



LexmarkTM

CX725, CX727, XC4140, XC4143, XC4150, XC4153 MFPs

**7528-1A9, -196, -5A6, -576, -5A8, -578,
-5A9, -598**

Service Manual

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Product information

Product name:

Lexmark CX725, CX727, XC4140, XC4143, XC4150, XC4153 MFPs

Machine type:

7528

Model(s):

1A9, 196, 5A6, 576, 5A8, 578, 5A9, 598

Edition notice

June 23, 2021

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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-buikbare printkopenheid. 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 bølglængdeområdet 650–670 nanometer og indbygget i en printhovedenhed, der ikke er servicebar. 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.



CAUTION—ROTATING FAN BLADES: Indicates a risk of laceration from moving fan blades.

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, 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.

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.

Informació de seguretat


- La seguretat d'aquest producte es basa en les proves i les homologacions del disseny original i dels components específics. El fabricant no és responsable de la seguretat en el cas d'ús de peces de recanvi no autoritzades.
- La informació de manteniment d'aquest producte s'ha preparat per a l'ús d'un professional tècnic i no per a l'ús d'altres persones.
- És possible que el risc de descàrrega elèctrica i lesions personals augmenti durant el desmuntatge i les tasques de manteniment d'aquest producte. El professional tècnic ha de comprendre aquest risc i prendre les precaucions necessàries.


 **PRECAUCIÓ. PERILL DE DESCÀRREGA ELÈCTRICA:** Quan vegeu aquest símbol, indica que hi ha un perill de voltatge elevat en l'àrea del producte on esteu treballant. Desconnecteu el producte abans de començar o tingueu precaució si el producte ha de rebre alimentació per realitzar la tasca.

 **PRECAUCIÓ. POSSIBLES DANYS:** La bateria de liti d'aquest producte no ha estat dissenyada perquè se substitueixi. Hi ha perill d'explosió si no es substitueix correctament la bateria de liti. No recarregueu, desmunteu o incinereu una bateria de liti. Desfeu-vos de les bateries de liti usades d'acord amb les instruccions del fabricant i les regulacions locals.

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, existe peligro de tensiones peligrosas en el área del producto en la que está trabajando. Desconecte el producto antes de empezar o tenga cuidado si el producto debe recibir alimentación a fin de realizar la tarea.

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

Informações sobre segurança

- A segurança deste produto é baseada em testes e aprovações do design original e de componentes específicos. O fabricante não é responsável por segurança em caso de uso não autorizado de peças de substituição.
- As informações sobre manutenção deste produto foram preparadas para utilização por um técnico profissional experiente e não se destinam ao uso por outros.
- Pode haver maior risco de choque elétrico e danos pessoais durante a desmontagem e manutenção deste produto. Os técnicos profissionais experientes devem entender esses riscos e tomar as precauções necessárias.

 **ATENÇÃO—RISCO DE CHOQUE:** Se você vir este símbolo, existe perigo de tensão elétrica na área do produto onde está trabalhando. Desligue o produto antes de começar ou tenha cuidado se o produto precisar receber energia para executar a tarefa.

 **ATENÇÃO—RISCO DE FERIMENTO:** A bateria de lítio neste produto não deve ser substituída. Existe o risco de explosão se uma bateria de lítio for substituída incorretamente. Não recarregue, desmonte nem incinere uma bateria de lítio. Descarte as baterias de lítio usadas de acordo com as instruções do fabricante e regulamentos locais.

Informazioni sulla sicurezza

- La sicurezza di questo prodotto è basata sui test e sulle approvazioni del design originale e dei componenti specifici. Il produttore non è responsabile della sicurezza in caso di utilizzo di parti di ricambio non autorizzate.

- Le informazioni di manutenzione per questo prodotto sono state predisposte per essere utilizzate da un tecnico dell'assistenza professionale e non sono state previste per l'uso da parte di altre persone.
- È possibile che vi sia un maggior rischio di scosse elettriche e lesioni personali durante lo smontaggio e la manutenzione di questo prodotto. Il personale dell'assistenza deve comprendere questo rischio e prendere le precauzioni necessarie.



ATTENZIONE - PERICOLO DI SCOSSE ELETTRICHE: Questo simbolo indica la presenza di un rischio per tensioni pericolose nell'area del prodotto in cui si lavora. Scollegare l'alimentazione prima di iniziare, o prestare la massima attenzione se per effettuare l'operazione il prodotto deve ricevere l'alimentazione.



ATTENZIONE - PERICOLO DI LESIONI: La batteria al litio contenuto nel prodotto non deve essere sostituita: in caso di sostituzione errata della batteria al litio, potrebbe verificarsi un'esplosione. Non ricaricare, smontare o bruciare batterie al litio. Smaltire le batterie al litio usate seguendo le istruzioni del produttore e le norme locali.

Informatie over veiligheid

- De veiligheid van dit product is gebaseerd op testen en goedkeuringen van het oorspronkelijke ontwerp en specifieke onderdelen. De fabrikant is niet verantwoordelijk voor de veiligheid bij gebruik van ongeautoriseerde vervangende onderdelen.
- De informatie over het onderhoud van dit product is opgesteld voor gebruik door een professionele onderhoudsmonteur en is niet bedoeld voor gebruik door anderen.
- Tijdens demontage en onderhoud van dit product bestaat mogelijk een hoger risico op elektrische schokken en lichamelijk letsel. Professionele onderhoudsmonteurs dienen op de hoogte te zijn van dit risico en de noodzakelijke voorzorgsmaatregelen te nemen.



LET OP: GEVAAR VOOR ELEKTRISCHE SCHOKKEN: Wanneer u dit symbool ziet, bestaat er een gevaar voor gevaarlijke spanning in het gebied van het product waaraan u werkt. Haal de stekker van het product uit het stopcontact voordat u begint, of let extra goed op als het product stroom nodig heeft om een taak te kunnen uitvoeren.




LET OP: RISICO OP LETSEL: De lithiumbatterij in dit product moet niet worden vervangen. Wanneer de lithiumbatterij niet juist wordt vervangen, bestaat er explosiegevaar. Probeer nooit lithiumbatterijen op te laden, open te maken of te verbranden. Gooi gebruikte lithiumbatterijen weg volgens de aanwijzingen van de fabrikant en houd hierbij de plaatselijke regelgeving in acht.

Sikkerhedsoplysninger

- Sikkerheden for dette produkt er baseret på afprøvning og godkendelser af det oprindelige design og specifikke komponenter. Producenten er ikke ansvarlig for sikkerhed i tilfælde af brug af uautoriserede dele til udskiftning.
- Vedligeholdelsesoplysninger om dette produkt er udarbejdet til brug af en kvalificeret servicetekniker og er ikke beregnet til at blive brugt af andre.
- Der kan være en forøget risiko for elektrisk stød eller personskade ved afmontering og service af dette produkt. Professionelt servicepersonale bør forstå denne risiko og tage nødvendige forholdsregler.





FORSIGTIG - ELEKTRISK STØD: Når du ser dette symbol, er der risiko for elektrisk spænding i nærheden af produktet, hvor du arbejder. Tag strømtikket ud inden du begynder, eller udvis forsigtighed, hvis produktet skal modtage strøm for at udføre opgaven.

-  **FORSIGTIG - RISIKO FOR SKADE:** Litium-batteriet i dette produkt er ikke beregnet til at blive udskiftet. Der er fare for eksplosion, hvis et litium-batteri udskiftes forkert. Du må ikke genoplade, demontere eller afbrænde et litium-batteri. Brugte litium-batterier skal bortskaffes i overensstemmelse med producentens instruktioner og lokale retningslinjer.

Sicherheitshinweise


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


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

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

Turvallisuusohjeet


- Tämän laitteen turvallisuus perustuu alkuperäisen rakenteen ja tiettyjen osien testaukseen ja hyväksymiseen. Valmistaja ei vastaa turvallisuudessa, jos laitteessa on käytetty luvattomia vaihto-osia.
- Tämän tuotteen huoltoa koskevat tiedot on tarkoitettu vain ammattitaitoisen huoltohenkilön käyttöön.
- Tämän tuotteen purkamiseen ja huoltoon voi liittyä kasvanut sähköiskun tai henkilövahingon vaara. Ammattitaitoisen huoltohenkilön on ymmärrettävä tämä vaara ja toimittava sen edellyttämällä tavalla.


 **HUOMIO – SÄHKÖISKUN VAARA:** Tämä symboli ilmaisee, että tuotteen työskentelyalueella on olemassa vaarallinen jännite. Irrota laite verkkovirrasta ennen kuin aloitat tai toimi erittäin varovasti, jos laitteessa on oltava virta työn aikana.

 **HUOMIO – TAPATURMAN MAHDOLLISUUS:** Tuotteessa olevaa litiumakkua ei ole tarkoitettu vaihdettavaksi. Litiumakun poistaminen väärin aiheuttaa räjähdysvaaran. Älä lataa, pura tai polta litiumakkua. Hävitä käytetyt litiumakut valmistajan ohjeiden ja paikallisten säädösten mukaisesti.

Sikkerhetsinformasjon


- Sikkerheten til dette produktet er basert på testing og godkjenning av originaldesignet og bestemte komponenter. Produsenten er ikke ansvarlig for sikkerheten ved bruk av uautoriserte reservedeler.
- Vedlikeholdsinformasjonen for dette produktet er tilrettelagt for bruk av profesjonelt servicepersonale, og er ikke ment for bruk av andre.
- Det kan være en økt risiko for elektrisk støt og personskade under demontering og vedlikehold av produktet. Profesjonelt servicepersonell må være innforstått med denne risikoen og ta nødvendige forholdsregler.


 **FORSIKTIG – FARE FOR STØT:** Dette symbolet betyr at det er fare for farlig spenning i det området av produktet der du arbeider. Koble fra produktet før du begynner, eller vær forsiktig hvis produktet må ha strøm for å kunne utføre oppgaven.

 **FORSIKTIG – POTENSIELLE SKADER:** Litiumbatteriet i dette produktet er ikke beregnet for å byttes. Det er fare for eksplosjon hvis litiumbatteriet skiftes ut på feil måte. Ikke lad opp, demonter eller destruer et litiumbatteri. Kast brukte litiumbatterier i henhold til produsentens instruksjoner og lokale regelverk.

Säkerhetsinformation


- Säkerheten för denna produkt baseras på tester och godkännanden av ursprungsdesignen och av specifika komponenter. Tillverkaren har inget ansvar vid användning av oauktoriserade reservdelar.
- Underhållsinformationen för produkten är avsedd att användas av utbildade servicetekniker och inte avsedd att användas av andra.
- Risken för elektriska stötar och personskador kan vara förhöjd vid isärtagning och service av produkten. Professionell servicepersonal bör vara medvetna om denna risk och vidta nödvändiga försiktighetsåtgärder.


 **VAR FÖRSIKTIG– RISK FÖR ELEKTRISK STÖT:** När du ser denna symbol är det risk att det finns farlig spänning i den del av produkten du arbetar med. Koppla från strömmen innan du börjar, eller var försiktig om produkten måste vara strömförsörjd för att uppgiften ska kunna utföras.

 **VAR FÖRSIKTIG – RISK FÖR SKADA:** Litiumbatteriet i produkten är inte utbytbart. Om ett litiumbatteri byts ut på fel sätt finns det risk att det exploderar. Du får inte ladda om, ta isär eller elda upp ett litiumbatteri. Gör dig av med använda litiumbatterier enligt tillverkarens instruktioner och lokala föreskrifter.

安全情報


- 本製品の安全性は、本来の設計、特定コンポーネントの試験、承認に基づいています。承認されていない交換部品をお客様が使用した場合、メーカーは安全性に対して責任を負いません。
- 本製品のメンテナンス情報は、専門のサービス担当者による利用を目的としており、その他の人を対象としていません。
- 本製品の分解や保守サービスを行う場合は、感電や傷害の危険性があります。専門のサービス担当者はこの危険性を理解し、十分な対策を講じる必要があります。


 **注意—感電危険:** この表記がある場合、対象製品の作業領域には、高電圧による危険性が生じています。作業を始める前に、製品から電源コードを取り外してください。また作業時に、製品に給電する必要がある場合は、十分に注意するようにしてください。

 **注意—傷害の恐れあり:** この製品に使用されているリチウム電池は、交換を前提としていません。リチウム電池の交換を誤ると破裂する危険性があります。リチウム電池の充電、解体、焼却はしないでください。使用済みのリチウム電池を廃棄する際は、製造元の指示およびお使いの地域の法律に従ってください。

안전 정보


- 이 제품의 안전은 기본 디자인 및 특정 구성품의 승인 및 테스트를 기반으로 합니다. 제조업체는 권한 없는 교체 부품 사용 시 안전에 대해 책임을 지지 않습니다.
- 이 제품의 유지관리 정보는 전문 서비스 요원을 대상으로 하며 다른 사람은 사용할 수 없습니다.
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 **주의—감전 위험:** 이 기호가 표시된 경우 작업 중인 제품 주변에서 위험 전압 위험이 있습니다. 사용 전/후에 전원 코드를 뽑아 두시고 제품에서 작업을 수행하는 데 반드시 전원이 필요한 경우에는 주의하여 사용하십시오.

 **주의—상해 위험:** 이 제품에 들어 있는 리튬 배터리는 교체할 수 없습니다. 리튬 배터리를 잘못 교체하면 폭발할 위험이 있습니다. 리튬 배터리를 충전, 분해하거나 불에 태우지 마십시오. 제조업체의 지침과 지역 규정에 따라 다 쓴 리튬 배터리를 폐기하십시오.

安全信息


- 本产品的安全性以原始设计和特定组件的测试和审批为基础。如果使用未经授权的替换部件，制造商不对安全性负责。
- 本产品的维护信息仅供专业服务人员使用，并不打算由其他人使用。
- 本产品在拆卸和维修时，遭受电击和人员受伤的危险性会增高。专业服务人员对这点必须有所了解，并采取必要的预防措施。


 **小心—电击危险:** 当您看到此符号时，在您工作的产品区域内存在危险电压的威胁。在您开始操作之前请拔掉产品电源，如果产品必须接收功率才能执行任务，请务必谨慎操作。

 **小心—可能的伤害:** 本产品中的锂电池不可更换。如果不正确更换锂电池，可能会有爆炸危险。不要再充电、拆解或焚烧锂电池。丢弃旧的锂电池时应按照制造商的指导及当地法规进行处理。


安全資訊


- 本產品安全性係以原始設計及特定元件之測試與核准為依據。如有使用未獲授權替換組件之情形者，製造商對安全性概不負責。
- 本產品之維護資訊僅供專業維修人員使用，而非預定由他人使用。
- 拆裝及維修本產品時，有可能造成電擊與人員損傷之危險。專業維修人員應瞭解前項危險並採取必要措施。


 **請當心—觸電危險:** 當您看到此符號時，表示您所在產品工作區有危險電壓。開始工作之前，請先拔掉產品電源線，若產品必須接上電源方能執行作業，用電時請務必小心。


 **請當心—潛在受傷危險性:** 本產品中的鋰電池原本並不需要予以更換。若未正確更換鋰電池，可能會有爆炸的危險。請勿將鋰電池充電、拆裝或焚燒。請遵照製造商的指示及當地法規，丟棄用過的電池。

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.

Change history

Change history

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 254](#).

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 551](#)).
- Updated the Hard disk failure service check topic in the Diagnostics and troubleshooting chapter ([“Hard disk failure service check” on page 207](#)).

November 18, 2020

- Updated the Paper path 1 assembly in the Parts catalog chapter.

October 21, 2020

- Updated the description for PN 41X0572 in the Parts catalog chapter.
- Replaced the Control panel tub mounting bracket part name with Control panel pivot gear in the Parts removal chapter.

October 6, 2020

- Added the XC4143 and XC4153 models in the Printer model configurations topic in the General information chapter.
- Added the following parts in the Control panel topic in the Parts catalog chapter:
 - PN 41X2856 - Lower control panel bezel (XC4143)
 - PN 41X2857- Lower control panel bezel (XC4153)
- Added the XC4153 model in the Inspection guide topic in the Maintenance chapter.
- Added the XC4143 and XC4153 model in the Wiring diagrams.

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.

March 17, 2020

- Added the Entering recovery mode topic in the Service menus chapter.
- Changed PN 41X0874 to 41X0875 in the Control panel topic in the Parts catalog chapter.
- Added PN 41X0874 (Lower control panel bezel (blank)) in the Control panel topic in the Parts catalog chapter.

November 5, 2019

- Added the 7528-5A6, 7528-5A8, 7528-1A9, and 7528-5A9 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

- Added rows to the tables and deleted from them in the topic “121 error messages” in the “Diagnostics information” chapter.
- 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.

October 15, 2018

- Updated the Units/FRU values of the following PNs in the Parts catalog chapter:
 - 41X0567
 - 41X0372

October 5, 2018

- Updated the following topics in the Parts removal chapter:
 - Control panel FFC cable removal
 - Scanner tilt removal
 - Top cover removal

September 14, 2018

- Added the Control panel FFC cable removal topic in the Parts removal 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 2, 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 41X1907 (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 23, 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 72.](#)
- Updated [“Control panel” on page 541.](#)

August 31, 2017

- Updated the [“Fuser removal” on page 431](#) and [“Transfer module removal” on page 432](#) in the Parts removal chapter.
- Updated the [“Sensor \(input\): Paper failed to arrive service check” on page 92](#) in the Diagnostics and troubleshooting chapter.

August 22, 2017

- Created this error code table for 621 error, [“621 error messages” on page 248.](#)
- Updated [“Left cover removal” on page 358](#) to add a note at the beginning of the removal procedure.
- Updated [“Missing toner, developer, or photoconductor service check” on page 183.](#)
- Updated [“Sensor \(duplex path 1\): Paper failed to arrive service check” on page 111.](#)

June 27, 2017

- Added “CX727” in the cover.
- Added “CX727de” in the introduction to the “General information” chapter.
- Added 41X2064 to the topic “Control panel” in the “Parts catalog” chapter.

June 19, 2017

- Updated [“Printhead removal” on page 457](#) and [“Flatbed removal” on page 483.](#)
- Created/updated the following checks/topics (RFID Option-related):
 - [“RFID tag silhouette on prints check” on page 75](#)
 - [“RFID Option jam service check” on page 174](#)
 - [“Non-supply user attendance error messages” on page 194](#)
 - [“Error on every page service check” on page 197](#)
 - [“Error on some pages service check” on page 199](#)
 - [“Hardware failure service check” on page 202](#)
 - [“RFID data within print job is invalid service check” on page 201](#)
 - [“985 error messages” on page 267](#)
 - [“RFID Option communication error service check” on page 267](#)
 - [“RFID Option connection error service check” on page 267](#)
 - [“Printer fails to program RFID tags service check” on page 306](#)
 - [“Behavioral issues \(without error codes\) of printers with RFID Option” on page 309](#)

May 15, 2017

- Updated [“Controller board removal” on page 452](#) 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 145](#).
- Updated [“Isolation unit section” on page 585](#) 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 2, 2017

- Added rows to the tables and deleted from them in the topics “121 error messages” in the “Diagnostics information.”
- Deleted rows from the table of the topics “126-127 error messages” in the “Diagnostics information.”
- 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:
 - Control panel removal
 - Controller board removal
- Revised the following topics in the “Parts catalog” chapter:
 - Control panel
 - Electrical

January 11, 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.

May 25, 2016

- Added the XC4140 model.
- Added PN 41X1035 and PN 41X0876 in Assembly 3 of the Parts catalog 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™ CX725 is a network-capable, multi-function, A4 laser printer that prints both color and monochrome print jobs. All information in this service manual pertains to all models unless explicitly noted.

The printer is available in the following models:

Model	Configurations	Machine type / model
CX725dthe	7-in. color touch screen display, duplex print, duplex scan, networking, hard disk, additional 550-sheet tray	7528-578 7528-5A8
CX725dhe	7-in. color touch screen display, duplex print, duplex scan, networking, hard disk	
CX725de	7-in. color touch screen display, duplex print, duplex scan, networking	7528-576
CX727de		7528-5A6
XC4140	7-in. color touch screen display, duplex print, duplex scan, networking, hard disk	7528-196
XC4143		7528-1A9
XC4150	7-in. color touch screen display, duplex print, duplex scan, networking, hard disk	7528-598
XC4153		7528-5A9

For information on diagnosing a problem, see [“Diagnostics and troubleshooting” on page 41](#). For information on removing and reinstalling parts, see [“Parts removal” on page 337](#). For information on identifying the parts, see [“Parts catalog” on page 536](#).

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

Select the correct paper or specialty media to reduce printing problems. For the best print quality, try a sample of the paper or specialty media before buying large quantities.

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 37](#).

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/m² (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/m² (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

The following tables provide information on standard and optional paper sources and the sizes, types, and weights of paper they support.

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

Supported paper sizes

Paper sizes supported by the trays and multipurpose feeder

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 B5²	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 5²	76.2 x 127 mm (3 x 5 in.)	X	✓	X
4 x 5²	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
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

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.

Paper size	Dimensions	550-sheet tray	Multipurpose feeder	Two-sided printing
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 Envelope³	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.

Paper sizes supported by the ADF and scanner glass

Paper size	Dimensions	ADF	Scanner glass
Letter	216 x 279 mm (8.5 x 11 in.)	✓	✓
Executive	184 x 267 mm (7.3 x 10.5 in.)	✓	✓
Legal	216 x 356 mm (8.5 x 14 in.)	✓	✓
A4	210 x 297 mm (8.3 x 11.7 in.)	✓	✓
A5	148 x 210 mm (5.8 x 8.3 in.)	✓	✓*
A6	105 x 148 mm (4.1 x 5.8 in.)	✓	✓
JIS B5	182 x 257 mm (7.2 x 10.1 in.)	✓	✓
Folio	216 x 330 mm (8.5 x 13 in.)	✓	✓
Statement	140 x 216 mm (5.5 x 8.5 in.)	✓	✓
3 x 5²	76.2 x 127 mm (3 x 5 in.)	X	✓
4 x 6	101.6 x 152.4 mm (4 x 6 in.)	X	✓
Business Card		X	✓
Auto		✓	✓
Mixed		✓	✓

* Supported only in long-edge orientation.

Paper size	Dimensions	ADF	Scanner glass
Oficio	216 x 340 mm (8.5 x 13.4 in.)	✓	✓
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.)	✓	✓
Custom scan size		✓	✓
* Supported only in long-edge orientation.			

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 Paper¹	✓	✓	✓
Card Stock²	✓	✓	✓
Glossy¹	✓	✓	✓
Labels <ul style="list-style-type: none"> Paper¹ Vinyl 	✓	✓	✓
Envelopes	✓	✓	✓
Light Paper¹	✓	✓	✓
Heavy Paper¹	✓	✓	✓
¹ Supported for two-sided printing.			
² Supported for two-sided printing only up to 162-g/m ² (90-lb) index.			

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.
- **Non-volatile memory**—The printer may use two forms of non-volatile 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 printer hard disk is designed for printer-specific functionality and cannot be used for the long-term storage of data that is not print-related. The hard disk does not provide the capability for users to 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 non-volatile memory:

- 1 From the home screen, touch **Settings > Device > Maintenance > Out of Service Erase**.
- 2 Select the **Sanitize all information on nonvolatile memory** check box, and then touch **ERASE**.
- 3 Follow the instructions on the display.

To erase the hard disk memory:

- 1 From the home screen, touch **Settings > Device > Maintenance > Out of Service Erase**.
- 2 Select the **Sanitize all information on hard disk** check box, and then touch **ERASE**.
- 3 Follow the instructions on the display.

Notes:




- This process can take from several minutes to more than an hour, making the printer unavailable for other tasks.
- After removing the hard disk, return it to the next level of support.

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

-  **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 before you connect or disconnect any cable or electronic card or assembly for personal safety and to prevent damage to the printer. Disconnect any connections between the printer and computers or peripherals.
-  **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 of the printer. Make sure that your fingers are not under the printer when you lift or set the printer down.
-  **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.

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 576](#).
- 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 Scanner calibration starts.
- 6 The home screen displays.
- 7 Printer calibration may begin.

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

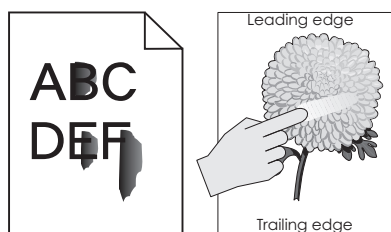
Fixing print quality issues

Initial print quality check

Before troubleshooting print problems, perform the following:

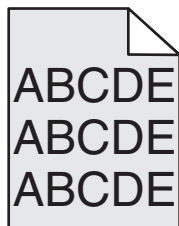
- Make sure that the printer is located in an area that follows the recommended operating environment and power requirement specifications.
- Check the status of supplies. Replace supplies that are low or empty.
- Load 20-lb plain letter or A4 paper. Make sure that the paper guides are properly set and 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



Actions	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size and type, or adjust the size settings in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper for texture or rough finish. Is the paper textured or rough?	Go to step 4.	Go to step 5.
Step 4 Replace the textured or rough paper with plain paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Remove, and then reinstall the fuser. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the fuser. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 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?	Go to step 8.	Go to step 9.
Step 8 Perform the service check for the error code found. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the LVPS. See “LVPS removal” on page 403 . Does the problem remain?	Contact the next level of support.	The problem is solved.

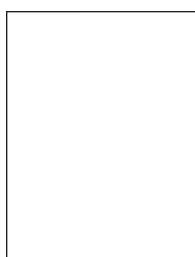
Background or gray background check



Action	Yes	No
Step 1 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?	Go to step 2.	Go to step 3.
Step 2 Check if only one color is producing the background of the print job. Is only one color producing the background?	Go to step 3.	Go to step 4.
Step 3 <ul style="list-style-type: none"> 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?	Go to step 4.	The problem is solved.
Step 4 Replace the imaging kit. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reseat the HVPS cable on the HVPS and on the JHVPS1 connector on the controller board. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the contact pins connecting the HVPS to the transfer module for damage. Are the contact pins damaged?	Go to step 7.	Go to step 8.
Step 7 Replace the HVPS. See “HVPS removal” on page 417 . Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Remove the printhead, and then clean the printhead lenses. See “Printhead removal” on page 457 . Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the printhead. See “Printhead removal” on page 457 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Blank or white pages check



Action	Yes	No
Step 1 Make sure all the packing materials on the imaging unit are removed. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 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?	Go to step 3.	Go to step 5.
Step 3 Check the contacts between the imaging unit and developer unit of the affected color. Are the contacts clean?	Go to step 5.	Go to step 4.
Step 4 Clean the contacts. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 <ul style="list-style-type: none"> 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. <p>Does the problem remain?</p>	Go to step 6.	The problem is solved.
Step 6 <p>a Remove the imaging kit.</p> <p>b Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests</p> <p>c Select the developer unit motor of the affected color, and then touch Start.</p> <p>Does the motor run?</p>	Go to step 8.	Go to step 7.
Step 7 <p>Replace the motor. See “Motor (EP drive) removal” on page 394.</p> <p>Does the problem remain?</p>	Go to step 8.	The problem is solved.
Step 8 <p>a Manually turn the motor.</p> <p>b While turning the motor, check if the couplers that drive the imaging kit move.</p> <p>Do the couplers move?</p>	Go to step 10.	Go to step 9.
Step 9 <p>Replace the EP gear box. See “EP gear box removal” on page 400.</p> <p>Does the problem remain?</p>	Go to step 10.	The problem is solved.
Step 10 <p>Check if the pins on the HVPS freely move.</p> <p>Do the pins freely move?</p>	Go to step 12.	Go to step 11.
Step 11 <p>Replace the HVPS. See “HVPS removal” on page 417.</p> <p>Does the problem remain?</p>	Go to step 12.	The problem is solved.
Step 12 <p>Check the continuity of the cable on the JSC1 connector on the controller board.</p> <p>Does the cable have continuity?</p>	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 Replace the cable. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Replace the printhead. See “Printhead removal” on page 457. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Gapping or half color page check

Action	Yes	No
Step 1 Make sure all the packing materials on the imaging unit are removed. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 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?	Go to step 3.	The problem is solved.
Step 3 Check the developer hold down arms and springs for damage, and replace if necessary. See “Developer hold down removal” on page 461. Does the problem remain?	Go to step 4.	The problem is solved.

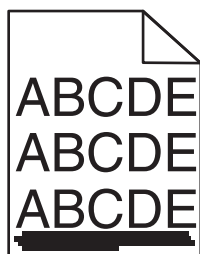
Action	Yes	No
Step 4 <ul style="list-style-type: none"> If the affected color is cyan, magenta, or yellow, then replace the developer unit of the affected color. If the affected color is black, then replace the imaging unit. <p>Does the problem remain?</p>	Go to step 5.	The problem is solved.
Step 5 Replace the imaging kit. Does the problem remain?	Contact the next level of support.	The problem is solved.

Blurred print or misaligned color check

Actions	Yes	No
Step 1 <ol style="list-style-type: none"> From the home screen, touch Settings > Print Quality Pages. Check the test page. <p>Is only one color blurred or misaligned?</p>	Go to step 2.	Go to step 3.
Step 2 Perform the color alignment adjustment on the misaligned color. See “Color alignment adjust” on page 320 . Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Perform color alignment adjustment on all colors. See “Color alignment adjust” on page 320 . Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform the Auto alignment service check. See “Auto alignment service check” on page 303 . Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 <ol style="list-style-type: none"> Open and close the toner door a few times to clean the toner patch sensors and alignment sensor. Enter the Diagnostics menu, and then navigate to: Advanced Print Quality Samples > Advanced Print Quality Samples <p>Does the problem remain?</p>	Go to step 6.	The problem is solved.

Actions	Yes	No
Step 6 Remove the imaging kit, and then clean the printhead lenses. See “Cleaning the printhead lenses” on page 534. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the motor (EP drive). See “Motor (EP drive) removal” on page 394. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the printhead. See “Printhead removal” on page 457. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

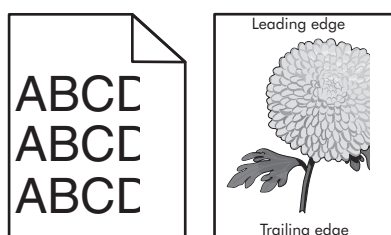
Horizontal colored lines or banding check



Actions	Yes	No
Step 1 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?	Go to step 2.	Go to step 3.
Step 2 Perform the repeating defects check. See “Repeating defects check” on page 66. Does the problem remain?	Go to step 3.	The problem is solved.

Actions	Yes	No
Step 3 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?	Go to step 4.	Go to step 5.
Step 4 Perform the repeating defects check. See “Repeating defects check” on page 66 . Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the pages right after the defective page. Do the lines appear after two consecutive normal pages were printed?	Go to step 6.	The problem is solved.
Step 6 Check the transfer module for contamination. Is the transfer module free of contamination?	Contact the next level of support.	Go to step 7.
Step 7 Clean the transfer module. Does the problem remain?	Contact the next level of support.	The problem is solved.

Text or images cut off check



Actions	Yes	No
Step 1 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?	Contact the next level of support.	Go to step 2.

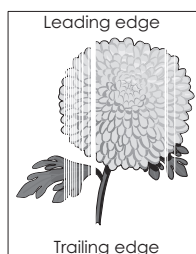
Actions	Yes	No
Step 2 Change the paper size and type, or adjust the size settings in the tray. Does the problem remain?	Contact the next level of support.	The problem is solved.

Mottled print and dots check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size and type, or adjust the size settings in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper for texture or rough finish. Is the paper textured or rough?	Go to step 4.	Go to step 5.
Step 4 Replace the textured or rough paper with plain paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the printer for toner leaks. Are there toner leaks?	Go to step 6.	Go to step 7.
Step 6 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?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 <ul style="list-style-type: none"> 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. <p>Does the problem remain?</p>	Go to step 8.	The problem is solved.
Step 8 <p>Check if the affected color is black.</p> <p>Is the affected color black?</p>	Go to step 10.	Go to step 9.
Step 9 <p>Replace the photoconductor unit.</p> <p>Does the problem remain?</p>	Go to step 10.	The problem is solved.
Step 10 <p>Check the transfer module for proper installation and damage, and replace if necessary. See “Transfer module removal” on page 432.</p> <p>Does the problem remain?</p>	Contact the next level of support.	The problem is solved.

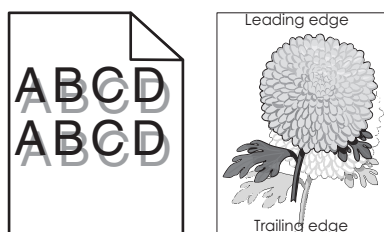
Vertical white lines check



Action	Yes	No
Step 1 <ol style="list-style-type: none"> Remove the waste toner bottle and imaging kit. Inspect and clean the printhead lenses. Print a test page. <p>Does the problem remain?</p>	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 a Enter the Diagnostics menu, and then navigate to: Advanced Print Quality Samples > Advanced Print Quality Samples b Check the test page. Did the print defect appear on all the pages?	Go to step 6.	Go to step 3.
Step 3 <ul style="list-style-type: none"> 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 go to step 4. Does the problem remain?	Go to step 5.	The problem is solved.
Step 4 If the affected color is black only, then replace the black imaging kit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 5 Replace the color imaging kit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the transfer module for proper installation and damage, and replace if necessary. See “Transfer module removal” on page 432 . Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the printhead. See “Printhead removal” on page 457 . Does the problem remain?	Contact the next level of support.	The problem is solved.

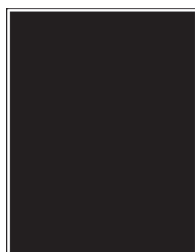
Ghost images check



Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size and type, or adjust the size settings in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 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?	Go to step 4.	Go to step 6.
Step 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?	Go to step 5.	Go to step 6
Step 5 <ul style="list-style-type: none"> • 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?	Go to step 6.	The problem is solved.
Step 6 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?	Go to step 7.	Go to step 8.
Step 7 <ul style="list-style-type: none"> • 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?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 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?	Go to step 9.	Contact the next level of support.
Step 9 Replace the fuser. See “Fuser removal” on page 431 . Does the problem remain?	Contact the next level of support.	The problem is solved.

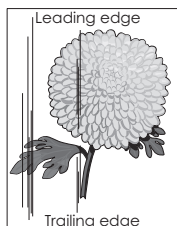
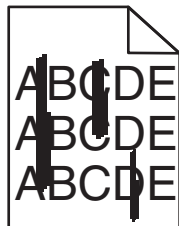
Solid color or black image check



Action	Yes	No
Step 1 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?	Go to step 2.	Go to step 3.
Step 2 Replace the imaging unit. Does the problem remain?	Go to step 4.	The problem is solved.
Step 3 Replace the photocopier unit. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 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?	Go to step 5.	Go to step 6.
Step 5 Replace the printhead. See “Printhead removal” on page 457 . Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the toner cartridge contacts for damage, and replace if necessary. See “Toner cartridge contacts removal” on page 426 . Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Turn off the printer, and then check the continuity of the HVPS cable. Does the cable have continuity?	Go to step 9.	Go to step 8.
Step 8 Replace the HVPS cable. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the HVPS. See “HVPS removal” on page 417 . Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the printhead. See “Printhead removal” on page 457 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Vertical colored lines or banding check



Action	Yes	No
Step 1 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?	Go to step 2.	Go to step 4.
Step 2 <ul style="list-style-type: none"> 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?	Go to step 3.	The problem is solved.
Step 3 Replace the photoconductor unit. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the transfer module. See “Transfer module removal” on page 432. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the fuser. See “Fuser removal” on page 431. Does the problem remain?	Contact the next level of support.	The problem is solved.

Image void scan direction check

Action	Yes	No
Step 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?	Go to step 2.	The problem is solved.
Step 2 Reseat the imaging kit, and then perform a print job. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the problem affects only one color. Does the problem affect only one color?	Go to step 4.	Go to step 5.
Step 4 <ul style="list-style-type: none"> • If the affected color is cyan, magenta, or yellow, then reseal the developer unit of the affected color. • If the affected color is black, then reseal the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 5 Reseat all the developer units in the imaging kit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Measure the interval between every defect. Does the defect occur in 55-mm intervals?	Contact the next level of support.	Go to step 7.
Step 7 Check the HVPS cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the HVPS. See “HVPS removal” on page 417 . Does the problem remain?	Go to step 9.	The problem is solved.

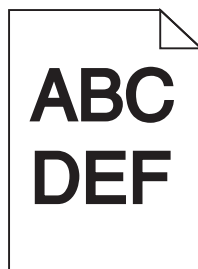
Action	Yes	No
Step 9 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the printhead. See “Printhead removal” on page 457. Does the problem remain?	Contact the next level of support.	The problem is solved.

Image void process direction check

Action	Yes	No
Step 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?	Go to step 2.	The problem is solved.
Step 2 Reseat all the developer units in the imaging kit, and then perform a print job. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the problem appears only on one side of the page. Does the problem appear only on one side?	Go to step 4.	Go to step 6.
Step 4 Check the developer hold downs for damage or loose springs, and replace if necessary. See “Developer hold down removal” on page 461. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check for missing colors. Is only one color missing?	Go to step 8.	Go to step 6.
Step 6 Check the printhead for dust or debris. Is the printhead free of dust or debris?	Go to step 8.	Go to step 7.

Action	Yes	No
Step 7 Remove the dust or debris. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 <ul style="list-style-type: none"> • 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?	Go to step 9.	The problem is solved.
Step 9 Replace the printhead. See “Printhead removal” on page 457. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Dark print check





Action	Yes	No
Step 1 <ol style="list-style-type: none"> From the home screen, touch Settings > Print > Quality > Toner Darkness. Check the toner darkness setting value. Is the darkness setting too high?	Go to step 2.	Go to step 3.
Step 2 Adjust the darkness setting to the proper value. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 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?	Go to step 4.	Go to step 11.
Step 4 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?	Go to step 5.	The problem is solved.
Step 5 Perform the toner patch sensing service check. See “Toner patch sensing service check” on page 301 . Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the HVPS cable for proper connection and damage, and reseal if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the continuity of the main HVPS cable. Does the cable have continuity?	Go to step 9.	Go to step 8.
Step 8 Replace the cable. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the pins on the toner cartridge contact. Are the pins stuck or damaged?	Go to step 10.	Go to step 11.
Step 10 Replace the toner cartridge contacts. See “Toner cartridge contacts removal” on page 426 . Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Check the electrical contacts on the transfer module for damage. Are the contacts on the belt damaged?	Go to step 12.	Go to step 13.
Step 12 Replace the transfer module. See “Transfer module removal” on page 432. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the HVPS. See “HVPS removal” on page 417. Does the problem remain?	Contact the next level of support.	The problem is solved.

Missing color check

Action	Yes	No
Step 1 Make sure that all packing materials of the imaging unit are removed. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that all supplies are properly installed. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Reinstall the imaging unit and waste toner bottle. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
<p>Step 4</p> <p>Open the toner access door, and then pull down the developer unit release mechanism.</p>  <p>Does the problem remain?</p>	Go to step 5.	The problem is solved.
<p>Step 5</p> <p>Reconnect the printhead cable connector on the controller board.</p> <p>Does the problem remain?</p>	Go to step 6.	The problem is solved.
<p>Step 6</p> <p>a Enter the Diagnostics menu, and then navigate to: Print Quality Pages > Print Quality Pages</p> <p>b Check the test page.</p> <p>Is only one color missing?</p>	Go to step 7.	Go to step 10.
<p>Step 7</p> <p>Check if the missing color is yellow.</p> <p>Is the missing color yellow?</p>	Go to step 8.	Go to step 10.
<p>Step 8</p> <p>Remove the imaging unit, and then check if the ITU cleaning blade is in the correct position.</p>  <p>Does the cleaning blade appear like the picture above?</p>	Go to step 9.	Go to step 10.

Action	Yes	No
Step 9 Replace the transfer module. See “Transfer module removal” on page 432. Does the problem remain?	Go to step 10.	The problem is solved.
Step 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?	Go to step 12.	Go to step 11.
Step 11 Clean the contacts between the developer and the imaging unit. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 <ul style="list-style-type: none"> • 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?	Go to step 13.	The problem is solved.
Step 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?	Go to step 15.	Go to step 14.
Step 14 Replace the HVPS. See “HVPS removal” on page 417. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 <ul style="list-style-type: none"> 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?	Go to step 17.	Go to step 16.
Step 16 Replace the defective EP drive motor. See “Motor (EP drive) removal” on page 394. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 While manually turning the motors, check if the couplers that drive the imaging kit move. Do the couplers move?	Go to step 19.	Go to step 18.
Step 18 Replace the EP gear box. See “EP gear box removal” on page 400. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the continuity of the cable on the JSC1 connector on the controller board. Is there continuity?	Go to step 21.	Go to step 20.
Step 20 Replace the cable. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the printhead. See “Printhead removal” on page 457. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Uneven print density check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size and type, or adjust the size settings in the tray. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the paper for texture or rough finish. Is the paper textured or rough?	Go to step 4.	Go to step 5.
Step 4 Replace the textured or rough paper with plain paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Remove, and then reinstall the fuser. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the fuser. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the LVPS. See “LVPS removal” on page 403 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Repeating defects check



Action	Yes	No
Step 1 Check the printer rollers for dust or debris. Are the rollers free of dust or debris?	Go to step 3.	Go to step 2.
Step 2 Remove the dust or debris. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Measure the distance between the repeating marks. Is the distance between the marks either 43.9 mm or 45.5 mm?	Go to step 4.	Go to step 5.

Action	Yes	No
Step 4 <ul style="list-style-type: none"> • 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. <p>Does the problem remain?</p>	Contact the next level of support.	The problem is solved.
Step 5 <p>Measure the distance between the repeating marks.</p> <p>Is the distance between the marks either 29.8 mm, 25.1 mm, or 94.2 mm?</p>	Go to step 6.	Go to step 7.
Step 6 <ul style="list-style-type: none"> • 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. <p>Does the problem remain?</p>	Contact the next level of support.	The problem is solved.
Step 7 <p>Measure the distance between the repeating marks.</p> <p>Is the distance between the marks either 34.6 mm, 95 mm, or 110 mm?</p>	Go to step 8.	Go to step 9.
Step 8 <p>Replace the fuser. See “Fuser removal” on page 431.</p> <p>Does the problem remain?</p>	Contact the next level of support.	The problem is solved.
Step 9 <p>Measure the distance between the repeating marks.</p> <p>Is the distance between the marks either 37.7 mm, 55 mm, or 78.5 mm?</p>	Go to step 11.	Go to step 10.
Step 10 <p>Check the marks that appear on a multi-page print job.</p> <p>Do the marks appear on every other page?</p>	Go to step 11.	Contact the next level of support.
Step 11 <p>Replace the transfer module. See “Transfer module removal” on page 432.</p> <p>Does the problem remain?</p>	Contact the next level of support.	The problem is solved.

Random marks check

Action	Yes	No
Step 1 Check the printer for toner leaks. Are there toner leaks?	Go to step 2.	Go to step 3.
Step 2 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?	Go to step 3.	The problem is solved.
Step 3 Check the imaging kit for debris and fragments. Is the imaging kit free of debris and fragments?	Go to step 5.	Go to step 4.
Step 4 Remove the debris and fragments. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the transfer module for debris and fragments. Is the transfer module free of debris and fragments?	Contact the next level of support.	Go to step 6.
Step 6 Remove the debris and fragments. Does the problem remain?	Contact the next level of support.	The problem is solved.

Light print check

Action	Yes	No
<p>Step 1</p> <p>a Remove the transfer module. See “Transfer module removal” on page 432.</p> <p>b Check if the three contacts are visible and if they freely move.</p>  <p>Are the contacts visible and do they freely move?</p>	Go to step 2.	Go to step 3.
<p>Step 2</p> <p>Check if the index pin behind the transfer module retract arm is visible and properly aligned.</p>  <p>Is the index pin visible and properly aligned?</p>	Go to step 4.	Go to step 3.
<p>Step 3</p> <p>a Reseat the HVPS.</p> <p>b Make sure that the contacts are visible and can freely move.</p> <p>c Make sure that the index pin is properly aligned.</p> <p>Does the problem remain?</p>	Go to step 4.	The problem is solved.
<p>Step 4</p> <p>a From the home screen, touch Settings > Print > Quality.</p> <p>b Check the Toner darkness setting value.</p> <p>Is the darkness setting too low?</p>	Go to step 5.	Go to step 6.

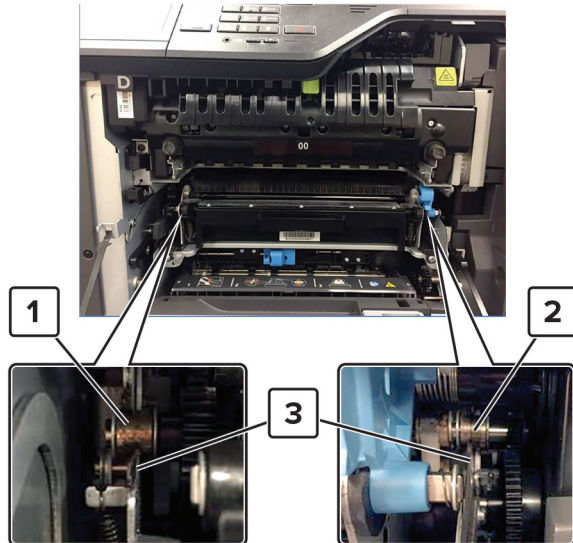
Action	Yes	No
Step 5 Adjust the darkness setting to the proper value. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 a Enter the Diagnostics menu, and then navigate to: Advanced Print Quality Samples > Advanced Print Quality Samples b Check the test page. Is only one color affected?	Go to step 7.	Go to step 15.
Step 7 Check the toner cartridge of the affected color for proper installation. <ul style="list-style-type: none"> • Make sure that there are no packing materials still on it. • Check for misalignment. Is the toner cartridge properly installed?	Go to step 9.	Go to step 8.
Step 8 Reinstall the toner cartridge. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the cartridge toner level. Is the cartridge empty?	Go to step 10.	Go to step 11.
Step 10 Replace the toner cartridge. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Remove, and then reinstall the developer unit of the affected color. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 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?	Go to step 15.	Go to step 13.

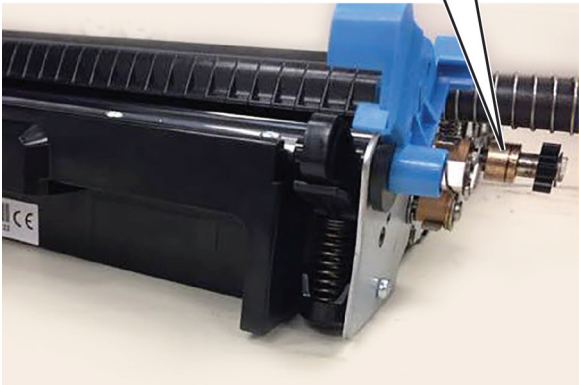
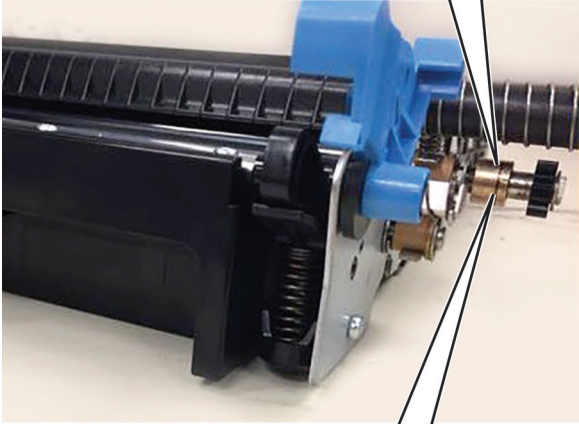
Action	Yes	No
Step 13 Check the motor cable for proper installation, and reseal if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Replace the motor. See “Motor (EP drive) removal” on page 394. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Remove the printhead, and then check the printhead lenses for dust or debris. See “Printhead removal” on page 457. Are the lenses free of dust or debris?	Go to step 17.	Go to step 16.
Step 16 Clean the printhead lenses. Does the problem remain?	Go to step 17.	The problem is solved.
Step 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?	Go to step 19.	Go to step 18.
Step 18 Reconnect the cable. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the cable for continuity. Does the cable have continuity?	Go to step 21.	Go to step 20.
Step 20 Replace the HVPS cable. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Check the toner cartridge contacts for damage, and replace if necessary. See “Toner cartridge contacts removal” on page 426. Does the problem remain?	Go to step 22.	The problem is solved.

Action	Yes	No
Step 22 Replace the transfer module. See “Transfer module removal” on page 432. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Replace the HVPS. See “HVPS removal” on page 417. Does the problem remain?	Contact the next level of support.	The problem is solved.

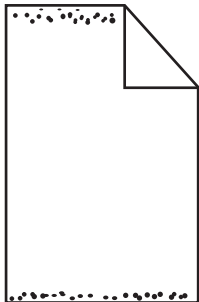
Skewed print service check

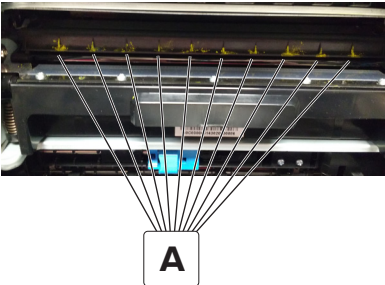
Action	Yes	No
Step 1 Check the paper for improper loading and damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a From the home screen, touch Settings > Device > Preferences. b Check if the paper type and size settings match the paper type and size set on the tray. Do the settings match?	Go to step 4.	Go to step 3.
Step 3 Change the paper size and type, or adjust the size settings in the tray. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the isolation unit for dust or debris. Is the isolation unit free of dust or debris?	Go to step 6.	Go to step 5.
Step 5 Remove the dust or debris. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Deskew b Touch Start. Does the motor run?	Go to step 9.	Go to step 7.

Action	Yes	No								
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?	Go to step 8.	The problem is solved.								
Step 8 Replace the motor (deskew). See “Motor (deskew) removal” on page 397. Does the problem remain?	Go to step 9.	The problem is solved.								
Step 9 Check the condition of the deskew rollers. Are the rollers free from excess wear, contamination, and damage?	Contact the next level of support.	Go to step 10.								
Step 10 Clean or replace the rollers. Does the problem remain?	Go to step 11.	The problem is solved.								
Step 11 a Check if the ITU bearings are properly seated on the frame.  <table data-bbox="230 1596 479 1785"><tr><th>#</th><th>Part</th></tr><tr><td>1</td><td>Left bearing</td></tr><tr><td>2</td><td>Right bearing</td></tr><tr><td>3</td><td>Frame</td></tr></table> b If necessary, reinstall the bearings. Does the problem remain?	#	Part	1	Left bearing	2	Right bearing	3	Frame	Go to step 12.	The problem is solved.
#	Part									
1	Left bearing									
2	Right bearing									
3	Frame									

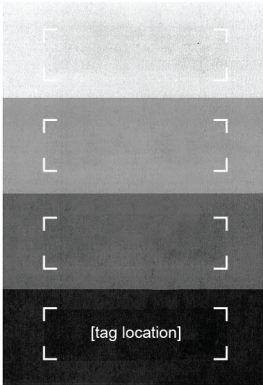
Action	Yes	No
<p>Step 12</p> <p>Inspect the ITU for missing and damaged or defective hardware. If necessary, replace the ITU.</p> <p>a Check if the E-clip (A) is not missing.</p> <div data-bbox="305 378 880 961"></div> <p>b Check if the bearing (B) is properly seated.</p> <div data-bbox="305 1045 880 1869"></div> <p>Does the problem remain?</p>	<p>Contact the next level of support.</p>	<p>The problem is solved.</p>

Marks on leading or trailing edges check



Action	Yes	No
Step 1 Check the leading and trailing edges of the printout for marks. Does the printout have marks on the leading or trailing edges?	Go to step 2.	Go to another print quality check.
Step 2 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?	Contact the next level of support.	The problem is solved.

RFID tag silhouette on prints check



Action	Yes	No
<p>Step 1</p> <p>Make sure that the image on your original document does not print directly over the area where the tag (A) is present.</p> <ul style="list-style-type: none"> • Sample RFID media <p>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.</p> <div data-bbox="306 506 873 1043" data-label="Image"> <p>The image shows two side-by-side photographs of a document. The left photograph is labeled 'FRONT' and the right one is labeled 'BACK'. Both photographs show a document with a light-colored background and a darker, textured area at the bottom. In the center of the bottom area, there is a small, rectangular, light-colored object, which is the RFID tag. This tag is highlighted with a red rectangular border. Below the two photographs, there is a small square box containing the letter 'A'. Two lines connect the bottom corners of the red rectangles on the 'FRONT' and 'BACK' images to the top corners of the 'A' box, indicating that the tag is located at the same position on both sides of the document.</p> </div> <p>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.</p> <p>Does the problem remain?</p>	<p>Go to step 2.</p>	<p>The problem is solved.</p>
<p>Step 2</p> <p>Make sure that the RFID tag is not thick and that it has an even contour.</p> <p>Does the problem remain?</p>	<p>Contact the next level of support.</p>	<p>The problem is solved.</p>

Fixing scan quality issues

Dark image quality (using the ADF or scanner) check

Actions	Yes	No
Step 1 Isolate the scanner system by printing the advanced print quality samples directly from the printer. Enter the Diagnostics menu, and then navigate to: Advanced Print Quality Samples > Advanced Print Quality Samples Is the scan defect seen on the print quality samples?	Go to step 2.	Go to step 3.
Step 2 Identify, and then resolve the print quality defect. See “Fixing print quality issues” on page 42. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the large and small platen glasses on the flatbed scanner for contamination. Are the platen glasses free of contamination?	Go to step 5.	Go to step 4.
Step 4 Clean both sides of the platen glasses. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the white reference strip on the bottom of the ADF float plate for contamination. Are the reference strips free of contamination?	Go to step 7.	Go to step 6.
Step 6 Clean the reference strips. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Perform a scan-to-print test using both the ADF and scanner unit assemblies. Does the problem remain?	Go to step 8.	The problem is solved.

Actions	Yes	No
Step 8 Replace the printer controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Vertical lines (process direction using the ADF) check

Actions	Yes	No
Step 1 Isolate the scanner system by printing the advanced print quality samples directly from the printer. Enter the Diagnostics menu, and then navigate to: Advanced Print Quality Samples > Advanced Print Quality Samples Is the scan defect seen on the print quality samples?	Go to step 2.	Go to step 3.
Step 2 Identify, and then resolve the print quality defect. See “Fixing print quality issues” on page 42 . Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the small platen glass on the flatbed scanner for contamination or damage. Is the platen glass free of contamination and damage?	Go to step 5.	Go to step 4.
Step 4 Clean the glass or replace the ADF top cover. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the small ADF glass for cracks or damage. Is the ADF glass free of cracks or damage?	Go to step 7.	Go to step 6.
Step 6 Check the inside of the flatbed unit for dust or contamination. Is the inside of the flatbed free of dust or contamination?	Go to step 7.	Contact the next level of support.

Actions	Yes	No
Step 7 a Replace the flatbed. See “Flatbed removal” on page 483 . b Perform a scan-to-print test using both the ADF and scanner unit assemblies. Does the problem remain?	Contact the next level of support.	The problem is solved.

Spots (using the flatbed scanner) check

Actions	Yes	No
Step 1 Isolate the scanner system by printing the advanced print quality samples directly from the printer. Enter the Diagnostics menu, and then navigate to: Advanced Print Quality Samples > Advanced Print Quality Samples Is the scan defect seen on the print quality samples?	Go to step 2.	Go to step 3.
Step 2 Identify, and then resolve the print quality defect. See “Fixing print quality issues” on page 42 . Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the large platen glass on the scanner unit assembly for contamination or damage. Is the glass free of contamination and damage?	Go to step 5.	Go to step 4.
Step 4 a Clean the platen glass or replace the flatbed cushion. b Perform a scan-to-print test using both the ADF and scanner unit assemblies. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the flatbed for dust or contamination. Is the flatbed free of dust or contamination?	Go to step 6.	Contact the next level of support.

Actions	Yes	No
Step 6 a Replace the flatbed. See “Flatbed removal” on page 483 . b Perform a scan-to-print test using both the ADF and scanner unit assemblies. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF skew check

Actions	Yes	No
Step 1 Isolate the scanner system by printing the advanced print quality samples directly from the printer. Enter the Diagnostics menu, and then navigate to: Advanced Print Quality Samples > Advanced Print Quality Samples Is the scan defect seen on the print quality samples?	Go to step 2.	Go to step 3.
Step 2 Identify, and then resolve the print quality defect. See “Fixing print quality issues” on page 42 . Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer is placed on a flat, sturdy, and stable surface. Is the printer on a flat, sturdy, and stable surface?	Go to step 5.	Go to step 4.
Step 4 Place the printer on a flat, sturdy, and stable surface. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Properly load the document into the ADF tray and ensure that all guides are correctly set. b Perform a scan-to-print test using the ADF unit assembly. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Clear the paper path in the ADF of any obstructions. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 Open, and then properly close the following ADF top cover. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 From the home screen, navigate to: Settings > Device > Maintenance > Configuration Menu > Scanner Configuration > ADF Deskew > ADF Mechanical Deskew > On Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 From the home screen, navigate to: Settings > Device > Maintenance > Configuration Menu > Scanner Configuration > ADF Deskew > ADF Electronic Deskew > On Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the ADF pick roller assembly for wear or damage. Is the assembly free of wear or damage?	Go to step 12.	Go to step 11.
Step 11 Replace the ADF pick roller assembly. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the ADF separator roller for wear or damage. Is the roller free of wear or damage?	Contact the next level of support.	Go to step 13.
Step 13 Replace the separator roller. Does the problem remain?	Contact the next level of support.	The problem is solved.

Media damage (using the ADF) check

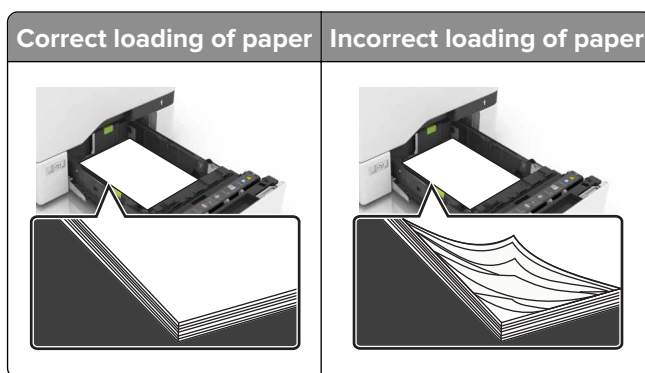
Actions	Yes	No
Step 1 Isolate the scanner system by printing the advanced print quality samples directly from the printer. Enter the Diagnostics menu, and then navigate to: Advanced Print Quality Samples > Advanced Print Quality Samples Is the scan defect seen on the print quality samples?	Go to step 2.	Go to step 3.
Step 2 Identify, and then resolve the print quality defect. See “Fixing print quality issues” on page 42. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Properly load the document into the ADF tray and ensure that all guides are correctly set. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Clear the paper path in the ADF of any obstructions. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Open, and then properly close the following ADF top cover. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the ADF pick roller assembly for wear or damage. Is the assembly free of wear or damage?	Contact the next level of support.	Go to step 7.
Step 7 Replace the ADF pick roller assembly. Does the problem remain?	Contact the next level of support.	The problem is solved.

Paper jams

Avoiding jams

Load paper properly

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



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

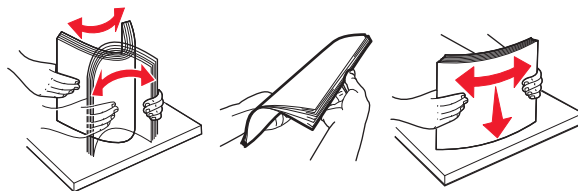


- Make sure that the paper guides are positioned correctly and are not pressing tightly against the paper or envelopes.
- Push the tray firmly into the printer after loading paper.

Use recommended paper

- Use only recommended paper or specialty media.
- Do not load paper that is wrinkled, creased, damp, bent, or curled.

- Flex, fan, and align the paper edges before loading.

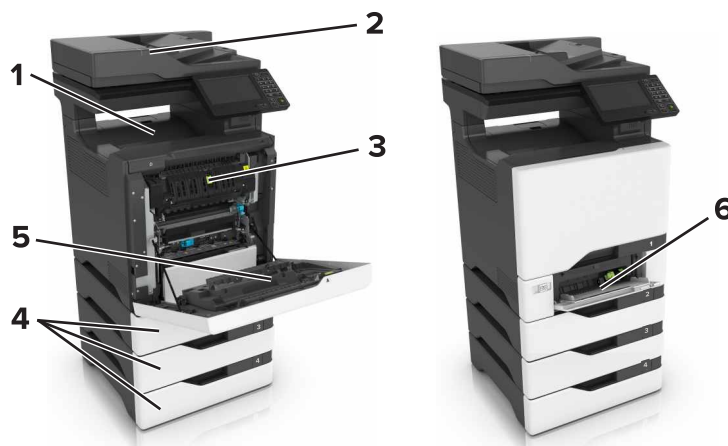


- Do not use paper that has been cut or trimmed by hand.
- Do not mix paper sizes, weights, or types in the same tray.
- Make sure that the paper size and type are set correctly on the computer or printer control panel.
- Store paper according to manufacturer recommendations.

Identifying jam locations

Notes:

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



	Jam locations
1	Standard bin
2	Automatic document feeder (ADF)
3	Fuser
4	Trays
5	Duplex unit
6	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.

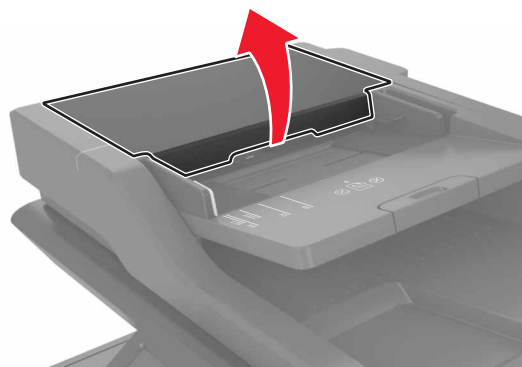
Note: Make sure that all paper fragments are removed.



- 3 Insert the tray.

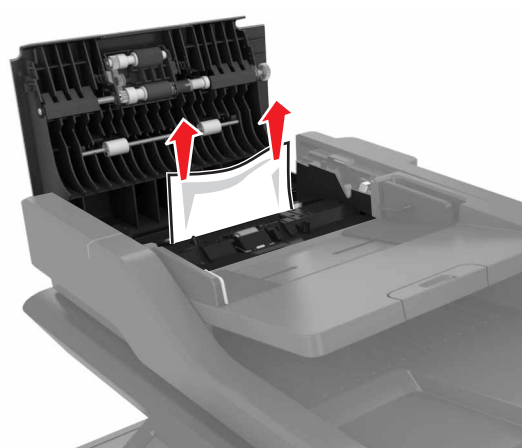
Paper jam behind door E

- 1 Open door E.



- 2 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.

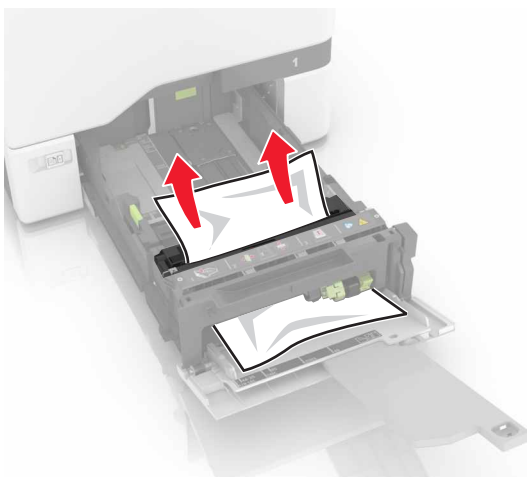


- 3 Close door E.

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.

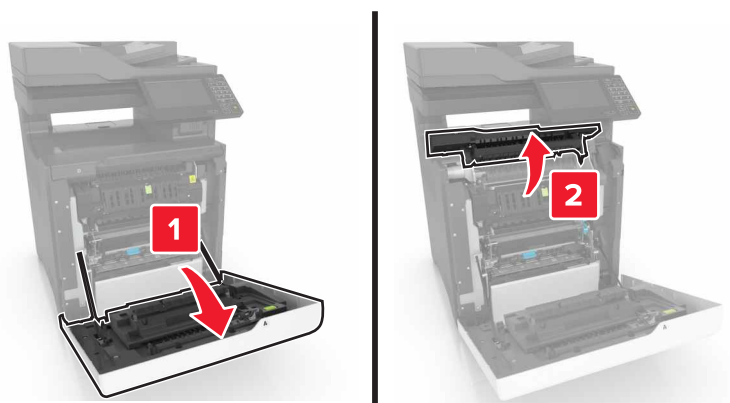
Note: Make sure that all paper fragments are removed.



- 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.

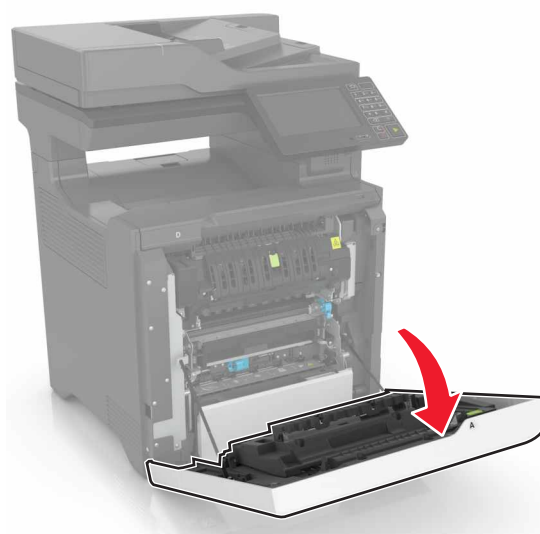
Paper jam in door A

Paper jam in the fuser

1 Open door A.

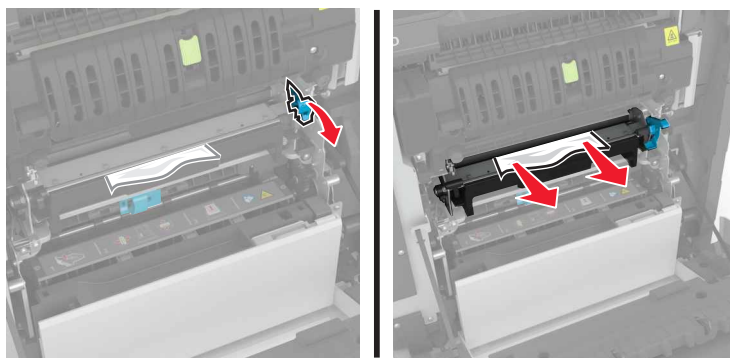


CAUTION—HOT SURFACE: The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching it.

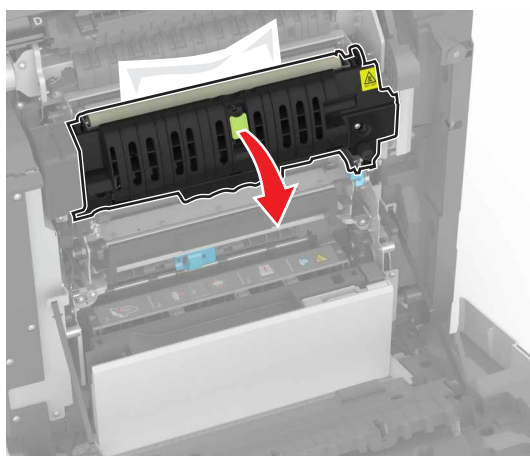


2 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.

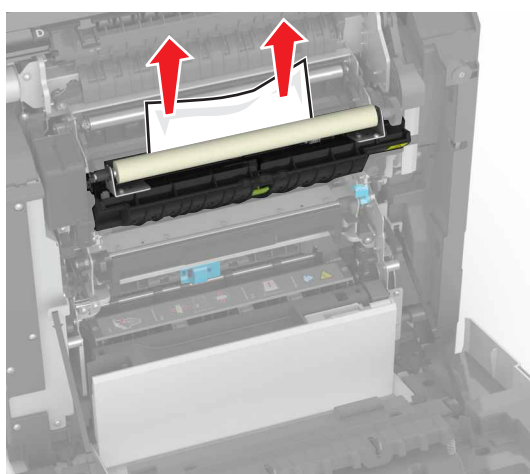


3 Open the fuser access door.



4 Remove the jammed paper.


Note: Make sure that all paper fragments are removed.

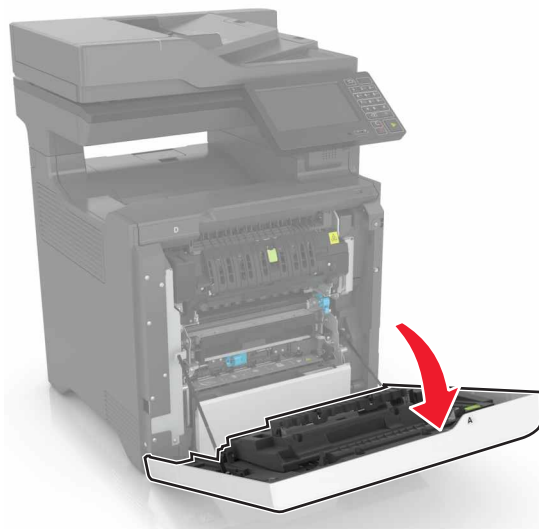


5 Close door A.

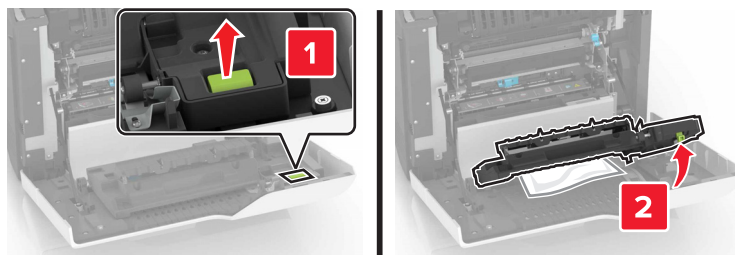
Paper jam in the duplex unit

- 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.

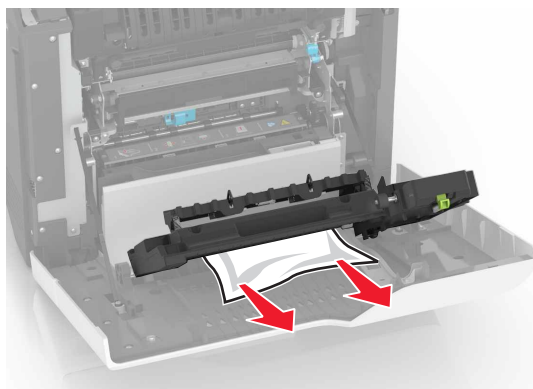


- 2 Open the duplex cover.



- 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 94.
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 92.
200.13	Paper fed from tray 1 never arrived at the sensor (input).	See “Sensor (input): Paper failed to arrive service check” on page 92.
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 95.
200.15	Paper fed from tray 1 never cleared the sensor (input).	See “Sensor (input): Paper failed to clear service check” on page 94.
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 92.
200.23	Paper fed from tray 2 did not reach the sensor (input).	See “Sensor (input): Paper failed to arrive service check” on page 92.
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 95.
200.25	Paper fed from tray 2 never cleared the sensor (input).	See “Sensor (input): Paper failed to clear service check” on page 94.
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 92.
200.33	Paper fed from tray 3 did not reach the sensor (input).	See “Sensor (input): Paper failed to arrive service check” on page 92.
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 95.
200.35	Paper fed from tray 3 never cleared the sensor (input).	See “Sensor (input): Paper failed to clear service check” on page 94.
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 92.
200.43	Paper fed from tray 4 did not reach the sensor (input).	See “Sensor (input): Paper failed to arrive service check” on page 92.
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 95.
200.45	Paper fed from tray 4 never cleared the sensor (input).	See “Sensor (input): Paper failed to clear service check” on page 94.
200.91	Paper remains detected at the sensor (input) after the printer is turned on.	See “Sensor (input) static jam service check” on page 96.

Sensor (input): Paper arrived too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray for overfilling. Is the tray overfilled?	Go to step 4.	Go to step 5.
Step 4 Remove the excess paper from the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path along the tray exit. Is the paper path free of fragments and contamination?	Go to step 7.	Go to step 6.
Step 6 Clean the paper path. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 5.	Go to step 4.
Step 4 Remove the jams and fragments. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 6.
Step 6 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 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?	Go to step 9.	Go to step 10.
Step 9 Replace the isolation unit. See “Isolation unit removal” on page 469 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
Step 10 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Deskew b Touch Start . Does the motor run?	Contact the next level of support.	Go to step 11.
Step 11 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the motor (registration). Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper failed to clear service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 5.	Go to step 4.
Step 4 Remove the jams and obstructions. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.

Action	Yes	No
Step 6 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Deskew b Touch Start . Does the motor run?	Contact the next level of support.	Go to step 9.
Step 9 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 a Replace the motor (registration). b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper cleared too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray for overfilling. Is the tray overfilled?	Go to step 4.	Go to step 5.

Action	Yes	No
Step 4 Remove the excess paper from the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper condition in the tray. Is the paper crumpled or damaged?	Go to step 6.	Go to step 7.
Step 6 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 9.	The problem is solved.
Step 8 Check the sensor cable for proper connection, and then reseal if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor. See “Sensor (input) removal” on page 439 . Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input) static jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the sensor for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 8 Perform a print job. Does the problem remain?	Contact the next level of support.	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 98.

Sensor (fuser buckle) jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Fuser buckle). Does the sensor status change while toggling the sensor?	Contact the next level of support.	Go to step 6.
Step 6 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a Check the sensor for damage, and replace if necessary. b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

202 paper jams

202 paper jam messages

Error code	Description	Action
202.12	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 100.
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 100.
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 104.
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 103.
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 100.
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 100.
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 104.
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 103.
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 100.
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 100.
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 104.
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 103.
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 100.
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 100.
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 104.
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 103.
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 105.

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

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path just before the fuser for paper jams and fragments. Is the paper path free of fragments and contamination?	Go to step 5.	Go to step 4.
Step 4 Remove the paper jams and fragments. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the fuser rollers for damage. Are the rollers free of damage?	Go to step 7.	Go to step 6.
Step 6 Replace the fuser. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (fuser exit): Paper failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 5.	Go to step 4.
Step 4 Remove the jams and fragments. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the fuser for obstructions. Is the fuser free from obstructions?	Go to step 7.	Go to step 6.
Step 6 Remove the obstructions in the fuser area. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the fuser for damage or life expiration, and replace if necessary. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 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?	Go to step 11.	Go to step 9.
Step 9 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 reseal if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Check the transfer belt for damage and replace if necessary. See “Transfer module removal” on page 432. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 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?	Go to step 15.	Go to step 13.
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?	Go to step 14.	The problem is solved.
Step 14 a Replace the motor. See “Motor (fuser) removal” on page 416. b Perform a print job. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > K developer-transfer b Touch Start . Does the motor run?	Contact the next level of support.	Go to step 16.
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?	Go to step 17.	The problem is solved.
Step 17 a Replace the motor (K cartridge). See “Motor (EP drive) removal” on page 394. b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (fuser exit): Paper failed to clear service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the redrive paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 5.	Go to step 4.
Step 4 Remove the jams and fragments. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the fuser for obstructions. Is the fuser free from obstructions?	Go to step 7.	Go to step 6.
Step 6 Remove the obstructions in the fuser area. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the fuser for damage or life expiration, and replace if necessary. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 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?	Go to step 11.	Go to step 9.

Action	Yes	No
Step 9 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 reseal if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 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?	Contact the next level of support.	Go to step 12.
Step 12 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 a Replace the motor. See “Motor (fuser) removal” on page 416 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the fuser rollers for damage. Are the rollers free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the fuser. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Fuser exit). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 Check the sensor cable for proper connection, and then reseal if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the fuser. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (fuser exit) static jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Fuser exit). Does the sensor status change while toggling the sensor?	Contact the next level of support.	Go to step 6.
Step 6 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 reseal if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a Check the sensor for damage, and replace if necessary. b Perform a print job. Does the problem remain?	Contact the next level of support.	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 106.

Sensor (output bin full) static jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Output bin full). Does the sensor status change while toggling the sensor?	Contact the next level of support.	Go to step 6.
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?	Go to step 7.	The problem is solved.
Step 7 a Check the sensor for damage, and replace if necessary. b Perform a print job. Does the problem remain?	Contact the next level of support.	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 108.

Sensor (narrow media) static jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Narrow media). Does the sensor status change while toggling the sensor?	Contact the next level of support.	Go to step 6.
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?	Go to step 7.	The problem is solved.
Step 7 a Check the sensor for damage, and replace if necessary. b Perform a print job. Does the problem remain?	Contact the next level of support.	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 109.

Sensor (duplex path 1) static jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Duplex path 1). Does the sensor status change while toggling the sensor?	Contact the next level of support.	Go to step 6.
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?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 a Check the sensor for damage, and replace if necessary. See “Sensor (redrive) removal” on page 449 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

230 paper jams

230 paper jam messages

Error code	Description	Action
230.12	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 111 .
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 111 .
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 115 .
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 113 .
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 111 .
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 111 .
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 115 .
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 113 .
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 111 .
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 111 .
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 115 .
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 113 .
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 111 .
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 111 .

Error code	Description	Action
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 115.
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 113.
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 109.

Sensor (duplex path 1): Paper arrived too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path entering the duplex path for paper jams and fragments. Is the paper path free of fragments and contamination?	Go to step 5.	Go to step 4.
Step 4 Remove the paper jams and fragments. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex path 1): Paper failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the redrive paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 5.	Go to step 4.
Step 4 Remove the jams and obstructions. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the duplex paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 7.	Go to step 6.
Step 6 Remove the jams and obstructions. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Inspect the ribs on the top frame base cover for wear, nicks, or other damage that could obstruct the paper path. Is there any damage?	Go to step 8.	Go to step 9.
Step 8 Replace the top frame base cover. See “Top frame base cover removal” on page 375. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the diverter for smooth movement. Does the diverter freely move without interference?	Go to step 11.	Go to step 10.
Step 10 Replace the diverter. See “Diverter removal” on page 447. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 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?	Go to step 13.	Go to step 12.
Step 12 Replace the sensor. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Redrive b Select a setting, and then touch Start . Does the motor run?	Go to step 15.	Go to step 14.
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?	Go to step 15.	The problem is solved.
Step 15 Replace the motor (output). See “Motor (output) removal” on page 395 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex path 1): Paper failed to clear service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 7.	Go to step 6.
Step 6 Remove the jams and obstructions. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Duplex path 1). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Duplex/MPF b Select a setting, and then touch Start . Does the motor run?	Contact the next level of support.	Go to step 11.
Step 11 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 a Replace the motor. See “Motor (duplex/MPF) removal” on page 413. b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex path 1): Paper cleared too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the duplex rollers for damage. Are the rollers free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the duplex assembly. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Duplex path 1). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 Check the sensor cable for proper connection, and then reseal if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the sensor. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Perform a print job. Does the problem remain?	Contact the next level of support.	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 117.
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 117.
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 120.
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 119.
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 117.
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 117.
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 120.
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 117.
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 117.
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 120.
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 117.
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 117.
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 120.
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 121.

Sensor (duplex path 2): Paper arrived too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size settings in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 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?	Go to step 5.	Go to step 4.
Step 4 Change the paper settings to match the paper in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the duplex paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 6.	Go to step 6.
Step 6 Remove the jams and obstructions. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex path 2): Paper failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the duplex paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 5.	Go to step 4.
Step 4 Remove the jams and obstructions. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Duplex path 2). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 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?	Go to step 11.	Go to step 9.
Step 9 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 a Replace the motor. See “Motor (duplex/MPF) removal” on page 413 . b Perform a print job. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Check the duplex drive gears in the printer for damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 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 387 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex path 2): Paper failed to clear service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 7.	Go to step 6.
Step 6 Remove the jams and obstructions. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Duplex path 2). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Isolation b Touch Start . Does the motor run?	Contact the next level of support.	Go to step 11.
Step 11 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 a Replace the isolation unit. See “Isolation unit removal” on page 469 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex path 2): Paper (duplex job) cleared too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the duplex rollers for damage. Are the rollers free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the duplex. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Duplex path 2). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 Check the sensor cable for proper connection, and then reseal if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex path 2) static jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Duplex path 2). Does the sensor status change while toggling the sensor?	Contact the next level of support.	Go to step 6.
Step 6 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a Check the sensor for damage, and replace if necessary. b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

232 paper jams

232 paper jam messages

Error code	Description	Action
232.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 123.
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 126.
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 125.

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 121.

Sensor (MPF/pass-through): Paper (duplex job) failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the duplex paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 5.	Go to step 4.
Step 4 Remove the jams and obstructions. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the tray for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor (MPF/pass-through) area for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 8.	Go to step 7.
Step 7 Remove the jams and obstructions. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 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?	Go to step 11.	Go to step 9.

Action	Yes	No
Step 9 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the isolation unit. See “Isolation unit removal” on page 469 . Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 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?	Go to step 14.	Go to step 12.
Step 12 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 a Replace the motor. See “Motor (duplex/MPF) removal” on page 413 . b Perform a print job. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the duplex drive gears in the printer for damage, and replace if necessary. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 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 387 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF/pass-through): Paper (duplex job) failed to clear service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 7.	Go to step 6.
Step 6 Remove the jams and obstructions. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (MPF/pass-through). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the isolation unit for damage, and replace if necessary. See “Isolation unit removal” on page 469 . Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Deskew b Touch Start . Does the motor run?	Contact the next level of support.	Go to step 11.
Step 11 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 a Replace the motor (registration). b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF/pass-through): Paper (MPF/pass-through) cleared too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the duplex rollers for damage. Are the rollers free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the duplex. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 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?	Go to step 8.	Go to step 6.
Step 6 Check the sensor cable for proper connection, and then reseal if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the isolation unit. See “Isolation unit removal” on page 469 . Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print job. Does the problem remain?	Contact the next level of support.	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 129 .
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 131 .
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 133 .
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 135 .
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 128 .
240.25		
240.35		
240.45		

Error code	Description	Action
240.82	The motor (duplex/MPF) has stalled.	See “Motor (duplex/MPF) jam service check” on page 138.
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 137.

Sensor (MPF/pass-through): Paper failed to clear service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the duplex and MPF paper paths for paper jams and obstructions. Are the paper paths free of jams and obstructions?	Go to step 5.	Go to step 4.
Step 4 Remove the paper jams and obstructions. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the tray paper path and drive gears for damage, and replace the tray if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (MPF/pass-through). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 7.
Step 7 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the sensor and sensor flag for damage. Is the sensor or sensor flag damaged?	Go to step 9.	Contact the next level of support.
Step 9 Replace the isolation unit. See “Isolation unit removal” on page 469 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF/pass-through): Paper (MPF tray) failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray for overfilling. Is the paper tray overfilled?	Go to step 4.	Go to step 5.
Step 4 Remove the excess paper from the MPF tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper condition in the MPF tray. Is the paper crumpled or damaged?	Go to step 6.	Go to step 7.
Step 6 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the condition of the MPF pick rollers. Are the pick rollers free from excess wear, contamination, and damage?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Replace the pick rollers. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 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?	Go to step 11.	Go to step 10.
Step 10 Reinstall the pick roller assembly. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the paper path exiting the tray. Is the paper path free of fragments and contamination?	Go to step 13.	Go to step 12.
Step 12 Clean the paper path. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the tray paper path and drive gears for damage, and replace the tray if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 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?	Go to step 17.	Go to step 15.
Step 15 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 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?	Contact the next level of support.	Go to step 18.
Step 18 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 a Replace the motor. See “Motor (duplex/MPF) removal” on page 413 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF/pass-through): Paper (tray 2) failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray for overfilling. Is the tray overfilled?	Go to step 4.	Go to step 5.
Step 4 Remove the excess paper from the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper condition in the tray. Is the paper crumpled or damaged?	Go to step 6.	Go to step 7.

Action	Yes	No
Step 6 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the condition of the tray 2 pick rollers. Are the pick rollers free from excess wear, contamination, and damage?	Go to step 9.	Go to step 8.
Step 8 Replace the pick rollers. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 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?	Go to step 11.	Go to step 10.
Step 10 Reinstall the pick roller assembly. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the paper path exiting the tray. Is the paper path free of fragments and contamination?	Go to step 13.	Go to step 12.
Step 12 Clean the paper path. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (MPF/pass-through). Does the sensor status change while toggling the sensor?	Go to step 16.	Go to step 14.
Step 14 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 15.	The problem is solved.

Action	Yes	No
Step 15 Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 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?	Go to step 19.	Go to step 17.
Step 17 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 a Replace the motor (550-sheet tray pass-through). See “Motor (550-sheet tray pass-through) removal” on page 494 . b Perform a print job. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 a Replace the media feeder. See “Media feeder removal” on page 468 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF/pass-through): Paper (tray 3) failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 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?	Go to step 6.	Go to step 4.
Step 4 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the sensor for damage and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Pass-through (tray 2)). Does the sensor status change while toggling the sensor?	Go to step 9.	Go to step 7.
Step 7 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 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?	Go to step 9.	The problem is solved.
Step 9 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?	Contact the next level of support.	Go to step 10.
Step 10 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 a Replace the motor (550-sheet tray pass-through). See “Motor (550-sheet tray pass-through) removal” on page 494. b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF/pass-through): Paper (tray 4) failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path in tray 3 for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 5.	Go to step 4.
Step 4 Remove the paper jams and fragments. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (MPF/pass-through). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the sensor for damage and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Pass-through (tray 2)). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 9.
Step 9 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 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?	Go to step 11.	The problem is solved.
Step 11 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?	Go to step 14.	Go to step 12.
Step 12 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 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?	Go to step 14.	The problem is solved.
Step 14 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?	Go to step 17.	Go to step 15.

Action	Yes	No
Step 15 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 a Replace the motor (550-sheet tray pass-through). See “Motor (550-sheet tray pass-through) removal” on page 494. b Perform a print job. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 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?	Contact the next level of support.	Go to step 18.
Step 18 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 a Replace the motor (550-sheet tray pass-through). See “Motor (550-sheet tray pass-through) removal” on page 494. b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF/pass-through) static jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 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?	Contact the next level of support.	Go to step 4.
Step 4 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Check the isolation unit for damage, and replace if necessary. See “Isolation unit removal” on page 469 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (duplex/MPF) jam service check

Action	Yes	No
Step 1 Check if this is a duplex issue. Is this a duplex issue?	Go to step 6.	Go to step 2.
Step 2 Check the MPF tray for overfilling. Is the tray overfilled?	Go to step 3.	Go to step 4.
Step 3 Remove the excess paper from the tray. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the paper condition in the MPF tray. Is the paper crumpled or damaged?	Go to step 5.	Go to step 6.
Step 5 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Check the duplex and MPF paper path exiting tray 1. Is the paper path free of fragments and contamination?	Go to step 7.	Go to step 8.
Step 7 Clean the paper path. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 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?	Contact the next level of support.	Go to step 9.
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?	Go to step 10.	The problem is solved.
Step 10 a Replace the motor (duplex/MPF). See “Motor (duplex/MPF) removal” on page 413 . b Perform a duplex or MPF feed test. Does the problem remain?	Contact the next level of support.	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 143 .
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 143 .
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 140 .
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 141 .
241.82	The motor (tray 1 pick) failed to achieve expected speed or has stalled.	See “Motor (tray 1 pick) jam service check” on page 146 .
241.83		

Error code	Description	Action
241.84	Failed to pick last sheet of paper.	See “Tray actuator and spring service check” on page 148.
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 145.

Sensor (tray 1 pick): Paper failed to clear service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 5.	Go to step 4.
Step 4 Remove the paper jams and fragments. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the tray paper path and drive gears for damage, and replace the tray if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 9.	Go to step 7.
Step 7 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the sensor for damage and replace if necessary. See “Sensor (input) removal” on page 439 . Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Isolation b Touch Start . Does the motor run?	Contact the next level of support.	Go to step 10.
Step 10 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 a Replace the isolation unit. See “Isolation unit removal” on page 469 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 1 pick): Paper failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray for overfilling. Is the tray overfilled?	Go to step 4.	Go to step 5.
Step 4 Remove the excess paper from the tray. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the paper condition in tray 1. Is the paper crumpled or damaged?	Go to step 6.	Go to step 7.
Step 6 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the condition of the pick rollers. Are the pick rollers free from excess wear, contamination, and damage?	Go to step 9.	Go to step 8.
Step 8 Replace the pick rollers. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 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?	Go to step 11.	Go to step 10.
Step 10 Reinstall the pick roller assembly. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the paper path exiting the paper tray. Is the paper path free of fragments and contamination?	Go to step 13.	Go to step 12.
Step 12 Clean the paper path. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 16.	Go to step 14.

Action	Yes	No
Step 14 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the sensor for damage, and replace if necessary. See “Sensor (input) removal” on page 439 . Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 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?	Go to step 19.	Go to step 17.
Step 17 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 a Replace the motor (tray 1 pick). b Perform a print job. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 a Replace the media feeder. See “Media feeder removal” on page 468 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 1 pick): Paper arrived too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray for overfilling. Is the tray overfilled?	Go to step 4.	Go to step 5.
Step 4 Remove the excess paper from the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path along the tray exit. Is the paper path free of fragments and contamination?	Go to step 7.	Go to step 6.
Step 6 Clean the paper path. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 1 pick): Paper cleared too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray for overfilling. Is the tray overfilled?	Go to step 4.	Go to step 5.

Action	Yes	No
Step 4 Remove the excess paper from the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper condition in the tray. Is the paper crumpled or damaged?	Go to step 6.	Go to step 7.
Step 6 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 9.	The problem is solved.
Step 8 Check the sensor cable for proper connection, and then reseal if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor. See “Sensor (input) removal” on page 439 . Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 1 pick) static jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.

