Lexmark

CS820 and C6160

5063-530, -571, -539

Service Manual

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Product information

Product name:
Lexmark CS820 and C6160

Machine type:
5063

Model(s):
530, 571, 539

Edition notice

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P/N 12G3412

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Notices 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.

Class I laser products are not considered to be hazardous. The printer contains internally a Class IIIb (3b) AlGaAs laser that is nominally 20-milliwatts operating in the wavelength region of 755–800 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 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 AlGaAs (arséniure de gallium-aluminium) de classe IIIb (3b) d'une puissance nominale de 20 milliwatts fonctionnant dans la plage de longueurs d'onde allant de 755 à 800 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.

Els productes de làser Classe I no es consideren perillosos. La impressora conté un làser intern Classe IIIb (3b) AlGaAs que normalment és de 20 miliwatts, que funciona a la regió de longitud d'ona de 755 a 800 nanòmetres i es troba dins d'una unitat de capçals d'impressió no substituïbles. 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.

Los productos láser de Clase I no se consideran peligrosos. Este producto contiene un láser interno de Clase IIIb (3b) AlGaAs que opera nominalmente a 20 milivatios en una longitud de onda de 755-800 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.

Os produtos a laser de Classe I não são considerados prejudiciais. A impressora contém, internamente, um laser de Classe IIIb (3b) AlGaAs que funciona nominalmente a 20 miliwatts no comprimento de onda de 755-800 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.

I prodotti laser di Classe I non sono considerati pericolosi. La stampante contiene internamente un laser AlGaAs di Classe IIIb (3b) con valore nominale di 20 milliwatt, funzionante nella regione della lunghezza d'onda dei 755-800 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.

Laserproducten van klasse I worden geacht geen gevaar op te leveren. De printer bevat intern een laser van klasse IIIb (3b) AlGaAs met een nominaal vermogen van 20 milliwatt in een golflengtebereik van 755-800 nanometer in een niet-bruikbare printkopeenheid. Het lasersysteem en de printer zijn zodanig ontworpen dat gebruikers nooit blootstaan aan laserstraling die hoger is dan het toegestane niveau voor klasse I-apparaten, tijdens normaal gebruik, onderhoudswerkzaamheden door de gebruiker of voorgeschreven servicewerkzaamheden.

Lasererklæring

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

Klasse I-laserprodukter er ikke anset som farlige. Printeren indeholder internt en Klasse IIIb (3b) AlGaAs-laser, der nominelt er en 20 milliwatt laser, som fungerer i bølgelængdeområdet 755–800 nanometer og indbygget i en printhovedenhed, der ikke er servicerbar. Lasersystemet og printeren er designet på en sådan måde, at der ikke er en direkte laserstråling, der overskrider Klasse I-niveauet under normal brug, brugers vedligeholdelse eller de foreskrevne servicebetingelser.

Laser-Hinweis

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

Laserprodukte der Klasse I werden nicht als gefährlich betrachtet. Der Drucker enthält im Inneren einen Laser der Klasse IIIb (3b) AlGaAs mit 20 Milliwatt, im Wellenlängenbereich von 755 bis 800 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 -standardin mukaiseksi luokan I lasertuotteeksi.

Luokan I lasertuotteita ei pidetä haitallisina. Tulostimen sisällä on luokan IIIb (3b) AlGaAs -laser, jonka nimellisteho on 20 mW milliwatts, joka toimii 755–800 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.

Laserprodukter av klasse I anses ikke som helseskadelige. Skriveren inneholder en intern AlGaAs-laser av klasse IIIb (3b) på nominelt 20 milliwatt, som opererer i bølgelengder på 755–800 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.

Laserprodukter av klass I anses inte vara skadliga. Skrivaren innehåller en klass IIIb (3b) AlGaAs-laser på nominellt 20 mW som arbetar inom en våglängd på 755-800 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 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）AlGaAs レーザーが内蔵されています。これは、755 ～ 800 ナノメートルの波長で、定格 20 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 60825-1의 요구 사항을 준수하는 클래스 I(1) 레이저 제품으로 승인되었습니다.

Class I 레이저 제품은 위험한 제품으로 간주되지 않습니다. 프린터에는 755~800 나노미터 범위의 파장 영역에서 공칭 작동하는 20밀리와트 AlGaAs 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 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）的砷化铝镓激光，标称值为 20 毫瓦，其工作波长范围在 755-800nm 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 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 AlGaAs 雷射在 775 至 800 奈米 (nanometer) 波長範圍內運作時通常為 20 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。

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.

⚠ **ATENCIÓ: PERILL DE DESCÀRREGA:** 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.

⚠ **ATENCIÓ: 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.

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.

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.

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.

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.

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 strømstikket 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.

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.

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.

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- 이 제품의 안전은 기본 디자인 및 특정 구성품의 승인 및 테스팅을 기반으로 합니다. 제조업체는 권한 없는 교체 부품 사용 시 안전에 대해 책임을 지지 않습니다.
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- 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。

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- 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。

Preface

This manual contains maintenance procedures for service personnel.

It is divided into the following chapters:

- **General information** provides a general description of the printer, tools, and equipment needed to service the printer.
- **Diagnostic information** contains diagnostic aids such as error code tables, symptoms, and service checks that you can use to isolate failing field replaceable units (FRUs).
- **Service menus** describes the printer interface, user, and service menus.
- **Repair information** provides instructions for making printer adjustments and for removing and installing FRUs.
- **Component locations** illustrates the basic and fully configured models and identifies the locations of the basic printer parts.
- **Maintenance** contains the specifications for lubricating the printer and recommendations to prevent printer problems.
- **Parts catalog** shows illustrations and part numbers for the FRUs.
- **Appendix A: Printer specifications** contains detailed specifications of the product.
- **Appendix B: Options and features** contains the available options and other features of the product.
- **Appendix C: Theory of operation** contains the theory on how the printer operates.
- **Appendix D: Acronyms** contains a list of acronyms in the manual and their meanings.

Conventions

Note: A *note* identifies information that could help you.

Warning—Potential Damage: A *warning* identifies something that could damage the product hardware or software.

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.

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

June 29, 2016

- A video link was added to the Staple finisher bin clamp assembly removal.
- Printer hardware errors (1YY) were revised.
    - 100–101 error messages
    - 121 error messages
    - 126 error messages
    - 127–128 error messages
    - 168 error messages
    - 169 error messages
    - 171–179 error messages
    - Main HVPS undetected service check (new topic)
    - Charge roller HVPS undetected service check (new topic)
- Updated the left door assembly to change the descriptions and PNs for callouts 2 and 12.
- Added PN 40X9934 in the Parts catalog chapter.

May 23, 2016

- Step for checking in-line connector was added to the Motor (duplex diverter) failure service check.

May 3, 2016

- Updated the control panel assembly (both art and the table).
- Added the Enabling the security reset jumper topic in appendix A.
- Updated the Entering the Service Engineer (SE) menu topic.
- References to Fuser temperature and Weather station were removed from the Service menus.
- Ghost images check has been revised.
- References to the sensor (media type) were removed from MPF/pass-through and isolation drive theory and Registration drive theory.

April 18, 2016

- Arts were added to the Motor ([K, M, C, and Y] toner add) failure service checks.
- Miscellaneous parts catalog was added.

March 31, 2016

- Updated the Feeder Parts catalog to change the PN for paper overfill stop to 41X1033.
- Changed the description for PN 41X0899 to model plate (C6160).
- Deleted 41X0930 (maintenance kit).
- FRU 41X0930—300K Roller Maintenance kit was removed from the Maintenance kits parts catalog.

March 11, 2016

- FRU 41X1033—Paper overfill stop was added to the Feeder parts catalog.
- Placed a trademark symbol on the first mention of Lexmark in the body of the manual.

February 22, 2016

- Title was changed for the Toner easily rubs off check topic on the Diagnostic information.
- FRU 41X0140—Motor (duplex) was added to the Duplex Parts catalog.
- FRU 41X0140—Motor (pick) was added to the Feeder Parts catalog.
- FRU 41X0140—Motor (deskew) was added to the Registration Parts catalog.
- FRU part number 41X0140—Motor (redrive) was replaced with 41X0451.

February 9, 2016

- FRU part number 41X0975—Main fan was replaced with 41X0954 on the Electronics—Rear Parts catalog.
- Electronics—Front Parts catalog was revised.
  - FRU part number 41X0954—Printhead fan was replaced with 41X0975.
  - FRU part number 41X0162—Sensor (door interlock) was replaced with 41X0684.
  - FRU part name Switch (left door interlock) was replaced with Door interlock actuator.

General information

Printer model configurations

The Lexmark™ CS820 and C6160 printers are network-capable laser printers that print color print jobs. All information in this manual pertains to all models unless explicitly noted.

