the duplex path is active.



#	Description
1	Sensor (MPF/pass-through)
2	MPF/pass-through roller
3	isolation roller
4	Sensor (MPF empty)
5	MPF pick assembly

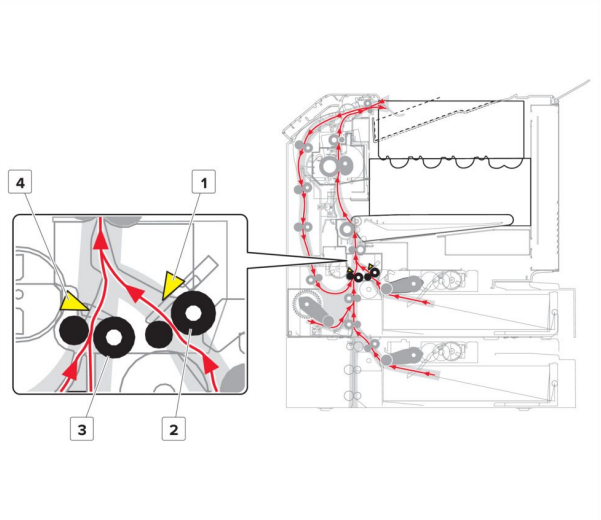
Isolation unit section

The paper enters the isolation unit through one of two paths, each path having its own isolation roller. If the paper is fed from tray 1, the tray 1 isolation nip moves the paper through the isolation housing and into the aligner roller. If the paper is fed from MPF, option tray, or duplex, the alternate isolation roller moves the paper through the isolation housing and into the aligner roller.
The following occurs if the paper does not reach the sensor (tray 1 pick):

- If the paper is fed from the tray and does not reach the sensor, a 241.16 error is generated.

The following occurs if the paper does not reach the sensor (MPF/pass-through):

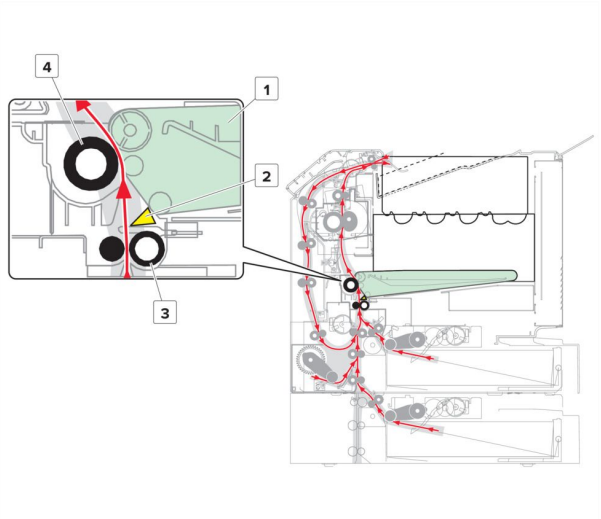
- If the paper is fed from the MPF and does not reach the sensor, a 240.06 error is generated.
- If the paper is fed from an option tray and does not reach the sensor, a 240.x3 error is generated.
- If the paper is fed from the duplex and does not reach the sensor, a 232.x3 error is generated.



#	Description
1	Sensor (tray 1 pick)
2	Tray 1 isolation roller
3	Alternate isolation roller
4	Sensor (MPF/pass-through)

Aligner section

After the paper reaches the sensor (input), or the sensor (MPF/pass-through), a count is started. The paper is pushed up against the aligner rollers to align the leading edge of the paper and form a bubble. After a predetermined count from the sensor (input) is reached, the motor (aligner) turns and moves the paper through the aligner rollers and the sensor (input). The sensor (input) detects the leading edge of the paper and determines the timing from the aligner rollers to the second transfer area, ensuring the proper placement of the image on the paper. Depending on the position of the paper in the paper path, it is fed faster or slower to ensure that the paper and image are properly aligned. The image is then transferred from the belt to the right position on the paper in the second transfer area.