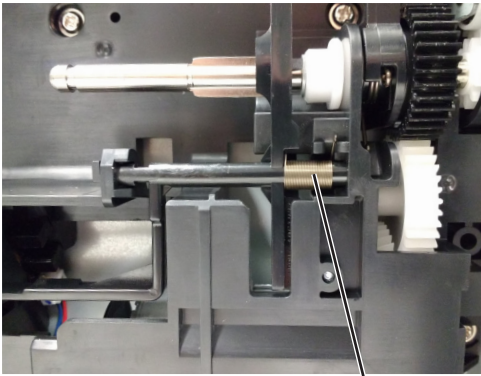
Action	Yes	No
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Tray 1 pick). Does the sensor status change while toggling the sensor?	Contact the next level of support.	Go to step 4.
Step 4 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Check the sensor (Tray 1 pick) for damage. If necessary, replace the isolation unit. See “Isolation unit removal” on page 469 . b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

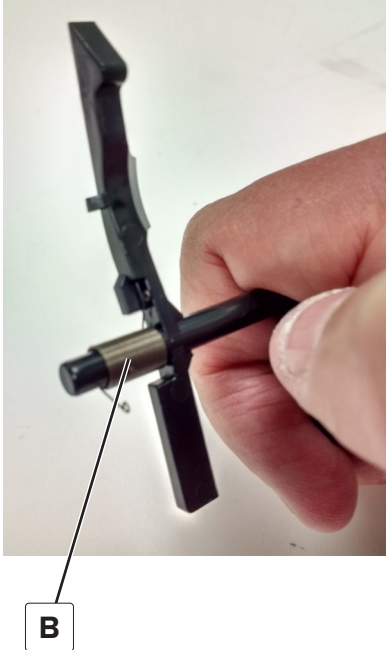
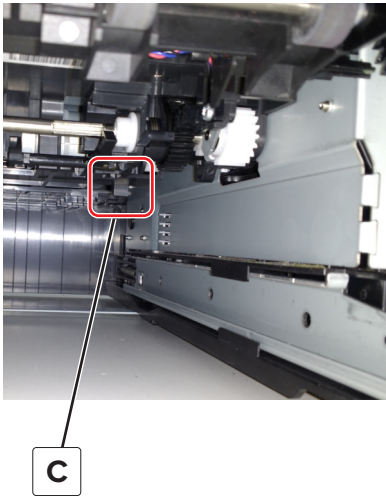
Motor (tray 1 pick) jam service check

Action	Yes	No
Step 1 Check the tray for overfilling. Is the tray overfilled?	Go to step 2.	Go to step 3.
Step 2 Remove the excess paper from the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper condition in the tray. Is the paper crumpled or damaged?	Go to step 4.	Go to step 5.
Step 4 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the paper path exiting the tray. Is the paper path free of fragments and contamination?	Go to step 7.	Go to step 6.
Step 6 Clean the paper path. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics and adjustments > Motor tests > Pick (tray 1) b Select a setting, and then touch Start . Does the motor run?	Contact the next level of support.	Go to step 8.
Step 8 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 a Replace the motor (tray 1 pick). b Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Tray actuator and spring service check

Action	Yes	No
<p>Step 1</p> <p>a Remove the imaging kit.</p> <p>b Remove the affected tray insert.</p> <p>c Remove the pick roller from the tray.</p> <p>d Place the printer on its side.</p> <p>e Check if the spring (A) on the flag is installed properly.</p>	Go to step 3.	Go to step 2.
<div><div data-bbox="706 930 755 978">A</div></div> <p>Is the spring installed properly?</p>		

Action	Yes	No
<p>Step 2</p> <p>a Remove the tray empty sensor actuator. See “550-sheet tray empty sensor actuator removal” on page 502.</p> <p>b Reseat the spring (B) on the flag as shown.</p>  <p>c Reinstall the flag.</p> <p>d Reseat the media feeder. See “Media feeder removal” on page 468.</p> <p>e Press the media feeder actuator (C), and then check if the flag drops.</p>  <p>Did the flag drop?</p>	<p>Go to step 4.</p>	<p>Go to step 3.</p>

Action	Yes	No
Step 3 a Replace the media feeder. See “Media feeder removal” on page 468 . b Perform a feed test until the tray is out of paper. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 4 Perform a feed test until the tray is out of paper. Does the problem remain?	Contact the next level of support.	The problem is solved.

242–244 paper jams

242 paper jam messages

Error code	Description	Action
242.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 174 .
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 155 .
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 156 .
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 162 .
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 164 .
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 166 .
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 169 .
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 171 .
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 155 .
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 156 .

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 158.
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 162.
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 164.
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 169.
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 171.
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 155.
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 156.
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 158.
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 162.
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 164.
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 169.
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 171.
242.84	Failed to pick last sheet of paper.	See “Tray actuator and spring service check” on page 148.
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 155.
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 156.

Error code	Description	Action
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 158.
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 162.
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 164.
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 166.
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 169.
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 171.

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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 155 .
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 156.
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 162.
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 164.
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 166.
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 169.
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 171.
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 155 .

Error code	Description	Action
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 156.
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 160.
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 162.
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 164.
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 169.
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 171.
243.84	Failed to pick last sheet of paper.	See “Tray actuator and spring service check” on page 148.
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 155 .
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 156.
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 160.
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 162.
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 164.
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 166.
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 169.
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 171.

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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 155 .
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 156 .
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 162 .
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 164 .
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 166 .
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 169 .
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 171 .
244.84	Failed to pick last sheet of paper.	See “Tray actuator and spring service check” on page 148 .
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 155 .
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 156 .
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 162 .
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 164 .
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 166 .
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 169 .

Error code	Description	Action
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 171.

Sensors (tray [x] trailing edge and pass-through) static jam service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Additional input tray diagnostics > Sensor tests b Find the sensor (Trailing edge (tray [x])). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the sensor. See “Sensor (550-sheet tray trailing edge) removal” on page 498. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 a Enter the Diagnostics menu, and then navigate to: Additional input tray diagnostics > Sensor tests b Find the sensor (Pass-through (tray [x])). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 9.
Step 9 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the sensor. See “Sensor (550-sheet tray pass-through) removal” on page 497. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper arrived too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 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?	Go to step 8.	Go to step 6.
Step 6 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the sensor. See “Sensor (550-sheet tray trailing edge) removal” on page 498. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 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?	Go to step 11.	Go to step 9.
Step 9 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the sensor. See “Sensor (550-sheet tray pass-through) removal” on page 497. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 2 pass-through): Paper failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Replace the paper or change the paper size setting in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper tray for overfilling. Is the paper tray overfilled?	Go to step 6.	Go to step 7.
Step 6 Remove the excess paper from the tray. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the paper condition in the tray. Is the paper crumpled or damaged?	Go to step 8.	Go to step 9.
Step 8 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 11.	Go to step 10.
Step 10 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 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?	Go to step 14.	Go to step 12.
Step 12 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the sensor. See “Sensor (550-sheet tray pass-through) removal” on page 497. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 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?	Go to step 17.	Go to step 15.
Step 15 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 17.	Go to step 16.
Step 16 Reinstall or replace the motor. See “Motor (550-sheet tray pass-through) removal” on page 494. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 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?	Go to step 20.	Go to step 18.
Step 18 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 20.	Go to step 19.

Action	Yes	No
Step 19 Reinstall or replace the motor. See “Motor (550-sheet tray pass-through) removal” on page 494. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 3 pass-through): Paper failed to arrive service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Replace the paper or change the paper size setting in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper tray for overfilling. Is the paper tray overfilled?	Go to step 6.	Go to step 7.
Step 6 Remove the excess paper from the tray. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the paper condition in the tray. Is the paper crumpled or damaged?	Go to step 8.	Go to step 9.

Action	Yes	No
Step 8 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 11.	Go to step 10.
Step 10 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 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?	Go to step 14.	Go to step 12.
Step 12 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the sensor. See “Sensor (550-sheet tray pass-through) removal” on page 497 . Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 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?	Go to step 17.	Go to step 15.
Step 15 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 17.	Go to step 16.

Action	Yes	No
Step 16 Reinstall or replace the motor. See “Motor (550-sheet tray pass-through) removal” on page 494. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 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?	Go to step 20.	Go to step 18.
Step 18 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 20.	Go to step 19.
Step 19 Reinstall or replace the motor. See “Motor (550-sheet tray pass-through) removal” on page 494. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper cleared too early service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Replace the paper or change the paper size setting in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper tray for overfilling. Is the paper tray overfilled?	Go to step 6.	Go to step 7.
Step 6 Remove the excess paper from the tray. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the paper condition in the tray. Is the paper crumpled or damaged?	Go to step 8.	Go to step 9.
Step 8 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 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?	Go to step 12.	Go to step 10.
Step 10 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the sensor. See “Sensor (550-sheet tray trailing edge) removal” on page 498. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 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?	Go to step 15.	Go to step 13.

Action	Yes	No
Step 13 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 15.	Go to step 14.
Step 14 Reinstall or replace the sensor. See “Sensor (550-sheet tray pass-through) removal” on page 497. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper cleared too late service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Replace the paper or change the paper size setting in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the primary paper path for paper jams and obstructions. Is the paper path free of jams and obstructions?	Go to step 7.	Go to step 6.
Step 6 Remove the paper jams and obstructions. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 a Enter the Diagnostics menu, and then navigate to: Additional input tray diagnostics > Sensor tests b Find the sensor (Trailing edge (tray [x])). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the sensor. See “Sensor (550-sheet tray trailing edge) removal” on page 498. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests b Find the motor (Duplex/MPF), and then touch Start . Does the motor run?	Go to step 13.	Go to step 11.
Step 11 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the motor. See “Motor (duplex/MPF) removal” on page 413. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 a Enter the Diagnostics menu, and then navigate to: Additional input tray diagnostics > Sensor tests b Find the sensor (Pass-through (tray [x])). Does the sensor status change while toggling the sensor?	Go to step 16.	Go to step 14.
Step 14 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 16.	Go to step 15.

Action	Yes	No
Step 15 Reinstall or replace the sensor. See “Sensor (550-sheet tray pass-through) removal” on page 497 . Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 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?	Go to step 19.	Go to step 17.
Step 17 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 19.	Go to step 18.
Step 18 Reinstall or replace the motor. See “Motor (550-sheet tray pass-through) removal” on page 494 . Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray [x] pass-through): Tray [x] failed to pick service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Replace the paper or change the paper size setting in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper tray for overfilling. Is the paper tray overfilled?	Go to step 6.	Go to step 7.
Step 6 Remove the excess paper from the tray. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the paper condition in the tray. Is the paper crumpled or damaged?	Go to step 8.	Go to step 9.
Step 8 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 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?	Go to step 11.	Go to step 10.
Step 10 Reinstall the pick roller assembly. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the condition of the pick rollers. Are the pick rollers free from excess wear, contamination, and damage?	Go to step 13.	Go to step 12.
Step 12 Replace the pick rollers. Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
Step 13 Check the paper path exiting the paper tray. Is the paper path free of fragments and contamination?	Go to step 15.	Go to step 14.
Step 14 Clean the paper path. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 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?	Go to step 18.	Go to step 16.
Step 16 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the sensor. See “Sensor (550-sheet tray trailing edge) removal” on page 498. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 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?	Go to step 21.	Go to step 19.
Step 19 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 21.	Go to step 20.
Step 20 Reinstall or replace the motor. See “550-sheet tray paper feeder removal” on page 496. Does the problem remain?	Go to step 21.	The problem is solved.

Action	Yes	No
Step 21 Replace the media feeder. See “Media feeder removal” on page 468 . Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper failed to clear service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 5.	Go to step 4.
Step 4 Remove the partially fed or jammed paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: Additional input tray diagnostics > Sensor tests b Find the sensor (Trailing edge (tray [x])). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 8.	Go to step 7.

Action	Yes	No
Step 7 Reinstall or replace the sensor. See “Sensor (550-sheet tray trailing edge) removal” on page 498. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 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?	Go to step 11.	Go to step 9.
Step 9 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the motor. See “Motor (duplex/MPF) removal” on page 413. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 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?	Go to step 14.	Go to step 12.
Step 12 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the sensor. See “Sensor (550-sheet tray pass-through) removal” on page 497. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 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?	Go to step 17.	Go to step 15.

Action	Yes	No
Step 15 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 17.	Go to step 16.
Step 16 Reinstall or replace the motor. See “Motor (550-sheet tray pass-through) removal” on page 494. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensors (tray [x] trailing edge and pass-through): Paper arrived too late service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Replace the paper or change the paper size setting in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper tray for overfilling. Is the paper tray overfilled?	Go to step 6.	Go to step 7.
Step 6 Remove the excess paper from the tray. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 Check the paper condition in the tray. Is the paper crumpled or damaged?	Go to step 8.	Go to step 9.
Step 8 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the tray separator pad for proper installation and damage. Is the separator pad properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the separator pad. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the condition of the tray pick rollers. Are the pick rollers free from excess wear, contamination, and damage?	Go to step 13.	Go to step 12.
Step 12 Replace the pick rollers. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the paper path exiting the paper tray. Is the paper path free of fragments and contamination?	Go to step 15.	Go to step 14.
Step 14 Clean the paper path. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 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?	Go to step 18.	Go to step 16.

Action	Yes	No
Step 16 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the sensor. See “Sensor (550-sheet tray trailing edge) removal” on page 498. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 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?	Go to step 21.	Go to step 19.
Step 19 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 21.	Go to step 20.
Step 20 Reinstall or replace the motor. See “550-sheet tray paper feeder removal” on page 496. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the media feeder. See “Media feeder removal” on page 468. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 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?	Go to step 25.	Go to step 23.
Step 23 Reseat the sensor cable, and then check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 25.	Go to step 24.

Action	Yes	No
Step 24 Reinstall or replace the sensor. See “Sensor (550-sheet tray pass-through) removal” on page 497. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 a Enter the Diagnostics menu, and then navigate to: Additional input tray diagnostics > Motor tests b Find the motor (Pass-through (tray [x])), and then touch Start . Does the motor run?	Go to step 28.	Go to step 26.
Step 26 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 28.	Go to step 27.
Step 27 Reinstall or replace the motor. See “Motor (550-sheet tray pass-through) removal” on page 494. Does the problem remain?	Go to step 28.	The problem is solved.
Step 28 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

RFID Option jam service check

Action	Yes	No
Step 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?	Go to step 2.	Go to step 3.
Step 2 Remove the jammed media. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 3 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?	Contact the next level of support.	The problem is solved.

28y and 680 paper jams

28y and 680 paper jam messages

Error code	Description	Action
280.11	The paper remains detected at the sensor (media present) after the printer is turned on.	See “ADF paper jam service check” on page 175.
280.13	The sensor (media present) did not detect the paper.	
280.15	The paper remains detected at the sensor (media present) during a job.	
281.11	The paper remains detected at the sensor (pick) after the printer is turned on.	
281.13	The sensor (pick) did not detect the paper.	
281.15	The paper remains detected at the sensor (pick) during a job.	
283.11	The paper remains detected at the sensor (trail) after the printer is turned on.	
283.13	The sensor (trail) did not detect the paper.	
283.15	The paper remains detected at the sensor (trail) during a job.	
284.11	The paper remains detected at the sensor (1st scan) after the printer is turned on.	
284.13	The sensor (1st scan) did not detect the paper.	
284.15	The paper remains detected at the sensor (1st scan) during a job.	
291.06	The flatbed cover is open before starting ADF job.	See “ADF open service check” on page 178.
295.01	Imagepipe Error—Page gap is too small.	See “ADF feed errors service check” on page 276.
680.10	The ADF cover is open during the scan job.	See “ADF top cover open service check” on page 179.
680.20	No paper is loaded for the ADF scan job.	See “ADF tray empty service check” on page 180.

ADF paper jam service check

Notes:

- Before performing this check, update the scanner firmware. For more information on the correct firmware version, contact the next level of support.
- If the paper does not feed into the ADF, then see [“ADF feed errors service check” on page 276.](#)

Actions	Yes	No
Step 1 Resend the scan job. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the paper path for paper jams and fragments. Is the paper path free of fragments and debris?	Go to step 4.	Go to step 3.
Step 3 Remove the paper jams and fragments. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check if the paper feeds into the ADF. Does the paper feed into the ADF?	Go to step 6.	Go to step 5.
Step 5 Perform the ADF feed error service check. See “ADF feed errors service check” on page 276. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check if the paper has a bent or curled leading edge. Does the paper have a bent or curled leading edge?	Go to step 7.	Go to step 10.
Step 7 Replace the paper, and then resend the scan job. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check if the paper is damp or heavy. Is the paper damp or heavy?	Go to step 9.	Go to step 10.
Step 9 Replace the paper, and then resend the scan job. Does the problem remain?	Go to step 10.	The problem is solved.

Actions	Yes	No
<p>Step 10</p> <p>a Enter the Diagnostics menu, and then navigate to: Scanner diagnostics > Motor tests > ADF pick</p> <p>b Touch Start.</p> <p>c Enter the Diagnostics menu, and then navigate to: Scanner diagnostics > Motor tests > ADF transport</p> <p>d Touch Start.</p> <p>Does each motor run?</p>	Go to step 12.	Go to step 11.
<p>Step 11</p> <p>Reseat the ADF cable on the JADF1 connector on the controller board.</p> <p>Does the problem remain?</p>	Go to step 12.	The problem is solved.
<p>Step 12</p> <p>a Enter the Diagnostics menu, and then navigate to: Scanner diagnostics > Sensor tests</p> <p>b Find the following sensors:</p> <ol style="list-style-type: none"> 1 Sensor (ADF media present) 2 Sensor (ADF 1st scan) 3 Sensor (ADF trail) 4 Sensor (ADF duplex) <p>Does the status of each sensor change while toggling the sensors?</p>	Go to step 16.	Go to step 13.
<p>Step 13</p> <p>Check the sensor for dirt and debris.</p> <p>Is the sensor free of dirt and debris?</p>	Go to step 16.	Go to step 14.
<p>Step 14</p> <p>Clean the sensor.</p> <p>Does the problem remain?</p>	Go to step 15.	The problem is solved.
<p>Step 15</p> <p>Check if the actuator is stuck or damaged.</p> <p>Is the actuator stuck or damaged?</p>	Go to step 18.	Go to step 16.
<p>Step 16</p> <p>Reseat the ADF cable on the JADF1 connector on the controller board.</p> <p>Does the problem remain?</p>	Go to step 17.	The problem is solved.

Actions	Yes	No
Step 17 Check the following pins of the JADF1 connector on the controller board if the values are as shown: a Pins 14 and 16 are +25V. b Pins 15 and 22 are +3V. c Pins 17, 18, and 23 are GND. Are the values approximately correct?	Contact the next level of support.	Go to step 18.
Step 18 Replace the ADF. See “ADF removal” on page 474 . Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF open service check

Actions	Yes	No
Step 1 Check if the ADF is completely closed and resting on the flatbed. Is the ADF completely closed and resting on the flatbed?	Go to step 3.	Go to step 2.
Step 2 Close the ADF completely until it rests on the flatbed. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Reset the printer, and then perform an ADF scan job. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 a Enter the Diagnostics menu, and then navigate to: Scanner diagnostics > Sensor tests b Find the sensor (ADF closed). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 Check the actuator for misalignment and damage. Is the actuator misaligned or damaged?	Go to step 6.	Go to step 7.
Step 6 Replace the ADF. See “ADF removal” on page 474 . Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 Perform an ADF scan job. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF top cover open service check

Actions	Yes	No
Step 1 Check if the ADF top cover is completely closed. Is the ADF top cover completely closed?	Go to step 3.	Go to step 2.
Step 2 Close the ADF top cover completely. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Reset the printer, and then perform an ADF scan job. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 a Enter the Diagnostics menu, and then navigate to: Scanner diagnostics > Sensor tests b Find the sensor (ADF top door interlock). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 Check the actuator for misalignment and damage. Is the actuator misaligned or damaged?	Go to step 6.	Go to step 7.
Step 6 Replace the ADF. See “ADF removal” on page 474 . Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Perform an ADF scan job. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF tray empty service check

Actions	Yes	No
Step 1 a Load the scan documents properly in the ADF tray. b Reset the printer, and then perform an ADF scan job. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Enter the Diagnostics menu, and then navigate to: Scanner diagnostics > Sensor tests b Find the sensor (ADF media present). Does the sensor status change while toggling the sensor?	The problem is solved.	Go to step 3.
Step 3 Reseat or replace the cable on the JADF1 connector on the controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

User attendance messages

Non-Lexmark supply

The printer has detected a non-Lexmark supply or part installed in the printer.

The Lexmark printer is designed to function best with genuine Lexmark supplies and parts. Use of third-party supplies or parts may affect the performance, reliability, or life of the printer and its imaging components.

All life indicators are designed to function with Lexmark supplies and parts and may deliver unpredictable results if third-party supplies or parts are used. Imaging component usage beyond the intended life may damage the Lexmark printer or associated components.

Warning—Potential Damage: Use of third-party supplies or parts can affect warranty coverage. Damage caused by the use of third-party supplies or parts may not be covered by the warranty.

If a customer accepts any and all of these risks and proceeds with the use of non-genuine supplies or parts in the printer, then instruct the customer to press and hold **X** and **#** simultaneously from the control panel for 15 seconds. Do not perform this action yourself.

If a customer does not want to accept these risks, then remove the third-party supply or part from the printer and install a genuine Lexmark supply or part. For more information, see

[Using genuine Lexmark parts and supplies.](#)

If the printer does not print after pressing and holding **X** and **#** simultaneously for 15 seconds, then instruct the customer to reset the supply usage counter.

- 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 183.
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 189.
31.50z	Smart chip communications problem. Reinstall the missing or unresponsive black developer.	See “Missing toner, developer, or photoconductor service check” on page 183.
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 222.

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 183.
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 180.](#)

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 183.
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

Action	Yes	No
Step 1 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?	Go to step 2.	The problem is solved.
Step 2 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?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Replace the imaging kit. Reuse the current supplies. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the HVPS and pogo pin cables for proper connection, and reseal if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the pogo pin contacts for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the pogo pin contacts for dust or debris. Are the contacts free of dust or debris?	Go to step 8.	Go to step 7.
Step 7 Remove the dust or debris. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 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?	Go to step 10.	Go to step 9.
Step 9 Replace the TMC card. See “TMC card removal” on page 413. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 185.
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.	

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

Action	Yes	No
Step 1 Check the region number of the cartridge and the printer. Do the numbers match?	Contact the next level of support.	Go to step 2.
Step 2 Install the appropriate cartridge. Does the problem remain?	Contact the next level of support.	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 299.
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 186.

Fax failure service check

Action	Yes	No
Step 1 Turn off the printer, wait for about 10 seconds, and then turn on the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 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?	Go to step 3.	The problem is solved.
Step 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?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Check the firmware version. Is the firmware updated to the latest version?	Go to step 6.	Go to step 5.
Step 5 Update the firmware. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Make sure that the controller board is properly installed. Reseat all the cables on the controller board. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the controller board and its connector pins for damage. Are the controller board and its connectors free of damage?	Contact the next level of support.	Go to step 8.
Step 8 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	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 188 .
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.	
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

Action	Yes	No
<p>Warning—Potential Damage: Do not perform this step if the printer is on.</p> <p>a Replace the required maintenance kit.</p> <p>b Reset the maintenance counter. See “Resetting the maintenance counter” on page 532.</p> <p>Does the problem remain?</p>	Contact the next level of support.	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 189.
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

Action	Yes	No
Step 1 Reseat the waste toner bottle. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the printer is placed on a flat surface. Is the printer placed on a flat surface?	Go to step 4.	Go to step 3.
Step 3 Place the printer on a flat surface. Does the problem remain?	Go to step 4.	The problem is solved.
Step 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?	Go to step 6.	Go to step 5.
Step 5 Remove the dust or debris. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the waste toner contact block for proper connection and damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	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 193.
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 193.
85.09	The black imaging unit is nearly low. The user-selected EWS set point has been reached.	
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 193.
88.09z	The cartridge is nearly low. The user-selected EWS set point has been reached.	
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

Action	Yes	No
Step 1 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?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 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?	Go to step 3.	The problem is solved.
Step 3 Check the cartridge or photoconductor contacts for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	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 195 .
35	Insufficient memory.	See “Insufficient memory service check” on page 196 .
36	The resolution is reduced.	
37	No memory for collation, defrag, or held jobs.	See “Insufficient memory service check” on page 196 .
38	Memory is full.	See “Insufficient memory service check” on page 196 .
39	Complex page.	See “Complex page service check” on page 196 .
44.01	Error on every page. Printer fails to program RFID tag.	See “Error on every page service check” on page 197 .
44.01	Error on some pages. Printer fails to program RFID tag.	See “Error on some pages service check” on page 199 .
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 201 .
51	Defective flash memory.	See “Flash memory failure service check” on page 203 .

Error code	Description	Action
52	Flash memory is full.	See “Insufficient flash memory service check” on page 204.
53	Unformatted flash memory.	See “Flash memory failure service check” on page 203.
54	Serial port or network error.	See “Flash memory failure service check” on page 203.
55	Unsupported option.	See “Unsupported internal option service check” on page 205
56	Parallel, serial, or USB port disabled.	See “Disabled port service check” on page 205.
57	Configuration changed – held jobs lost.	--
58	Too many flash options or trays.	See “Excess options service check” on page 206.
58.xx	Optional tray is defective or incorrectly installed.	See “Hardware failure service check” on page 202.
59	Incompatible option or tray.	See “Incompatible hardware option service check” on page 207.
61	Defective hard disk.	See “Hard disk failure service check” on page 207.
62	Hard disk is full.	See “Hard disk failure service check” on page 207.
63	Unformatted hard disk.	Format the hard disk.
64	Unsupported hard disk format.	Format the hard disk.

Mismatched paper size service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the controller board pins for damage, and replace if necessary. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Insufficient memory service check

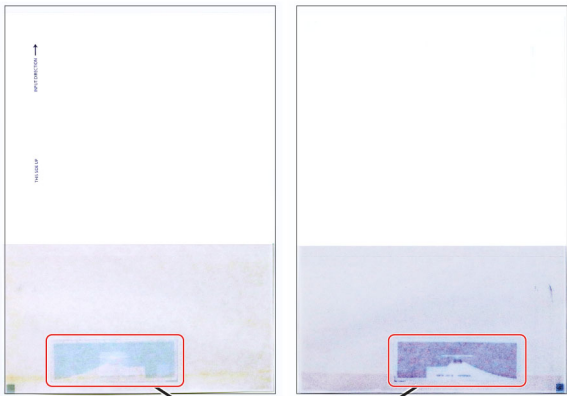
Action	Yes	No
Step 1 a Perform a POR. b From the home screen, navigate to Settings > Print > Setup > Download Target > Disk . Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 If applicable, install an extra memory card. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the controller board pins for damage. Are the pins free of damage?	Contact the next level of support.	Go to step 4.
Step 4 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Complex page service check

Action	Yes	No
Step 1 Reset the printer, and then navigate to: Settings > Print > Setup > Download Target > Disk Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: Input tray quick print > Tray 1 > Single Does the problem remain?	Go to step 4.	Go to step 3.
Step 3 If applicable, install extra memory card. If applicable, make sure that the additional memory card is properly installed. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Check the controller board pins for damage, and replace if necessary. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

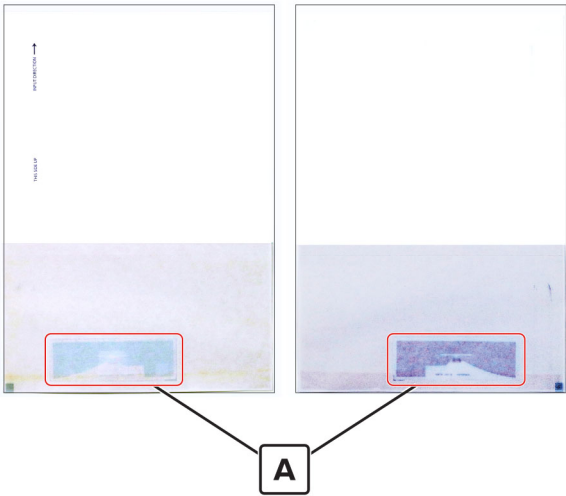
Error on every page service check

Action	Yes	No
Step 1 Check if the media loaded has an RFID tag (A) attached or embedded. <ul style="list-style-type: none"> • 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. <div style="text-align: center;"> <p>FRONT BACK</p>  <p>A</p> </div> <p>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.</p> <p>Is the tray loaded with an RFID media?</p>	Go to step 3.	Go to step 2.
Step 2 Load the tray with an RFID media. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 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?	Go to step 5.	Go to step 4.
Step 4 Load the RFID media into Tray 3 or Tray 4. Does the problem remain?	Go to step 5.	The problem is solved.
Step 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?	Go to step 7.	Go to step 6.
Step 6 Configure the printer, driver, or job settings to specify the tray that holds the RFID media. Does the problem remain?	Go to step 7.	The problem is solved.
Step 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?	Go to step 9.	Go to step 8.
Step 8 Rotate the media to the correct orientation for the user's application. Does the problem remain?	Go to step 9.	The problem is solved.
Step 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?	Contact the next level of support.	Go to step 10.

Action	Yes	No
Step 10 Replace the RFID media. Does the problem remain?	Contact the next level of support.	The problem is solved.

Error on some pages service check

Action	Yes	No
Step 1 Check if the media loaded has an RFID tag (A) attached or embedded. <ul style="list-style-type: none"> • Sample RFID media <p>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.</p> <div style="text-align: center;"> <p>FRONT BACK</p>  <p>A</p> </div> <p>Is the tray loaded with an RFID media?</p>	Go to step 3.	Go to step 2.
Step 2 Load the tray with an RFID media. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
<p>Step 3</p> <p>Check if the RFID media is loaded in Tray or Tray 4.</p> <p>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.</p> <p>Is the RFID media loaded in Tray 3 or Tray 4?</p>	Go to step 5.	Go to step 4.
<p>Step 4</p> <p>Load the RFID media into Tray 3 or Tray 4.</p> <p>Does the problem remain?</p>	Go to step 5.	The problem is solved.
<p>Step 5</p> <p>Check if the printer, driver, or job settings are selecting the tray that holds the RFID media.</p> <p>Do the settings specify Tray 3 or Tray 4?</p>	Go to step 7.	Go to step 6.
<p>Step 6</p> <p>Configure the printer, driver, or job settings to specify the tray that holds the RFID media.</p> <p>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.</p> <p>Does the problem remain?</p>	Go to step 7.	The problem is solved.
<p>Step 7</p> <p>a Check if the Retry Count setting is greater than zero.</p> <p>From the home screen, navigate to:</p> <p>Settings > RFID > Retry Count</p> <p>b Check if the error happens every <i>N</i> pages.</p> <p>Is the Retry Count setting greater than 0 and happens every <i>N</i> pages?</p>	Go to step 8.	Go to step 12.
<p>Step 8</p> <p>Check if the RFID media is rotated to the correct orientation for the user's application.</p> <p>Note: The orientation of the media loaded in the tray should match the orientation specified by the user's RFID system design.</p> <p>Is the RFID media rotated to the correct orientation?</p>	Go to step 9.	Go to step 10.

Action	Yes	No
Step 9 Rotate the media to the correct orientation for the user's application. Does the problem remain?	Go to step 10.	The problem is solved.
Step 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?	Go to step 11.	Go to step 12.
Step 11 Make sure that all pages are in the correct and similar orientation. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 12 Replace the RFID media. Does the problem remain?	Contact the next level of support.	The problem is solved.

RFID data within print job is invalid service check

Action	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Reformat the RFID job data. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Clear any existing error code. See the <i>RFID Programmer's Guide</i> . Note: Each specific error code indicates a specific type of problem with the RFID data. Does the problem remain?	Contact the next level of support.	The problem is solved.

Hardware failure service check

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 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?	Go to step 3.	The problem is solved.
Step 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?	Go to step 4.	Go to step 5.
Step 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?	Go to step 5.	The problem is solved.
Step 5 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. Note: If the 58.xx error persists, then there is a problem with the tray. Does the problem remain?	Go to step 6.	Go to step 7.
Step 6 Replace the optional tray. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 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?	Go to step 8.	Go to step 9.
Step 8 Replace the optional tray. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Remove Tray 4, and then reinstall the RFID Option. Does the problem remain?	Go to step 10.	Contact the next level of support.
Step 10 Replace the RFID Option. <ul style="list-style-type: none"> • 41X1379 (low voltage, North America) • 41X1613 (high voltage, EMEA) Does the problem remain?	Contact the next level of support.	The problem is solved.

Flash memory failure service check

Action	Yes	No
Step 1 Navigate to Settings > Print > Job Accounting > Log Near Full Level . Make sure that the value is set to maximum. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 If applicable, make sure that the optional memory card is supported. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the controller board pins for damage, and replace if necessary. See “Controller board removal” on page 452 . Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Make sure that the firmware version is the latest, and update if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Insufficient flash memory service check

Action	Yes	No
Step 1 Navigate to Settings > USB Drive > Flash Drive Scan > Format Flash . Does the problem remain?	Go to step 3.	Go to step 2.
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?	Go to step 3.	The problem is solved.
Step 3 If applicable, make sure that the optional memory card is supported. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See “Controller board removal” on page 452 . Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Make sure that the firmware version is the latest, and update if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Unsupported internal option service check

Action	Yes	No
Step 1 If applicable, make sure that the option cards are supported. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the controller board pins for damage. Are the pins free of damage?	Go to step 4.	Go to step 3.
Step 3 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Make sure that the printer is using the latest firmware version, and update if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Disabled port service check

Action	Yes	No
Step 1 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?	Go to step 2.	The problem is solved.
Step 2 Enter the Network/Ports menu and make sure that the applicable port settings are enabled. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 If applicable, make sure that the option card is supported. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage. Are the pins free of damage?	Go to step 6.	Go to step 5.


Action	Yes	No
Step 5 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Make sure that the printer is using the latest firmware version, and update if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Excess options service check

Action	Yes	No
Step 1 Perform a POR, and then resend the print job. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 If applicable, make sure that the internal option is supported. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a If applicable, remove all internal options. b Perform a POR, and then resend the print job. Does the problem remain?	Go to step 6.	Go to step 4.
Step 4 Check if the number of internal options installed is allowed, and then remove the excess option. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the number of input options allowed, and then remove the excess input options. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board pins for damage. Are the pins free of damage?	Contact the next level of support.	Go to step 7.

Action	Yes	No
Step 7 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Incompatible hardware option service check

Action	Yes	No
Step 1  CAUTION—SHOCK HAZARD: Do not perform this step if the printer is on. a Reseat the hardware option cables. b Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 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?	Go to step 3.	The problem is solved.
Step 3 Check the hardware option controller board pins for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Hard disk failure service check

Action	Yes	No
Step 1 Delete unnecessary files. a From the home screen, navigate to Settings > Device > Maintenance > Out-of-Service Erase > Erase Hard Disk > Sanitize all information on hard disk . b Select Erase downloads (Erase all macros, fonts, PFOs, etc), Erase buffered jobs, and Erase held jobs > All held jobs . c Touch Erase . Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 Make sure that the printer is using the latest firmware version. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a Make sure that the hard disk cable is properly installed. b Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 a Make sure that the hard disk is properly installed. b Check the hard disk for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the controller board pins for damage. Are the pins free of damage?	Contact the next level of support.	Go to step 6.
Step 6 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	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 209 .
100.04D	The printhead thermistor reading is out of range.	See “Printhead service check” on page 216 .
100.05A	The fuser exit sensor cable is unplugged.	See “Fuser sensors service check” on page 210 .
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 210 .
100.27	The tray 1 paper exit sensor cable is unplugged.	See “Tray 1 sensor (media out) cable is unplugged service check” on page 211 .

Error code	Description	Action
100.32	The duplex path 1 sensor cable is unplugged.	See “Upper paper path sensors service check” on page 211.
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 213.
100.36	The MPF paper present sensor is unplugged.	
100.37	The duplex path 2 sensor is unplugged.	
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 212.
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

Action	Yes	No
Step 1 Check the sensor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Replace the sensor. See “Sensor (weather station) removal ” on page 409. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fuser sensors service check

Action	Yes	No
Step 1 Check the error that appeared. Is the error 100.4?	Go to step 2.	Go to step 3.
Step 2 Check the sensor (fuser nip) for proper connection, and reseal if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor (fuser exit) for proper connection, and reseal if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 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?	Go to step 5.	The problem is solved.
Step 5 Replace the fuser. See “Fuser removal” on page 431 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Transfer module thermistor service check

Action	Yes	No
Step 1 Check the cable on the JTHM1 connector on the controller board for proper connection, and reseal if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Replace the sensor (TPS). See “Sensor (TPS) removal” on page 423 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Tray 1 sensor (media out) cable is unplugged service check

Action	Yes	No
Step 1 Check the cable on the JMTR1 connector on the controller board for proper connection, and reseal if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Remove the media feeder. See “Media feeder removal” on page 468 . b Check the cable on the sensor (media out), and reseal if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the media feeder. See “Media feeder removal” on page 468 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Upper paper path sensors service check

Action	Yes	No
Step 1 Check the following sensors for proper connection, and reseal if necessary: <ul style="list-style-type: none"> • Sensor (output) • Sensor (bin full) Does the problem remain?	Go to step 2.	The problem is solved.
Step 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?	Go to step 4.	Go to step 3.
Step 3 Reconnect the cables. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the sensors for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Lower paper path sensors service check

Action	Yes	No
Step 1 Check the error that appeared. Is the error 100.41?	Go to step 3.	Go to step 2.
Step 2 Check the error that appeared. Is the error 100.44?	Go to step 10.	Go to step 3.
Step 3 Check the cable on the JPKSNS1 connector on the controller board for proper connection. Is the cable properly connected?	Go to step 5.	Go to step 4.
Step 4 Reconnect the cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the error that appeared. Is the error 100.42 or 100.43?	Go to step 6.	Go to step 10.
Step 6 Check the sensor cables in the isolation unit for proper connection. Are the cables properly connected?	Go to step 8.	Go to step 7.
Step 7 Reconnect the cables. Does the problem remain?	Go to step 8.	The problem is solved.
Step 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?	Go to step 9.	The problem is solved.
Step 9 Replace the isolation unit. See “Isolation unit removal” on page 469 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
Step 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?	Go to step 11.	The problem is solved.
Step 11 Replace the sensor (input). See “Sensor (input) removal” on page 439 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex/MPF input) service check

Action	Yes	No
Step 1 Check the error that appeared. Is the error 100.35?	Go to step 2.	Go to step 5.
Step 2 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?	Go to step 4.	Go to step 3.
Step 3 Reconnect the cable. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the cable. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 5 Check the following sensors for proper connection, and reseal if necessary: <ul style="list-style-type: none"> • Sensor (MPF empty) • Sensor (duplex path 1) • Sensor (fuser buckle) • Sensor (narrow media) Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Check the sensors for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	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 214.
102.21	Tray 2 board ID is invalid.	
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

Action	Yes	No
Step 1 a Make sure that the latest firmware is installed. b Make sure that the options configuration is supported. See the <i>Printer, Option, and Stand Compatibility Guide</i> . c Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Reseat the interface cable, and then check the cable for damage. Is the cable free of damage?	Go to step 4.	Go to step 3.
Step 3 Replace the cable. See “550-sheet tray interface cable removal” on page 501. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Check the printer interface cable and adjacent options for damage. Are the cable and options free of damage?	Go to step 6.	Go to step 5.
Step 5 Replace the cable and options. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the input option controller board. See “550-sheet tray controller board assembly removal” on page 500. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Reset the printer. Does the problem remain?	Contact the next level of support.	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 216.
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.	
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

Action	Yes	No
Step 1 Perform a POR. Does the problem remain?	Go to step 2.	The problem is solved.
Step 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?	Go to step 4.	Go to step 3.

Action	Yes	No
Step 3 Reconnect the cables. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the printhead cable for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the printhead. See “Printhead removal” on page 457. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 218.
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.	
120.86	The motor (fuser) did not run at the correct timing.	

Motor (fuser) service check

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the fuser for damage or life expiration, and replace if necessary. See “Fuser removal” on page 431 . Does the problem remain?	Go to step 3.	Go to step 4.
Step 3 Check the motor cable on the JFUSED1 connector on the controller board for proper connection. Is the cable properly connected at both ends?	Go to step 5.	Go to step 4.
Step 4 Reconnect the cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Remove the fuser, and then manually turn the fuser drive gear. Does the gear freely turn?	Go to step 8.	Go to step 7.
Step 7 Replace the fuser drive gear. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the motor (fuser). See “Motor (fuser) removal” on page 416 . Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	The problem is solved.

121 errors

121 error messages

Error code	Description	Action
121.00	Fuser failed to reach the temperature during warm-up.	See “Fuser service check” on page 222.
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.	
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 222.
121.21	Fuser low power trace heating rate exceeded error threshold.	
121.22	Open fuser relay was detected.	
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/line voltage detection.	

Error code	Description	Action
121.41	Fuser mechanism did not detect the expected cam sensor signal.	See “Fuser service check” on page 222.
121.42	Fuser gate time increasing out of control.	
121.48	Fuser type does not match the fuser driver.	
121.50	Fuser went over the required temperature during global over temperature check.	
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 222.
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.	
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 222.
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 service check

Action	Yes	No
Step 1 Check the fuser for proper installation. Is the fuser properly installed?	Go to step 3.	Go to step 2.
Step 2 Reinstall the fuser. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Reconnect the cable. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the fuser cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the fuser. See “Fuser removal” on page 431. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the LVPS. See “LVPS removal” on page 403. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 224.
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 224.
127.02	HVPS secondary power supply was not detected.	

LVPS service check

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the LVPS cable on the JLVPS connector on the controller board for proper connection. Is the cable properly connected at both ends?	Go to step 4.	Go to step 3.
Step 3 Reconnect the cable. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the LVPS. See “LVPS removal” on page 403. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

HVPS service check

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the HVPS cable on the JHVPS connector on the controller board for proper connection. Is the cable properly connected at both ends?	Go to step 4.	Go to step 3.

Action	Yes	No
Step 3 Reconnect the cable. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the HVPS. See “HVPS removal” on page 417. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 225.

TPS communications service check

Action	Yes	No
Step 1 Check the TPS cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 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?	Go to step 4.	Go to step 3.
Step 3 Reconnect the cable. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Replace the sensor (TPS). See “Sensor (TPS) removal” on page 423. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 226.
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Remove the imaging kit, and then remove the transfer module. See “Transfer module removal” on page 432. b Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > CM developer c Touch Start . Does the motor run?	Go to step 3.	Go to step 6.

Action	Yes	No
Step 3 Manually turn the drive gears. Do the black developer and transfer module drive gears freely turn?	Go to step 5.	Go to step 4.
Step 4 Replace the motor (EP drive). See “Motor (EP drive) removal” on page 394. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the imaging kit components and transfer module for damage or life expiration, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 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?	Go to step 8.	Go to step 7.
Step 7 Reconnect the cables. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (CM developer). See “Motor (EP drive) removal” on page 394. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 228.
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Remove the imaging kit, and then remove the transfer module. See “Transfer module removal” on page 432. b Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Y developer c Touch Start . Does the motor run?	Go to step 3.	Go to step 6.
Step 3 Manually turn the drive gears. Do the black developer and transfer module drive gears freely turn?	Go to step 5.	Go to step 4.
Step 4 Replace the motor (EP drive). See “Motor (EP drive) removal” on page 394. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the imaging kit components and transfer module for damage or life expiration, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 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?	Go to step 8.	Go to step 7.
Step 7 Reconnect the cables. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (Y developer). See “Motor (EP drive) removal” on page 394. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 230.
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Remove the transfer module. See “Transfer module removal” on page 432. b Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Black only retract c Touch Start . Does the motor run?	Go to step 3.	Go to step 5.
Step 3 Manually turn the BOR gear on the transfer module. Does the gear freely turn?	Contact the next level of support.	Go to step 4.
Step 4 Replace the transfer module. See “Transfer module removal” on page 432. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 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?	Go to step 7.	Go to step 6.
Step 6 Reconnect the cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the motor. See “Motor (black only retract) removal” on page 407. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 232.
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Deskew b Touch Start . Does the motor run?	Go to step 3.	Go to step 5.
Step 3 Turn the aligner and registration rollers. Is there binding or uneven movement when turning the rollers?	Go to step 4.	Go to step 5.
Step 4 Check the aligner roller gears for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 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?	Go to step 7.	Go to step 6.
Step 6 Reconnect the cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the motor. See “Motor (deskew) removal” on page 397 . Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	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 233.
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 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?	Go to step 3.	The problem is solved.
Step 3 Reset the printer. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor. See “Motor (output) removal” on page 395. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reset the printer. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 235.
160.80	The motor (duplex/MPF) did not turn on.	
150.81	The motor (duplex/MPF) did not turn off.	
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Duplex/MPF b Touch Start . Does the motor run?	Go to step 3.	Go to step 5.
Step 3 Open the front door, and then manually turn the duplex/MPF drive gears. Is there binding in the gears?	Go to step 4.	Go to step 5.
Step 4 Replace the motor. See “Motor (duplex/MPF) removal” on page 413 . Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor cable for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	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 236.
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.	
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Remove the imaging kit, and then remove the transfer module. See “Transfer module removal” on page 432. b Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > K developer c Touch Start . Does the motor run?	Go to step 3.	Go to step 6.
Step 3 Manually turn the drive gears. Do the black developer and transfer module drive gears freely turn?	Go to step 5.	Go to step 4.
Step 4 Replace the motor (EP drive). See “Motor (EP drive) removal” on page 394. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the imaging kit components and transfer module for damage or life expiration, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 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?	Go to step 8.	Go to step 7.
Step 7 Reconnect the cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (K developer). See “Motor (EP drive) removal” on page 394. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 238.
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Motor tests > Isolation b Touch Start . Does the motor run?	Go to step 3.	Go to step 5.
Step 3 Manually turn the isolation unit input rollers. Is there binding or uneven movement when turning the rollers?	Go to step 4.	Go to step 5.
Step 4 Replace the isolation unit. See “Isolation unit removal” on page 469. Does the problem remain?	Go to step 5.	The problem is solved.
Step 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?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 Reconnect the cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	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 241 .
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 242.
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 242.
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that the tray insert is properly seated or fully inserted. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Pick roller index (tray 1)). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 4.
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?	Go to step 6.	Go to step 5.
Step 5 Reseat the cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor cable for damage. Is the cable free of damage?	Go to step 7.	Go to step 12.
Step 7 Replace the sensor. See “Sensor (550-sheet tray index) removal” on page 504. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the cable that connects the motor (tray 1 pick) to the controller board. Are both ends of the cable properly seated?	Go to step 10.	Go to step 9.
Step 9 Reseat the cable. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 Check the motor (tray 1 pick) for proper operation and noise. 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?	Go to step 13.	Go to step 11.
Step 11 Check the motor cable for damage. Is the cable free of damage?	Go to step 13.	Go to step 12.
Step 12 Replace the paper feeder. See “Media feeder removal” on page 468 . Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Tray pick roller assembly and lift motor service check

Action	Yes	No
Step 1 Check the pick roller for misalignment and damage. Is the pick roller properly installed and free of damage?	Go to step 3.	Go to step 2.
Step 2 Reinstall or replace the pick roller. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Reseat or replace the cable. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Reset the printer. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the media feeder. See “Media feeder removal” on page 468. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

166-168 errors

166–168 error messages

166.80	The motor (tray 2 pass-through) did not turn on.	See “Motor (tray [x] transport) failure service check” on page 245.
166.81	The motor (tray 2 pass-through) did not turn off.	
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.	
167.81	The motor (tray 3 pass-through) did not turn off.	
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.	
168.81	The motor (tray 4 pass-through) did not turn off.	
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.	

Motor (tray [x] transport) failure service check

Action	Yes	No
Step 1 Reset the printer Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the connections between the motor (tray [x] transport) and controller board. Is the motor properly connected?	Go to step 4.	Go to step 3.
Step 3 Reseat the cable. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the motor (tray [x] transport) cable for damage. Is the cable free of damage?	Go to step 6.	Go to step 5.
Step 5 Replace the cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reset the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the motor (tray [x] transport). Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

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 247.
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 246.
172.83	The LVPS fuser fan stalled.	
172.84	The LVPS fuser fan ran too slow.	
172.85	The LVPS fuser fan ran too fast.	

LVPS fuser fan service check

Action	Yes	No
Step 1 Check the fuser fan area for obstructions. Is the fan area free from obstructions?	Go to step 3.	Go to step 2.
Step 2 Remove the obstructions. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the cable on the JFAN1 connector on the controller board for proper connection. Is the cable properly connected?	Go to step 5.	Go to step 4.
Step 4 Reconnect the cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the fuser fan. See “Fuser fan removal” on page 397. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Main fan service check

Action	Yes	No
Step 1 Check the main fan area for obstructions. Is the fan area free from obstructions?	Go to step 3.	Go to step 2.
Step 2 Remove the obstructions. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the cable on the JFAN2 connector on the controller board for proper connection. Is the cable properly connected?	Go to step 5.	Go to step 4.
Step 4 Reconnect the cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the main fan. See “Main fan removal” on page 399. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

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 222.

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 232.
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 233.
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 235.
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 238.
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 235.
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 241.
662.23	The tray 2 lift plate failed to lift.	See “Motor (option tray pick) lifting error service check” on page 250.
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 252.
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

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that the tray insert is properly seated or fully inserted. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 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?	Go to step 8.	Go to step 4.
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?	Go to step 6.	Go to step 5.
Step 5 Reseat the cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor cable for damage. Is the cable free of damage?	Go to step 7.	Go to step 12.
Step 7 Replace the sensor. See “Sensor (550-sheet tray index) removal” on page 504. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the cable that connects the motor (tray [x] pick) to the controller board. Are both ends of the cable properly seated?	Go to step 10.	Go to step 9.
Step 9 Reseat the cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the motor (tray [x] pick) for proper operation and noise. 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?	Go to step 13.	Go to step 11.

Action	Yes	No
Step 11 Check the motor cable for damage. Is the cable free of damage?	Go to step 13.	Go to step 12.
Step 12 Replace the paper feeder. See “Media feeder removal” on page 468. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray [x] pass-through) stalled service check

Action	Yes	No
Step 1 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?	Go to step 4.	Go to step 2.
Step 2 Check the motor cable for proper connection, and reseal if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the motor. See “Motor (550-sheet tray pass-through) removal” on page 494. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the motor for noise. Does the motor sound abnormal or do the gears make a grinding sound?	Contact the next level of support.	Go to step 5.
Step 5 Perform a print job. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Replace the controller board. See “550-sheet tray controller board assembly removal” on page 500. Does the problem remain?	Contact the next level of support.	The problem is solved.

Procedure before starting the 9yy service checks

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

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

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

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

A. Collecting the history information from the SE menu

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

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

Notes:

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

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

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

Notes:

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

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

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

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

Note: To download the FWdebug log to a flash drive, see [“General SE” on page 333.](#)

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

Printing the Menu Settings Page

- 1 From the home screen, navigate to:
Reports > Menu Settings Page
- 2 Print the Menu Settings Page, and then use Scan to E-mail to send it to your next level of support.

D. Collecting information from the user

Ask the user for information about the following:

- Print job being run
- Operating system being used
- Print driver being used
- Other information on what was happening when the 9yy error occurred

900 errors

900 error messages

Error code	Description	Action
900.xx	Unrecoverable RIP software error/illegal trap.	See “900 error service check” on page 254 .

900 error service check

Action	Yes	No
Step 1 a Perform a POR. b Check if a 900.xx error code appears on the display. Does a 900.xx error code appear?	Go to step 4.	Go to step 2.

Action	Yes	No
Step 2 Check if another type of error code appears instead of the 900.xx error code. Does a different error code appear?	Go to step 3.	Go to step 4.
Step 3 See the error code and its service instructions in the printer <i>Service Manual</i> . Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 a Turn off the printer. b At the rear of the printer, disconnect the network cable, USB cable, and fax line. c Turn on the printer. Does the problem remain?	Go to step 12.	Go to step 5.
Step 5 a From the control panel, navigate to the Reports menu. b Select Device Statistics and Device Settings . Does the problem remain?	Go to step 12.	Go to step 6.
Step 6 Check if the printer has a scanner. Does the printer have a scanner?	Go to step 7.	Go to step 8.
Step 7 Using the scanner, perform a one-page copy job in color. Does the problem remain?	Go to step 12.	Go to step 8.
Step 8 a Turn off the printer. b At the rear of the printer, connect the network cable, USB cable, and fax line. c Turn on the printer. Does the problem remain?	Go to step 9.	Go to step 10.
Step 9 a Start the printer in Invalid engine mode . See “Entering Invalid engine mode” on page 331 . b Check if an Invalid Engine Code message appears. Does an Invalid Engine Code message appear?	Go to step 10.	Contact the next level of support.

Action	Yes	No
Step 10 Using the Device Settings report that is printed in step 5, check if the firmware level is older than the latest available version. Is the firmware version older, and does the customer agree to update the firmware?	Go to step 11.	Contact the next level of support.
Step 11 Update the firmware to the latest version. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 a Turn off the printer. b Make sure that all the cables on the controller board and scanner are properly connected. c Turn on the printer. d From the control panel, navigate to the Reports menu, and then select Device Statistics and Device Settings . e For MFPs, perform a one-page copy and scan job in color. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check if a hard disk is installed. Is a hard disk installed?	Go to step 14.	Go to step 17.
Step 14 a Check for buffered print jobs, and then delete them. See “Hard disk failure service check” on page 207 . b Perform a POR. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 a Turn off the printer. b Uninstall the hard disk. c Perform a POR. Does the problem remain?	Go to step 17.	Go to step 16.
Step 16 Replace the hard disk. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 Check if the printer has any of the following components installed: <ul style="list-style-type: none"> • Memory options • Fax card • Modem • Wireless and network option cards Is any of the components installed?	Go to step 18.	Go to step 21.
Step 18 a Turn off the printer. b Remove all the installed components. c Turn on the printer. Does the problem remain?	Go to step 21.	Go to step 19.
Step 19 a Turn off the printer. b Install the following components one at a time: <ul style="list-style-type: none"> • Memory options • Fax card • Modem • Wireless and network option cards Note: Make sure to perform a POR after installing each component. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 a Turn off the printer. b Replace the components that caused the error. c Turn on the printer. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 258.
911.xx		
912.xx		
913.xx	General engine software error.	See “913.xx error code check” on page 259.
914.xx	General engine software error.	See “91x.xx (910.xx-919.xx) Engine software service check” on page 258.
915.xx		
916.xx		
917.xx		
918.xx		
919.xx		

91x.xx (910.xx-919.xx) Engine software service check

Actions	Yes	No
Step 1 a Remove the controller board shield. See “Controller board shield removal” on page 451. b Check the cables on the controller board for proper connection. Are the cables properly connected?	Go to step 2.	Go to step 3.
Step 2 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 3 Reconnect the cables, and then reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

913.xx error code check

Actions	Yes	No
Step 1 a Turn the printer off, and remove the controller board shield. See “Controller board shield removal” on page 451. b Check the cable connections. See “Controller board removal” on page 452 for proper disconnecting and connecting of cables from controller board. Are all cable connections secure?	Go to step 3.	Go to step 2.
Step 2 a Reconnect any loose connections. b Print multiple print tests. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the fuser drive motor. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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 452.
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	<p>There is a mismatch between controller EEPROM and mirror.</p> <ul style="list-style-type: none"> 950.00 through 950.29 codes: mismatch between controller and mirror 950.30 through 950.60 codes: mismatch between secure and controller 	See “NVRAM mismatch failure service check” on page 261.
950.10	An NVRAM mismatch error occurred.	
951.xx	Error NV part on system board.	See “Controller board removal” on page 452.
952.xx	A recoverable MVRAM Cyclic Redundancy Check (CRC) error occurred. <i>n</i> is the offset at which the error occurred.	Performing a POR will clear this error.
953.xx	<p>NVRAM chip failure with mirror.</p> <ol style="list-style-type: none"> 1 POR the printer. 2 If the problem persists, replace the UICC card. 	See “Control panel removal” on page 378.

Error code	Description	Action
953.99	A control panel NVRAM error occurred.	See “NVRAM mismatch failure service check” on page 261.
954.xx	The NVRAM chip failure with controller part.	
955.xx	<p>The Code ROM or NAND flash failed the Cyclic Redundancy Check (CRC) check or the NAND experienced an uncorrectable multi-bit failure. </oc> indicates the source of the failure and has one of the following values:</p> <ul style="list-style-type: none"> • CRC Failure: The source is a failing package indicated by Pn 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 Bn 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.	See “Invalid firmware/controller board service check” on page 263.
959.xx	Controller verification failure of system boot code.	
959.0x	System hardware failure.	See “Controller board removal” on page 452.

NVRAM mismatch failure service check

Warning—Potential Damage: To avoid NVRAM mismatch issues, replace only one of the following components at a time:

- Control panel
- Controller board

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

1 Replace the affected component.

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

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

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

3 Use the Diagnostics menu to test the replacement part. Perform a feed test to check if the problem is resolved.

- If the problem is not resolved—Turn off the printer, and then install the old part.
- If the problem is resolved—Perform a POR.

Action	Yes	No
Step 1 Check if the control panel was recently replaced. Was the control panel recently replaced?	Go to step 2.	Go to step 4.
Step 2 Replace the current control panel with the original control panel. See “Control panel removal” on page 378 . Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the original control panel with a new control panel. Note: Make sure that the new control panel is not previously installed from another printer. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 4 Check if the controller board was recently replaced. Was the controller board recently replaced?	Go to step 5.	Contact the next level of support.
Step 5 Replace the current controller board with the original controller board. See “Controller board removal” on page 452 . Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Replace the original controller board with a new controller board. Note: Make sure that the new controller board is not previously installed from another printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Invalid firmware/controller board service check

Action	Yes	No
Step 1 Update the firmware. Note: Contact the next level of support for the correct firmware level. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	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 452 .
961.xx	RAM memory error: slot 1 RAM is bad.	See “Memory failure service check” on page 264 .
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 264 .

Memory failure service check

Action	Yes	No
Step 1 Check the memory module on the controller board for proper installation and damage, and reseal if necessary. Is the memory module properly installed and free of damage?	Go to step 2.	Go to step 3.
Step 2 Reset the printer. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the memory module. Does the problem remain?	Contact the next level of support.	The problem is solved.

Download emulation cyclic redundancy service check

Action	Yes	No
Step 1 Disable the download emulation, and then program the download emulation into the firmware card again. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 Replace the firmware card and download the emulation to the new card. Does the error remain?	Contact the next level of support.	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 265.
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 265.

Error code	Description	Action
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 265.

Standard network/network card error service check

Action	Yes	No
Step 1 Check if the network card is installed. Is the network card installed?	Go to step 2.	Go to step 3.
Step 2 Make sure that the network card is properly installed. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 3 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Standard network/network card programming error service check

Action	Yes	No
Step 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?	Go to step 2.	The problem is solved.
Step 2 Check if the network card is installed. Is the network card installed?	Go to step 3.	Go to step 4.
Step 3 Make sure that the network card is properly installed. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 4 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

980-984 errors

980–984 error messages

Error code	Description	Action
980.xx	<p>Engine experiencing unreliable communication with the specified device.</p> <p>Note: <device> can be one of the following:</p> <ul style="list-style-type: none"> • Tray 2 • Tray 3 • Tray 4 	See “Options communication error service check” on page 268 .
981.xx	<p>Engine protocol violation detected by the specified device.</p> <p>Note: <device> can be one of the following:</p> <ul style="list-style-type: none"> • Tray 2 • Tray 3 • Tray 4 	
982.xx	<p>Communications error detected by the specified device.</p> <p>Note: <device> can be one of the following:</p> <ul style="list-style-type: none"> • Tray 2 • Tray 3 • Tray 4 	
983.xx	<p>Invalid command received by the specified device.</p> <p>Note: <device> can be one of the following:</p> <ul style="list-style-type: none"> • Tray 2 • Tray 3 • Tray 4 	
984.xx	<p>Invalid command parameter received by the specified device.</p> <p>Note: <device> can be one of the following:</p> <ul style="list-style-type: none"> • 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 267.
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 267.

RFID Option communication error service check

Action	Yes	No
Step 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?	Contact the next level of support.	Go to step 2.
Step 2 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?	Contact the next level of support.	The problem is solved.

RFID Option connection error service check

Action	Yes	No
Step 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?	Go to step 2.	The problem is solved.
Step 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?	Go to step 3.	The problem is solved.
Step 3 Turn off the printer, and then turn it on. Does the problem remain?	Contact the next level of support.	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 268.
991.xx	An equipment check condition occurred in the controller card.	
992.xx	General software error.	

Options communication error service check

Action	Yes	No
Step 1 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 <i>Printer, Option, and Stand Compatibility Guide</i> . c Make sure that the option is properly attached to the printer or adjacent option. d Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Reseat the printer interface cable on the printer controller board. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Do the following to each option: a Reinstall the option. b Print a test page, and then check if the option is defective. Are all options properly working?	Go to step 4.	Contact the next level of support
Step 4 Reseat the option interface cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the option interface cable for damage. Is the cable free of damage?	Go to step 6.	Go to step 7.

Action	Yes	No
Step 6 Replace the option interface cable. See “550-sheet tray interface cable removal” on page 501. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the option controller board. See “550-sheet tray controller board assembly removal” on page 500. Does the problem remain?	Contact the next level of support	The problem is solved.

ADF/scanner hardware errors

8yy error messages

Error code	Description	Action
840.01	The scanner is disabled by the administrator.	See “Scanner disabled error service check” on page 270.
840.02	The scanner is disabled due to other reasons, such as an invalid license and hardware errors.	
842.00	The scanner failed to communicate.	See “Scanner communication failure service check” on page 271.
842.01	The scanner failed to communicate due to a hardware protocol.	
842.02	The scanner failed to communicate due to a logical protocol.	
843.00	The scanner carriage failed to return to its home position.	See “Flatbed home position service check” on page 274.
849.01	The configuration error indicates that a modem is installed.	See “Scanner configuration error service check” on page 271.
849.10	The configuration error indicates that a hard disk is installed.	

Scanner disabled error service check

Actions	Yes	No
Step 1 a From the home screen, navigate to: Settings > Device > Maintenance > Configuration Menu > Scanner Configuration > Disable Scanner > Enable b Reset the printer, and then perform an ADF scan job. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a From the home screen, navigate to: Settings > Device > Maintenance > Configuration Menu > Scanner Configuration > Disable Scanner > Disable b Reset the printer, and then perform an ADF scan job. Does the display indicate that the ADF is disabled?	Go to step 3.	Go to step 4.
Step 3 a Reseat the cable on the JADF1 connector on the controller board. b Repeat step 1. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 a Replace the ADF. See “ADF removal” on page 474. b Repeat step 1. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reseat the cables on the JFB1, JHS1, and JCCD1 connectors on the controller board. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 a Replace the flatbed. See “Flatbed removal” on page 483. b Repeat step 1. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Scanner communication failure service check

Actions	Yes	No
Step 1 Reseat the cable on the JADF1 connector on the controller board. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Reseat the cable on the JCCD1 connector on the controller board. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the ADF. See “ADF removal” on page 474. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the flatbed. See “Flatbed removal” on page 483. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Scanner configuration error service check

Action	Yes	No
Contact the next level of support. They will give the instructions on how to resolve the error.	N/A	N/A

Scan/fax/copy symptoms

Symptom	Action
The ADF does not scan both sides of the document.	See “ADF duplex service check” on page 278.
The scanned image using the ADF is skewed.	See “ADF feed errors service check” on page 276.
Multiple documents feed into the ADF.	
Documents do not feed into the ADF.	
The scanner makes a buzzing noise on startup or during a scan.	See “Flatbed home position service check” on page 274.
The page is blank.	See “Black or blank page copy service check” on page 272.
The page is black.	

Symptom	Action
There is no dial tone.	See “Modem/fax card service check” on page 279.
The printer does not connect to a fax machine.	The fax machine is turned off. Ask the fax recipient to check the machine.
Incoming fax has blank spaces or poor quality.	See “Blank spaces on incoming fax service check” on page 280.
Incoming fax has stretched words.	See “Stretched words on incoming fax service check” on page 281.
The printer does not transmit faxes.	See “Fax transmission service check” on page 283.
The printer does not receive faxes.	See “Fax reception service check” on page 281.
The ADF makes a rattling noise.	See “ADF rattling noise service check” on page 275.
The scanner does not scan a legal-size document.	See “Flatbed legal-size scan service check” on page 275.
The scanner carriage does not move during scanning.	See “Flatbed motor service check” on page 273.

Black or blank page copy service check

Actions	Yes	No
Step 1 Print a test page. Is the page black?	Go to step 2.	Go to step 3.
Step 2 See “Solid color or black image check” on page 55. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printed output is from an ADF scan job. Is the printed output from an ADF scan job?	Go to step 4.	Go to step 5.
Step 4 Send a flatbed scan job. Is the printed output blank or black?	Go to step 6.	Go to step 5.
Step 5 Check if the scan document feeds into the ADF. Does the scan document feed into the ADF?	Go to step 7.	Go to step 6.

Actions	Yes	No
Step 6 Reseat the CCD ribbon cable on the JCCD1 connector on the controller board. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the flatbed. See “Flatbed removal” on page 483 . Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Flatbed motor service check

Actions	Yes	No
Step 1 Reseat the CCD ribbon cable on the JCCD1 connector on the controller board. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Measure the voltage of pin 1 of the JFB1 connector on the controller board. Is the voltage equal to +24 V AC?	Go to step 3.	Go to step 4.
Step 3 Replace the flatbed. See “Flatbed removal” on page 483 . Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Flatbed home position service check

Actions	Yes	No
Step 1 Turn off the printer. Does the CCD move and return to the home position?	The problem is solved.	Go to step 2.
Step 2 a Enter the Diagnostics menu, and then navigate to: Scanner diagnostics > Sensor tests b Find the sensor (FB scanner home). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 3.
Step 3 Reseat the home position cable on the JHS1 connector on the controller board. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Reseat the cable on the JFB1 connector on the controller board. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Measure the voltage of pin 1 of the JFB1 connector on the controller board. Is the voltage equal to +24 V AC?	Go to step 7.	Go to step 6.
Step 6 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Measure the voltage of pin 1 of the JHS1 connector on the controller board. Note: Pin 2 is GND. Is the voltage equal to +5 V AC?	Go to step 8.	Go to step 9.
Step 8 Replace the flatbed. See “Flatbed removal” on page 483. Does the problem remain?	Go to step 9.	The problem is solved.

Actions	Yes	No
Step 9 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF rattling noise service check

Actions	Yes	No
Step 1 Reinstall the ADF separator roller. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Replace the ADF separator roll. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Reinstall the ADF top cover. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the ADF top cover assembly. See “ADF top cover removal” on page 479. Does the problem remain?	Contact the next level of support.	The problem is solved.

Flatbed legal-size scan service check

Actions	Yes	No
Step 1 a Open the ADF. b Check if the X mark is visible and free of damage. Is the X mark visible and free of damage?	Go to step 3.	Go to step 2.
Step 2 Replace the flatbed cushion. Does the problem remain?	Go to step 3.	The problem is solved.

Actions	Yes	No
Step 3 a Open the ADF. b Check if the X mark is in the rear right of the flatbed cushion. Is the X mark in the rear right of the flatbed cushion?	Go to step 5.	Go to step 4.
Step 4 Reinstall the flatbed cushion properly. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 a Perform scanner calibration. See “Scanner Calibration Reset” on page 325. b Send a scan job. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 a Replace the flatbed. See “Flatbed removal” on page 483. b Send a scan job. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF feed errors service check

Actions	Yes	No
Step 1 Check if multiple scan documents feed into the ADF. Do multiple scan documents feed into the ADF?	Go to step 5.	Go to step 2.
Step 2 Check the ADF separator pad and roller for dirt. Are the separator pad and roller clean?	Go to step 4.	Go to step 3.
Step 3 Using a lint-free cloth and isopropyl alcohol, clean the separator pad and roller. Does the problem remain?	Go to step 4.	The problem is solved.

Actions	Yes	No
Step 4 Replace the separator pad and roller. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check if the scan document that fed into the ADF is skewed. Is the scan document skewed?	Go to step 6.	Go to step 7.
Step 6 Set the ADF tray guides correctly. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the ADF top cover is completely closed. Is the ADF top cover completely closed?	Go to step 9.	Go to step 8.
Step 8 Close the ADF top cover completely. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check if the scan document has a wrinkled or torn leading edge. Does the scan document have a wrinkled or torn leading edge?	Go to step 10.	Go to step 11.
Step 10 Replace the scan document, and then resend the scan job. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 a Enter the Diagnostics menu, and then navigate to: Scanner diagnostics > Motor tests b Select ADF pick and ADF transport . Do the motors run?	Go to step 13.	Go to step 12.
Step 12 Reseat the ADF cable on the JADF1 connector on the controller board. Does the problem remain?	Go to step 13.	The problem is solved.

Actions	Yes	No
Step 13 a Enter the Diagnostics menu, and then navigate to: Scanner diagnostics > Sensor tests b Find the sensor (ADF media present). Does the sensor status change while toggling the sensor?	Go to step 16.	Go to step 14.
Step 14 Check if the actuator is dirty or stuck. Is the actuator dirty or stuck?	Go to step 15.	Go to step 16.
Step 15 Clean the actuator. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Reseat the ADF cable on the JADF1 connector on the controller board. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Replace the ADF. See “ADF removal” on page 474. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF duplex service check

Actions	Yes	No
Step 1 Check if all the ADF motors run. See “Motor tests” on page 325. Does each motor run?	Go to step 2.	Go to step 5.
Step 2 Check if the status of each ADF sensor changes while toggling the sensor. See “Sensor tests” on page 322. Does the sensor status change while toggling the sensor?	Go to step 3.	Go to step 5.

Actions	Yes	No
Step 3 Check if the actuator of each sensor is dirty or stuck. Is the actuator dirty or stuck?	Go to step 4.	Go to step 5.
Step 4 Clean the actuator. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reseat the cable on the JADF1 connector on the controller board. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the ADF. See “ADF removal” on page 474 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Modem/fax card service check

Actions	Yes	No
Step 1 Reseat the telephone cable on the LINE port of the printer and on the wall jack. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the telephone cable sends and receives calls. Does the cable send and receive calls?	Go to step 4.	Go to step 3.
Step 3 Connect the telephone cable to a working wall jack. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Reseat the modem card ribbon cable on the modem card and on the JFAX connector on the controller board. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the modem card ribbon cable for continuity. Does the cable have continuity?	Go to step 6.	The problem is solved.

Actions	Yes	No
Step 6 Replace the modem card ribbon cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Measure the voltages of pins 4, 5, and 7 of the JFAX connector on the controller board. Note: Pins 9, 11, 13, 15, 17, and 19 are GND. Are the voltages of pins 4 and 5 equal to +3.3 V DC and pin 7 equal to +5 V DC?	Go to step 8.	Go to step 9.
Step 8 Replace the fax card. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Blank spaces on incoming fax service check

Actions	Yes	No
Step 1 Have a fax sent from another machine. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Attach the MFP to a different phone line. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Print a test page. Does the image quality issue remain?	Go to step 4.	The problem is solved.
Step 4 Install a new toner cartridge. Does the problem remain?	Contact the next level of support.	The problem is solved.

Stretched words on incoming fax service check

Actions	Yes	No
Have a fax sent from another machine. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fax reception service check

Note: Before performing this service check, make sure that the correct country code is selected.

Actions	Yes	No
Step 1 Reseat the telephone cable on the LINE port of the printer and on the wall jack. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the telephone cable sends and receives calls. Does the cable send and receive calls?	Go to step 4.	Go to step 3.
Step 3 Connect the telephone cable to a working wall jack. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check if the telephone line is analog. Is the telephone line analog?	Go to step 7.	Go to step 5.
Step 5 Check if the telephone line is a VOIP line. Is the line VOIP?	Go to step 6.	Go to step 7.
Step 6 Ask the system administrator to verify if the VOIP server is configured to receive faxes. Is the server configured to receive faxes?	Go to step 7.	Contact the next level of support.
Step 7 Check if the printer is on a PABX. Is the printer on a PABX?	Go to step 9.	Go to step 8.

Actions	Yes	No
Step 8 a From the home screen, navigate to: Settings > Fax > Analog Fax Setup > Fax Send Settings > Behind a PABX b Touch Yes . Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 a From the home screen, navigate to: Settings > Fax > Analog Fax Setup > Fax Send Settings > Behind a PABX b Touch No . c Check if access to an outside line needs a dial prefix. Does access need a dial prefix?	Go to step 10.	Go to step 11.
Step 10 Send a fax using a dial prefix. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check if the printer sends a fax to one specific destination. Does the printer send a fax to one specific destination?	Go to step 13.	Go to step 12.
Step 12 Check if the device that does not receive a fax can send a fax. Does the device send a fax?	Go to step 13.	Contact the next level of support.
Step 13 a Enter the Service Engineer menu, and then navigate to: Fax SE > Fax Settings > AutoPrint T30 Logs b Check the reported error code. See “Fax error log codes” on page 285 . c Perform the action suggested for the error. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 a Enter the Service Engineer menu, and then navigate to: Fax SE > Modem Settings > Transmit Level b Adjust the setting in steps of 1 dB. Note: The recommended adjustment range is ± 5 dB from the default value. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fax transmission service check

Actions	Yes	No
Step 1 Reseat the telephone cable on the LINE port of the printer and on the wall jack. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check for a dial tone. Is there a dial tone?	Go to step 3.	Go to step 5.
Step 3 Use a telephone to check if the telephone line sends and receives calls. Does the line send and receive calls?	Go to step 6.	Go to step 4.
Step 4 Use a telephone handset to check if the telephone line is free of static or external noise. Is the line free of static or external noise?	Go to step 6.	Go to step 5.
Step 5 Connect the telephone cable to a working wall jack. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 a From the home screen, navigate to: Settings > Fax > Analog Fax Setup > Fax Receive Settings > Admin Controls > Enable Fax Receive b Touch On . Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a From the home screen, navigate to: Settings > Fax > Analog Fax Setup > Fax Receive Settings > Admin Controls > Answer on b Select a ring pattern. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check if the telephone line is analog. Is the line analog?	Go to step 11.	Go to step 9.

Actions	Yes	No
Step 9 Check if the telephone line is a VOIP line. Is the line VOIP?	Go to step 11.	Go to step 10.
Step 10 Ask the system administrator to check if the VOIP server is configured to receive faxes. Is the server configured to receive faxes?	Go to step 11.	Contact the next level of support.
Step 11 Check if the printer receives a fax from one specific remote device. Does the printer receive a fax from one specific remote device?	Go to step 13.	Go to step 12.
Step 12 Check if a different device can send a fax. Does the device send a fax?	Contact the next level of support.	Go to step 13.
Step 13 a From the home screen, navigate to: Settings > Fax > Analog Fax Setup > Fax Receive Settings > Admin Controls > Block No Name Fax b Touch Off . Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 a From the home screen, navigate to: Settings > Fax > Analog Fax Setup > Fax Receive Settings > Admin Controls > Banned Fax List b Check if the remote device number is on the list. Is the number on the list?	Go to step 15.	Go to step 16.
Step 15 Remove the remote device number from the list. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 a Enter the Service Engineer menu, and then navigate to: Fax SE > Modem Settings > Receive Thresh b Adjust the setting in steps of 2 dB. Note: The recommended adjustment range is between -33 dB and -48dB. Does the problem remain?	Go to step 17.	The problem is solved.

Actions	Yes	No
Step 17 a Enter the Service Engineer menu, and then navigate to: Fax SE > Fax Settings > AutoPrint T30 Logs b Check the reported error code. See “Fax error log codes” on page 285 . c Perform the action suggested for the error. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fax error log codes

Error code	Description	Action
000	No error occurred during fax transmission.	No action is needed.
200	Error occurred when transmitting training.	<ul style="list-style-type: none"> • Check line quality. • Select a lower Max Speed value under Fax Send settings. • Adjust the transmit level.
3XX	Error occurred when receiving image data.	<ul style="list-style-type: none"> • Check line quality. • Adjust Receive Threshold. • Select a lower Max Speed value under Fax Receive settings.
4XX	Error occurred when sending image data.	<ul style="list-style-type: none"> • Check line quality. • Adjust 'Transmit Level'. • Select a lower 'Max Speed' value under Fax Receive settings.
5XX	Received unknown response from remote fax device.	No action needed. Issue is with the other device.
6XX	Error occurred when receiving a frame.	<ul style="list-style-type: none"> • Check line quality. • Adjust 'Receive Threshold'.
7XX	Error occurred when sending a frame.	<ul style="list-style-type: none"> • Check line quality. • Adjust 'Transmit Level'. • Select a lower 'Max Speed' value under Fax Send settings.
800	Received EOT unexpectedly from the modem in V34 mode.	If error persists, then disable V34 modulation scheme.
802	Too many timeouts occurred during ECM reception.	If error persists, then disable ECM mode.
803	Fax cancelled by user	No action needed.

Error code	Description	Action
804	Unexpectedly received a disconnect command from the remote end.	<ul style="list-style-type: none"> • Check line quality. • Adjust Transmit Level/Receive Threshold values. • Remote device could be requesting an unsupported feature.
805	Remote fax device failed to respond to the DCS command.	<ul style="list-style-type: none"> • Adjust Transmit Level/Receive Threshold values. • Remote device could be malfunctioning.
808	T1 timeout occurred when trying to establish a connection with a remote fax device.	Adjust Transmit Level/Receive Threshold values.
809	T2 Timeout occurred due to loss of command/response synchronization.	Adjust Transmit Level/Receive Threshold values.
80A	T5 Timeout occurred when transmitting image data to remote fax device.	<ul style="list-style-type: none"> • Check line quality. • Adjust 'Transmit Level'. • Select a lower 'Max Speed' value under Fax Send settings.
80B	Too many errors when transmitting in ECM mode.	<ul style="list-style-type: none"> • Check line quality. • Adjust 'Transmit Level'. • Select a lower 'Max Speed' value under Fax Send settings.
80C	Remote device failed to respond to the CTC command.	<ul style="list-style-type: none"> • Select a lower 'Max Speed' value under Fax Send settings. • Adjust 'Transmit Level'.
80D	Received too many requests from remote end to repeat the previous command sent.	<ul style="list-style-type: none"> • Check line quality. • Adjust 'Transmit Level'. • Check if line conditions on remote end will facilitate a good connection.
80E	Functional limitation-Remote fax device does not support G3 receive capability.	No action needed. Issue with the remote device.
811	Failed to detect a fax device at the remote end.	<ul style="list-style-type: none"> • Verify MFD is answering to fax call and not a voice call. • Decrease value of 'Rings To Answer' setting.
812	No more data rates available in V34 modulation scheme.	Adjust to a lower modulation scheme.
813	Timeout occurred after waiting too long to receive a good frame.	Adjust "Receive Threshold".
814	Tried too many times at selected speed using V34 modulation scheme.	<ul style="list-style-type: none"> • Adjust 'Transmit Level'. • Adjust to a lower modulation scheme.

Error code	Description	Action
815	Fax transmission was interrupted due to power failure.	Troubleshoot MFP if error persists. See “Modem/fax card service check” on page 279 .
818	Fax transmission failed due to insufficient memory to store scanned image.	Adjust ‘Memory Use’ setting to allocate more memory for send jobs.
819	Fax transmission failed due to insufficient memory to store received image.	Adjust ‘Memory Use’ setting to allocate more memory for receive jobs.
81A	A timeout occurred during transmission of a page in ECM mode.	Select a lower ‘Max Speed’ value under Fax Send settings.
880	Failure to transmit training successfully in V17, V29, V27 terminal modulation schemes.	<ul style="list-style-type: none"> • Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
881	Failure to transmit training successfully in V33, V29, V27 terminal modulation schemes.	<ul style="list-style-type: none"> • Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
882	Failure to transmit training successfully in V17, V29 terminal modulation schemes.	<ul style="list-style-type: none"> • Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
883	Failure to transmit training successfully in V17, V27 terminal modulation schemes.	<ul style="list-style-type: none"> • Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
884	Failure to transmit training successfully in V29, V27 terminal modulation schemes.	<ul style="list-style-type: none"> • Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
885	Failure to transmit training successfully in V17 terminal modulation scheme.	<ul style="list-style-type: none"> • Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
886	Failure to transmit training successfully in V29 terminal modulation scheme.	<ul style="list-style-type: none"> • Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
887	Failure to transmit training successfully in V27 terminal modulation scheme.	<ul style="list-style-type: none"> • Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.

Error code	Description	Action
888	Failure to transmit training successfully at 2400 bps in V27 terminal modulation scheme.	<ul style="list-style-type: none"> Adjust “Transmit Level”. Check line quality.
889	Failed to connect at the minimum speed supported by the MFP.	<ul style="list-style-type: none"> Adjust “Transmit Level”. Incompatible connection.
88A	Failed to connect using V.34 modulation scheme.	<ul style="list-style-type: none"> Check line quality. Adjust to a lower modulation scheme. Adjust Transmit Level Receive Threshold values.
901	No fax tones detected from remote end.	<ul style="list-style-type: none"> Verify destination phone number. Verify that the remote fax is authorized to receive faxes.
902	No dial tone detected.	<ul style="list-style-type: none"> Check by enabling ‘Behind a PABX’ setting. Check phone line. Check MFD modem hardware.
903	Busy tone detected.	Check with remote end if successive attempts fail.
904	Hardware error detected.	See “Modem/fax card service check” on page 279.
905	A timeout occurred after dialing the number and waiting for a response.	Check with remote end if successive attempts fail.
906	Fax cancelled by user.	No action needed.
907	Modem detected a digital line connection.	Verify the MFP is connected to an analog line. See “Fax transmission service check” on page 283.
908	Phone line was disconnected	Restore phone line connection.
A00	Received request for unsupported function from remote fax device.	No action needed.
A01	Received request for unsupported image width from remote fax device.	No action needed.
A02	Received request for unsupported image resolution from remote fax device.	No action needed.
A03	Received request for unsupported compression type from remote fax device.	No action needed.
A04	Received request for unsupported image length from remote fax device.	No action needed.
F00	Unknown error occurred.	No action needed.

Escalating a fax issue to second-level support

Before contacting the second-level support, go to the SE menu on the MFP, and then generate a Fax error file. This file contains machine settings information and debug information that will help second-level support determine the cause of a failure.

To generate the fax error file, perform the following steps:

- 1 In a Web browser, type **http://MFP/<IP address>/se**.
- 2 The MFP's SE menu page will display. Click the "Dump Job History" link. The following displays:

Fax Job Log							
Wednesday, 2006-02-08 11:25							
Action	Date	Time	Job #	Length	Station Name/Number	Pages	Status
SCAN	1969-12-31	19:00				9	OK
SEND	2006-02-01	13:55	73	17:53	4039	2	CANCELED
SEND	2006-02-01	13:56	74	17:53	4039	0	CANCELED

- 3 Write down the type of connection, the type of error, and the job in which the error occurred.
- 4 In the Web browser address bar, type **http://MFP/<IP address>/se**.
- 5 Click **Report a Fax Problem**. The fax check list displays.
- 6 Fill in the requested information. This is where you will type in the information you retrieved in step 3. Second-level support can assist you if you have questions about the information requested on the page.

Title/Name of Tester	<input type="text" value="Your Name"/>	Date of Event	<input type="text" value="Date of Event"/>	mm/dd/yyyy
Customer	<input type="text" value="Customer Name"/>	Time of Event	<input type="text" value="Time of Event"/>	hh:mm [A,P]M
Job ID	<input type="text" value="Job ID"/>	#		
Describe the Physical Connection:				
Type:	Description:	Channel Quality:		
<input checked="" type="radio"/> Analog	<input type="checkbox"/> VoIP/FoIP	<input checked="" type="radio"/> Clear		
<input type="radio"/> Digital	<input type="checkbox"/> PAB	<input type="radio"/> OK		
	<input type="checkbox"/> ISD	<input type="radio"/> Some Noise		
		<input type="radio"/> Very Noisy		

Note: The fields requesting the code levels, model number, type of problem are auto-filled. If the information is not in the fields, it can be retrieved from the SE menu. The SE menu can be accessed by pressing ****411** or typing **http://MFP/<IP address>/se** in a Web browser.

- 7 After all the requested information is entered into the Fax Checklist Web page, press the **Submit** button on the bottom of the page. A dialogue asking you to save the file appears.

Note: The file generated by the MFP is not automatically transmitted to second-level support. It is placed on the computer desktop.

- 8 Enter a name for the file, and indicated where you want to save the file.
- 9 Press **OK**. The file appears on the desktop.
- 10 E-mail the file to second-level support.

Other symptoms

Base printer symptoms

Symptom	Action
Printer has no power.	See “Dead machine service check” on page 293.
Control panel not functioning.	See “Control panel service check” on page 290.
False values for the front door appear on the display.	See “Interlock switch service check” on page 291.
NFC communications failure.	See “Mobile solutions module NFC service check” on page 295.
Toner out displays.	See “Toner meter cycle (TMC) card service check” on page 299.
Printer not communicating with host (USB).	See “USB service check” on page 300.
Printer not communicating with host (network).	See “Network service check” on page 296.
Paper jam in the output bin.	See “Sensor (output bin full) static jam service check” on page 106.

Control panel service check

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the blue LED on the control panel. Is the LED on?	Go to step 3.	Go to step 4.
Step 3 Check the Ethernet and controller board LEDs on the control panel. Are the LEDs on?	Go to step 4.	Go to step 9.
Step 4 Check the ribbon cable connection on the control panel and controller board. Is the cable properly connected at both ends?	Go to step 6.	Go to step 5.
Step 5 Reconnect the cable. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the control panel cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the control panel. See “Control panel removal” on page 378. Does the problem remain?	Go to step 12.	The problem is solved.
Step 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?	Go to step 12.	Go to step 10.
Step 10 Replace the LVPS cable. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the LVPS. See “LVPS removal” on page 403. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Interlock switch service check

Action	Yes	No
Step 1 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?	The problem is solved.	Go to step 2.

Action	Yes	No
Step 2 Check the sensor cable for proper connection. Is the cable properly connected?	Go to step 4.	Go to step 3.
Step 3 Reconnect the cable. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Remove the motor cover, and then check the interlock cable relay for proper connection. Is the cable properly connected?	Go to step 6.	Go to step 5.
Step 5 Reconnect the cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the front door interlock switch actuator for damage. Is the actuator free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the duplex outer guide. See “Duplex outer guide removal” on page 387 . Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the toner door interlock switch actuator for damage. Is the actuator free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the toner door. See “Toner door removal” on page 364 . Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor cover. See “Motor cover removal” on page 361 . Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (narrow media) and sensor (fuser buckle) service check

Actions	Yes	No
Step 1 Check the sensor (narrow media) and sensor (fuser buckle) for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Enter the Diagnostics menu, and then navigate to: Printer diagnostics & adjustments > Sensor tests b Find the sensor (Fuser buckle) and sensor (Narrow media). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 3.
Step 3 Check the sensor cables for proper connection and damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the sensors. Does the problem remain?	Contact the next level of support.	The problem is solved.

Dead machine service check

Action	Yes	No
Step 1 Check the AC line for proper voltage. Does the AC line have proper voltage?	Go to step 3.	Go to step 2.
Step 2 Use an electrical outlet that has proper voltage. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the power cord for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the cable on the LVPS and on the JLVPS connector on the controller board for proper connection. Is the cable properly connected at both ends?	Go to step 6.	Go to step 5.
Step 5 Reconnect the cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the cable for continuity. Does the cable have continuity?	Go to step 8.	Go to step 7.
Step 7 Replace the cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Measure the values of pin 4, 6, 8, and 11 to 26 of the JLVPS connector on the controller board. See “Controller board connectors” on page 508 . Are the values approximately correct?	Go to step 10.	Go to step 9.
Step 9 Replace the LVPS. See “LVPS removal” on page 403 . Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Mobile solutions module NFC service check

Action	Yes	No
Step 1 Check if the control panel is functioning properly. Is the control panel functioning properly?	Go to step 3.	Go to step 2.
Step 2 Replace the control panel. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Use a mobile device that supports NFC. Does the problem remain?	Go to step 5.	The problem is solved.
Step 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?	Go to step 7.	Go to step 6.
Step 6 Install the latest version of the Lexmark Mobile Printing application on the mobile device. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the printer has a wireless ISP installed and if it is functioning properly. Is the wireless ISP installed and functioning properly?	Go to step 9.	Go to step 8.
Step 8 Install or reinstall the wireless ISP in the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Verify if WiFi Direct is enabled in the printer. Is WiFi Direct enabled?	Go to step 11.	Go to step 10.

Action	Yes	No
Step 10 Enable WiFi direct in the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 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?	Go to step 13.	Go to step 12.
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?	Go to step 13.	The problem is solved.
Step 13 Check if the mobile solutions module is properly installed on the control panel assembly. Is the mobile solutions module properly installed?	Go to step 15.	Go to step 14.
Step 14 Reinstall the mobile solutions module on the control panel assembly. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Install a new NFC card. Does the problem remain?	Contact the next level of support.	The problem is solved.

Network service check

Notes:

- 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.

Actions	Yes	No
Step 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?	Go to step 2.	The problem is solved.
Step 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?	Go to step 4.	Go to step 3.
Step 3 Change the printer status to online. Does the problem remain?	Go to step 4.	The problem is solved.
Step 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?	Go to step 9.	Go to step 5.
Step 5 Note: A printer should use a static IP address on a network. Does the LAN use DHCP?	Go to step 6.	Go to step 8.
Step 6 Check the first two segments of the IP address. Does the IP address start with 169.254?	Go to step 7.	Go to step 8.
Step 7 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 8 Reset the address on the printer to match the IP address on the driver. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Have the network administrator check if the printer and computer IP address have identical subnet addresses. Are the subnet addresses the same?	Go to step 11.	Go to step 10.

Actions	Yes	No
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?	Go to step 11.	The problem is solved.
Step 11 Is the printer physically connected (Ethernet cable) to the network?	Go to step 12.	Go to step 15.
Step 12 Try using a different Ethernet cable. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Have the network administrator check the network drop for activity. Is the network drop functioning properly?	Go to step 14.	Contact the network administrator.
Step 14 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Is the printer on the same wireless network as the other devices?	Go to step 17.	Go to step 16.
Step 16 Assign the correct wireless network to the printer. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Are the other devices on the wireless network communicating properly?	Go to step 18.	Contact the network administrator.
Step 18 Make sure that the wireless card on the controller board is properly installed. Does the problem remain?	Go to step 19.	The problem is solved.

Actions	Yes	No
Step 19 If there is an attached antenna, check it for damage, and replace if necessary. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Make sure that the antenna is properly connected to the wireless card. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the wireless card. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Replace the controller board. See “Controller board removal” on page 452 . Does the problem remain?	Contact the next level of support.	The problem is solved.

Toner meter cycle (TMC) card service check

Actions	Yes	No
Step 1 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?	Go to step 2.	Go to step 3.
Step 2 Replace the toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the TMC card. See “TMC card removal” on page 413 . Does the problem remain?	Contact the next level of support.	The problem is solved.

USB service check

Actions	Yes	No
Step 1 Is the USB cable properly connected to the printer and host PC?	Go to step 2.	Properly connect the cable at both ends.
Step 2 Try a different USB cable. Does this fix the issue?	Issue fixed.	Go to step 3.
Step 3 Connect a different device to the USB cable. Did the host PC see the device?	Replace the controller board. See “Controller board removal” on page 452.	There is an issue with the host machine.

Control panel USB cable service check

Actions	Yes	No
Step 1 a Remove the controller board shield. See “Controller board shield removal” on page 451. b Check the USB cable on the JPFUSB1 connector on the controller board for proper connection. Is the cable properly connected?	Go to step 3.	Go to step 2.
Step 2 Reconnect the cable. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the cable. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the controller board. See “Controller board removal” on page 452. Does the problem remain?	Contact the next level of support.	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).

Action	Yes	No
<p>Step 1</p> <p>a From the home screen, touch Settings > Reports > Print Quality Pages.</p> <p>b On the Device information section of the print quality test page, check the CalSet values of the following:</p> <ul style="list-style-type: none"> • 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 <p>Are the values 0?</p>	Go to step 2.	The problem is solved.
<p>Step 2</p> <p>Perform the blank or white pages service check. See “Blank or white pages check” on page 45.</p> <p>Was an issue found and resolved?</p>	Go to step 3.	Go to step 4.

Action	Yes	No
Step 3 Perform the auto alignment service check. See “Auto alignment service check” on page 303 . Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 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?	The problem is solved.	Go to step 5.
Step 5 a Remove the imaging kit. b Move the TPS wiper mechanism lever up and down. Does the wiper mechanism properly move?	Go to step 8.	Go to step 6.
Step 6 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 303 . Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the cable on the sensor (TPS) and on the JTPSAA1 connector on the controller board for proper connection, and reseal if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 a Replace the sensor (TPS). See “Sensor (TPS) removal” on page 423 . 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?	The problem is solved.	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).

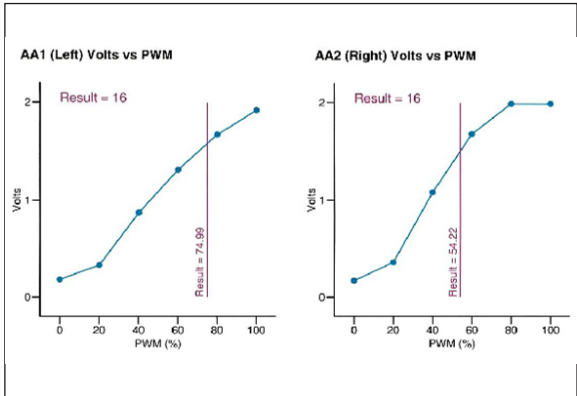
Note: If the AA adjustment is successful, an **AA adjustment passed** message appears on the screen. If an **AA adjustment passed** message does not appear, skip the next pre-check step, and then go directly to step 3 in the service check.