The printers are available in the following models:

Model name	Configuration / description	Machine type / model number
CS820de	Network, duplex, 4.3" e-Task touch screen	5063-530
CS820dte	Network, duplex, 4.3" e-Task touch screen, optional 550-sheet tray	5063-530
CS820dtfe	Network, duplex, 4.3" e-Task touch screen, optional 550-sheet tray, staple finisher	5063-571
C6160	Network, duplex, 4.3" e-Task touch screen	5063-539
N/A	2200-sheet tray	0563-HCI
N/A	550-sheet tray	0563-550
N/A	Staple finisher	0563-ILS
N/A	Caster base	9045-076

Finding the serial number

Pull out tray 1, and then find the serial number at the left side of the printer.

Paper and specialty media guide

Notes:

- Make sure that the paper size, type, and weight are set correctly on the computer or control panel.
- Flex, fan, and straighten specialty media before loading them.
- The printer may print at a reduced speed to prevent damage to the fuser.
- For more information on card stock and labels, see the *Card Stock & Label Guide* at **http://support.lexmark.com**.

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 size	Dimensions	550-sheet tray	2200-sheet tray	Multipurpose feeder[1]	Two-sided printing	Staple finisher
3 x 5	76.2 x 127 mm (3 x 5 in.)	X	X	✓	X	✓[3]
4 x 6	101.6 x 152.4 mm (4 x 6 in.)	X	X	✓	X	✓[3]
Statement	139.7 x 215.9 mm (5.5 x 8.5 in.)	✓	X	✓	✓	✓[3]
Executive	184.2 x 266.7 mm (7.3 x 10.5 in.)	✓	X	✓	✓	✓[2]
Letter	215.9 x 279.4 mm (8.5 x 11 in.)	✓	✓	✓	✓	✓
Folio	215.9 x 330.2 mm (8.5 x 13 in.)	✓	✓	✓	✓	✓
Legal	215.9 x 355.6 mm (8.5 x 14 in.)	✓	✓	✓	✓	✓
A6	105 x 148 mm (4.1 x 5.8 in.)	X	X	✓	✓	✓[3]
A5	210 x 148 mm (5.8 x 8.3 in.)	✓	✓	✓	✓	✓[2]
JIS B5	182 x 257 mm (7.2 x 10.1 in.)	✓	X	✓	✓	✓[2]
A4	210 x 297 mm (8.3 x 11.7 in.)	✓	✓	✓	✓	✓

[1] The paper source supports paper size *without size sensing*.

[2] The finisher only supports offset stacking.

[3] The finisher does not support offset stacking or stapling.

General information

Paper size	Dimensions	550-sheet tray	2200-sheet tray	Multipurpose feeder[1]	Two-sided printing	Staple finisher
Oficio	216 x 340 mm (8.5 x 13.4 in.)	✓	✓	✓	✓	✓
Universal	139.7 x 148 mm (5.5 x 5.8 in.) to 215.9 x 359.9 mm (8.5 x 14.2 in.)	✓	X	✓	✓	✓[3]
Universal	76.2 x 127 mm (3 x 5 in.) to 229 x 359.9 mm (9 x 14.2 in.)	X	X	✓	X	✓[3]
Universal	210 x 215.9 mm (8.27 x 8.5 in.) to 210 x 1321 mm (8.27 x 52 in.)	X	X	✓	X	X
7 3/4 Envelope	98 x 190.5 mm (3.9 x 7.5 in.)	X	X	✓	X	✓[3]
9 Envelope	98.4 x 225.4 mm (3.86 x 8.9 in.)	X	X	✓	X	✓[3]
10 Envelope	104.8 x 241.3 mm (4.1 x 9.5 in.)	X	X	✓	X	✓[3]
DL Envelope	110 x 220 mm (4.3 x 8.7 in.)	X	X	✓	X	✓
C4 Envelope	229 x 324 mm (9 x 13 in.)	X	X	✓	X	✓
C5 Envelope	162 x 229 mm (6.4 x 9 in.)	X	X	✓	X	✓
B5 Envelope	176 x 250 mm (6.9 x 9.8 in.)	X	X	✓	X	✓
Other Envelope	98.4 x 162 mm (3.9 x 6.4 in.) to 229 x 359.9 mm (9 x 14.2 in.)	X	X	✓	X	✓

[1] The paper source supports paper size *without size sensing*.

[2] The finisher only supports offset stacking.

[3] The finisher does not support offset stacking or stapling.

Supported paper types

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

Paper type	550-sheet tray	2200-sheet tray	Multipurpose feeder	Two-sided printing	Staple finisher*	Multiposition staple, hole punch finisher*
Plain Paper	✓	✓	✓	✓	✓	✓
Card Stock	✓	X	✓	✓	X	X
Recycled	✓	✓	✓	✓	✓	✓
Glossy	✓	✓	✓	✓	X	X
Heavy Glossy	✓	✓	✓	✓	X	X
Labels	✓	X	✓	X	X	X
Bond	✓	✓	✓	✓	✓	✓
Envelope	X	X	✓	X	X	X
Rough Envelope	X	X	✓	X	X	X
Letterhead	✓	✓	✓	✓	✓	✓
Preprinted	✓	✓	✓	✓	✓	✓
Colored Paper	✓	✓	✓	✓	✓	✓
Light Paper	✓	✓	✓	✓	✓	✓
Heavy Paper	✓	✓	✓	✓	✓	✓
Rough Cotton	✓	✓	✓	✓	✓	✓
Custom Type	✓	✓	✓	✓	✓	✓

* Finisher is supported only in some printer models.

Supported paper weights

Paper type	Standard 550-sheet tray	2200-sheet tray	Multipurpose feeder
Plain Paper	60–176 g/m² (16–47 lb)	60–120 g/m² (16–32 lb)	60–176 g/m² (16–47 lb)
Banner Paper	Not applicable	Not applicable	90–105 g/m² (24–28 lb)
Glossy	88–176 g/m² (60–120 lb)	Not applicable	88–176 g/m² (60–120 lb)
Card stock	88–300 g/m² (60–192 lb)	Not applicable	163–176 g/m² (90–120 lb)

Paper type	Standard 550-sheet tray	2200-sheet tray	Multipurpose feeder
Labels	88–300 g/m² (60–192 lb)	Not applicable	199–220 g/m² (53–59 lb)
Envelopes	Not applicable	Not applicable	60–105 g/m² (16–28 lb)

Paper guidelines

Selecting the correct paper or specialty media reduces 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

The trays can feed paper weights between 60–176 g/m² (16–47-lb) grain long paper. Paper lighter than 60 g/m² (16 lb) may not be stiff enough to feed properly, and may cause jams.

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 (16–47-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.

Selecting preprinted forms and letterhead

- Use grain long for 60–176-g/m^2 (16–47-lb) paper.
- Use only forms and letterhead printed using an offset lithographic or engraved printing process.
- Avoid paper with rough or heavily textured surfaces.
- Use inks that are not affected by the resin in toner. Inks that are oxidation-set or oil-based generally meet these requirements; latex inks might not.
- Print samples on preprinted forms and letterheads considered for use before buying large quantities. This determines whether or not the ink in the preprinted form or letterhead will affect print quality.
- When in doubt, contact your paper supplier.

Using recycled paper and other office papers

As an environmentally conscientious company, Lexmark supports the use of recycled paper produced specifically for use in laser (electrophotographic) printers.

While no blanket statement can be made that all recycled paper will feed well, Lexmark consistently tests papers that represent recycled cut size copier papers available on the global market. This scientific testing is conducted with rigor and discipline. Many factors are taken into consideration both separately and as a whole, including the following:

- Amount of post-consumer waste (Lexmark tests up to 100% post-consumer waste content.)
- Temperature and humidity conditions (Testing chambers simulate climates from all over the world.)
- Moisture content (Business papers should have low moisture: 4–5%.)
- Bending resistance and proper stiffness means optimum feeding through the printer.
- Thickness (impacts how much can be loaded into a tray)
- Surface roughness (measured in Sheffield units, impacts print clarity and how well toner fuses to the paper)
- Surface friction (determines how easily sheets can be separated)

- Grain and formation (impacts curling, which also influences the mechanics of how the paper behaves as it moves through the printer)
- Brightness and texture (look and feel)

Recycled papers are better than ever; however, the amount of recycled content in a paper affects the degree of control over foreign matter. And while recycled papers are one good path to printing in an environmentally responsible manner, they are not perfect. The energy required to de-ink and deal with additives such as colorants and "glue" often generates more carbon emissions than does normal paper production. However, using recycled papers enables better resource management overall.