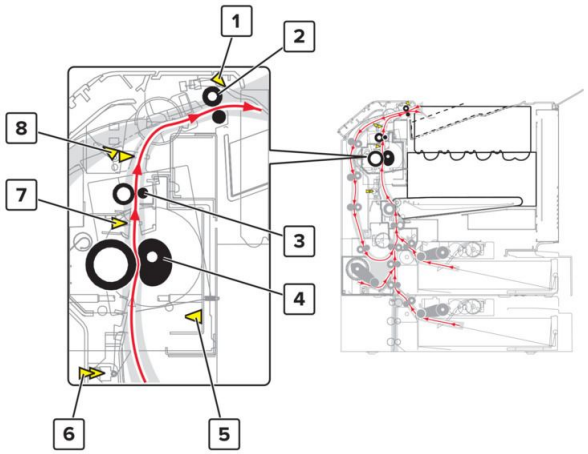


#	Description
1	Transfer belt
2	Sensor (input)

#	Description
3	Aligner roller
4	Transfer roller

Fuser section

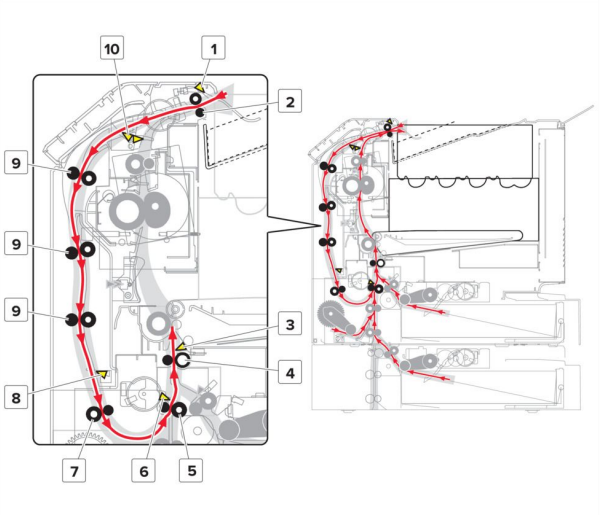
After the second transfer, the paper is fed to the fuser. The paper passes through the sensor (fuser buckle) located before the fuser. The sensor detects the buckle in the paper when it hits the fuser rollers. If the buckle is too great, the motor (fuser) speeds up to avoid causing a paper jam. If the buckle is too small, the motor slows to avoid smearing the image. The sensor (fuser nip) detects if the rollers are holding the paper. At the same location, the sensor (narrow media) is also present. The sensor (narrow media) detects whether narrow paper is being passed through. Depending on the width of the paper detected, a process speed change, fuser temperature change, and print speed change occurs to avoid damaging the fuser. The paper then passes through the fuser where heat and pressure are applied to melt the toner particles and bond them permanently to the paper. As the paper leaves the fuser, the paper passes through the sensor (fuser exit). The sensor (fuser exit) detects fuser wraps and helps prevent wraps to go completely around the belt. The paper then moves through the decurl rollers and passes through the sensor (paper exit). If the print job is one-sided, the paper is passed through the exit rollers and into the output bin. If the print job is duplex, the paper is retracted into the duplex path after the trailing edge passes through the sensor (paper exit) actuator.



#	Description
1	Sensor (bin full)
2	Exit roller
3	Decurl roller
4	Fuser
5	Sensor (fuser nip)
6	Sensor (fuser buckle) / Sensor (narrow media)
7	Sensor (fuser exit)
8	Sensor (paper exit) / Sensor (duplex entry)

Duplex section

After the first side of the paper is printed and the trailing edge of the paper clears the diverter, the diverter drops and the motor (output) engages in reverse. The output roller turns in reverse to retract and feed the paper into the duplex path. The paper goes through the sensor (duplex entry) where the new leading-edge position of the paper is determined. The paper is then moved to the first duplex paper path nip (duplex bottom turn nip) through the three duplex aligner rollers. The duplex aligner rollers are driven by the motor (duplex/MPF) which continuously adjusts its speed as the paper passes through the duplex path to achieve the desired belt image offset at the aligner. After the paper passes through the three aligner rollers, the paper reaches the sensor (duplex staging) where the leading edge of the paper is updated.
After passing the sensor (duplex staging), the duplex aligner roller drives the paper to the isolation nip and to the sensor (MPF/pass-through) where the leading-edge position of the paper is again updated. When the paper reaches the sensor (MPF/pass-through) in the isolation unit, the paper is pushed to the deskew rollers. As the paper reaches the sensor (input) after the registration process, the motor (aligner) adjusts its speed to line up the leading edge exactly with the belt image at the second transfer. After the paper passes through the deskew rollers, it goes through the transfer and fusing process again. The paper is then passed through the exit roller and moved to the output bin.



#	Description
1	Sensor (bin full)
2	Output roller
3	Sensor (input)
4	Deskew roller
5	Alternate isolation roller
6	Sensor (MPF/pass-through)
7	Duplex feed roller
8	Sensor (duplex staging)
9	Duplex aligner roller
10	Sensor (duplex entry)

Print engine theory

Electrophotographic process

The method that all laser and LED printers use to print is called the electrophotographic (EP) process. These machines use differences in charge to manipulate and move toner from the print cartridge to the printed page. Even though the basic EP process is the same for every laser and LED printer, the specifics for each printer are different.

EP process basics

This printer is a four-laser tandem color laser printer that uses four print cartridges (cyan, yellow, magenta, and black) to create text and images on paper.
The printer has a black imaging unit including a developer unit and a photoconductor drum. It also has a color imaging kit including three separate color developers and a combined photoconductor unit with three photoconductor drums.
During the printing process, the printer follows the six basic EP process steps to create its output to the page.

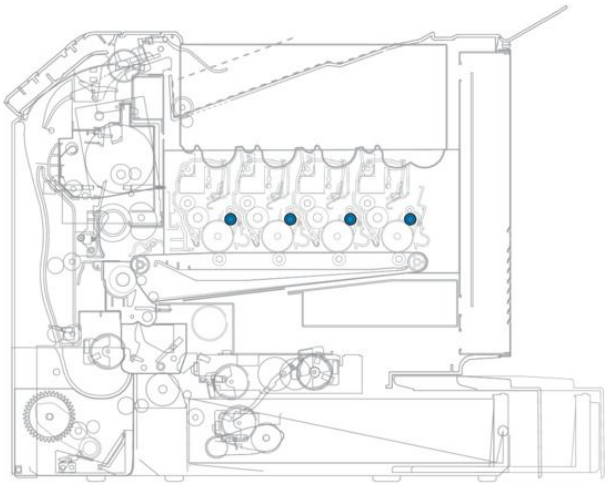
1. Charge the photoconductor.
2. Expose the photoconductor with the laser.
3. Develop toner on the photoconductor.
4. First transfer to the transfer module , and second transfer to the paper.
5. Fuse the toner to the paper.
6. Clean/Erase the photoconductor and the transfer module.