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).

Action	Yes	No
Step 1 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?	Go to step 2.	The problem is solved.

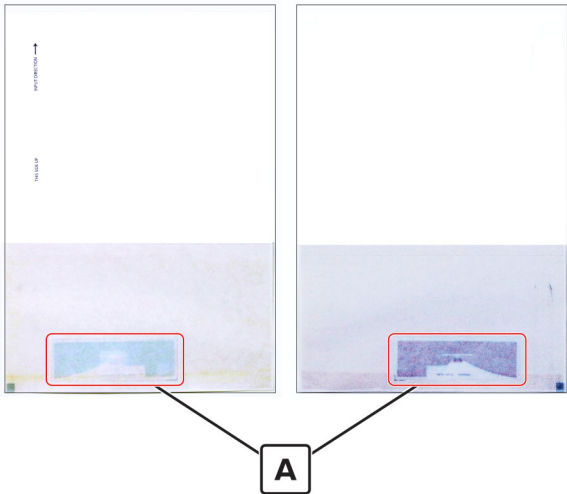
Action	Yes	No
<p>Step 2</p> <p>a Perform the blank or white pages service check or missing color service check. See “Blank or white pages check” on page 45 or “Missing color check” on page 62.</p> <p>b Enter the Diagnostics menu, and then navigate to: Printer setup > EP setup > Toner patch sensor adjust</p> <p>c On the sensor gain characterization row, touch Start.</p> <p>d On the sensor gain verification row, touch Start.</p> <p>e Check the graph in the printout.</p> <p>This sample graph shows good values:</p>  <p>Note: The normal range of the sensor voltage is 1.5–2.0 volts.</p> <p>Does the graph show good values?</p>	<p>The problem is solved.</p>	<p>Go to step 3.</p>
<p>Step 3</p> <p>a Remove the imaging kit.</p> <p>b Move the TPS wiper mechanism lever up and down.</p> <p>Does the wiper mechanism properly move?</p>	<p>Go to step 5.</p>	<p>Go to step 4.</p>
<p>Step 4</p> <p>Check the TPS sled and TPS wiper mechanism for proper installation.</p> <p>Are the TPS sled and TPS wiper mechanism properly installed?</p>	<p>Go to step 6.</p>	<p>Go to step 5.</p>
<p>Step 5</p> <p>Reinstall, repair, or replace the TPS sled and TPS wiper mechanism. See “TPS sled removal” on page 425 and “TPS wiper mechanism removal” on page 428.</p> <p>Does the problem remain?</p>	<p>Go to step 6.</p>	<p>The problem is solved.</p>

Action	Yes	No
<p>Step 6</p> <p>Check the cables on the sensor (auto alignment) and on the JTPSAA1 connector on the controller board for proper connection, and reseal if necessary.</p> <p>Does the problem remain?</p>	Go to step 7.	The problem is solved.
<p>Step 7</p> <p>a Replace the sensor (TPS). See “Sensor (TPS) removal” on page 423.</p> <p>b Enter the Diagnostics menu, and then navigate to: Printer setup > EP setup > Toner patch sensor adjust</p> <p>c On the sensor gain characterization row, touch Start.</p> <p>d On the sensor gain verification row, touch Start.</p> <p>e Check the graph in the printout. This sample graph shows good values:</p> <div data-bbox="305 798 876 1192"> <p>AA1 (Left) Volts vs PWM</p> <p>AA2 (Right) Volts vs PWM</p> </div> <p>Note: The normal range of the sensor voltage is 1.5–2.0 volts.</p> <p>Does the graph show good values?</p>	The problem is solved.	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.

Action	Yes	No									
<p>Step 1</p> <p>a From the home screen, navigate to: Settings > RFID</p> <p>b Check the values of the following settings:</p> <ul style="list-style-type: none"> • Stop on Error • Mark on Error • Retry Count <p>c If the values of the settings match any of the following combinations, then modify the settings.</p> <table border="1"> <thead> <tr> <th>Stop on Error</th><th>Mark on Error</th><th>Retry Count</th></tr> </thead> <tbody> <tr> <td>NO</td><td>NO</td><td>0</td></tr> <tr> <td>NO</td><td>NO</td><td>$N > 0$</td></tr> </tbody> </table> <p>Does the problem remain?</p>	Stop on Error	Mark on Error	Retry Count	NO	NO	0	NO	NO	$N > 0$	Go to step 2.	The problem is solved.
Stop on Error	Mark on Error	Retry Count									
NO	NO	0									
NO	NO	$N > 0$									
<p>Step 2</p> <p>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 309.</p> <p>Does the behavior match the intended behavior for the RFID menu settings?</p>	Go to step 3.	Go to step 4.									
<p>Step 3</p> <p>Make sure that the print job stream actually includes RFID content. To check whether the print job includes RFID content:</p> <p>a Load plain paper (non-RFID) into the tray.</p> <p>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.</p> <p>c Resend the print job.</p> <p>Note: If the job prints without error, then there is no RFID content in the job.</p> <p>Does the problem remain?</p>	Go to step 4.	The problem is solved.									

Action	Yes	No
<p>Step 4</p> <p>Check if the media loaded has an RFID tag (A) attached or embedded.</p> <ul style="list-style-type: none"> • Sample RFID media <p>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.</p> <div style="text-align: center;"> <p>FRONT BACK</p>  <p>A</p> </div> <p>Is the tray loaded with an RFID media?</p>	Go to step 6.	Go to step 5.
<p>Step 5</p> <p>Load the tray with RFID media.</p> <p>Does the problem remain?</p>	Go to step 6.	The problem is solved.
<p>Step 6</p> <p>Check if the RFID media is loaded in Tray 3 or Tray 4.</p> <p>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.</p> <p>Is the RFID media loaded in Tray 3 or Tray 4?</p>	Go to step 8.	Go to step 7.
<p>Step 7</p> <p>Load the RFID media into Tray 3 or Tray 4.</p> <p>Does the problem remain?</p>	Go to step 8.	The problem is solved.

Action	Yes	No
Step 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?	Go to step 10.	Go to step 9.
Step 9 Configure the printer, driver, or job settings to specify the tray that holds the RFID media. Does the problem remain?	Go to step 10.	The problem is solved.
Step 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?	Go to step 12.	Go to step 11.
Step 11 Rotate the media to the correct orientation for the user's application. Does the problem remain?	Go to step 12.	The problem is solved.
Step 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?	Contact the next level of support.	Go to step 13.
Step 13 Replace the RFID media. Does the problem remain?	Contact the next level of support.	The problem is solved.

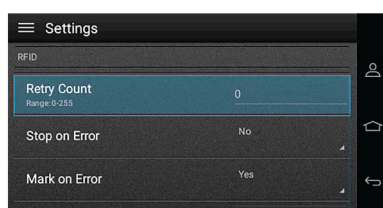
Behavioral issues (without error codes) of printers with RFID Option

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.
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 <i>N</i> 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 <i>N</i> times. Each failed page will be marked. After <i>N</i> retries, 44.01 error will be posted.
No	Yes	Any number greater than 0	Failed pages will be reprinted up to <i>N</i> times. Each failed page will be marked. After <i>N</i> 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.
Notes: <ul style="list-style-type: none"> • <i>N</i> 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. 			

Setting combination			Actual behavior
Stop on Error	Mark on Error	Retry Count	
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.
Notes: <ul style="list-style-type: none"> 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. 			

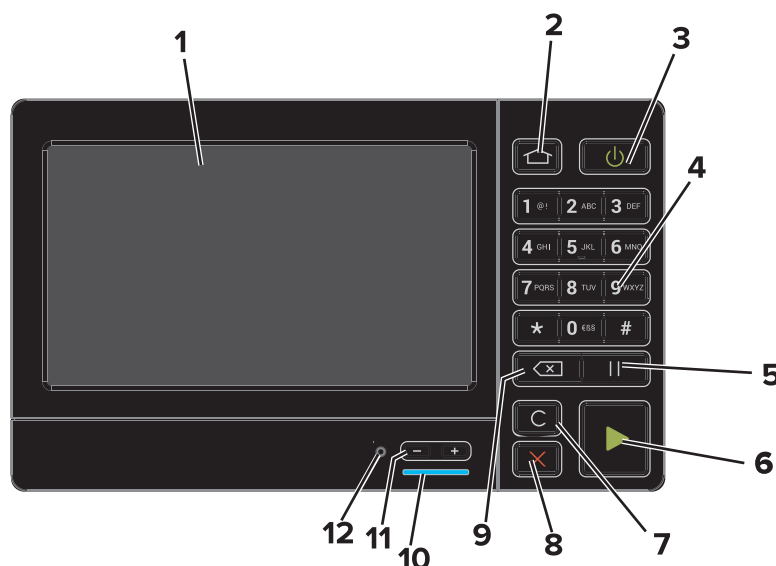
The printer runs slow service check

Action	Yes	No
Step 1 Make sure that the paper setting on the printer matches the paper used. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Enter the Configuration menu, and then navigate to: Device Operations > Automatic Media Type Detection b Select Off . Does the problem remain?	Contact the next level of support.	The problem is solved.

Service menus

Understanding the printer control panel

Using the control panel



	Use the	To
1	Display	<ul style="list-style-type: none"> View the printer messages and supply status. Set up and operate the printer.
2	Home button	Go to the home screen.
3	Power button	<ul style="list-style-type: none"> Turn on or turn off the printer. <p>Note: To turn off the printer, press and hold the power button for five seconds.</p> <ul style="list-style-type: none"> Set the printer to Sleep or Hibernate mode. Wake the printer from Sleep or Hibernate mode.
4	Keypad	Enter numbers or symbols in an input field.
5	Pause button	Place a dial pause in a fax number.
6	Start button	Start a job, depending on which mode is selected.
7	Clear all or Reset button	Reset the default settings of a function such as copying, faxing, or scanning.
8	Stop or Cancel button	Stop the current job.
9	Backspace button	Move the cursor backward and delete a character in an input field.
10	Indicator light	Check the status of the printer.
11	Volume buttons	Adjust the volume of the headset or speaker.
12	Headset or speaker port	Attach a headset or speaker.

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

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



Touch	To
1	Copy Make copies.
2	E-mail Send e-mails.
3	Change Language Change the language on the printer display.
4	Fax Send fax.
5	Settings Access the printer menus.
6	Held Faxes Show all the current held fax jobs. Note: If Held Faxes is hidden, then Release Held Faxes appears.
7	Shortcut Center Organize all shortcuts.

Touch		To
8	Status/Supplies	<ul style="list-style-type: none"> 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. <p>Note: You can also access this setting by touching the top section of the home screen.</p>
9	Address Book	Access, create, and organize contacts.
10	Scan Profiles	Scan and save documents directly to the computer.
11	FTP	Scan and save documents directly to an FTP server.
12	Bookmarks	Organize all bookmarks.
13	Held Jobs	Show all the current held print jobs
14	USB Drive	View, select, or print photos and documents from a flash drive.
15	Job Queue	<p>Show all the current print jobs.</p> <p>Note: You can also access this setting by touching the top section of the home screen.</p>

These settings may also appear on the home screen

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	Copy	Fax
Preferences	Layout	Tray Configuration	Copy	Fax Mode
Notifications	Setup	Media Configuration	Defaults	Analog Fax Setup
Group Lists	Quality	Bin Configuration		Fax Server Setup
Alert Types	Job Accounting			
Anti-Spam Logic Description	Image			
Suppressing Duplicate Alerts	XPS			
Power Management	PDF			
Information Sent to Lexmark	HTML			
Accessibility	PostScript			
Restore Factory Defaults	PCL			
Maintenance	PPDS			
Remote Operator Panel				
Visible Home Screen Icons				
Site Map				
Update Firmware				
About This Printer				

E-mail	FTP	Network/Ports	USB Drive	Security
E-mail Defaults	FTP Defaults	Network Overview	Flash Drive	Login Methods
E-mail Setup		Wireless	Scan	Certificate Management
Web Link Setup		AirPrint	Flash Drive	Schedule USB Devices
		Ethernet	Print	Security Audit Log
		TCP/IP		Login Restrictions
		IPv6		Confidential Print Setup
		SNMP		Disk Encryption
		802.1x		Erase Temporary Data
		IPSec		Files
		LPD Configuration		Solutions LDAP Settings
		HTTP/FTP Settings		Miscellaneous
		ThinPrint		
		USB		
		Parallel [x]		
		Serial		
		Wi-Fi Direct		
Option Card Menu	Reports	Help		
Note: This setting appears only when an optional card is installed.	Menu Settings Page	Print All Guides		
	Print Quality Pages	Color Quality Guide		
	Device	Connection Guide		
	Print	Copy Guide		
	Shortcuts	E-mail Guide		
	Fax	Information Guide		
	Network	Media Guide		
		Moving Guide		
		Print Quality Guide		
		Scan 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.

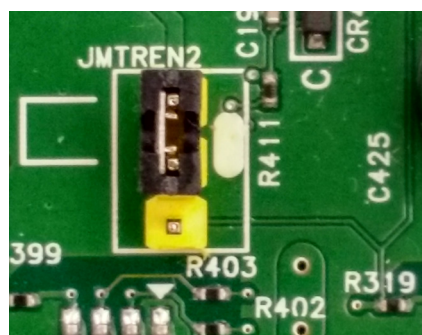
The following are the jumper configurations:



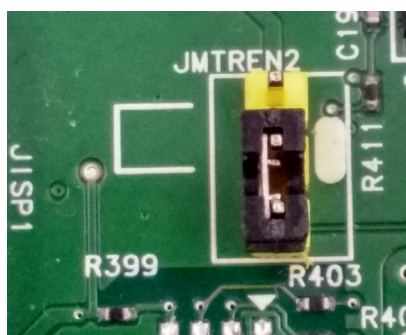
Interlock bypass disabled
(default)



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 451.](#)
- 3 Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452.](#)
- 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.

Enable edge-to-edge (printing)

This setting shifts all four margins to the physical edges of the page.

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

- 1 Enter the Diagnostics menu, and then navigate to:
Printer Setup > Enable edge-to-edge (printing)
 - 2 Select a setting to adjust.
- Note:** This feature does not work in PPDS emulation.

Enable edge-to-edge (copy)

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

- 1 Enter the Diagnostics menu, and then navigate to:
Printer Setup > Enable edge-to-edge (copy)
- 2 Select a setting to adjust.

Processor ID

This setting indicates the ID of the processor on the controller board.

- 1 Enter the Diagnostics menu, and then 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.

Notes:

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

Motor tests

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > Motor tests

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

Notes:

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

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.

Registration adjust

This setting lets you adjust the skew, margins, or perform a Quick Test. For more information, see [“Registration adjustment” on page 347](#).

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > Registration adjust

2 Select a setting to adjust.

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

2 Select a setting.

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.

USB high-speed tests

This setting determines the throughput of the USB port on the printer.

- 1 Enter the Diagnostics menu, and then navigate to:
Printer diagnostics & adjustments > USB high-speed tests
- 2 Select a test, and then touch **Start**.

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**.

Scanner Diagnostics

Feed Test

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

- 1 Enter the Diagnostics menu, and then navigate to:
Scanner diagnostics > Feed Test
- 2 Select a paper size.

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

Sensor tests

This test verifies the status of the scanner sensors.

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

2 From the Sensor tests section, touch **Start**.

A dialog listing the sensor tests appears.

3 Find, and then manually toggle the sensor.

Notes:

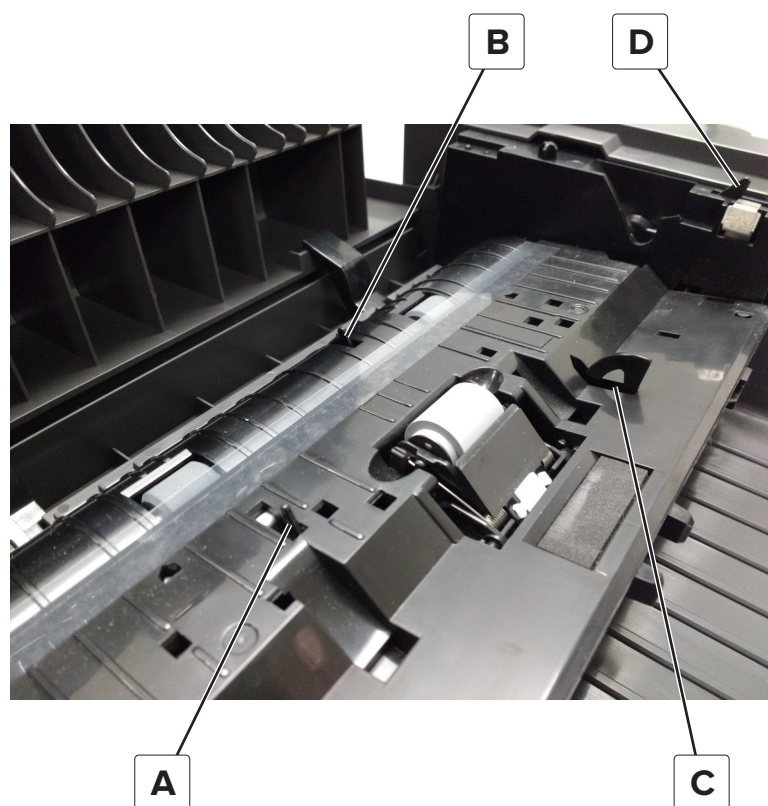
- The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
- If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.

List of sensor tests

Test	Procedure to perform before the test
FB CCD home	--
ADF closed	Open the ADF.
ADF media present	Open the ADF top cover.
ADF pick	
ADF deskew	
ADF 1st scan	
ADF 2nd scan	--
ADF top door interlock	Open the ADF top cover.
ADF calibration strip home	--

Toggling the ADF sensors

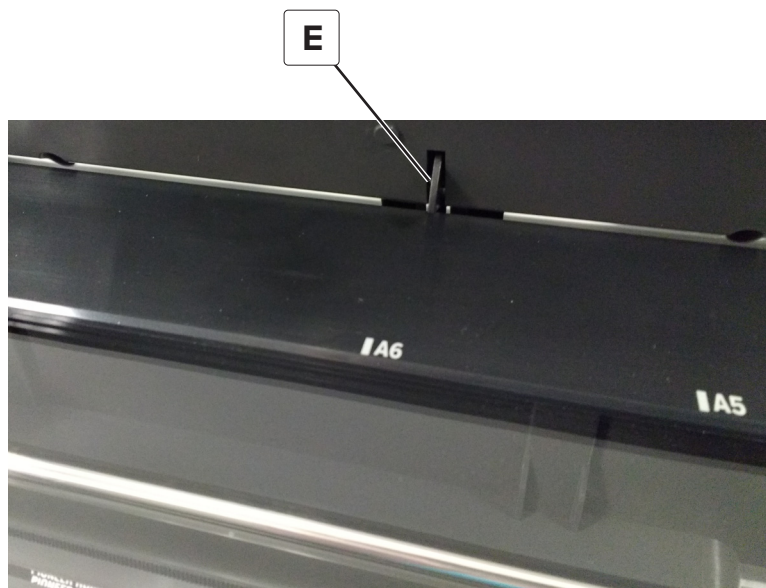
1 Open the ADF top cover, and then locate the sensors.



A	Sensor (ADF pick)
B	Sensor (ADF trail)
C	Sensor (ADF media present)
D	Sensor (ADF top door interlock)

2 Close the ADF top cover, and then open the ADF.

- 3** Locate the sensor (ADF closed) (E).



- 4** Close the ADF, remove the ADF tray, and then open the ADF top cover.

- 5** Insert a folded sheet of paper to toggle the sensor (ADF duplex).



- 6** Insert a folded sheet of paper as shown to toggle the sensor (ADF input 1st scan).



Motor tests

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

Scanner diagnostics > Motor tests

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

Notes:

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

Multifeed calibration

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

- 2** Select Multifeed Calibration, and then touch **Start**.

Scanner Calibration Reset

Before starting the test, make sure that the scanner glass and backing material are clean. For more information, go to [“Cleaning the scanner glass” on page 533](#).

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

- 2** From the Sensor Calibration Test section, touch **Start**.

To verify the result, do the following:

- 1 Load the ADF with a document containing light and dark content.
- 2 Print a two-sided copy of the document.

Notes:

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

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.

Notes:

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

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**.

Notes:

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

Configuration Menu

Menu item	Description
USB Configuration USB PnP 1* 2 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.
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.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
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. Note: These settings may vary depending on your printer model.
Scanner Configuration Edge Erase ADF Edge Erase 0–6 (3*) FB Edge Erase 0–6 (3*) ADF Mechanical Deskew On* Off ADF Electronic Deskew On* Off	Set the size of a border around the scanned image that will be erased.
Scanner Configuration Scanner Manual Registration Print Quick Test Front ADF Registration Rear ADF Registration Flatbed Registration	Set the scanner registration after replacing the ADF, scanner glass, or controller board.
Scanner Configuration Tiff Byte Order CPU Endianness* Little Endian Big Endian	Determine the byte order of a TIFF-formatted scan output.
Scanner Configuration Exact Tiff Rows Per Strip On* Off	Set the RowsPerStrip tag value of a TIFF-formatted scan output.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
Printer Emulations PPDS Emulation Off* On	Set the printer to use the PPDS data stream.
Fax Configuration Fax Low Power Support Disable Sleep Permit Sleep Auto*	Specify the power setting when in fax mode.
Fax Configuration Fax Storage Location NAND Disk*	Specify the fax storage location. Note: This setting appears only when a printer hard disk is installed.
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*) Copy Density 0–5 (3*)	Adjust the toner density when printing or copying 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.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
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 Minimum Copy Memory 20 MB 30 MB 50 MB 80 MB 100 MB	Set the memory allocation for storing copy jobs. Notes: <ul style="list-style-type: none"> • 20 MB is the factory default setting for mono laser printers. • 80 MB is the factory default setting for color laser printers. • The values may vary depending on your printer model. • The values appear only if the amount of installed DRAM is at least twice the amount of the value.
Device Operations Clear Custom Status	Erase all custom messages.
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 Honor orientation on fast path copy Off* On	Set the printer to use the Orientation setting under Copy menu when sending quick copy jobs.
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.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
Device Operations Custom Supply Levels Off* On	Set supply levels.
Toner patch sensor setup 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.
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 Invalid engine mode

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

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

Entering Recovery mode

This mode allows the printer to boot from a secondary set of instructions and flash firmware code. While in this mode, you can only flash firmware code through a USB cable directly connected to a PC.

Depending on your printer model, do any of the following:

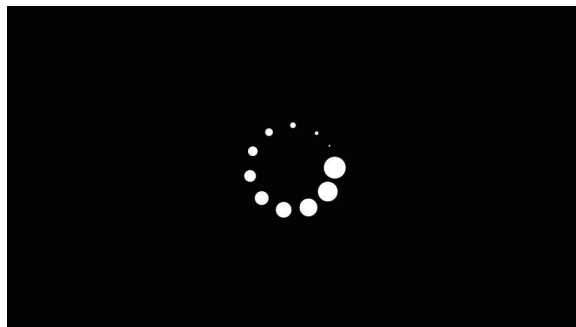
For LED display

- 1 Turn off the printer.
- 2 Open the front door.
- 3 Press and hold the **Stop** button.

- 4 Turn on the printer.
- 5 When all the icons flash, release the button.

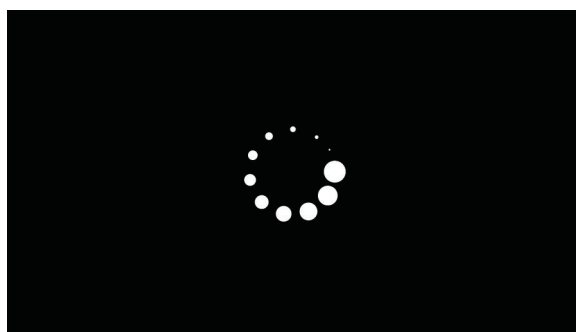
For 2-line display

- 1 Turn off the printer.
- 2 Press and hold the **OK** and **Back** buttons.
- 3 Turn on the printer.
- 4 When the display shows the following icon, release the buttons.



For 2.4-, 4.3-, 7-, and 10-inch displays

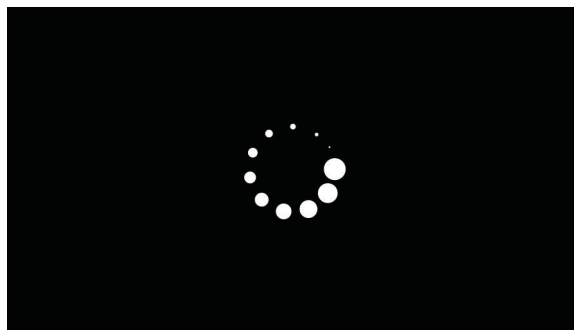
- 1 Turn off the printer.
- 2 Press and hold the **2**, **7**, and **8** buttons.
- 3 Turn on the printer.
- 4 When the display shows the following icon, release the buttons.



For 2.8-inch display

- 1 Turn off the printer.
- 2 Open tray 1.
- 3 Make sure that paper is loaded in tray 1.
- 4 Turn on the printer.

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



Note: If tray 1 is not closed, then the printer will boot normally.

- 6 A screen with red selection items appears.
Touch → to navigate to Recovery mode.
- 7 Touch **Boot** or **RECOVERY**.

Service Engineer menu

Entering the Service Engineer (SE) menu

To access the Service Engineer (SE) menu:

- 1 Turn on the printer.
- 2 When the home screen appears, press * * **411** on the control panel.
For 2-line control panels, press the right arrow button twice, press **OK**, and then press the left arrow button.

General SE

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	<ul style="list-style-type: none"> • Print History • Mark History

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

Fax SE

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

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

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

Top level menu	Intermediate menu
Code Levels	<ul style="list-style-type: none"> • Base: [current value] • Kernel: [current value] • Network: [current value] • Engine: [current value] • Loader: [current value] • Fax: [current value] • Scanner: [current value]
Agency Test	<ul style="list-style-type: none"> • Go Off Hook • Ring Detect • Generate Tones • Modulations

Top level menu	Intermediate menu
Fax Settings	<ul style="list-style-type: none"> • Line Features • Fax Modulations • Detect EOLS • Print Logs • AutoPrint T30 Logs
Modem Settings	<ul style="list-style-type: none"> • Caller ID Pattern Note: Changing the value of this setting also changes the value of the Caller ID setting in the Fax Settings. • Dial Timeout • Transmit Level • Receive Thresh • DTMF Low Level • DTMF High Level • Positive Twt Ctrl • Negative Twt Ctrl • ATRA EQM Bias • V34 PreEmph Filt • Dial Tone Thresh • Progress Thresh • Pulse Make Time • Pulse Break Time • Pulse Dial Type • Interdigit Delay • Enable CEQ • V17 TX Filter • DC Characteristic • Impedance • Caller ID Pattern • Busy Tone Cycles • Busy Tone Min On Time • Busy Tone Max On Time • Busy Tone Min Off Time • Busy Tone Max Off Time • Congest Tone Cycles • Congest Tone Min On Time • Adjust Power FSK • Pulse Fall Time • High Ring Impedance
Reboot System	After this setting is selected, the control panel displays the message: About to reboot. Press Start to reboot. Press Stop to return.

Scan SE

This setting displays the current left, top, right, and mag scanner registration values for each scanner source (flatbed, ADF front, ADF rear).

Enter the Service Engineer (SE) menu, and then navigate to:

Scan SE > Scanner Info

Parts removal

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.

Removal precautions


-  **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 before you connect or disconnect any cable or electronic card or assembly for personal safety and to prevent damage to the printer. Disconnect any connections between the printer and computers or peripherals.
-  **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 of the printer. Make sure that your fingers are not under the printer when you lift or set the printer down.
-  **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.


Handling ESD-sensitive parts


To prevent damage to the electrostatic discharge (ESD)-sensitive parts in the printer, do the following:


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

Critical information for controller board or control panel replacement

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

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

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

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

Warning—Potential Damage: Observe all precautions when handling ESD sensitive parts. See [“Handling ESD-sensitive parts” on page 338](#).

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 344](#).

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 261](#)

Restoring the printer configuration after replacing the controller board

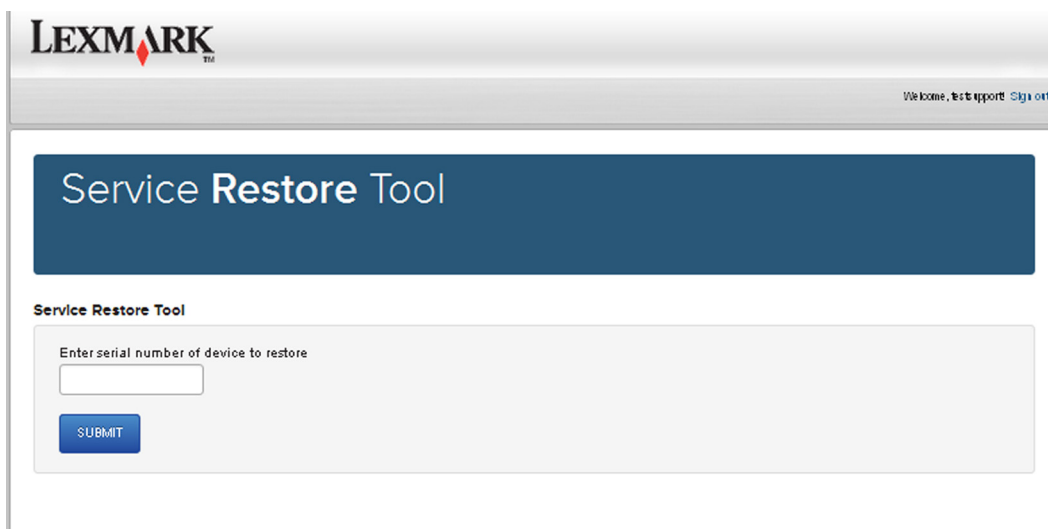
Restore the printer to its correct configuration to complete the replacement service. Use the Service Restore Tool to download the software bundle, and then flash the printer settings and embedded solutions.

Note: Perform this procedure only if the printer has an eSF application that is installed from the Virtual Solution Center, during manufacturing, or through customization. If you do not have access to Service Restore Tool, then contact your next level of support.

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

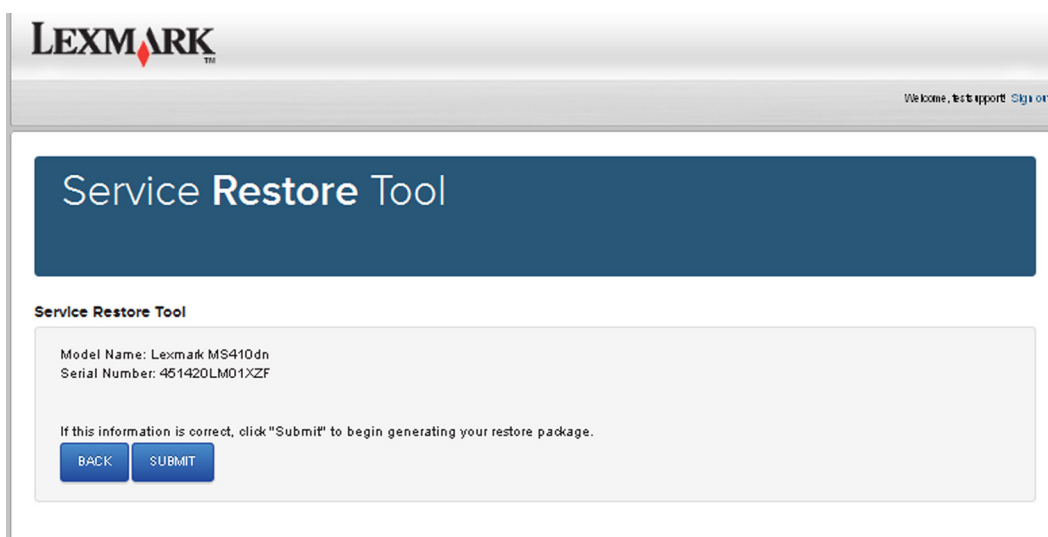
Using the Service Restore Tool

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



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

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



The screenshot shows the Lexmark Service Restore Tool web interface. At the top is the Lexmark logo. Below it, a navigation bar contains the text "Welcome, test support" and a "Sign out" link. The main heading is "Service Restore Tool". Below this, the tool displays the following information:

Service Restore Tool

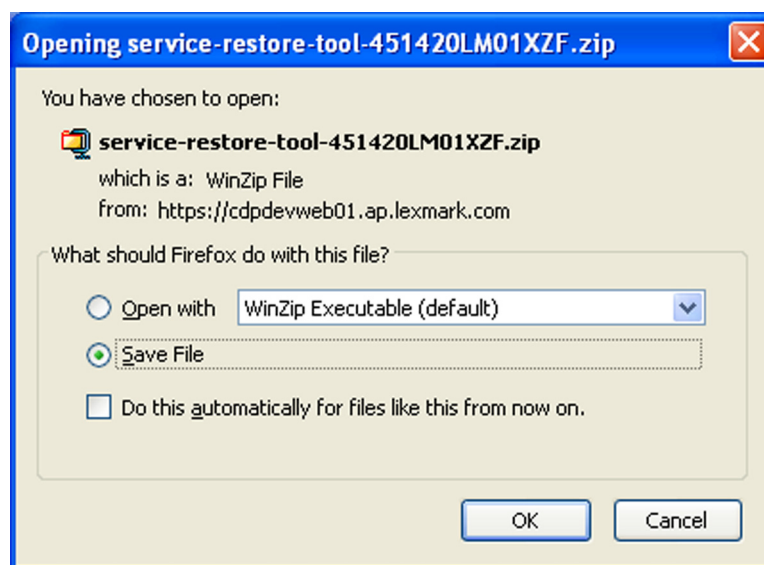
Model Name: Lexmark MS410dn
Serial Number: 451420LM01XZF

If this information is correct, click "Submit" to begin generating your restore package.

At the bottom of the form are two buttons: "BACK" and "SUBMIT".

4 Save the zip file.

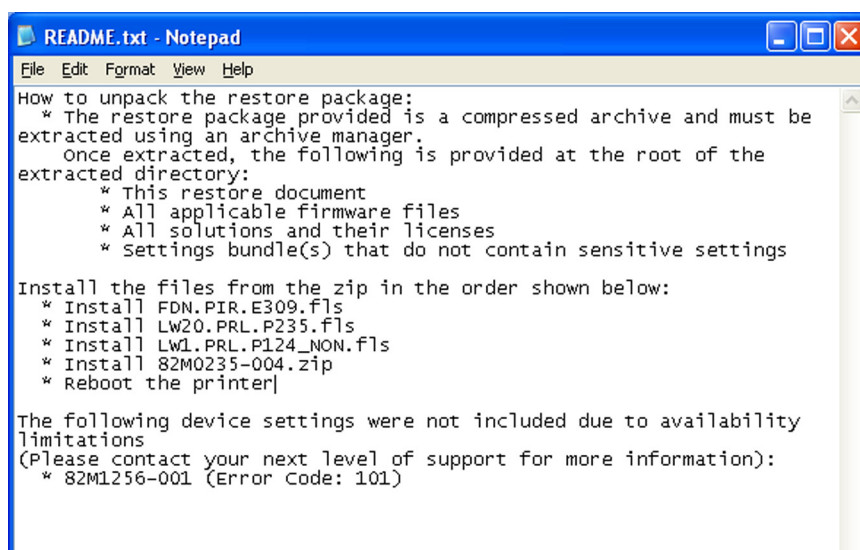
Note: Make sure that the serial number in the zip file matches the serial number of the printer being restored.



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

Notes:

- Perform the install instructions on the *Readme* file in the exact order shown. Restart the printer only if the file says so.
- For more information on how to flash the downloaded files, see [“Updating the printer firmware” on page 343](#).
- To load the zip files that are extracted from the Service Restore Tool, see [“Restoring solutions, licenses, and configuration settings” on page 342](#).



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

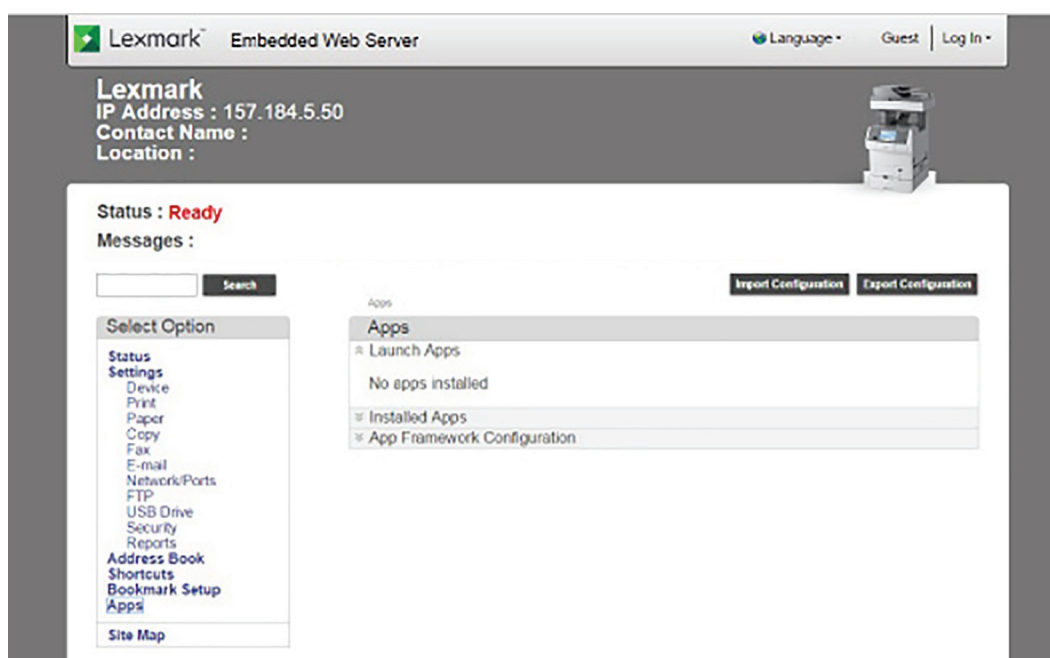
Notes:

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

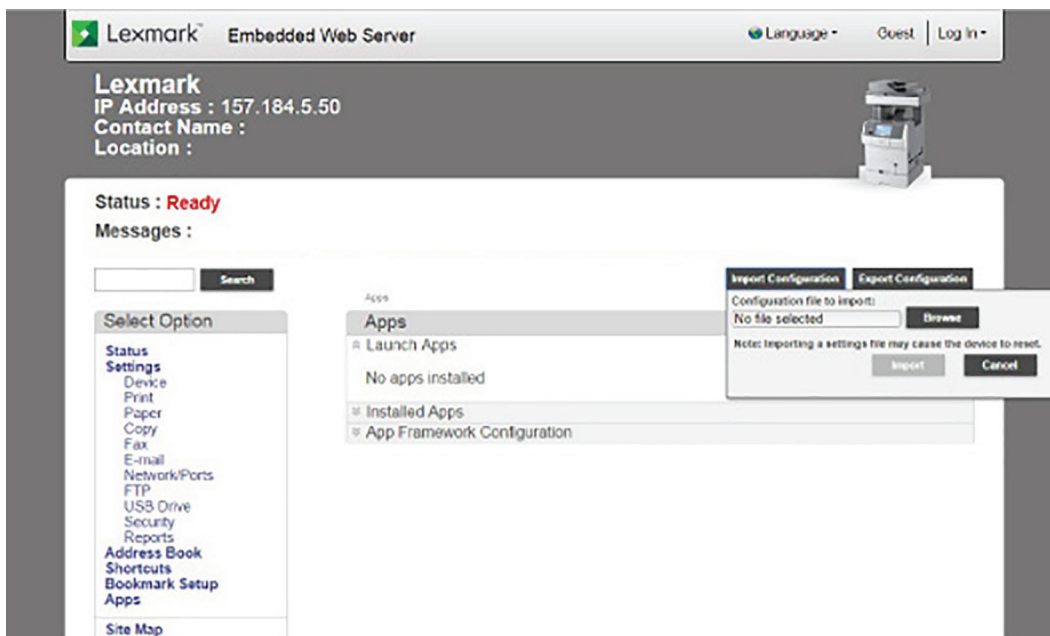
Restoring solutions, licenses, and configuration settings

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

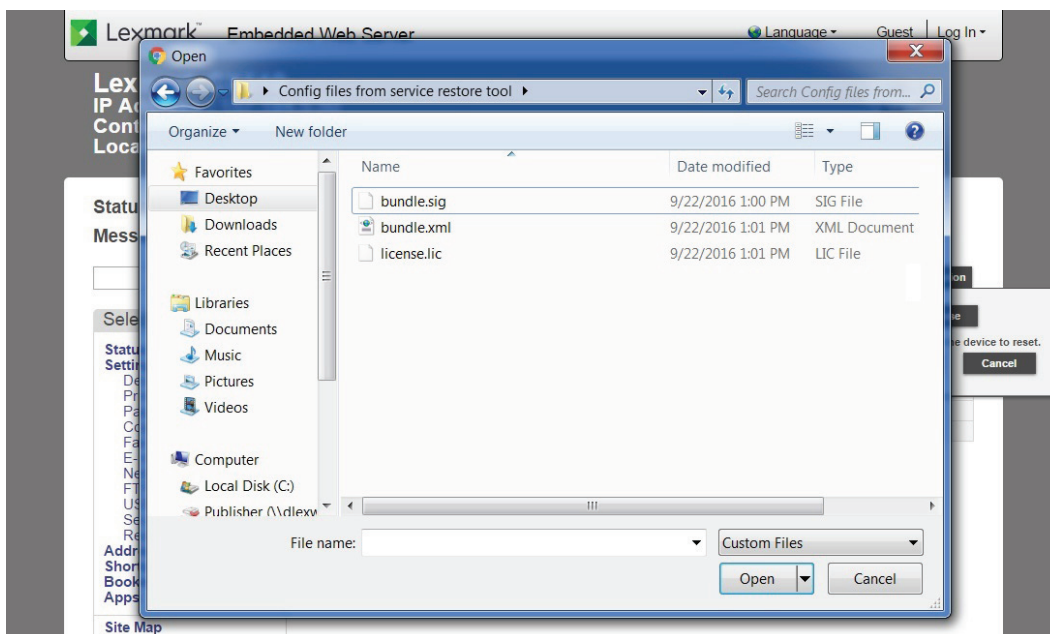
- 1 Open a web browser, and then type the printer IP address.



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



- 3 Navigate to the folder where the zip files are extracted from the Service Restore Tool.



- 4 Select the file to import, and then click **Import**.
- 5 Repeat step 2 through step 4 for the other files that are included in the extracted zip file.

Updating the printer firmware

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

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

Using a flash drive

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

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

- 1 Insert the flash drive.

The display lists the files on the thumbdrive.

- 2 Select the file that you need to flash.

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

Using a network computer

Using the File Transfer Protocol (FTP)

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

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

Using the Embedded Web Server

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

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

Backing up eSF solutions and settings

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

Exporting eSF solutions and settings file

- 1 Reset the printer into Invalid engine mode. See [“Entering Invalid engine mode” on page 331](#).
- 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.

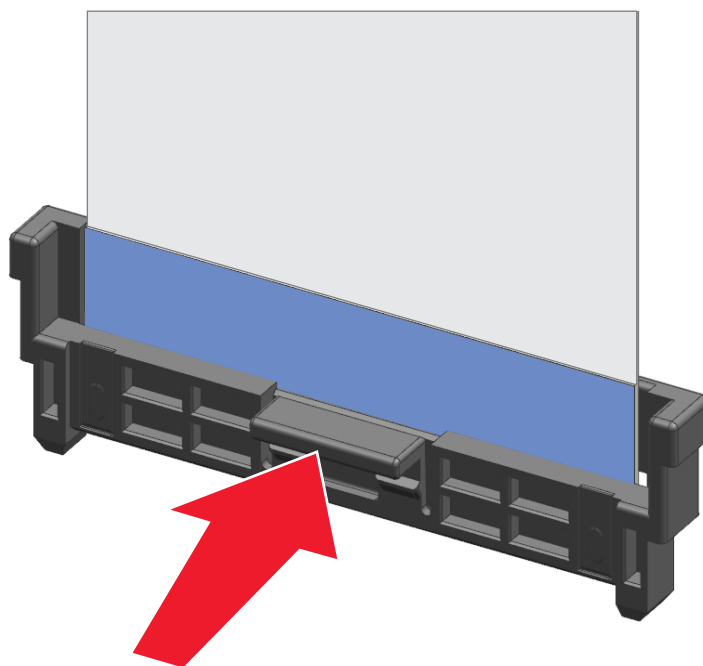
3 Click **Apps**, click **Export Configuration**, and then select one of the options in the dropdown menu.

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.

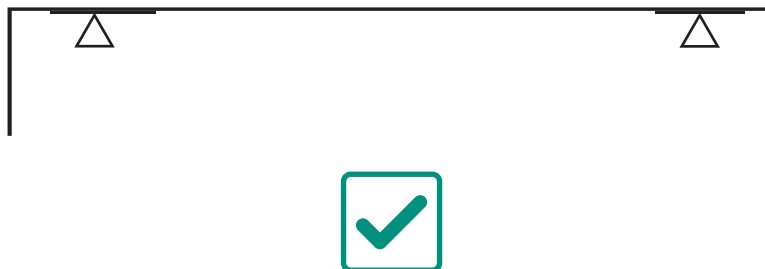
Checking the test page for alignment

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > Registration adjust > Quick test

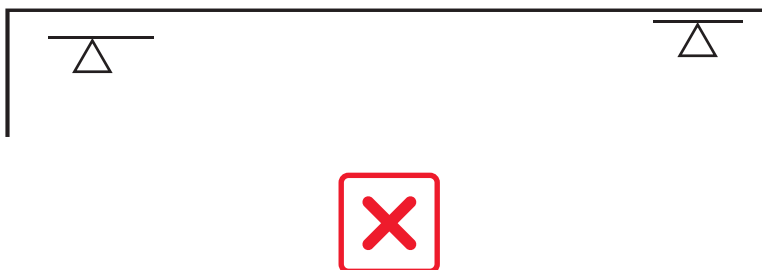
2 Check the test page.

The following test page result shows a properly aligned printhead:

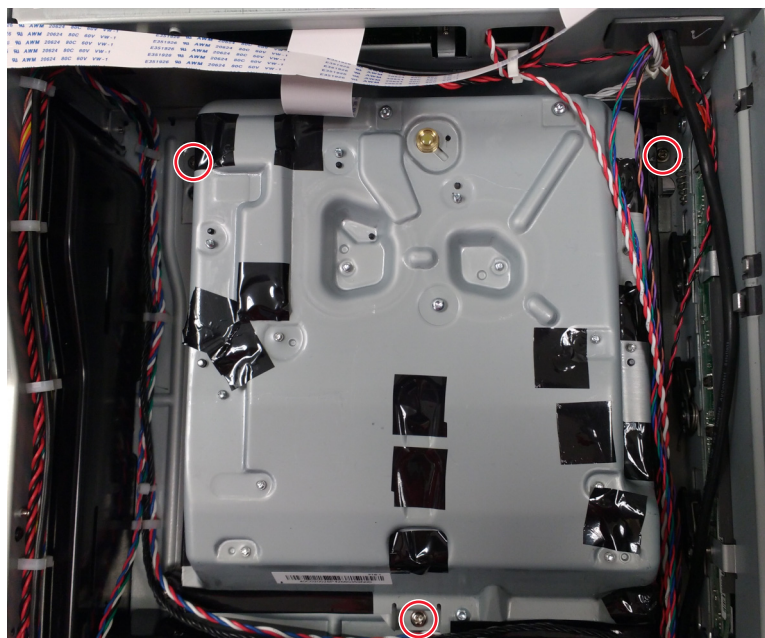


Aligning a printhead skewed in the counterclockwise direction

In most cases, the printhead is skewed counterclockwise, as shown in the following test page result.



- 1 Remove the scanner tilt. See [“Scanner tilt removal” on page 490](#).
- 2 Lift the scanner, and then remove the output bin cover. See [“Output bin cover removal” on page 372](#).
- 3 Loosen the three screws.



- 4 Adjust the printhead until the bottom left corner of the printhead touches the alignment pin (A).



- 5 Print another test page, and then check if the printhead is aligned.
- 6 Repeat steps 4 and 5 until the printhead is aligned.
- 7 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

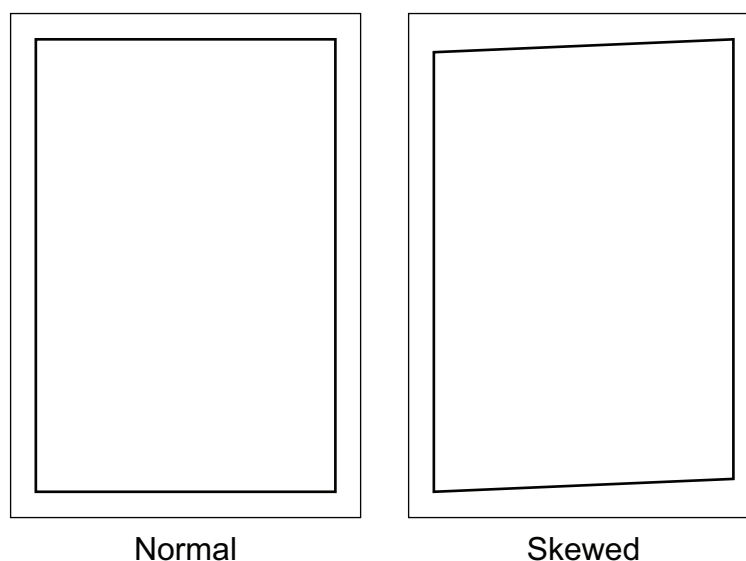
The skew adjustment changes the angle of the horizontal lines so that the lines can be aligned with the leading edge of the page. As the skew setting is changed, the top line on the test page stays in place at the left end, while its right end tilts up or down. All horizontal lines on the page will tilt 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 [“Adjusting the margins” on page 349](#).

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.

Notes:

- 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.

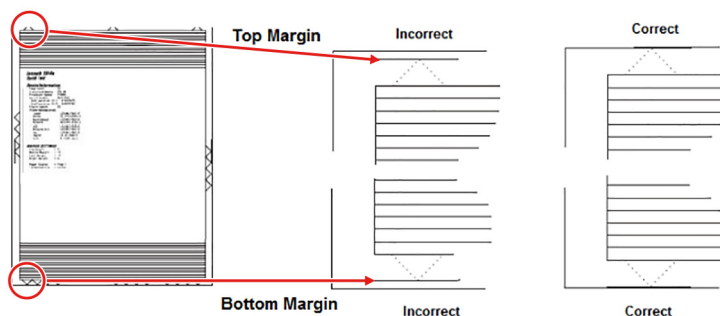
- Decreasing the value of the skew rotates the horizontal lines counterclockwise. The left end of the line remains in the same place and the right end moves upward.

- Select **OK**.
- Print a Quick test page to verify the change.
- Repeat steps 1 to 4 until the horizontal line is properly aligned with the leading edge of the page.
- Check for proper margin alignment. See [“Adjusting the margins” on page 349](#).

Adjusting the margins

To check for proper margin alignment:

- Enter the Diagnostics menu, and then navigate to:
Printer diagnostics & adjustments > Registration adjust
- Select **Quick Test**, and then press **OK** or touch **Start**.
The printer prints a test page.
- Check the top and bottom margins of the test page for proper alignment.



To adjust the margins:

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

Notes:

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

- Enter the Diagnostics menu, and then navigate to:
Printer diagnostics & adjustments > Registration adjust
- Select the field of the margin to adjust.
- Specify value. The value range is from -80 to 80.

Notes:

- 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 [“Adjusting the color alignment” on page 350](#).

Adjusting the color alignment

- 1 Enter the Diagnostics menu, and then navigate to:
Printer diagnostics & adjustments > Color alignment adjust
 On the AA Adjustment row, press **OK** or touch **Start**.
Note: The Color alignment procedure is performed on the cyan, magenta, and yellow colors.
- 2 Enter the Diagnostics menu, and then navigate to:
Printer diagnostics & adjustments > Color alignment adjust > Cyan > Quick test
 Check the alignment markings on the test page generated. Follow the instructions on the test page to correct the color misalignment.
- 3 Enter the Diagnostics menu, and then navigate to:
Printer diagnostics & adjustments > Color alignment adjust > Yellow > Quick test
 Check the alignment markings on the test page generated. Follow the instructions on the test page to correct the color misalignment.
- 4 Enter the Diagnostics menu, and then navigate to:
Printer diagnostics & adjustments > Color alignment adjust > Magenta > Quick test
 Check the alignment markings on the test page generated. Follow the instructions on the test page to correct the color misalignment.
- 5 If color misalignment still occurs, then repeat step 1 through to step 4.

Scanner Manual Registration

Use this setting to register the flatbed and ADF on the scanner. Perform a registration adjustment whenever the ADF, flatbed, or controller board is replaced.

Note: This setting does not appear if the Disable Scanner setting is set to Auto Disabled.

For more information on adjusting the scanner registration, see [“ADF registration adjustment” on page 350](#) and [“Flatbed registration adjustment” on page 351](#).

ADF registration adjustment

- 1 From the home screen, navigate to:
Settings > Device > Maintenance > Configuration Menu > Scanner Configuration > Scanner Manual Registration
- 2 From the Print Quick Test section, touch **Start**.
- 3 Place the test page faceup on the ADF, and then select **Front ADF Registration**.
- 4 From the Copy Quick Test section, touch **Start**.

- 5 Compare the pages from the print quick and copy quick tests.
- 6 Adjust the value of the horizontal adjust, top margin, horizontal magnification, and vertical magnification settings.
- 7 Apply the changes.
- 8 Repeat step 2 through 7 to make further adjustments.
- 9 From the Print Quick Test section, touch **Start**.
- 10 Place the quick test page facedown on the ADF, and then select **Rear ADF Registration**.
- 11 From the Copy Quick Test section, touch **Start**.
- 12 Compare the pages from the print quick and copy quick tests.
- 13 Adjust the value of the horizontal adjust, top margin, horizontal magnification, and vertical magnification settings.
- 14 Apply the changes.
- 15 Repeat step 8 through 14 to make further adjustments.

Flatbed registration adjustment

- 1 From the home screen, navigate to:
Settings > Device > Maintenance > Configuration Menu > Scanner Configuration > Scanner Manual Registration
- 2 From the Print Quick Test section, touch **Start**.
- 3 Place the test page on the flatbed, and then select **Flatbed Registration**.
- 4 From the Copy Quick Test section, touch **Start**.
- 5 Compare the pages from the print quick and copy quick tests.
- 6 Adjust the value of the horizontal adjust, top margin, horizontal magnification, and vertical magnification settings.
- 7 Apply the changes.
- 8 Repeat steps 2 through 7 to make further adjustments.

Removal procedures


Keep the following tips in mind as you replace parts:

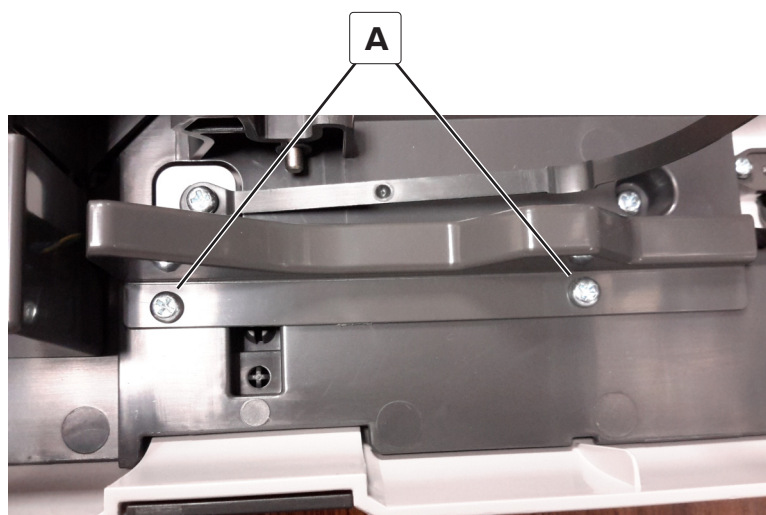
- Some removal procedures require removing the cable ties. Replace the cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.
- Remove the toner cartridges, imaging unit, and media tray before removing other printer parts. The imaging unit 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

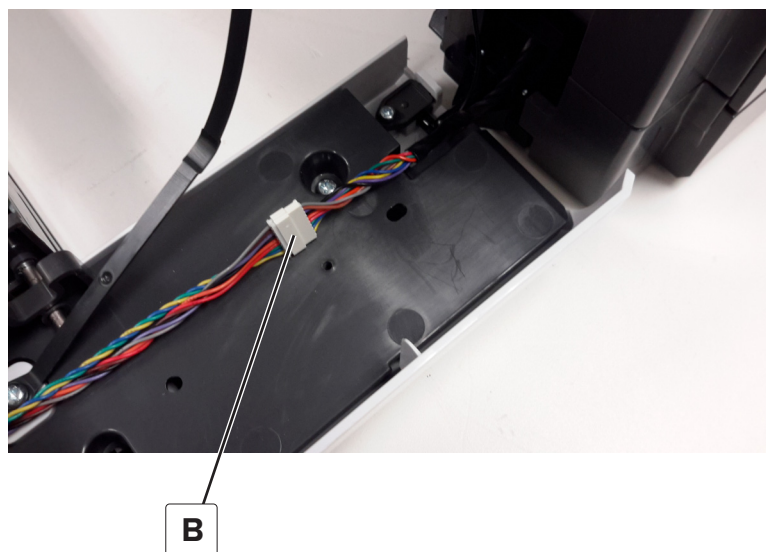
Front cover removal

- 1 Open the front door, and then remove the two screws (A).

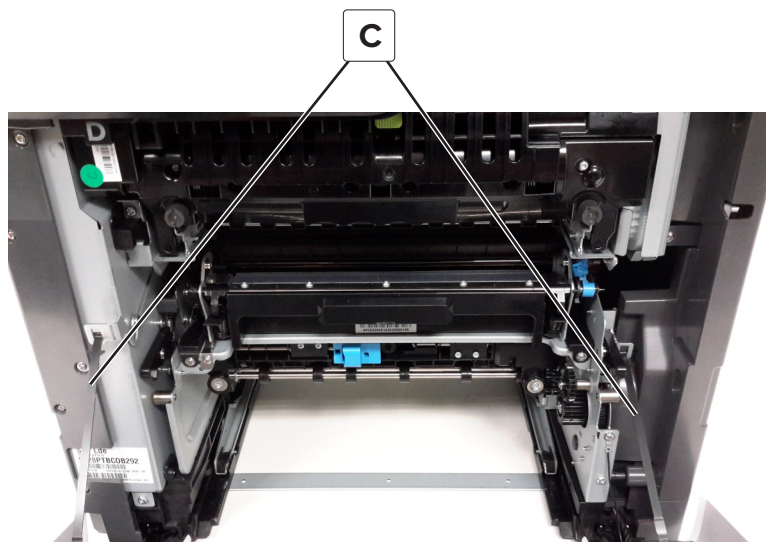
 **CAUTION—POTENTIAL INJURY:** Make sure that the front door has support after the straps are removed to avoid damage.



- 2 Disconnect the connector (B).



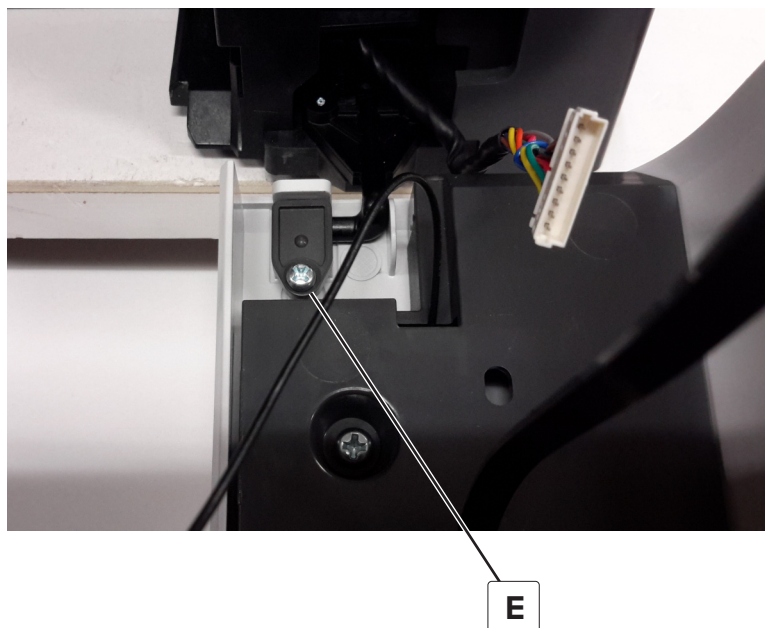
- 3** Disconnect the front door straps (C).



- 4** Remove the screw (D) securing the ground cables.



- 5** Remove the screw (E).

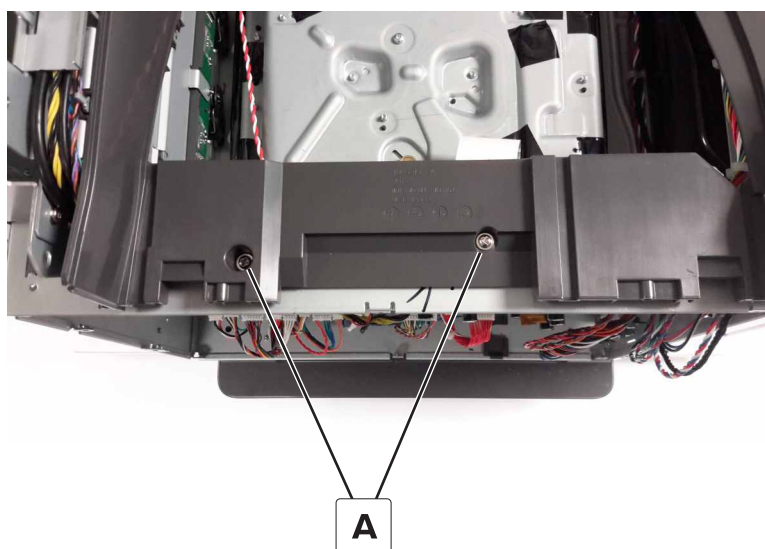


- 6** Remove the straps from the duplex outer guide.

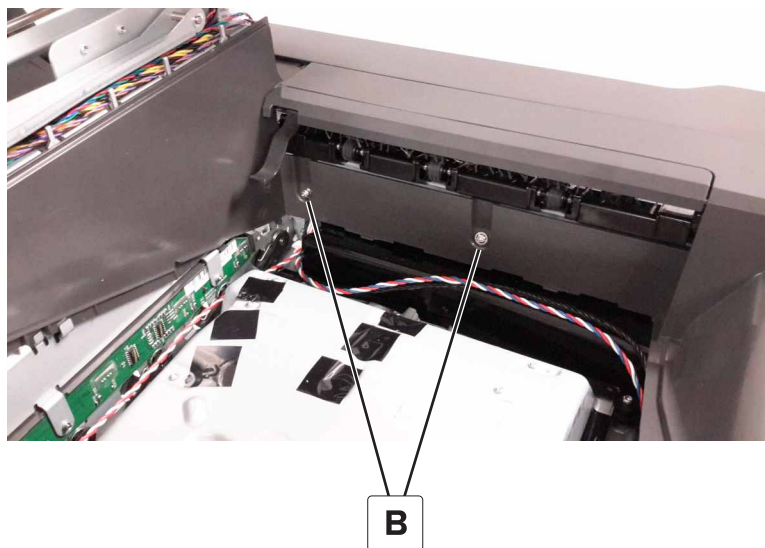
- 7** Remove the front cover from the duplex outer guide. See [“Duplex outer guide removal” on page 387.](#)

Top cover removal

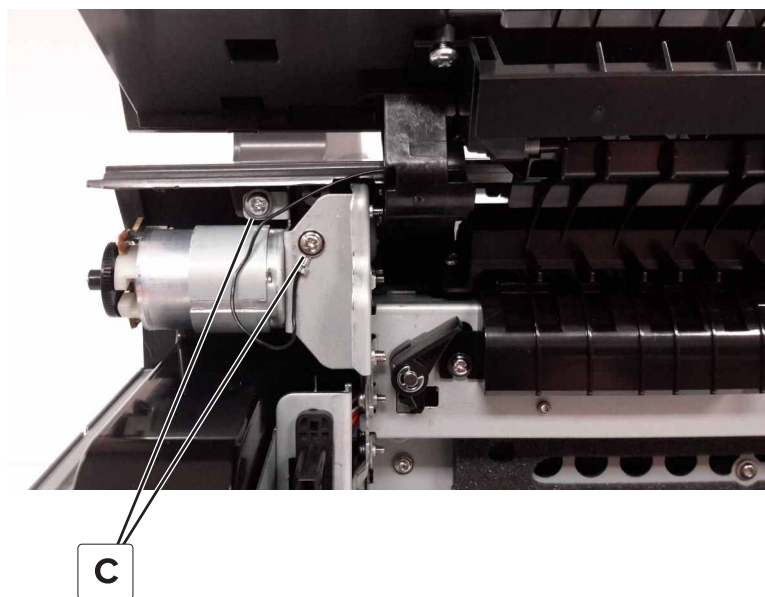
- 1** Remove the flatbed. See [“Flatbed removal” on page 483.](#)
- 2** Remove the output bin cover. See [“Output bin cover removal” on page 372.](#)
- 3** Remove the two screws (A) from the top of the cover.



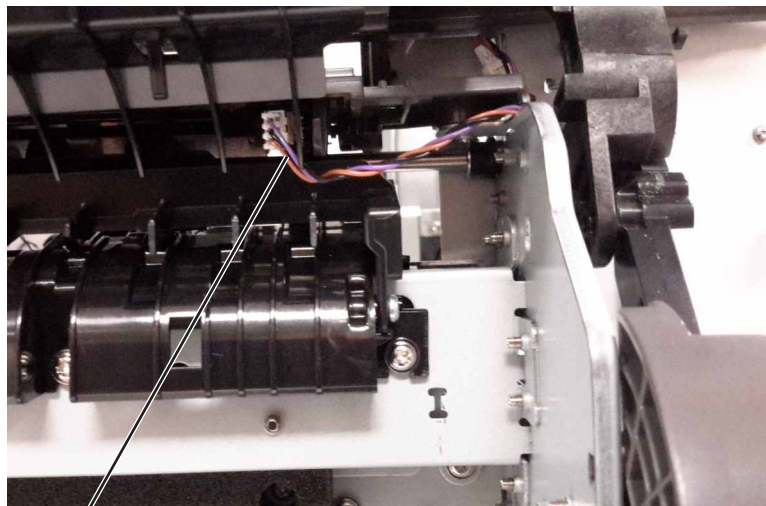
- 4** Remove the two screws (B) from inside the cover.



- 5** Remove the two screws (C) from the left-front side of the cover.



- 6** Disconnect the bin full sensor cable (D).



D

- 7** Remove the screw (E) from the top-right corner of the cover.



E

- 8 Open the front cover, and then raise the diverter guide.



- 9 Gently lift and remove the cover.



Installation note: Make sure that the cables are properly routed before replacing the top cover.



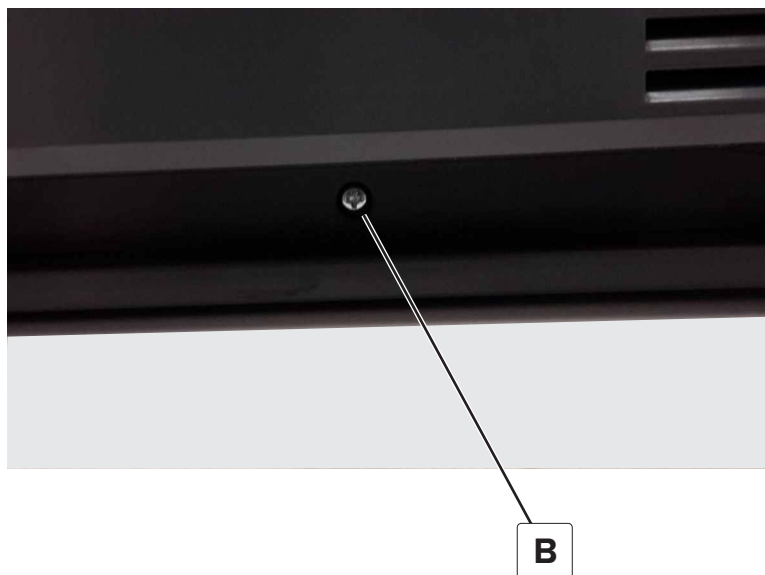
Left cover removal

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 Remove the scanner rear left cover. See [“Scanner rear left cover removal” on page 377](#).
- 2 Remove the three screws (A) from the front of the cover.



- 3** Remove the screw (B) from the lower-left side of the cover.



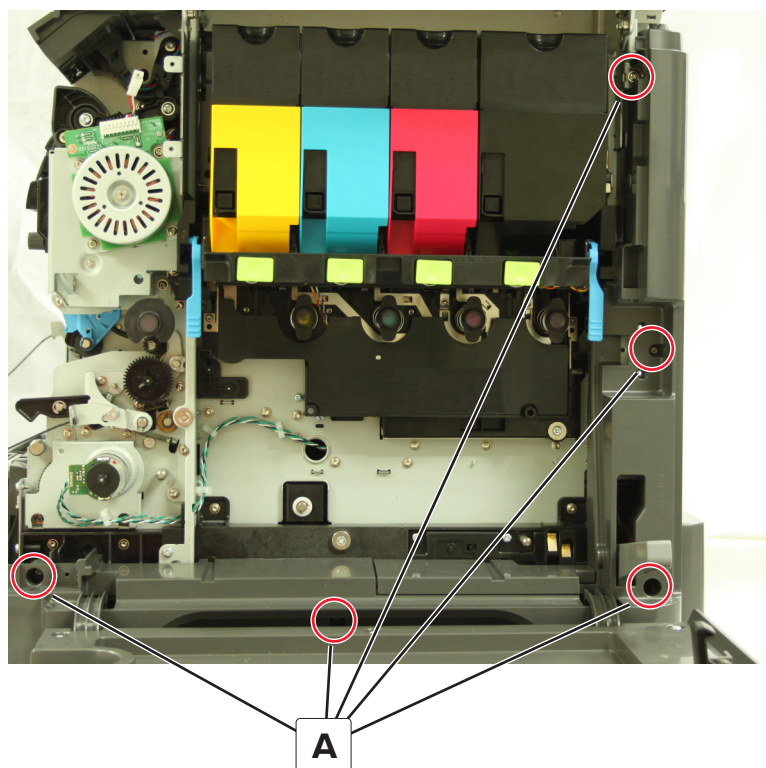
- 4** Remove the three screws (C) from the rear of the cover, and then remove the cover.



Right cover removal

- 1** Remove the motor cover. See [“Motor cover removal” on page 361](#).
- 2** Remove the scanner rear left cover. See [“Scanner rear left cover removal” on page 377](#).

- 3 Remove the waste toner bottle.
- 4 Remove the five screws (A).

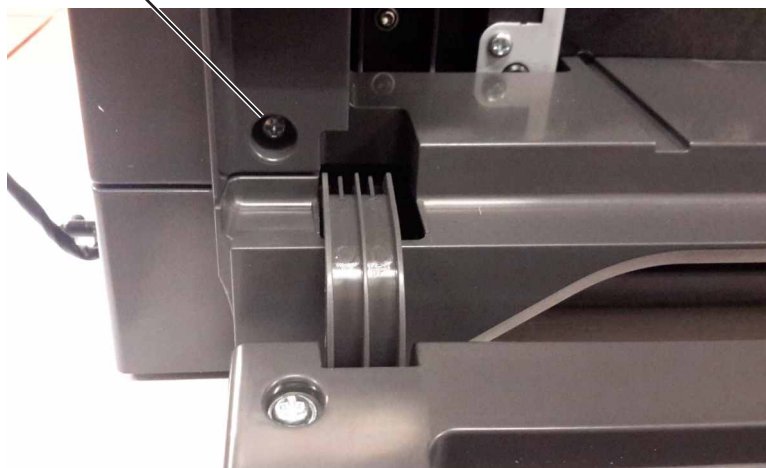
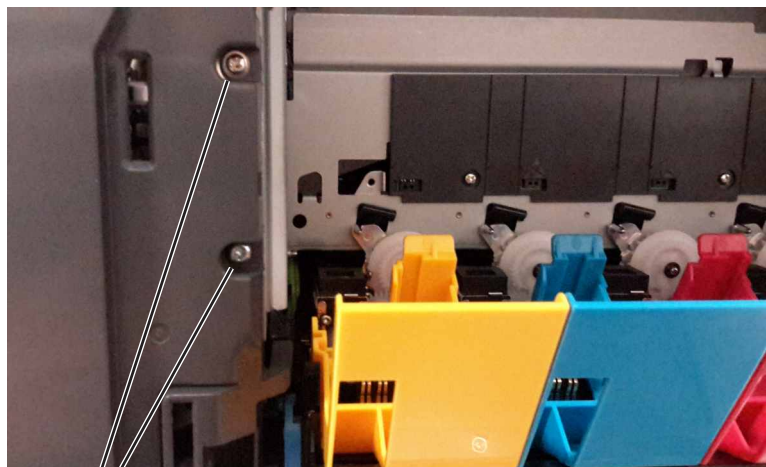


- 5 Remove the right cover from the printer.
- 6 Remove the right cover from the imaging unit cover. See [“Imaging unit cover removal” on page 422.](#)

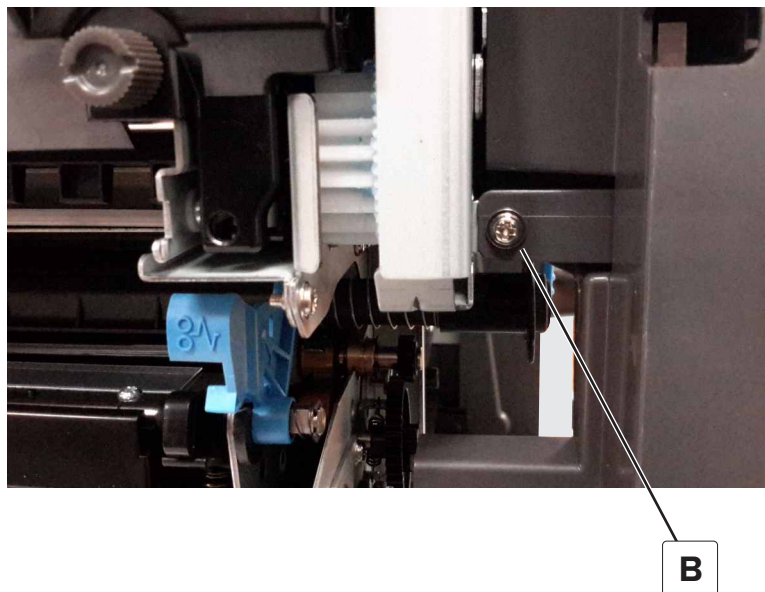
Motor cover removal

- 1 Open the toner door.
- 2 Open the imaging unit cover.

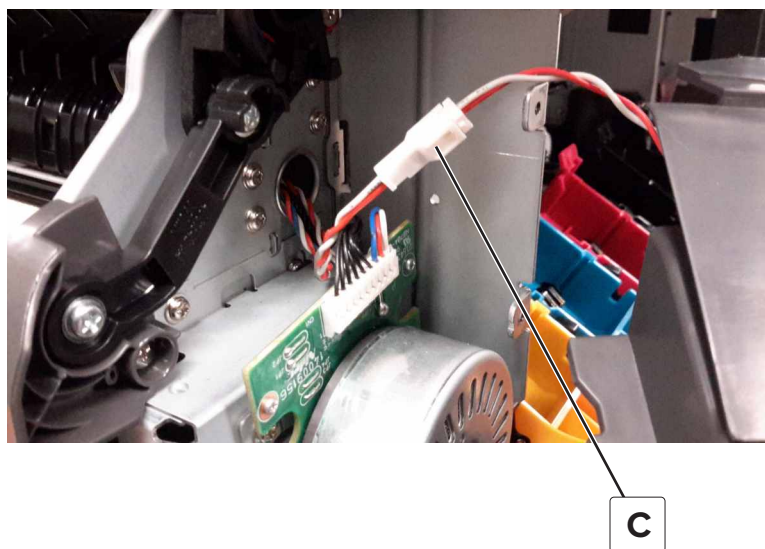
3 Remove the three screws (A).



- 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.

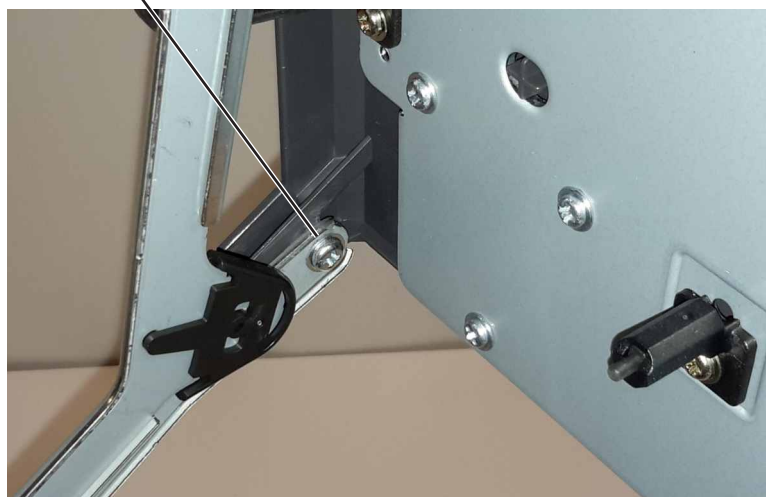


Toner door removal

- 1 Open the toner door.
- 2 Remove the two screws (A) securing the toner door on the front side of the printer.



A



- 3** Remove the two screws (B) securing the toner door on the rear side the printer, and then remove the toner door.

**B**

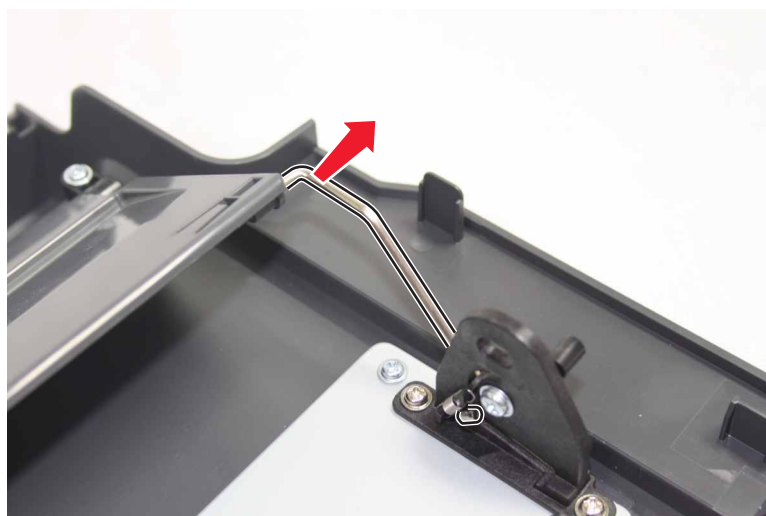
Toner door mount bracket removal

- 1 Remove the toner door. See [“Toner door removal” on page 364](#).
- 2 Remove the E-clip (A).

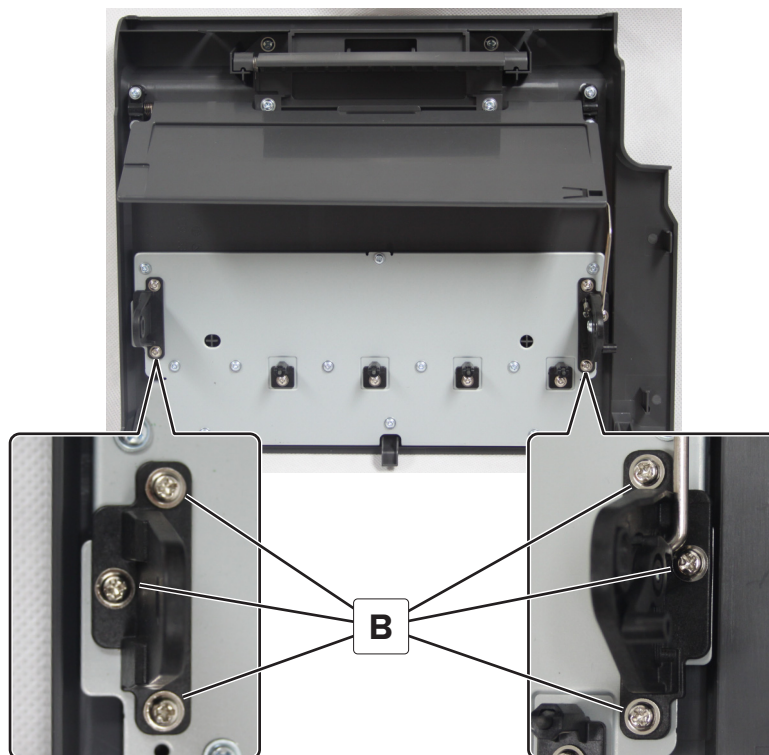


A

- 3 Slide the retainer out of the hole.

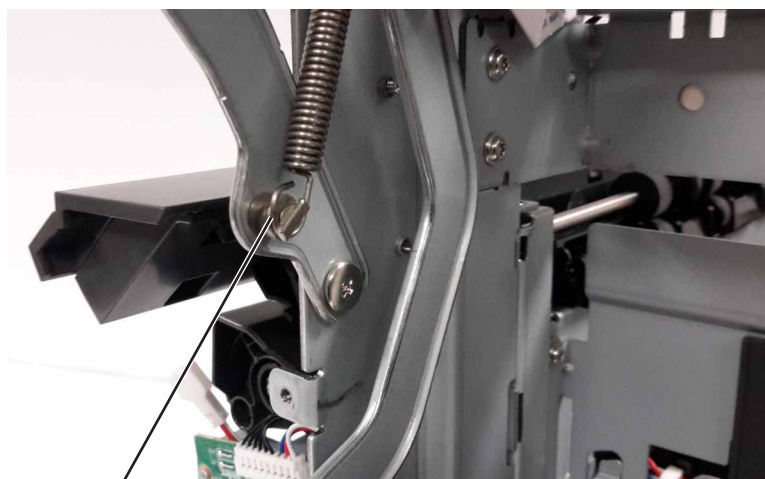


- 4** Remove the six screws (B) from the bracket, and then remove the bracket.

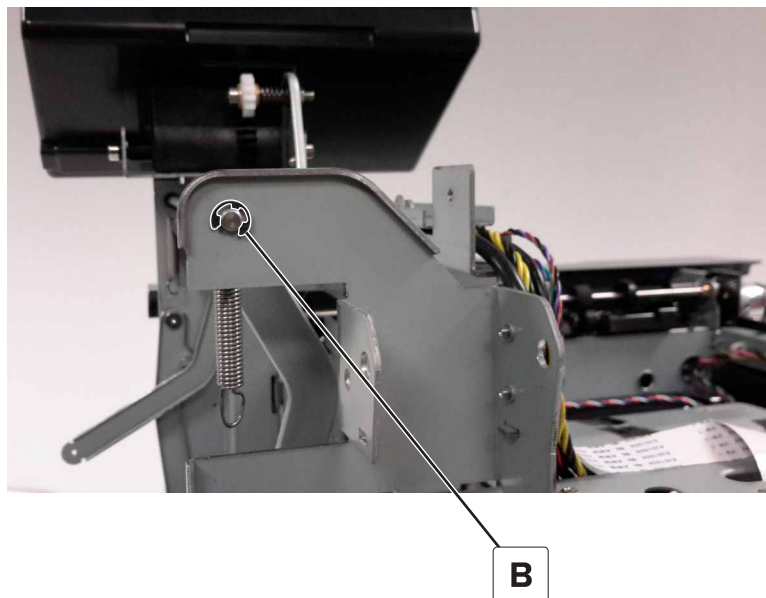


Toner door mount frame removal

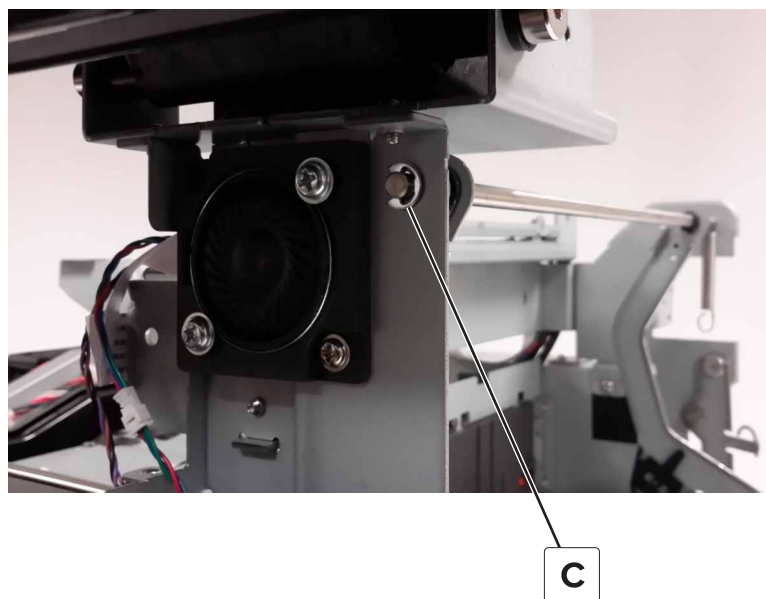
- 1 Remove toner door. See [“Toner door removal” on page 364](#).
- 2 Raise the front and rear toner door arms, and then unhook the two springs (A).



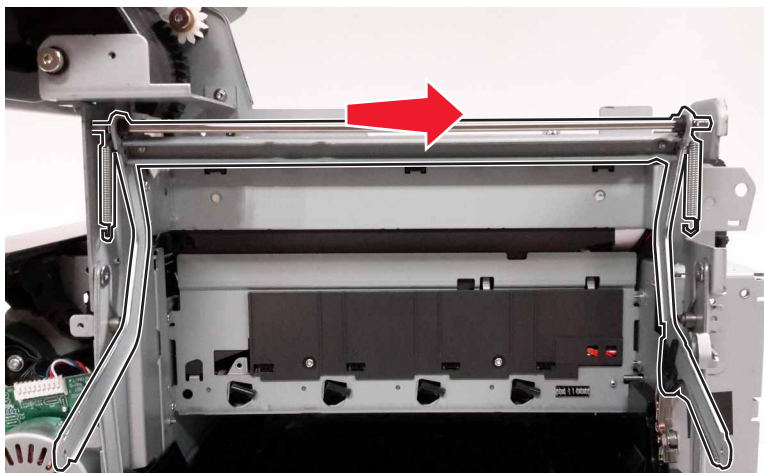
3 Remove the E-clip (B).



4 Remove the E-clip (C).



- 5** Slide the upper toner door mounting assembly to the right to disengage it from the frame.



- 6** Slide the mounting assembly to the left to remove.



- 7** Remove the two springs (D), and then remove the two E-clips (E).



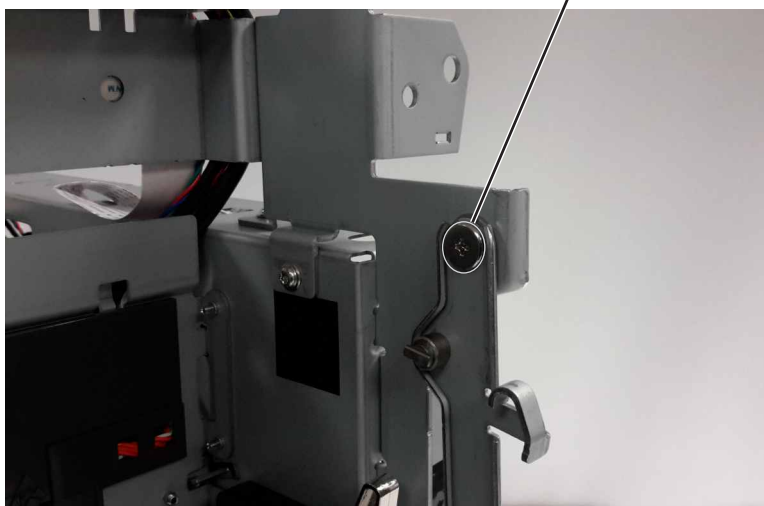
- 8 Slide the mounting rod out of the mounting assembly.



- 9 Remove the two screws (F) from the printer frame.

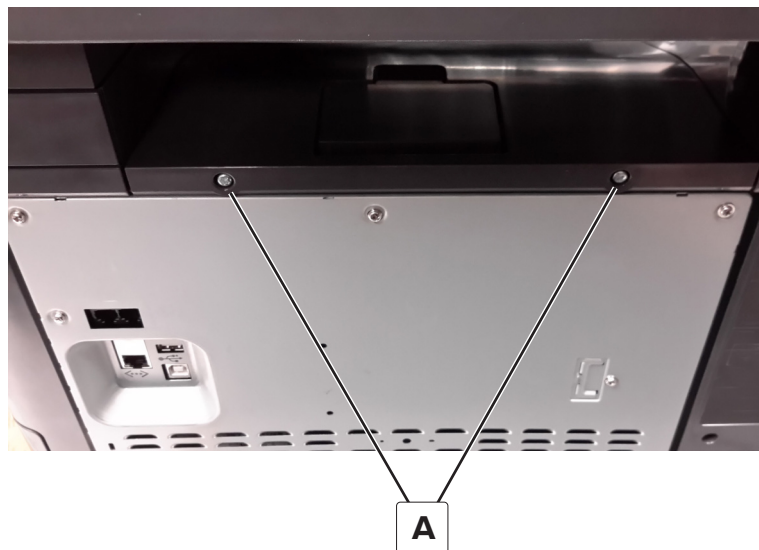


F

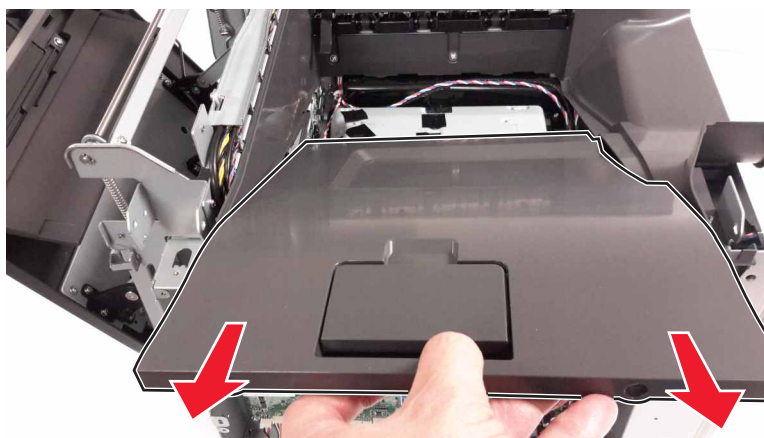


Output bin cover removal

- 1 Remove the two screws (A) from the rear of the output bin cover.



- 2 Remove the cover.