Lexmark concerns itself with the responsible use of paper in general based on life cycle assessments of its products. To gain a better understanding of the impact of printers on the environment, the company commissioned a number of life cycle assessments and found that paper was identified as the primary contributor (up to 80%) of carbon emissions caused throughout the entire life of a device (from design to end-of-life). This is due to the energy-intensive manufacturing processes required to make paper.

Thus, Lexmark seeks to educate customers and partners on minimizing the impact of paper. Using recycled paper is one way. Eliminating excessive and unnecessary paper consumption is another. Lexmark is well-equipped to help customers minimize printing and copying waste. In addition, the company encourages purchasing paper from suppliers who demonstrate their commitment to sustainable forestry practices.

Lexmark does not endorse specific suppliers, although a converter's product list for special applications is maintained. However, the following paper choice guidelines will help alleviate the environmental impact of printing:

1 Minimize paper consumption.

2 Be selective about the origin of wood fiber. Buy from suppliers who carry certifications such as the Forestry Stewardship Council (FSC) or the Program for the Endorsement of Forest Certification (PEFC). These certifications guarantee that the paper manufacturer uses wood pulp from forestry operators that employ environmentally and socially responsible forest management and restoration practices.

3 Choose the most appropriate paper for printing needs: normal 75 or 80 g/m^2 certified paper, lower weight paper, or recycled paper.

Unacceptable paper examples

Test results indicate that the following paper types are at risk for use with laser printers:

- Chemically treated papers used to make copies without carbon paper, also known as *carbonless papers*
- Preprinted papers with chemicals that may contaminate the printer
- Preprinted papers that can be affected by the temperature in the printer fuser
- Preprinted papers that require a registration (the precise location on the page) greater than ± 2.3 mm (± 0.9 in.), such as optical character recognition (OCR) forms. In some cases, registration can be adjusted with a software application to successfully print on these forms.)
- Coated papers (erasable bond), synthetic papers, thermal papers
- Rough-edged, rough or heavily textured surface papers or curled papers
- Recycled papers that fail EN12281:2002 (European testing)
- Paper weighing less than 60 g/m^2 (16 lb)
- Multiple part forms or documents

For more information about Lexmark, visit **www.lexmark.com**. General sustainability-related information can be found at the **Environmental Sustainability** link.

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 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.

Tips on using envelopes

- From the printer control panel, set the paper size, type, texture, and weight in the Paper menu to match the envelopes loaded in the tray.
- Print samples on the envelopes being considered for use before buying large quantities.
- Use envelopes designed specifically for laser printers.
- For best performance, use envelopes made from 90-g/m^2 (24-lb) paper or 25% cotton.
- Use only new envelopes from undamaged packages.
- To optimize performance and minimize jams, do not use envelopes that:
  - Have excessive curl or twist.
  - Are stuck together or damaged in any way.
  - Have windows, holes, perforations, cutouts, or embossing.
  - Have metal clasps, string ties, or folding bars.
  - Have an interlocking design.
  - Have postage stamps attached.
  - Have any exposed adhesive when the flap is in the sealed or closed position.
  - Have bent corners.
  - Have rough, cockle, or laid finishes.

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

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

Tips on using labels

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

Tips on using letterhead

- Use letterhead specifically for laser printers.
- Print samples before buying large quantities.
- Before loading letterhead, flex and fan the sheets.
- When printing on letterhead, take note of the page orientation.

Source	Printing	Side with the letterhead	Paper orientation
Trays	One-sided	Faceup	Load the sheet with the top edge toward the left side of the tray.
	Two-sided	Facedown	Load the sheet with the top edge toward the right side of the tray.
Multipurpose feeder	One-sided	Facedown	Load the sheet with the top edge on the right side.
	Two-sided	Faceup	Load the sheet with the top edge on the left side.

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, various sizes

- #1 Phillips screwdriver, magnetic

- #2 Phillips screwdriver, magnetic

- #2 Phillips screwdriver, magnetic short-blade

- Needle-nose pliers

- Diagonal side cutters

- Spring hook

- Feeler gauges

- Analog or digital multimeter

- 3-mm ball hex wrench

- Toner vacuum

- Flashlight

Diagnostic information

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

⚠ **CAUTION—POTENTIAL INJURY:** The printer weights 61–84 kg (135–185 lb) and requires at least three people to lift it safely. Always use the handholds on the printer to lift it. 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 it.

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

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 691**.

- Avoid locations that:
  - Generate ammonia gas
  - Are exposed to direct sunlight
  - Are near open flames
  - Are dusty

- Make sure that the recommended paper for this printer is used.

- Do a test print with paper from a newly opened package, and then check the result.

Fixing print quality issues
- **"Initial print quality check" on page 42**
- **"Blank or white pages, or one color missing check" on page 43**
- **"Dark print check" on page 46**

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 transfer roller, toner cartridge, and transfer belt 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.

Blank or white pages, or one color missing check

Actions	Yes	No
Step 1 **a** Remove the transfer belt. **b** Check if the cable shield end of the transfer belt contact is touching the black only retract coupler. Does the transfer belt contact interfere with the BOR coupler?	Go to step 2.	Go to step 3.
Step 2 Reinstall, repair, or replace the transfer belt contact. Does the problem remain?	Go to step 5.	The problem is solved.
Step 3 Check the cable for proper connection. • Check the controller board socket JVD01. • Check the cable connected to the printhead. Is the cable properly connected?	Go to step 5.	Go to step 4.
Step 4 Reseat the cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** From the home screen, touch **Settings** > **Device** > **Notifications** > **Show Supply Estimates**. **b** Check the remaining life of the photoconductor units and developer units. Is the photoconductor unit or developer unit near or at its end of life?	Go to step 6.	Go to step 7.
Step 6 Replace the appropriate photoconductor unit or developer unit. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 **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 8.	Go to step 7.
Step 8 Check the contacts of the photoconductor unit and developer unit of the affected color. Are the contacts clean?	Go to step 10.	Go to step 9.
Step 9 Clean the contacts. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Do the following: • If the missing color is cyan, magenta, or yellow, then replace the appropriate developer unit. • If the missing color is black, then replace the black developer unit. See **"Developer unit and photoconductor unit removal" on page 426**. 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** **b** Select the developer unit of the affected color, and then touch **Start**. Do the developer unit drive couplers rotate?	Go to step 13.	Go to step 12.
Step 12 Replace the EP/developer/toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Remove the main HVPS, and then clean its contacts. See **"Main HVPS removal" on page 440**. **b** Reinstall the main HVPS. Does the problem remain?	Go to step 14.	The problem is solved.

Actions	Yes	No
Step 14 Replace the main HVPS. See **"Main HVPS removal" on page 440**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the continuity of the main HVPS cable. Does the cable have continuity?	Go to step 17.	Go to step 16.
Step 16 Replace the cable. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 **a** Enter the Diagnostics menu, and then navigate to: 　　**Printer setup** > **EP setup** > **Toner patch sensor adjust** > **Clean sensing and laser optics** 　　Let the cleaning operation run for three minutes. **b** From the home screen, touch **Settings** > **Reports** > **Print Quality Pages**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Turn off the printer to let the printhead shutters remain open. **b** Remove the developer and PC combos, and then clean the printhead lenses using a lint-free cloth. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the motor (printhead wiper) for damage. Is the motor free of damage?	Go to step 21.	Go to step 20.
Step 20 Replace the motor. See **"Motor (printhead wiper) removal" on page 419**. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Check the printhead wiper actuator rack for misalignment and damage. Is the actuator rack properly engaged with the printhead wipers, and is it free of damage?	Go to step 23.	Go to step 22.

Actions	Yes	No
Step 22 Reinstall or replace the printhead wiper actuator rack. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Replace the printhead. See **"Printhead removal" on page 416**. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Dark print check

ABC
DEF

Actions	Yes	No
Step 1 **a** From the home screen, touch **Settings** > **Print** > **Quality** > **Toner Darkness**. **b** Check the darkness setting value. Is the darkness setting too low?	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.
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 12.

Actions	Yes	No
Step 4 Perform color alignment adjustment on all colors. See **"Color alignment adjust" on page 366**. 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 342**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the main HVPS for proper connection. • Check the main HVPS connector. • Check the main HVPS socket JHVPS1 on the controller board. Is the cable properly connected?	Go to step 8.	Go to step 7.
Step 7 Reseat the cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the continuity of the main HVPS cable. Does the cable have continuity?	Go to step 10.	Go to step 9.
Step 9 Replace the cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the electrical contacts of the developer/PC unit wiper rail of the affected color. Are the contacts stuck or damaged?	Go to step 11.	Go to step 11.
Step 11 Repair or replace the developer/PC unit wiper rail. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the electrical contacts of the transfer belt. Are the pins stuck or damaged?	Go to step 13.	Go to step 14.