In summary, the printer controller board receives print data and print command. The controller board then initiates the print process. The controller board is the command center for the EP process and coordinates the various motors and signals.
The high-voltage power supply (HVPS) sends charge to various components in the EP process. The laser fires on the photoconductors and alters the surface charge relative to the planed image for each photoconductor. Each photoconductor rotates past its respective developer roll, and toner is developed on the surface of each photoconductor. The four separate color images are then transferred to the transfer belt on the transfer module as it passes under the photoconductors. After the image is transferred to the transfer belt, the photoconductors are cleaned and recharged.
The transfer belt carries the four-colored image towards the transfer rolls. Paper is picked up from the tray and carried to the transfer roll where the image is transferred from the transfer belt to the paper. The timing of the paper pick is determined by the speed of the transfer belt.
The paper is carried to the fuser rollers where heat and pressure are applied to the page to permanently bond the toner to the page. The fuser rollers push the paper into the output bin. The transfer unit is cleaned and the process begins again for the next page.

Step 1: Charge

During the charge step, voltage is sent from the HVPS to the charge roller beside each of the four photoconductors. In this printer, the charge roll is part of the photoconductor unit in the print cartridges.

The charge roller puts a uniform negative charge over the entire surface of the photoconductor to prepare it for the laser beam.



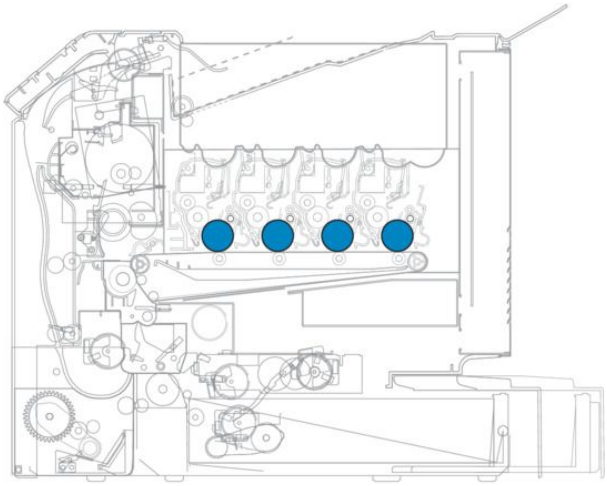
Service tips

- If the surface of the charge roller is damaged (such as a nick or pit), it will cause the charge on the photoconductor to be uneven. This causes a repeating mark on the printed page. Check the service manual for the repeating marks table.
- If the charge roller is severely damaged, the surface of the photoconductor will not be not be properly charged and heavy amounts of toner will be deposited on the photoconductor. This causes the printed page to be saturated with 100% of each color. The imaging kit will need to be replaced sooner.

Step 2: Expose

During the expose step, the laser fires a focused beam of light at the surface of each photoconductor and writes an invisible image, called a latent image or electrostatic image, for each color.

The laser beam only discharges the surface where the beam hits the photoconductor. This creates a difference in charge potential between the exposed area and the rest of the photoconductor surface.



Service tips

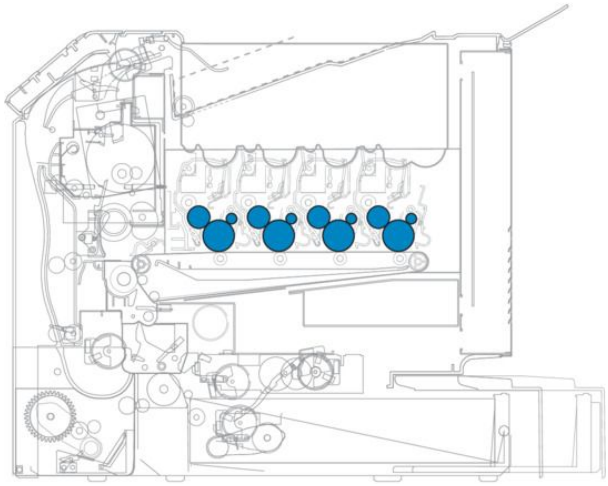
- The laser beam passes through a glass lens as it exits the laser unit. If this lens gets contaminated with toner or other debris, vertical streaking of white/lightness on the page occurs. Cleaning the lens will solve the problem.
- Never touch the surface of the photoconductor with your bare hand. The oil from your skin may cause a charge differential on the surface, and the toner will not properly stick. The result would be repeating blotches of voids/light print on a page, and the photoconductor will have to be replaced.

- The surface of the photoconductor is coated with an organic substance that makes it sensitive to light. Make sure to cover the photoconductor to avoid damage. If it is exposed to light for too long, light/dark print quality problems may occur, and it will have to be replaced.

Step 3: Develop

When the laser exposes the photoconductor, the HVPS sends a charge to the developer roll. For each color, the print cartridge engages the photoconductor so that it is in contact with the surface. Because of the charge difference between the toner on the developer roller and the electrostatic image created by the laser, the toner is attracted to areas of the photoconductor surface exposed by the laser.

This process is similar to using glue to write on a can and then rolling it over glitter. The glitter sticks to the glue but will not stick to the rest of the can.