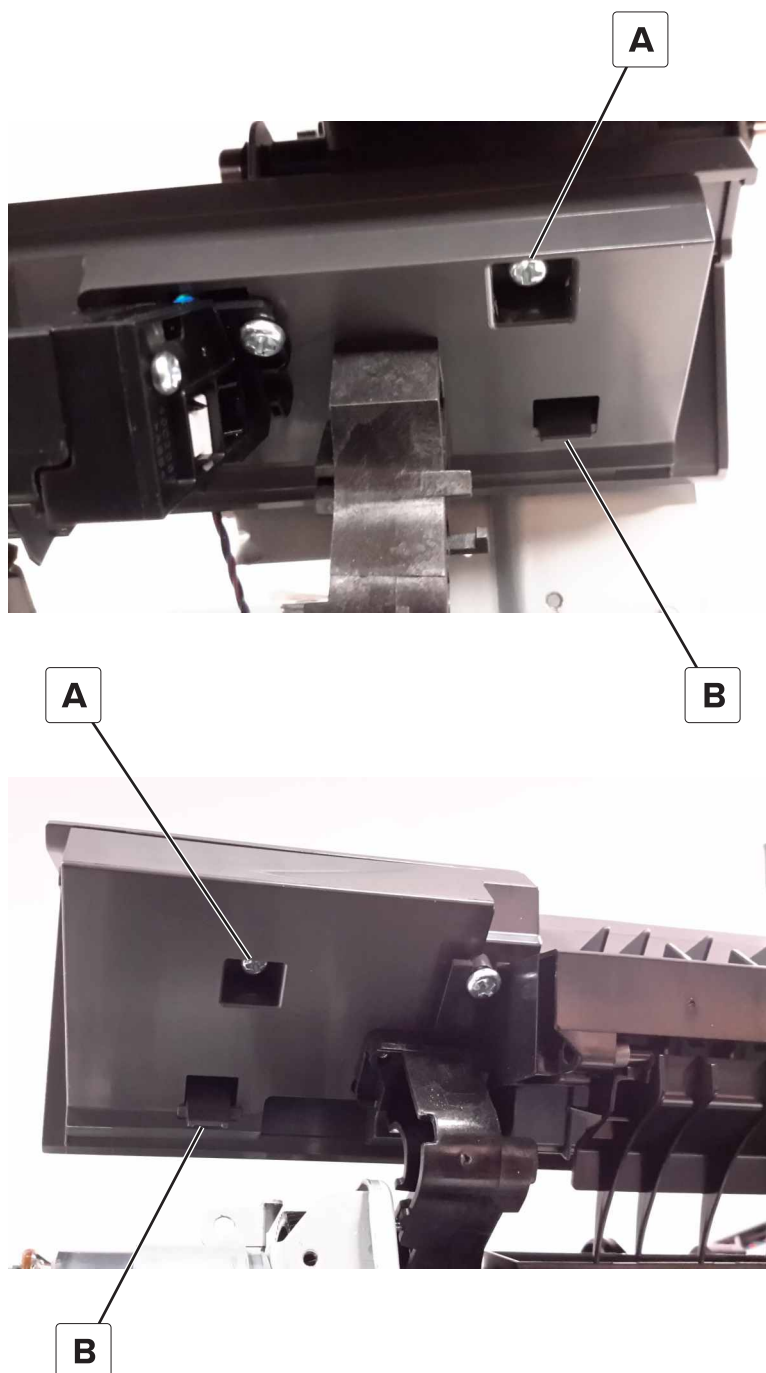


Top frame cover removal

- 1 Open the front cover, and then raise the diverter.



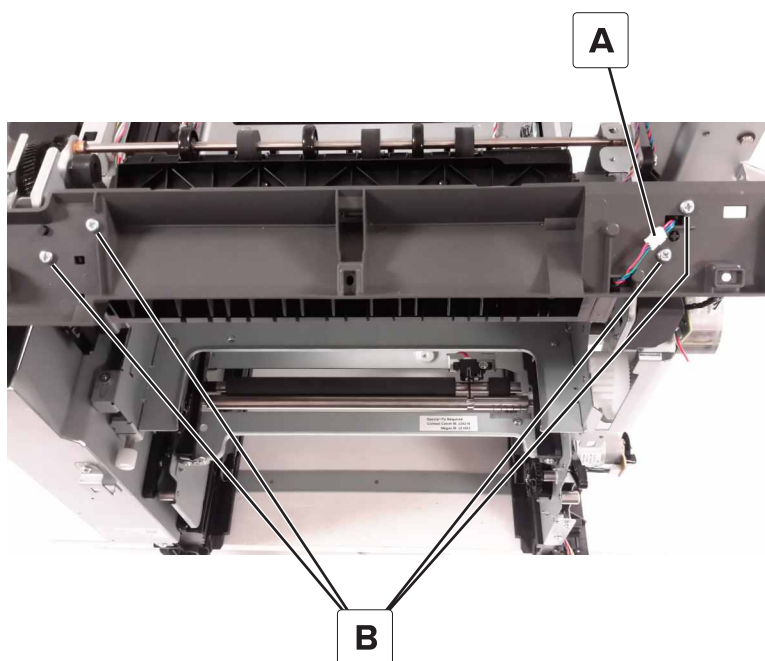
- 2** From under the top frame base cover, remove the two screws (A), and then release the two tabs (B).



- 3** Remove the top frame cover from the top frame base cover.

Top frame base cover removal

- 1 Remove the top frame cover. See [“Top frame cover removal” on page 373](#).
- 2 Disconnect the redrive sensor cable (A), remove the four screws (B), and then remove the cover.



Scanner rear right cover removal

- 1 Pull the scanner rear right cover (A) to detach from the frame.



- 2 Remove the cover.

Scanner rear left cover removal

- 1 Pull the scanner rear left cover (A) to detach from the frame.

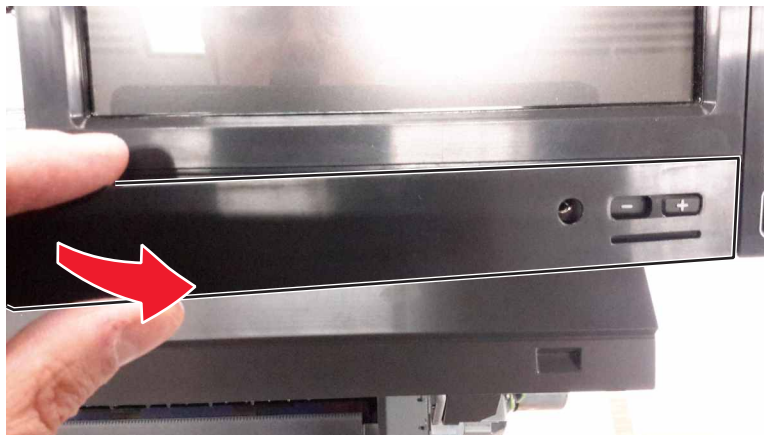


- 2 Remove the cover.

Control panel removals

Lower control panel bezel removal

- 1 Carefully pull the bezel to disengage it.



- 2 Remove the bezel.

Control panel bezel removal

- 1 Carefully pull the lower left corner of the bezel to disengage it.



- 2 Remove the bezel.

Control panel 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.

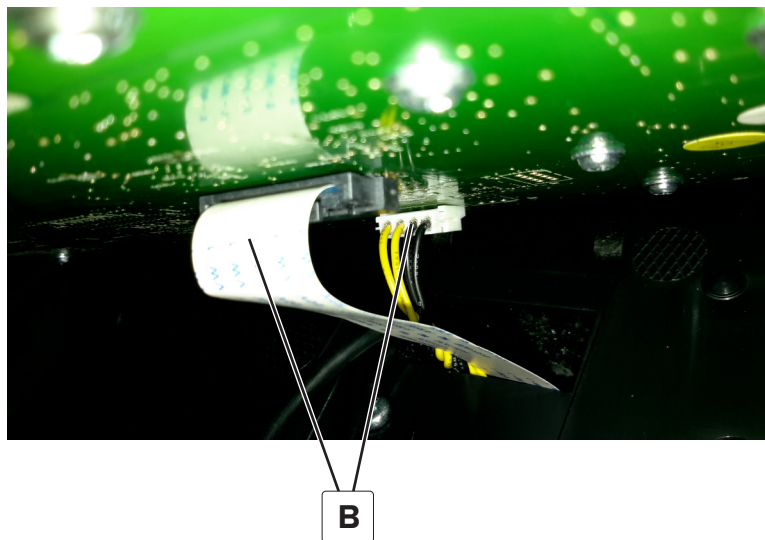
- 3 Use the Diagnostics Menu to test the replacement part. Do a feed test to check if the problem is resolved.
 - If the problem is not resolved—Turn off the printer, and then reinstall the old part.
 - If the problem is resolved—Perform a POR.
 - If NVRAM error occurs during the replacement, go to [“NVRAM mismatch failure service check” on page 261](#)

Removal procedure

- 1 Remove the control panel bezel. See [“Control panel bezel removal” on page 378](#).
- 2 Remove the lower control panel bezel. See [“Lower control panel bezel removal” on page 378](#).
- 3 Remove the six screws (A).

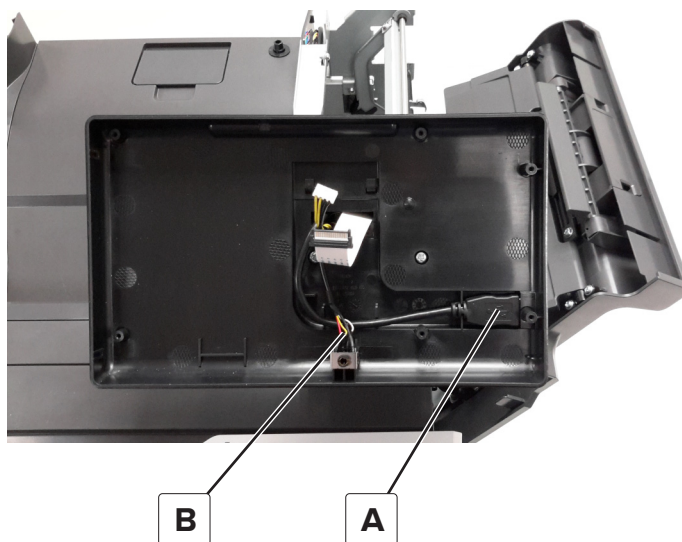


- 4 Disconnect the two control panel cables (B) from the control panel board, and then remove the control panel.

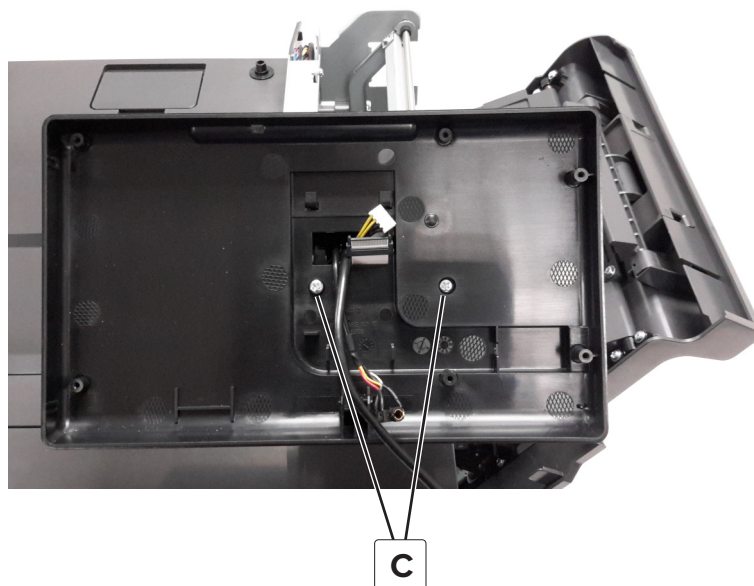


Control panel tub removal

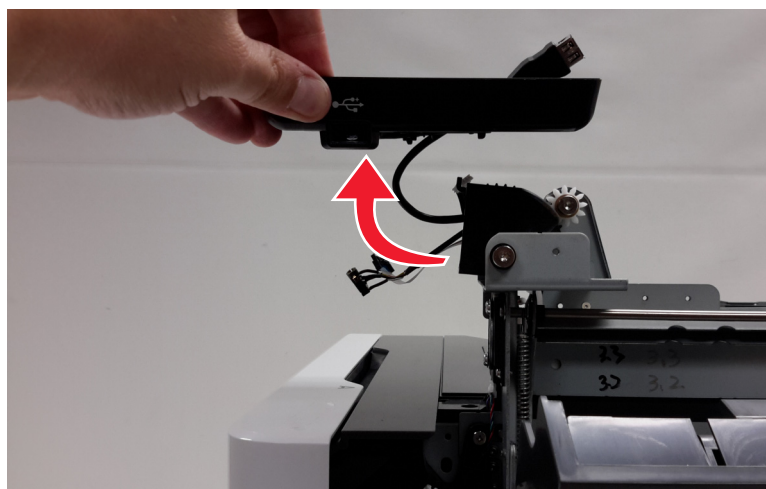
- 1 Remove the control panel bezel. See [“Control panel bezel removal” on page 378.](#)
- 2 Remove the lower control panel bezel. See [“Lower control panel bezel removal” on page 378.](#)
- 3 Remove the control panel. See [“Control panel removal” on page 378.](#)
- 4 Unfasten the USB (A) and headphone (B) cables.



- 5 Remove the two screws (C).



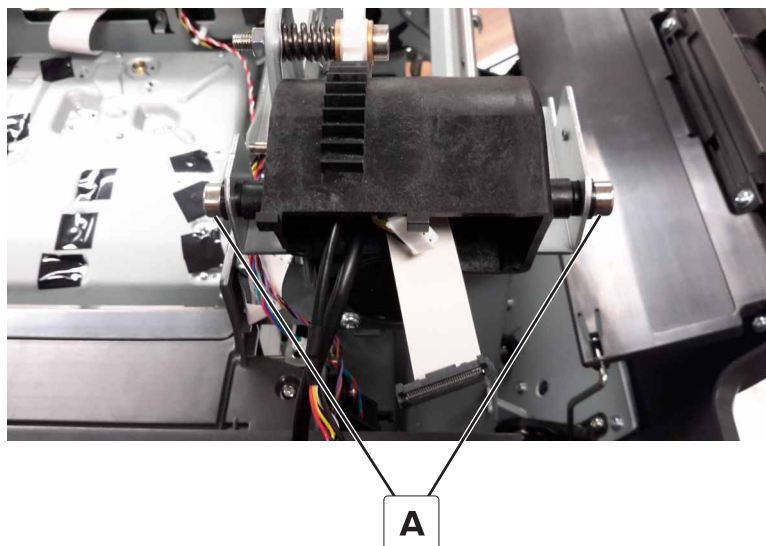
- 6 Tilt up the control panel tub, and then lift to remove.



Control panel pivot gear removal

- 1 Remove the control panel bezel. See [“Control panel bezel removal” on page 378.](#)
- 2 Remove the lower control panel bezel. See [“Lower control panel bezel removal” on page 378.](#)
- 3 Remove the control panel. See [“Control panel removal” on page 378.](#)
- 4 Remove the control panel tub. See [“Control panel tub removal” on page 380.](#)

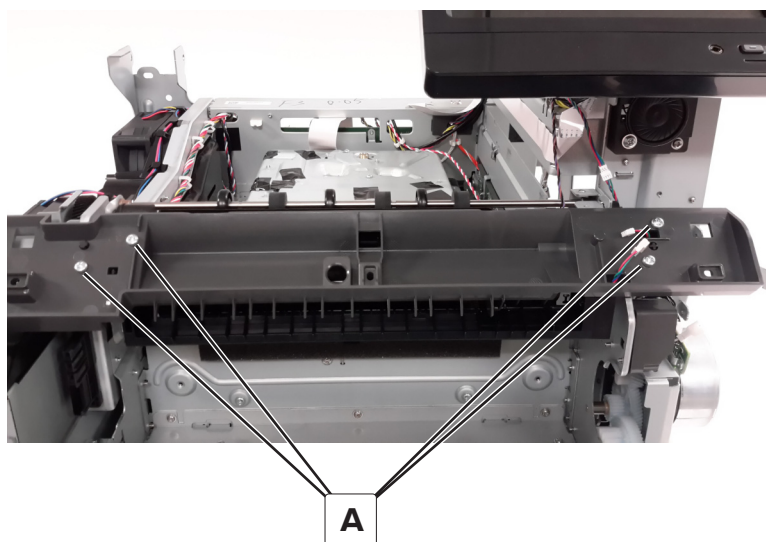
- 5 Remove the two shoulder screws (A), and then remove the mounting bracket.



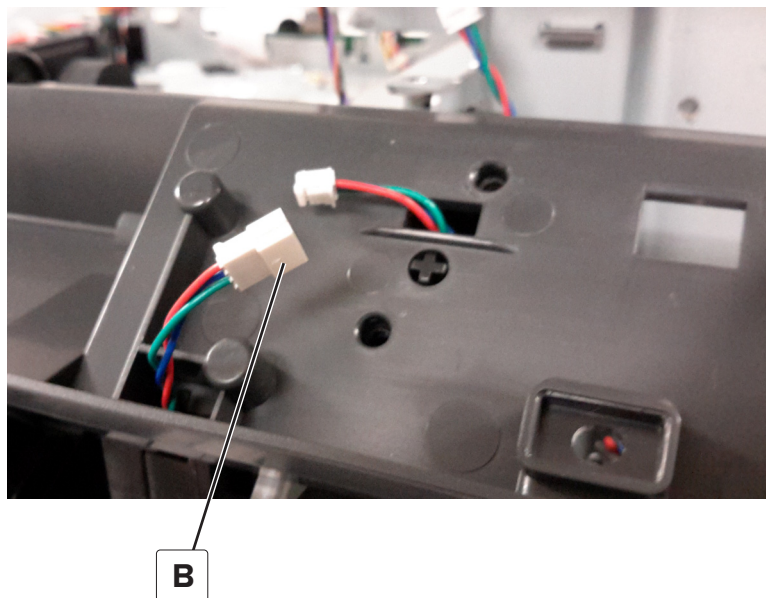
Control panel arms removal

Note: The control panel arms are two separate FRUs. This procedure shows how to remove the left and right arms.

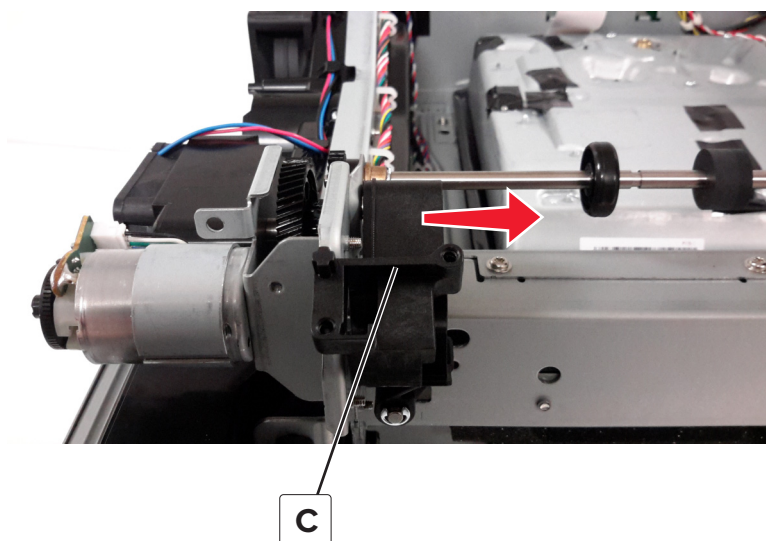
- 1 Remove the top frame cover. See [“Top frame cover removal” on page 373](#).
- 2 Remove the four screws (A).



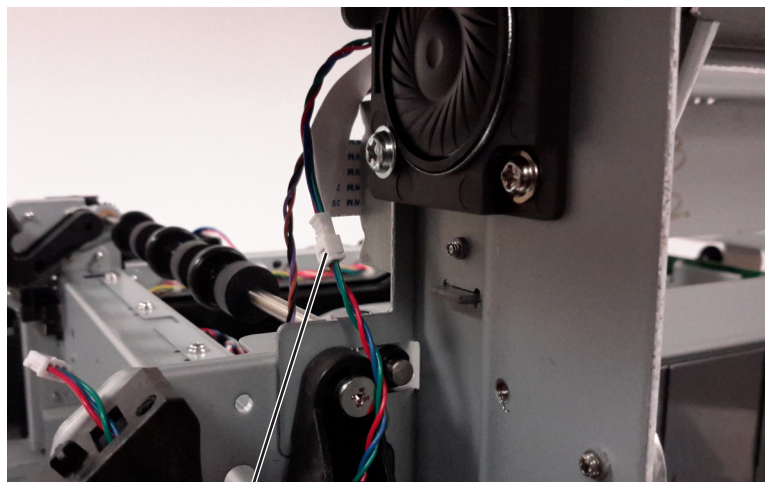
- 3 Disconnect the cable (B).



- 4 Remove the redrive guide. See [“Redrive guide removal” on page 449](#).
- 5 Remove the left control panel arm (C) from the mounting pin.

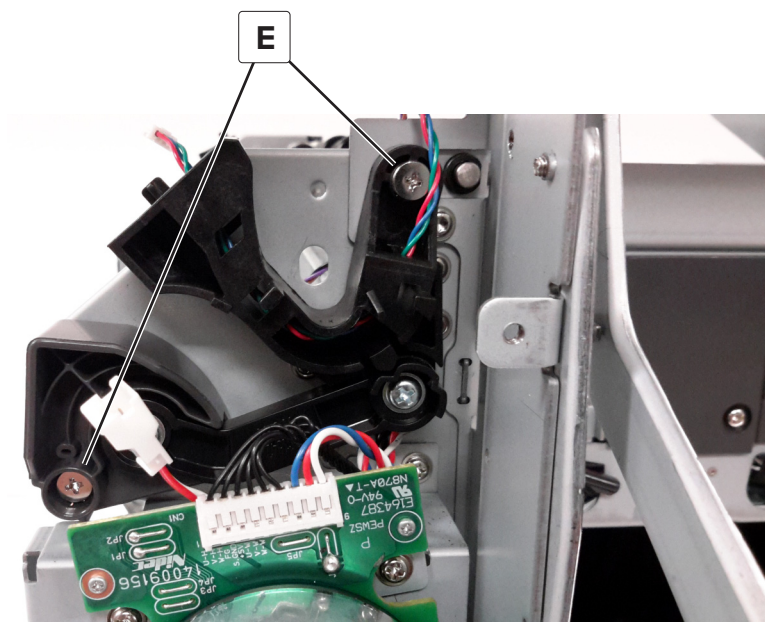


- 6** Disconnect the cable (D).



D

- 7** Remove the two screws (E), and then remove the right control panel arm.



E

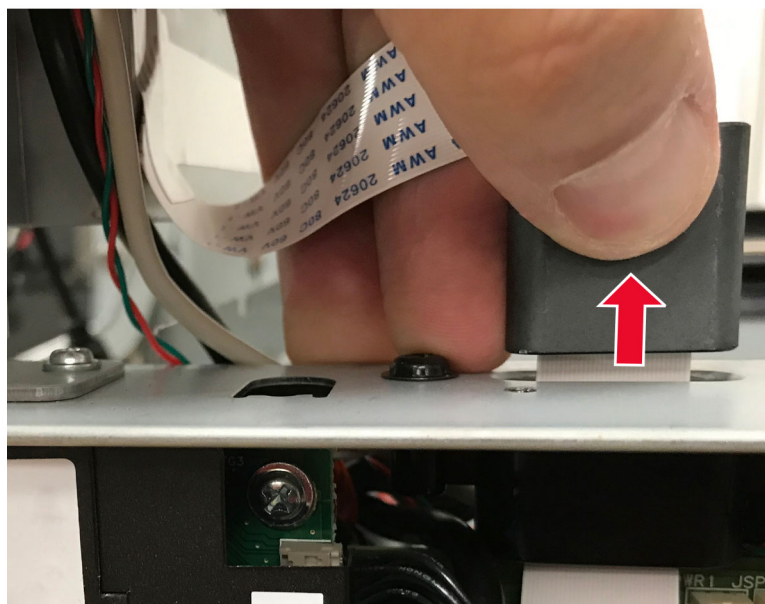
- 8** Remove the cable (F) from the right control panel arm.



Control panel FFC cable removal

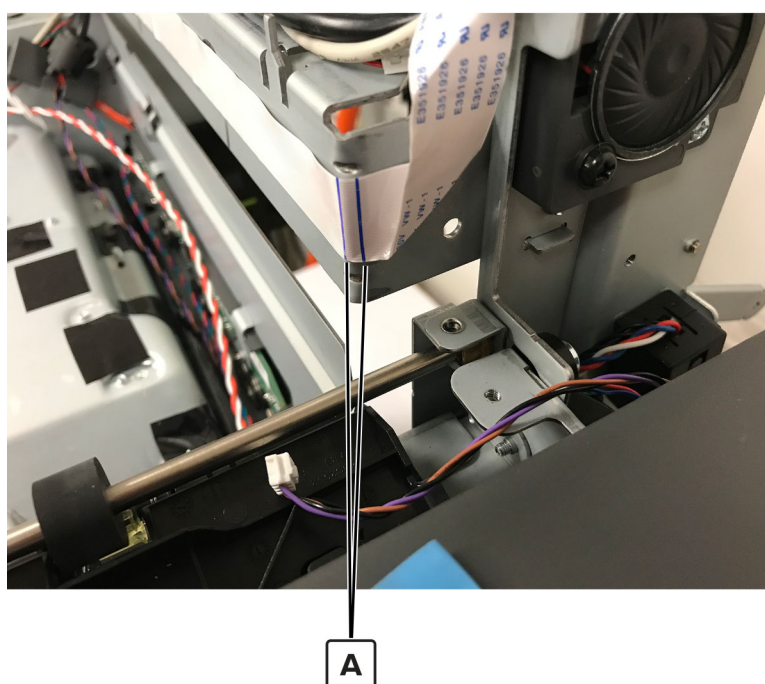
- 1** Remove the flatbed scanner. See [“Flatbed removal” on page 483](#).
- 2** Remove the top cover. See [“Top cover removal” on page 354](#).
- 3** Remove the scanner front cover. See [“Scanner front cover removal” on page 482](#).
- 4** Remove the control panel. See [“Control panel removal” on page 378](#).
- 5** Disconnect the control panel FFC cable from the JLCD1 connector on the controller board.

- 6 Lift the toroid out of the bracket, and then remove the cable from the controller board frame.



Note: Pay attention to the routing of the cable before releasing the cable from the frame.

Installation note: Make sure to line up the blue indicators (A) with the corner of the frame.

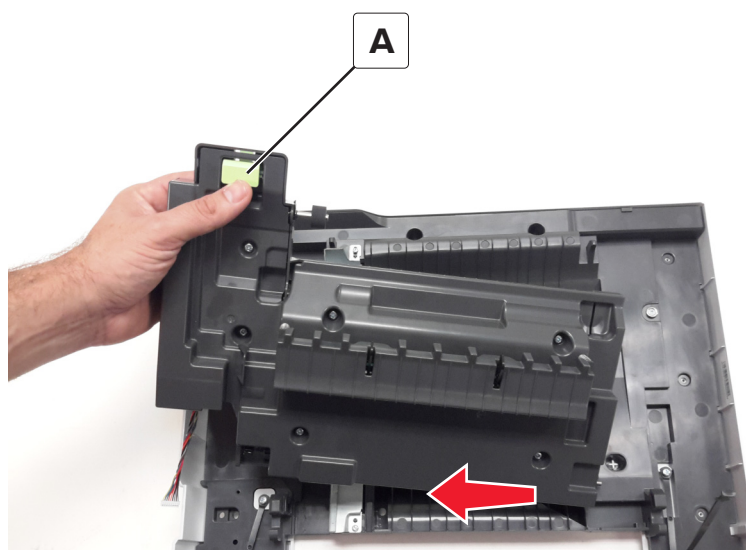


- 7 Route the cable out through the front of the printer and control panel tub.

Duplex removals

Duplex inner guide removal

- 1 Remove the front cover. See [“Front cover removal” on page 352.](#)
- 2 Remove the pivot shaft. See [“Pivot shaft removal” on page 389.](#)
- 3 Release the latch (A), and then slide the guide to remove.



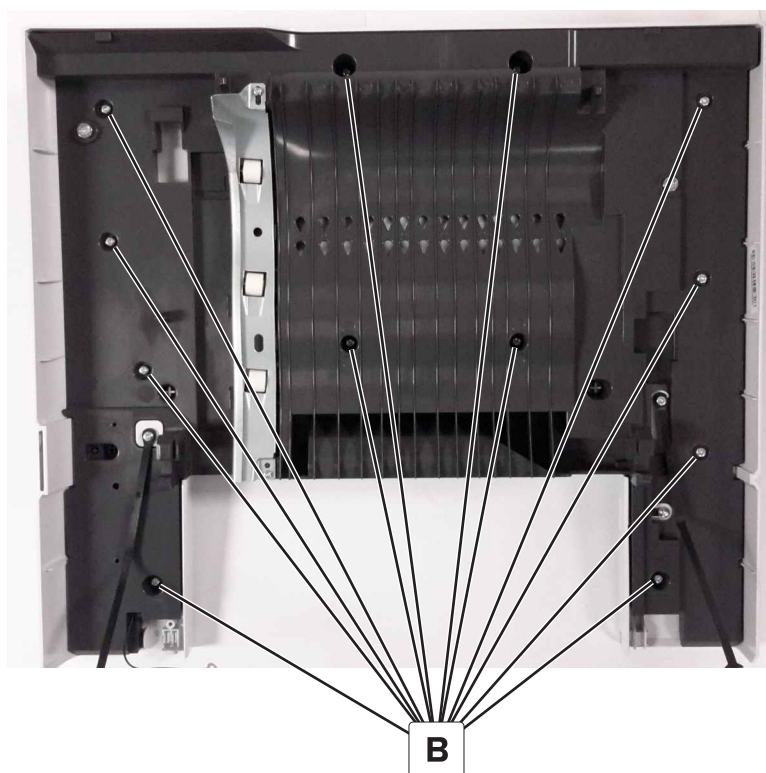
Duplex outer guide removal

- 1 Remove the front cover. See [“Front cover removal” on page 352.](#)
- 2 Remove duplex inner guide. See [“Duplex inner guide removal” on page 387.](#)
- 3 Remove the pivot shaft. See [“Pivot shaft removal” on page 389.](#)

- 4** Remove the tray indicator (A).



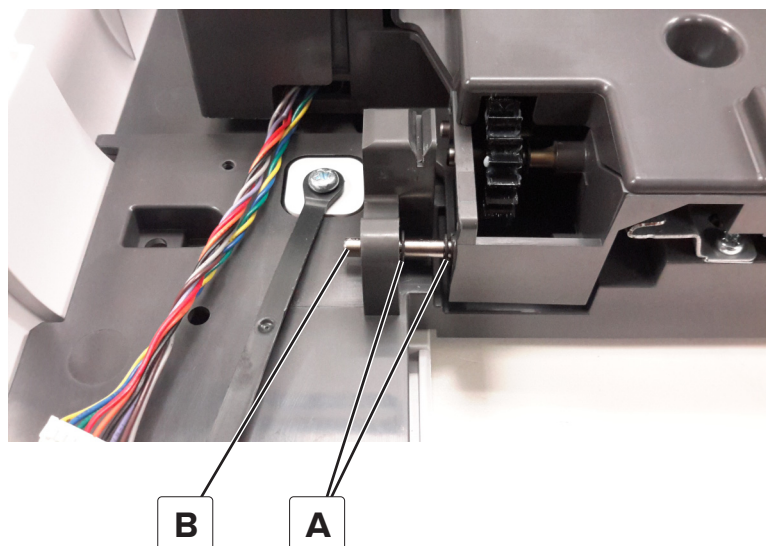
- 5** Remove the 12 screws (B), and then remove the duplex outer guide.



Parts removal

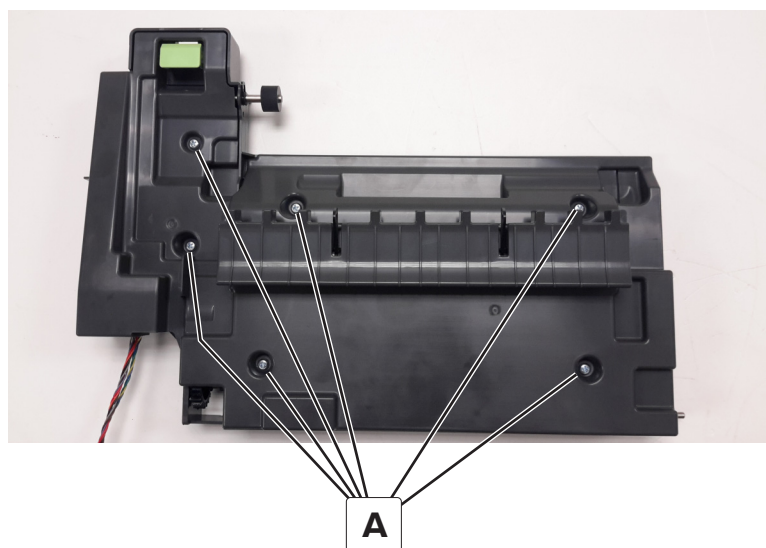
Pivot shaft removal

- 1 Remove the front cover. See [“Front cover removal” on page 352.](#)
- 2 Remove the two E-clips (A), and then remove the shaft (B).

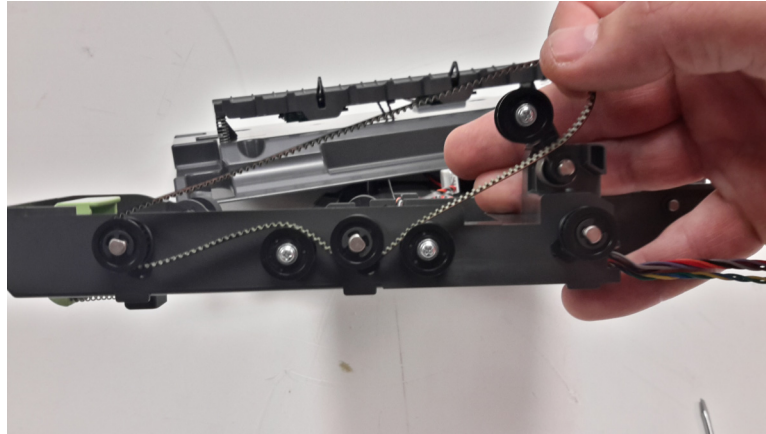


Tensioner belt removal

- 1 Remove the front cover. See [“Front cover removal” on page 352.](#)
- 2 Remove the duplex inner guide. See [“Duplex inner guide removal” on page 387.](#)
- 3 Remove the pivot shaft. See [“Pivot shaft removal” on page 389.](#)
- 4 Remove the six screws (A), and then remove the cover.



5 Remove the belt.



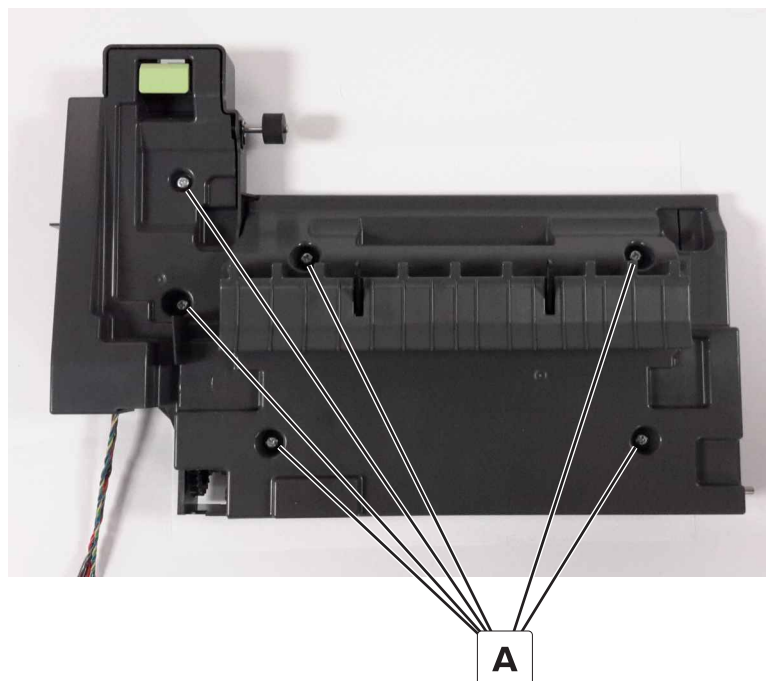
Note: Pay attention to the belt path before removing the belt.



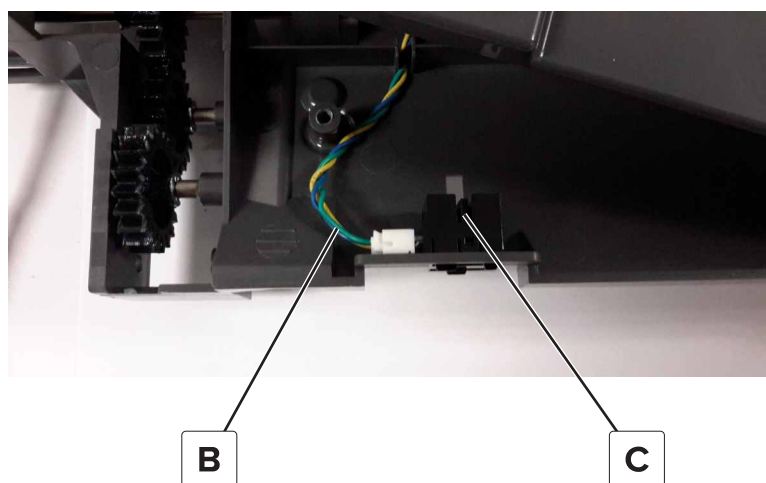
Sensor (duplex) removal

- 1 Remove the front cover. See [“Front cover removal” on page 352.](#)
- 2 Remove the duplex inner guide. See [“Duplex inner guide removal” on page 387.](#)
- 3 Remove the pivot shaft. See [“Pivot shaft removal” on page 389.](#)

- 4** Remove the six screws (A).

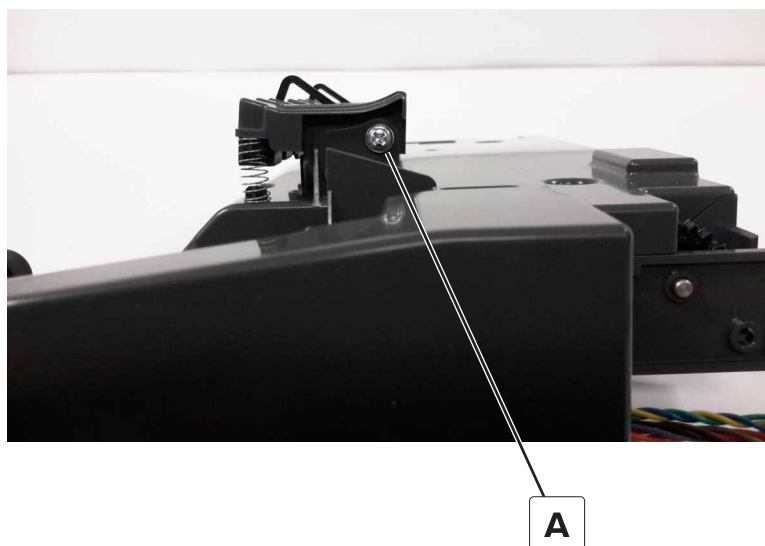


- 5** Disconnect the sensor cable (B), and then remove the sensor (C).



Sensors (fuser buckle and narrow media) removal

- 1 Open the front cover.
- 2 Remove the screw (A).

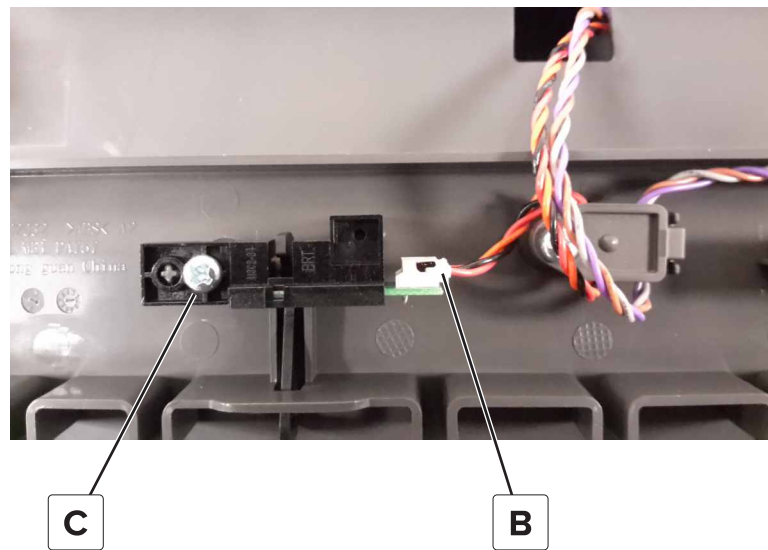


- 3 Slide the paper guide to the right to remove.



- 4 Disconnect the sensor cable (B), remove the screw (C), and then remove the sensors.

Note: The left sensor is the sensor (fuser buckle). The right sensor is the sensor (narrow media).

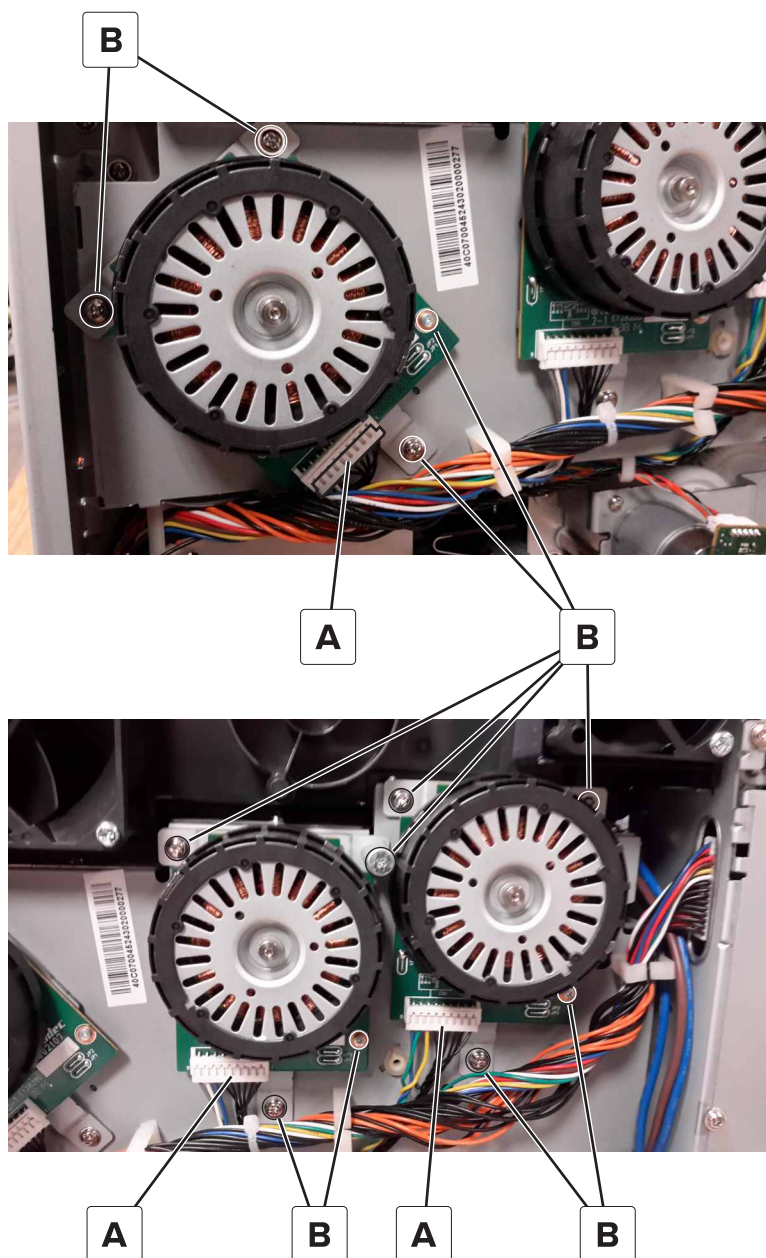


Left removals

Motor (EP drive) removal

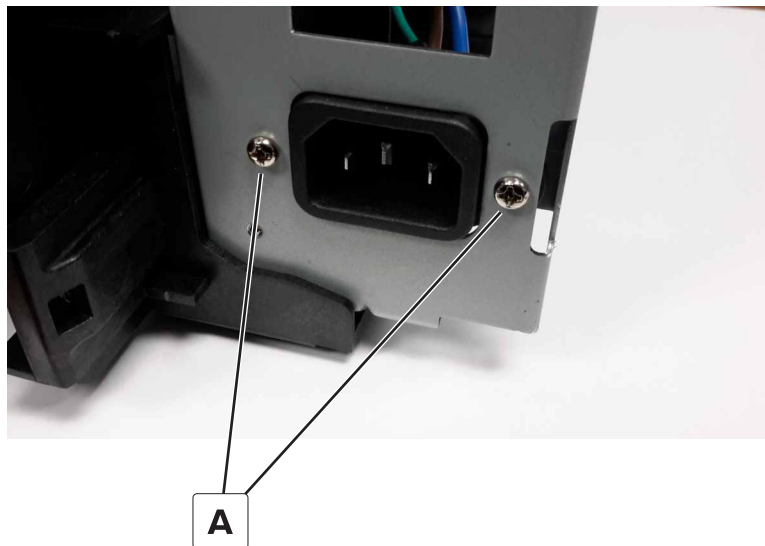
This removal shows how to remove all three motors. The motors can be replaced individually.

- 1 Remove the left cover. See [“Left cover removal” on page 358](#).
- 2 On each of the motor, disconnect the motor cable (A), remove the four screws (B), and then remove the motor.

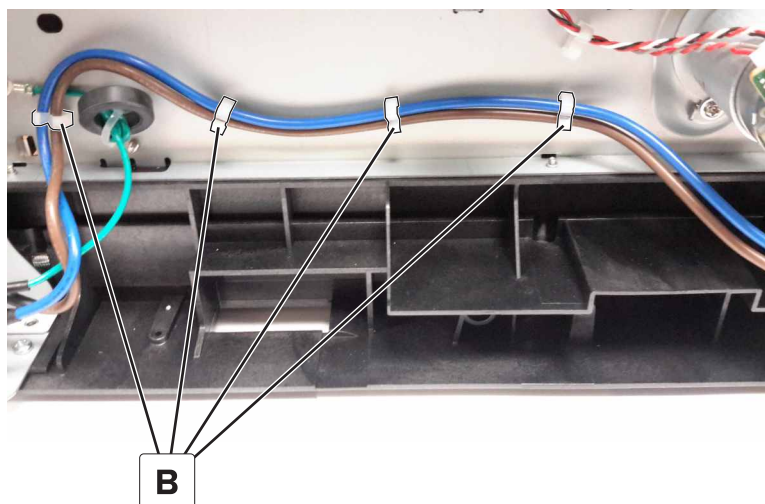


Power cable removal

- 1 Remove the left cover. See [“Left cover removal” on page 358](#).
- 2 Disconnect the power cable from the LVPS.
- 3 Remove the two screws (A).



- 4 Remove the cable from the cable ties (B).

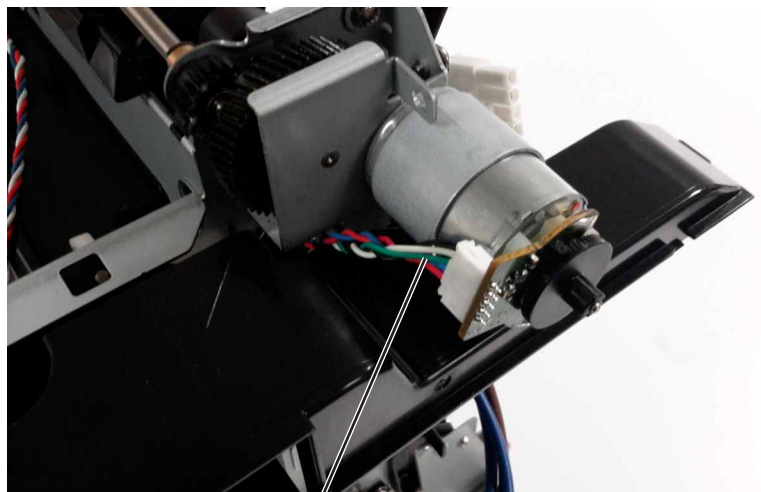


- 5 Disconnect the cable from the LVPS.

Motor (output) removal

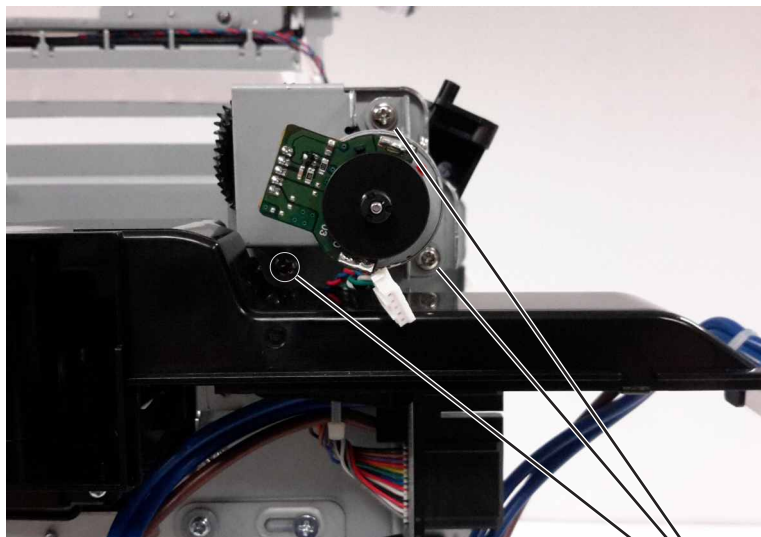
- 1 Remove the left cover. See [“Left cover removal” on page 358](#).
- 2 Remove the top cover. See [“Top cover removal” on page 354](#).

- 3** Disconnect the motor cable (A).



A

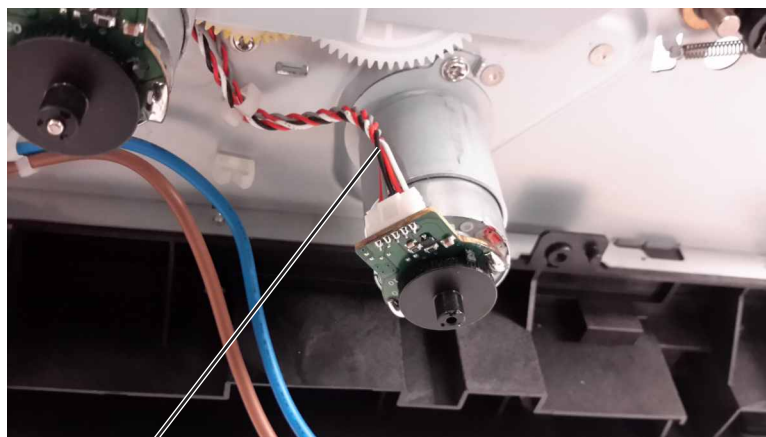
- 4** Remove the three screws (B), and then remove the motor.



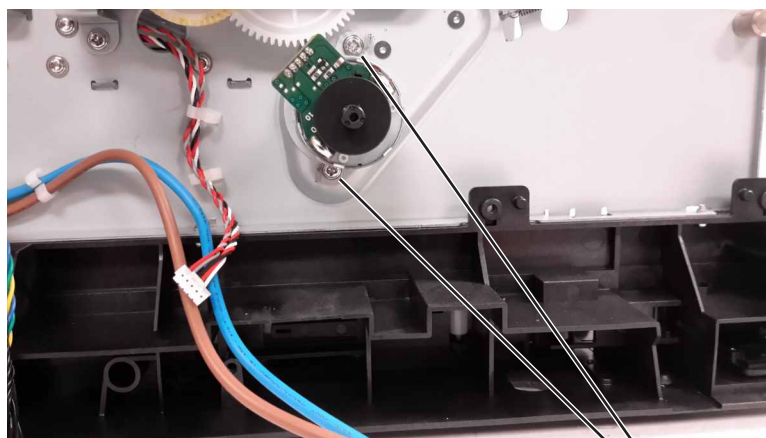
B

Motor (deskew) removal

- 1 Remove the left cover. See [“Left cover removal” on page 358.](#)
- 2 Disconnect the motor cable (A).

**A**

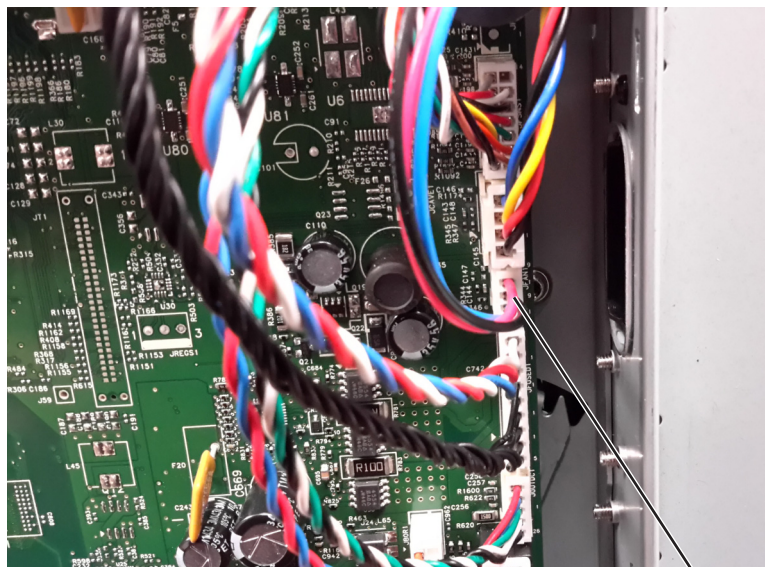
- 3 Remove the two screws (B), and then remove the motor.

**B**

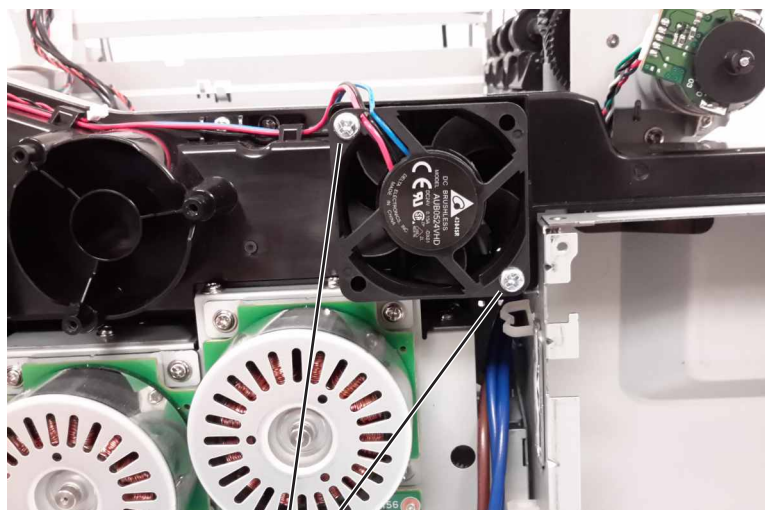
Fuser fan removal

- 1 Remove the left cover. See [“Left cover removal” on page 358.](#)
- 2 Remove the controller board shield. See [“Controller board shield removal” on page 451.](#)
- 3 Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452.](#)

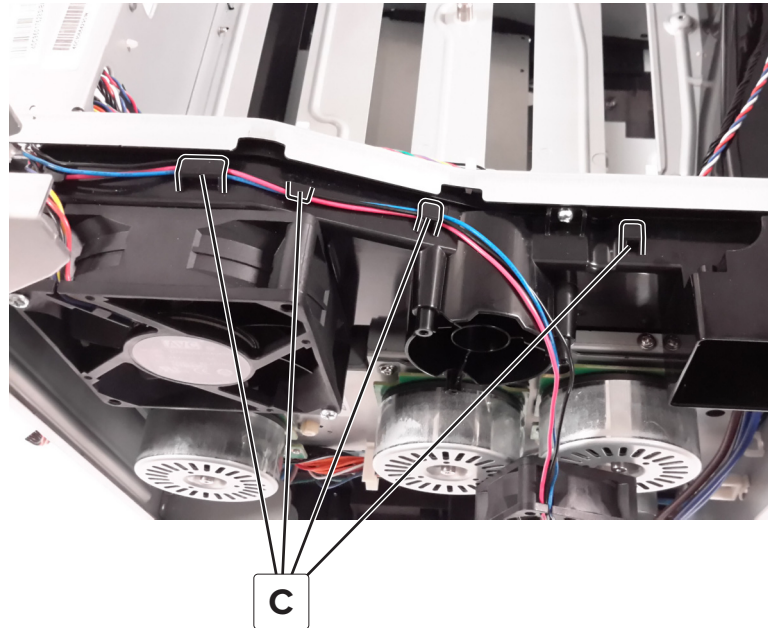
- 4 Disconnect the fuser fan cable (A) from the controller board.

**A**

- 5 Remove the two screws (B).

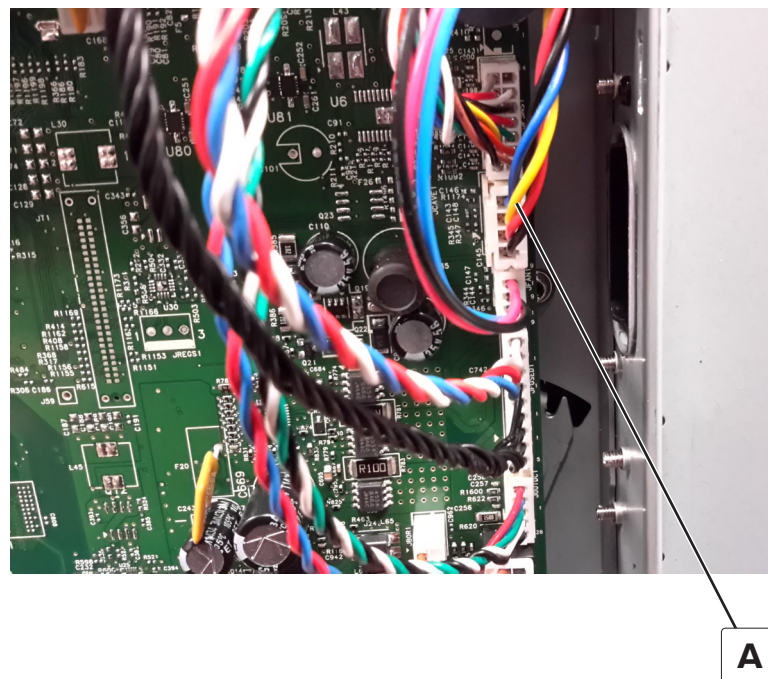
**B**

- 6 Route the fuser fan cable out of the retainers (C), and then remove the fan.

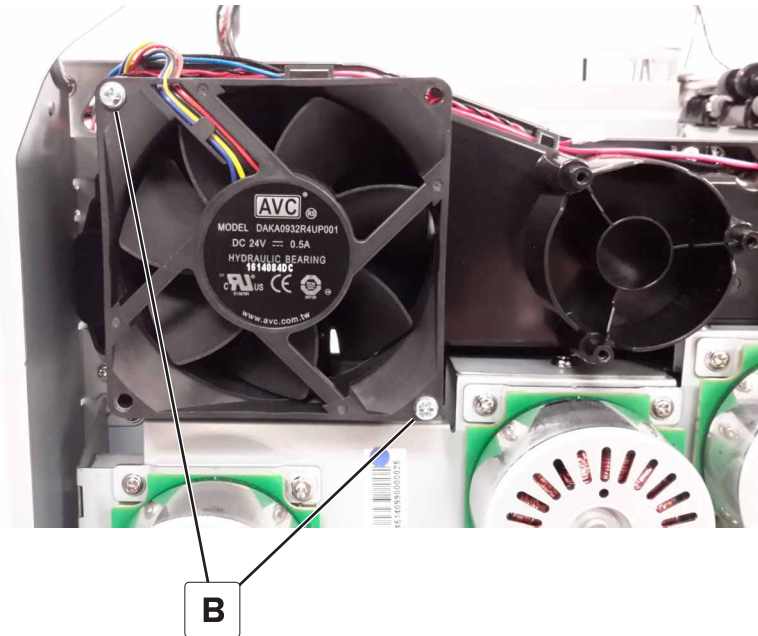


Main fan removal

- 1 Remove the left cover. See [“Left cover removal” on page 358.](#)
- 2 Remove the controller board shield. See [“Controller board shield removal” on page 451.](#)
- 3 Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452.](#)
- 4 Disconnect the main fan cable (A) from the controller board.

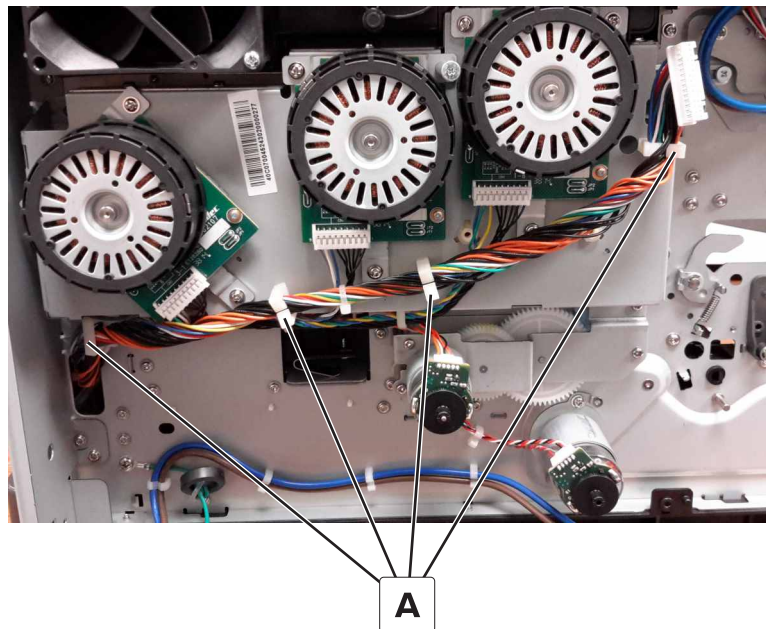


- 5 Remove the two screws (B), and then route the fan cable through the hole in the frame to remove the fan.

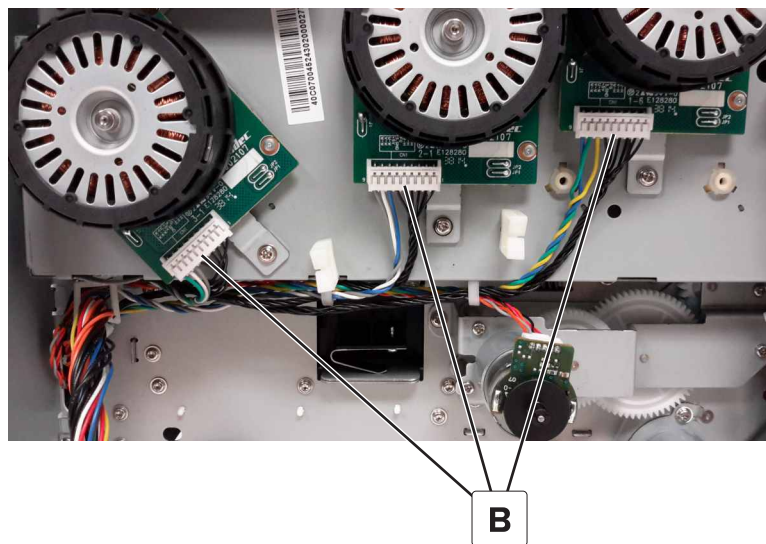


EP gear box removal

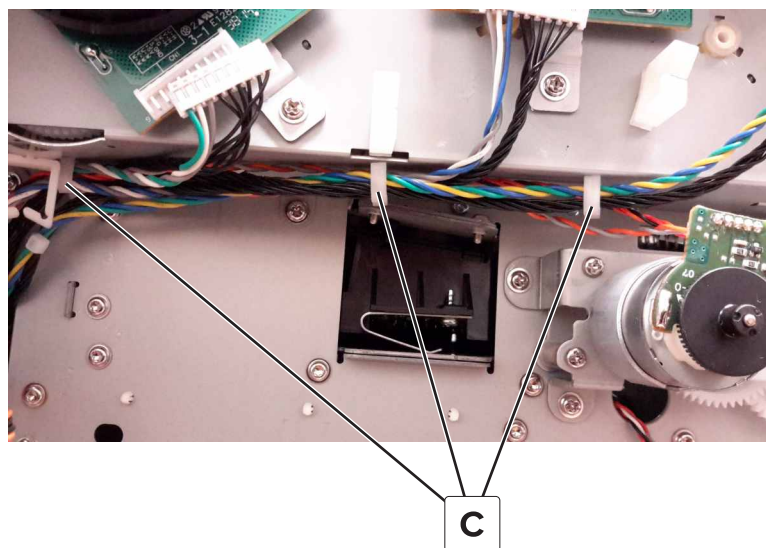
- 1 Remove the left cover. See [“Left cover removal” on page 358.](#)
- 2 Route the cable out of the guides (A).



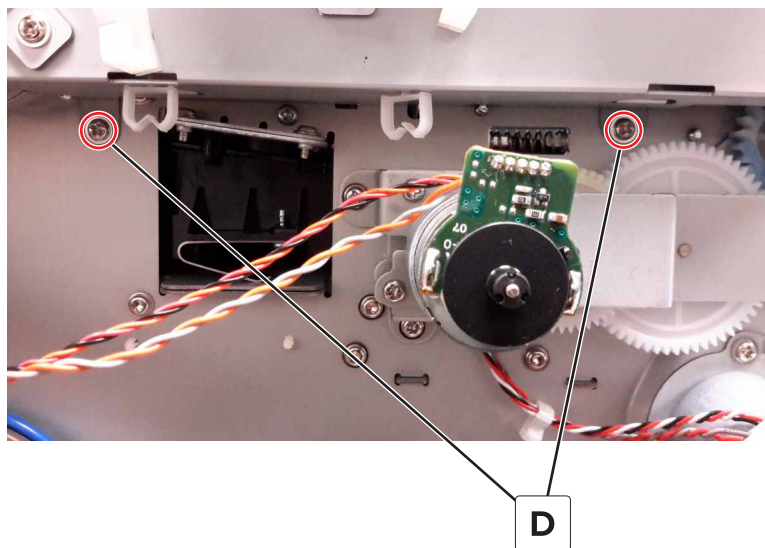
- 3** Disconnect the three motor cables (B).



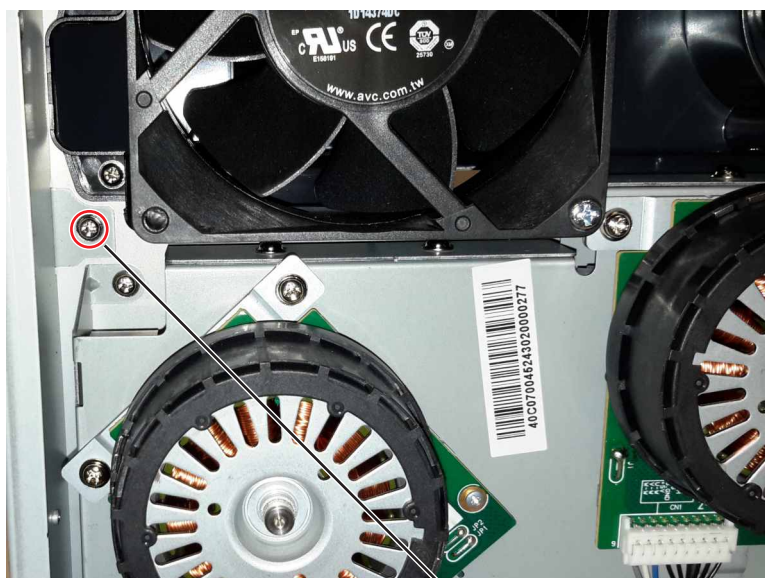
- 4** Route the motor cables out of the guides (C) from under the gear box.



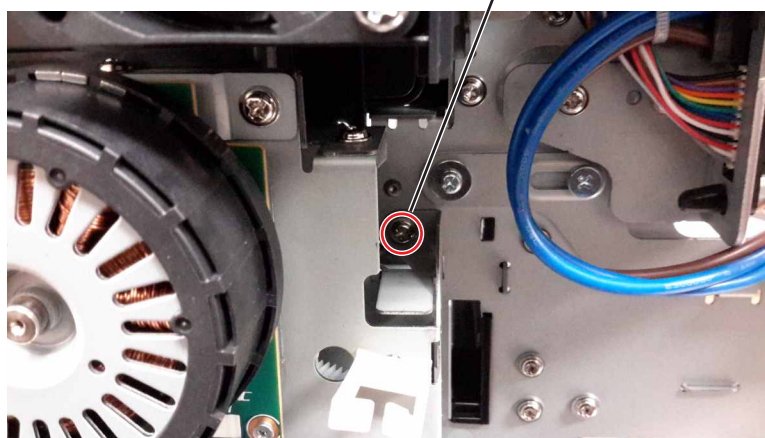
- 5** Remove the two screws (D) from under the gear box.



- 6 Remove the two screws (E) from the top-left and top-right corners of the EP drive, and then remove the gear box.



E

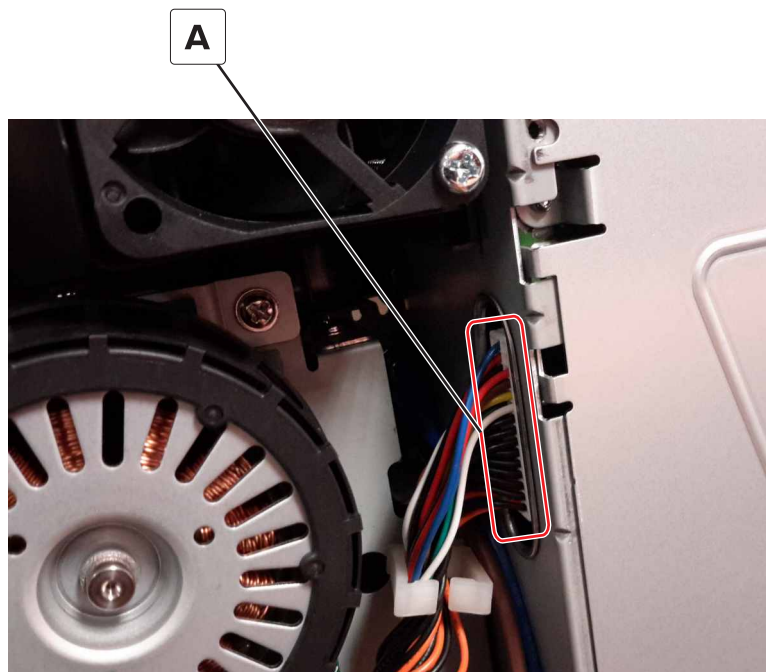


LVPS removal

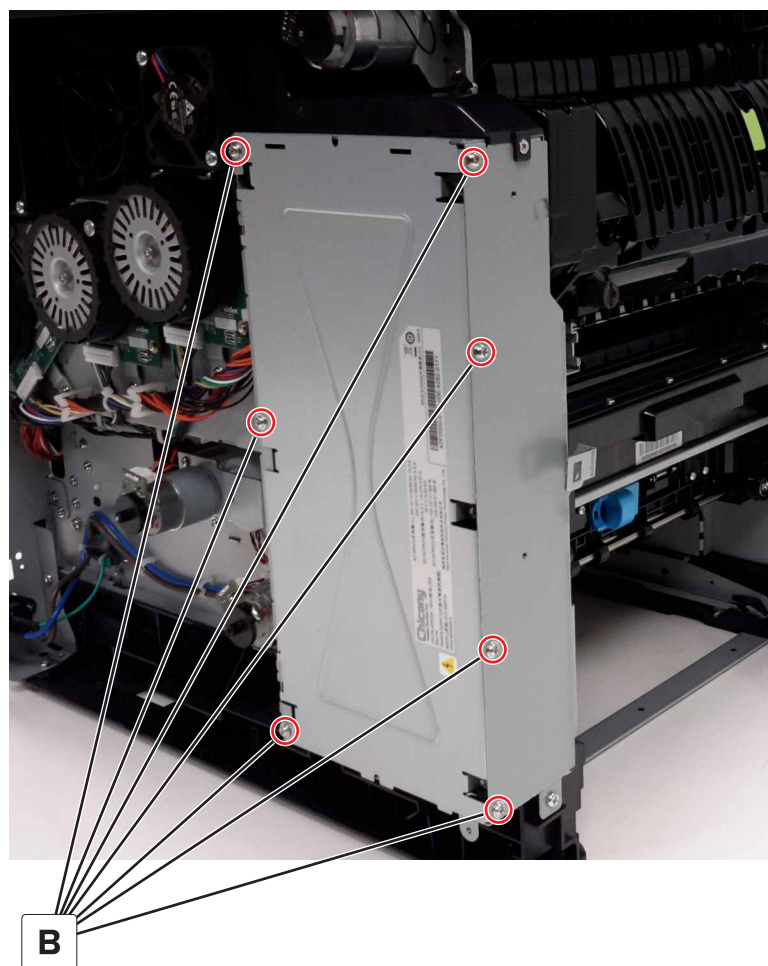
⚠ CAUTION—SHOCK HAZARD: The LVPS may have residual voltage present. To avoid the risk of electrical shock, do not touch its circuit components. Only handle it by its outer edges.

- 1 Open the front door.
- 2 Remove the left cover. See [“Left cover removal” on page 358](#).

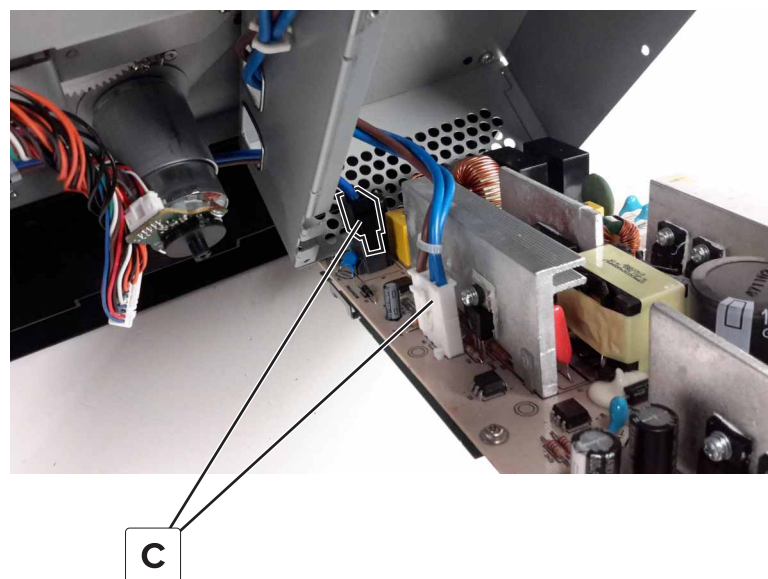
- 3** Disconnect the cable (A) from the LVPS.



4 Remove the seven screws (B).



5 Disconnect the two cables (C), and then remove the LVPS.

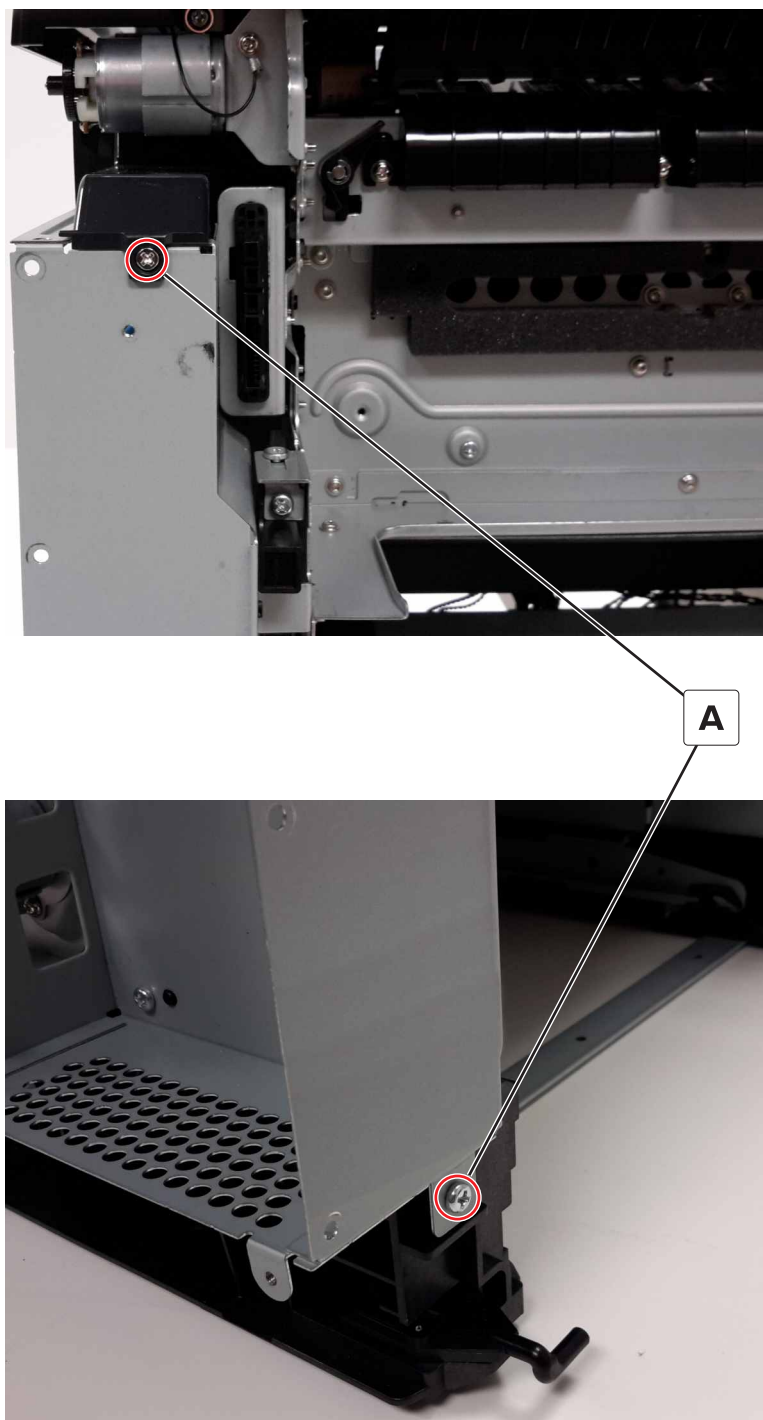


Parts removal

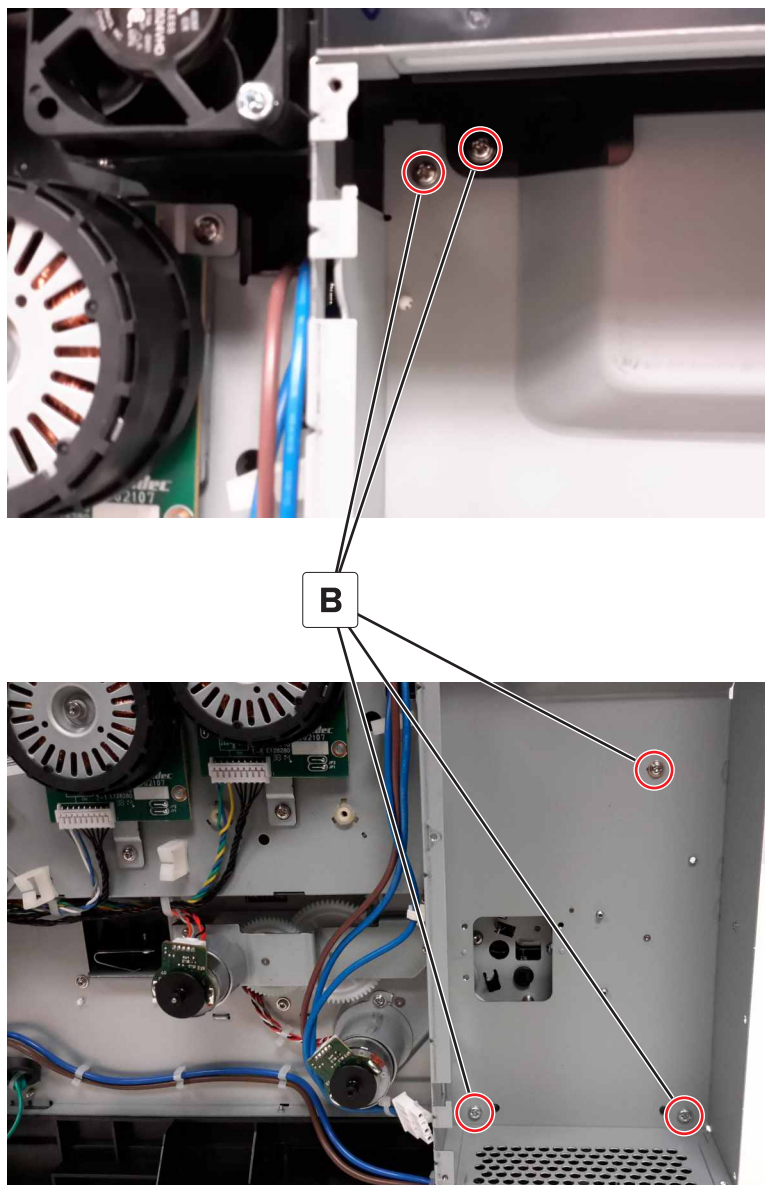
LVPS cage removal

Note: This is not a FRU.

- 1 Remove the left cover. See [“Left cover removal” on page 358](#).
- 2 Remove the LVPS. See [“LVPS removal” on page 403](#).
- 3 Remove the two screws (A) from the right side of the cage.



- 4 Remove the five screws (B) from the inside of the cage, and then remove the cage.



Motor (black only retract) removal

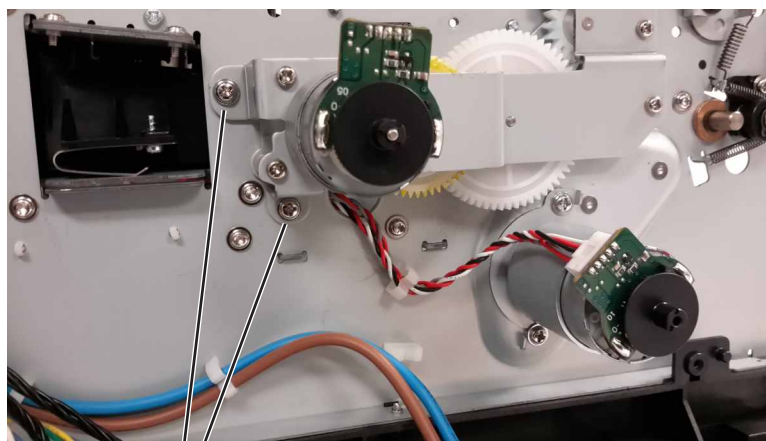
- 1 Remove the front cover. See [“Front cover removal” on page 352.](#)
- 2 Remove the left cover. See [“Left cover removal” on page 358.](#)
- 3 Remove the LVPS. See [“LVPS removal” on page 403.](#)
- 4 Remove the LVPS cage. See [“LVPS cage removal” on page 406.](#)
- 5 Remove the EP gear box. See [“EP gear box removal” on page 400.](#)

- 6** Disconnect the black only retract motor cable (A).



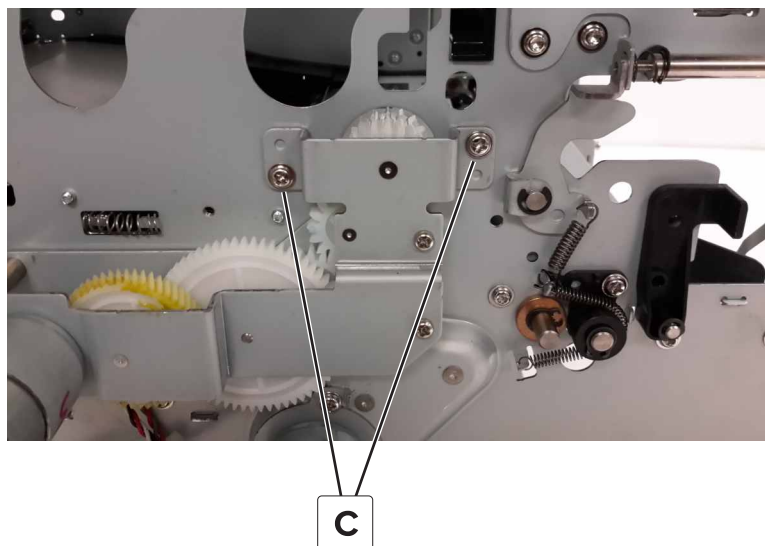
A

- 7** Remove the two screws (B).



B

- 8** Remove the two screws (C), and then remove the motor.

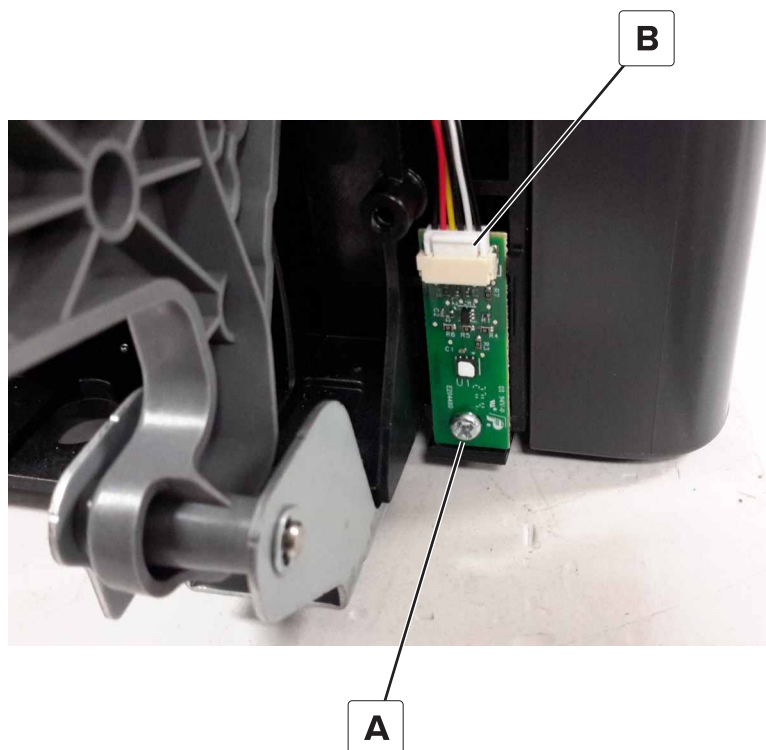


Right removals

Sensor (weather station) removal

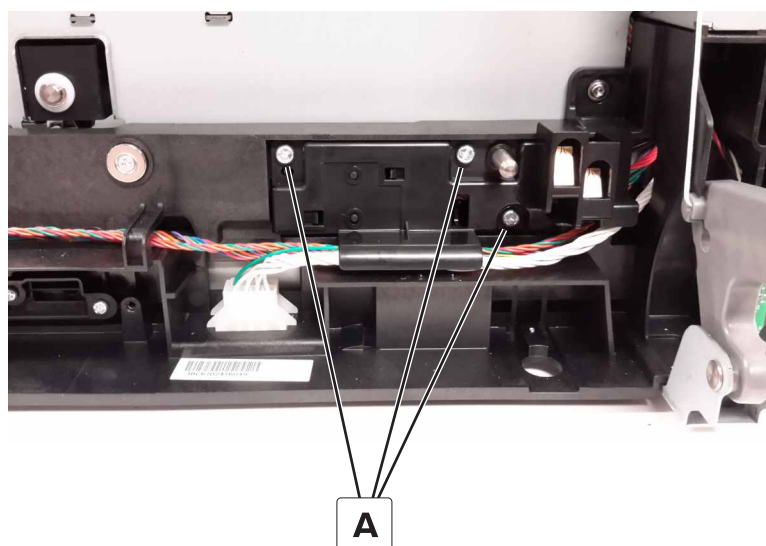
- 1** Remove the waste toner bottle.
- 2** Remove the motor cover. See [“Motor cover removal” on page 361](#).
- 3** Remove the scanner rear left cover. See [“Scanner rear left cover removal” on page 377](#).
- 4** Remove the right cover. See [“Right cover removal” on page 360](#).

- 5 Remove the screw (A), disconnect the cable (B), and then remove the sensor.



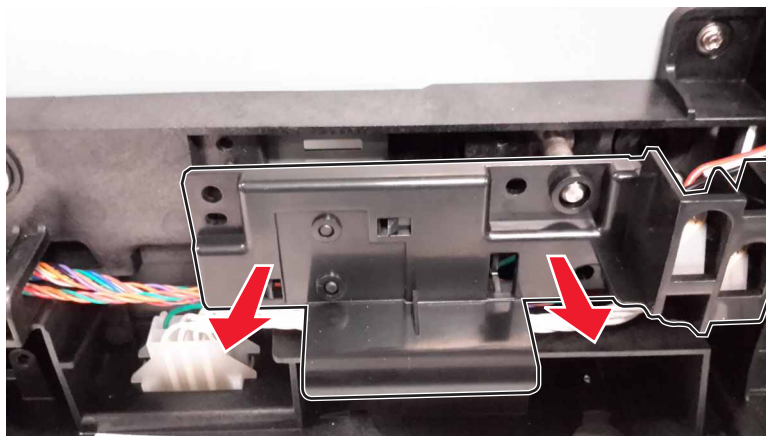
Sensor (paper size) removal

- 1 Remove the waste toner bottle.
- 2 Remove the motor cover. See [“Motor cover removal” on page 361](#).
- 3 Remove the scanner rear left cover. See [“Scanner rear left cover removal” on page 377](#).
- 4 Remove the right cover. See [“Right cover removal” on page 360](#).
- 5 Remove the three screws (A).

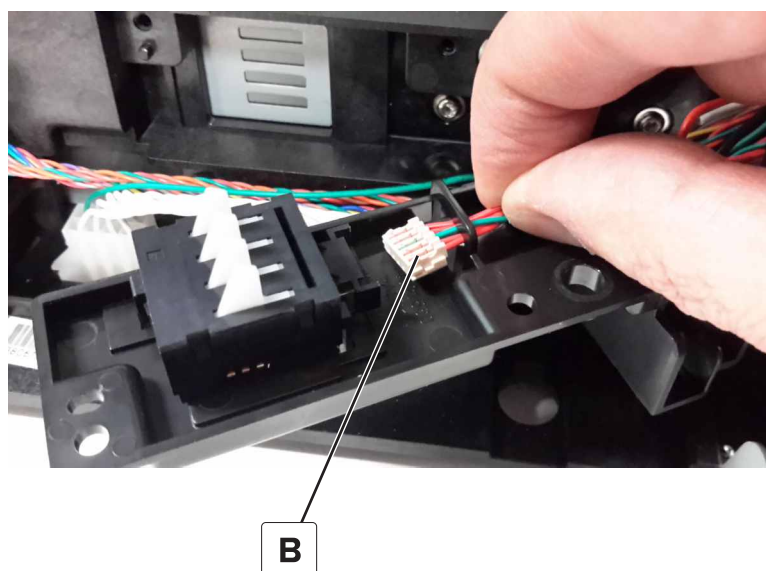


Parts removal

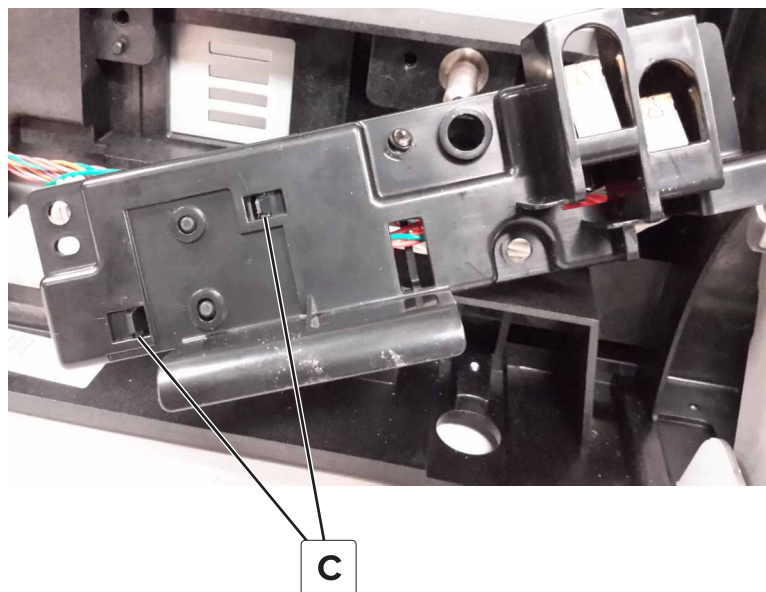
- 6** Pull the mounting assembly away from the printer.