Actions	Yes	No
Step 13 Repair the pins or replace the transfer belt contacts. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Replace the main HVPS. See **"Main HVPS removal" on page 440**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Ghost images 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. Is only one color affected on the ghost images?	Go to step 2.	Go to step 3.
Step 2 Replace the photoconductor unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the transfer belt for traces of residual toner. Is the transfer belt free of residual toner?	Go to step 5.	Go to step 4.
Step 4 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 5.	The problem is solved.

Actions	Yes	No
Step 5 Replace the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Gray or colored background 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 background. Is only one color producing the background?	Go to step 2.	Go to step 4.
Step 2 **a** From the home screen, touch **Settings** > **Device** > **Notifications** > **Show Supply Estimates**. **b** Check the remaining life of the photoconductor units and developer units. Is the photoconductor unit or developer unit near or at its end of life?	Go to step 3.	Go to step 4.
Step 3 Replace the appropriate photoconductor unit or developer unit. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the waste toner bottle. Is the waste toner bottle full?	Go to step 5.	Go to step 6.
Step 5 Replace the waste toner bottle. Does the problem remain?	Go to step 6.	The problem is solved.

Actions	Yes	No
Step 6 Check the transfer roller for misalignment, wear, and damage. Is the transfer roller properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the transfer roller. See **"Transfer roller removal" on page 388**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the transfer belt for misalignment, wear, and damage. Is the transfer belt properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the main HVPS for proper connection. • Check the main HVPS connector. • Check the main HVPS socket JHVPS1 on the controller board. Is the cable properly connected?	Go to step 12.	Go to step 11.
Step 11 Reseat the cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the continuity of the main HVPS cable. Does the cable have continuity?	Go to step 14.	Go to step 13.
Step 13 Replace the cable. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the charge roller HVPS for proper connection. • Check the charge roller HVPS connector. • Check the charge roller HVPS socket JHVPS2 on the controller board. Is the cable properly connected?	Go to step 16.	Go to step 15.

Actions	Yes	No
Step 15 Reseat the cable. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the continuity of the charge roller HVPS cable. Does the cable have continuity?	Go to step 18.	Go to step 17.
Step 17 Replace the cable. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Remove, and then reinstall the main HVPS. See **"Main HVPS removal" on page 440**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Replace the main HVPS. See **"Main HVPS removal" on page 440**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Remove, and then reinstall the charge roller HVPS. See **"Charge roller HVPS removal" on page 453**. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the charge roller HVPS. See **"Charge roller HVPS removal" on page 453**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Horizontal dark lines 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 dark lines. Does the line repeat within a test page?	Go to step 2.	Go to step 3.
Step 2 Perform the Repeating defects service check. See **"Repeating defects check" on page 71**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the pages right after the defective page. Does the defect repeat after two consecutive normal pages (A3 or letter) have been printed?	Go to step 4.	The problem is solved.
Step 4 Check the transfer belt for contamination. Is the transfer belt free of contamination?	Go to step 6.	Go to step 5.
Step 5 Clean the transfer belt. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Light print check

ABC
DEF

Actions	Yes	No
Step 1 **a** From the home screen, touch **Settings** > **Print** > **Quality** > **Color saver**. **b** Set Color saver to Off. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Update the firmware to the latest version. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** From the home screen, touch **Settings** > **Print** > **Quality** > **Toner Darkness**. **b** Check the darkness setting value. Is the darkness setting too low?	Go to step 4.	Go to step 5.
Step 4 Adjust the darkness setting to the proper value. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **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 light print?	Go to step 6.	Go to step 15.
Step 6 Check the toner cartridge of the affected color for proper installation. • Make sure that there are no packing material still on it. • Check for misalignment. Is the toner cartridge properly installed?	Go to step 8.	Go to step 7.

Actions	Yes	No
Step 7 Reinstall the toner cartridge. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the affected toner cartridge. • Check the shutter. **Note:** The toner cartridge shutter slides open to supply toner to the developer unit. • Check if the cartridge is empty. Is the toner cartridge filled and properly working?	Go to step 10.	Go to step 9.
Step 9 Repair the shutter or replace the toner cartridge. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the developer unit of the affected color for proper installation. Is the developer unit properly installed?	Go to step 12.	Go to step 11.
Step 11 Reinstall the developer unit. 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 motor (toner add) of the affected color, and then touch **Start**. Does the motor run?	Go to step 15.	Go to step 13.
Step 13 Check the motor cable JBTLM1 on the controller board for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Replace the motor. Does the problem remain?	Go to step 15.	The problem is solved.

Actions	Yes	No
Step 15 **a** Enter the Diagnostics menu, and then navigate to: **Printer setup** > **EP setup** > **Toner patch sensor adjust** > **Clean sensing and laser optics** Let the cleaning operation run for three minutes. **b** Enter the Diagnostics menu, and then navigate to: **Advanced Print Quality Samples** > **Advanced Print Quality Samples** Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Turn off the printer to let the printhead shutters remain open. **b** Remove the developer and PC unit combos, and then clean the printhead lenses using a lint-free cloth. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Check the main HVPS for proper connection. • Check the main HVPS connector. • Check the main HVPS socket JHVPS1 on the controller board. Is the cable properly connected?	Go to step 19.	Go to step 18.
Step 18 Reseat the cable. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the continuity of the main HVPS cable. Does the cable have 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 Check the electrical contacts of the developer/PC unit wiper rail of the affected color. Are the contacts stuck or damaged?	Go to step 23.	Go to step 22.

Actions	Yes	No
Step 22 Repair or replace the developer/PC unit wiper rail. See **"Developer/PC unit CMY wiper rail removal" on page 447** or **"Developer/PC unit K wiper rail removal" on page 448**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Check the electrical contacts of the transfer belt. Are the pins stuck or damaged?	Go to step 24.	Go to step 25.
Step 24 Repair the pins or replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Replace the main HVPS. See **"Main HVPS removal" on page 440**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Mottled print and dots check

ABC
DEF
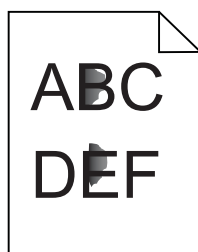
Actions	Yes	No
Step 1 **a** From the home screen, touch **Settings** > **Device** > **Preferences**. **b** Check if the paper type and size settings match the paper type and size set on the tray. Do the settings match?	Go to step 3.	Go to step 2.
Step 2 Change the paper size and type, or adjust the size settings in the tray. Does the problem remain?	Go to step 3.	The problem is solved.

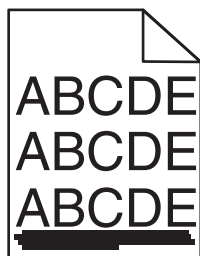| Actions	Yes	No
Step 3 Check the paper for texture or rough finish. Is the paper textured or rough?	Go to step 4.	Go to step 5.
Step 4 Replace the textured or rough paper with plain paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the printer for toner contamination. Is the printer free of leaked toner?	Go to step 7.	Go to step 6.
Step 6 Remove the leaked toner. • Using a toner vacuum, clean the printer and remove all traces of leaked toner. • Print several pages to clear the remaining traces of toner from the imaging components. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 a From the home screen, touch **Settings** > **Device** > **Notifications** > **Show Supply Estimates**. b Check the remaining life of the photoconductor units and developer units. Is the photoconductor unit or developer unit near or at its end of life?	Go to step 8.	Go to step 9.
Step 8 Replace the appropriate photoconductor unit or developer unit. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 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 mottled print and dots?	Go to step 10.	Go to step 11.

Actions	Yes	No
Step 10 Replace the photoconductor unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Print crooked or skewed check
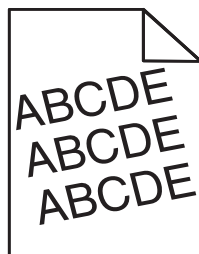
Actions	Yes	No
Step 1 Check the positions of the guides on all the trays. Adjust the guides to match the size of the paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the deskew roller for contamination and damage. Is the roller free of contamination and damage?	Go to step 4.	Go to step 3.
Step 3 Clean or replace the deskew roller. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform the printhead alignment adjustment. See **"Printhead alignment adjustment" on page 379**. Does the problem remain?	Go to step 5.	The problem is solved.

Actions	Yes	No
Step 5 **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 6.
Step 6 Check the motor cable JMTR3 on the controller board for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the motor. Does the problem remain?	Contact the next level of support.	The problem is solved.

Solid color or black images 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. Is only one color producing the solid color image?	Go to step 2.	Go to step 4.
Step 2 Replace the photoconductor unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 3.	The problem is solved.