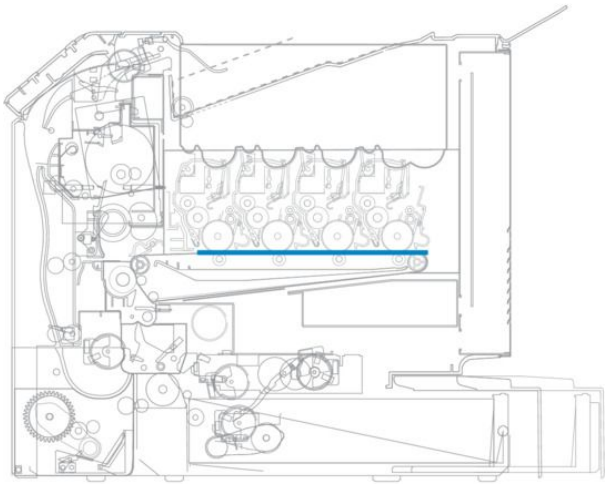
Service tips

- Never touch the surface of the developer roller with your bare hand. The oil from your skin may cause a charge differential on the surface, and the toner will not stick properly. The result would be repeating blotches of voids/light print on a page, and the affected cartridge will have to be replaced.
- If the developer roller is damaged, it will not contact the surface of the photoconductor properly. The result could be repeating marks, thin vertical voids, or thin vertical lines of color on the printed page. Check the surface of the developer for damage.

Step 4a: First transfer

When the latent images are developed on each photoconductor, the HVPS sends voltage to the first transfer rollers inside the transfer module.

The charge difference between the developed toner image on the photoconductor surface and the first transfer roller causes the images to transfer to the surface of the transfer module belt for each color. This takes place by a direct surface-to-surface contact between the photoconductors and the transfer module belt.



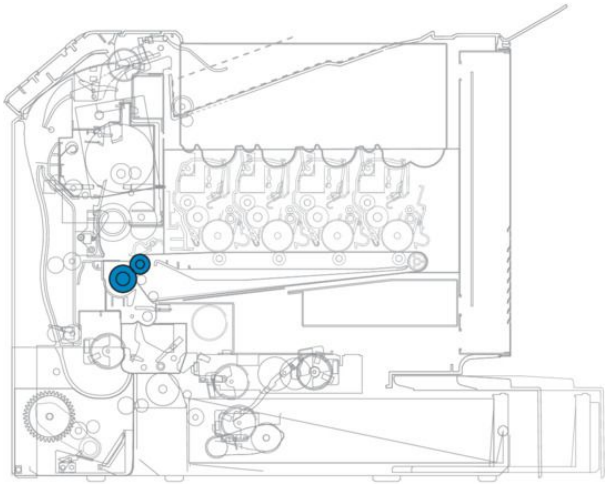
Service tips

- Never touch the surface of the transfer module belt with your bare hand. The oil from your skin will cause a charge differential on the surface, and the toner will not stick properly. The result would be repeating blotches of voids/light print on a page, and the transfer module belt will have to be replaced.
- Do not use solvents or other cleaners to clean the transfer module belt surface. No matter how careful you are, the surface will be compromised, causing scratches or a charge differential that will produce voids or light blotches on the printed page.

Step 4b: Second transfer

When the four planes of color are transferred to the transfer belt from the photoconductors, the image is carried towards the transfer roll, which is also part of the transfer module. Based on the speed of the transfer belt, the proper time to send the signal to pick the paper from an input source is determined. The pick is timed so that the paper passes between the transfer belt and transfer roll when the image on the belt reaches the second transfer area.

The HVPS sends voltage to the transfer roll to create a positive charge. When the image on the transfer belt reaches the transfer roll, the negatively charged toner clings to the paper and the entire image is transferred from the transfer belt to the paper.



Service tips

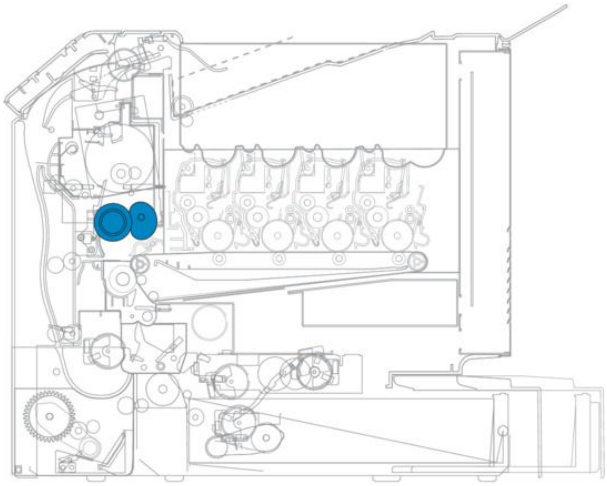
- If the transfer roller has nicks, pits, or flat spots on it, the surface does not come into contact with the paper and transfer unit. This causes voids or light spots on the page or repeating voids/light areas.
- If the transfer roller does not engage the transfer unit, or does not have voltage coming from the HVPS, the toner will not fully transfer from the transfer unit; the entire page will be very light or blank. Any toner

that does transfer will be due to a contact transfer instead of a charge transfer. Check the HVPS contacts to the transfer roller.

Step 5: Fuse

When the image has been fully transferred to the paper, the transfer roll helps move the paper into the fuser area.