- 7** Disconnect the sensor cable (B).



- 8 Release the two tabs (C) from the mounting assembly, and then remove the sensor.



Sensor (waste toner contact) removal

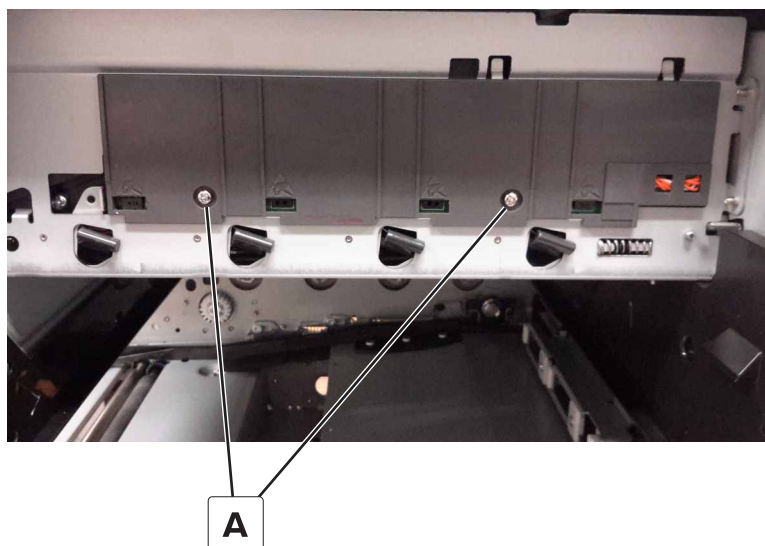
- 1 Remove the waste toner bottle.
- 2 Remove the motor cover. See [“Motor cover removal” on page 361.](#)
- 3 Remove the scanner rear left cover. See [“Scanner rear left cover removal” on page 377.](#)
- 4 Remove the sensor (paper size). See [“Sensor \(paper size\) removal” on page 410.](#)
- 5 Disconnect the waste toner bottle contact cable (A) from the controller board.



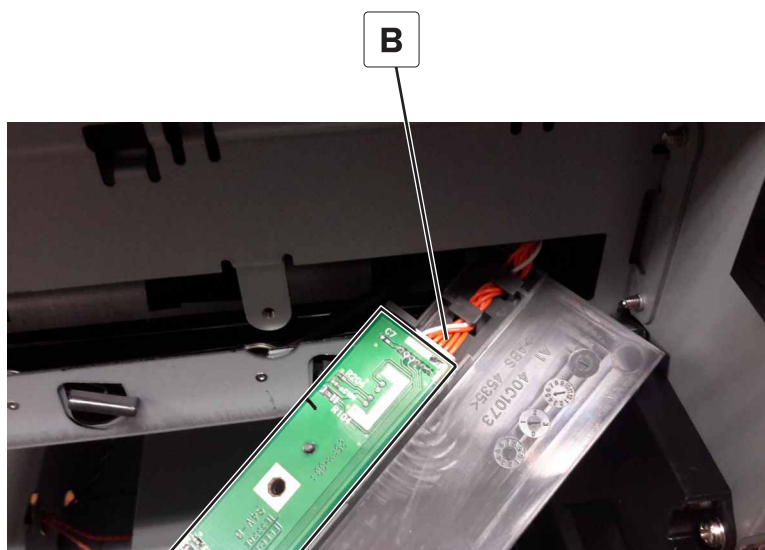
- 6 Route the cable out of the printer, and then remove the sensor.

TMC card removal

- 1 Remove the imaging unit.
- 2 Remove the two screws (A) securing the TMC cover.



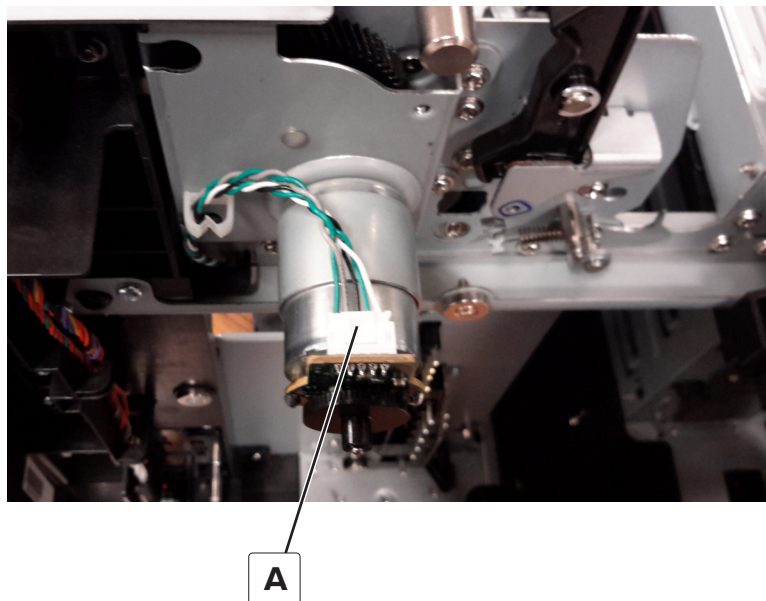
- 3 Disconnect the cable (B), and then remove the TMC card from the cover.



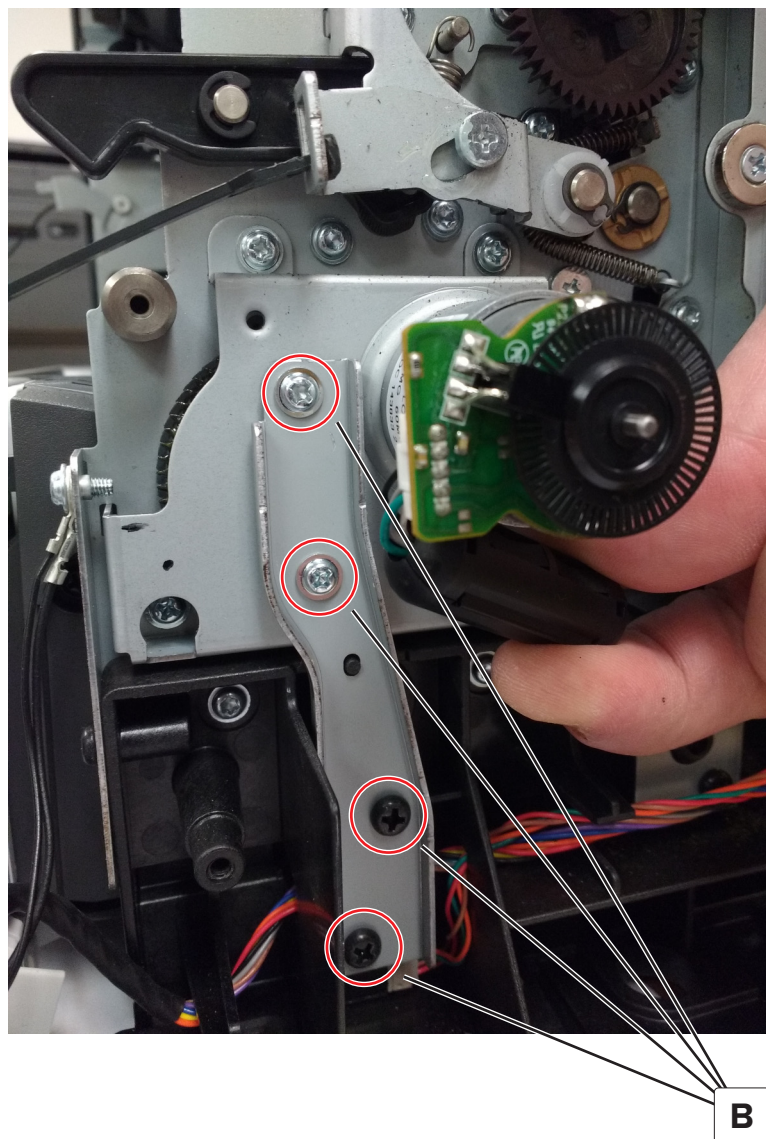
Motor (duplex/MPF) removal

- 1 Remove the right cover. See [“Right cover removal” on page 360.](#)
- 2 Remove the motor cover. See [“Motor cover removal” on page 361.](#)

3 Disconnect the motor cable (A).

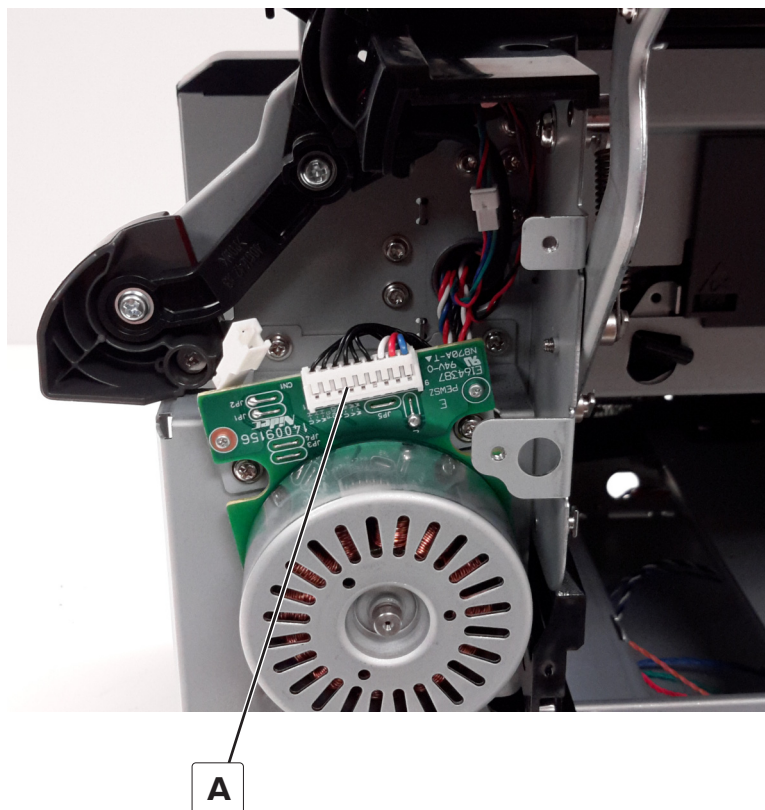


- 4 Remove the four screws (B), and then remove the motor.

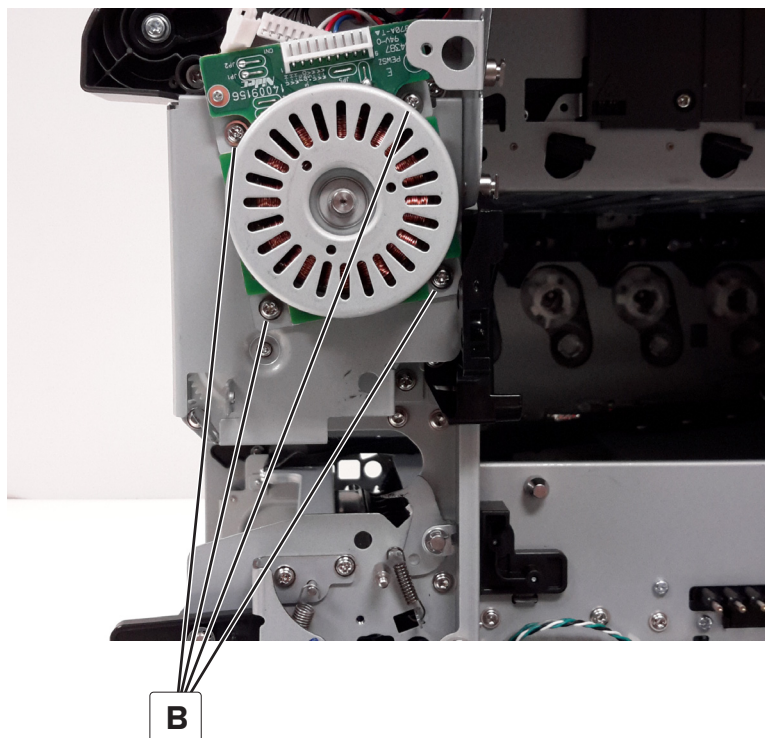


Motor (fuser) removal

- 1 Remove the motor cover. See [“Motor cover removal” on page 361](#).
- 2 Disconnect the motor cable (A).



- 3 Remove the four screws (B), and then remove the motor.

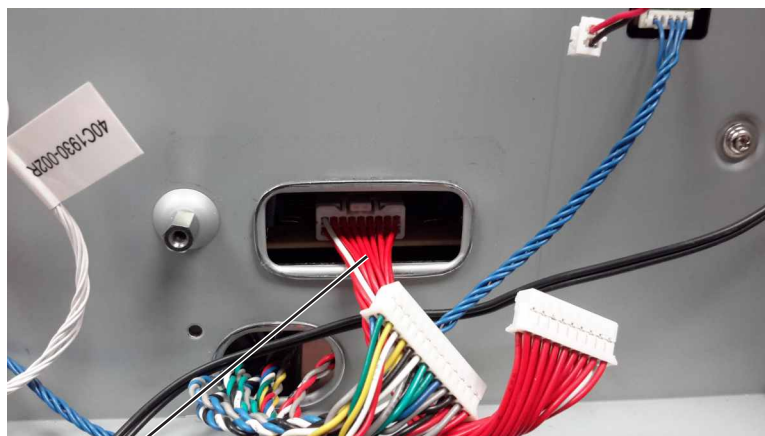


HVPS removal

- 1 Remove the transfer module. See [“Transfer module removal” on page 432.](#)
- 2 Remove the controller board. See [“Controller board removal” on page 452.](#)
- 3 Remove the retainer (A).

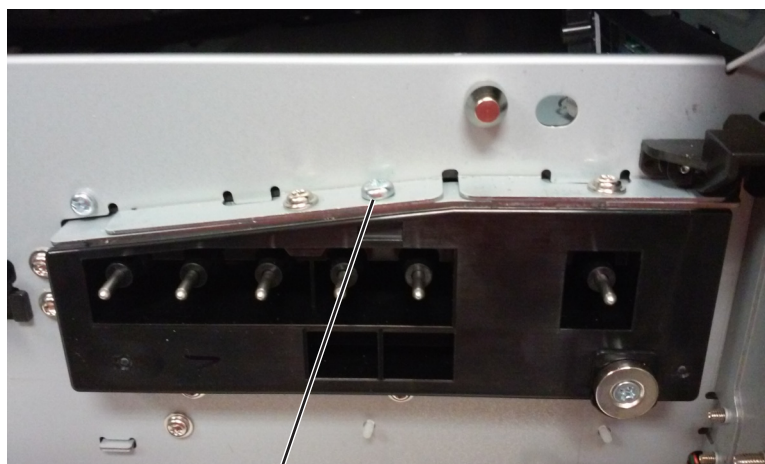


4 Disconnect the cable (B).



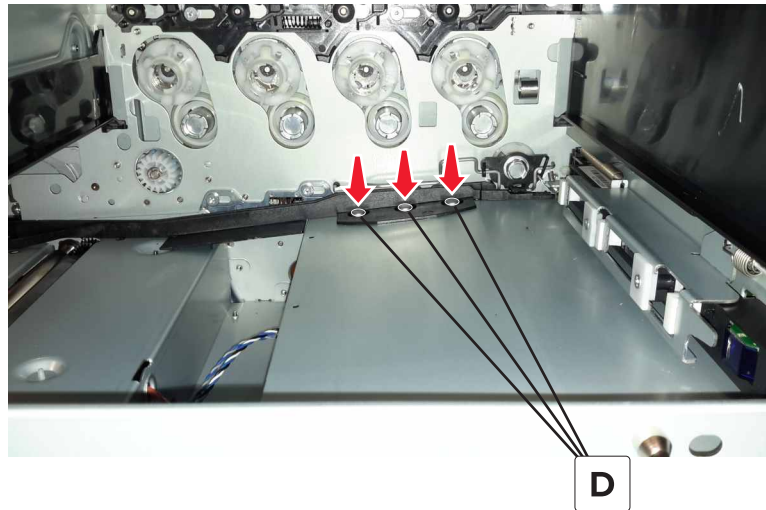
B

5 Remove the screw (C) securing the HVPS.



C

- 6 Press the three toner contacts (D) from inside the printer, and then remove the power supply.



Installation notes:

- 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.

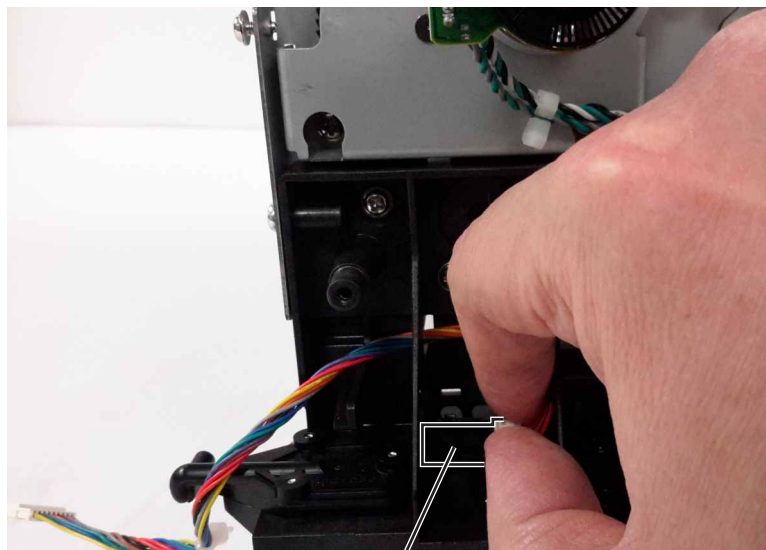
- Make sure that the index pin (A) behind the transfer module retract arm is properly aligned.



Sensor (MPF paper present) removal

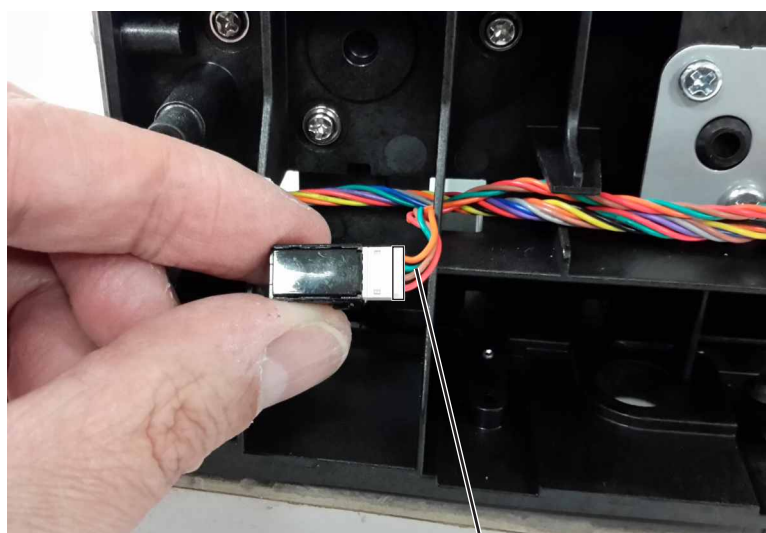
- 1 Remove the waste toner bottle.
- 2 Remove the motor cover. See [“Motor cover removal” on page 361.](#)
- 3 Remove the scanner rear left cover. See [“Scanner rear left cover removal” on page 377.](#)
- 4 Remove the right cover. See [“Right cover removal” on page 360.](#)

- 5** Pull the sensor (A) out of the printer.



A

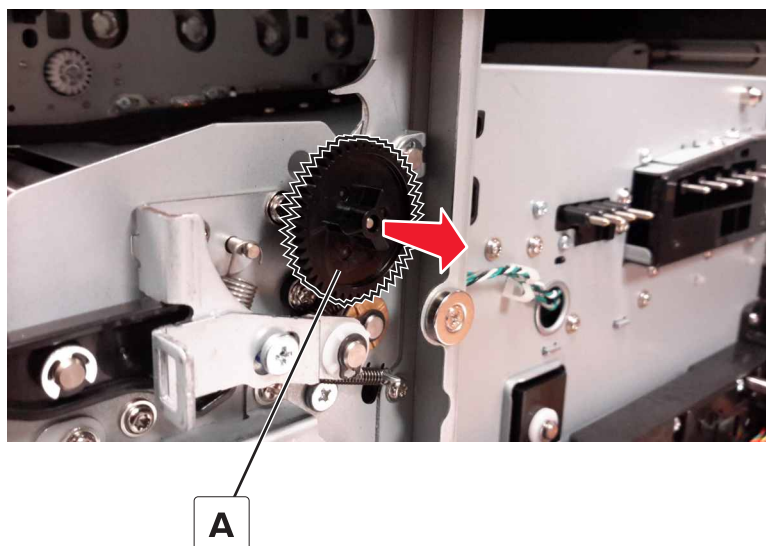
- 6** Disconnect the sensor cable (B) to remove the sensor.



B

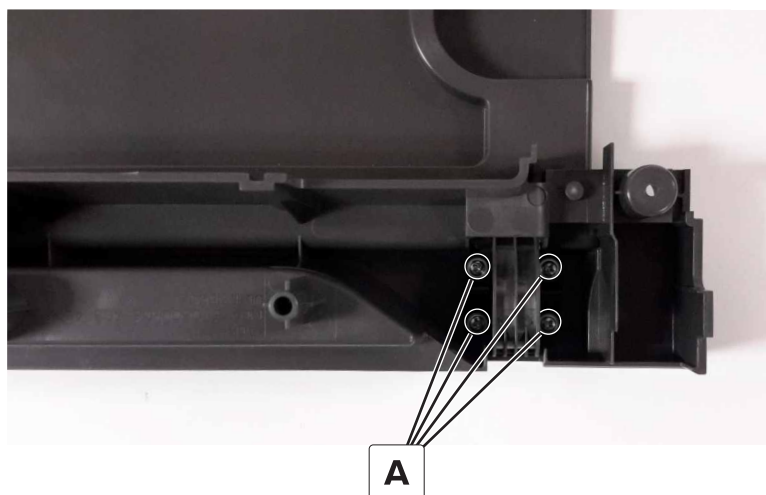
Waste toner bottle idler gear removal

- 1 Remove the waste toner bottle.
- 2 Remove the gear.

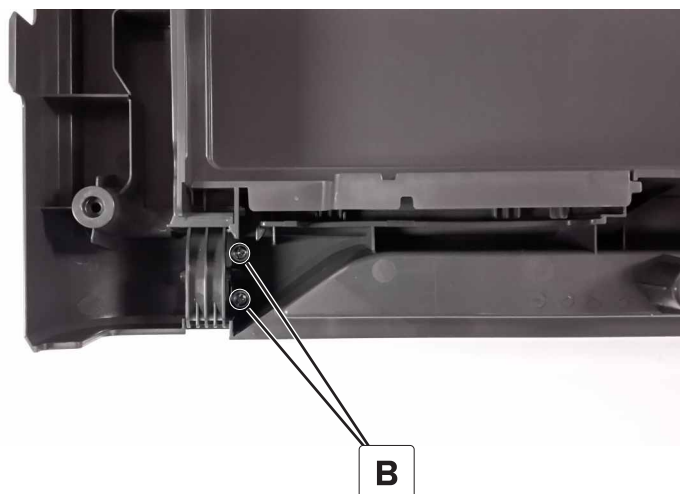


Imaging unit cover removal

- 1 Remove the waste toner bottle.
- 2 Remove the motor cover. See [“Motor cover removal” on page 361.](#)
- 3 Remove the scanner rear left cover. See [“Scanner rear left cover removal” on page 377.](#)
- 4 Remove the right cover. See [“Right cover removal” on page 360.](#)
- 5 Remove the four screws (A) securing the imaging unit cover hinges to the front of the right cover.



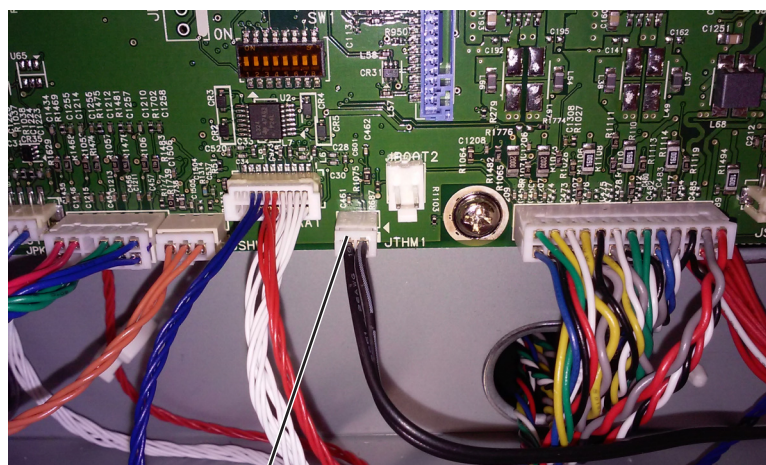
- 6 Remove the two screws (B) securing the hinges to the rear of the right cover.



- 7 Remove the imaging unit cover from the right cover.

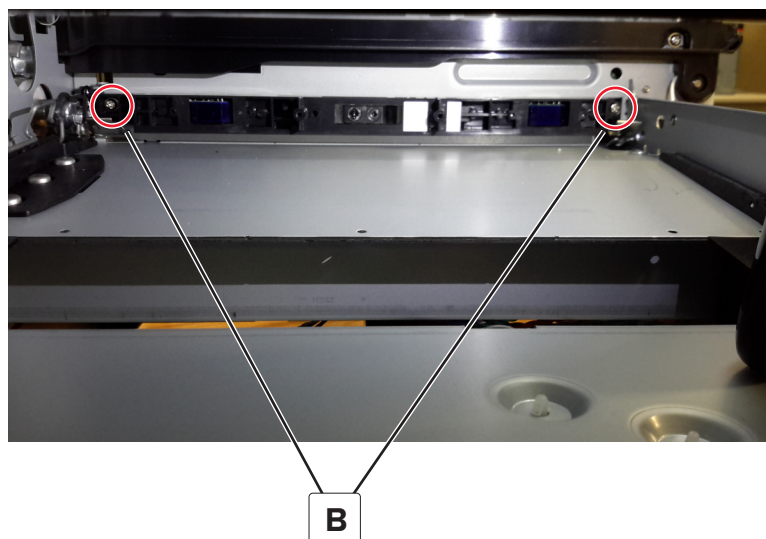
Sensor (TPS) removal

- 1 Remove the controller board shield. See [“Controller board shield removal” on page 451.](#)
- 2 Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452.](#)
- 3 Remove the TPS sled. See [“TPS sled removal” on page 425.](#)
- 4 Disconnect the thermistor cable (A) from the controller board.



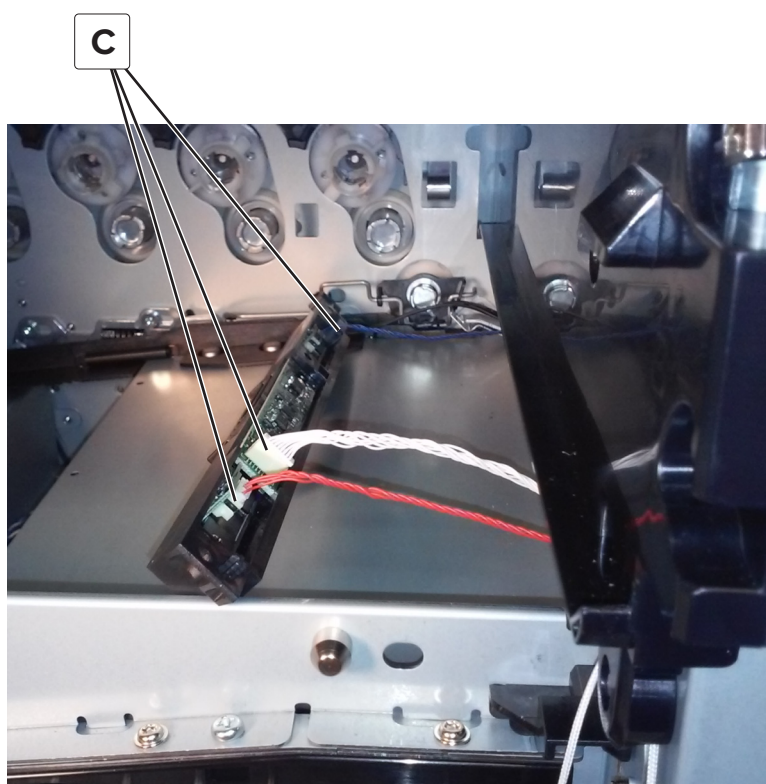
A

- 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 notes:

- a** 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.

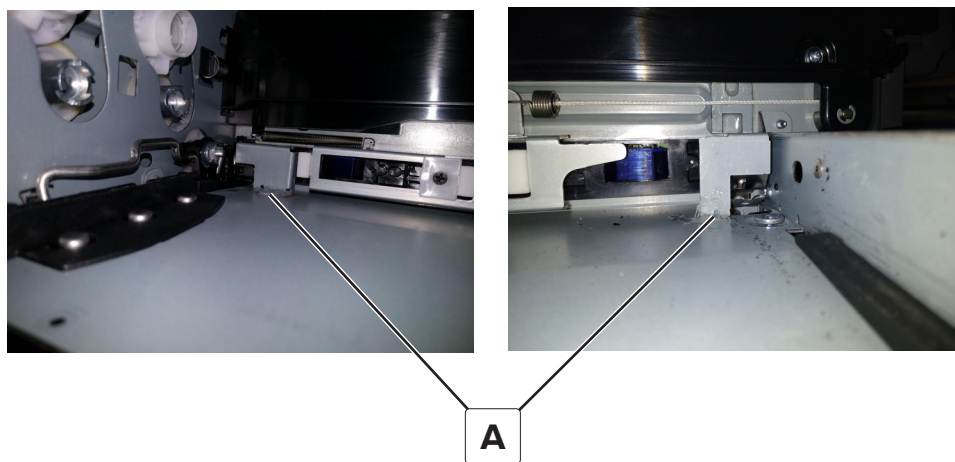


- b** After installing the sensor to the printer, restart the printer to test the cable connections to the sensor. A **128.xx** error indicates a bad connection at the sensor.
- c** Perform the TPS sensor characterization.
Enter the Diagnostics menu, and then navigate to:
Printer Diagnostics > Printer Setup > EP setup > Toner patch sensor adjust > Sensor Gain Characterization
- d** 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.

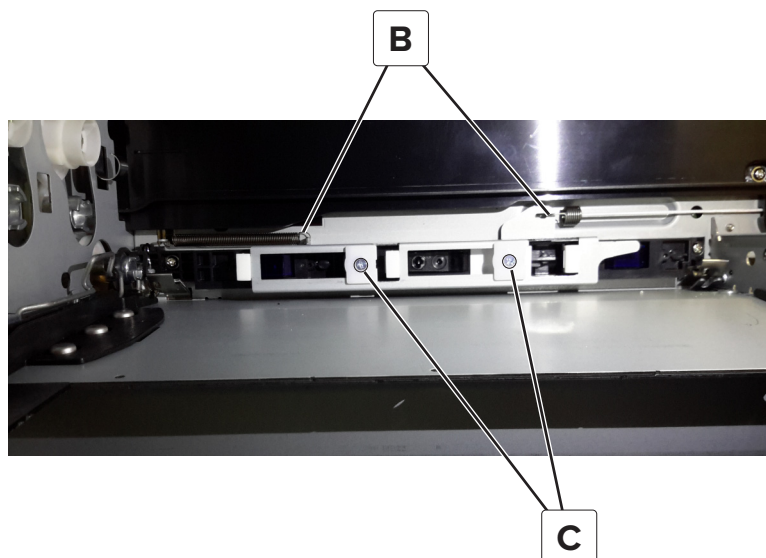
- 1** Remove the interlocks (A).



- 2** Disconnect the two springs (B) from the TPS sled.

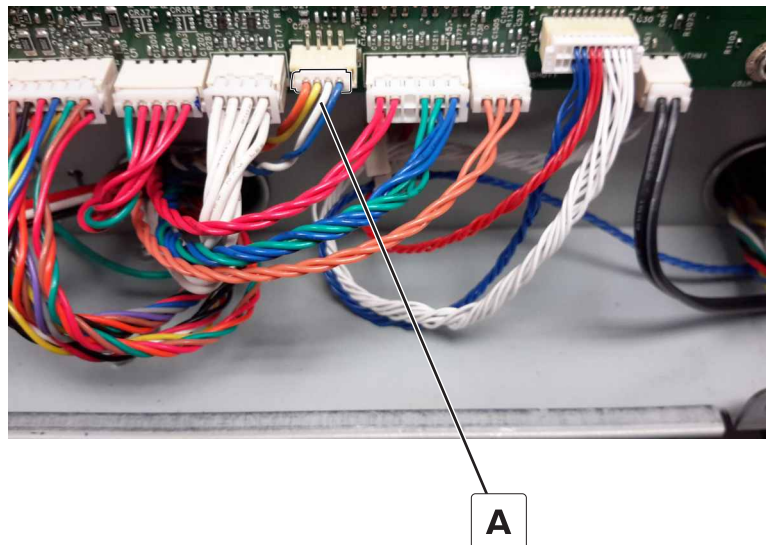
Parts removal

- 3 Remove the two screws (C), and then remove the sled.

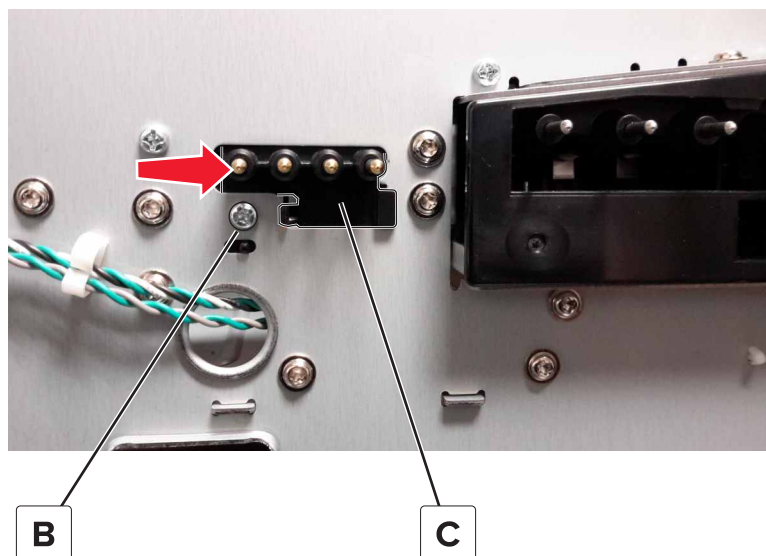


Toner cartridge contacts removal

- 1 Remove the imaging unit.
- 2 Remove the controller board shield. See [“Controller board shield removal” on page 451.](#)
- 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.

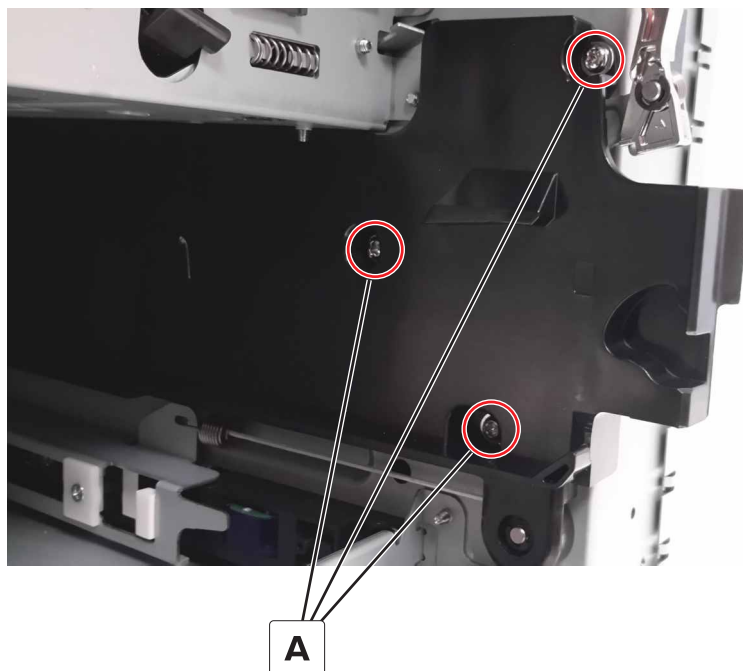


- 6** Remove the cable from the retainer clips, and then remove the cartridge contacts.

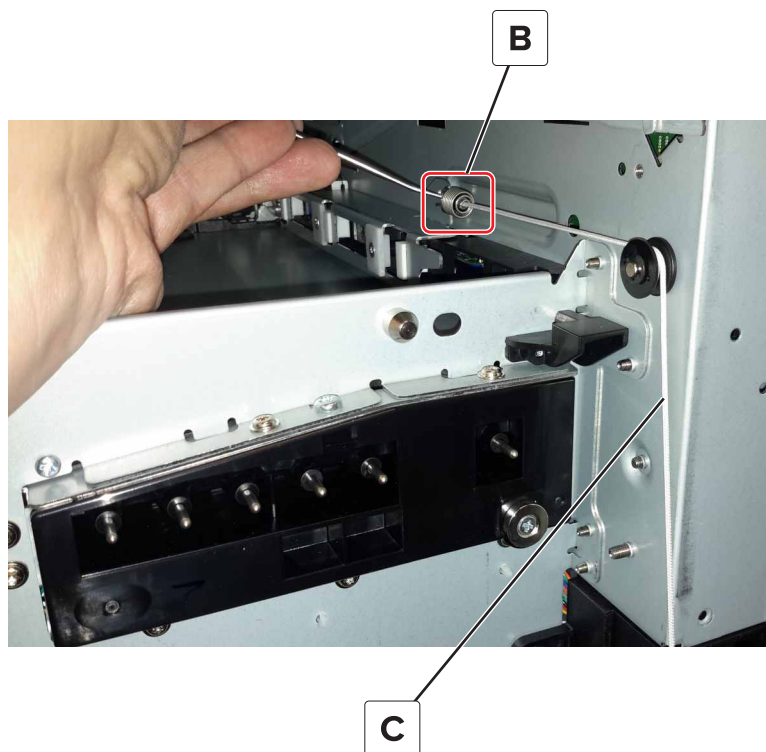


TPS wiper mechanism removal

- 1 Remove the waste toner bottle.
- 2 Remove the motor cover. See [“Motor cover removal” on page 361.](#)
- 3 Remove the scanner rear left cover. See [“Scanner rear left cover removal” on page 377.](#)
- 4 Remove the right cover. See [“Right cover removal” on page 360.](#)
- 5 Remove the three screws (A).



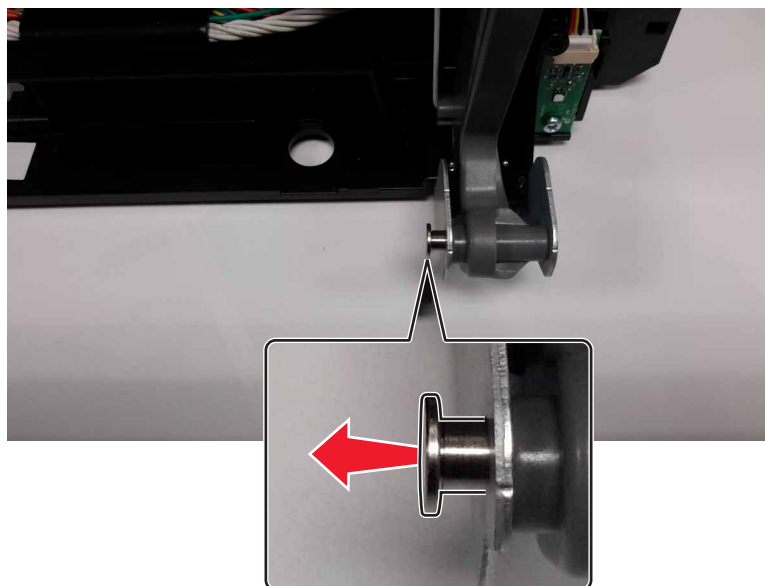
- 6** Unhook the spring (B) from the sled, and then remove the cord (C) from the pulley.



- 7** Remove the E-clip (D).

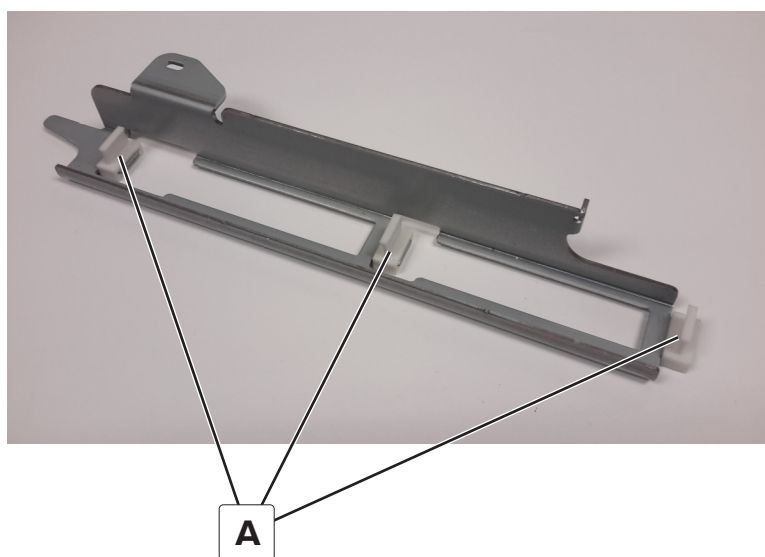


- 8 Slide the shaft out, and then remove the TPS wiper mechanism.



TPS wiper removal

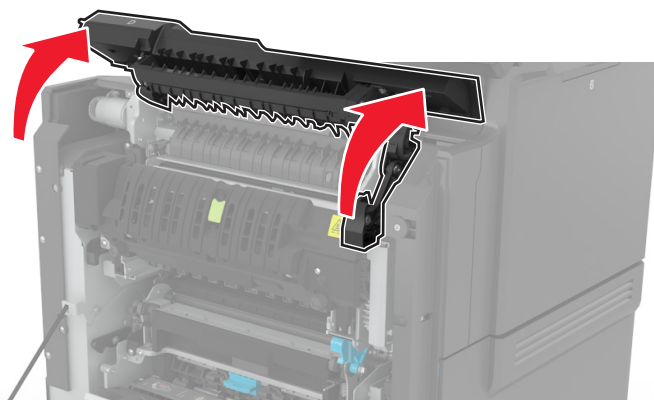
- 1 Remove the TPS sled. See [“TPS sled removal” on page 425](#).
- 2 Remove the three wipers (A) from the sled.



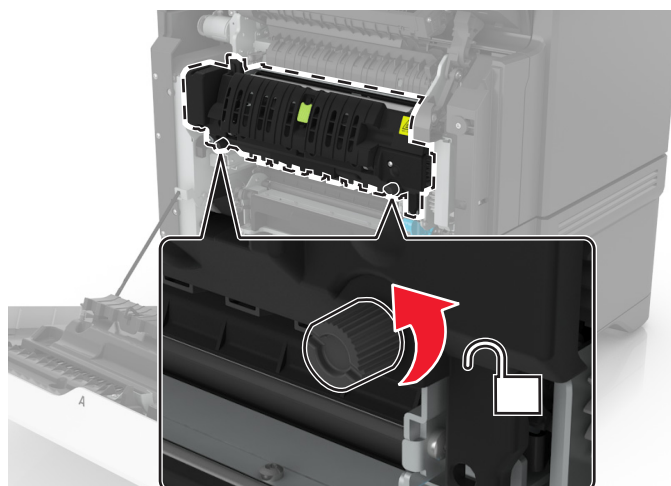
Front removals

Fuser removal

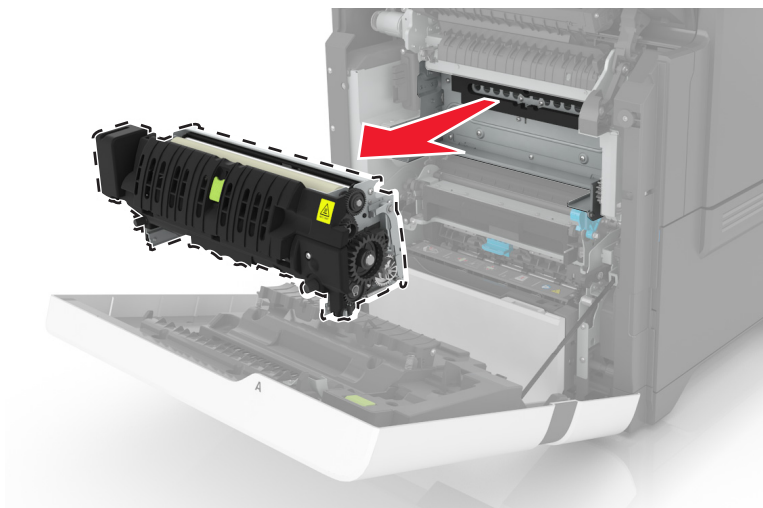
- 1 Open the front cover.
- 2 Raise the redrive guide.



- 3 Turn the fuser lock counterclockwise.

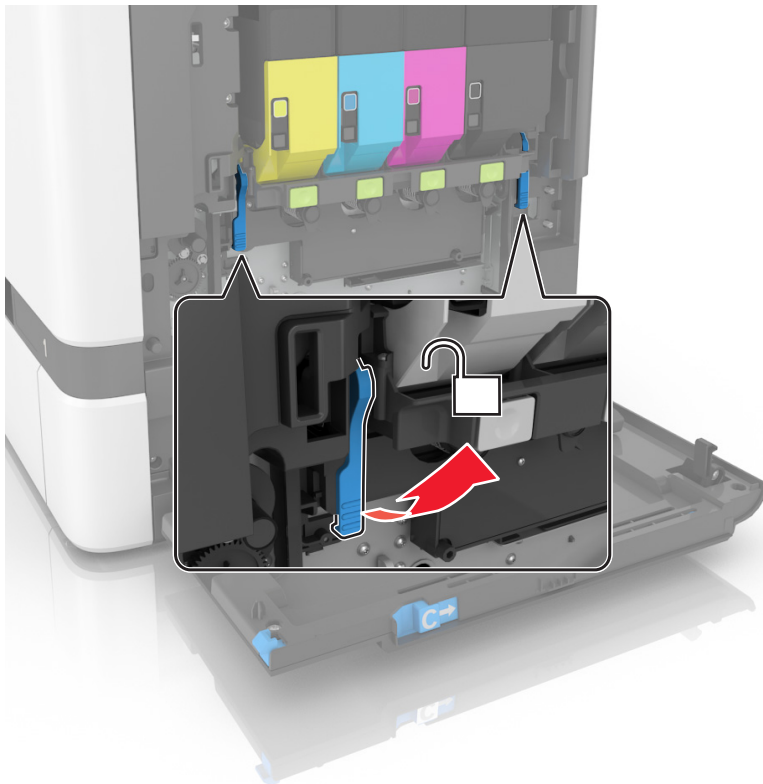


- 4 Remove the fuser.

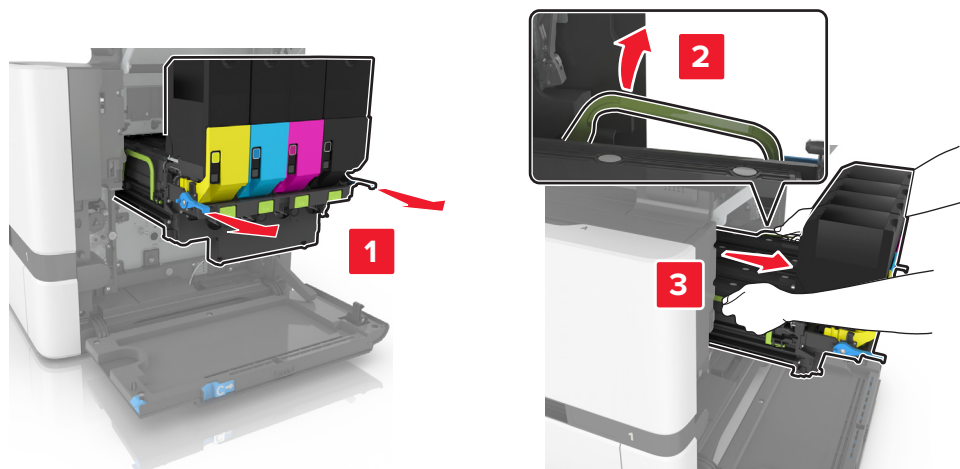


Transfer module removal

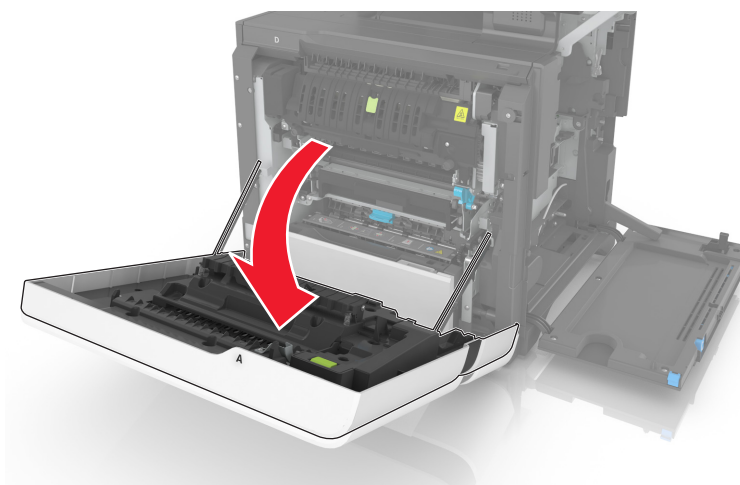
- 1 Open the toner door.
- 2 Open the imaging unit cover.
- 3 Remove the waste toner bottle.
- 4 Unlock the transfer module.



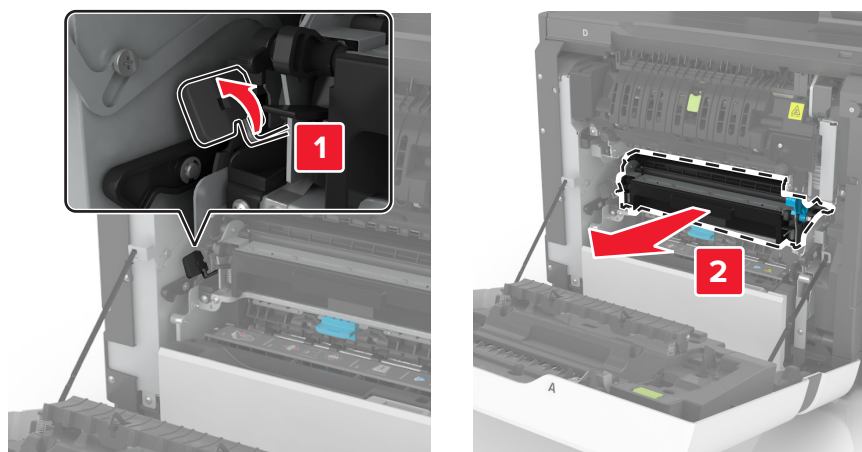
5 Remove the imaging kit.



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 532](#).

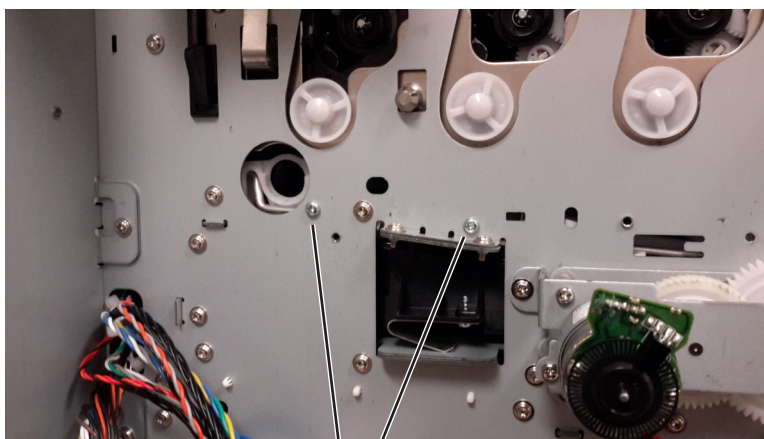
Transfer module guide rail removal

- 1 Remove the left cover. See [“Left cover removal” on page 358.](#)
- 2 Remove the LVPS. See [“LVPS removal” on page 403.](#)
- 3 Remove the screw (A).



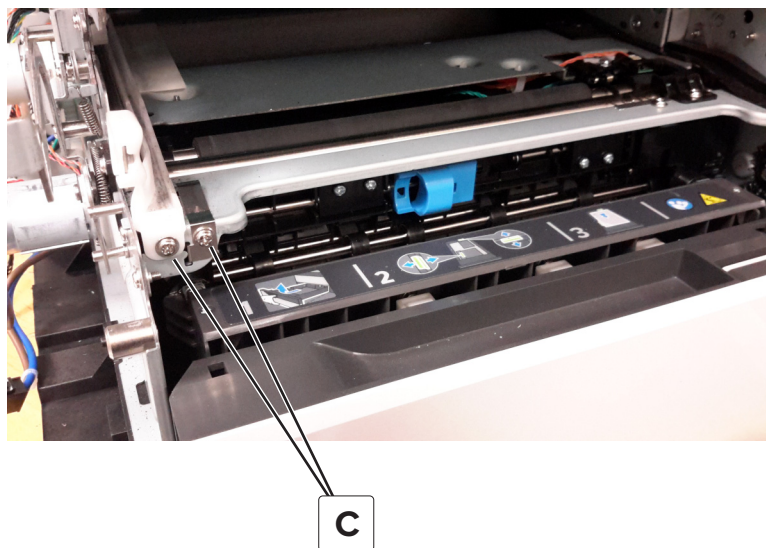
A

- 4 Remove the LVPS cage. See [“LVPS cage removal” on page 406.](#)
- 5 Remove the EP gear box. See [“EP gear box removal” on page 400.](#)
- 6 Remove the two screws (B).

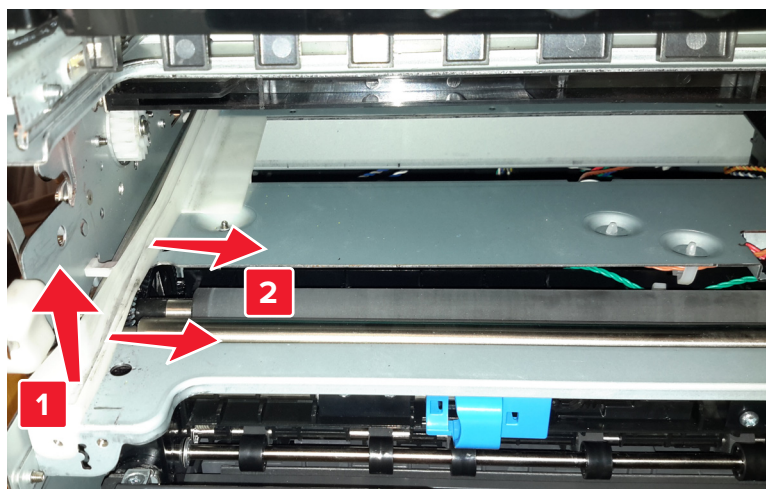


B

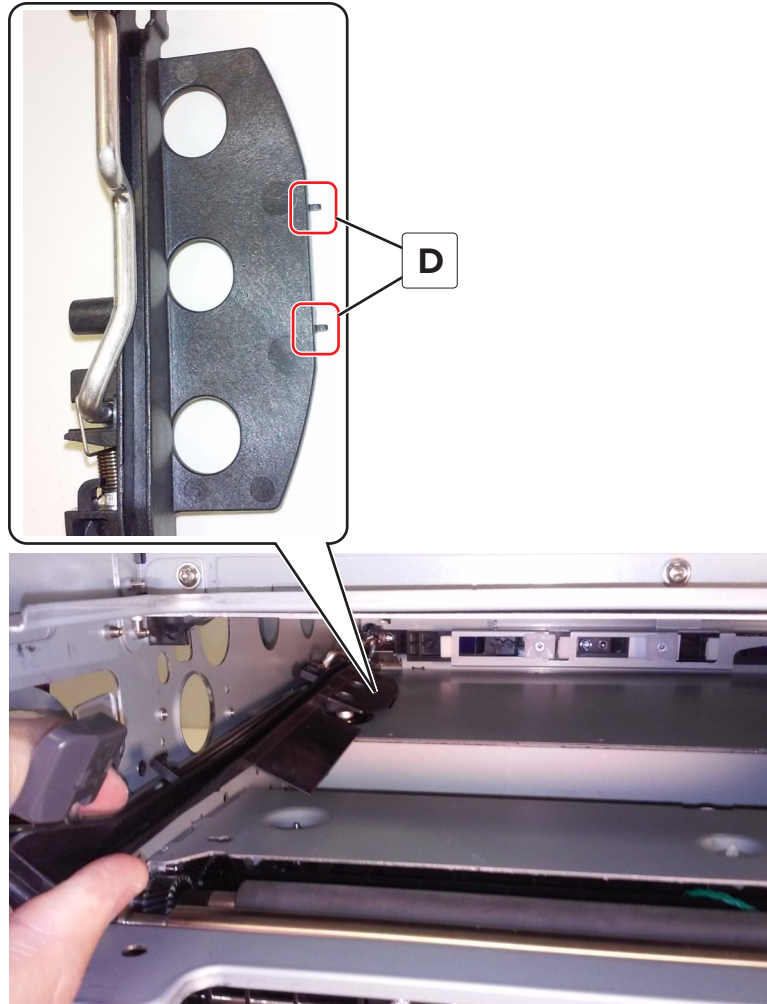
- 7** Remove the two screws (C), to release the ITU ground spring.



- 8** Lift the rail, and then move it slightly to the right.

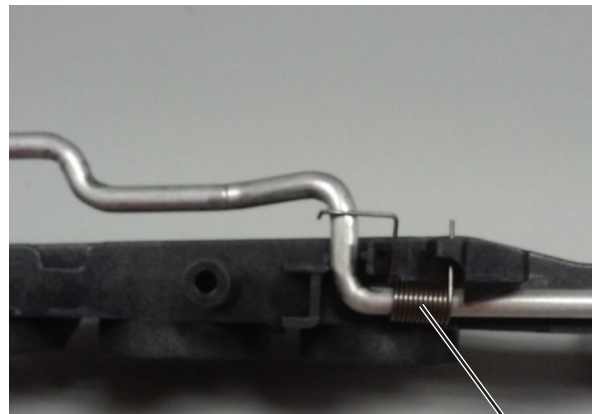


- 9 Gently twist the rail to release the two tabs (D) from the frame, and then remove it.

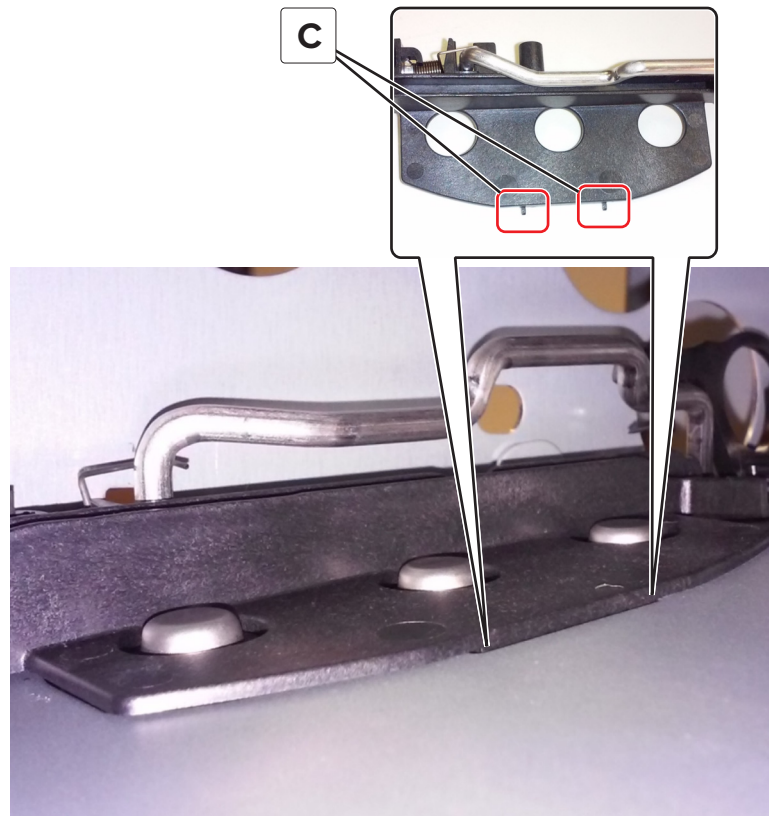


Installation notes:

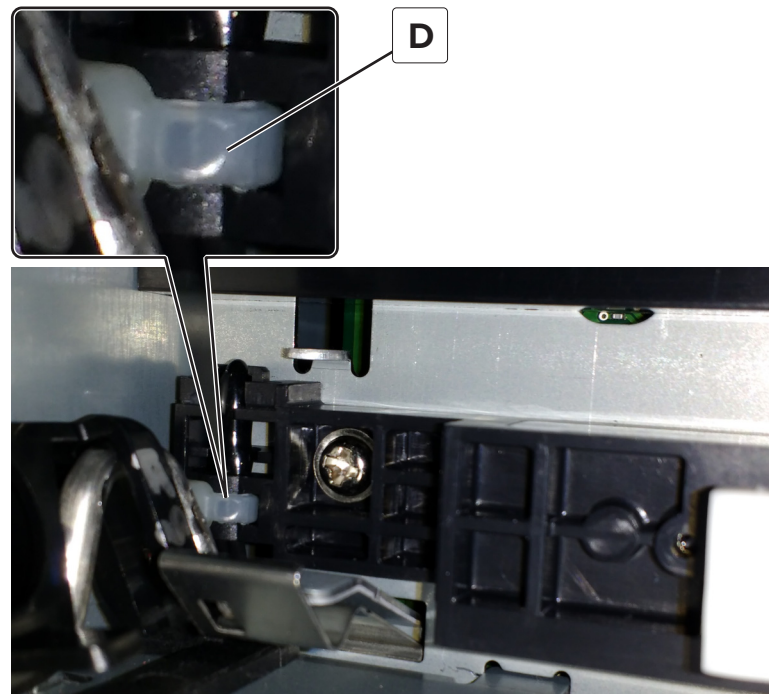
- a Make sure that ITM dog bone retract (A) and the spring (B) on the new rail are securely attached.



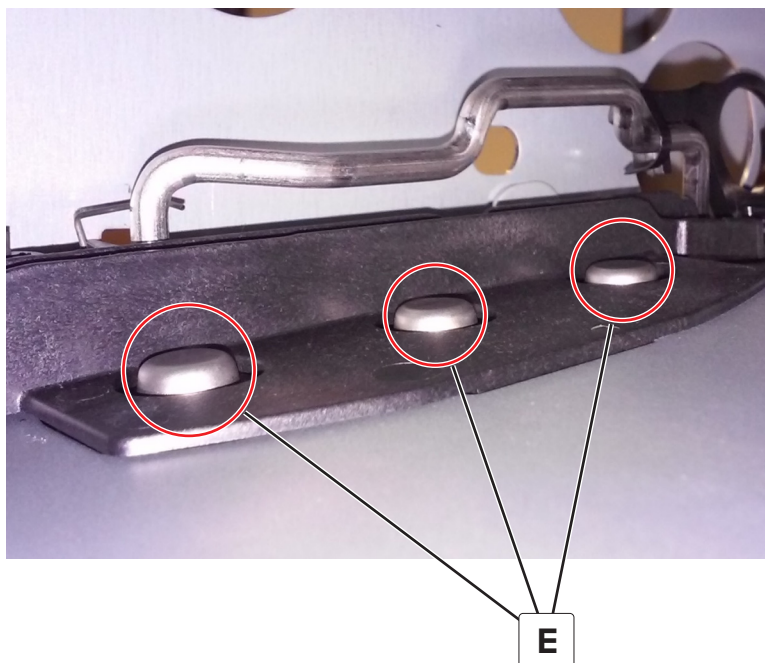
- b** When reinstalling the EP gear box, carefully insert the ITM drive shaft through the left side of the frame and rail to avoid damaging the ITM dog bone retract.
- c** Make sure that the tabs (C) are properly inserted into the frame.



- d** Make sure to place the rail below the thermistor wire tie (D).



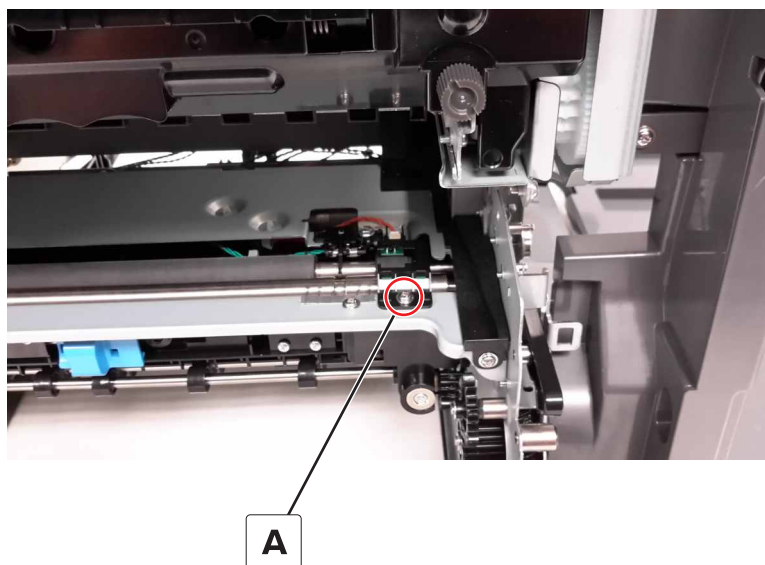
- e Make sure that the three HVPS contacts (E) move freely and are fully extended.



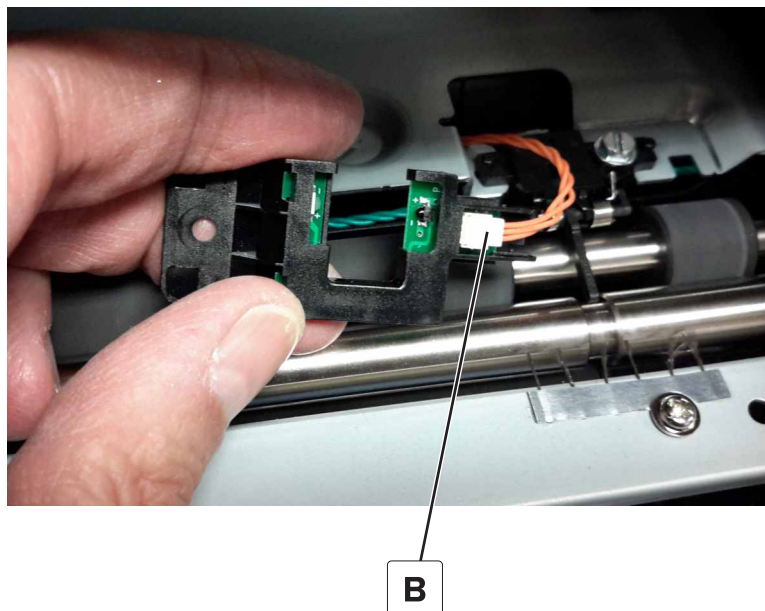
Sensor (media type) removal

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 432](#).
- 2 Open the front door.
- 3 Remove the screw (A).

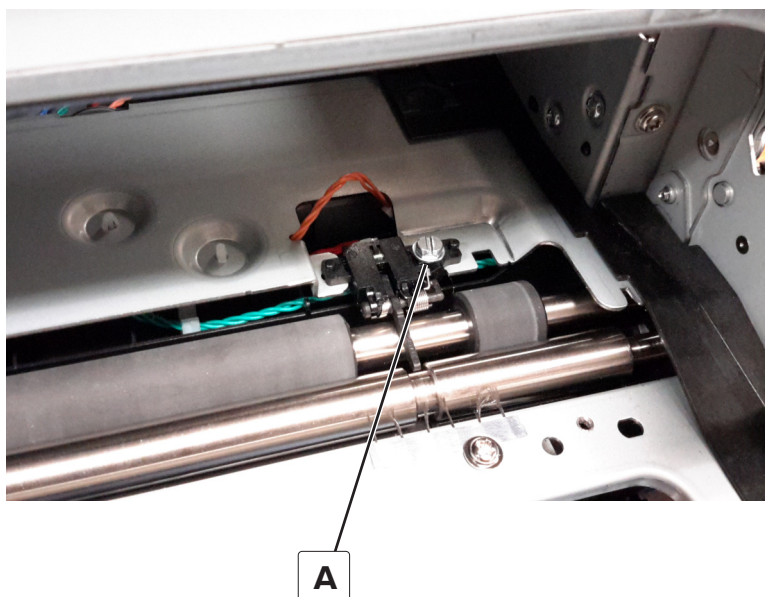


- 4 Disconnect the sensor cable (B), and then remove the sensor.

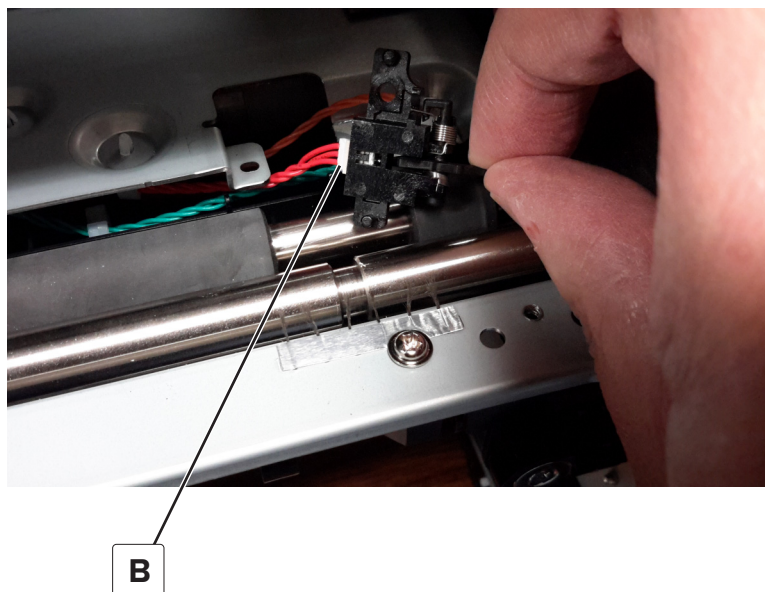


Sensor (input) removal

- 1 Remove the transfer module. See [“Transfer module removal” on page 432](#).
- 2 Open the front door.
- 3 Remove the sensor (media type). See [“Sensor \(media type\) removal” on page 438](#).
- 4 Remove the screw (A).



- 5 Disconnect the sensor cable (B), and then remove the sensor.

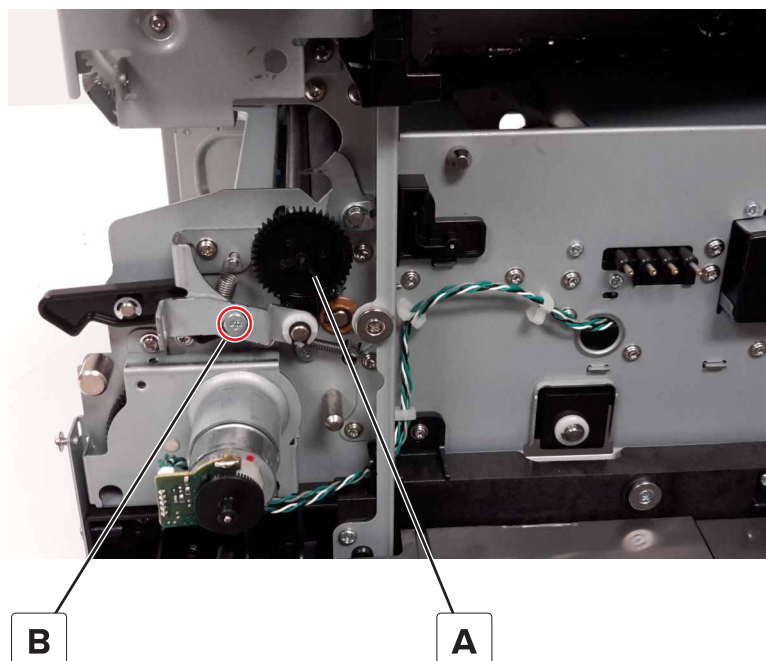


Deskew rollers removal

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.

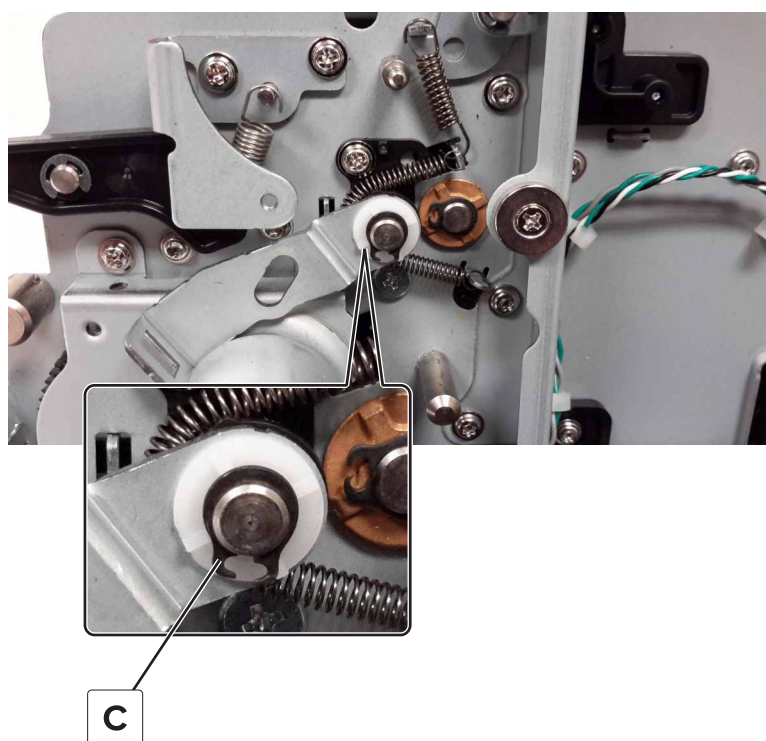
- 1 Open the front door.
- 2 Remove the right cover. See [“Right cover removal” on page 360.](#)
- 3 Remove the left cover. See [“Left cover removal” on page 358.](#)
- 4 Remove the LVPS cage. See [“LVPS cage removal” on page 406.](#)
- 5 Remove the sensor (media type). See [“Sensor \(media type\) removal” on page 438.](#)
- 6 Remove the sensor (input). See [“Sensor \(input\) removal” on page 439.](#)

- 7 On the right side of the printer, remove the gear (A), and then remove the screw (B).

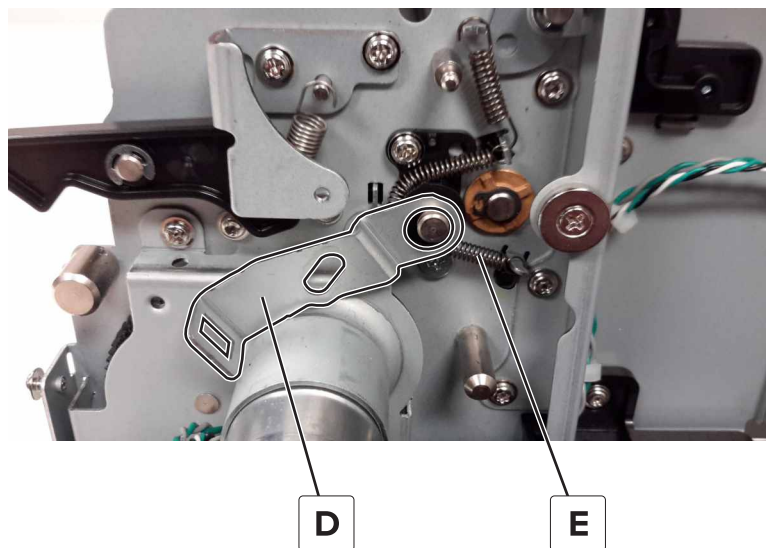


- 8 Remove the C-clip (C), and then remove the spacer.

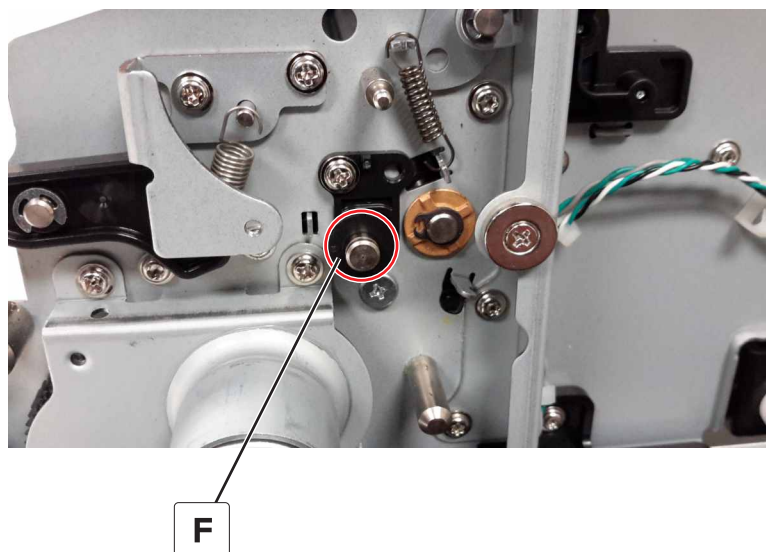
Warning—Potential Damage: Be careful not to over extend the clip when removing or installing to avoid damage.



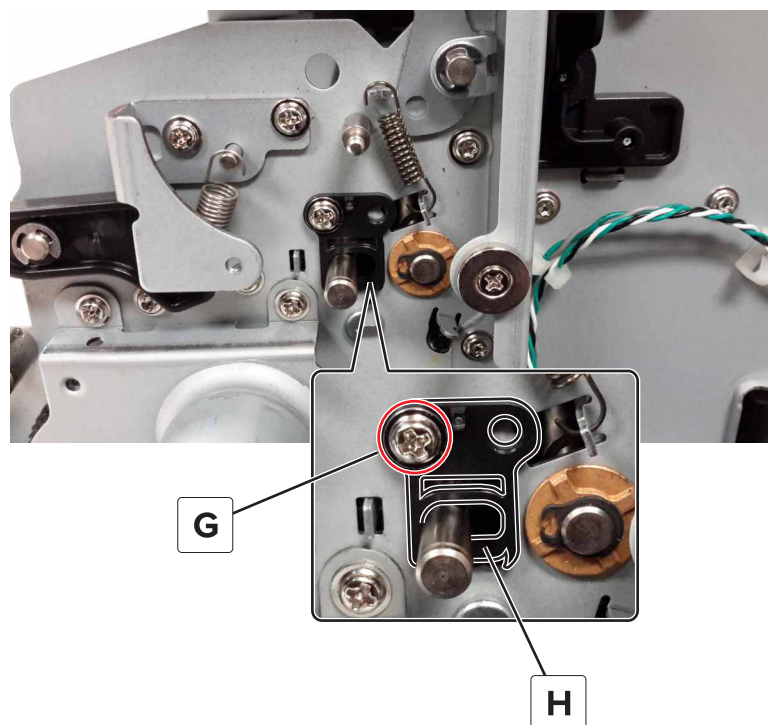
- 9** Remove the bracket (D), and then unhook the spring (E).



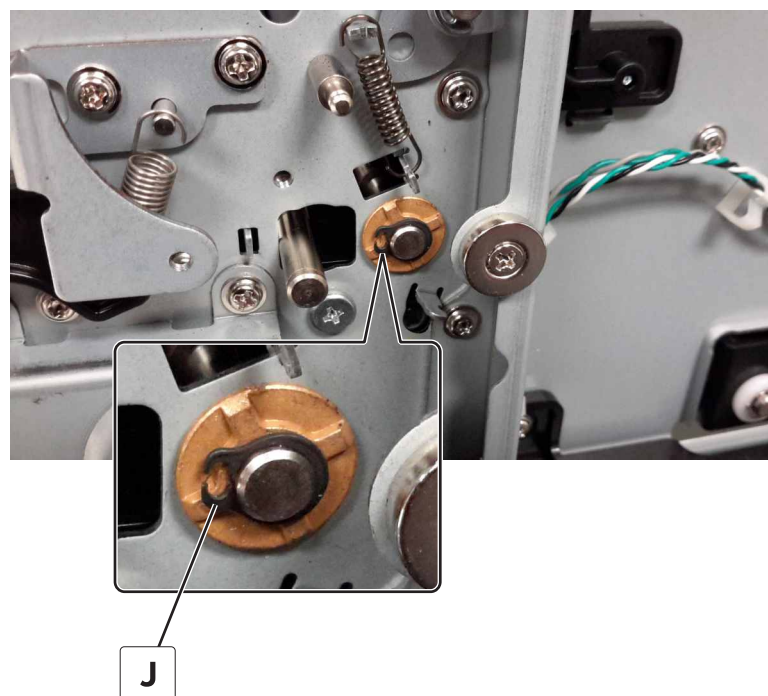
- 10** Remove the spacer (F).



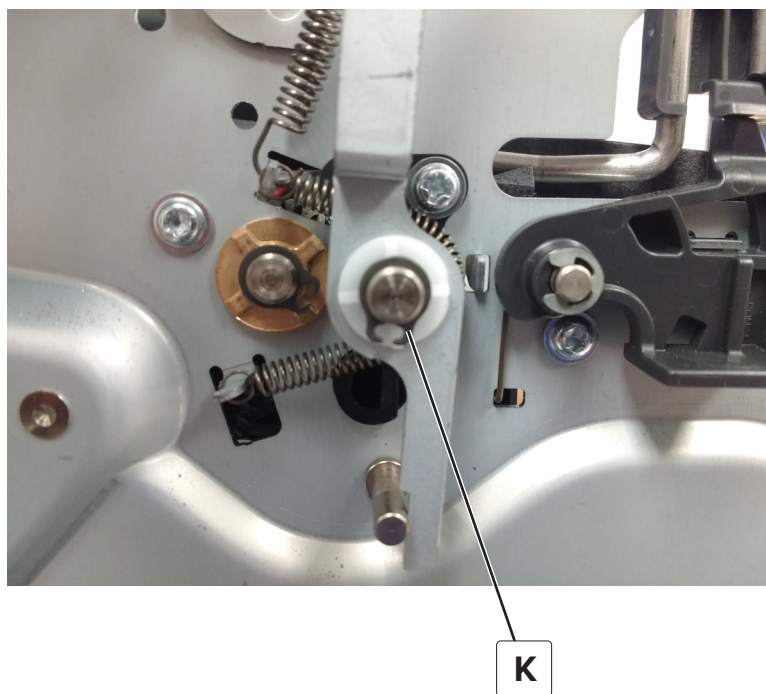
- 11** Remove the screw (G), and then remove the guide (H).



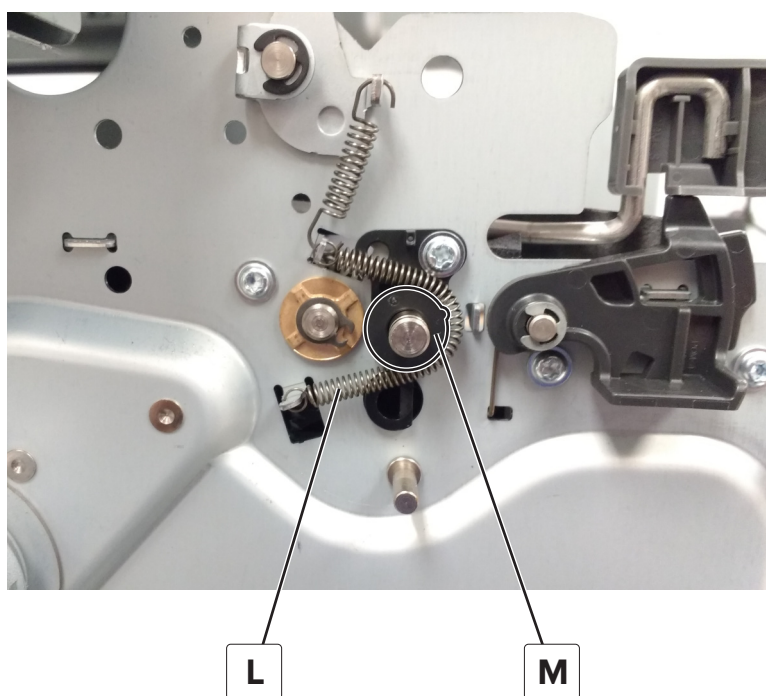
- 12** Remove the C-clip (J), and then remove the bushing.



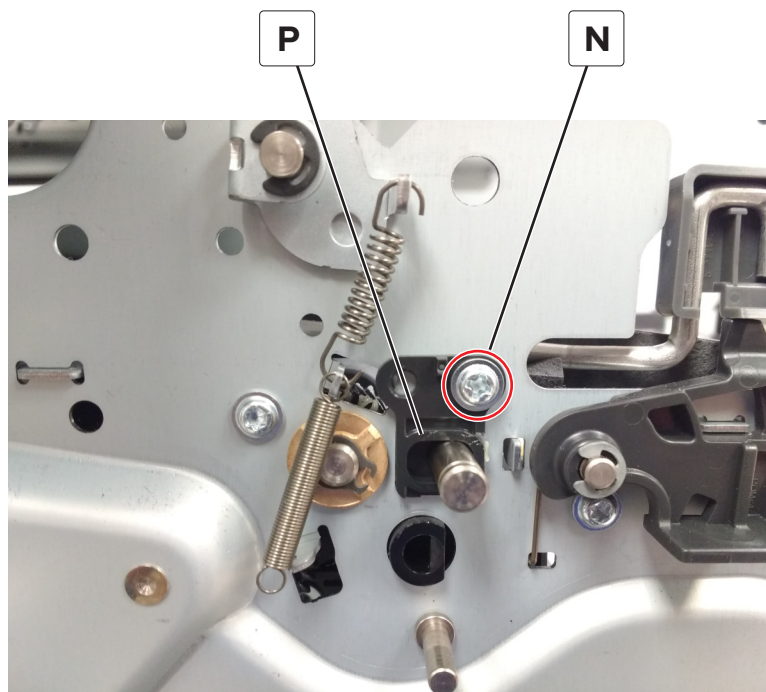
- 13** Remove the C-clip (K), and then remove the spacer.



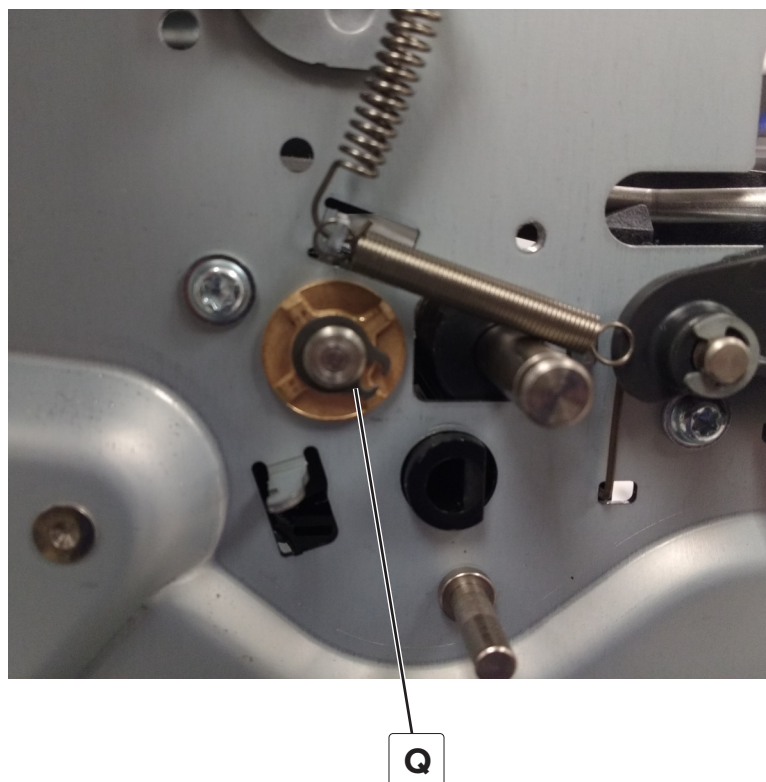
- 14** Remove the spring (L), and then remove the spacer (M).



- 15** Remove the screw (N), and then remove the guide (P).

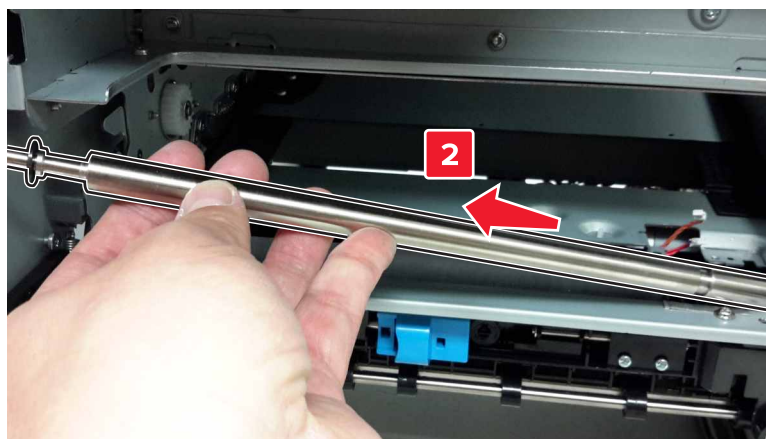
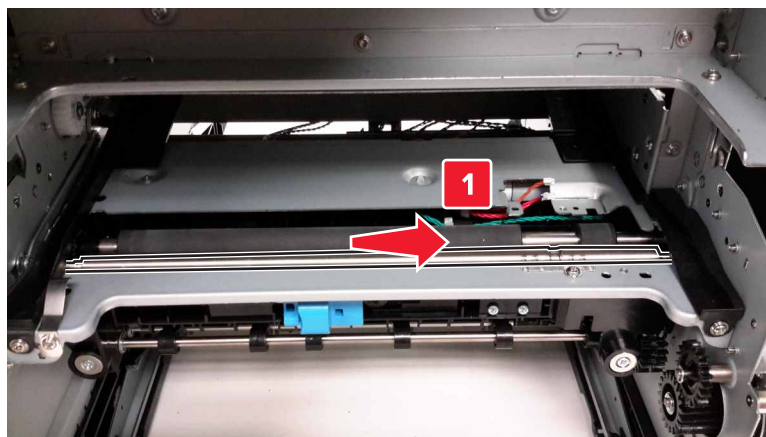


- 16** Remove the C-clip (Q), and then remove the bushing.