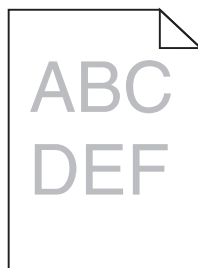| Actions	Yes	No
Step 3 Replace the developer unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the charge roller HVPS for proper connection. • Check the charge roller HVPS connector. • Check the charge roller HVPS socket JHVPS2 on the controller board. Is the cable properly connected?	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 continuity of the charge roller HVPS cable. 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 Check the high voltage connectors on the charge roller HVPS for proper connection. Are the connectors properly connected?	Go to step 10.	Go to step 9.
Step 9 Reseat the high voltage connectors. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the charge roller HVPS. See **"Charge roller HVPS removal" on page 453**. Does the problem remain?	Go to step 11.	The problem is solved.

Actions	Yes	No
Step 11 Check the cable for proper connection. - Check the controller board socket JVD01. - Check the cable connected to the printhead. Is the cable properly connected?	Contact the next level of support.	Go to step 12.
Step 12 Reseat the cable. Does the problem remain?	Contact the next level of support.	The problem is solved.

Text or images cut off check

Actions	Yes	No
Check the positions of the guides on all the trays. Adjust the guides to match the size of the paper. Does the problem remain?	Contact the next level of support.	The problem is solved.

Toner easily rubs/flakes off check

Actions	Yes	No
Step 1 a From the home screen, touch **Settings** > **Device** > **Preferences**. b Make sure that the paper type and size settings match with the paper type and size set on the tray. Does the problem remain?	Go to step 2.	The problem is solved.

Actions	Yes	No
Step 2 Check the paper for texture or rough finish. Is the paper textured or rough?	Go to step 3.	Go to step 4.
Step 3 Replace the textured or rough paper with plain paper. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Remove, and then reinstall the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **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 7.	Go to step 8.
Step 7 Perform the service check for the error code found. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the LVPS. See **"LVPS removal" on page 459**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Uneven print density check

ABCDE
ABCDE

Actions	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 **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 uneven print density?	Go to step 3.	Go to step 4.
Step 3 Replace the photoconductor unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Remove, and then reinstall the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Remove, and then reinstall the transfer roller. See **"Transfer roller removal" on page 388**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the transfer roller. See **"Transfer roller removal" on page 388**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Vertical dark lines or streaks 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. Is only one color producing the vertical lines or streaks?	Go to step 2.	Go to step 3.
Step 2 Replace the photoconductor unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Vertical white lines or voids 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 and check the colors affected. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Printer setup** > **EP setup** > **Toner patch sensor adjust** > **Clean sensing and laser optics** Let the cleaning operation run for three minutes. **b** From the home screen, touch **Settings** > **Reports** > **Print Quality Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Turn off the printer to let the printhead shutters remain open. **b** Remove the developer and PC unit combos, and then clean the printhead lenses using a lint-free cloth. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the developer unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the printhead. See **"Printhead removal" on page 416**. 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 **a** From the home screen, touch **Settings** > **Print Quality Pages**. **b** Check the test page. Is only one color blurred or misaligned?	Go to step 2.	Go to step 3.

Actions	Yes	No
Step 2 Perform color alignment adjustment on the misaligned color. See **"Color alignment adjust" on page 366**. 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 366**. 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 338**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Printer setup** > **EP setup** > **Toner patch sensor adjust** > **Clean sensing and laser optics** Let the cleaning operation run for three minutes. **b** Enter the Diagnostics menu, and then navigate to: **Advanced Print Quality Samples** > **Advanced Print Quality Samples** Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Turn off the printer to let the printhead shutters remain open. **b** Remove the developer and PC unit combos, and then clean the printhead lenses using a lint-free cloth. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the EP/Developer/toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the printhead. See **"Printhead removal" on page 416**. 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 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Image banding check

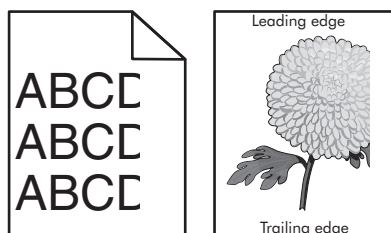| Actions	Yes	No
Step 1 Load paper from a fresh package. **Note:** Paper may absorb moisture due to high humidity. Store paper in its original wrapper until it is ready to be used. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Advanced Print Quality Samples** > **Advanced Print Quality Samples** **b** Check the test page. Are all colors affected by image banding?	Go to step 7.	Go to step 3.
Step 3 Replace the photoconductor unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Remove, and then reinstall the transfer roller. See **"Transfer roller removal" on page 388**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Remove, and then reinstall the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 6.	The problem is solved.

Actions	Yes	No
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Advanced Print Quality Samples** > **Advanced Print Quality Samples** **b** Check the test page. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the transfer roller. See **"Transfer roller removal" on page 388**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the main HVPS. See **"Main HVPS removal" on page 440**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Image void (process direction) check

Actions	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 **a** Enter the Diagnostics menu, and then navigate to: **Printer setup** > **EP setup** > **Toner patch sensor adjust** > **Clean sensing and laser optics** Let the cleaning operation run for three minutes. **b** From the home screen, touch **Settings** > **Reports** > **Print Quality Pages**. Does the problem remain?	Go to step 3.	The problem is solved.

Actions	Yes	No
Step 3 **a** Turn off the printer to let the printhead shutters remain open. **b** Remove the developer and PC unit combos, and then clean the printhead lenses using a lint-free cloth. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the motor (printhead wiper) for damage. Is the motor free of damage?	Go to step 6.	Go to step 5.
Step 5 Replace the motor. See **"Motor (printhead wiper) removal" on page 419**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the printhead wiper actuator rack for misalignment and damage. Is the actuator rack properly engaged with the printhead wipers, and is it free of damage?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the printhead wiper actuator rack. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **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 9.	Go to step 10.
Step 9 Replace the photoconductor unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the transfer belt for contamination. Is the transfer belt free of contamination?	Go to step 12.	Go to step 11.

Actions	Yes	No
Step 11 Clean the transfer belt. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Random marks check

Actions	Yes	No
Step 1 Check the printer for toner contamination. Is the printer free of leaked toner?	Go to step 3.	Go to step 2.
Step 2 Remove the leaked toner. • Using a toner vacuum, clean the printer and remove all traces of leaked toner. • Print several pages to clear the remaining traces of toner from the developer units and PC units. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the developer and PC unit combo for contamination. Is the developer and PC unit combo free of contamination?	Go to step 5.	Go to step 4.
Step 4 Clean or replace the developer and PC unit combo. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the developer units for contamination. Is the developer unit free of contamination?	Go to step 7.	Go to step 6.
Step 6 Replace the contaminated developer unit. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 Check the transfer belt for contamination. Is the transfer belt free of contamination?	Contact the next level of support.	Go to step 8.
Step 8 Replace the transfer belt. See **"Transfer belt removal" on page 431**. 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 contamination or dust. Are the rollers free of contamination or dust?	Go to step 3.	Go to step 2.
Step 2 Remove the contamination or dust. 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 42 mm?	Go to step 4.	Go to step 5.
Step 4 Replace the developer unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 5 Measure the distance between the repeating marks. Is the distance between the marks either 125.7 mm, or 35.4 mm?	Go to step 6.	Go to step 7.
Step 6 Replace the developer unit of the affected color. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 7 Measure the distance between the repeating marks. Is the distance between the marks 78.5 mm?	Go to step 8.	Go to step 9.

Diagnostic information

Action	Yes	No
Step 8 Replace the transfer roller. See **"Transfer roller removal" on page 388**. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 9 Measure the distance between the repeating marks. Is the distance between the marks either 96.6 mm or 127.6 mm?	Go to step 10.	Go to step 11.
Step 10 Replace the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 11 Measure the distance between the repeating marks. Is the distance between the marks either 47.1 mm or 90 mm?	Go to step 13.	Go to step 12.
Step 12 Check the marks that appear on a multi-page print job. Do the marks appear on every other page?	Go to step 13.	Contact the next level of support.
Step 13 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Paper jams

Avoiding jams

Load paper properly

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

Correct loading of paper
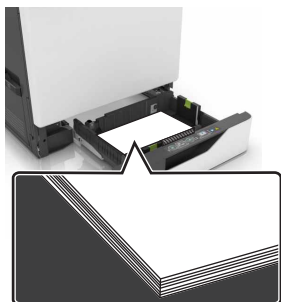
Incorrect loading of paper
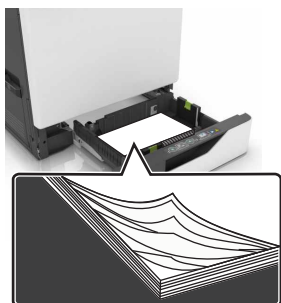
- Do not load or remove a tray while the printer is printing.