The fuser applies heat and pressure to the page to melt the toner particles and bond them permanently to the paper. The fuser moves the paper to the redrive rolls which move the paper to the output bin.



Service tips

- If the fuser rollers are damaged, they can cause toner to be pulled off the page or cause paper jams.
- Toner that rubs off a printed page can be a sign of a malfunctioning fuser or an improper paper setting. Always check the paper type setting before replacing the fuser. A common mistake is to print on heavier media (such as cardstock) with the paper type set to plain paper.
- Never pull unfused toner through the fuser. Try to back the jammed page out of the fuser in the opposite direction it was travelling.

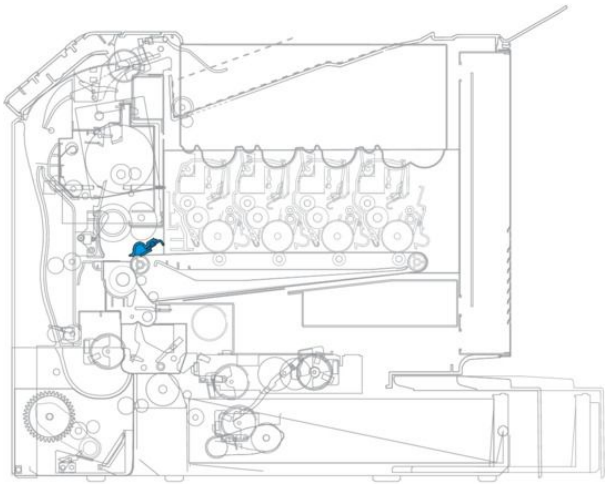
Step 6: Clean/Erase

There are two main cleaning processes that take place during the EP Process. One process cleans the transfer belt, and the other cleans the photoconductors.

Transfer unit clean

When the toner image on the transfer belt has been transferred to the page, the transfer belt rotates around and is cleaned by the cleaning blade. This occurs for every page that is printed.

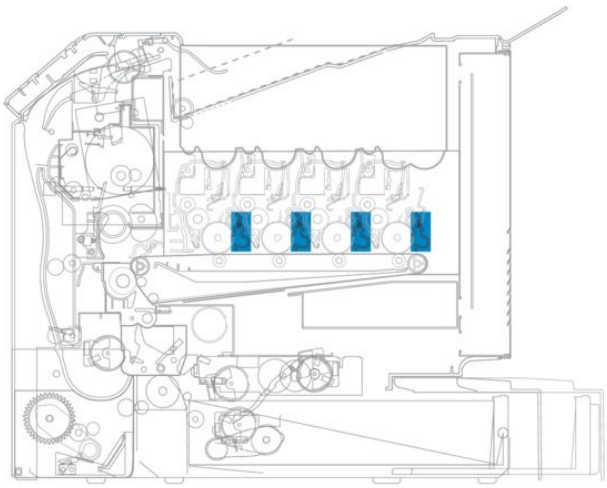
After the toner is moved to the cleaning blade, the toner is moved to the waste toner area using an auger system.



Photoconductor clean/erase

After each plane of color has been transferred to the transfer belt from the photoconductors, a cleaning blade scrapes the remaining toner from the surface of each photoconductor.

Now the photoconductor surface is prepared to restart the EP Process. This cleaning/erasing cycle happens after each plane of color is transferred to the transfer belt.



Color theory

Color theory

What is RGB color?

Red, green, and blue light can be added together in various amounts to produce a large range of colors observed in nature. For example, red and green can be combined to create yellow. Televisions and computer monitors create colors in this manner. RGB color is a method of describing colors by indicating the amount of red, green, or blue needed to produce a certain color.

What is CMYK color?

Cyan, magenta, yellow, and black inks or toners can be printed in various amounts to produce a large range of colors observed in nature. For example, cyan and yellow can be combined to create green. Printing presses,

inkjet printers, and color laser printers create colors in this manner. CMYK color is a method of describing colors by indicating the amount of cyan, magenta, yellow, and black needed to reproduce a particular color.

How is color specified in a document to be printed?

Software programs typically specify document color using RGB or CMYK color combinations. Additionally, they allow users to modify the color of each object in a document. For more information, see the software program Help topics.

How does the printer know what color to print?

When a user prints a document, information describing the type and color of each object is sent to the printer. The color information is passed through color conversion tables that translate the color into the appropriate amounts of cyan, magenta, yellow, and black toner needed to produce the desired color. The object information determines the application of color conversion tables. For example, it is possible to apply one type of color conversion table to text while applying a different color conversion table to photographic images.

Should I use PostScript or PCL emulation? What settings produce the best color?

The PostScript driver is strongly recommended for best color quality. The default settings in the PostScript driver provide the preferred color quality for the majority of printouts.

Why doesn't the printed color match the color I see on the computer screen?

The color conversion tables used in Auto Color Correction mode generally approximate the colors of a standard computer monitor. However, because of technology differences that exist between printers and monitors, there are many colors that can also be affected by monitor variations and lighting conditions.

The printed page appears tinted. Can I adjust the color?

Sometimes a printed page may appear tinted (for example, everything printed seems to be too red). This can be caused by environmental conditions, paper type, lighting conditions, or user preference. In these instances, adjust the Color Balance setting to create a more preferable color. Color Balance provides the user with the ability to make subtle adjustments to the amount of toner being used in each color plane. Selecting positive or negative values for cyan, magenta, yellow, and black (from the Color Balance menu) will slightly increase or decrease the amount of toner used for the chosen color. For example, if a printed page has a red tint, then decreasing both magenta and yellow could potentially improve the color balance.