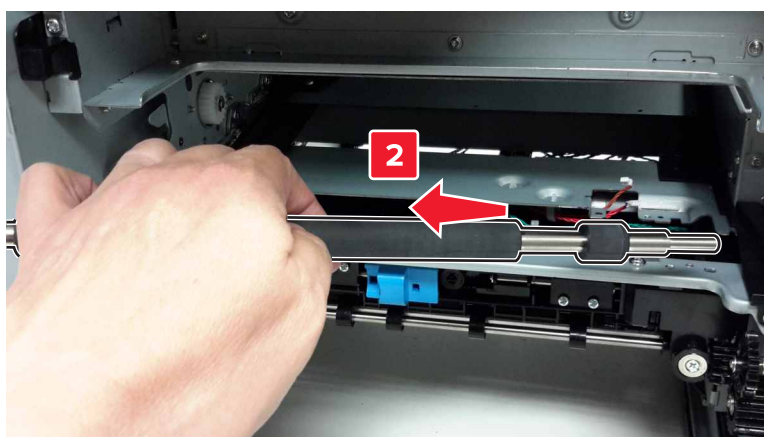
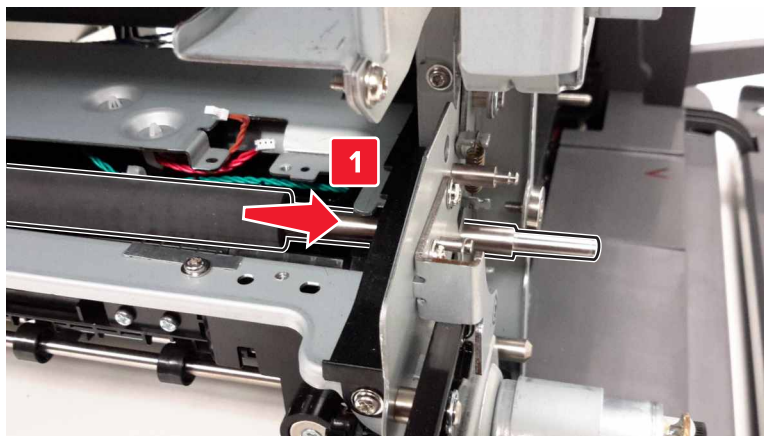
- 17** Slide the front deskew roller to the right to remove.

Note: Be careful not to drop or lose the washer on the left side of the shaft.



Parts removal

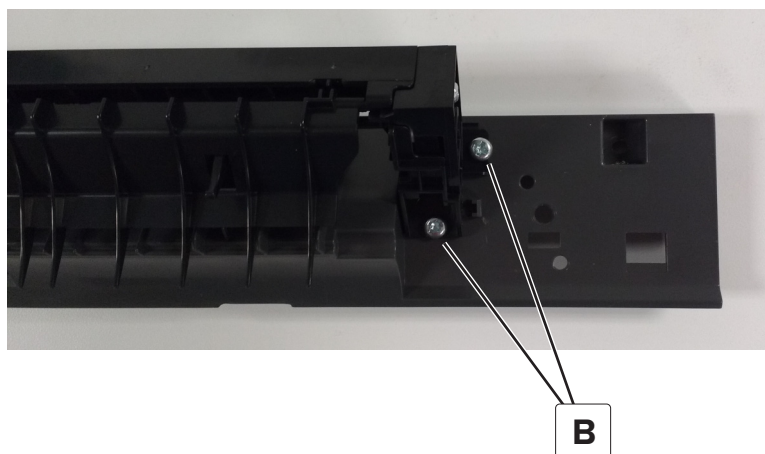
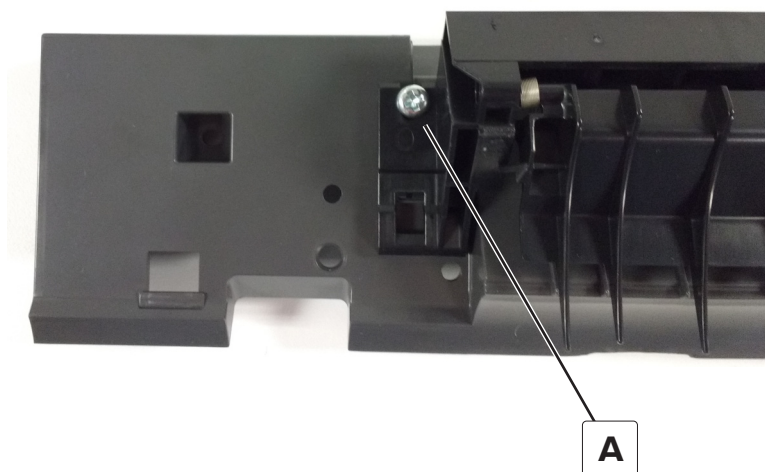
- 18** Slide the rear deskew roller to the right to remove.



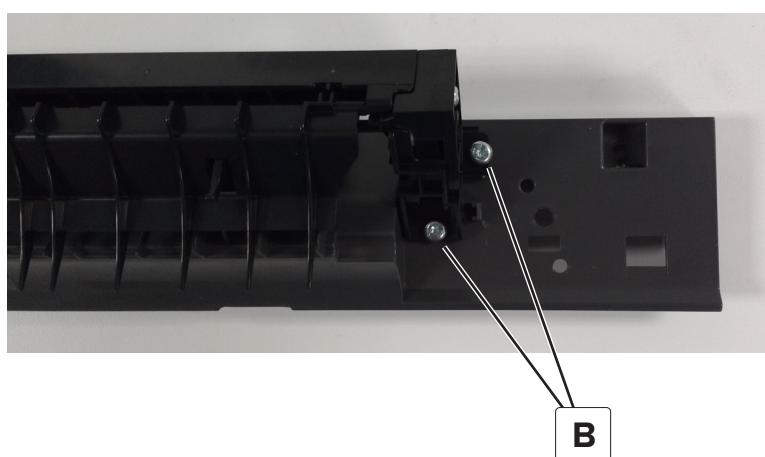
Diverter removal

- 1** Remove the top frame cover. See [“Top frame cover removal” on page 373.](#)
- 2** Remove the top frame base cover. See [“Top frame base cover removal” on page 375.](#)

- 3** Remove the screw (A) on the left and the two screws (B) on the right of the diverter.

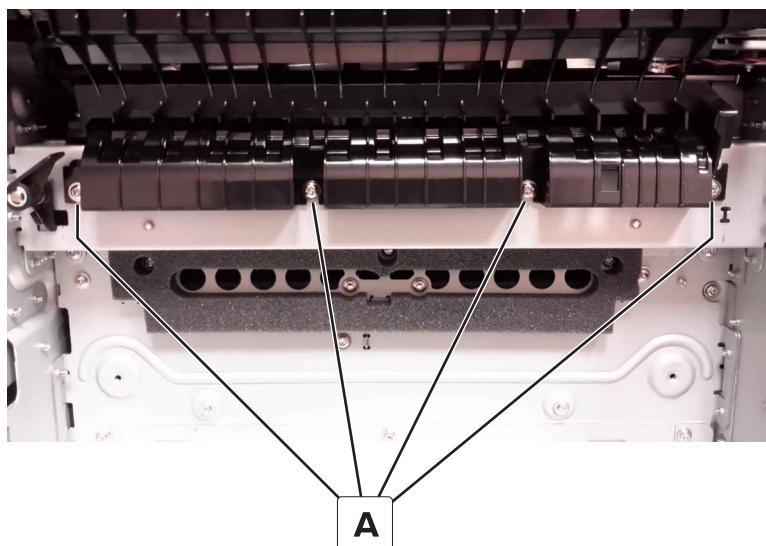


- 4** Remove the diverter from the top frame base cover.

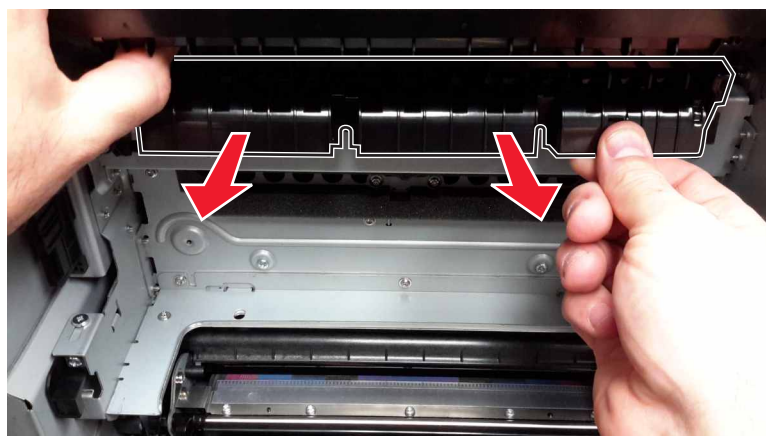


Redrive guide removal

- 1 Remove the fuser. See [“Fuser removal” on page 431.](#)
- 2 Remove the four screws (A).



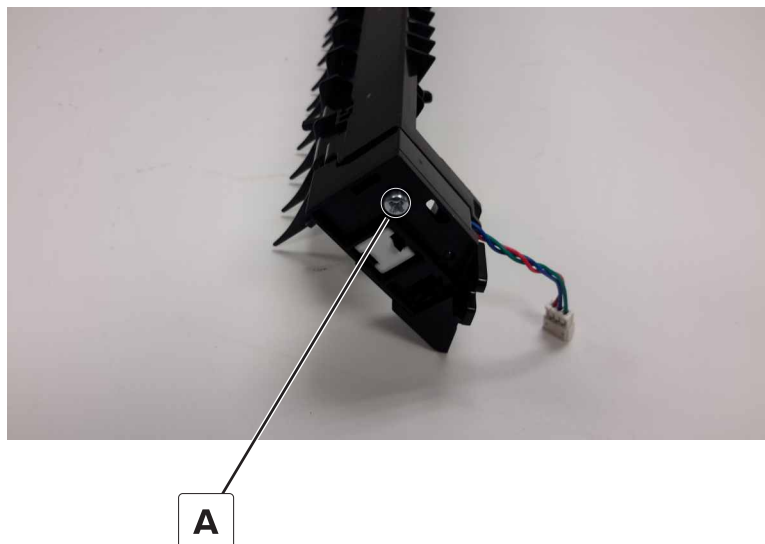
- 3 Hold the redrive deflector up, and then remove the redrive guide.



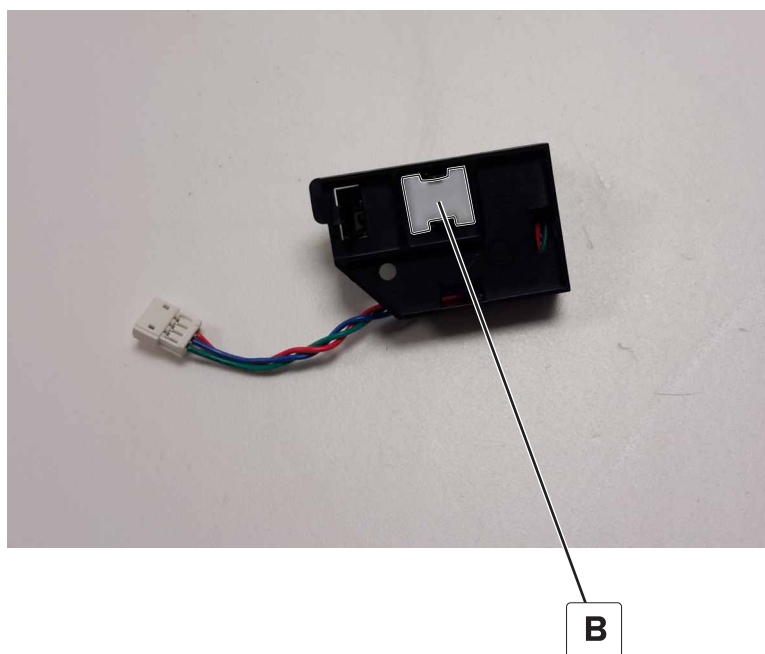
Sensor (redrive) removal

- 1 Remove the top frame cover. See [“Top frame cover removal” on page 373.](#)
- 2 Remove the top frame base cover. See [“Top frame base cover removal” on page 375.](#)
- 3 Remove the diverter. See [“Diverter removal” on page 447.](#)

- 4 Remove the screw (A).



- 5 Remove the retainer (B), and then remove the sensor from the bracket.



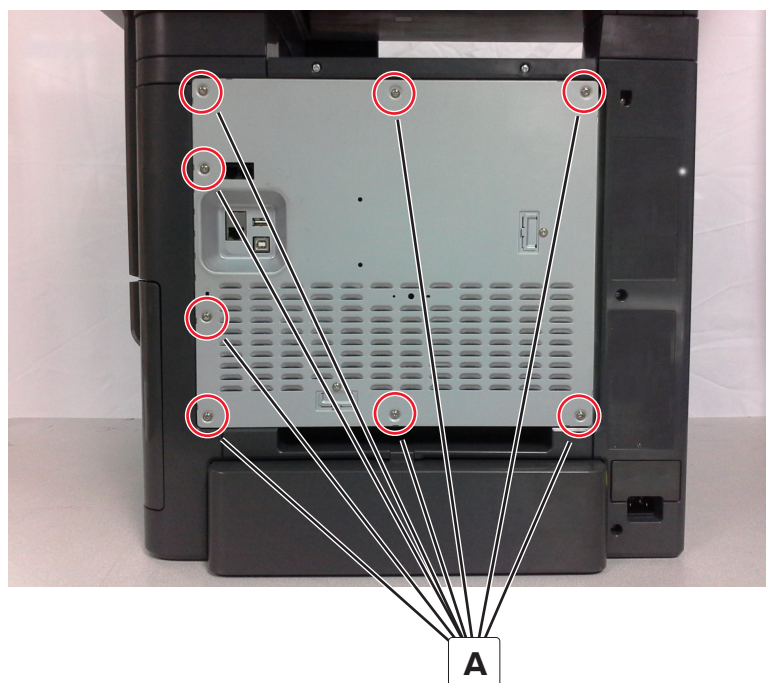
Installation note: Use the retainer of the old sensor when installing the new sensor.

Rear removals

Controller board shield removal

Note: This is not a FRU.

- 1 Remove the eight screws (A).

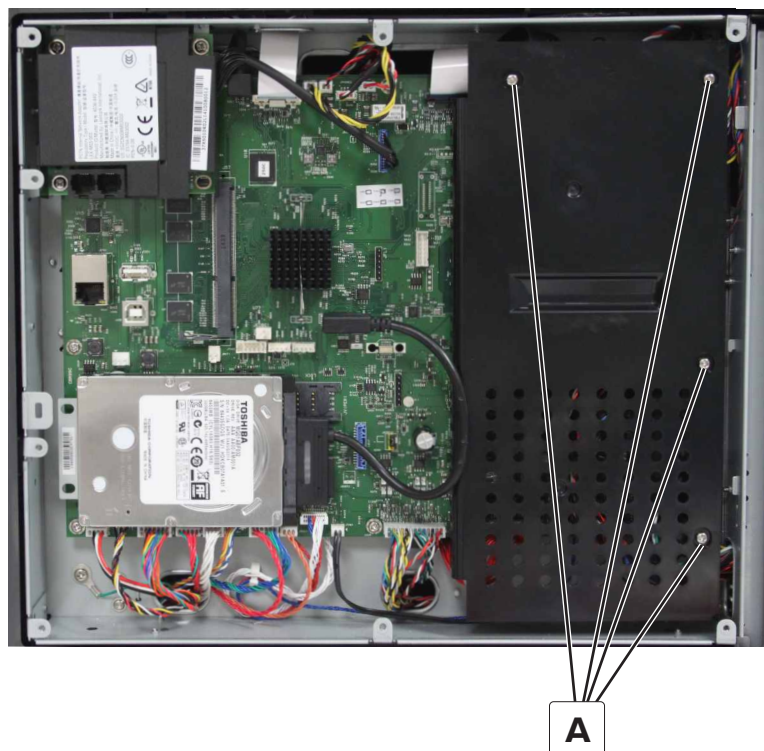


- 2 Remove the controller board shield.

Inner controller board shield removal

Note: This is not a FRU.

- 1 Remove the controller board shield. See [“Controller board shield removal” on page 451](#).
- 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 261](#)

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 456](#).

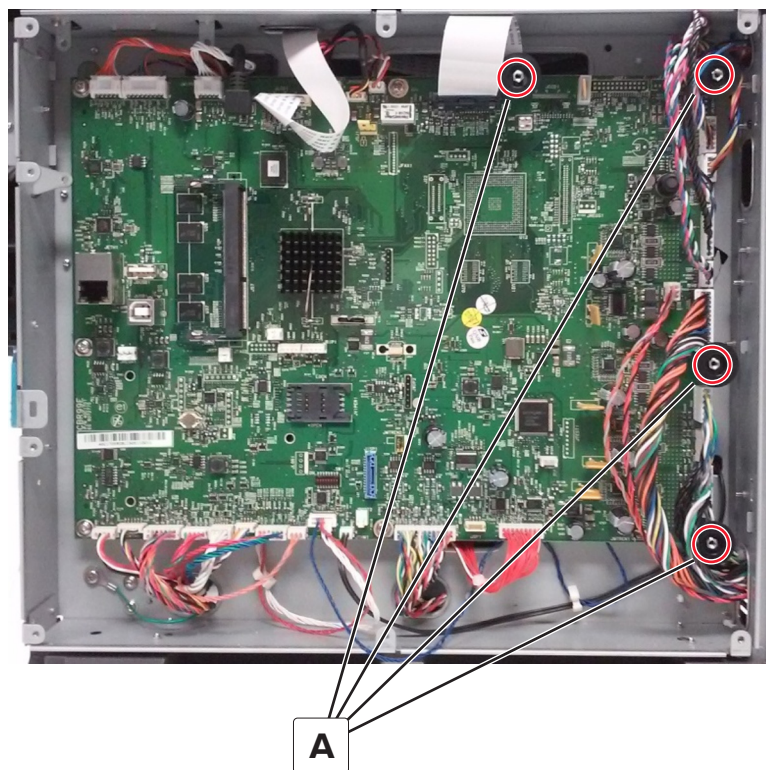
Removal procedure

- 1 Remove the controller board shield. See [“Controller board shield removal” on page 451](#).
- 2 Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452](#).
- 3 Remove all option cards from the controller board.
- 4 Disconnect all the cables from the controller board.

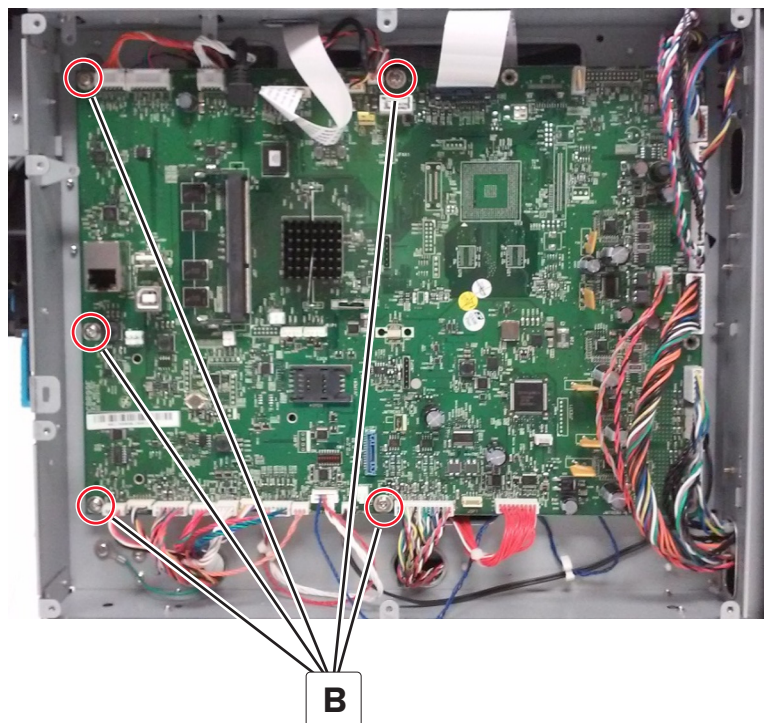
Warning—Potential Damage: When removing the TPS cable from JTPSAA1 connector, gently pry the cable connector from the controller board connector. Do not pull the cable by the wires.

Warning—Potential Damage: Do not yank the ribbon cables. See [“Disconnecting ribbon cables” on page 345](#).

- 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.

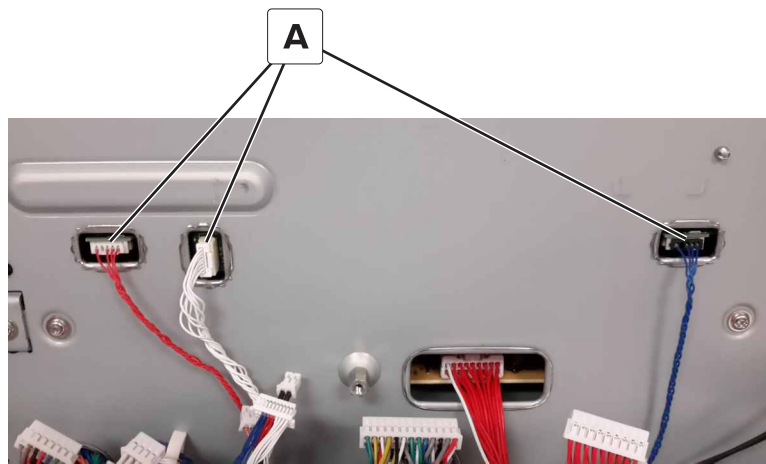


Installation note: After the new controller board is installed, perform printer configuration restoration. See [“Restoring the printer configuration after replacing the controller board” on page 340.](#)

TPS cables removal

- 1 Remove the controller board shield. See [“Controller board shield removal” on page 451.](#)
- 2 Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452.](#)
- 3 Remove the controller board. See [“Controller board removal” on page 452.](#)
- 4 Disconnect the three cables (A) from the sensor.

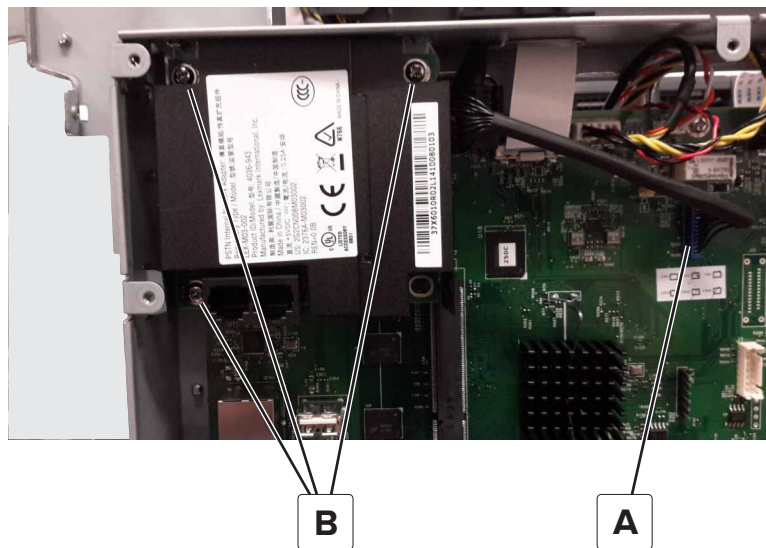
Warning—Potential Damage: Be careful when disconnecting the cables. Press the tab on the white cable while disconnecting to avoid damage.



5 Remove the cables.

Modem removal

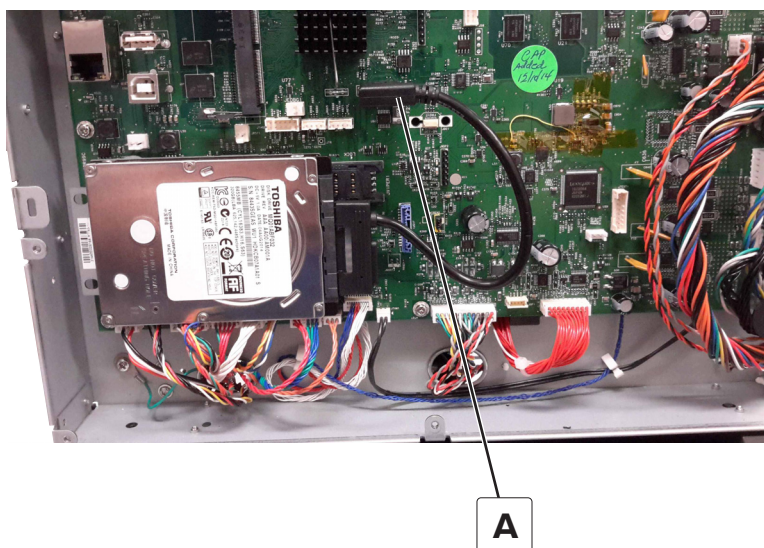
- 1** Remove the controller board shield. See [“Controller board shield removal” on page 451.](#)
- 2** Disconnect the modem cable (A) from the controller board, and then remove the three screws (B).



3 Remove the modem.

Hard disk drive removal

- 1 Remove the controller board shield. See [“Controller board shield removal” on page 451](#).
- 2 Disconnect the hard disk drive cable (A) from the controller board.

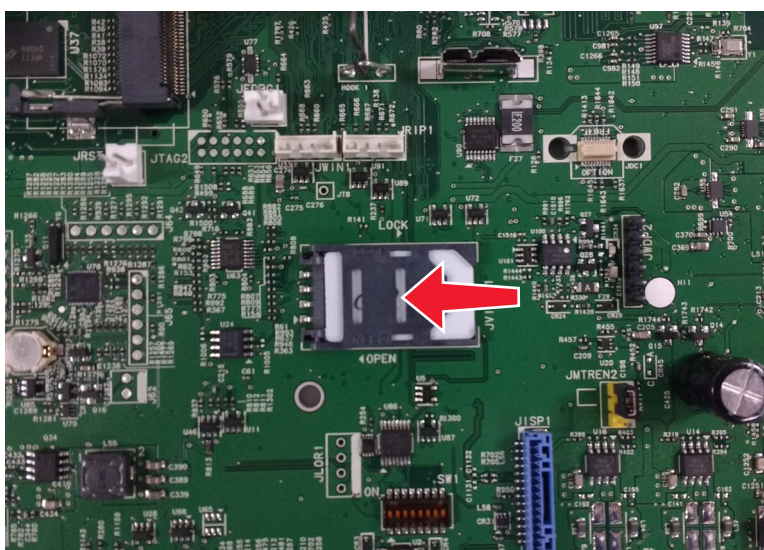


- 3 Disconnect the cable from the hard disk drive.
- 4 Remove the hard disk drive.

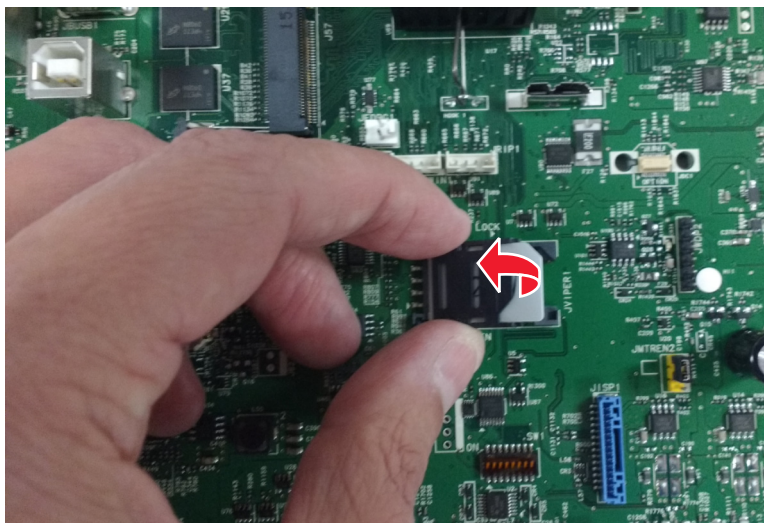
Secure element SIM card removal

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.

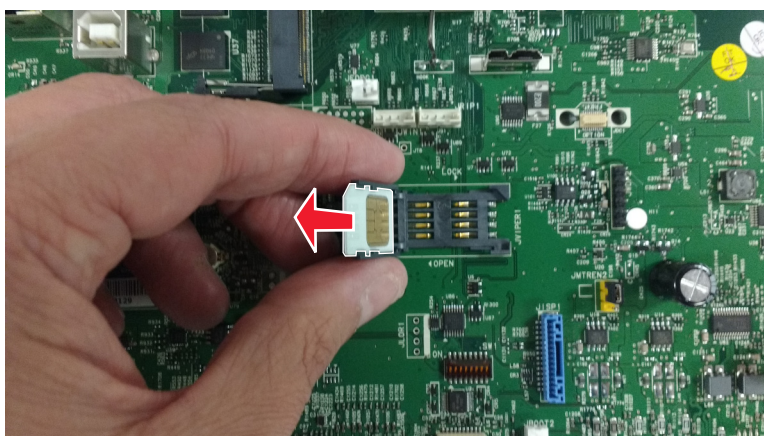
- 1 Remove the controller board shield. See [“Controller board shield removal” on page 451](#).
- 2 Slide the SIM card cover to unlock the SIM card holder.



- 3 Open the SIM card holder.



- 4 Remove the SIM card.



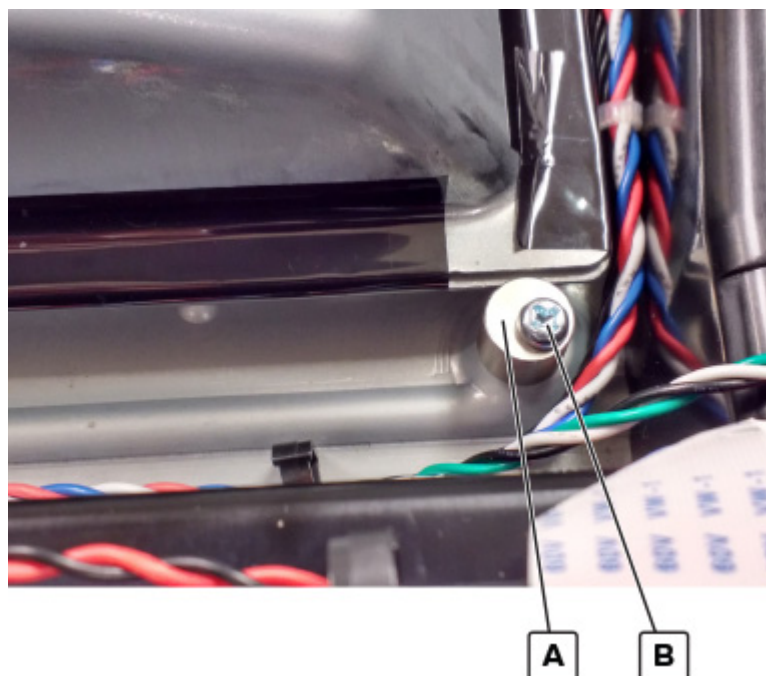
Top removals

Printhead removal

Note: 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.

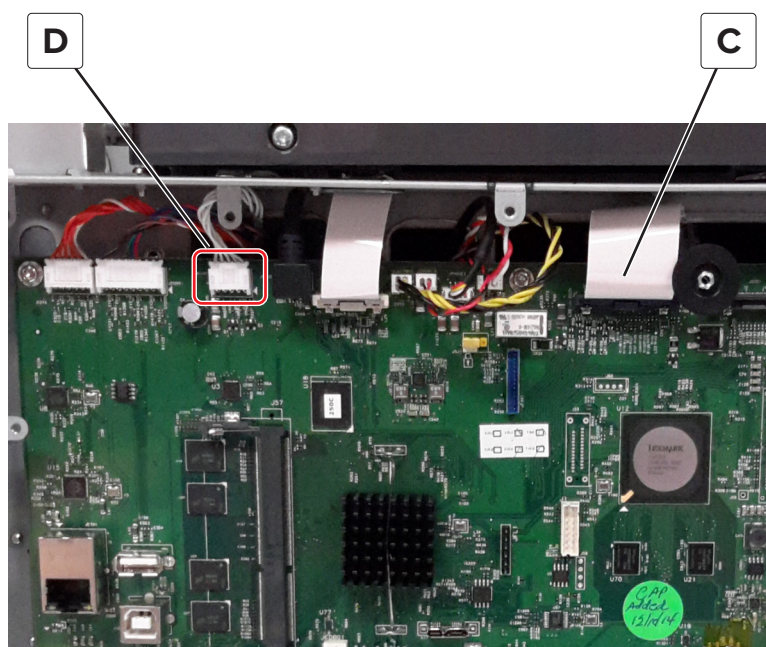
- 1 Remove the output bin cover. See [“Output bin cover removal” on page 372.](#)
- 2 Check the front left corner of the printhead if a printhead stop is installed. If the stop is installed, then proceed to step 5. If the stop is not installed, then proceed to the next step.
- 3 Unpack the printhead stop and screw.

- 4 Place the stop (A) next to the printhead, and then fasten the stop with the screw (B).

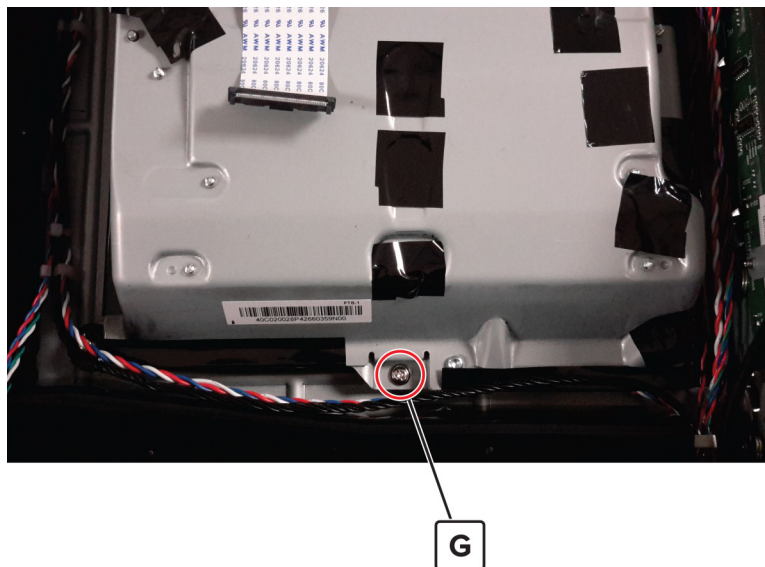


- 5 Remove the controller board shield. See [“Controller board shield removal” on page 451](#).
- 6 Remove the scanner tilt. See [“Scanner tilt removal” on page 490](#).
- 7 Disconnect the ribbon cable (C) and printhead cable (D).

Warning—Potential Damage: Do not yank the ribbon cable. See [“Disconnecting ribbon cables” on page 345](#).



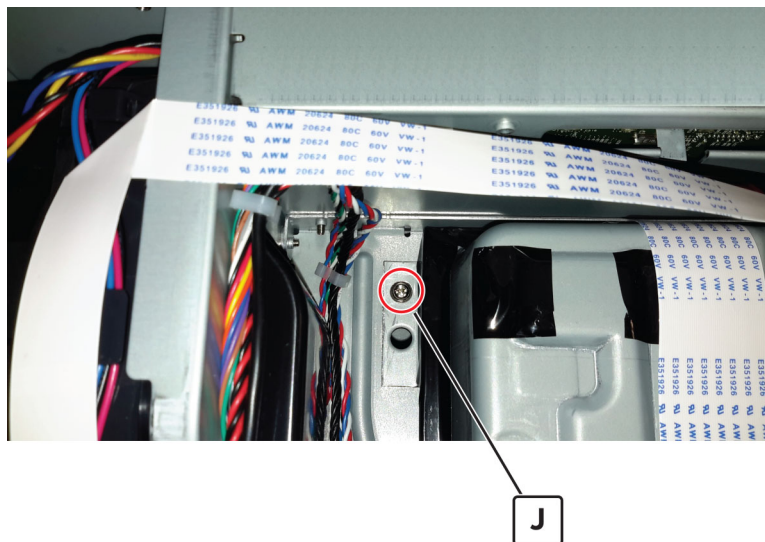
- 10** Remove the screw (G) from the printhead.



- 11** Remove the rear right screw (H) from the printhead.



- 12** Remove the rear left screw (J) from the printhead.



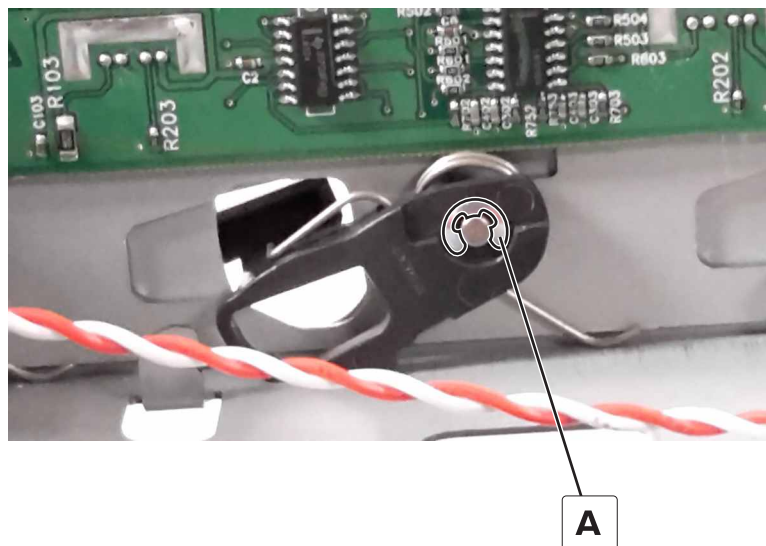
Installation Notes:

- 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 345](#).
- 4** Tighten the screws.
- 5** Perform a color alignment adjust. See [“Color alignment adjust” on page 320](#).

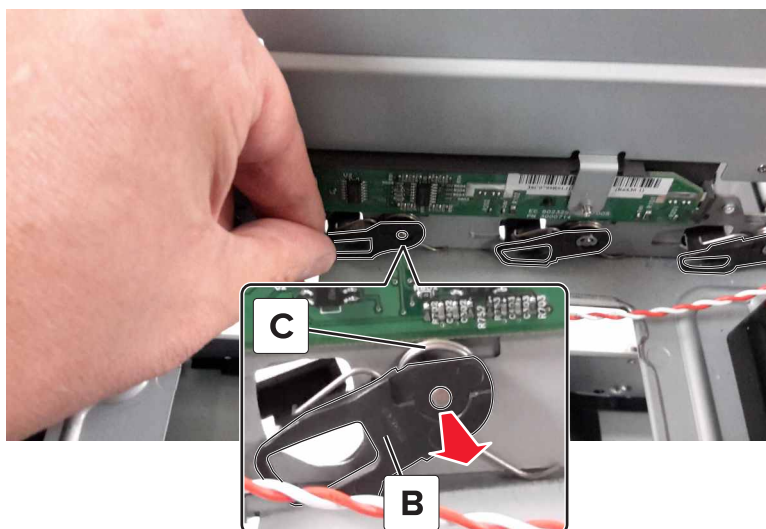
Developer hold down removal

- 1** Remove the output bin cover. See [“Output bin cover removal” on page 372](#).
- 2** Remove the controller board shield. See [“Controller board shield removal” on page 451](#).
- 3** Remove the printhead. See [“Printhead removal” on page 457](#).

- 4 Remove the E-clip (A).



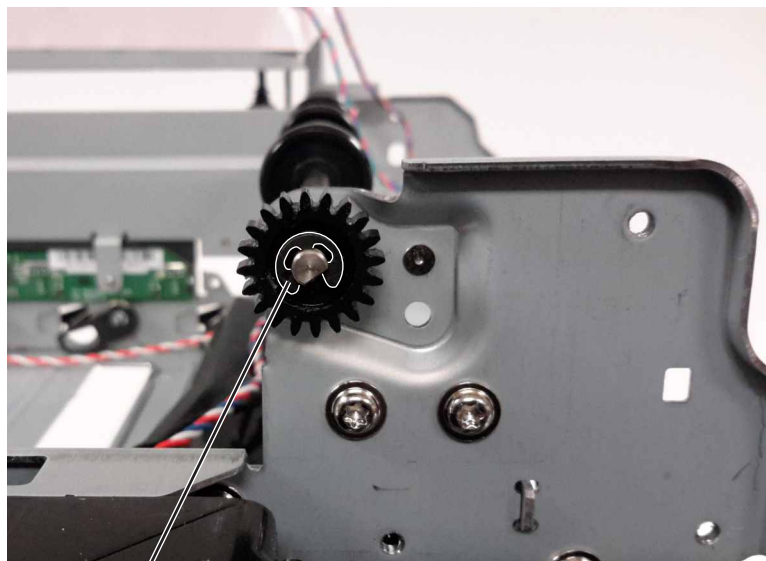
- 5 Pull the bell crank (B) and spring (C) off the mounting pin, and then remove the developer hold down.



Output roll removal

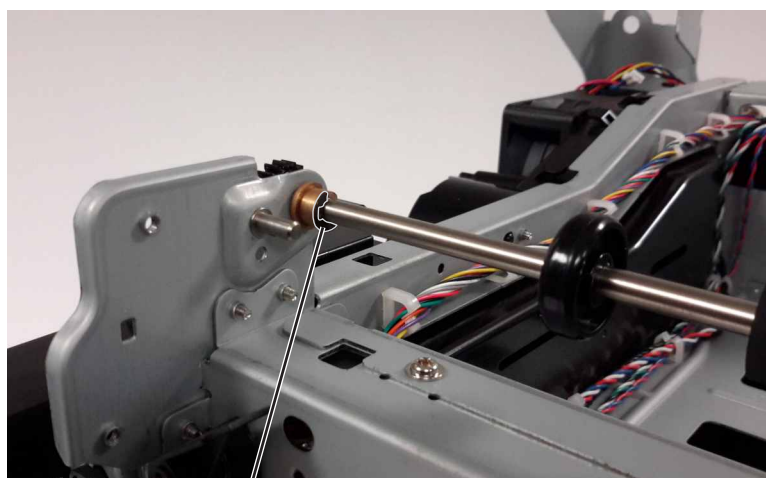
- 1 Remove the left cover. See [“Left cover removal” on page 358.](#)
- 2 Remove the fuser. See [“Fuser removal” on page 431.](#)
- 3 Remove the redrive guide. See [“Redrive guide removal” on page 449.](#)
- 4 Remove the motor (output). See [“Motor \(output\) removal” on page 395.](#)
- 5 Remove the top frame cover. See [“Top frame cover removal” on page 373.](#)
- 6 Remove the top frame base cover. See [“Top frame base cover removal” on page 375.](#)

- 7** Remove the E-clip (A), and then remove the gear.



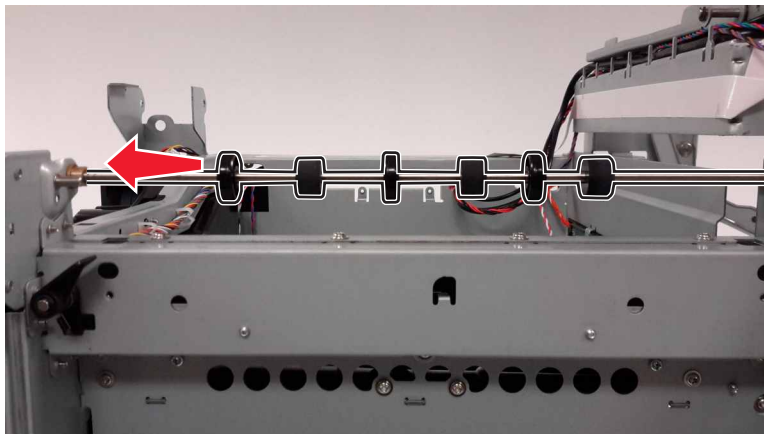
A

- 8** Remove the E-clip (B) from inside the frame.



B

- 9 Slide the output shaft to the left, and then slide out to remove.



- 10 Remove the E-clip (C).



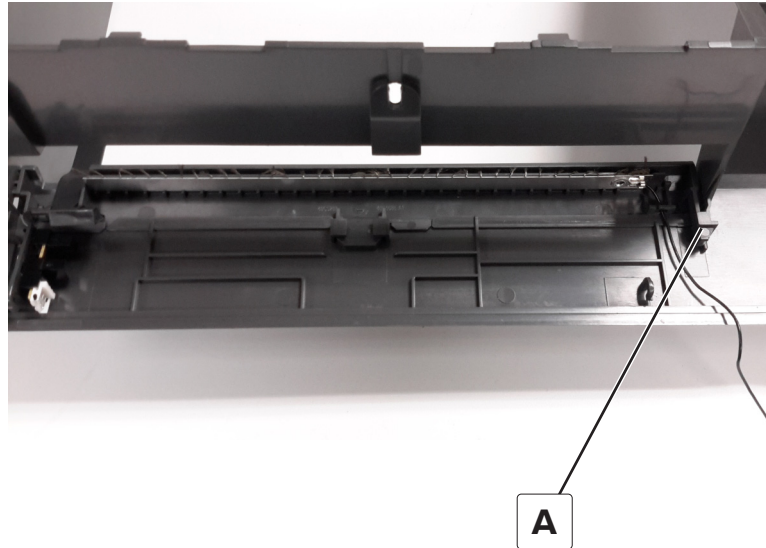
C

Installation note: Use the E-clips and bushings on the new shaft.

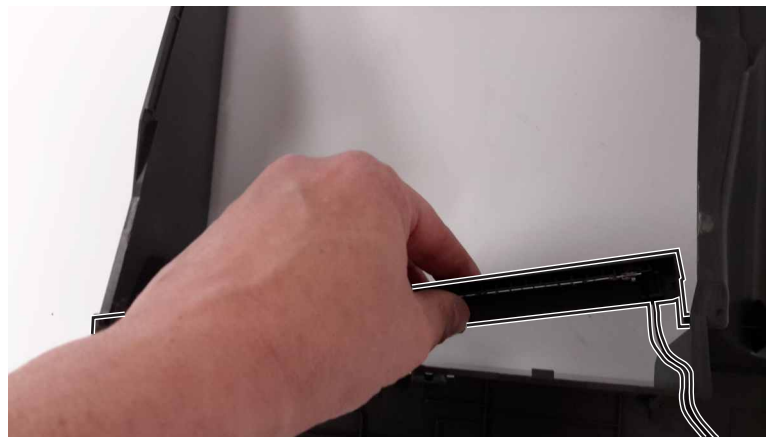
Output bin exit cover removal

- 1 Remove the flatbed. See [“Flatbed removal” on page 483.](#)
- 2 Remove the output bin cover. See [“Output bin cover removal” on page 372.](#)
- 3 Remove the top cover. See [“Top cover removal” on page 354.](#)

- 4** Disengage the tab (A), and then remove the cable from the tabs.



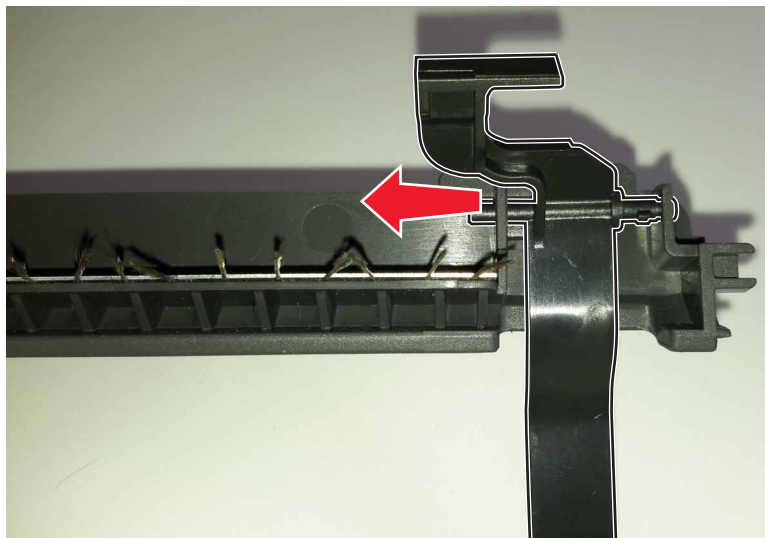
- 5** Remove the cover.



Output bin flag removal

- 1** Remove the flatbed. See [“Flatbed removal” on page 483.](#)
- 2** Remove the output bin cover. See [“Output bin cover removal” on page 372.](#)
- 3** Remove the top cover. See [“Top cover removal” on page 354.](#)
- 4** Remove the output bin exit cover. See [“Output bin exit cover removal” on page 464.](#)

- 5 Slide the flag to the left to remove.



Bottom removals

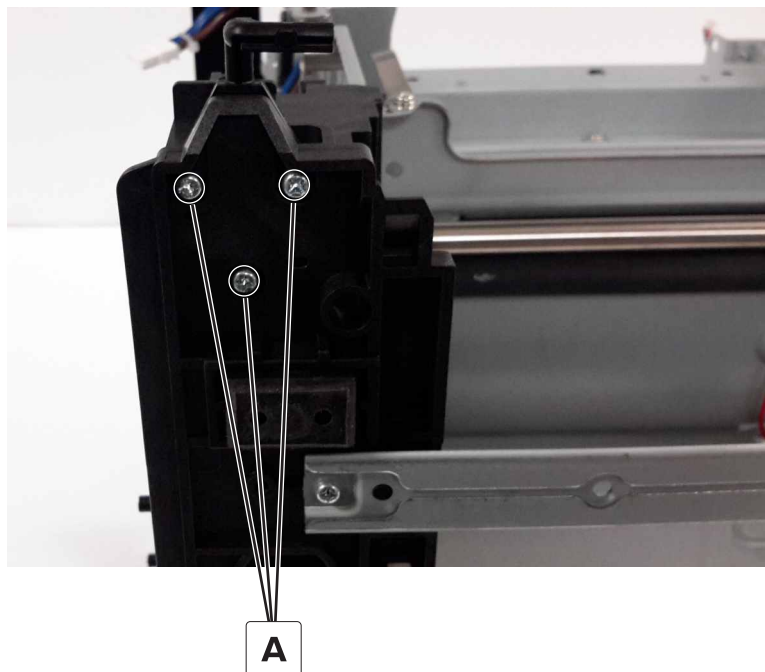
Front cover hinges removal

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.

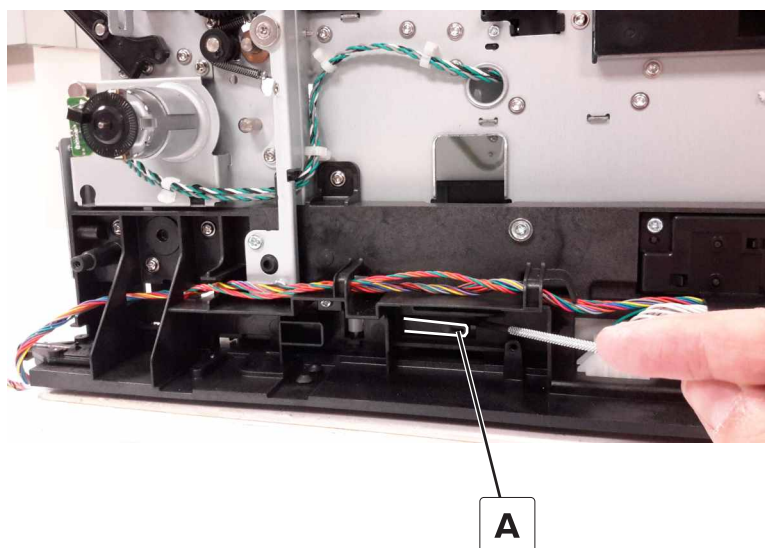
- 1 Remove the front cover. See [“Front cover removal” on page 352.](#)
- 2 Place the printer on its side.

- 3** Remove the three screws (A) securing the hinge, and then remove the hinge.

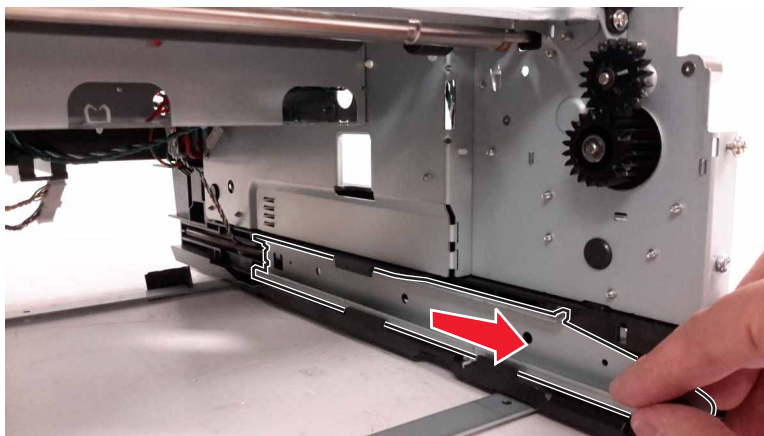


Tray rail removal

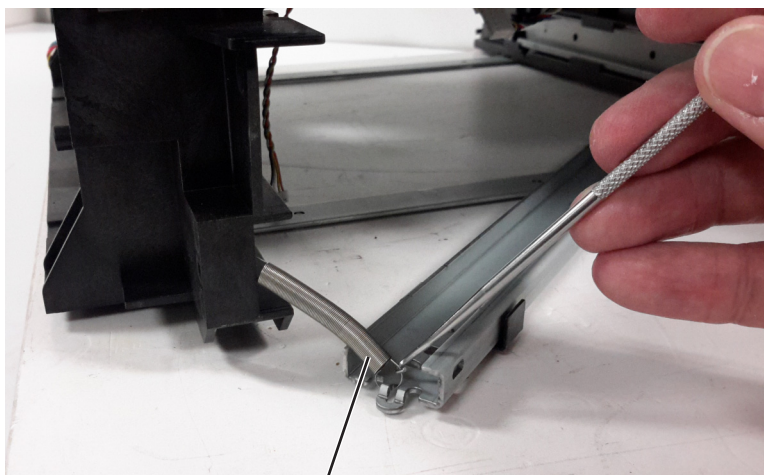
- 1** Remove the motor cover. See [“Motor cover removal” on page 361.](#)
- 2** Remove the scanner rear left cover. See [“Scanner rear left cover removal” on page 377.](#)
- 3** Remove the waste toner bottle.
- 4** Remove the right cover. See [“Right cover removal” on page 360.](#)
- 5** Remove the left cover. See [“Left cover removal” on page 358.](#)
- 6** Pull the tab (A) on the rail.



- 7 Hold the tab in place, and then slide the rail to the front of the printer to remove.



- 8 Remove the spring (B) from the rail.



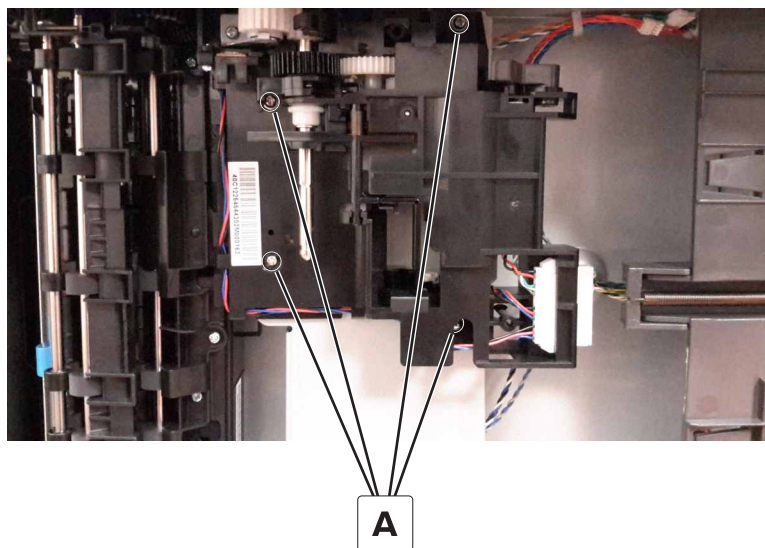
B

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.

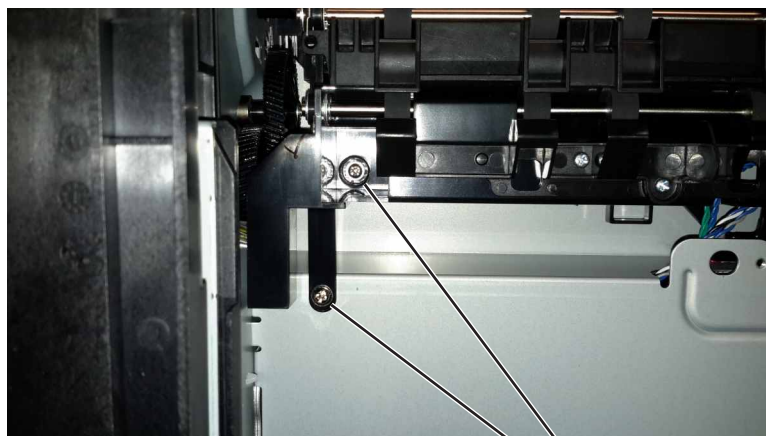


Isolation unit removal

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 468](#).

- 3** Remove the three screws (A) securing the isolation unit.

**A**

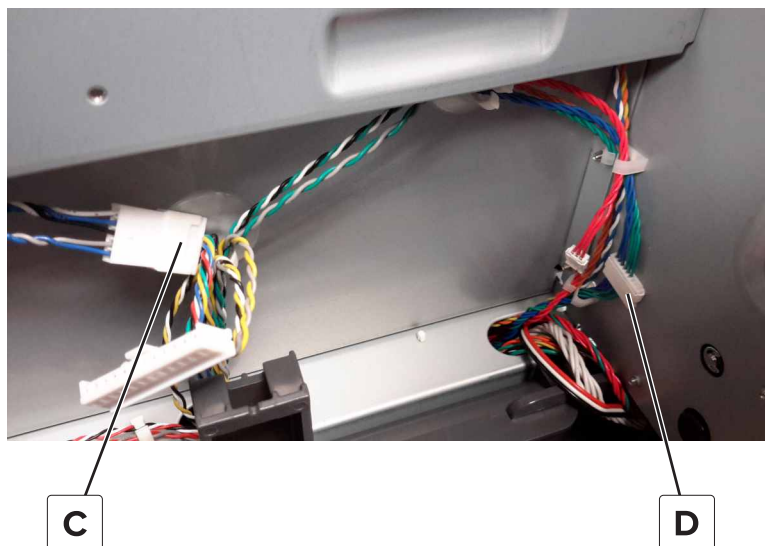
- 4** Remove the biasing screw (B).

**B**

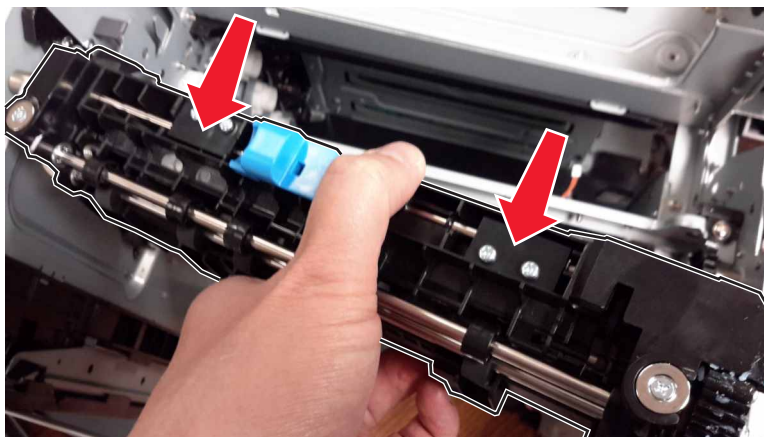
Parts removal

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.

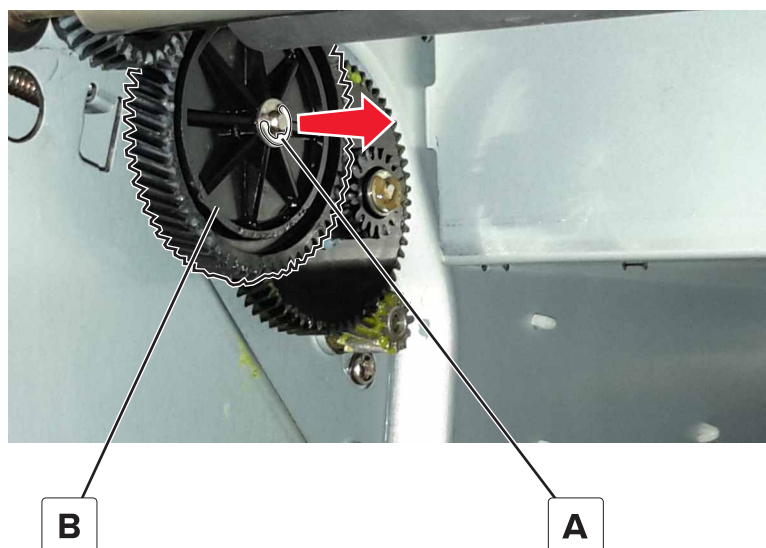


- 7 Route the isolation unit cables out of the printer.

Aligner idler gears removal

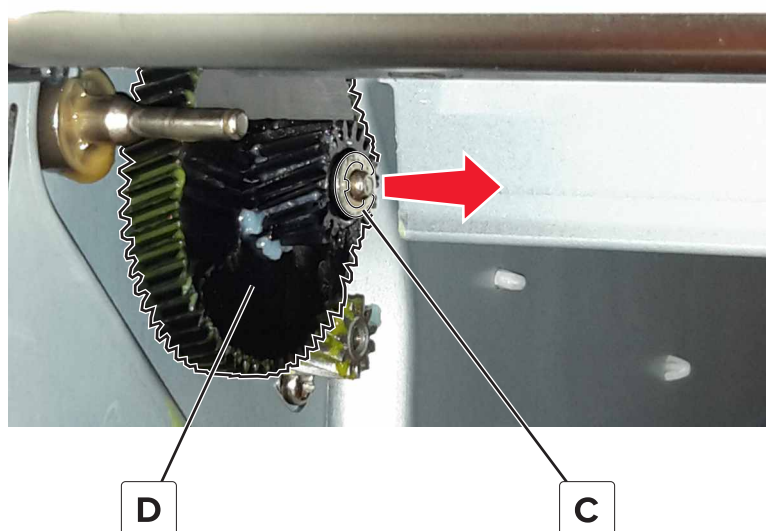
- 1 Remove the imaging kit.
- 2 Remove the media feeder. See [“Media feeder removal” on page 468.](#)
- 3 Remove the isolation unit. See [“Isolation unit removal” on page 469.](#)

- 4 Remove the E-clip (A), and then remove the outer gear (B).



Installation note: Use the washer in the new gear.

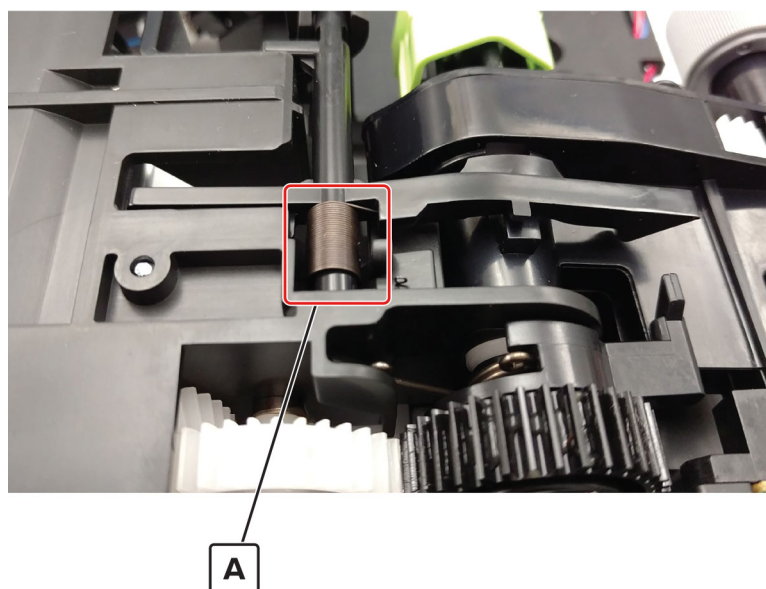
- 5 Remove the E-clip (C), and then remove the inner gear (D).



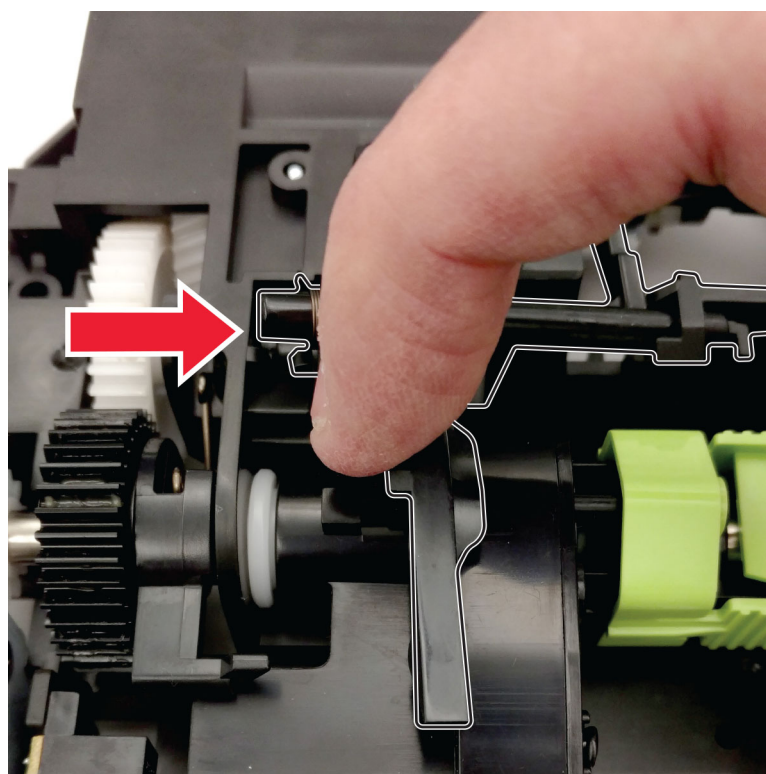
Installation note: Use the washer in the new gear.

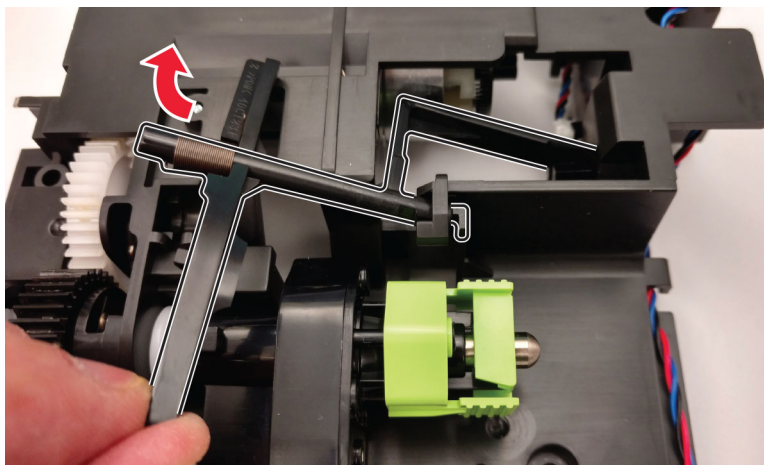
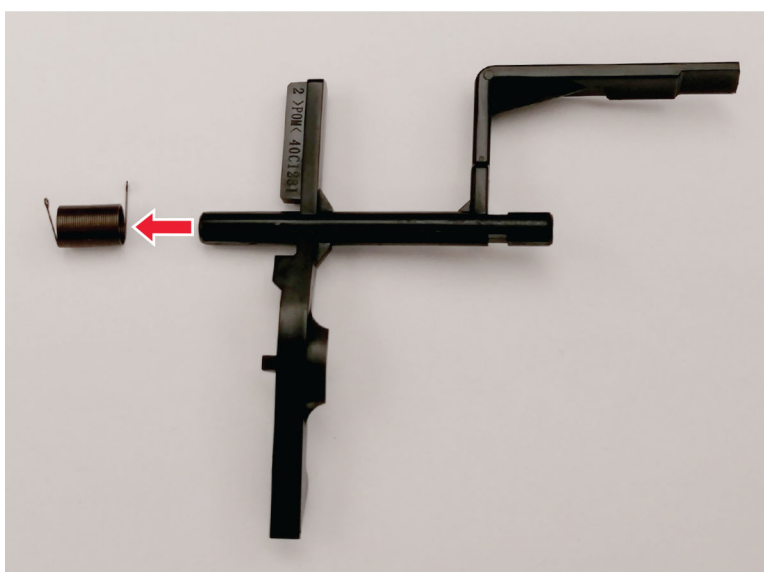
Paper out actuator spring removal

- 1 Remove the media feeder. See [“Media feeder removal” on page 468](#).
- 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.

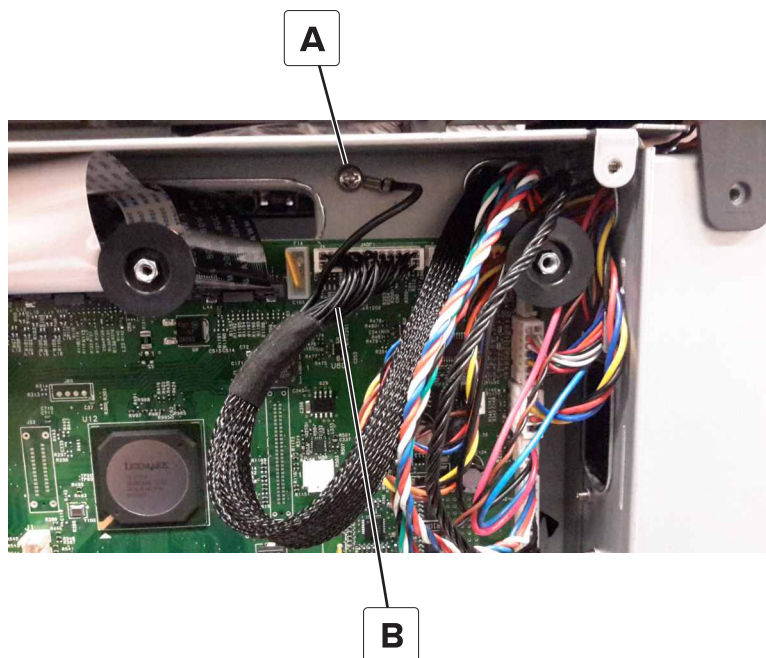
Installation note: When installing the spring, make sure to install it as shown in step 2.

ADF and flatbed removals

ADF removal

- 1** Remove the controller board shield. See [“Controller board shield removal” on page 451.](#)
- 2** Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452.](#)

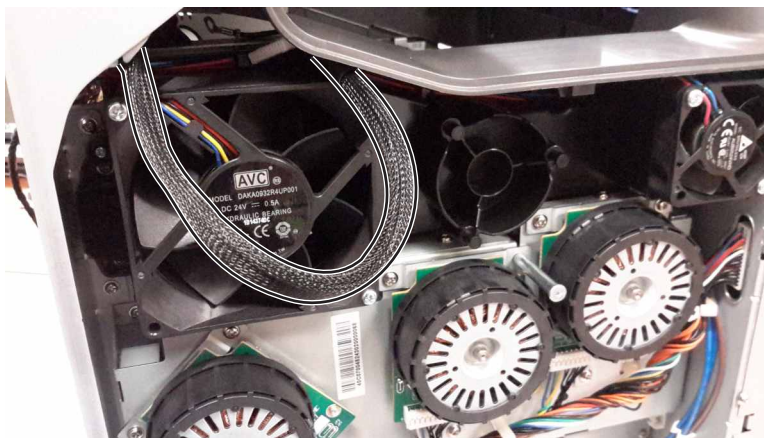
- 3 Remove the left cover. See [“Left cover removal” on page 358](#).
- 4 Remove the screw (A) from the ground cable, and then disconnect the ADF cable (B) from the controller board.



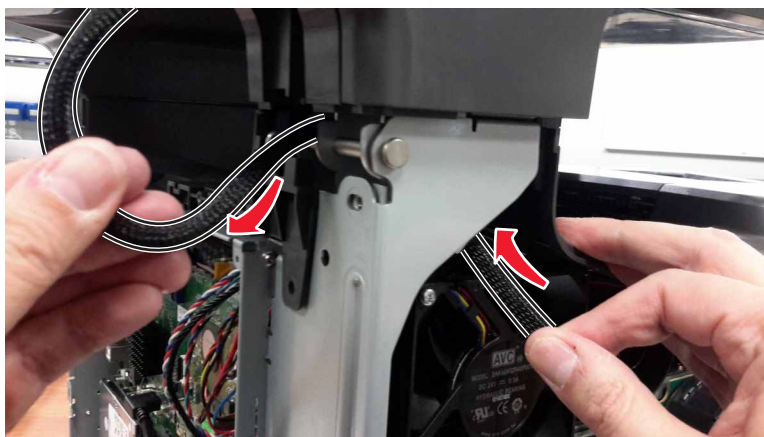
- 5 Route the cable through the hole on the rear of the controller board cage.



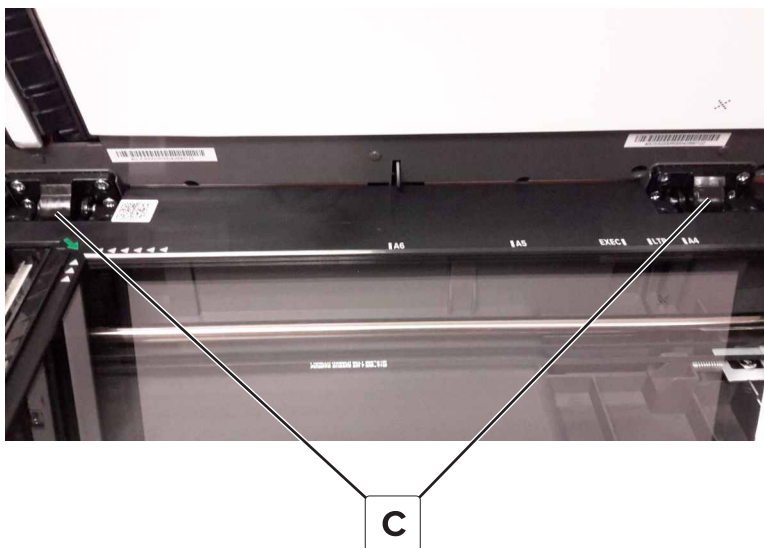
- 6 Route the cable to the side of the printer.



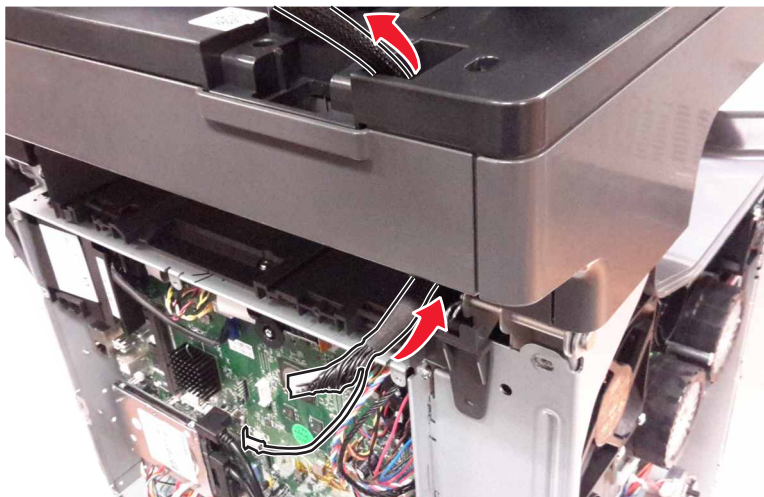
- 7 Route the cable to the rear of the printer.



- 8 Use a flat-head screwdriver to release the tabs on the left and right hinges (C).



9 Route the ADF cable through the flatbed.

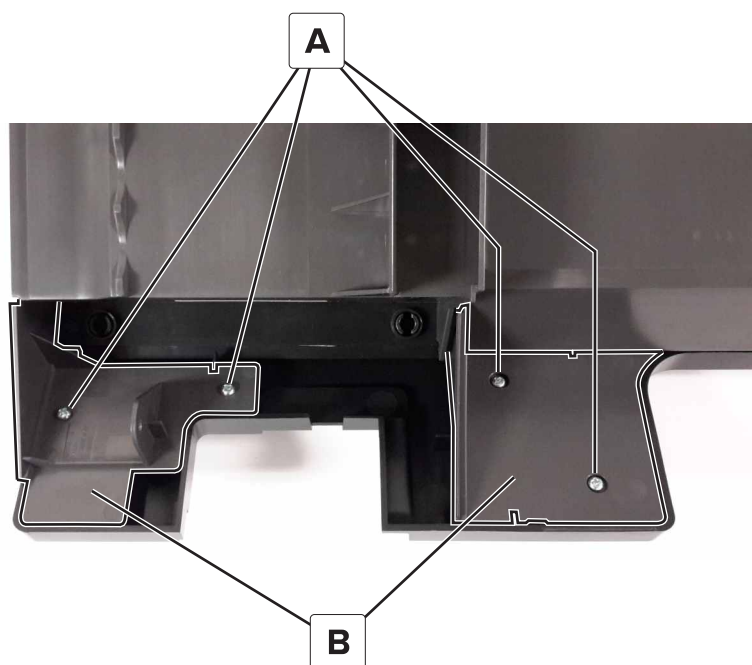


10 Remove the ADF.



Facade removal

- 1 Remove the flatbed. See [“Flatbed removal” on page 483](#).
- 2 Remove the four screws (A), and then remove the supports (B).

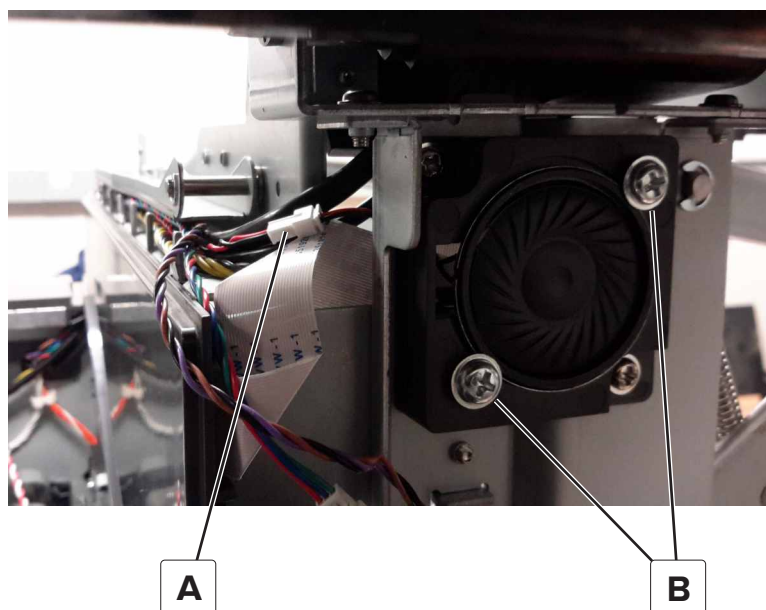


- 3 Pull the facade from the flatbed to remove.



Speaker removal

- 1 Remove the scanner front cover. See [“Scanner front cover removal” on page 482](#).
- 2 Disconnect the speaker connector (A), and then remove the two screws (B).

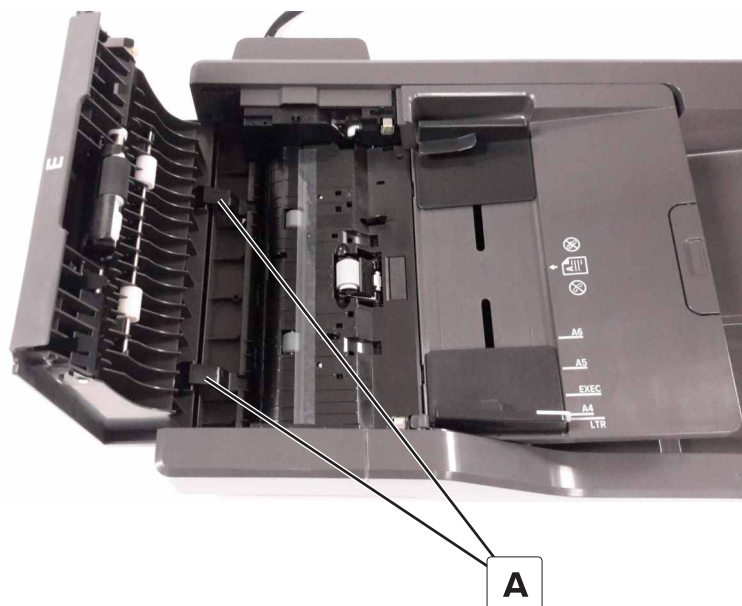


- 3 Remove the speaker.

ADF top cover removal

- 1 Open the ADF top cover.

Note: Pay attention to the position of the tabs (A).



- 2 Using a flat-head screwdriver (B), push the cover away from the ADF.



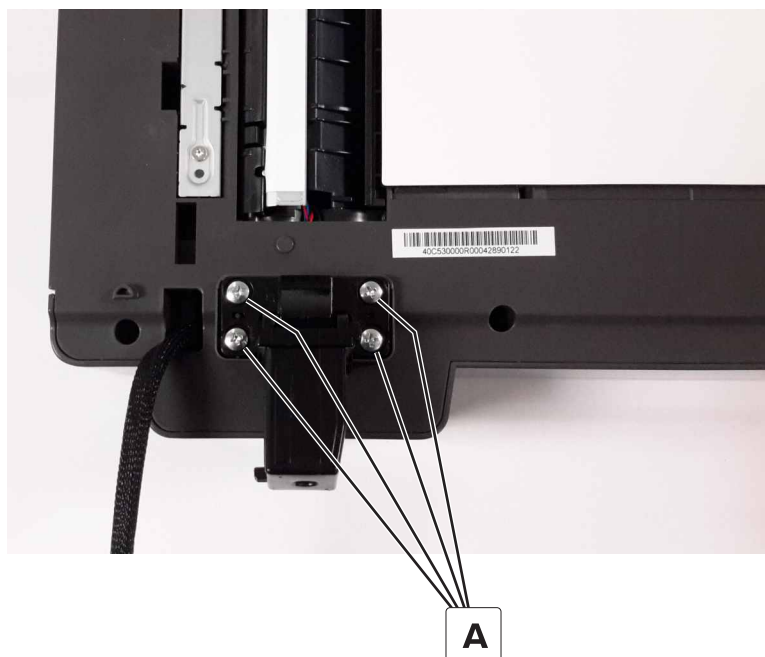
- 3 Remove the cover.



ADF left hinge removal

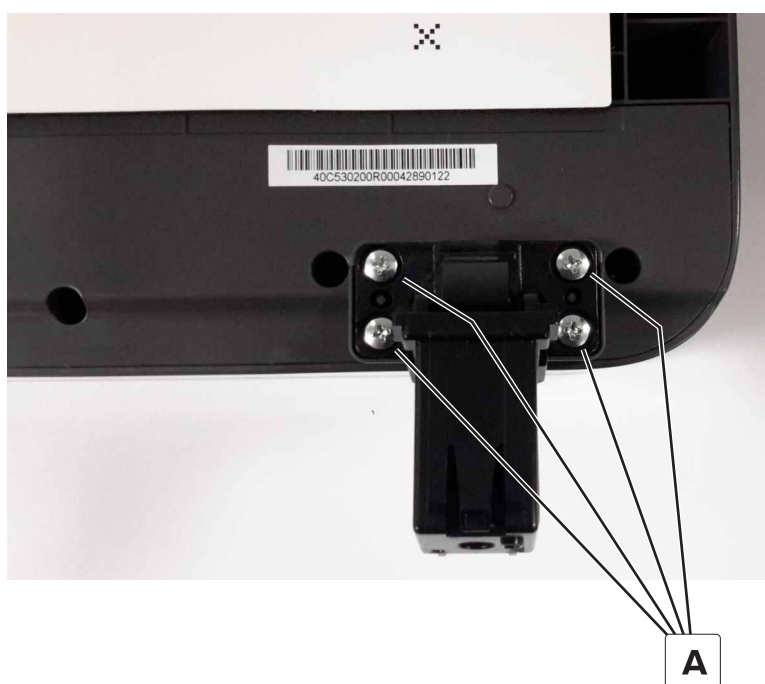
- 1 Remove the controller board shield. See [“Controller board shield removal” on page 451.](#)
- 2 Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452.](#)
- 3 Remove the ADF. See [“ADF removal” on page 474.](#)

- 4 Remove the four screws (A), and then remove the hinge.



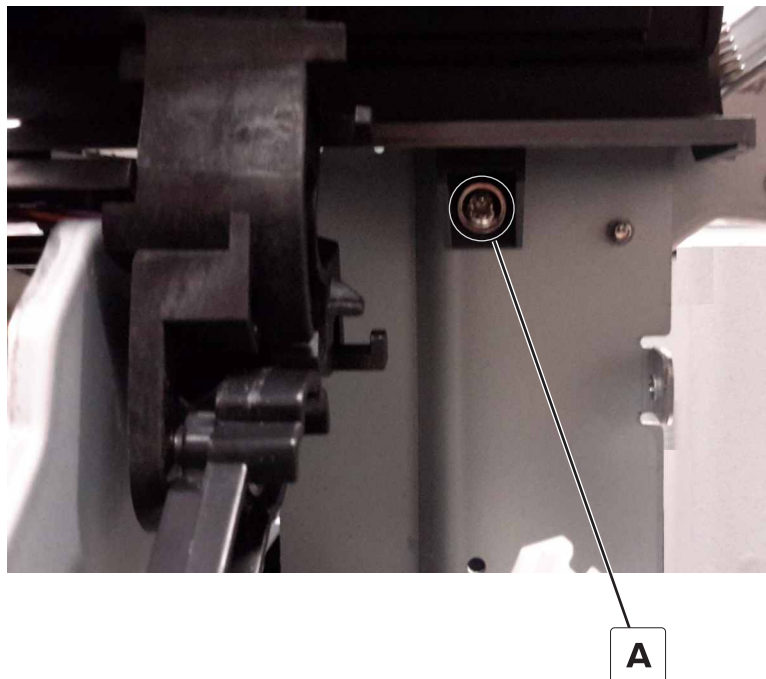
ADF right hinge removal

- 1 Remove the controller board shield. See [“Controller board shield removal” on page 451.](#)
- 2 Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452.](#)
- 3 Remove the ADF. See [“ADF removal” on page 474.](#)
- 4 Remove the four screws (A), and then remove the hinge.

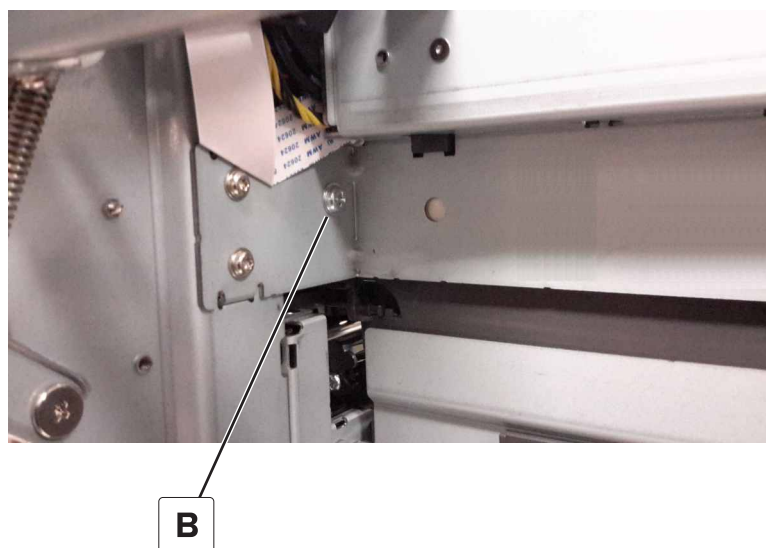


Scanner front cover removal

- 1 Remove the screw (A) on the front.



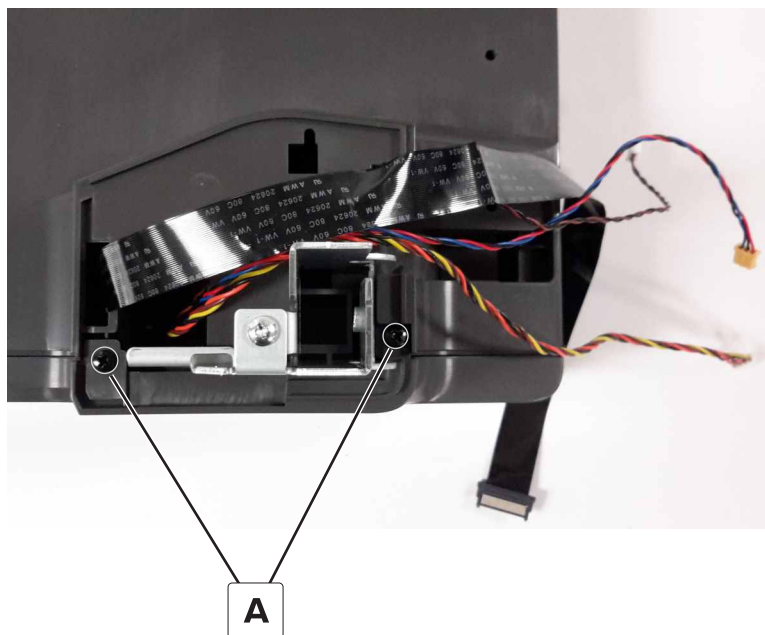
- 2 Remove the screw (B) from inside the toner cartridge area.



- 3 Remove the cover.

Left flatbed cover removal

- 1 Remove the flatbed. See [“Flatbed removal” on page 483](#).
- 2 Remove the two screws (A).



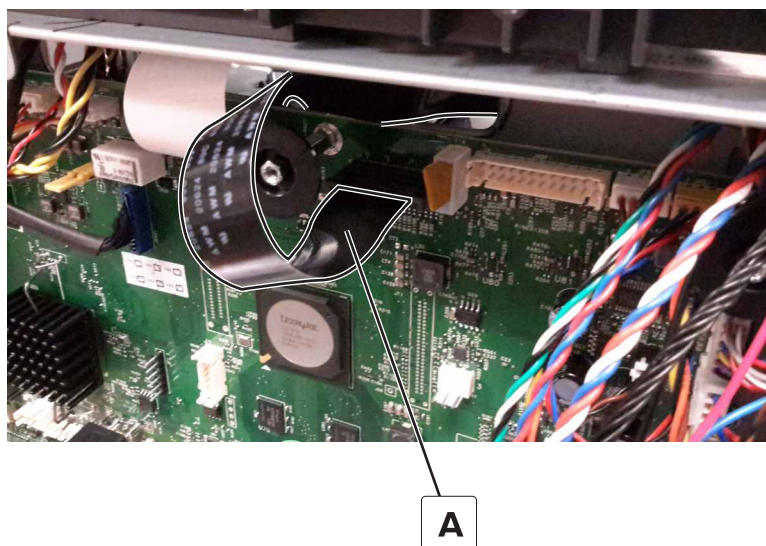
- 3 Slide down the flatbed cover to remove.



Flatbed removal

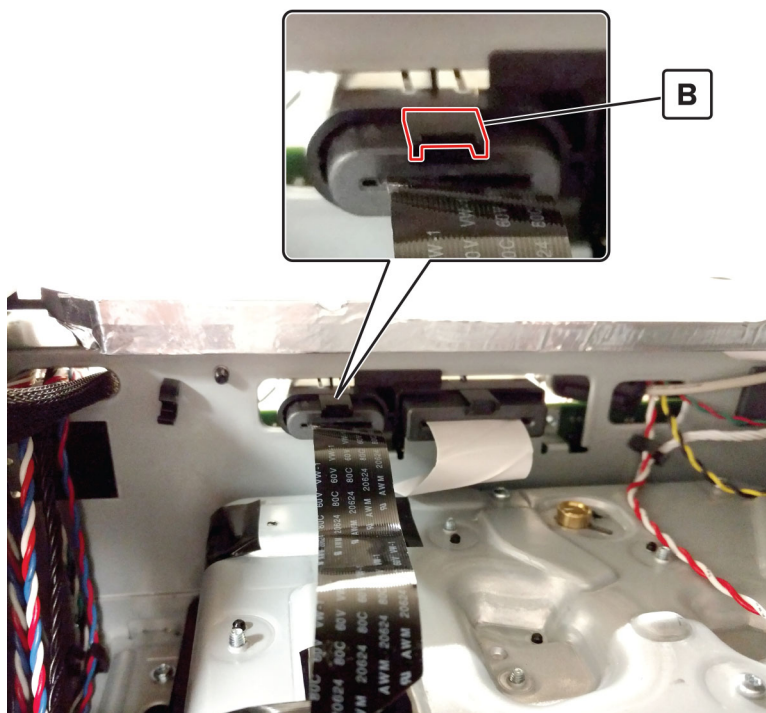
- 1 Remove the controller board shield. See [“Controller board shield removal” on page 451](#).
- 2 Remove the inner controller board shield. See [“Inner controller board shield removal” on page 452](#).
- 3 Remove the left cover. See [“Left cover removal” on page 358](#).
- 4 Remove the ADF. See [“ADF removal” on page 474](#).
- 5 Remove the scanner tilt. See [“Scanner tilt removal” on page 490](#).
- 6 Disconnect the flatbed CCD cable (A) from the controller board.