- Do not load too much paper. Make sure that the stack height is below the maximum paper fill indicator.

- Do not slide paper into the tray. Load paper as shown in the illustration.
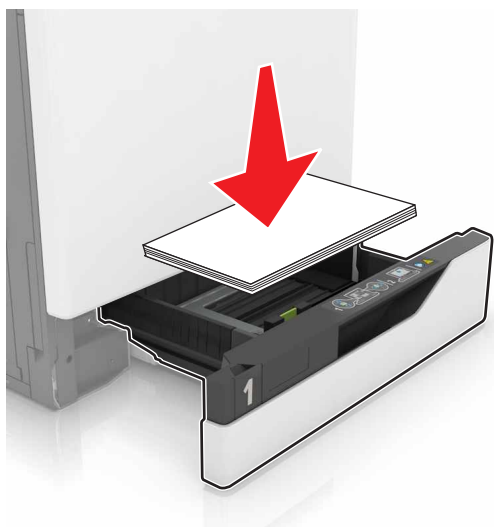
- Make sure that the paper guides are positioned correctly and are not pressing tightly against the paper or envelopes.

- Push the tray firmly into the printer after loading paper.

Use recommended paper

- Use only recommended paper or specialty media.

- Do not load paper that is wrinkled, creased, damp, bent, or curled.

Diagnostic information

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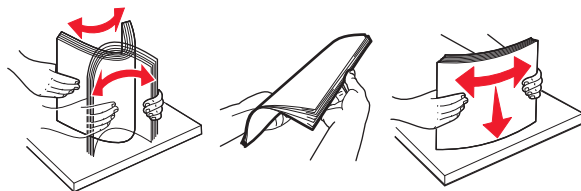
- Do not use paper that has been cut or trimmed by hand.
- Do not mix paper sizes, weights, or types in the same tray.
- Make sure that the paper size and type are set correctly on the computer or printer control panel.
- Store paper according to manufacturer recommendations.

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.
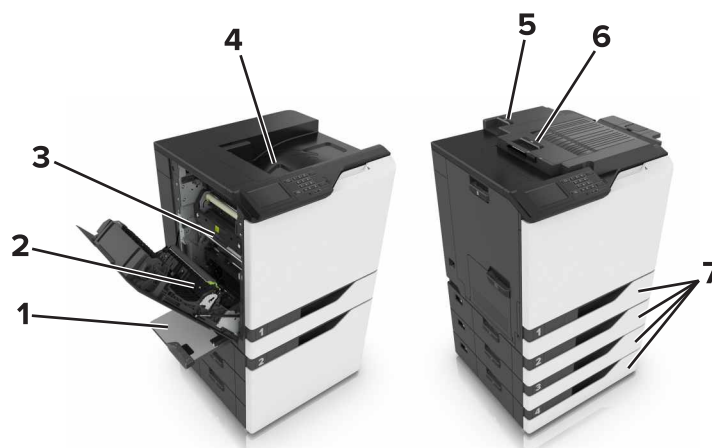
	Jam locations
1	Multipurpose feeder
2	Duplex unit
3	Fuser
4	Standard bin
5	Door G
6	Door F
7	Trays

Paper jam in trays

1 Pull out the tray.

2 Remove the jammed paper.

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

3 Insert the tray.

4 Open the tray cover.

5 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.
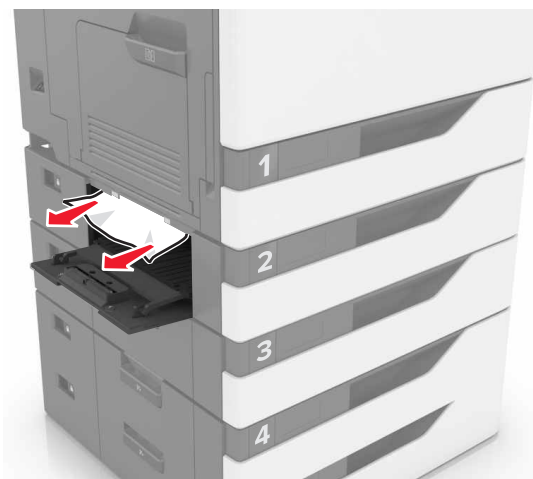
6 Close the tray cover.

Paper jam in the multipurpose feeder

1 Remove paper from the multipurpose feeder.

2 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.
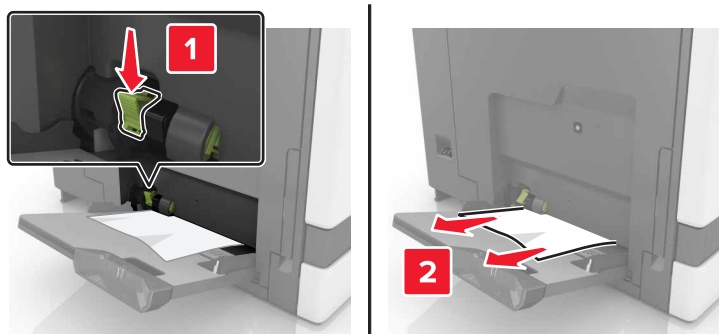
3 Open door B, and then remove any paper fragments.

⚠ **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.
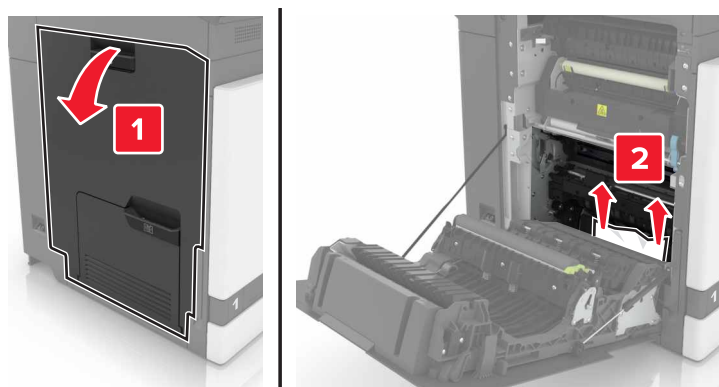
4 Close door B.

5 Flex, fan, and align the paper edges before loading.
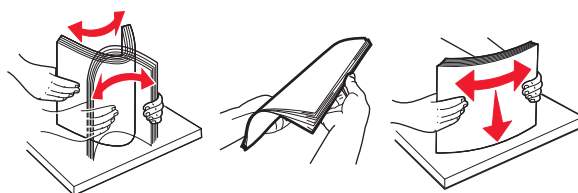
6 Reload paper.

Paper jam in the standard bin

1 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.

2 Open door B, 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.
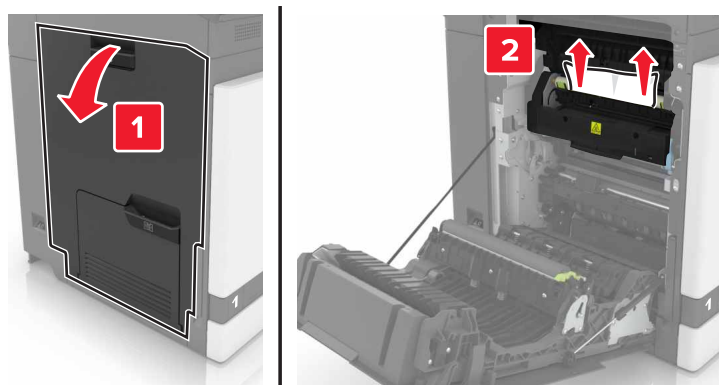
3 Close door B.

Paper jam in door B

Paper jam in the fuser

1 Open door B.

> ⚠ **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.
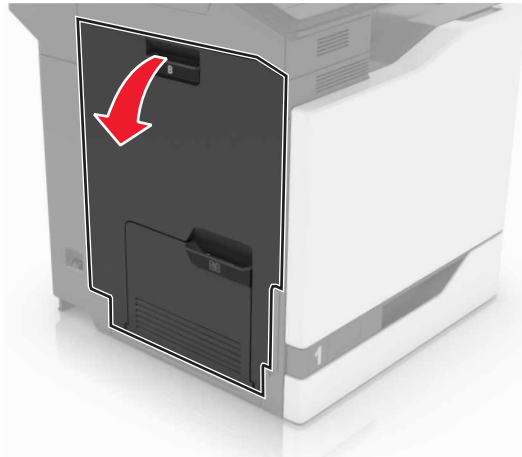
2 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.
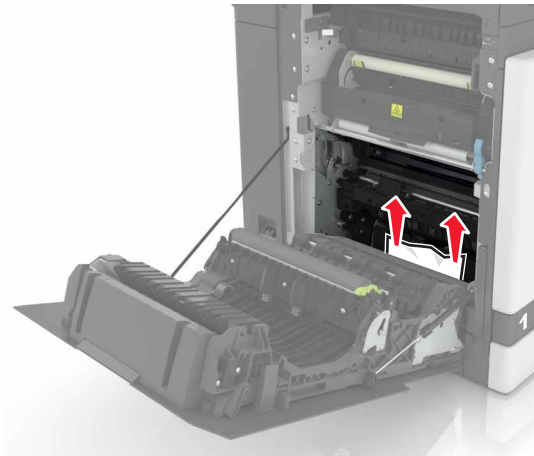
3 Open the fuser access door.