What is manual color correction?

When manual color correction is enabled, the printer employs user-selected color conversion tables to process objects. However, Color Correction must be set to Manual, or no user-defined color conversion will be

implemented. Manual color correction settings are specific to the type of object being printed (text, graphics, or images), and how the color of the object is specified in the software program (RGB or CMYK combinations).

Note:

- Manual color correction is not useful if the software program does not specify colors with RGB or CMYK combinations. It is also not effective in situations in which the software program or the computer operating system controls the adjustment of colors.
- The color conversion tables—applied to each object when Color Correction is set to Auto—generate preferred colors for the majority of documents.

To manually apply a different color conversion table:

1. From the home screen, touch **Settings > Print > Quality > Advanced Imaging > Color Correction**.
2. Select **Manual**, and then touch **Color Correction Content**.
3. Select the appropriate color conversion table for the affected object type.

Object type	Color conversion tables
RGB Image RGB Text RGB Graphics	• **Vivid**—Produces brighter, more saturated colors and may be applied to all incoming color formats. • **sRGB Display**—Produces an output that approximates the colors displayed on a computer monitor. Black toner usage is optimized for printing photographs. • **Display**—**True Black**—Produces an output that approximates the colors displayed on a computer monitor. Uses only black toner to create all levels of neutral gray. • **sRGB Vivid**—Provides an increased color saturation for the sRGB Display color correction. Black usage is optimized for printing business graphics. • **Off**—No color correction is implemented.
CMYK Image CMYK Text CMYK Graphics	• **US CMYK**—Applies color correction to approximate the SWOP (Specifications for Web Offset Publishing) color output. • **Euro CMYK**—Applies color correction to approximate EuroScale color output. • **Vivid CMYK**—Increases the color saturation of the US CMYK color correction setting. • **Off**—No color correction is implemented.

How can I match a particular color (such as a corporate logo)?

From the printer Quality menu, nine types of Color Samples sets are available. These are also available from the Color Samples page of the Embedded Web Server. Selecting any sample set generates a multiple-page printout consisting of hundreds of colored boxes. Either a CMYK or RGB combination is located on each box, depending on the table selected. The observed color of each box is obtained by passing the CMYK or RGB combination labelled on the box through the selected color conversion table.

To print Color samples from the printer:

1. From the home screen, touch **Settings > Print > Quality > Advanced Imaging > Color Samples > Print Color Samples**.
2. Select the appropriate color conversion table to print.

By examining Color Samples sets, a user can identify the box whose color is the closest to the desired color. The color combination labelled on the box can then be used for modifying the color of the object in a software program. For more information, see the software program Help topics. Manual color correction may be necessary to utilize the selected color conversion table for the particular object.

Selecting which Color Samples set to use for a particular color-matching problem depends on the Color Correction setting being used (Auto, Off, or Manual), the type of object being printed (text, graphics, or images), and how the color of the object is specified in the software program (RGB or CMYK combinations). When the printer Color Correction setting is set to Off, the color is based on the print job information; and no color conversion is implemented.

Note: The Color Samples pages are not useful if the software program does not specify colors with RGB or CMYK combinations. Additionally, certain situations exist in which the software program or the computer operating system adjusts the RGB or CMYK combinations specified in the program through color management. The resulting printed color may not be an exact match of the Color Samples pages.

What are detailed Color Samples and how do I access them?

Detailed Color Samples sets are available only through the Embedded Web Server of a network printer. A detailed Color Samples set contains a range of shades (displayed as colored boxes) that are similar to a user-defined RGBor CMYK value. The likeness of the colors in the set are dependent on the value entered in the RGB or CMYK Increment box.

To access a detailed Color Samples set from the Embedded Web Server:

1. From the home screen, touch **Settings > Print > Quality > Advanced Imaging > Color Samples > Print Color Samples**.
2. Touch **Detailed Options** to narrow the set to one color range.
3. Select the appropriate color conversion table to print.
4. Enter the RGB or CMYK color number.
5. Enter an Increment value from 1–255.

   Note: The closer the value is to 1, the narrower the color sample range will appear.

6. Touch **Print** to print the detailed Color Samples set.

Acronyms

Acronyms

ASIC	Application-specific integrated circuit
BLDC	Brushless DC motor
BOR	Black only retract
C	Cyan
CCD	Charge coupled device
CCP	Carbonless copy paper
CRC	Cyclic redundancy check
CSU	Customer setup
CTLS	Capacitance toner level sensing
DIMM	Dual inline memory module
DRAM	Dynamic random access memory
EDO	Enhanced data out
EP	Electrophotography
EPROM	Erasable programmable read-only memory
ESD	Electrostatic discharge
FFC	Flat flexible cable
FRU	Field replaceable unit
GB	Gigabyte
HCF	High-capacity feeder
HCIT	High-capacity input tray
HCOF	High-capacity output finisher
HVPS	High voltage power supply
K	Black
LAA	Locally Administered Access
LCD	Liquid crystal display
LDAP	Lightweight directory access protocol
LED	Light-emitting diode