Warning—Potential Damage: Do not yank the ribbon cable. See [“Disconnecting ribbon cables” on page 345](#).

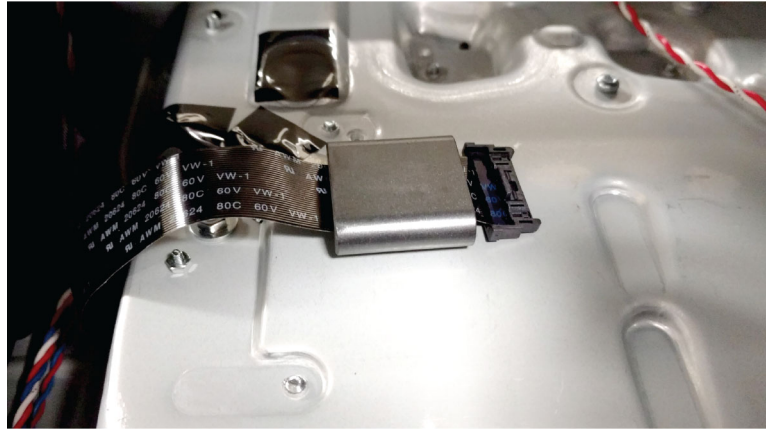


7 Remove the output bin cover. See [“Output bin cover removal” on page 372](#).

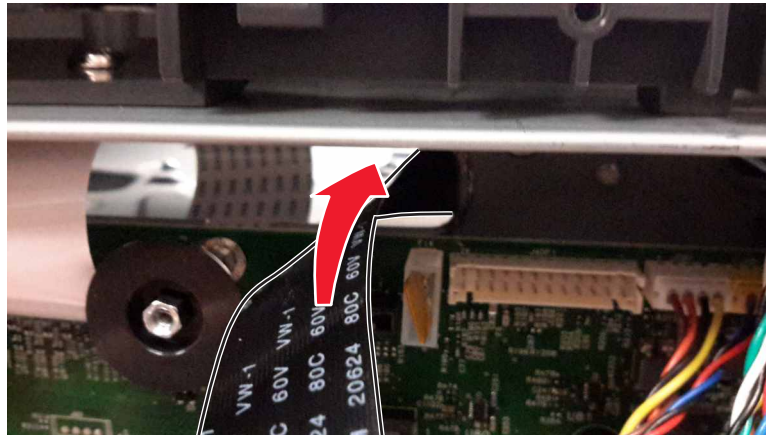
8 Pull up the cable to create some slack, and then pull the tab (B) to slide the toroid out of the retainer.



9 Pull the cable through the retainer.

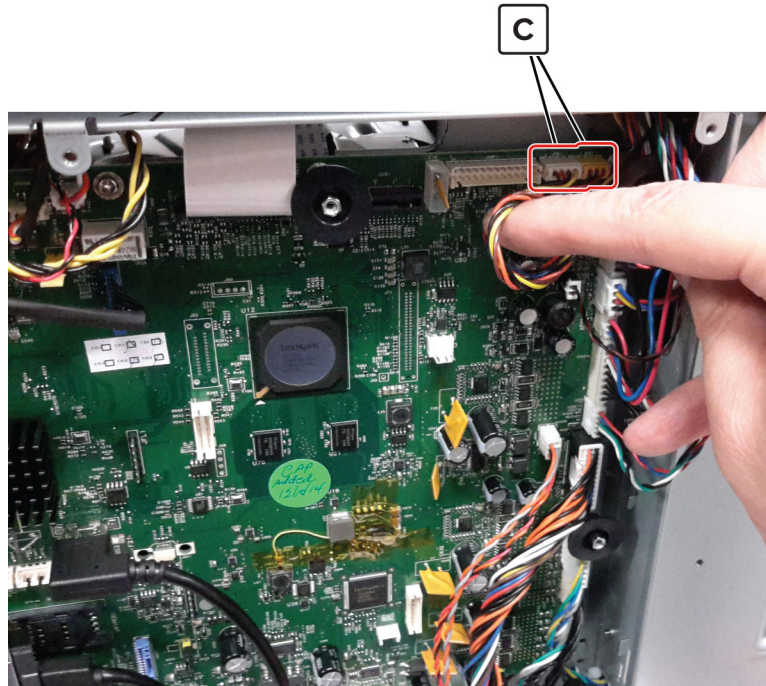


10 Route the cable through the frame and to the left side of the printer.

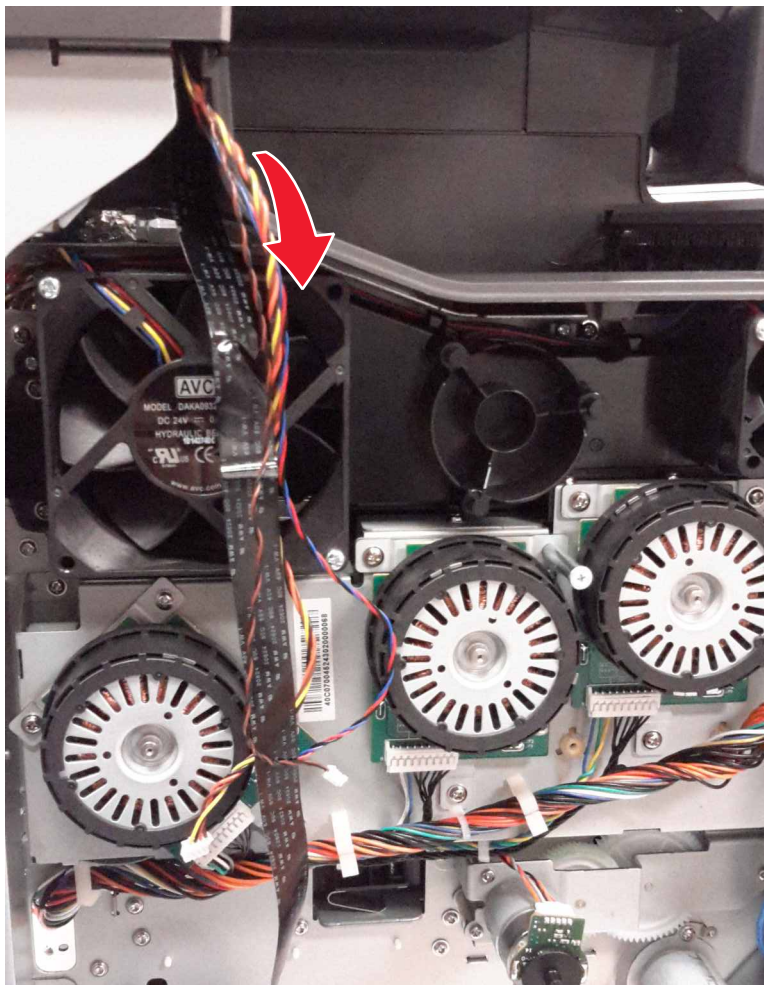


Parts removal

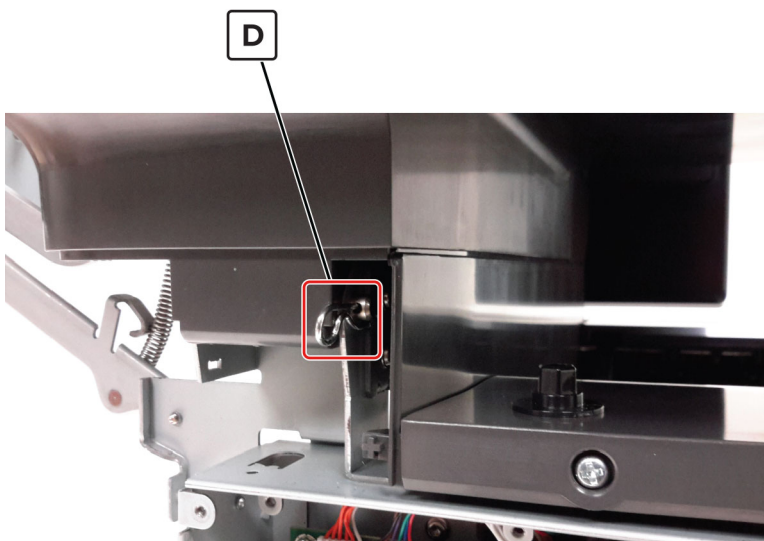
- 11** Disconnect the two cables (C) on the controller board.



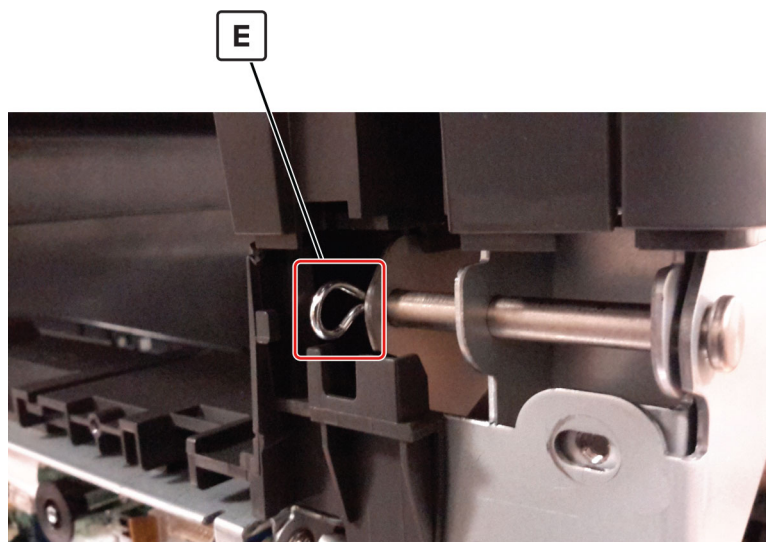
- 12** Route the cables through the frame and to the left side of the printer.



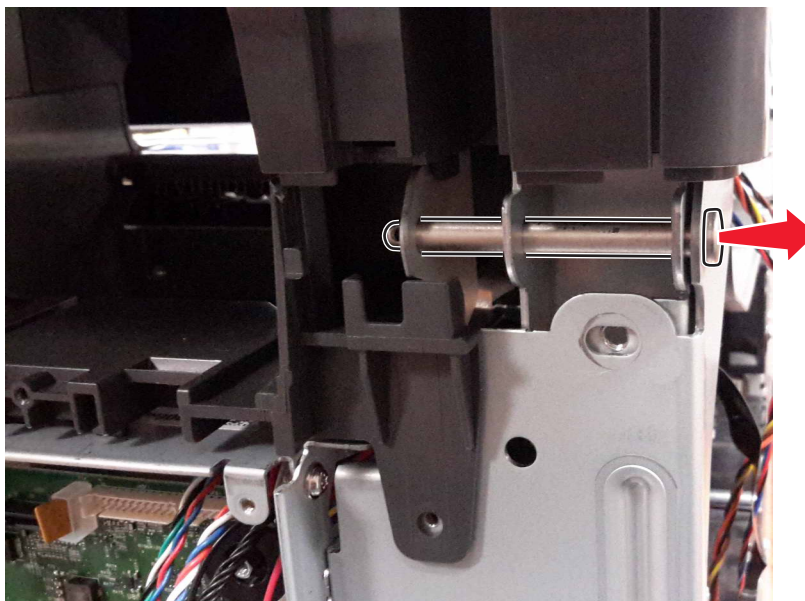
- 13** Remove the cotter pin (D) on the right side of the flatbed.

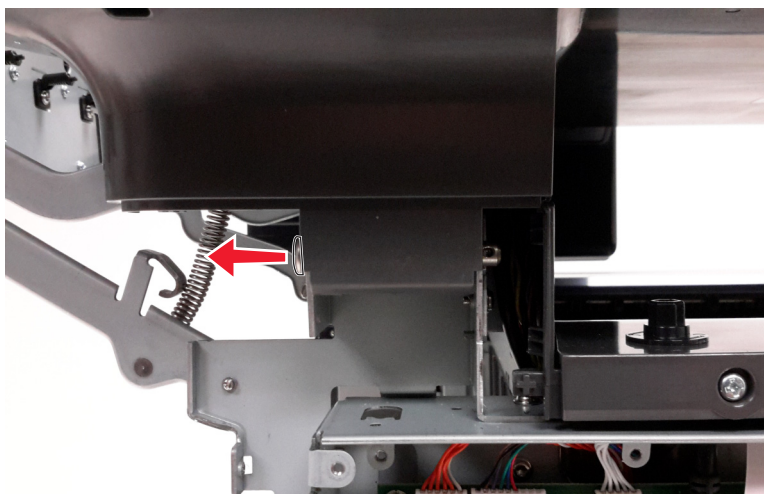


- 14** Remove the cotter pin (E) on the left side of the flatbed.



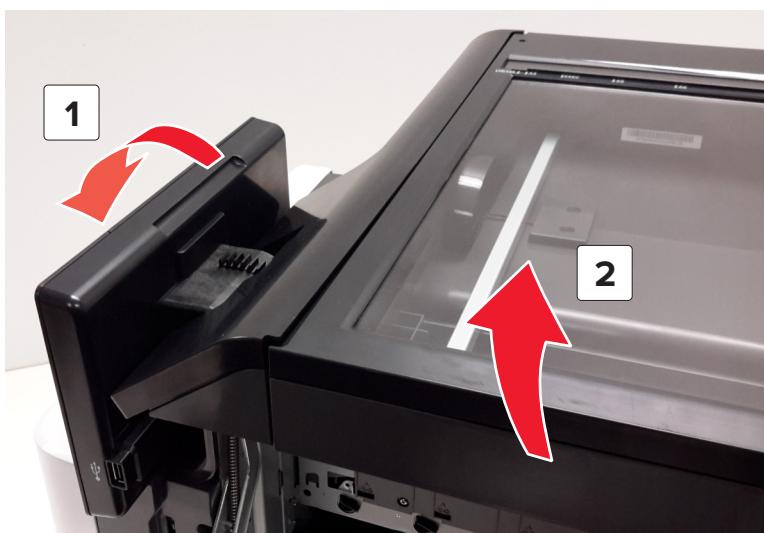
- 15** Slide out the pins to remove.





Installation note: Use the longer pin on the left hinge.

- 16** Move the control panel to the upright position, and then lift the flatbed to remove it from the printer.



Scanner cable cover removal

- 1 Using a screwdriver, release the latch on the scanner cable cover.

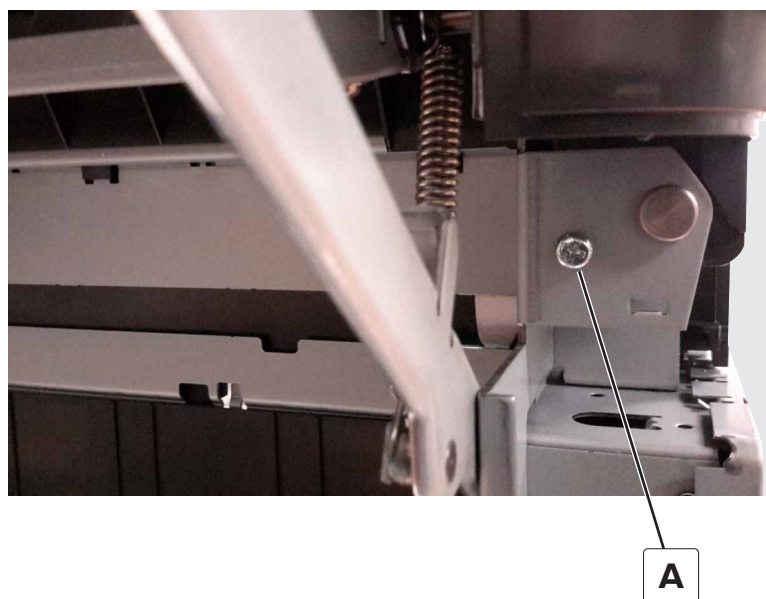


- 2 Remove the scanner cable cover.

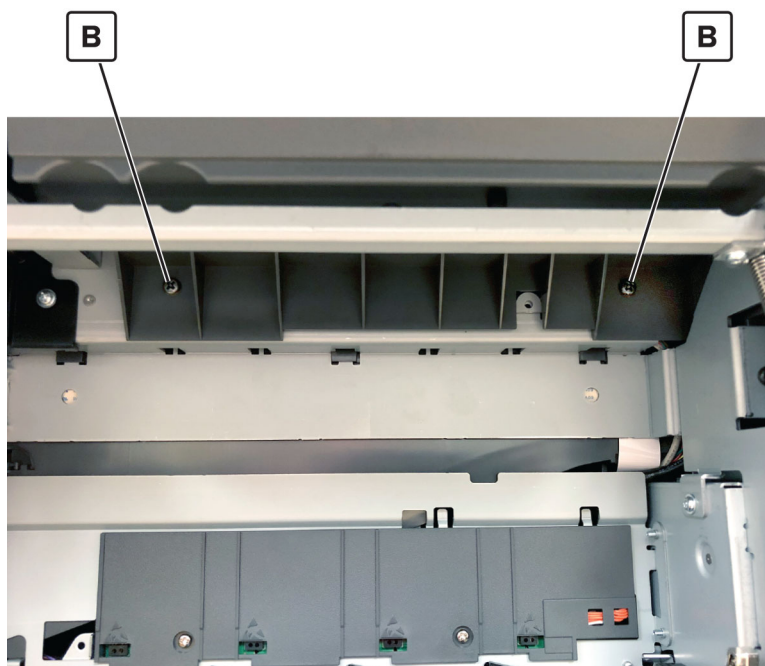
Scanner tilt removal

Note: This is not a FRU.

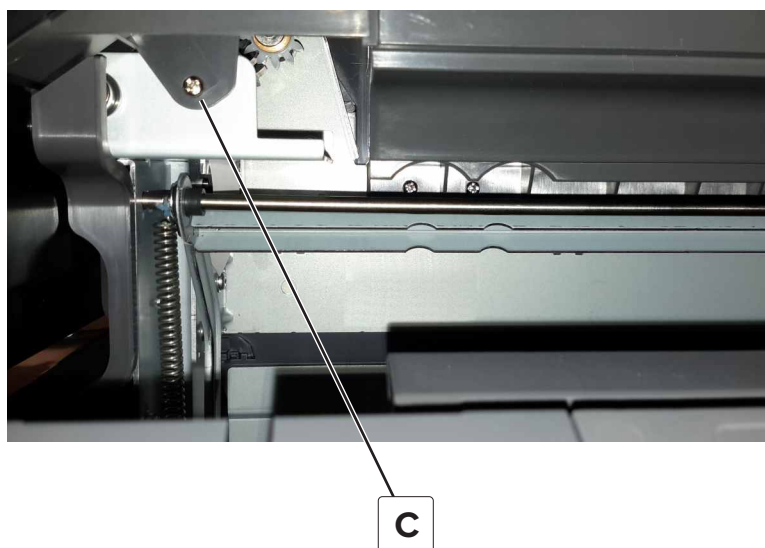
- 1 Open the toner door, and then remove the toner cartridges.
- 2 Remove the scanner rear right cover. See [“Scanner rear right cover removal” on page 376.](#)
- 3 Remove the screw (A).



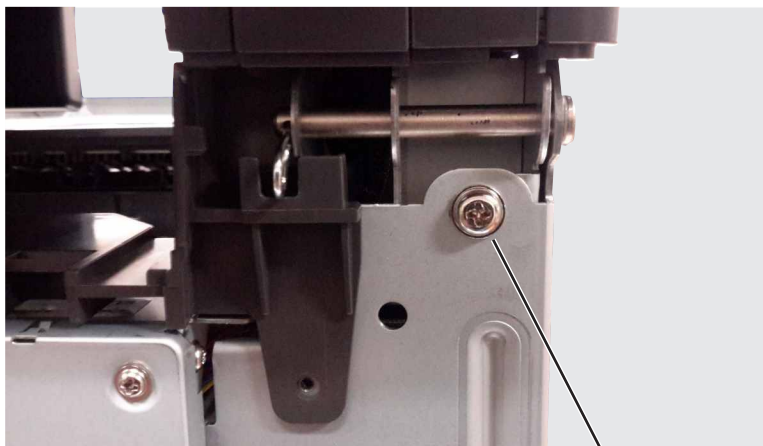
- 4** Remove the two screws (B) from inside the toner compartment.



- 5** Return the toner door to the down position, and then remove the screw (C).



- 6 Remove the screw (D), and then remove the scanner tilt.

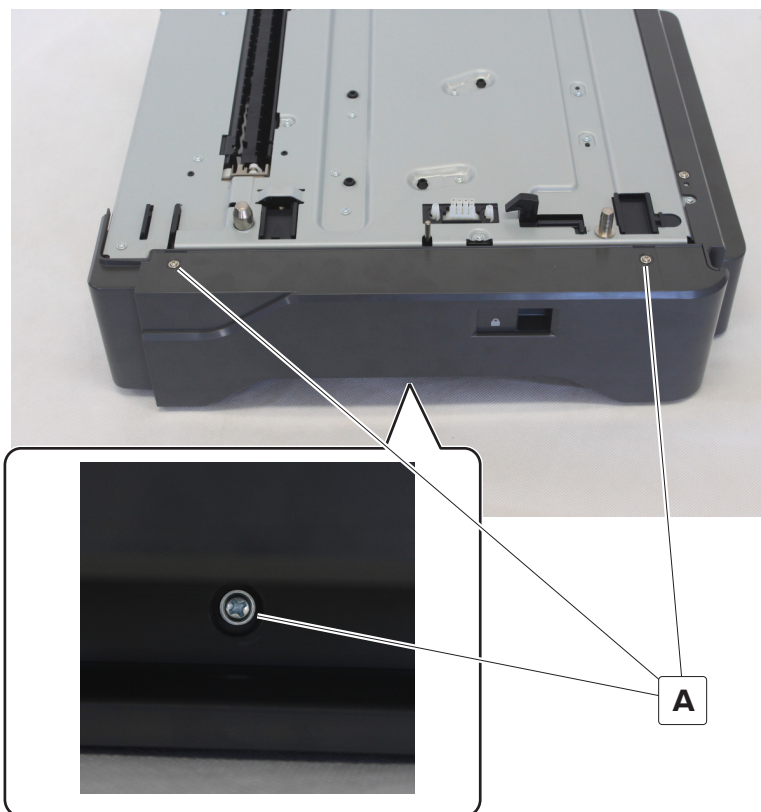


D

550-sheet tray removals

550-sheet tray right cover removal

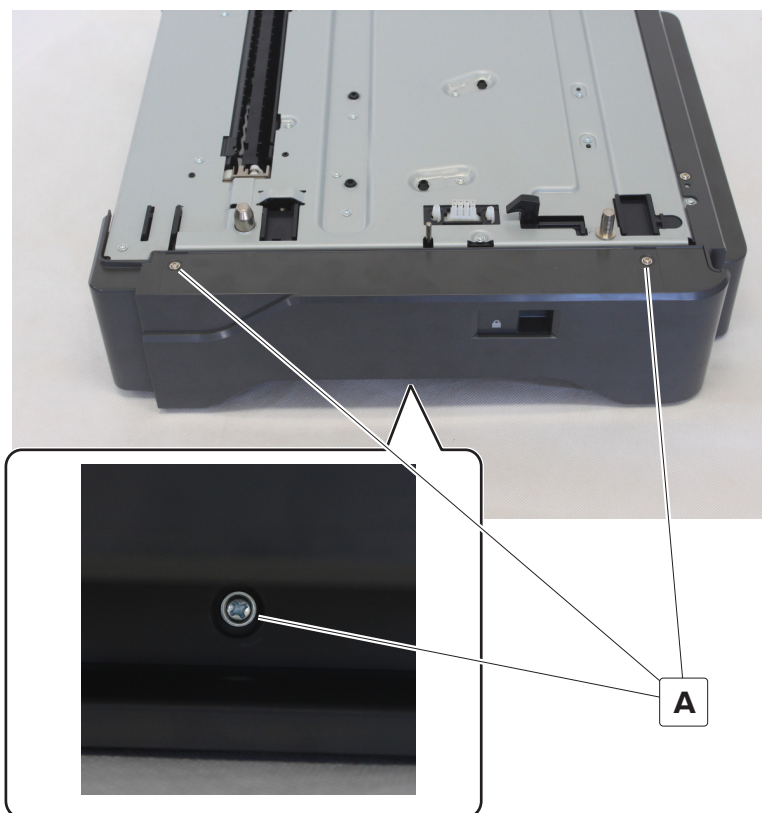
- 1 Remove the tray insert.
- 2 Remove the three screws (A).



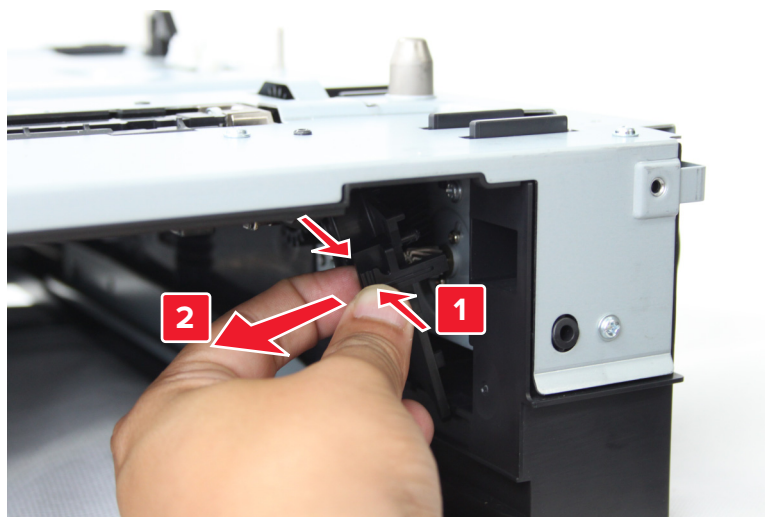
- 3 Remove the right cover.

Motor (550-sheet tray pass-through) removal

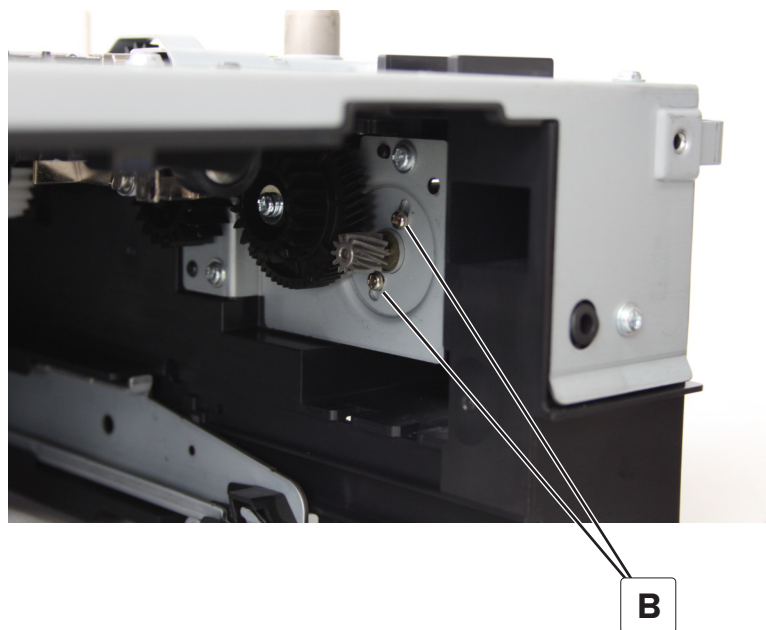
- 1 Remove the tray insert.
- 2 Remove the three screws (A).



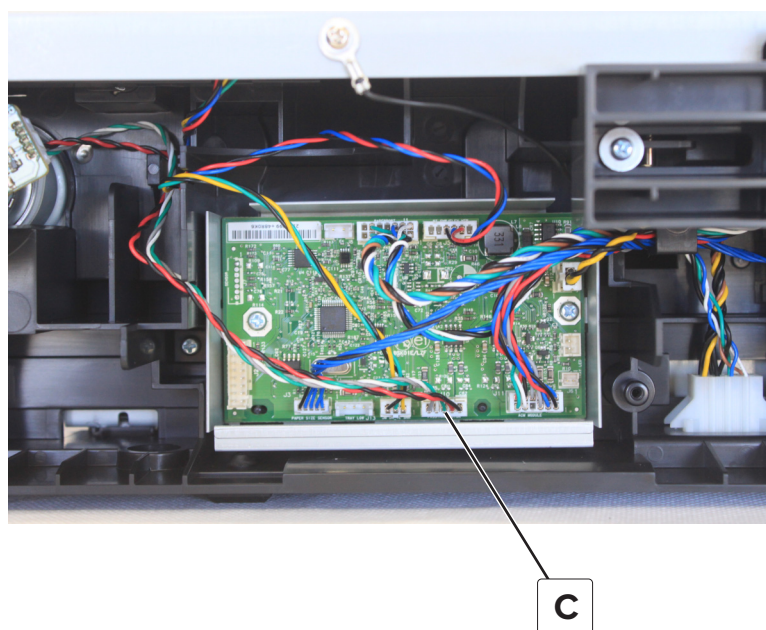
- 3 Remove the right cover.
- 4 Remove the motor cover.



5 Remove the two screws (B).



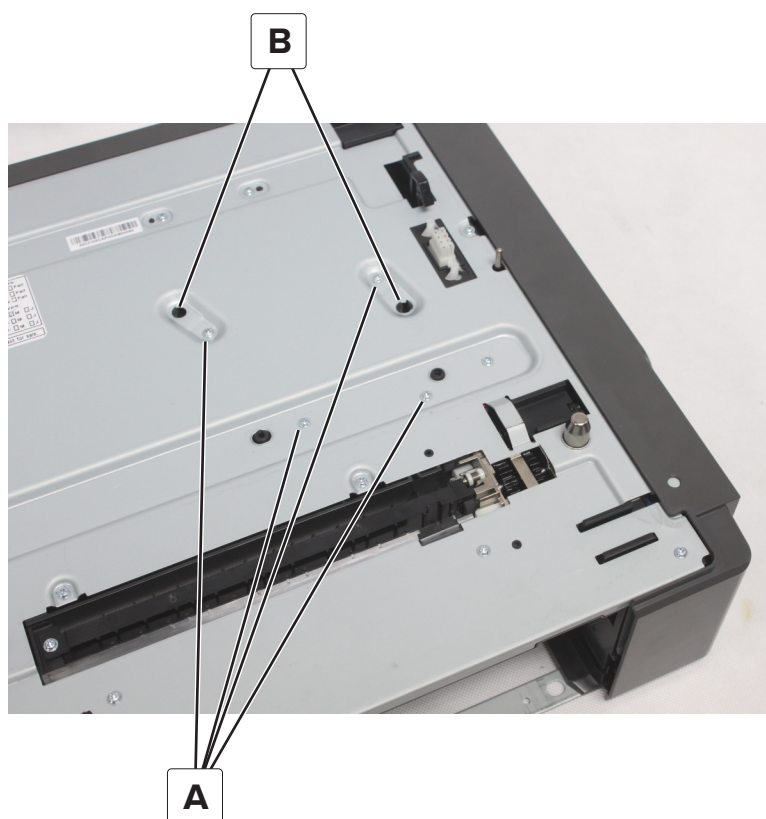
6 Disconnect the cable (C).



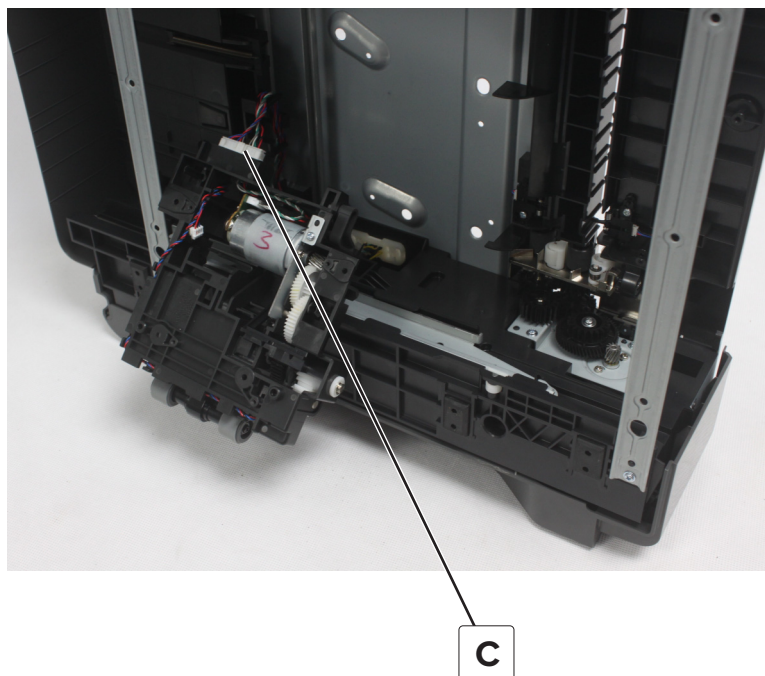
7 Remove the motor.

550-sheet tray paper feeder removal

- 1 Remove the tray insert.
- 2 Remove the four screws (A), and then release the two latches (B).



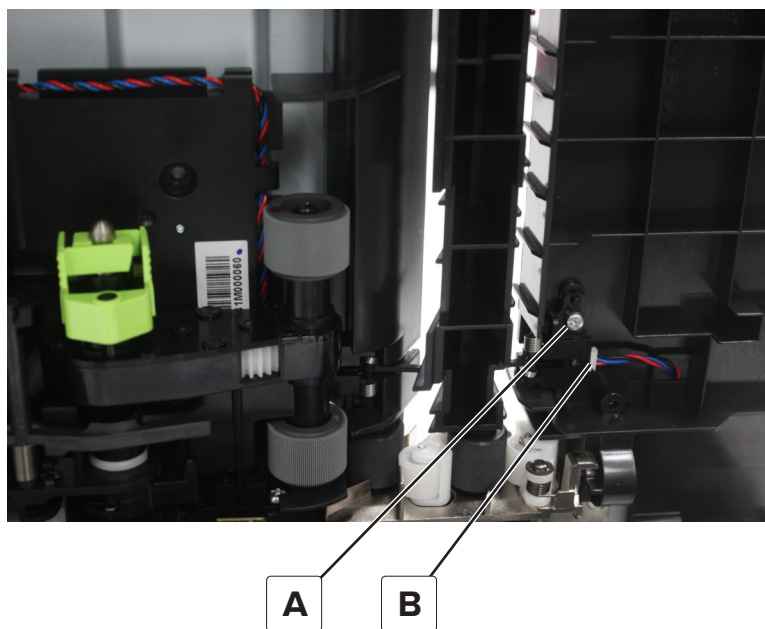
- 3** Disconnect the cable (C).



- 4** Remove the paper feeder.

Sensor (550-sheet tray pass-through) removal

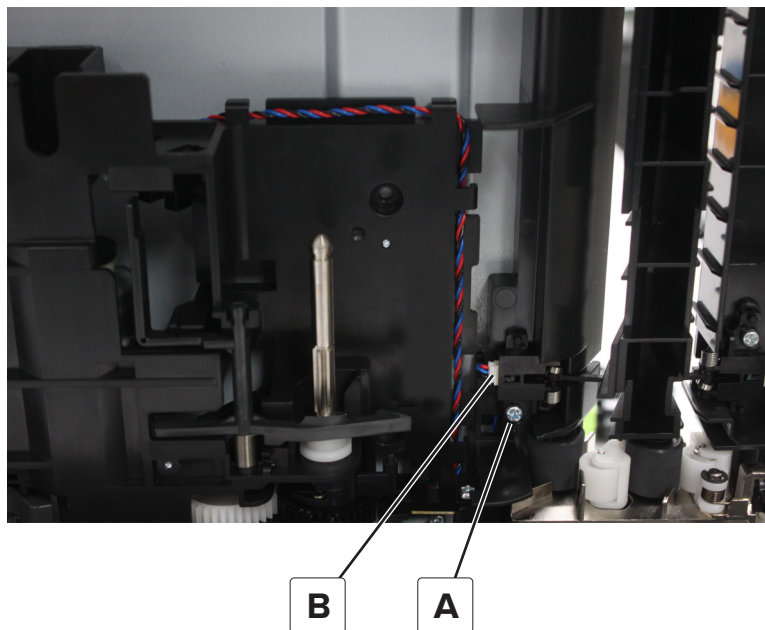
- 1** Remove the tray insert.
- 2** Remove the screw (A), and then disconnect the cable (B).



- 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).

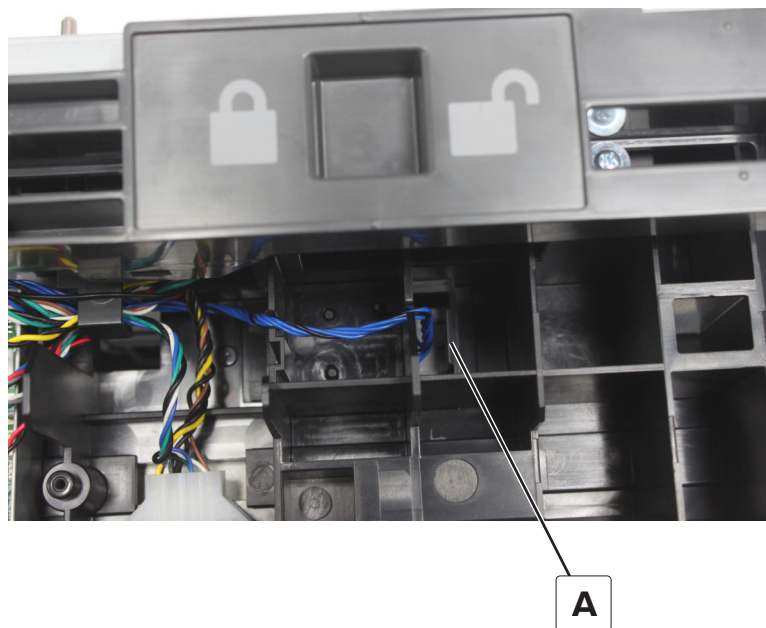


- 4 Remove the sensor.

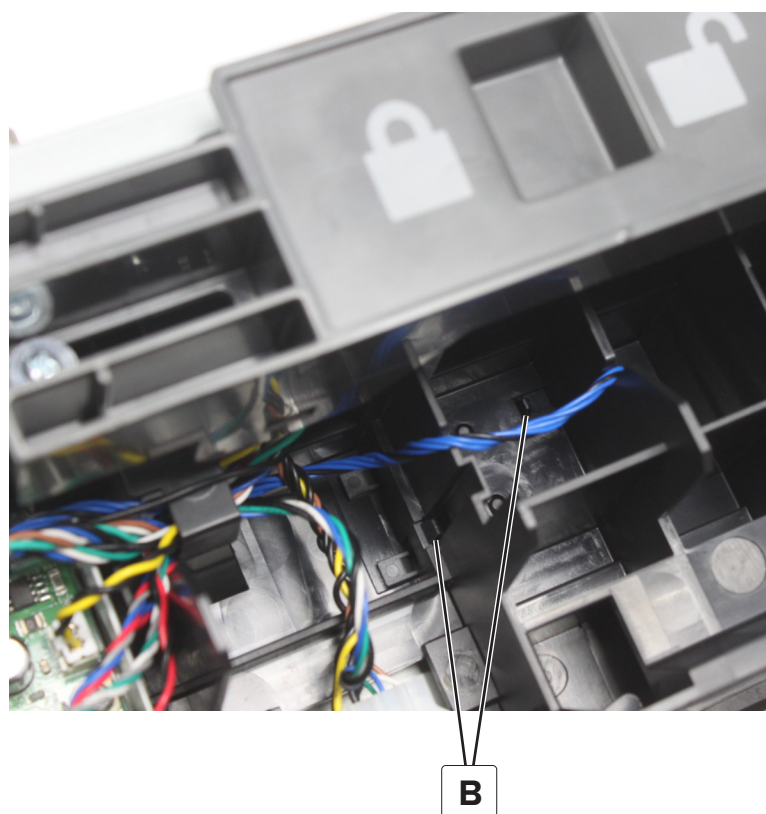
Sensor (550-sheet tray paper size) removal

- 1 Remove the tray insert.
- 2 Remove the right cover. See [“550-sheet tray right cover removal” on page 493](#).

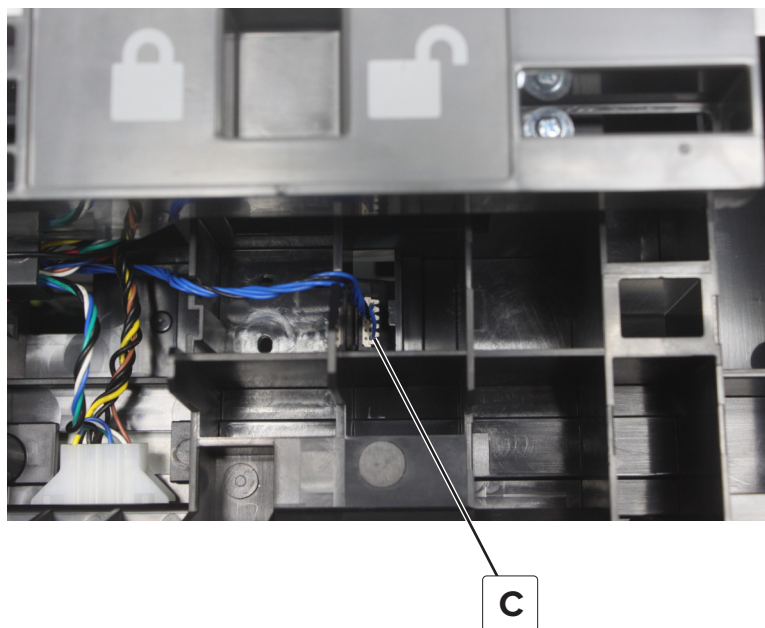
- 3** Release the latch (A), and then remove the sensor cover.



- 4** Release the two latches (B).

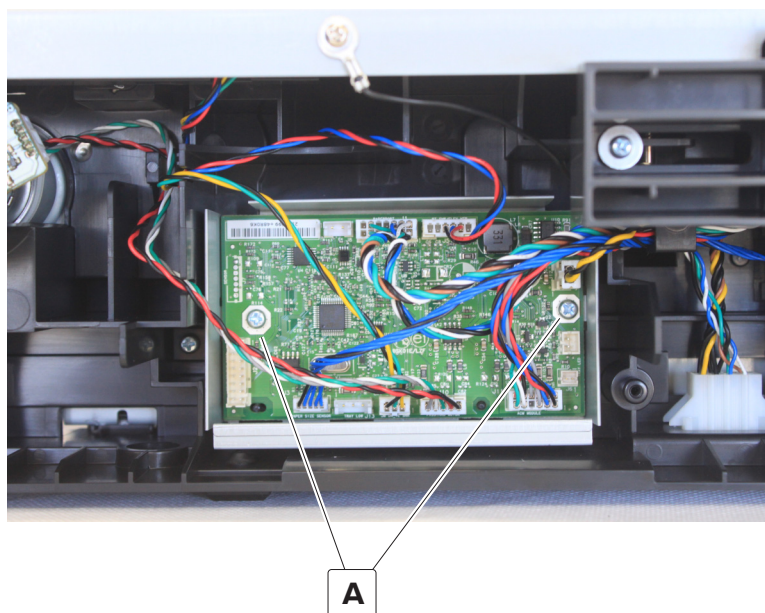


- 5 Disconnect the cable (C), and then remove the sensor.



550-sheet tray controller board assembly removal

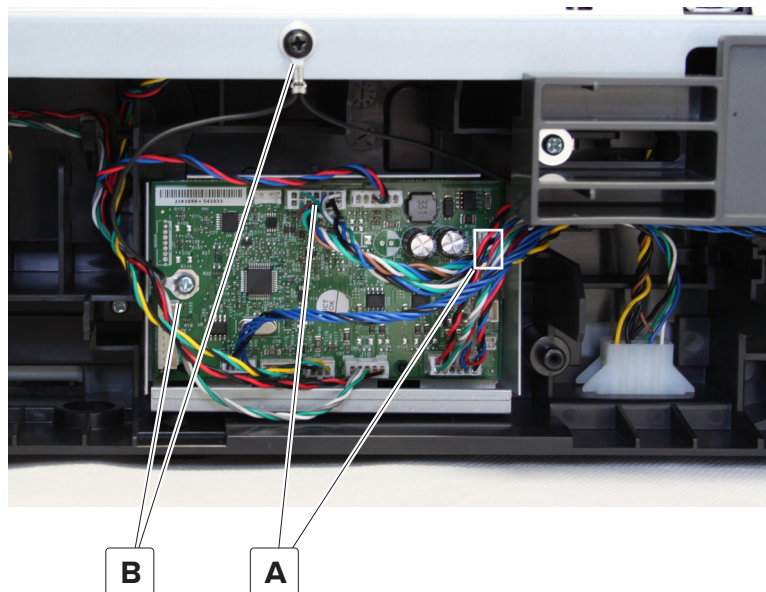
- 1 Remove the tray insert.
- 2 Remove the right cover. See [“550-sheet tray right cover removal” on page 493.](#)
- 3 Disconnect all cables from the assembly, and then remove the two screws (A).



- 4 Remove the controller board assembly.

550-sheet tray interface cable removal

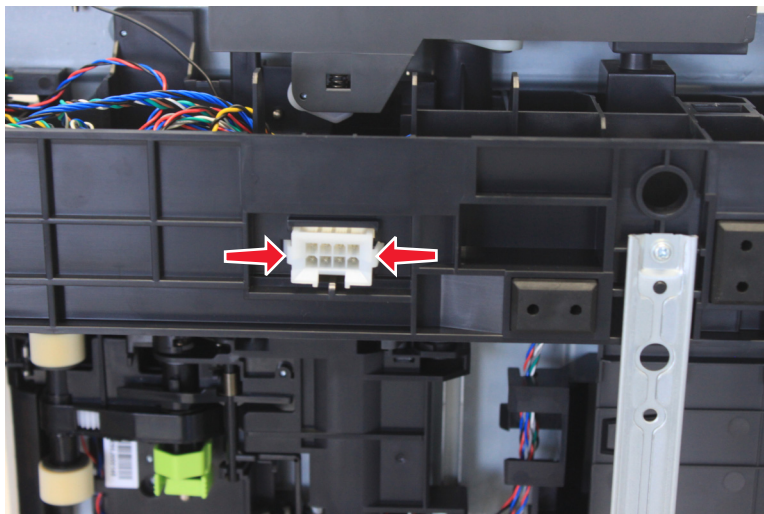
- 1 Remove the tray insert.
- 2 Remove the right cover. See [“550-sheet tray right cover removal” on page 493.](#)
- 3 Disconnect the two cables (A), and then remove the screws (B).



- 4 Squeeze, and then push the latches into the tray base to release the cable.

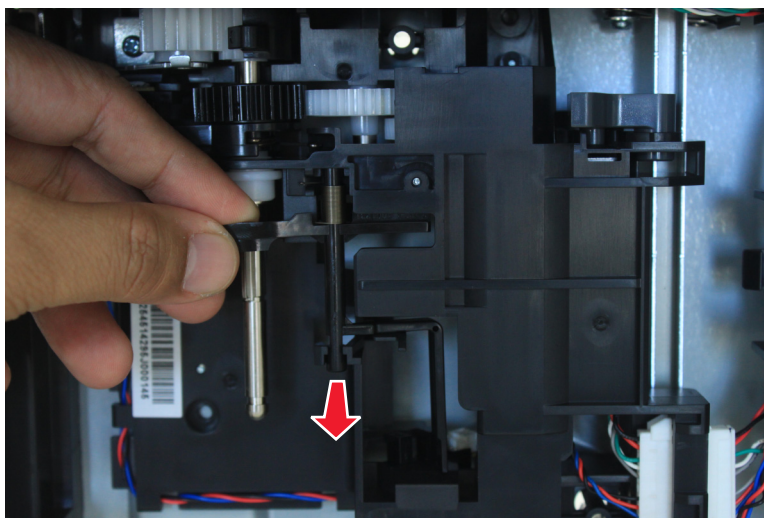


- 5 Squeeze, and then push the latches into the tray base to release the cable.

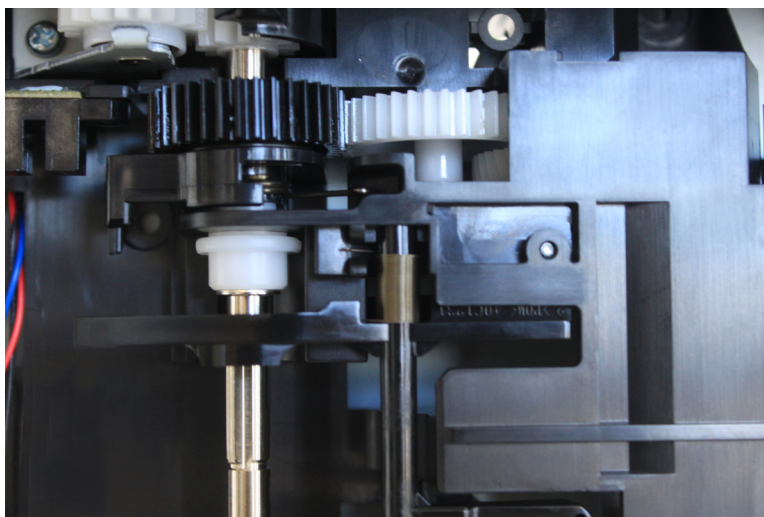


550-sheet tray empty sensor actuator removal

- 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.

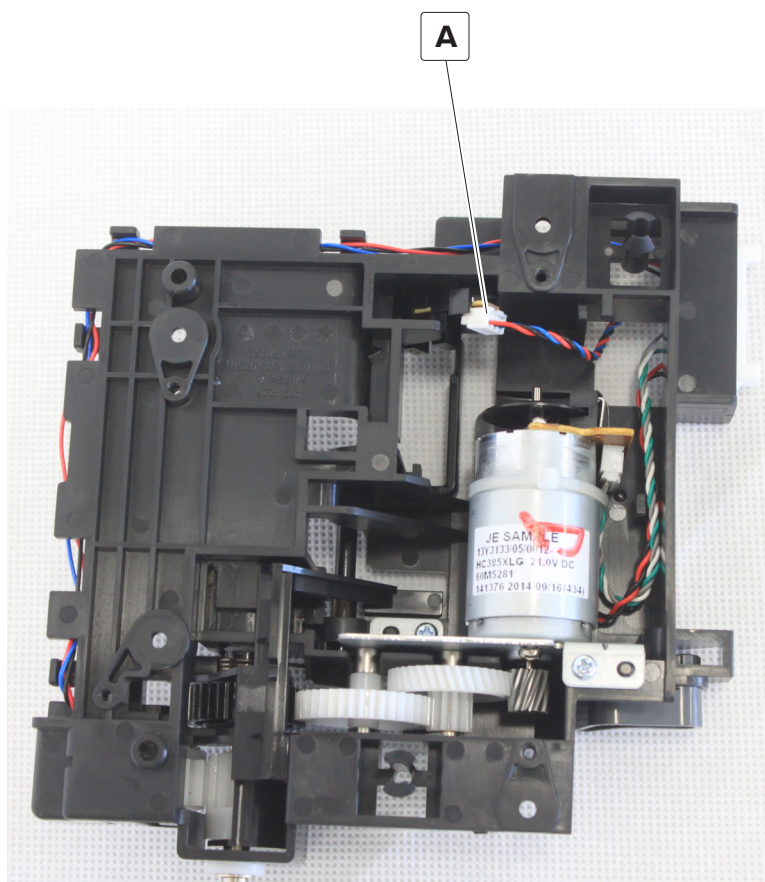


Installation note: Make sure that the actuator is properly installed as shown.



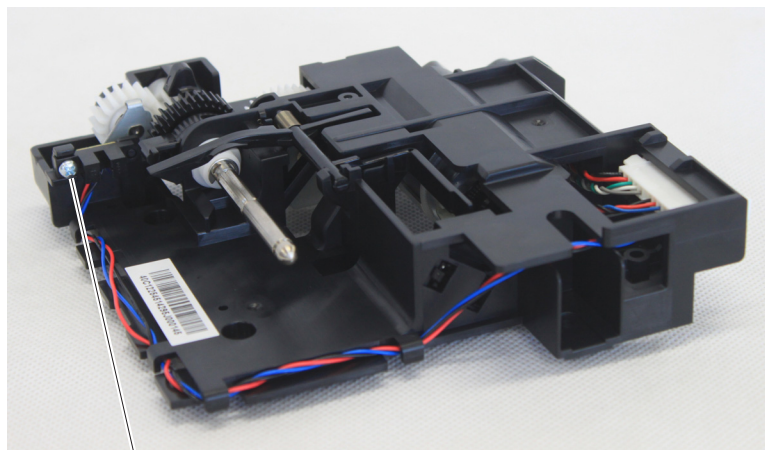
Sensor (550-sheet tray empty) removal

- 1 Remove the tray insert.
- 2 Remove the paper feeder. See [“550-sheet tray right cover removal” on page 493.](#)
- 3 Disconnect the cable (A), and then remove the sensor.

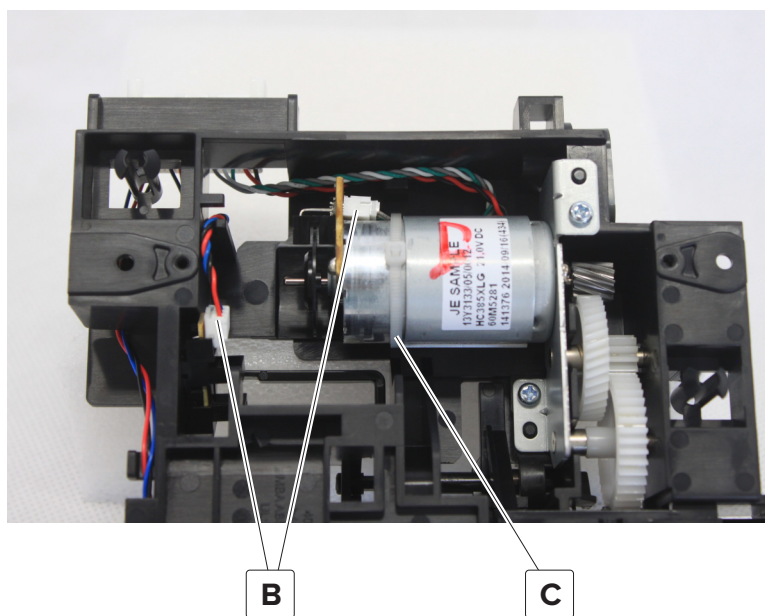


Sensor (550-sheet tray index) removal

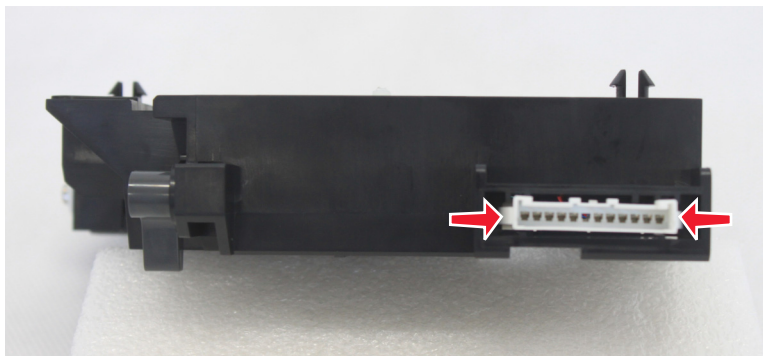
- 1 Remove the tray insert.
- 2 Remove the paper feeder. See [“550-sheet tray right cover removal” on page 493.](#)
- 3 Remove the screw (A).



- 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: To reduce the risk of equipment instability, load each tray separately. Keep all other trays closed until needed.

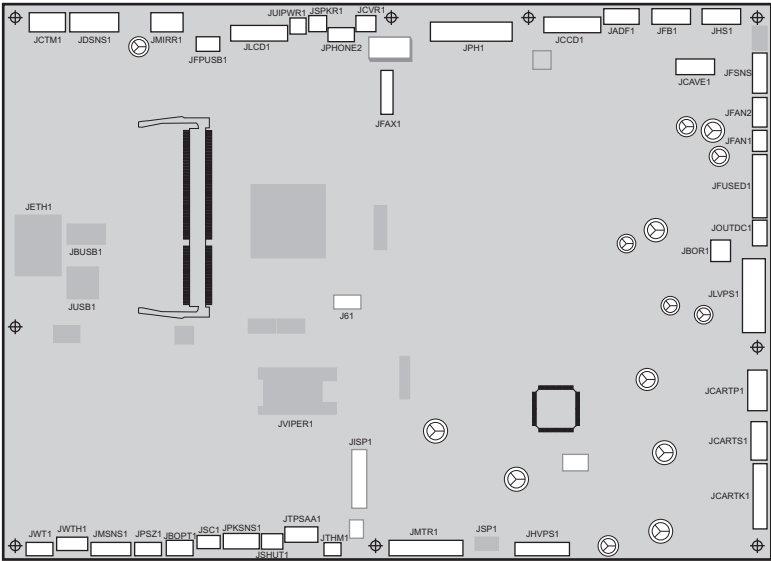
You can configure your printer by adding three optional 550-sheet trays.



1	Automatic document feeder (ADF)
2	ADF tray
3	ADF bin
4	Control panel

5	650-sheet duo tray
6	Optional 550-sheet trays
7	Standard bin

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

Connector	Connects to	Pin no.	Signal
JFAN2	Fuser / LVPS	1	GND
		2	+25V_FAN
		3	FAN2_FG_IN
		4	GR_FAN2_PWM
JFUSED	Fuser motor	1	HALLF_A_IN
		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

Connector	Connects to	Pin no.	Signal
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
		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

Connector	Connects to	Pin no.	Signal
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
		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

Connector	Connects to	Pin no.	Signal
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

Connector	Connects to	Pin no.	Signal
JMTR1	Isolation unit motor and pick motor and sensors	1	VS10_BA_LED
		2	V30_BA+
		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

Connector	Connects to	Pin no.	Signal
JTPSAA1	TPS and auto align sensors	1	VS10_TPS1_VDD
		2	TPS1_DIFF
		3	TPS1_SPEC
		4	GND
		5	TPS1_SPEC_G
		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

Connector	Connects to	Pin no.	Signal
JSC1	Imaging	1	V_FUSE_5V
		2	I2CDATA_AR_R
		3	I2CCLK_AR_R
		4	GND
JBOPT1	Optional 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
		14	GND
JWTH1	Weather station	--	--

Connector	Connects to	Pin no.	Signal
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
		4	GND
		5	V25_MM_25V
JPFUSB1	USB port		

Connector	Connects to	Pin no.	Signal
JLCD1	LCD display	1	LED_DRV_YLW2
		2	+5VL
		3	GSPI_TXD
		4	MIR_SPI_CS
		5	PWR_BUTTON_R2
		6	NC_SPICS_EXPAN1
		7	NC_SPICS_EXPAN2
		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-
		29	GND
		30	LVDS_UI_D0R+
		31	LVDS_UI_D0R-
		32	V15_UI
		MTG1	GND
		MTG2	GND

Connector	Connects to	Pin no.	Signal
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

Connector	Connects to	Pin no.	Signal
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
		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+

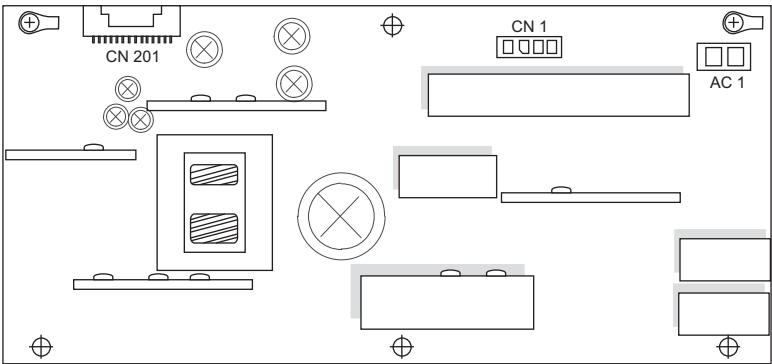
Connector	Connects to	Pin no.	Signal
JPH1	Printhead	31	GND
		32	MDATA2-
		33	MDATA2+
		34	GND
		35	MDATA1-
		36	MDATA1+
		37	GND
		38	CDATA2-
		39	CDATA2+
		40	GND
		41	CDATA1-
		42	CDATA1+
		43	GND
		44	KDATA2-
		45	KDATA2+
		46	GND
		47	KDATA1-
		48	KDATA1+
		49	GND
		50	LADJ_D3_OUT
		MTG1	GND
		MTG2	GND

Connector	Connects to	Pin no.	Signal
JCCD1	Flatbed CCD	1	GND
		2	+5V_SCAN
		3	FBR_AFE_SH
		4	+5V_SCAN
		5	FBR_AFE_SDIO
		6	+5V_SCAN
		7	FBR_AFE_SCLK
		8	GND
		9	FBR_AFE_SEN
		10	GND
		11	FBR_LVDS_RXIN0-
		12	FBR_LVDS_RXIN0+
		13	GND
		14	FBR_LVDS_RXIN1-
		15	FBR_LVDS_RXIN1+
		16	GND
		17	FBR_LVDS_RXIN2-
		18	FBR_LVDS_RXIN2+
		19	GND
		20	FBR_LVDS_RXCLK-
		21	FBR_LVDS_RXCLK+
		22	GND
		23	FBR_LVDS_MCLK-
		24	FBR_LVDS_MCLK+
		25	GND
		26	AFE_RST_CON
		27	GND
		28	+25V_CDO_IN
		29	+25V_CDO_IN
		30	GND
		31	+25V_CDO_IN
		32	GND
		MTG1	GND
		MTG2	GND

Connector	Connects to	Pin no.	Signal
JADF1	ADF assembly	1	PAP_PRES_ADFR
		2	FEED_DIR_ADFR
		3	STAGE_ADFR
		4	FEED_PWM_ADFR
		5	FEED_ADFR
		6	ECLUTCH_PWM_R
		7	DUPLEX_ADFR
		8	PICK_DIR_ADFR
		9	COVER_FBR
		10	PICK_PWM_ADFR
		11	COVER_ADFR
		12	nFAULT_ADF
		13	TRAIL_ADFR
		14	+25V_ADF
		15	+3V_MAIN_ADF
		16	+25V_ADF
		17	GND
		18	GND
		19	PICK_ENC_X_ADFR
		20	FEED_EC_Y_ADFR
		21	FEED_EC_X_ADFR
		22	+3V_WAKE_ADF
		23	GND
JFB1	Flatbed motor	1	FBM_A-
		2	FBM_A+
		3	FBM_B+
		4	FBM_B-
JCAVE1	Cave light	1	V_CAVE_PWR
		2	CAVE_LT_PWR
JHS1	Flatbed home sensor	1	+3.3V_HOME
		2	GND
		3	HOME_FBR

Connector	Connects to	Pin no.	Signal
JFAX	Fax modem	1	BSPI_CS-
		2	NC_FAXBuzzer_R
		3	BSPI_RXD
		4	GND
		5	BSPI_TXD
		6	GND
		7	BSPI_CLK
		8	GND
		9	SPI_IRQ-
		10	+5V_RIP
		11	FAX_POR_R
		12	+3.3v
		13	+3.3v
		14	TONE

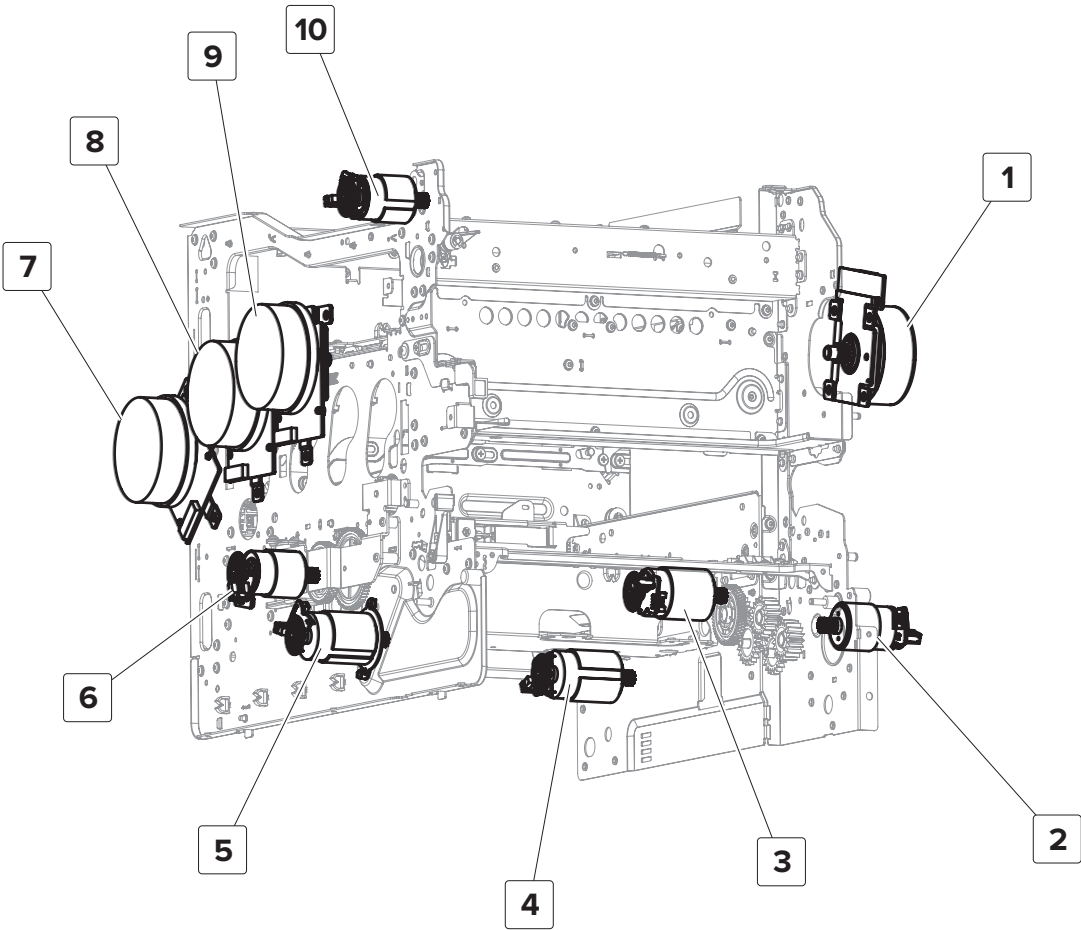
LVPS controller board connectors



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
		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

Connector	Connects to	Pin no.	Signal
AC1	AC line in	1	Phase
		2	Neutral

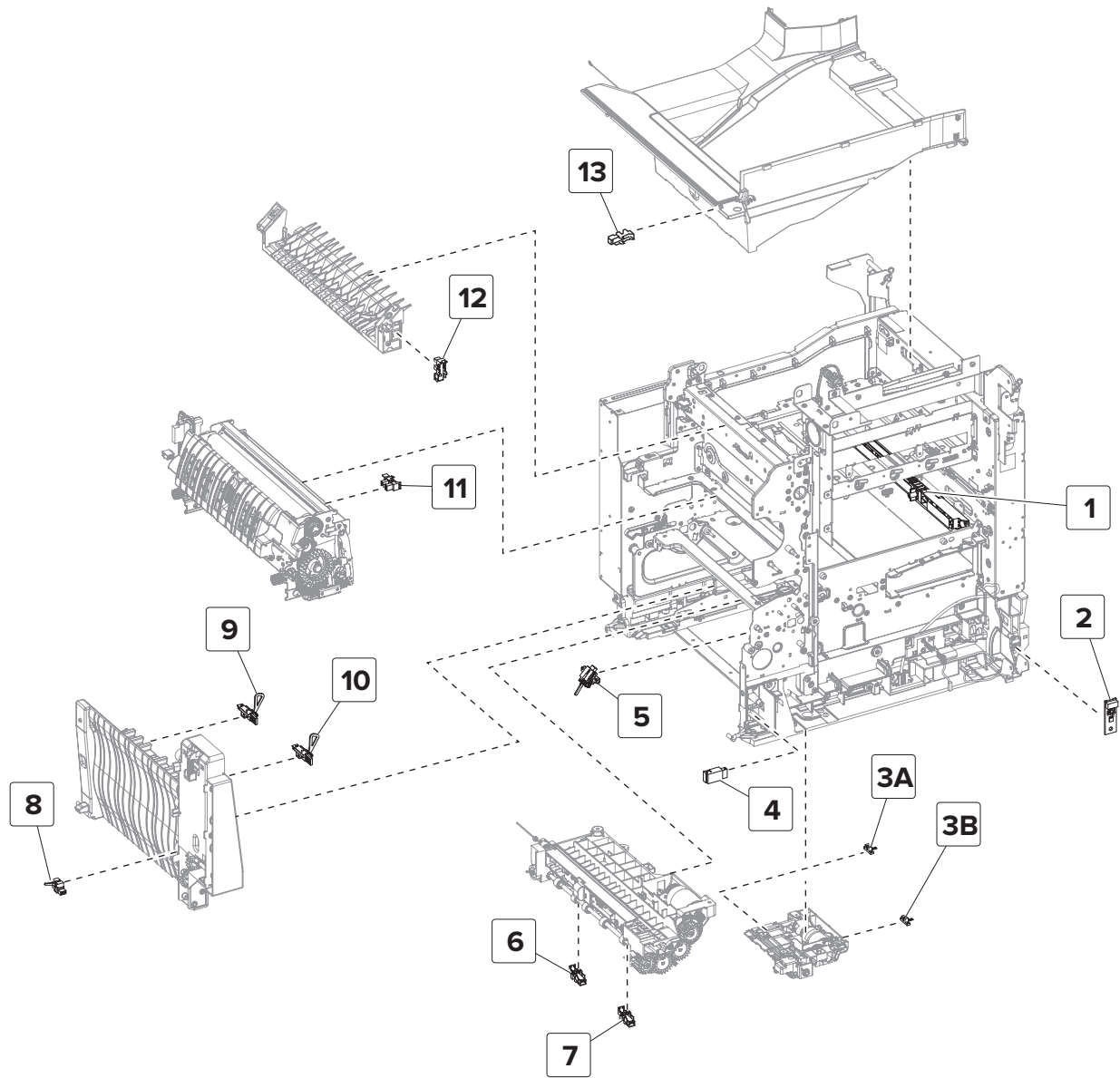
Motor locations



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)

Part	Description
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

Use this guide in identifying the parts that must be inspected, cleaned, or replaced based on the page count.

If any unsafe condition exists, find out how serious the hazard is and if you can continue before you correct the hazard.

As you service the machine, check for the following:

- Damaged, missing, or altered parts, especially in the area of the power switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top cover and power supply cover
- Possible safety exposure from any non-Lexmark attachments

Use the following table to determine when specified parts should be inspected:

Lexmark CX725, XC4150, and XC4153	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			
Duplex path rollers	Inspect		<ul style="list-style-type: none">• 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

The control panel displays an **80.xx** error when it reaches certain page counts. It is necessary to replace the appropriate maintenance kit to maintain print quality and printer reliability.

Note: When replacing the maintenance kit, install all the parts that are included in the box, and then reset the maintenance counter.

Maintenance kits

The printer may stop printing when the 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 532](#).

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	<ul style="list-style-type: none"> 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 532 .
41X0554—Fuser maintenance kit, type 00, 110–120V	<ul style="list-style-type: none"> 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 532 .

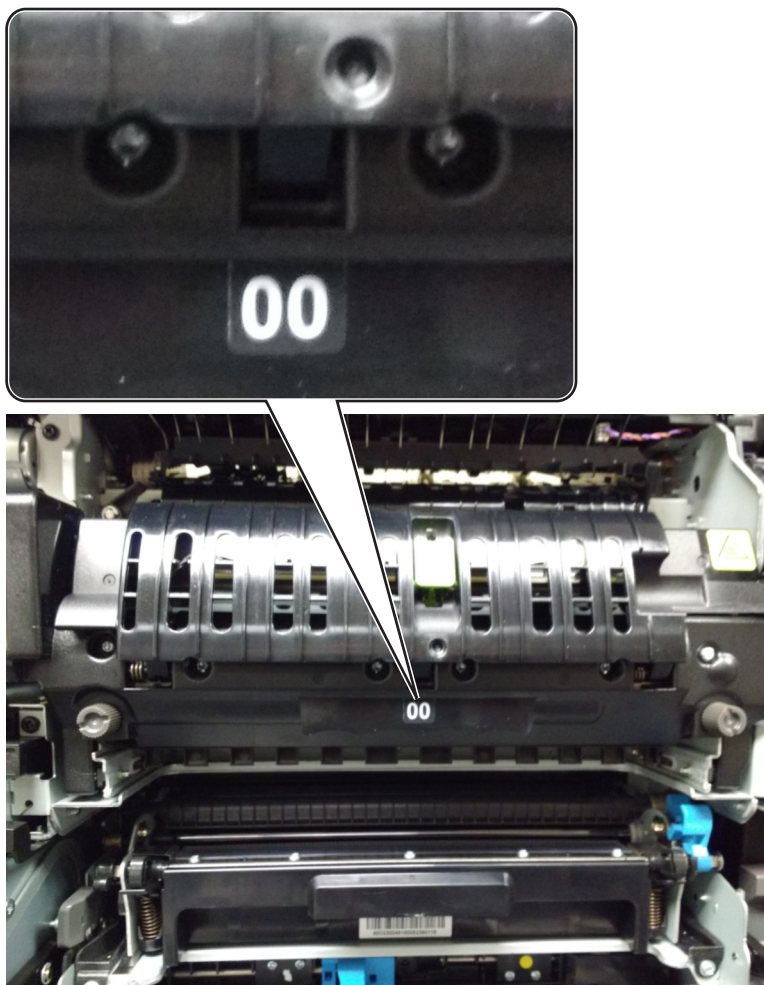
Part number and kit	Contents	Maintenance interval	Action
41X0556—Fuser maintenance kit, type 01, 220–240V	<ul style="list-style-type: none"> • 41X0253—Fuser (220V) • 41X0956—Pick roller • 41X0374—Separator pad 	150K	Reset the fuser maintenance counter after replacing the fuser maintenance kit. See “Resetting the maintenance counter” on page 532.
40X9929—Transfer module	--	150K	Reset the ITM maintenance counter after replacing the transfer module. See “Resetting the maintenance counter” on page 532.

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.

Notes:

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

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

Notes:

- Do not use household cleaners or detergents, as they may damage the finish of the printer.
- Make sure that all areas of the printer are dry after cleaning.

- 5 Connect the power cord, and then turn on the printer.

Cleaning the scanner glass

- 1 Open the scanner cover.



2 Wipe the areas shown with a damp, soft, lint-free cloth.

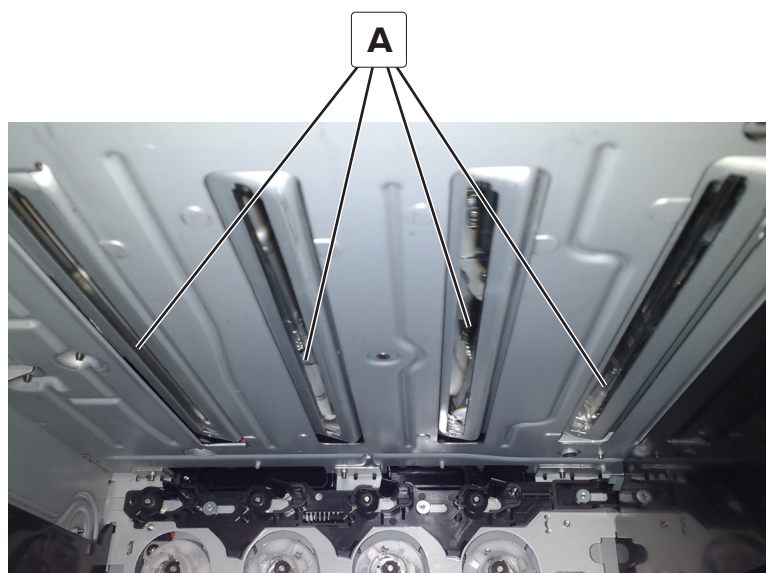


1	White underside of the scanner cover
2	Scanner glass
3	Automatic document feeder (ADF) glass
4	White underside of the ADF cover

3 Close the scanner cover.

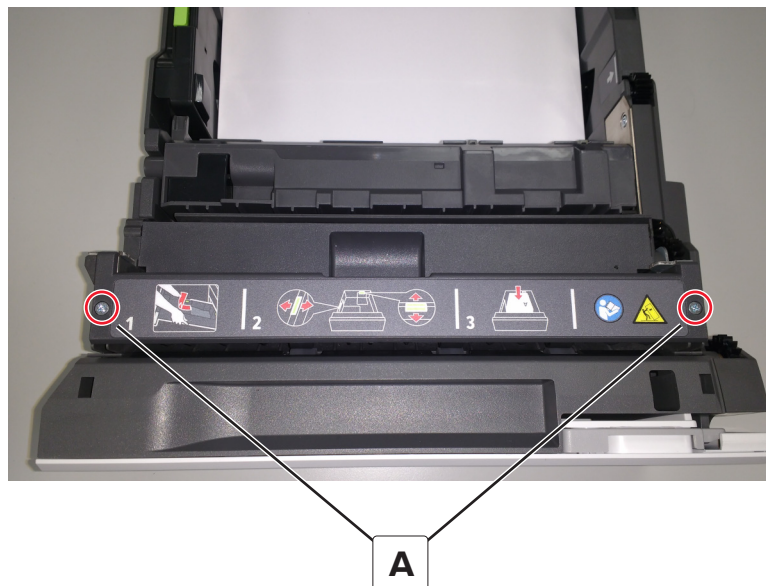
Cleaning the printhead lenses

- 1** Remove the waste toner bottle.
- 2** Remove the imaging kit.
- 3** Using a lint-free cloth, wipe the printhead lenses (A).

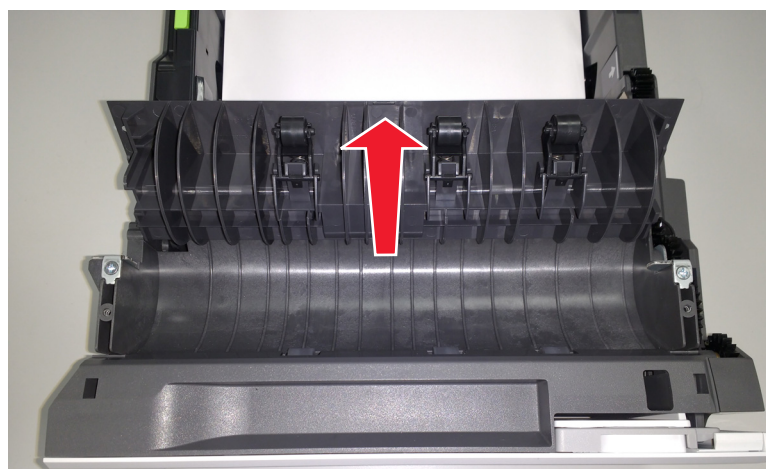


Cleaning the main tray duplex turnaround

- 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

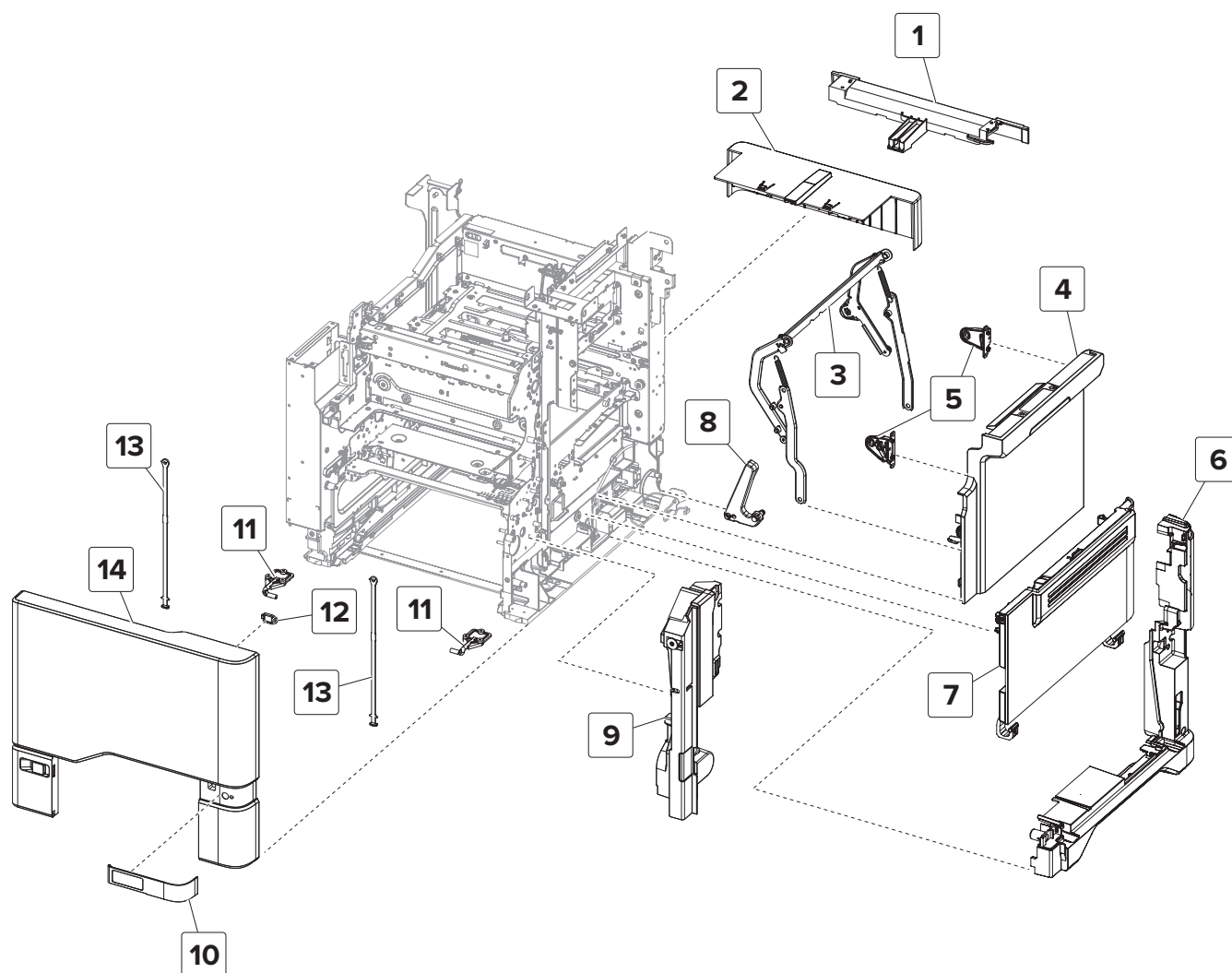
The following column headings are used in the parts catalog:

- **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.

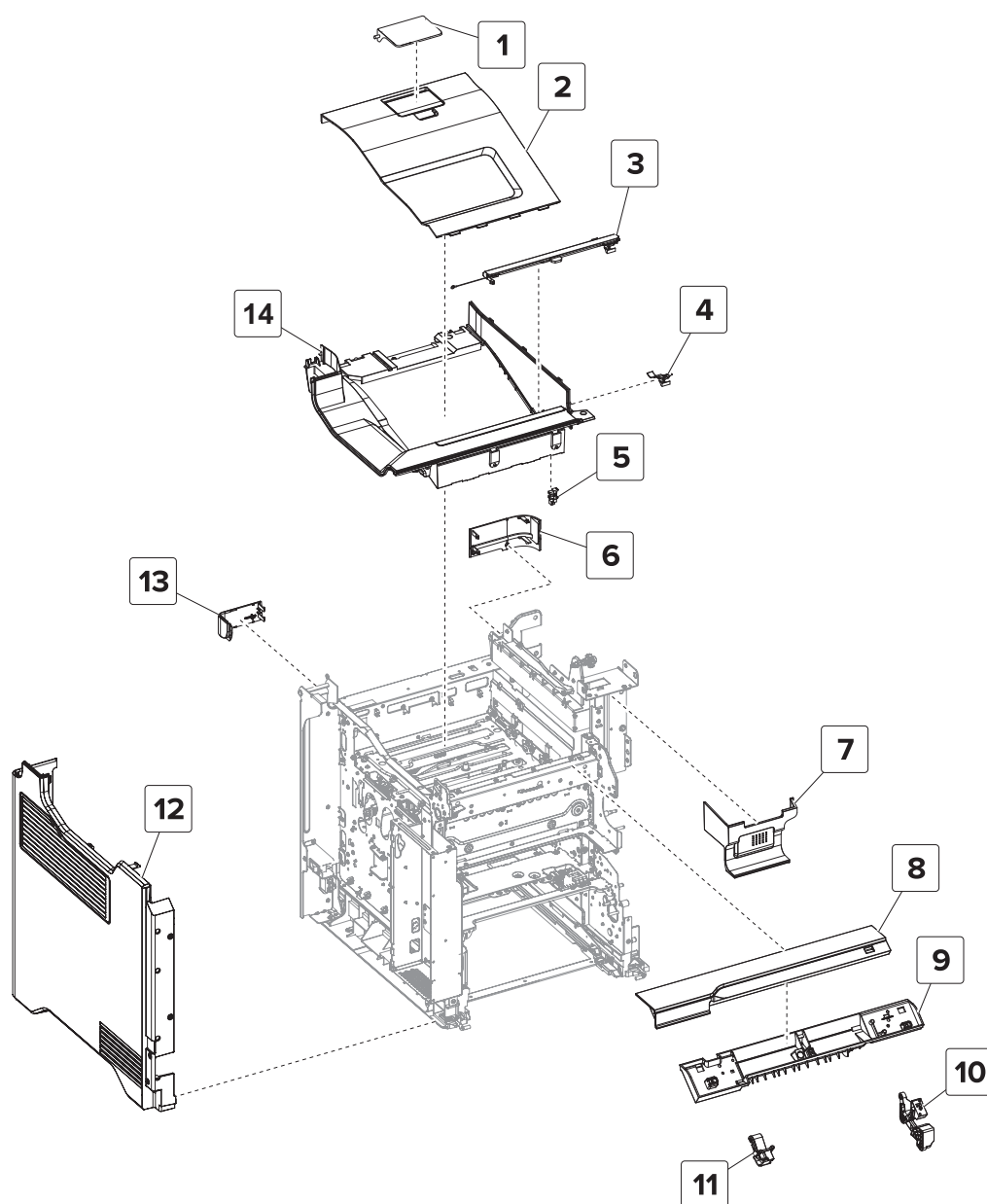
Assembly 1: Covers 1



Assembly 1: Covers 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0424	1	1	Rear handle cover	--
2	41X0408	1	1	Rear tray cover	--
3	41X0428	1	1	Toner door mount frame	“Toner door mount frame removal” on page 368
4	41X0427	1	1	Toner door	“Toner door removal” on page 364
5	41X0559	1	1	Toner door mount bracket	“Toner door mount bracket removal” on page 366
6	41X0419	1	1	Right cover	“Right cover removal” on page 360
7	41X0403	1	1	Imaging unit cover	“Imaging unit cover removal” on page 422
8	41X0686	1	1	TPS wiper mechanism	“TPS wiper mechanism removal” on page 428
9	41X0443	1	1	Motor cover	“Motor cover removal” on page 361
10	41X0401	1	1	Tray indicator cover	--
11	41X0567	2	2	Front cover hinges	“Front cover hinges removal” on page 466
12	41X0560	1	1	Front door bracket	--
13	41X0380	2	1	Front door strap	--
14	41X0442	1	1	Front cover	“Front cover removal” on page 352
NS	41X0448	1	1	Interlock assembly	--

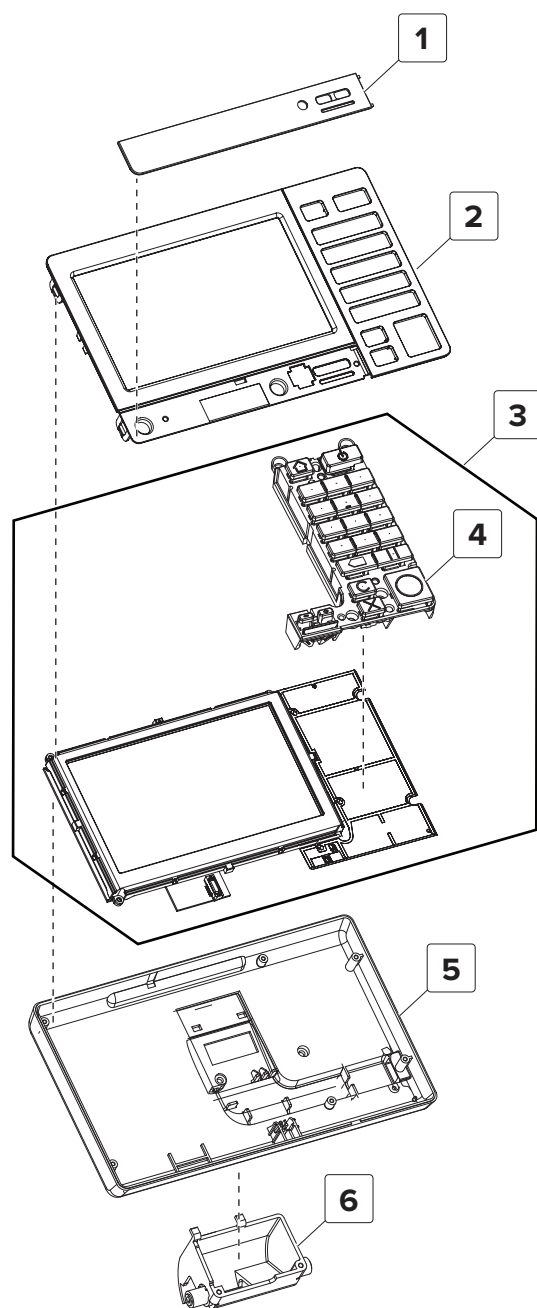
Assembly 2: Covers 2



Assembly 2: Covers 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0410	1	1	Output bin extender	--
2	41X0433	1	1	Output bin cover	“Output bin cover removal” on page 372
3	41X0771	1	1	Exit output cover	--
4	41X0772	1	1	Output bin flag	“Output bin flag removal” on page 465
5	41X0570	1	1	Sensor (bin full)	--
6	41X0435	1	1	Scanner rear right cover	“Scanner rear right cover removal” on page 376
7	41X0436	1	1	Scanner front cover	“Scanner front cover removal” on page 482
8	41X0429	1	1	Top frame cover	“Top frame cover removal” on page 373
9	41X0430	1	1	Top frame base cover	“Top frame base cover removal” on page 375
10	41X0562	1	1	Right control panel arm	“Control panel arms removal” on page 382
11	41X0561	1	1	Left control panel arm	“Control panel arms removal” on page 382
12	41X0432	1	1	Left cover	“Left cover removal” on page 358
13	41X0434	1	1	Scanner rear left cover	“Scanner rear left cover removal” on page 377
14	41X0438	1	1	Top cover	“Top cover removal” on page 354

Assembly 3: Control panel

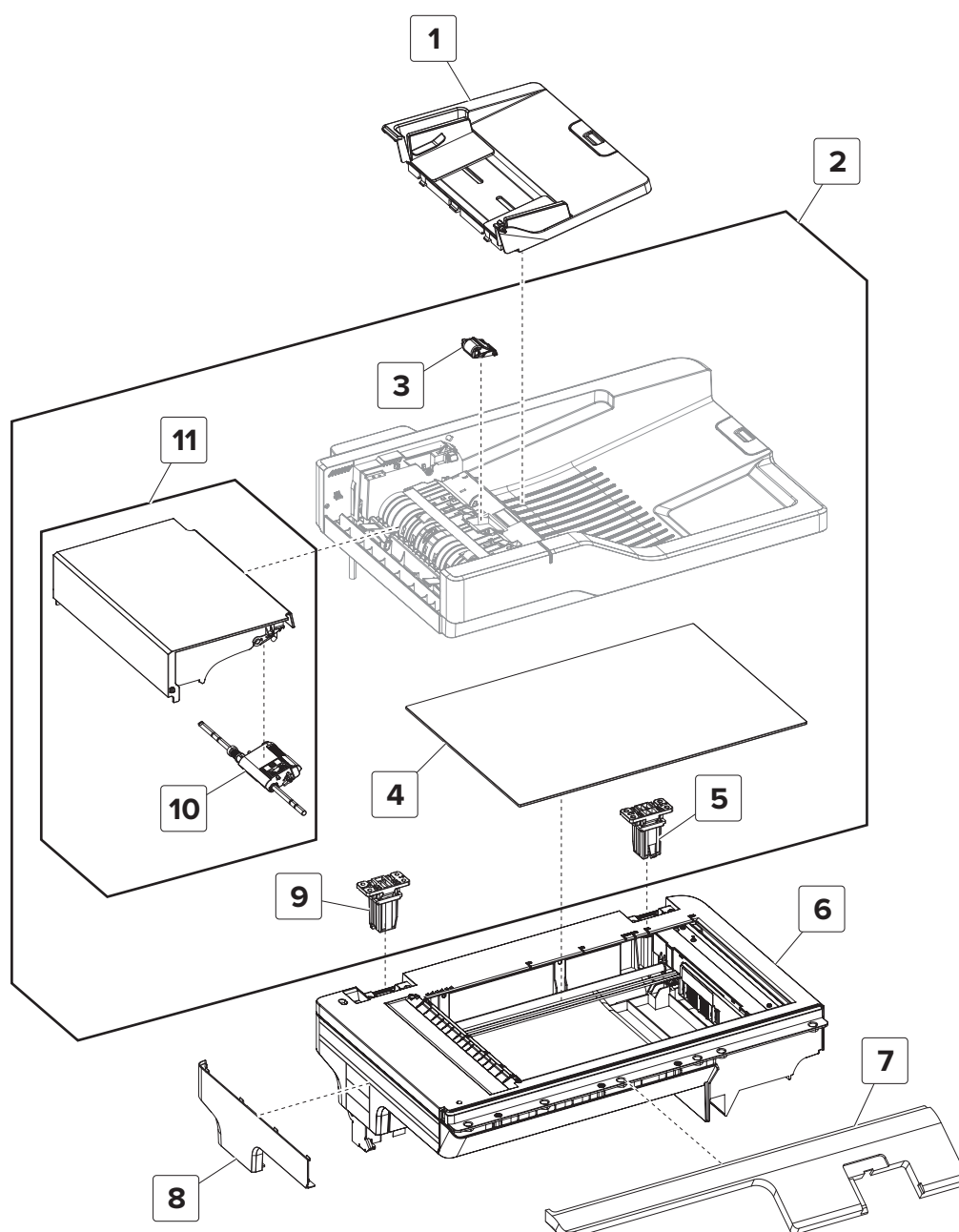


Assembly 3: Control panel

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0875	1	1	Lower control panel bezel (CX725)	“Lower control panel bezel removal” on page 378
1	41X2064	1	1	Lower control panel bezel (CX727)	“Lower control panel bezel removal” on page 378
1	41X1035	1	1	Lower control panel bezel (XC4140)	“Lower control panel bezel removal” on page 378
1	41X2856	1	1	Lower control panel bezel (XC4143)	“Lower control panel bezel removal” on page 378
1	41X0876	1	1	Lower control panel bezel (XC4150)	“Lower control panel bezel removal” on page 378
1	41X2857	1	1	Lower control panel bezel (XC4153)	“Lower control panel bezel removal” on page 378
1	41X0874	1	1	Lower control panel bezel (blank)	“Lower control panel bezel removal” on page 378
2	41X0543	1	1	Control panel bezel (blank)	“Control panel bezel removal” on page 378
3	41X0051	1	1	7-in. control panel	“Control panel removal” on page 378
4	41X0207	1	1	Button kit, 7-inch control panel Note: This part is obsolete.	--
5	41X0573	1	1	Control panel tub	“Control panel tub removal” on page 380
6	41X0572	1	1	Control panel pivot gear	“Control panel pivot gear removal” on page 381

Warning—Potential Damage: If you are replacing the controller board and the control panel board at the same time, then see [“Critical information for controller board or control panel replacement” on page 339](#).