4 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.
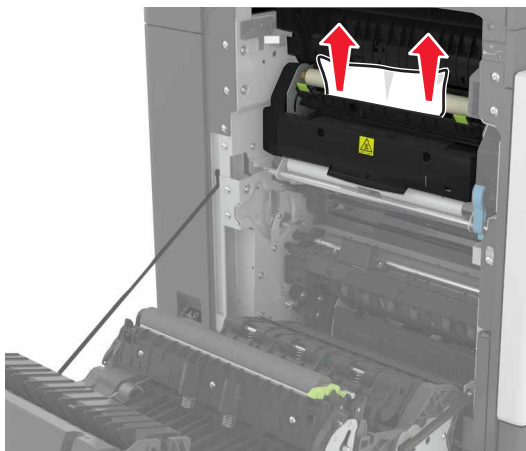
5 Close door B.

Paper jam in the duplex unit

1 Open door B.

⚠ **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.
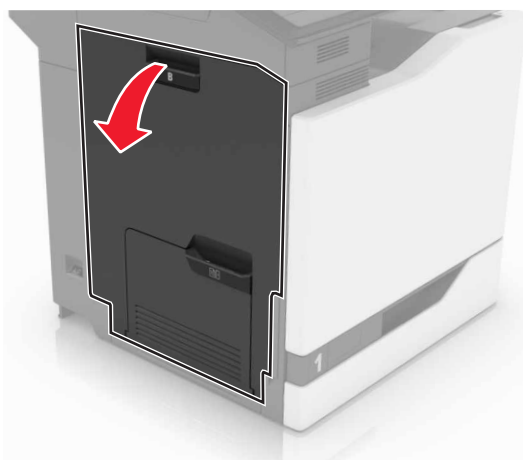
2 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.
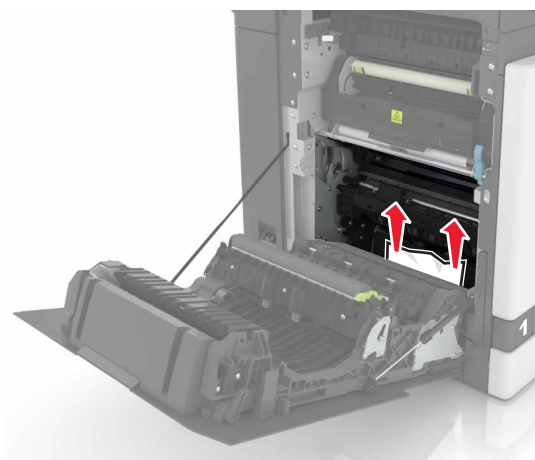
3 Open the duplex cover.
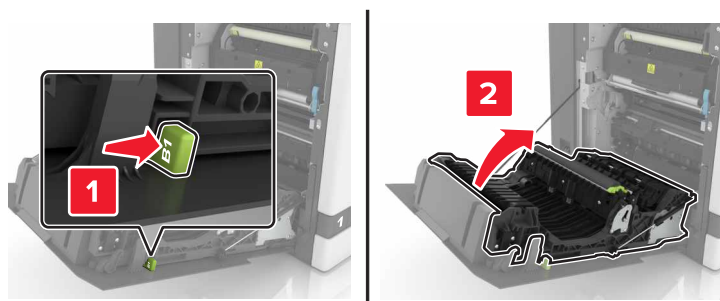
4 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.
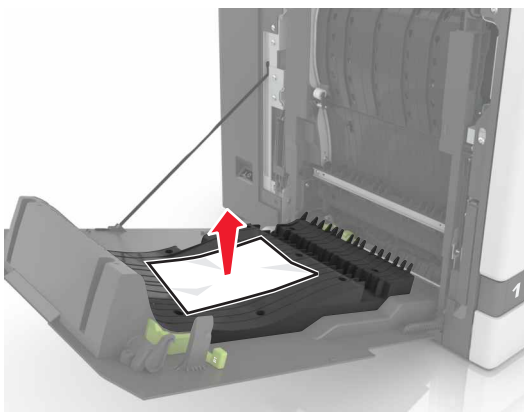
5 Close the duplex cover and door B.

Paper jam in the finisher bin

1 Open door F.
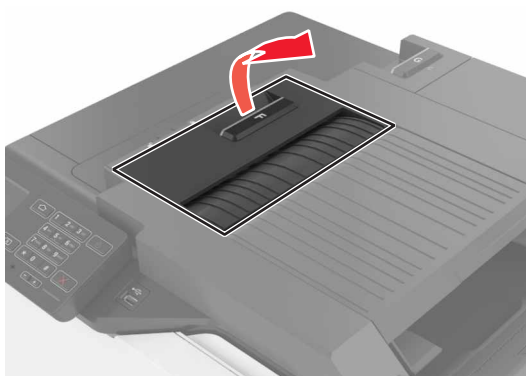
2 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.
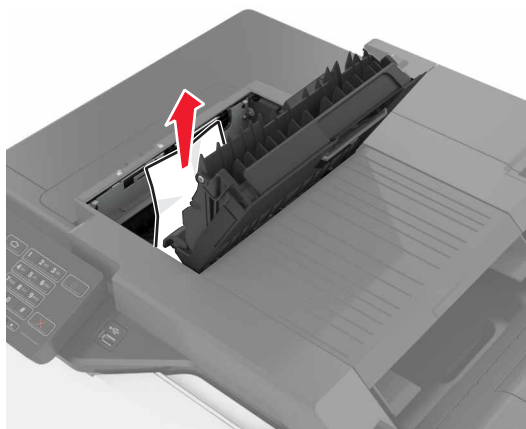
3 Close door F.

Staple jam in door G

1 Open door G.
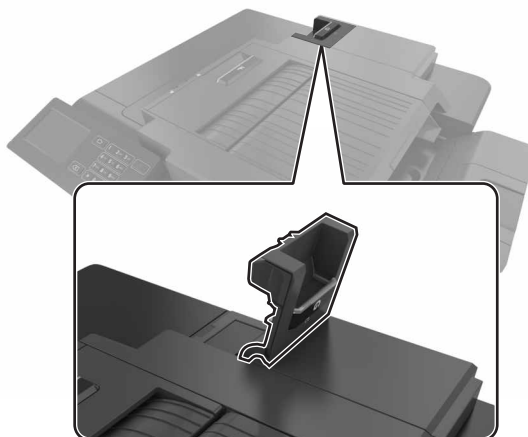
2 Pull out the staple cartridge holder.
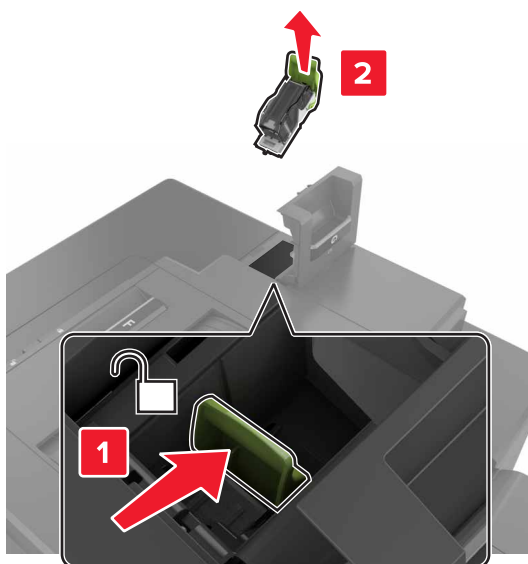
3 Open the staple guard, remove the loose staples, and then remove the partial slab of staples so only the full slabs remain.
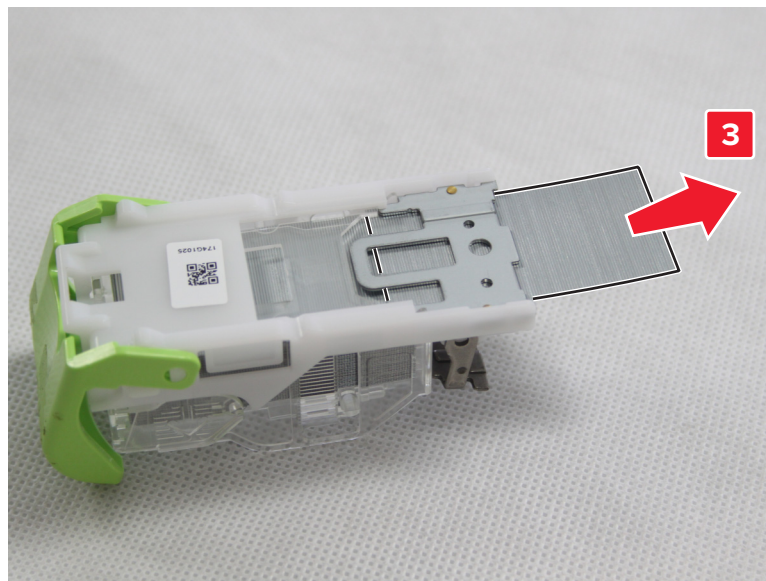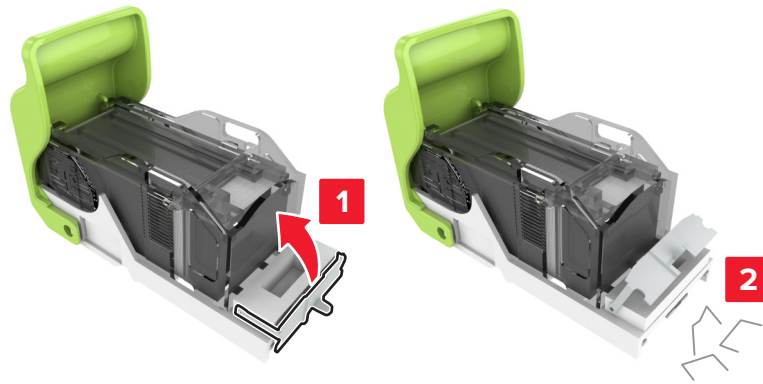
4 Close the staple guard.