LVPS	Low voltage power supply
M	Magenta
MB	Megabyte
MFP	Multi-function product
MPF	Multipurpose feeder
MROM	Masked read only memory
MS	Microswitch
NVM	Nonvolatile memory
NVRAM	Nonvolatile random access memory
OEM	Original equipment manufacturer
OPT	Optical sensor
PC	Photoconductor
pel, pixel	Picture element
POR	Power-on reset
POST	Power-on self test
PSD	Position sensing device
PWM	Pulse width modulation
RIP	Raster imaging processor
ROM	Read only memory
SDRAM	Synchronous dual random access memory
SIMM	Single inline memory module
SRAM	Static random access memory
TMC	Toner meter cycle
TPS	Toner patch sensing
UPR	Used parts return
V ac	Volts alternating current
V dc	Volts direct current
Y	Yellow

Index

A

acronyms 576

adding hardware options
- print driver 560

adding internal options
- print driver 560

additional input tray diagnostics
- motor tests 382
- sensor tests 381

adjustment
- printhead 404
- registration adjustment 406

advanced print quality samples 377

available internal options 559

avoiding jams 27

avoiding paper jams 90

B

blurred print 49

C

card stock
- tips 28

change history 16

cleaning
- exterior of the printer 524
- interior of the printer 524
- main tray duplex turnaround 525
- printhead lenses 524

cleaning the machine 520

cleaning the printer 524

color theory 572

configuration file
- exporting 397
- importing 397

configurations
- printer models 25

configuring the door interlock bypass jumpers 374

connectors
- controller board 505
- LVPS controller board 516

contacting customer support 369

control panel
- critical information 392

using 370

controller board

critical information 392

customer support

contacting 369

D

data security notice 38

diagnostics menu

accessing 375

E

electrophotographic process 567, 567

electrostatic-sensitive parts 392

embedded solutions 403

emission notices 557

envelopes

tips on using 27

EP process 567

error codes

100 error messages 260

102 error messages 267

110 error messages 269

120 error messages 271

121 error messages 273

126 and 127 error messages 280

128 error message 283

142 error messages 284

144 error messages 286

145 error messages 289

147 error messages 291

149 error messages 293

150 and 160 error messages 294

151 error messages 296

153 error messages 299

161 error messages 301

162 error messages 301

163 and 164 error messages 302

166–168 error messages 306

17y error messages 310

200 paper jam messages 98

201 paper jam messages 108

202 paper jam messages 110

203 paper jam messages 121

211 paper jam messages 123

221 paper jam messages 125

230 paper jam messages 126

231 paper jam messages 135

232 paper jam messages 145

240 paper jam messages 153

241 paper jam messages 171

242 paper jam messages 187

243 paper jam messages 190

244 paper jam messages 192

621 error messages 314

647 error messages 315

649 error messages 315

650 error messages 316

653 error messages 316

660 error messages 317

661–665 error messages 317

71 232

985 error messages 340

ESD-sensitive parts 392

eSF solutions 403

event log

display log 376

mark log 376

print log 376

print log summary 376

exporting configuration file 397

exterior of the printer

cleaning 524

F

finding

serial number 25

firmware card 559

flashing the printer firmware 402

flashing the printer firmware

using winbidi 402

fuser

identifying the fuser type 523

H

hardware options

trays 559

hardware options, adding

print driver 560

home screen buttons

using 371

I

importing configuration file 397

indicator light

printer status 371

Inspection guide 520

interior of the printer

cleaning 524

internal options 559

internal options, adding

print driver 560

invalid code, fixing 387

invalid engine mode
accessing 387

J

jam, clearing
multipurpose feeder 94
trays 92

jams
avoiding 90
locating jam areas 92
locations 92

jams, clearing
in the duplex unit 95
in the fuser 95

L

labels, paper
tips 28

locations
motor 518
sensor 519

M

maintenance counter 523

maintenance kit
resetting the counter 523

maintenance kits 521

memory card 559

menus
Configuration Menu 382
diagram of 373

menus diagram 373

misaligned color 49

motor
pass through 309

moving the printer 556

N

noise emission levels 557

Non-Lexmark supply 224

notices 556, 556, 555, 555, 556, 557, 558

O

options
firmware cards 559
memory card 559

P

paper
characteristics 26
selecting 27
storing 27, 26

paper characteristics 26

paper jam clearing
standard bin 94
paper jam in door A 95
paper jam in the multipurpose feeder 94
paper jam in the standard bin 94
paper jam in trays 92
paper jam, clearing
multipurpose feeder 94
trays 92
paper jams
avoiding 90
paper jams, clearing
in the duplex unit 95
in the fuser 95
paper path
aligner section 564
duplex section 566
fuser section 565
isolation unit section 563
MPF section 562
tray section 562
paper sizes
supported 29
paper types
supported 30
paper weights
supported 30
parts catalog legend 526
POR sequence 34
power button light
printer status 371
power-on reset sequence 34
print driver
hardware options, adding 560
print quality
initial check 41
print quality troubleshooting
background or gray background 43
blank or white pages 45
blurred print 49
dark print 67
gapping or half color page 48
ghost images 57
horizontal colored lines or banding 51
image void process direction 65
image void scan direction 63
light print 79
misaligned color 49
mottled print and dots 53