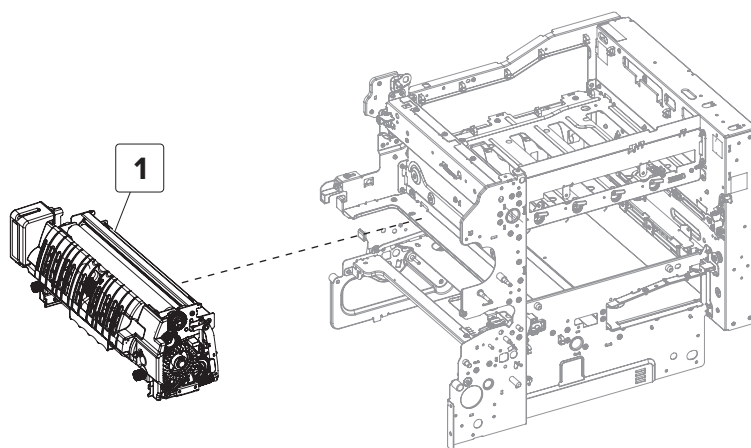
Assembly 4: ADF and flatbed



Assembly 4: ADF and flatbed

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0550	1	1	ADF input tray	--
2	41X0262	1	1	ADF	“ADF removal” on page 474
3	41X0917	1	1	ADF separator roller	--
4	41X0402	1	1	Flatbed cushion	--
5	40X7546	1	1	ADF right hinge	“ADF right hinge removal” on page 481
6	41X0263	1	1	Flatbed	“Flatbed removal” on page 483
7	41X0437	1	1	Scanner front cover	“Scanner front cover removal” on page 482
8	41X0877	1	1	Left flatbed cover removal	“Left flatbed cover removal” on page 483
9	40X8735	1	1	ADF left hinge	“ADF left hinge removal” on page 480
10	40X8736	1	1	ADF pick roller	--
11	41X0439	1	1	ADF top cover	“ADF top cover removal” on page 479

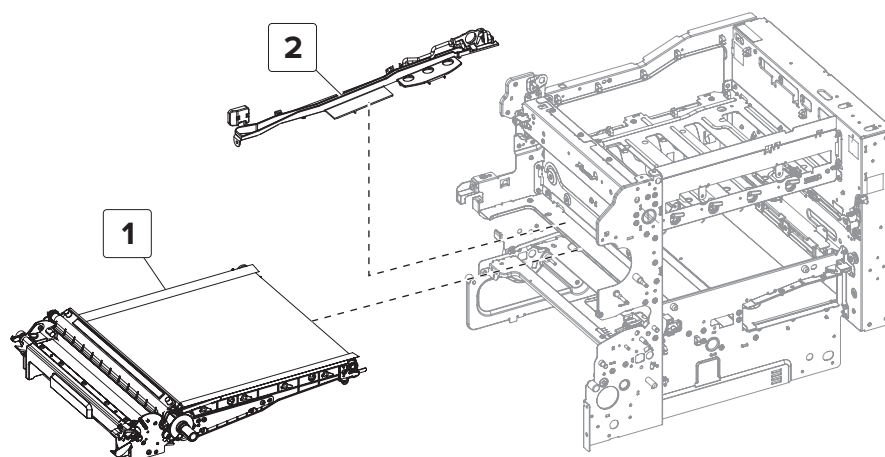
Assembly 5: Fuser



Assembly 5: Fuser

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0251	1	1	CS72x fuser type 02, 100V	“Fuser removal” on page 431
1	41X0252	1	1	CS72x fuser type 00, 110-120V	“Fuser removal” on page 431
1	41X0253	1	1	CS72x fuser type 01, 220-240V	“Fuser removal” on page 431

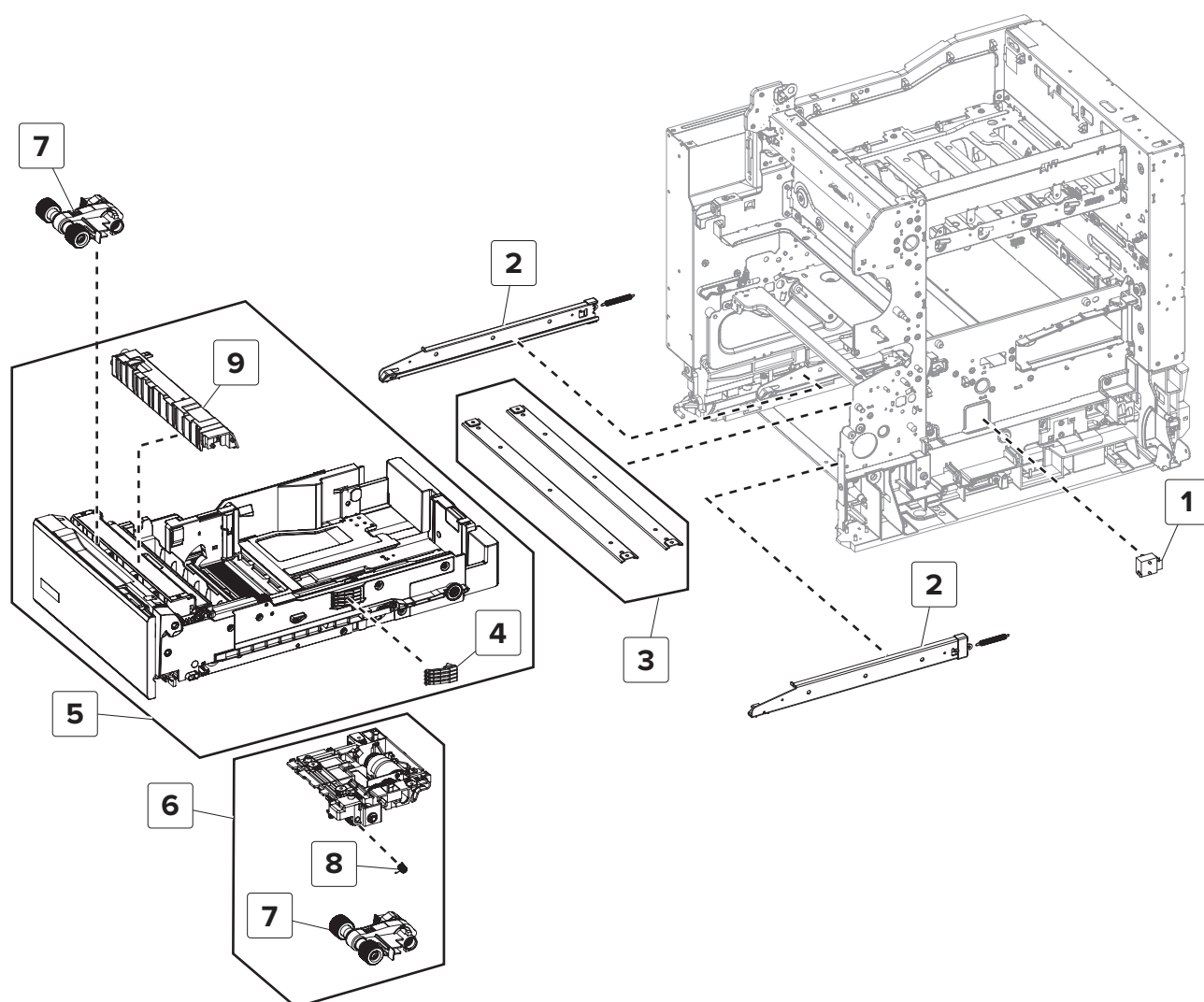
Assembly 6: Transfer module



Assembly 6: Transfer module

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9929	1	1	Transfer module	“Transfer module removal” on page 432
2	41X0683	1	1	Transfer module guide rail	“Transfer module guide rail removal” on page 434

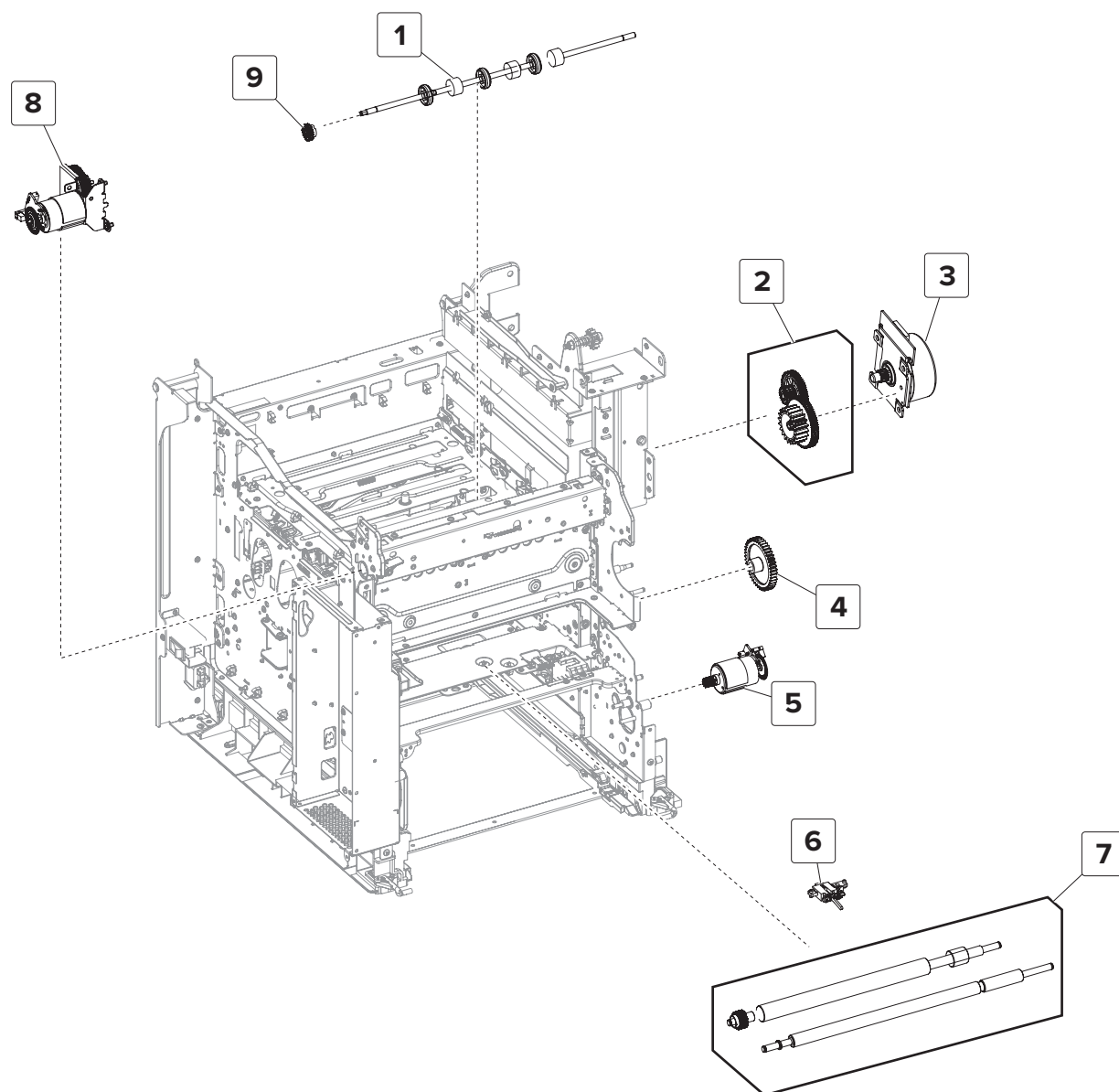
Assembly 7: Paper feed



Assembly 7: Paper feed

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X7911	1	1	Sensor (paper size)	“Sensor (paper size) removal” on page 410
2	41X0372	1	2	Tray rails	“Tray rail removal” on page 467
3	41X0825	2	1	Support strap	--
4	41X0373	1	1	Paper size sensor actuators	--
5	41X0268	1	1	550-sheet tray	--
6	41X0396	1	1	Media feeder	“Media feeder removal” on page 468
7	41X0956	2	1	Pick roller (tray 1 and MPF)	--
8	41X2034	2	1	Paper out actuator spring	“Paper out actuator spring removal” on page 473
9	41X0374	1	1	Separation pad	--

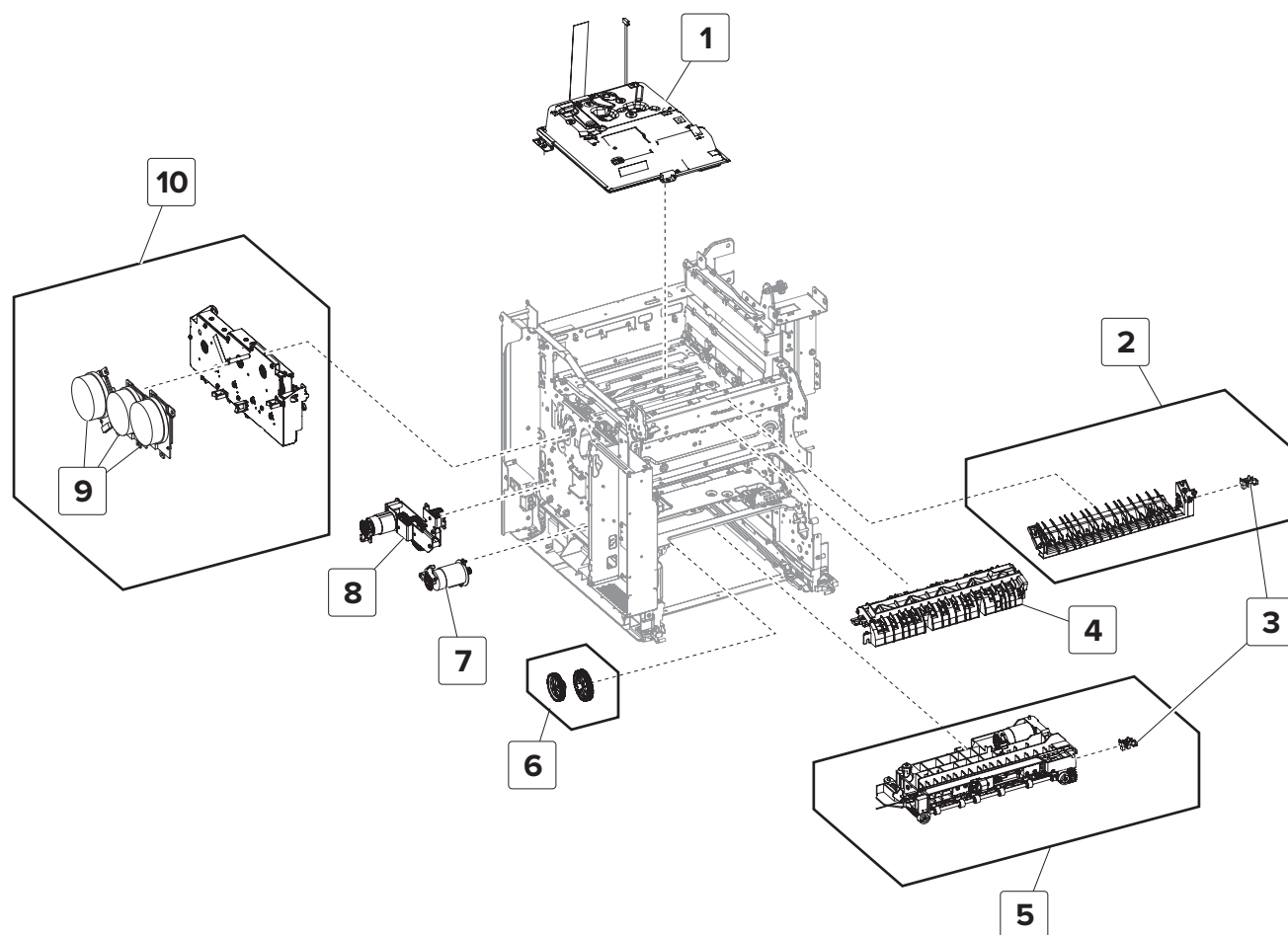
Assembly 8: Paper path 1



Assembly 8: Paper path 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0390	1	1	Output roll	“Output roll removal” on page 462
2	41X0395	1	1	Fuser drive gear	--
3	41X1038	1	1	Motor (fuser)	“Motor (fuser) removal” on page 416
4	41X0757	1	1	Waste toner bottle idler gear	“Waste toner bottle idler gear removal” on page 422
5	41X0381	1	1	Motor (duplex/MPF)	“Motor (duplex/MPF) removal” on page 413
6	41X0385	1	1	Sensor (input)	“Sensor (input) removal” on page 439
7	41X0386	1	1	Deskew rollers	“Deskew rollers removal” on page 440
8	41X0392	1	1	Motor (output)	“Motor (output) removal” on page 395
9	41X0391	1	1	Output gear	--

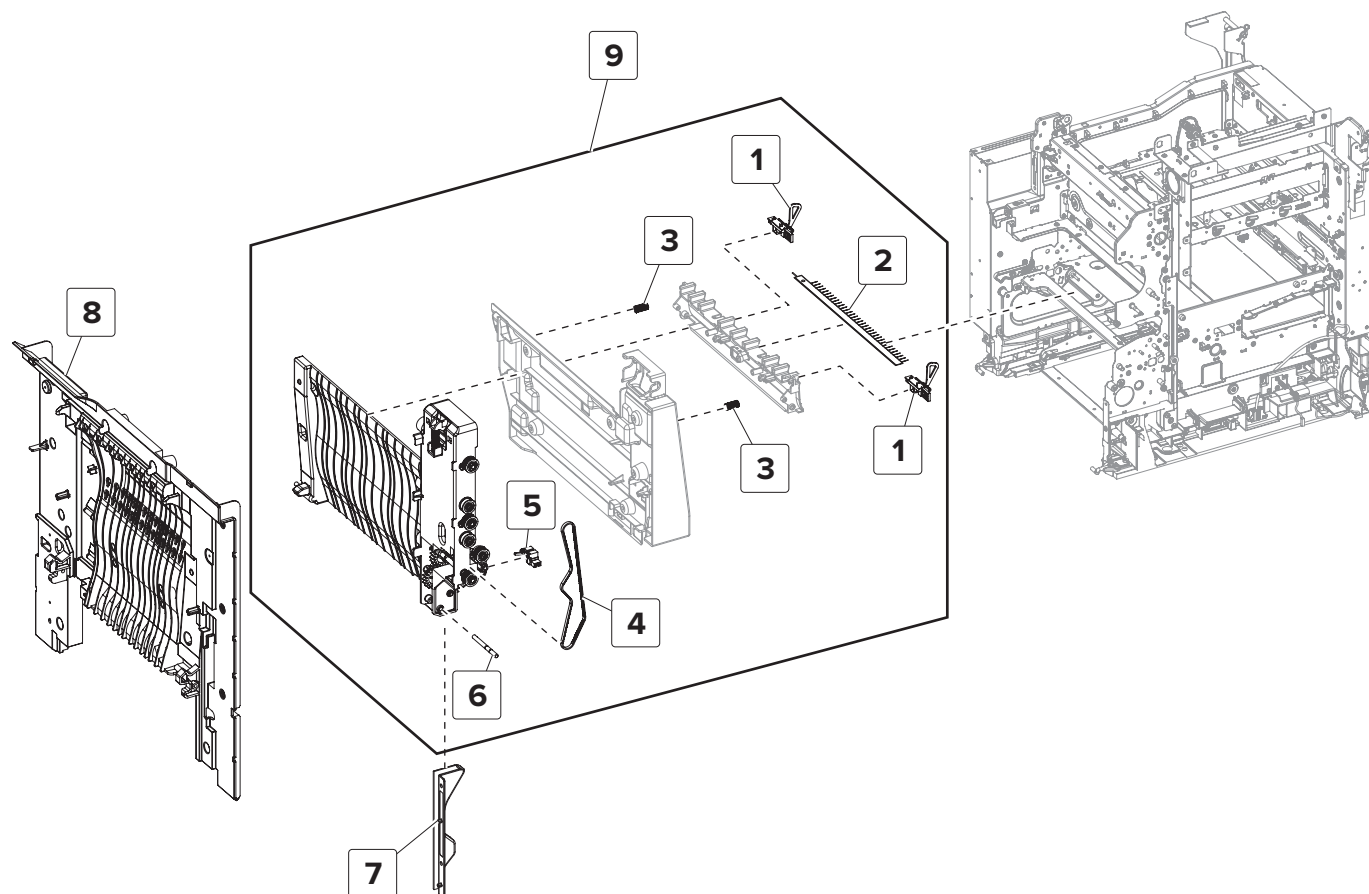
Assembly 9: Paper path 2



Assembly 9: Paper path 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0265	1	1	Printhead	“Printhead removal” on page 457
2	41X0389	1	1	Diverter	“Diverter removal” on page 447
3	41X0570	2	1	Sensor (duplex path 1 / MPF pass-through)	--
4	41X0388	1	1	Redrive guide	“Redrive guide removal” on page 449
5	41X0384	1	1	Isolation unit	“Isolation unit removal” on page 469
6	41X0758	1	1	Aligner drivetrain kit	--
7	41X0387	1	1	Motor (deskew)	“Motor (deskew) removal” on page 397
8	41X0393	1	1	Motor (black only retract)	“Motor (black only retract) removal” on page 407
9	41X0564	1	1	Motor (EP drive)	“Motor (EP drive) removal” on page 394
10	41X0264	1	1	EP gear box	“EP gear box removal” on page 400
NS	41X0897	4	1	Developer hold down arm	“Developer hold down removal” on page 461

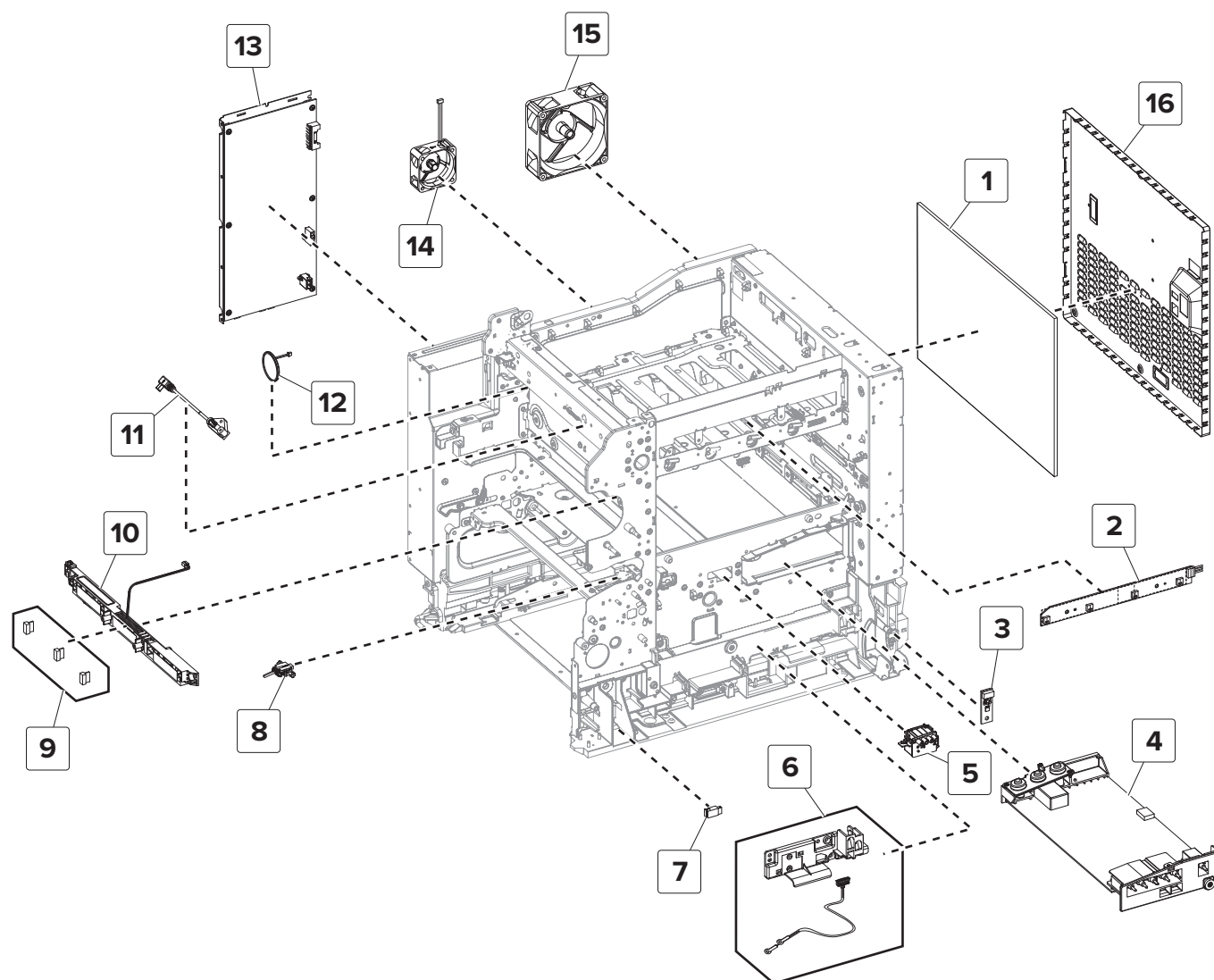
Assembly 10: Duplex



Assembly 10: Duplex

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0447	2	1	Sensor (fuser buckle)	“Sensors (fuser buckle and narrow media) removal” on page 392
2	41X0824	1	1	Static brush	--
3	41X0379	2	1	Guide spring	--
4	41X0378	1	1	Tensioner belt	“Tensioner belt removal” on page 389
5	41X0446	1	1	Sensor (duplex staging)	--
6	41X0377	1	1	Pivot shaft	“Pivot shaft removal” on page 389
7	41X0400	1	1	Cable cover	--
8	41X0426	1	1	Duplex outer guide	“Duplex outer guide removal” on page 387
9	41X0376	1	1	Duplex inner guide	“Duplex inner guide removal” on page 387

Assembly 11: Electrical



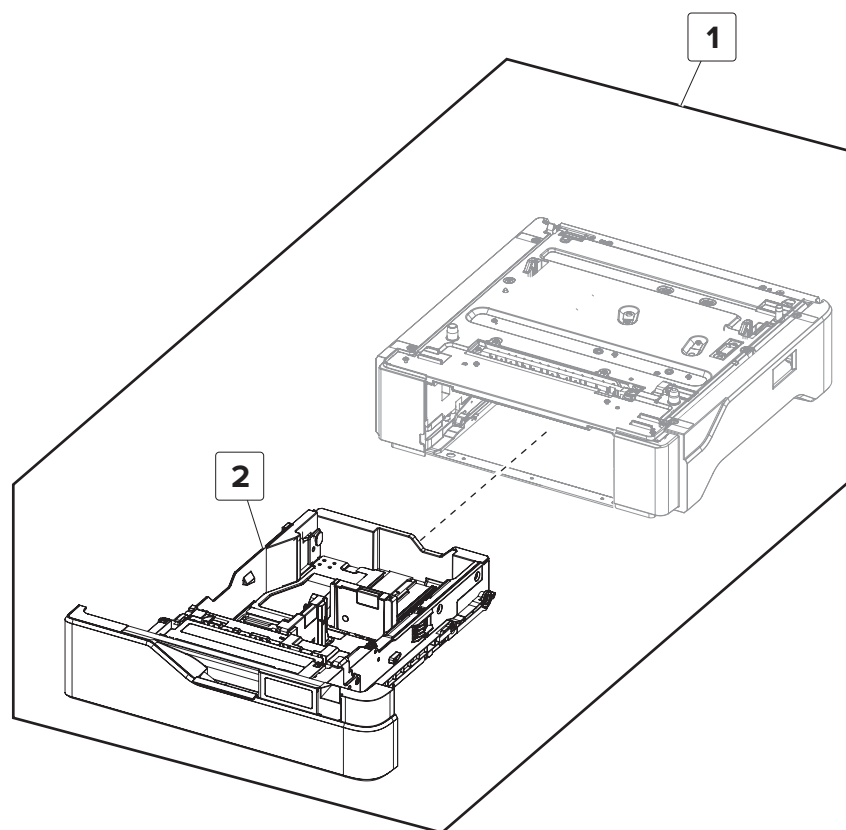
Assembly 11: Electrical

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0266	1	1	Controller board	“Controller board removal” on page 452
2	41X0394	1	1	TMC card	“TMC card removal” on page 413
3	41X0785	1	1	Sensor (weather station)	“Sensor (weather station) removal ” on page 409
4	41X0270	1	1	High voltage power supply	“HVPS removal” on page 417
5	41X0382	1	1	Toner cartridge contacts	“Toner cartridge contacts removal” on page 426
6	41X0486	1	1	Sensor (waste toner contact)	“Sensor (waste toner contact) removal ” on page 412
7	41X0566	1	1	Sensor (MPF paper present)	“Sensor (MPF paper present) removal” on page 420
8	41X0385	1	1	Sensor (input)	“Sensor (input) removal” on page 439
9	41X0578	1	3	TPS wipers	“TPS wiper removal” on page 430
10	41X0383	1	1	Sensor (TPS)	“Sensor (TPS) removal” on page 423
11	41X0488	1	1	Control panel USB cable	--
12	41X0399	1	1	Speaker	“Speaker removal” on page 479
13	41X0425	1	1	Low voltage power supply	“LVPS removal” on page 403
14	41X0398	1	1	Fuser fan	“Fuser fan removal” on page 397
15	41X0397	1	1	Main fan	“Main fan removal” on page 399
16	41X1907	1	1	Controller board shield	“Controller board shield removal” on page 451
NS	41X0575	1	1	TPS cable	“TPS cables removal ” on page 454

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	41X0413	1	1	Cable replacement pack: <ul style="list-style-type: none"> • 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 	--
NS	41X0489	1	1	Control panel FFC cable	--
NS	41X0487	1	1	Speaker cable	--

Warning—Potential Damage: If you are replacing the controller board and the control panel at the same time, then see [“Critical information for controller board or control panel replacement” on page 339](#).

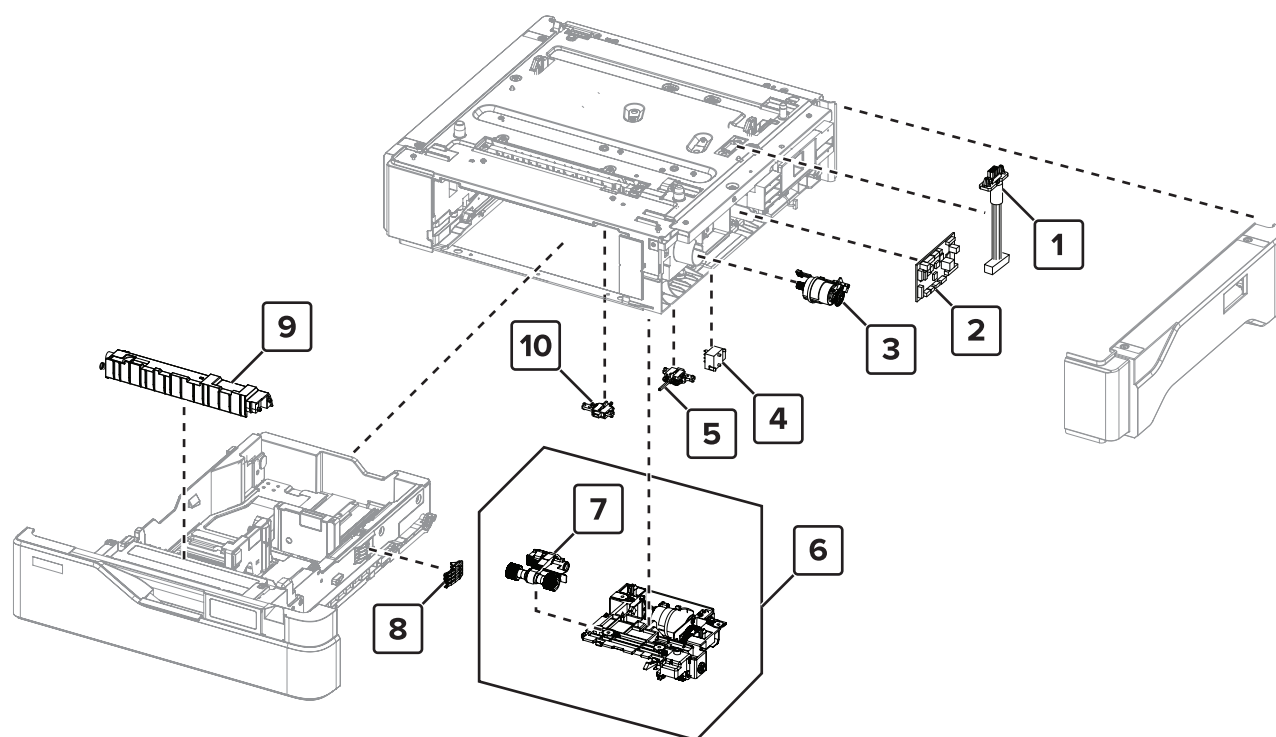
Assembly 12: 550-sheet tray option 1



Assembly 12: 550-sheet tray option 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0271	1	1	550-sheet tray	--
2	41X0361	1	1	550-sheet tray insert	--

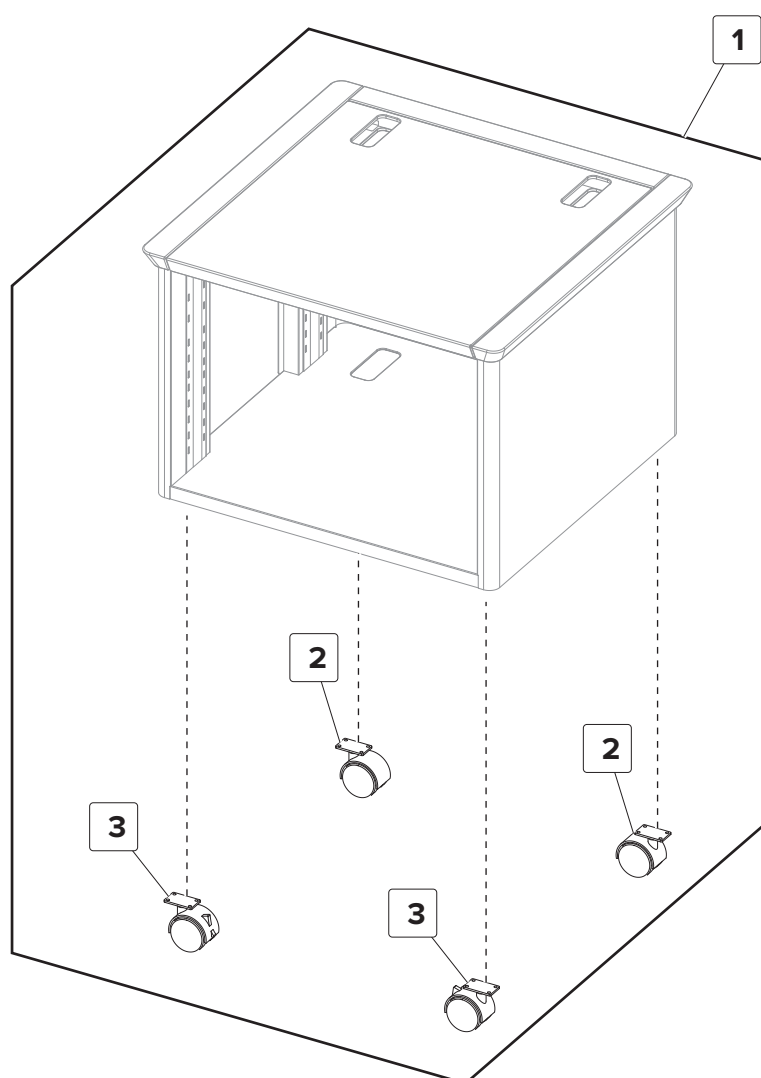
Assembly 13: 550-sheet tray option 2



Assembly 13: 550-sheet tray option 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0471	1	1	550-sheet tray interface cable	“550-sheet tray interface cable removal” on page 501
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 494
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

Assembly 14: Adjustable stand



Assembly 14: Adjustable stand

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0764	1	1	Locking caster	--
2	41X0775	2	1	Nonlocking caster	--
3	41X0774	2	1	Locking caster	--

Assembly 15: Miscellaneous parts

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	41X2543	1	1	MarkNet N8370 Wireless Print Server	--
NS	40X9935	1	1	Fax card	--
NS	40X9652	1	1	Adapter–Fiber gigabit ISP	--
NS	41X0028	1	1	DDR3 RAM, (G2) 2GB, 512Mx32, 204 SODIMM, Unbuffered Non-ECC	--
NS	41X1011	1	1	Font card, Hebrew	--
NS	41X1012	1	1	Font card, Arabic	--
NS	41X1013	1	1	Font card, Simplified Chinese	--
NS	41X1014	1	1	Font card, Traditional Chinese Note: This part is obsolete.	--
NS	41X1015	1	1	Font card, Korean	--
NS	41X1016	1	1	Font card, Japanese	--
NS	41X1002	1	1	Forms bar code card	--
NS	41X1006	1	1	Prescribe card	--
NS	41X1004	1	1	IPDS SCS TNE card	--
NS	41X1010	1	1	Flash card	--
NS	40X8671	1	1	Cover kit, removable hard disk drive	--
NS	40X9934	1	1	Hard disk drive, 320+ GB	--

Assembly 16: Maintenance kits

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	41X0552	1	1	Fuser maintenance kit, type 02, 100 V <ul style="list-style-type: none"> • Fuser (100 V) • Pick roller • Separator pad 	--
NS	41X0554	1	1	Fuser maintenance kit, type 00, 110–120 V <ul style="list-style-type: none"> • Fuser (110 V) • Pick roller • Separator pad 	--
NS	41X0556	1	1	Fuser maintenance kit, type 01, 220–240 V <ul style="list-style-type: none"> • Fuser (220 V) • Pick roller • Separator pad 	--
NS	40X9929	1	1	Transfer module	--

Assembly 17: Power cords

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
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	--
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.	700 (one-sided); 600 (two-sided)
Copy	The product is generating hard-copy output from hard-copy original documents.	460
Scan	The product is scanning hard-copy documents.	85
Ready	The product is waiting for a print job.	100
Sleep Mode	The product is in a high-level energy-saving mode.	2.6
Hibernate	The product is in a low-level energy-saving mode.	0.2
Off	The product is plugged into an electrical outlet, but the power switch is turned off.	0.2

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.

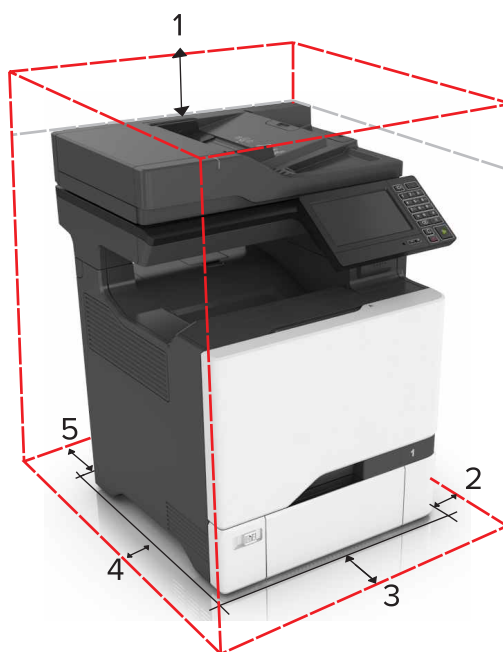
 **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

 **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 40°C (-40 to 104°F)

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



1	Top	229 mm (9 in.)
2	Right side	178 mm (7 in.)
3	Front	508 mm (20 in.)
4	Left side	127 mm (5 in.)
5	Rear	101.6 mm (4 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	52 (one-sided); 53 (two-sided)
Scanning	N/A
Copying	54
Ready	28

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	-10 to 40°C (14 to 104°F)
Storage temperature and relative humidity	-10 to 40°C (14 to 104°F) 8 to 80% RH

Enabling the security reset jumper

Notes:

- Before changing the security settings, ask for permission from your administrator.
- Resetting the printer deletes all security settings.
- For MFPs, replacing the controller board deletes all security settings.
- If LDAP is used to authenticate the copy function in MFPs, then the LDAP configuration and copy function are no longer protected.
- To prevent the tampering of the jumper, secure the controller board cage with a Kensington lock. To disable the effect of the jumper reset, select **No Effect** from the Security Reset Jumper Setting section in the Security menu.
- If Enable Audit is activated from the Security Audit Log section in the Security menu, then the printer logs a message each time the jumper is reset.

To reset the jumper:

- 1 Turn off the printer.
- 2 Access the controller board.
- 3 Locate the jumper on the controller board.

Note: The jumper is located next to a lock icon on the controller board.

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Options and features


Some of the options may not be available in every country or region.

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 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.

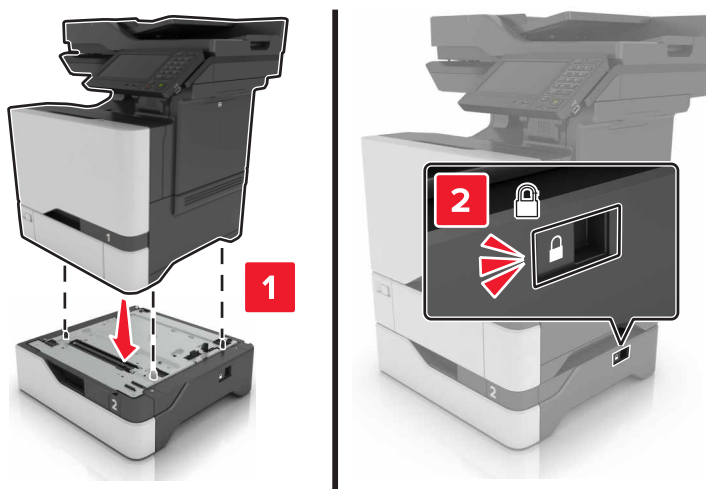
 **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, if you are accessing the controller board or installing optional hardware or memory devices sometime after setting up the printer, then turn the printer off, and unplug the power cord from the electrical outlet before continuing. If you 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 580](#).

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

For an image to be printed, the paper or specialty media has to be moved from an input source, such as a tray, into the printer and eventually exit into an output source.

The most important component in this process is the paper. Old, damaged, or out-of-specification paper can and will cause feed and transport problems. If you encounter problems, you should always check the paper first. See [“Paper and specialty media guide” on page 32](#). In addition, it is always good practice to check the printer and driver settings to see if the paper being used matches the user settings. It is not uncommon to find a user printing on cardstock with the printer programmed to print on a plain paper setting.

The printer feed and transport components can fail and cause paper jams or other feed and transport problems. These components should be examined for damage or wear and replaced if necessary.

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

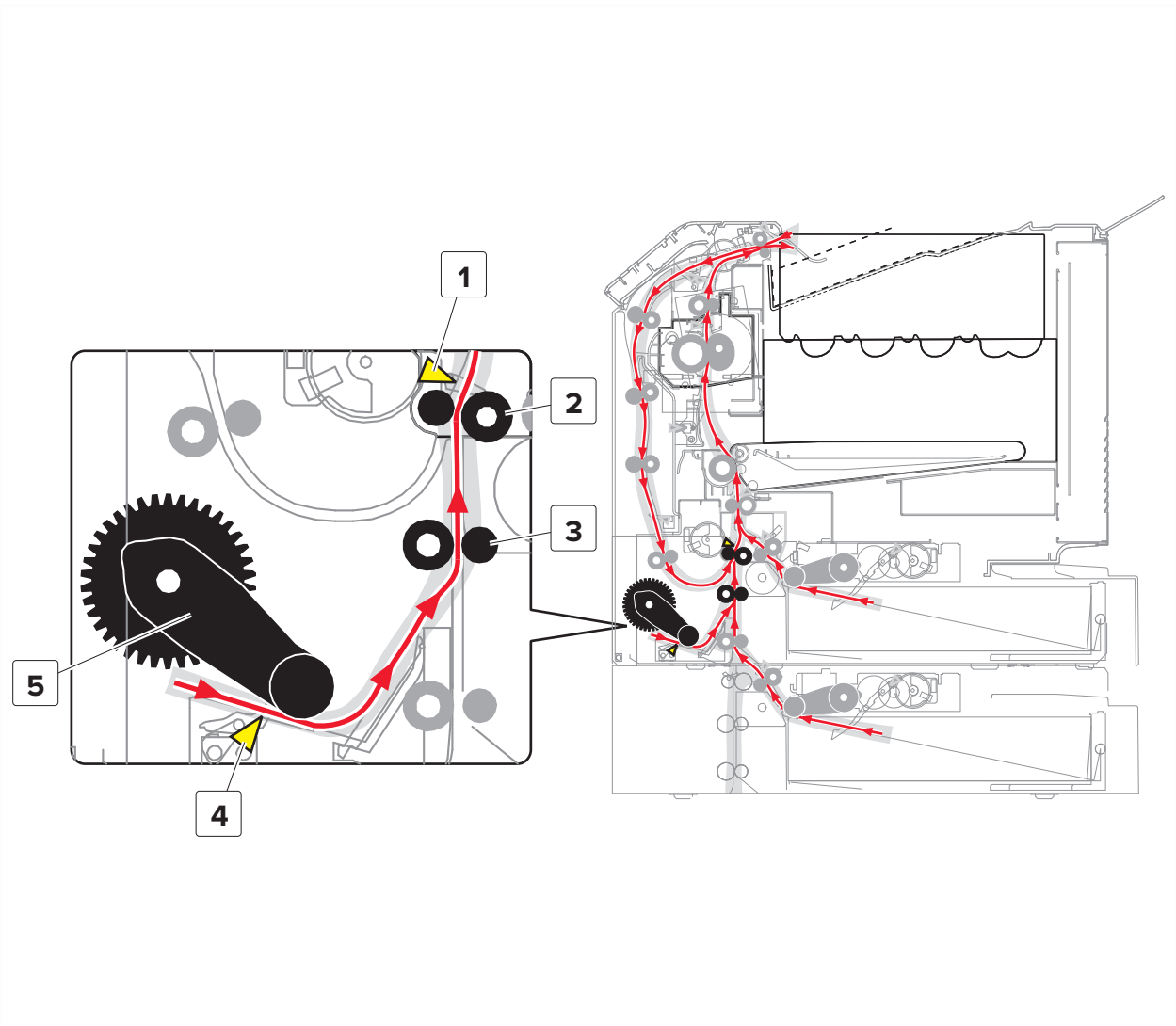
The pick roller assembly is a mechanical unit supplying paper from the tray to the paper path. Three motors move the paper from the tray to the transfer module at the second transfer station. The motor (isolation) feeds the paper from the pick system to the alignment rollers. The leading edge of the 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

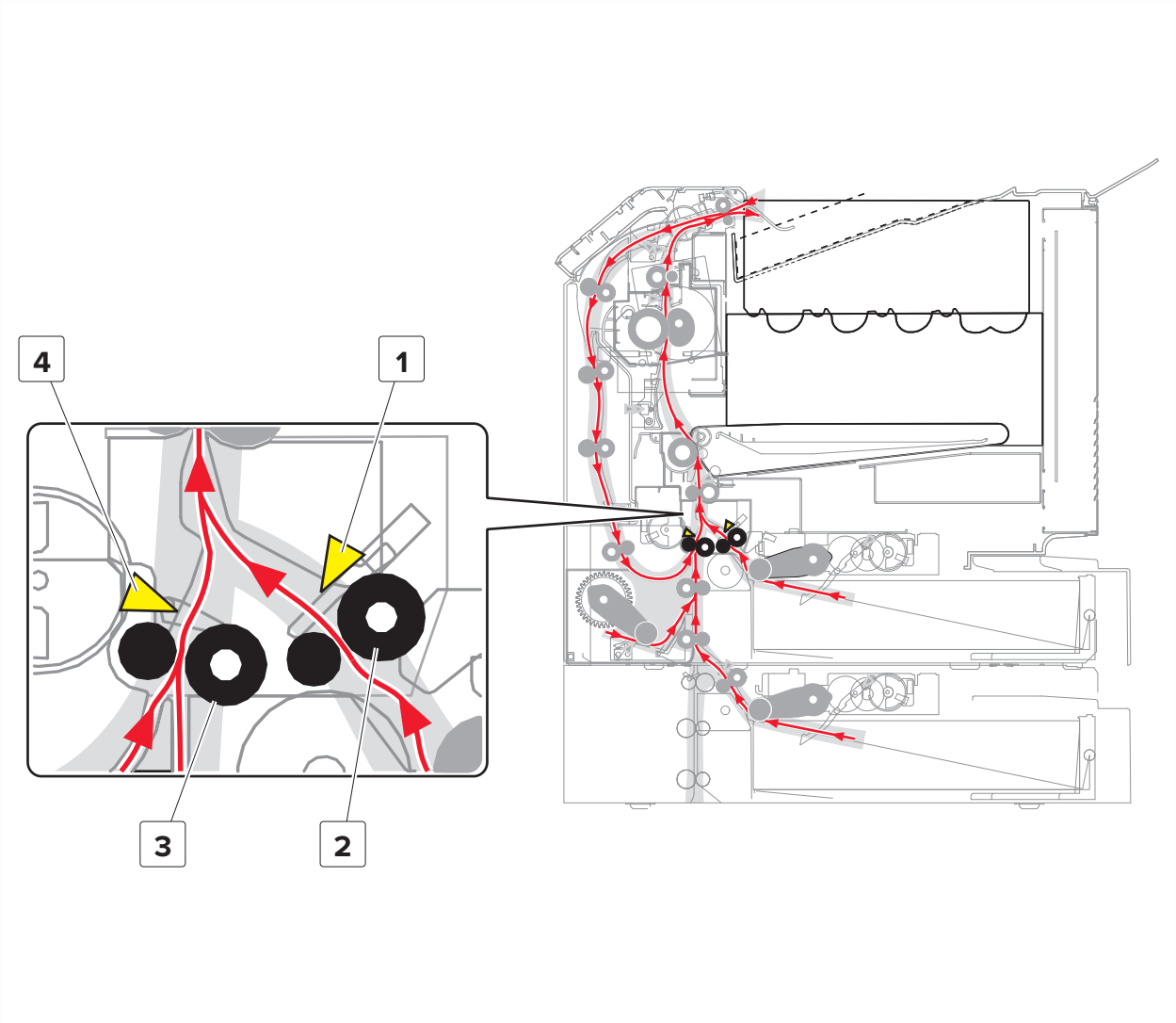
The paper enters the isolation unit through one of two paths, each path having its own isolation roller. If the paper is fed from tray 1, the tray 1 isolation nip moves the paper through the isolation housing and into the aligner roller. If the paper is fed from MPF, option tray, or duplex, the alternate 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.

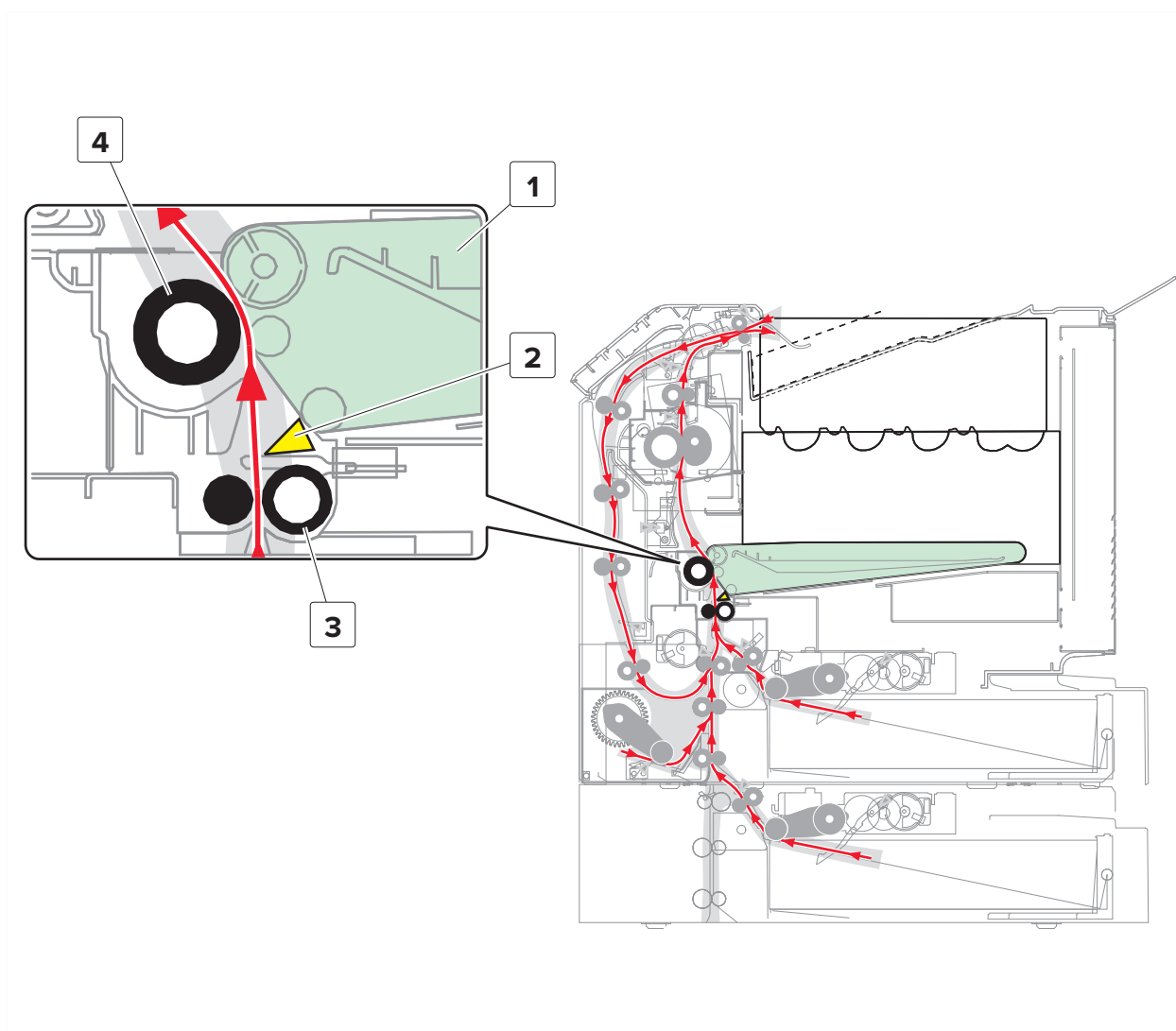


#	Description
1	Sensor (tray 1 pick)
2	Tray 1 isolation roller

#	Description
3	Alternate isolation roller
4	Sensor (MPF/pass-through)

Aligner section

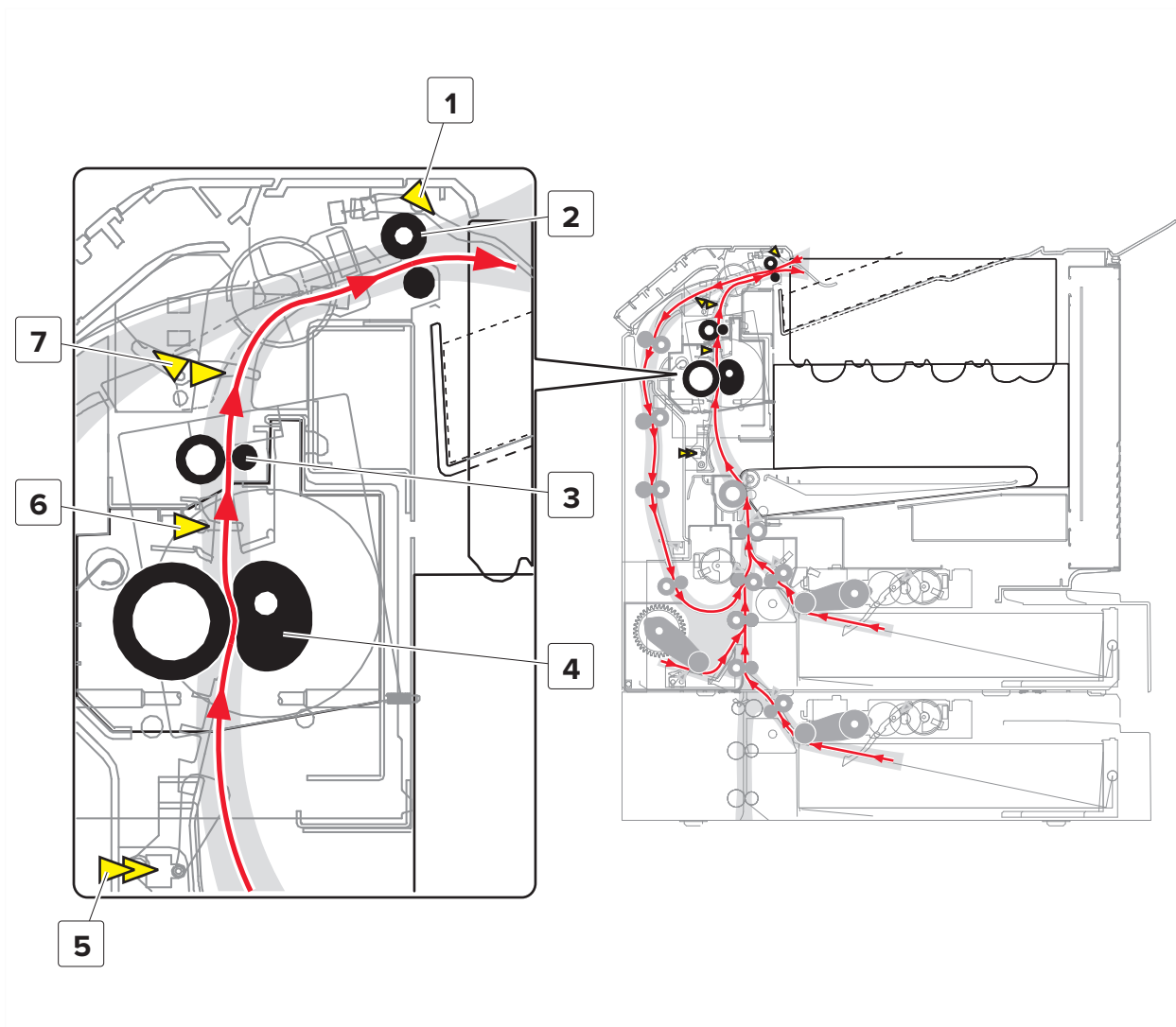
After the paper reaches the sensor (input), or the sensor (MPF/pass-through), a count is started. The paper is pushed up against the aligner rollers to align the leading edge of the paper and form a bubble. After a predetermined count from the sensor (input) is reached, the motor (aligner) turns and 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)
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. 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.



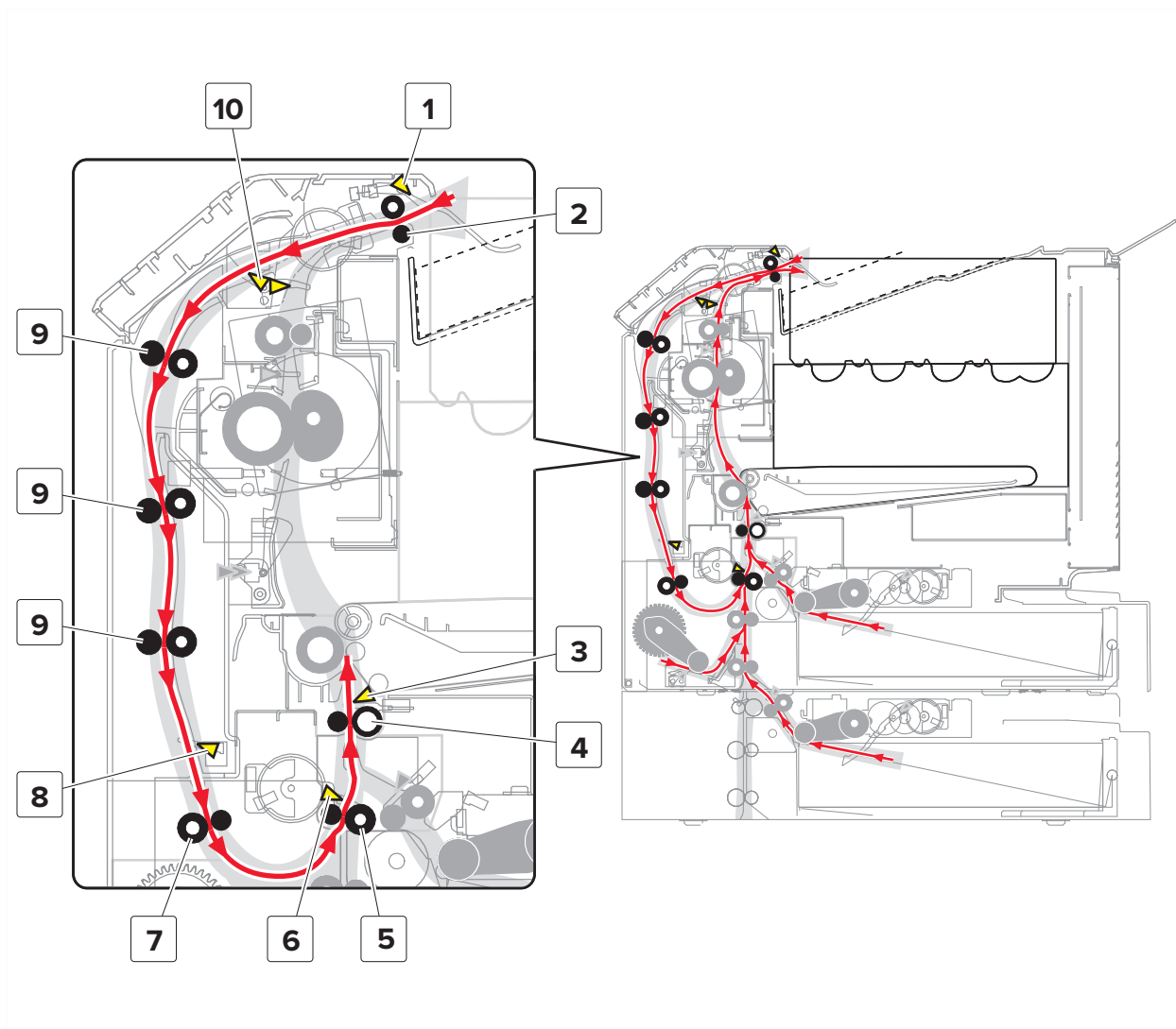
#	Description
1	Sensor (bin full)
2	Exit roller

#	Description
3	Decurl roller
4	Fuser
5	Sensor (fuser buckle) / Sensor (narrow media)
6	Sensor (fuser exit)
7	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)

#	Description
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.

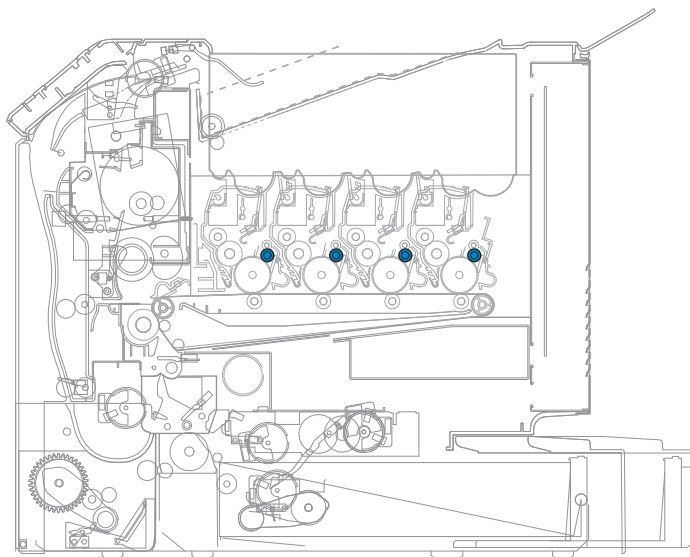
The transfer belt carries the four-colored image towards the transfer rolls. Paper is picked up from the tray and carried to the transfer roll where the image is transferred from the transfer belt to the paper. The timing of the paper pick is determined by the speed of the transfer belt.

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.



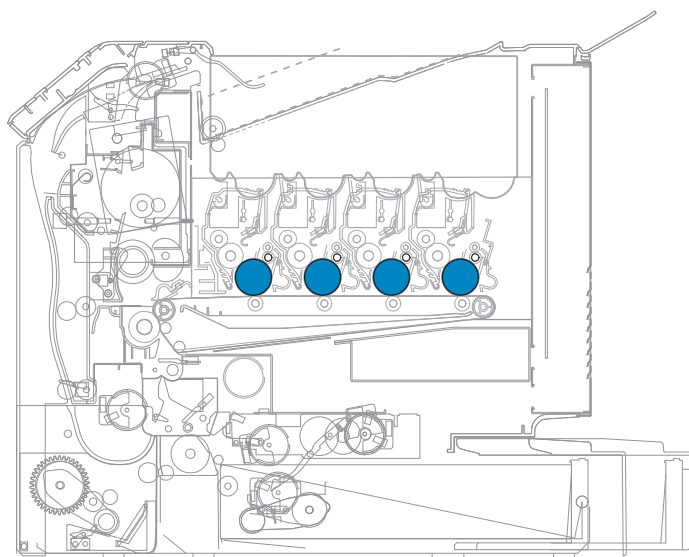
Service tips

- 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 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.



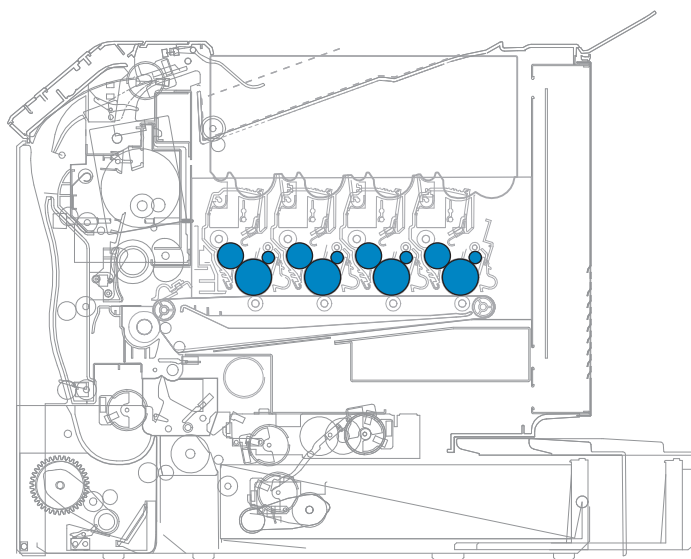
Service tips

- 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.



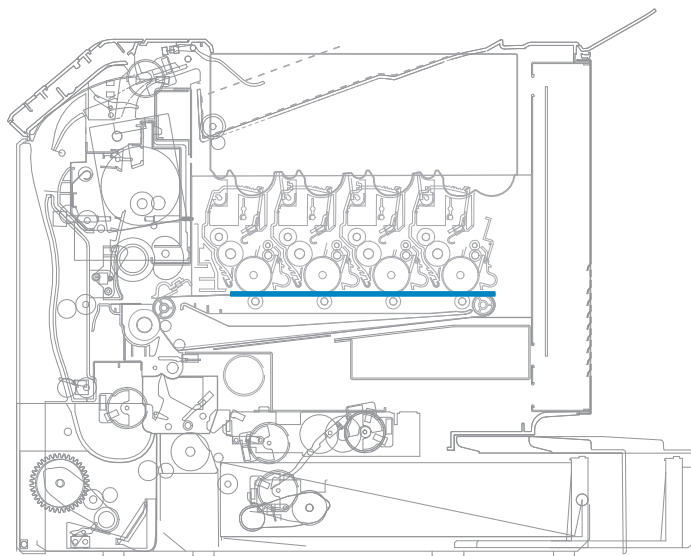
Service tips

- 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.



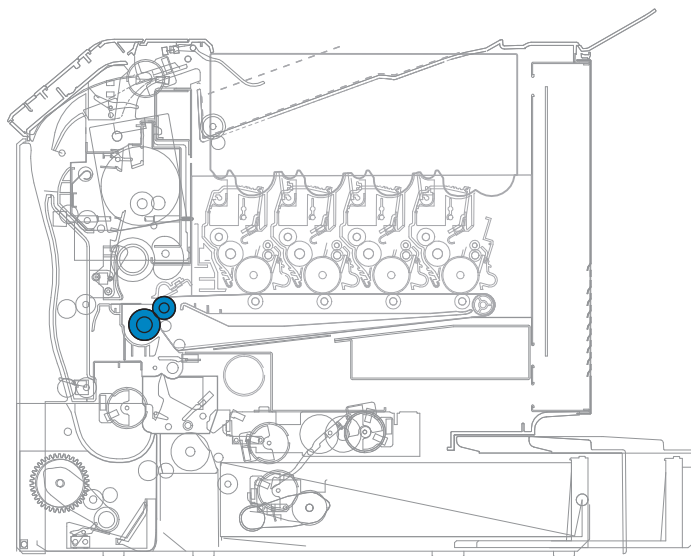
Service tips

- 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.



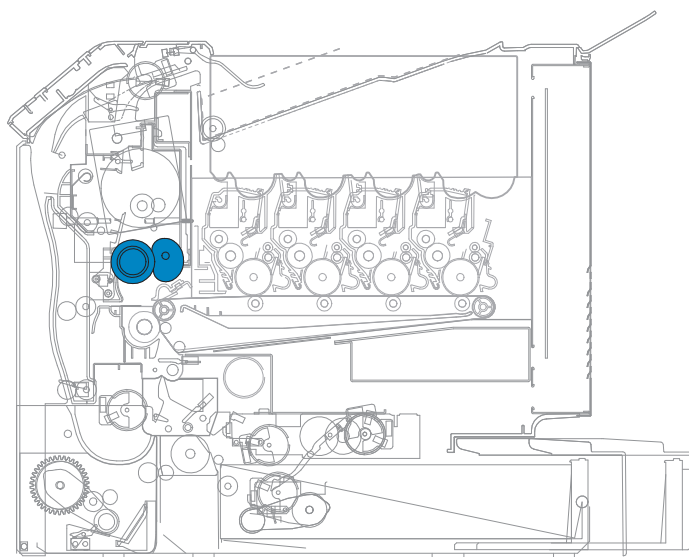
Service tips

- 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.

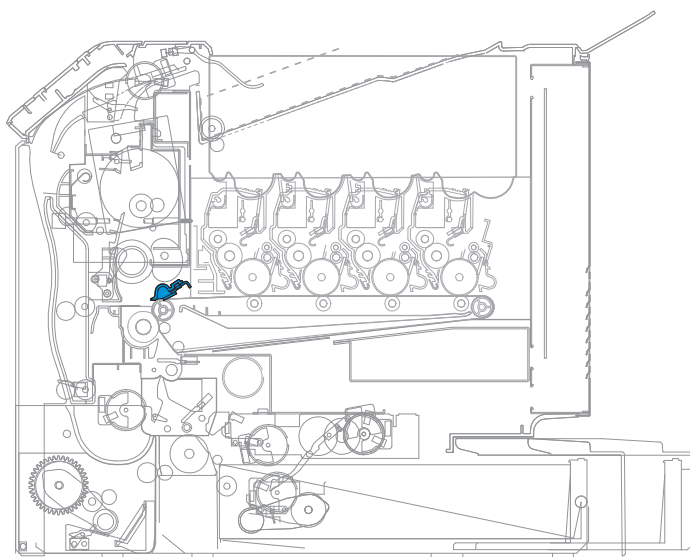
Step 6: Clean/Erase

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.

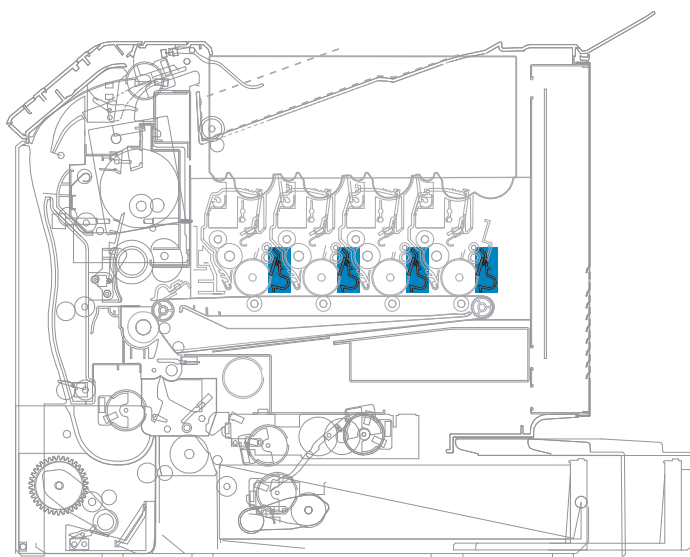
After the toner is moved to the cleaning blade, the toner is moved to the waste toner area using an auger system.



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.

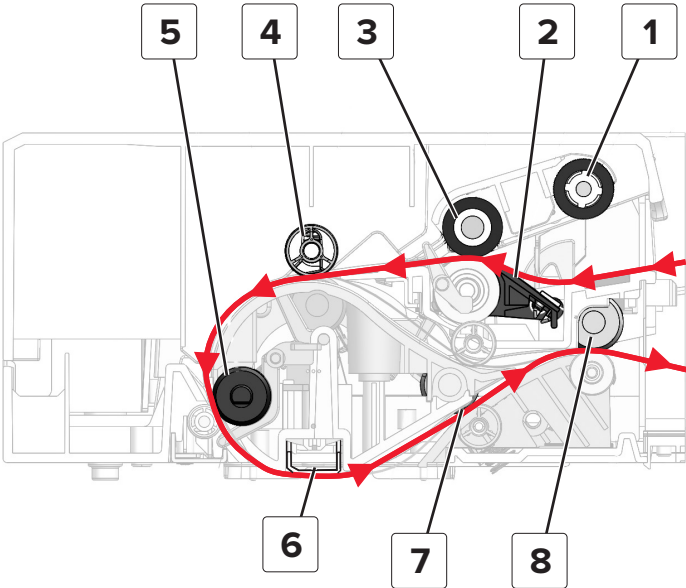


ADF theory

- “ADF paper path” on page 599
- “ADF paper path sensors” on page 600
- “ADF tray pick and feed” on page 600
- “ADF separation” on page 601

- “ADF registration” on page 602
- “ADF scan and exit” on page 603
- “ADF duplex” on page 604

ADF paper path



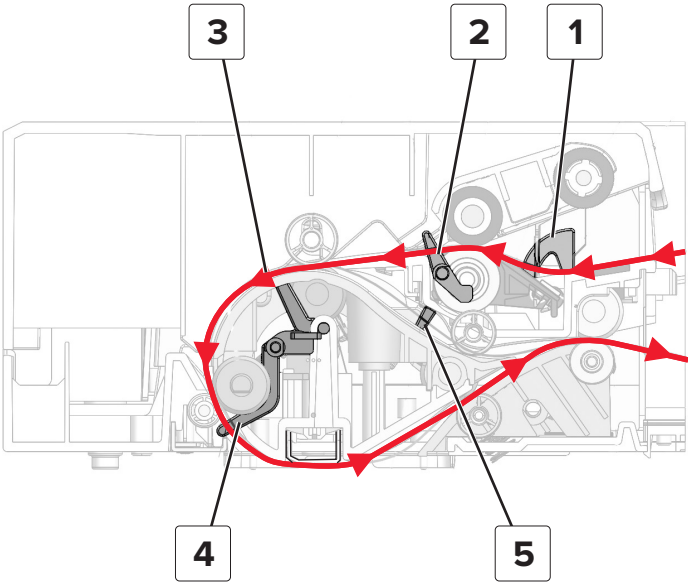
1	Pickup roller
2	Separator roller
3	Feed roller
4	Paper feed 1 roller
5	Paper feed 2 roller
6	Scan area
7	Eject 1 roller
8	Exit roller

The scan document enters the ADF from the ADF tray through the pick roller and the separator roller. It moves to the paper feed 1 roller for document skew correction. It passes by the paper feed 2 roller and then moves to the scan area for scanning.

After scanning, the scan document exits to the ADF bin through the exit roller if the scan job is a one-sided job.

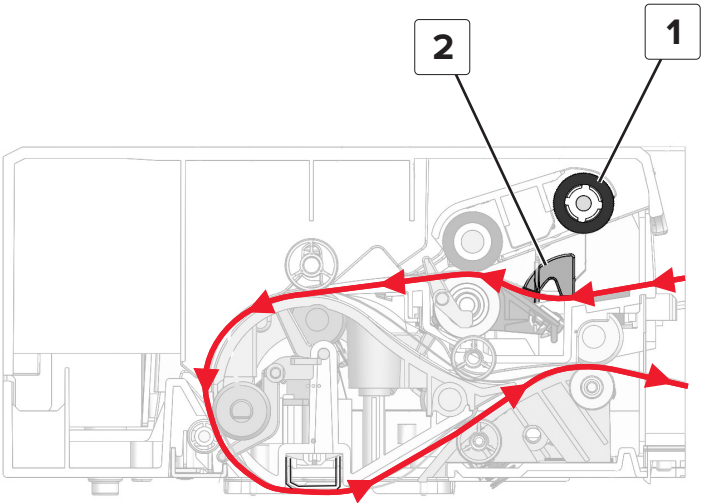
For a two-sided scan job, the scan document reenters the ADF through the exit roller. It returns to the paper feed 1 roller for document skew correction again. It passes by the paper feed 2 roller and then moves to the scan area for scanning the opposite side. After scanning, the scan document exits to the ADF bin through the exit roller.

ADF paper path sensors



1	Sensor (media present)	Detects whether the scan document is in the ADF
2	Sensor (pick)	Detects whether the scan document is to be scanned for the first time for a two-sided scan job
3	Sensor (trail)	Detects the trailing edge of the scan document
4	Sensor (1st scan)	Detects whether the scan document is to be moved to the scan area
5	Sensor (duplex)	Detects whether the scan document is to be scanned for the last time for a two-sided scan job

ADF tray pick and feed

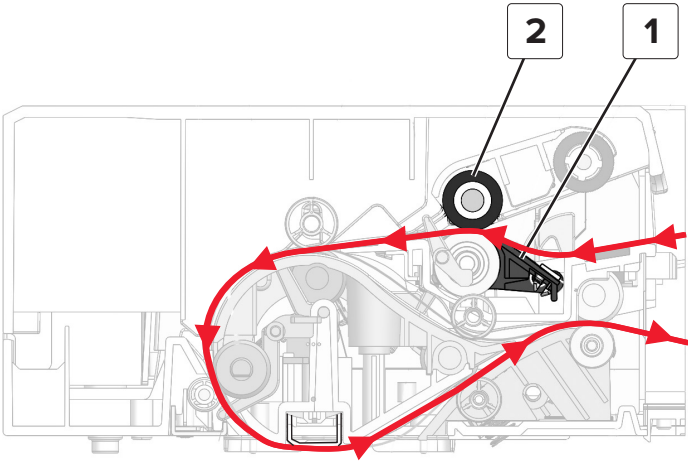


1	Pick roller
2	Sensor (media present)

A signal is sent to the ADF to poll the sensor (media present) (1) to check if the scan document is in the correct position. The document must be placed in the ADF input tray so that it actuates the sensor (media present).

If the scan document has actuated the document sensor, then an ADF scan is executed. At this point, the pick roller (2) lowers and moves the document into the ADF.

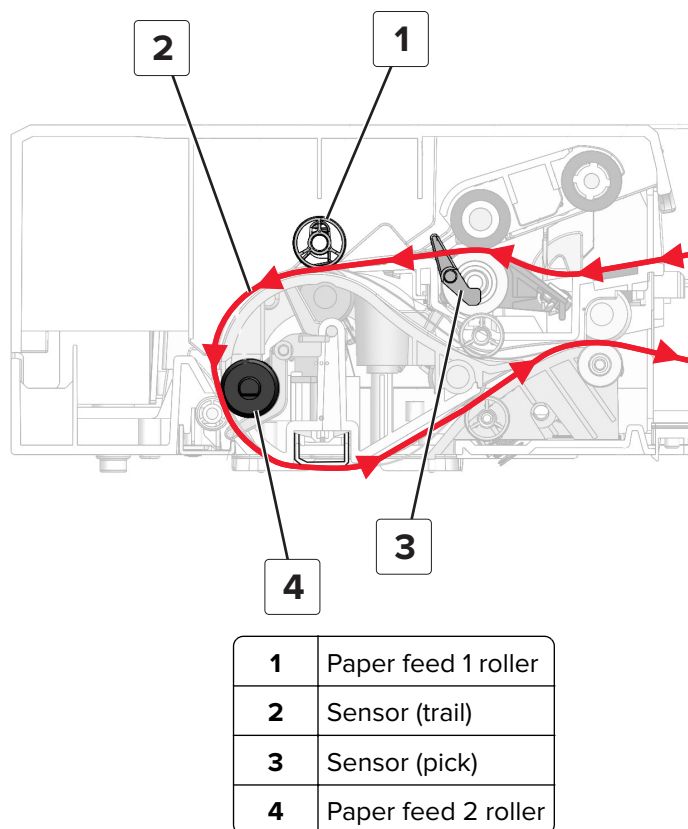
ADF separation



1	Separator roller
2	Feed roller

The separator roller prevents picking of multiple documents.

ADF registration



After passing through the pick assembly, the document actuates the sensor (pick). Actuating the sensor determines that this side is the first side of the document to be scanned for a two-sided scan job. The sensor (pick) triggers a count to track the position of the document between the sensor (pick) and the paper feed 1 roller. The count is generated by the encoder on the transport motor.

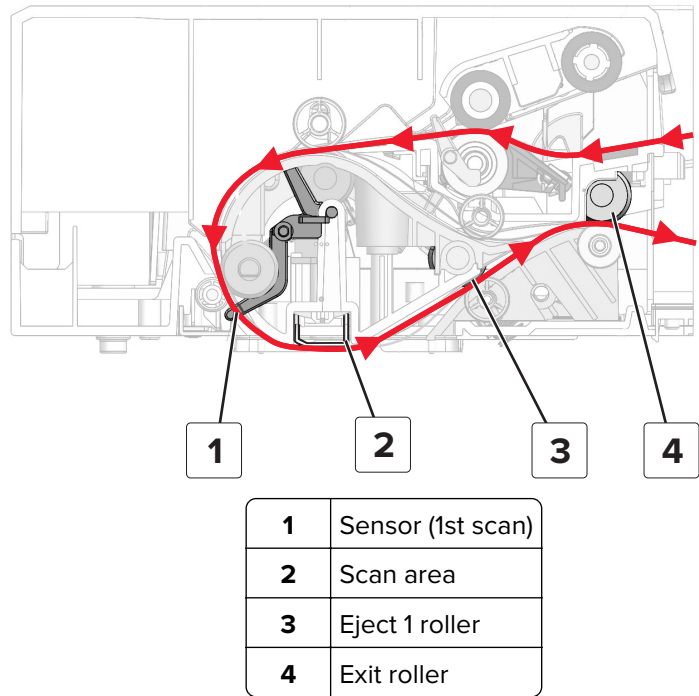
Note: Multiple feeds are often due to a worn restraint roller. Replace the restraint roller (separator roller CRU) if necessary.

After the sensor (pick) is triggered, the scan document is moved to the paper feed 1 roller. The roller at this point is not moving, held in place by a clutch. When the document reaches the roller, the roller does skew correction on the document. The clutch releases the roller when the counter, triggered by the sensor (pick), reaches a predetermined count. The roller then rotates and moves the document along the paper path.

The scan document passes through the paper feed 1 roller and actuates the sensor (trail). The sensor detects the trailing edge of the document as it passes by. This enables the ADF to stop the roller and initiate the next document to be picked and undergo skew correction. In addition, when the leading edge of the document actuates the sensor, a count is initiated to track the position of the document from the sensor (trail) to the sensor (1st scan). If the sensor (1st scan) is not reached at a predetermined interval, then a paper jam error is triggered.

Note: 283.xx paper jam errors are traceable to the sensor (trail). Check the actuator for paper or other debris. Make sure that the sensor actuator moves properly.

ADF scan and exit

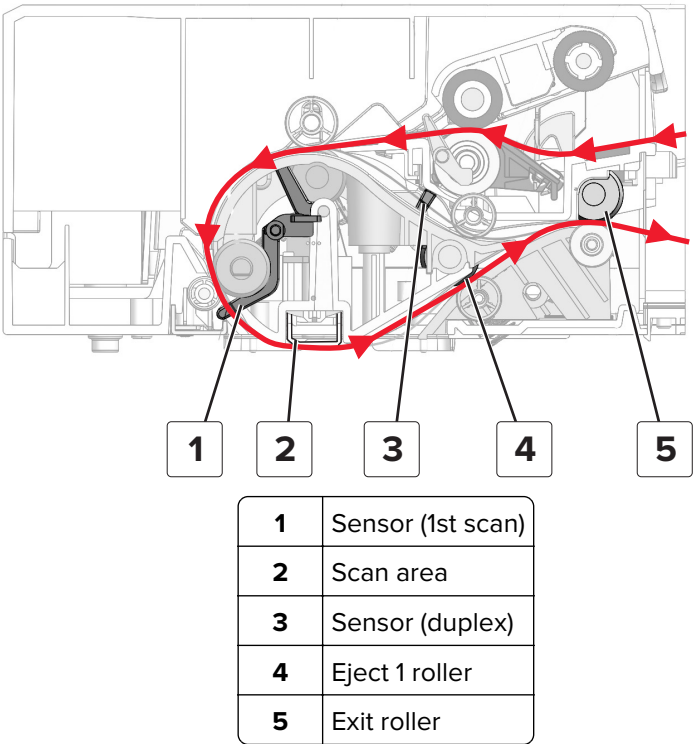


After a predetermined count, the scan document reaches the scan area and the image acquisition process is initiated. While scanning the document, the sensor (1st scan) is polled to determine if the trailing edge of the document has reached the sensor.

When the trailing edge of the scan document has reached the sensor (1st scan), then the sensor goes to the off position. Scanning continues for a predetermined length of time.

When scanning is completed, the trailing edge of the scan document continues to the reverse point. If the scan job is a simplex job, then the document continues to the exit roller (13) and exits the ADF.

ADF duplex



For a two-sided job, the transport motor counterrotates when the trailing edge of the scan document reaches the reverse point. The exit roller (13) pulls the document back into the ADF. The roller then moves the document to the sensor (duplex). When the sensor (duplex) (11) is actuated, this indicates to the ADF that the side of the document to be scanned is its second side.

Note: 284.xx paper jam errors are traceable to the sensor (duplex). Check the actuator for paper or other debris. Make sure that the sensor actuator moves properly.

After actuating the sensor (duplex), the scan document is pushed to the paper feed 1 roller for skew correction. After skew correction, the document passes over the sensor (trail) and is then moved to the sensor (1st scan). Like the first pass of the document, it is scanned.

When the trailing edge of the scan document reaches the reverse point the second time, then the document goes back into the ADF for a third time. The document passes through the paper path, but no scanning occurs. The document is flipped back to its original position and exits the ADF.

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).

Notes:

- 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 RGB or 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

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