random marks 78

solid color or black image 60

text or images cut off 53

toner easily rubs off 41

uneven print density 74

vertical colored lines or banding 62

vertical white lines 56

printer

basic model 504

fully configured 504

minimum clearances 556

moving 556

selecting a location 556

printer configurations 504

printer diagnostics

input tray quick print 377

printer diagnostics & adjustments

motor tests 379

sensor tests 379

printer diagnostics and adjustments

add-on cards tests 381

color alignment adjust 380

fuser temperature 381

memory tests 380

printhead diagnostics 381

registration adjust 380

supply reset 380

weather station 381

printer messages

Non-Lexmark supply 224

printer models

configurations 25

printer setup

engine setting [x] 378

EP setup 379

model name 378

permanent page count 378

printed page count (color) 377

printed page count (mono) 377

process ID 378

serial number 378

printhead lenses

cleaning 524

R

recovery mode

accessing 386

removal

control panel front cover 419

controller board 477

duplex inner guide 427

tensioner belt 428

removal procedures

tips 408

removals

550-sheet tray controller board assembly 500

550-sheet tray empty sensor actuator 501

550-sheet tray interface cable 500

550-sheet tray right cover 494

550-sheet tray paper feeder 496

aligner idler gears 489

bezel 422

control panel arms 423

control panel base cover 425

controller board shield 475

deskew roller 467

developer hold down 483

diverter 472

duplex outer guide 426

EP gear box 436

front cover 409

front cover hinges 487

fuser 459

fuser fan 434

high voltage power supply (HVPS) 448

imaging unit cover 453

inner controller board shield 476

isolation unit 490

left cover 413

LVPS 438

LVPS cage 440

main fan 435

media feeder 492

Motor (550-sheet tray pass-through) 495

motor (black only retract) 442

motor (deskew) 434

motor (duplex/MPF) 446

motor (EP drive) 431

motor (fuser) 447

motor (output) 433

motor cover 415

number pad cover 422

output bin exit cover 486

output bin flag 487

output roll 484

paper out actuator spring 493

pivot shaft 428

power cable 432

printhead 480

redrive guide 474

right cover 414

secure element SIM card 479

sensor (550-sheet tray empty) 502

sensor (550-sheet tray index) 502

sensor (550-sheet tray paper size) 498

sensor (550-sheet tray pass-through) 497

sensor (550-sheet tray trailing edge) 498

sensor (duplex) 429

sensor (fuser buckle and narrow media) 430

sensor (input) 466

sensor (media type) 465

sensor (MPF paper present) 451

sensor (paper size) 444

sensor (redrive) 474

sensor (TPS) 453

sensor (waste toner contact) 445

sensor (weather station) 443

speaker 424

TMC card 446

toner cartridge contacts 456

toner door 417

toner door mount 418

toner door mount bracket 418

top cover 411

TPS cable 478

TPS sled 455

TPS wiper 458

TPS wiper mechanism 457

transfer module 460

transfer module guide rail 461

tray rail 488

waste toner bottle idler gear 452

reports

device settings 377

installed licenses 377

resetting

supply usage counters 224

resetting the printer

without admin credentials 35

resetting the supply usage counters 224

restoring

configuration file 396

license file 396

restoring configuration 393

RFID menu settings

setting combination 367

ribbon cables 404

S

schedule for Inspection 520

scheduled maintenance 521

security reset jumper

using 36

selecting a location for the printer 556

selecting paper 27

service checks troubleshooting
  900 service error messages 323
  913.xx error code check 330
  91y service error messages 328
  938 service error messages 331
  95y service error messages 332
  96y service error messages 336
  97y service error messages 337
  980–984 service error messages 339
  99y service error messages 342
  network service check 352
  usb service check 356

service engineer (SE) menu
  accessing 387
  general SE 388
  network SE 388

setting combination
  printer behavior 367

storing
  paper 27

supply reset
  fuser reset 380
  ITM reset 380

supply usage counters
  resetting 224

supported paper sizes 29

supported paper types 30

supported paper weights 30

symptoms
  printer 343

T

tips
  card stock 28
  labels, paper 28
  on using envelopes 27

tips on using envelopes 27

tools, required 31

trays
  installing 559

troubleshooting
  initial check 34

troubleshooting, hardware errors
  fuser temperature error 277

troubleshooting, print quality
  background or gray background 43
  blank or white pages 45

blurred print 49

dark print 67

gapping or half color page 48

ghost images 57

horizontal colored lines or banding 51

image void process direction 65

image void scan direction 63

light print 79

misaligned color 49

mottled print and dots 53

random marks 78

solid color or black image 60

text or images cut off 53

toner easily rubs off 41

uneven print density 74

vertical colored lines or banding 62

vertical white lines 56

troubleshooting, service checks

900 service error messages 323

913.xx error code check 330

91y service error messages 328

938 service error messages 331

95y service error messages 332

96y service error messages 336

97y service error messages 337

980–984 service error messages 339

99y service error messages 342

network service check 352

usb service check 356

U

understanding the status of the power button and indicator light 371

user attendance messages

31 user attendance error messages 225

32 user attendance error messages 226

33 user attendance error messages 227

42 user attendance error messages 230

43 user attendance error messages 232

80 user attendance error messages 234

82 user attendance error messages 235

83 user attendance error messages 237

84 user attendance error messages 237

85 user attendance error messages 238

88 user attendance error messages 239

non-supply user attendance error messages 241

using the control panel 370

using the home screen 371

using the service restore tool 393

Service Manual