5 Insert the staple cartridge holder.
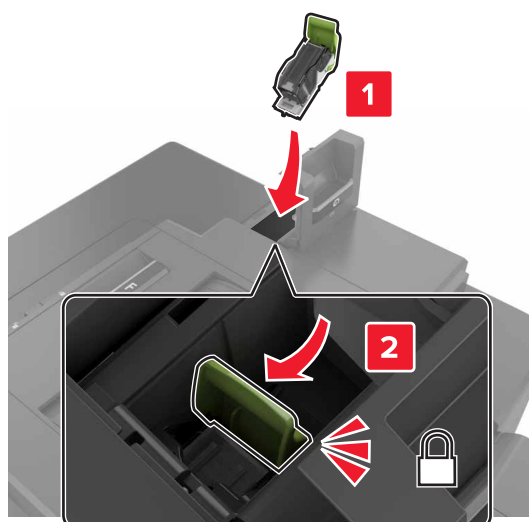
6 Close door G.

200 paper jams

200 paper jam messages

Error code	Description	Action
200.02	Paper fed from the MPF was detected earlier than expected at the sensor (input).	See **"Sensor (input): Paper arrived too early service check" on page 87**.
200.04	Paper fed from the MPF cleared the sensor (input) earlier than expected.	See **"Sensor (input): Paper cleared too early service check" on page 108**.
200.05	Paper fed from the MPF never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear service check" on page 88**.
200.07	Paper fed from the MPF never cleared the sensor (input).	

Error code	Description	Action
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 87**.
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 108**.
200.15	Paper fed from tray 1 never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear service check" on page 88**.
200.16	Paper fed from tray 1 was picked but it never arrived at the sensor (input).	See **"Sensor (input): Tray 1 failed to pick service check" on page 89**.
200.17	Paper fed from tray 1 never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear service check" on page 88**.
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 87**.
200.23	Paper fed from tray 2 jammed at the sensor (input). Paper did not reach the sensor (input).	See **"Sensor (input): Paper (tray 2) 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 108**.
200.25	Paper fed from tray 2 never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear service check" on page 88**.
200.27	Paper fed from tray 2 never cleared the sensor (input).	
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 87**.
200.33	Paper fed from tray 3 jammed at the sensor (input). Paper did not reach the sensor (input).	See **"Sensor (input): Paper (tray 3) failed to arrive service check" on page 95**.
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 108**.
200.35	Paper fed from tray 3 never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear service check" on page 88**.
200.37	Paper fed from tray 3 never cleared the sensor (input).	
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 87**.
200.43	Paper fed from tray 4 jammed at the sensor (input). Paper did not reach the sensor (input).	See **"Sensor (input): Paper (tray 4) failed to arrive service check" on page 98**.
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 108**.
200.45	Paper fed from tray 4 never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear service check" on page 88**.
200.47	Paper fed from tray 4 never cleared the sensor (input).	
200.52	Paper fed from tray 5 was detected earlier than expected at the sensor (input).	See **"Sensor (input): Paper arrived too early service check" on page 87**.

Error code	Description	Action
200.53	Paper fed from tray 5 jammed at the sensor (input). Paper did not reach the sensor (input).	See **"Sensor (input): Paper (tray 5) failed to arrive service check" on page 102**.
200.54	Paper fed from tray 5 cleared the sensor (input) earlier than expected.	See **"Sensor (input): Paper cleared too early service check" on page 108**.
200.55	Paper fed from tray 5 never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear service check" on page 88**.
200.56	Paper fed from tray 5 was picked but it never arrived at the sensor (input).	See **"Sensor (input): Paper (tray 5) failed to arrive service check" on page 102**.
200.57	Paper fed from tray 5 never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear service check" on page 88**.
200.91	Paper remains detected at the sensor (input) after the printer is turned on.	See **"Sensor (input) static jam service check" on page 109**.

Sensor (input): Paper arrived too early service check

Action	Yes	No
Step 1 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.

Action	Yes	No
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 clear service check

Action	Yes	No
Step 1 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 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.
Step 5 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 7.	Go to step 6.
Step 6 Remove the paper jams and fragments. 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.	Go to step 8.

Action	Yes	No
Step 8 Check the sensor cable for proper connection, and then reseat 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 403**. 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?	Go to step 13.	Go to step 11.
Step 11 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the motor (isolation). Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Tray 1 failed to pick service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the tray 1 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 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.
Step 6 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the tray 1 separator pad for misalignment and damage. Is the separator pad properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the separator pad. See **"Separator pad removal" on page 434**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the condition of the tray 1 pick roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 11.	Go to step 10.
Step 10 Replace the pick roller. See **"Pick roller removal" on page 433**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the pick roller for proper installation. **b** Fully press the pick roller assembly upward to make sure the mounting latches are properly engaging the slot on the shaft. Is the pick roller assembly properly installed?	Go to step 13.	Go to step 12.

Action	Yes	No
Step 12 Reinstall the pick roller assembly. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the paper path along the tray exit. 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: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 18.	Go to step 16.
Step 16 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Replace the sensor. See **"Sensor (input) removal" on page 403**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Pick (tray 1)** **b** Touch **Start**. Does the motor run?	Go to step 21.	Go to step 19.
Step 19 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the motor. Does the problem remain?	Go to step 21.	The problem is solved.

Action	Yes	No
Step 21 Perform a print job. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Replace the tray 1 paper feeder. See **"Paper feeder removal" on page 444**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper (tray 2) failed to arrive service check

Action	Yes	No
Step 1 Check the tray 1 paper path. Is the paper path free of fragments and contamination?	Go to step 3.	Go to step 2.
Step 2 Clean the paper path. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check tray 2 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 tray 2. 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 tray 2 separator pad for misalignment and damage. Is the separator pad properly installed and free of damage?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Reinstall or replace the separator pad. See **"Separator pad removal" on page 434**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the condition of the tray 2 pick roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 11.	Go to step 10.
Step 10 Replace the pick roller. See **"Pick roller removal" on page 433**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the pick roller for proper installation. **b** Fully press the pick roller assembly upward to make sure the mounting latches are properly engaging the slot on the shaft. Is the pick roller assembly properly installed?	Go to step 13.	Go to step 12.
Step 12 Reinstall the pick roller assembly. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the paper path along the tray 2 exit. 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: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 18.	Go to step 16.
Step 16 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 Replace the sensor. See **"Sensor (input) removal" on page 403**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **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 21.	Go to step 19.
Step 19 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Isolation** **b** Touch **Start**. Does the motor run?	Go to step 24.	Go to step 22.
Step 22 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Replace the motor (isolation). Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper (tray 3) failed to arrive service check

Action	Yes	No
Step 1 Check the tray 1 paper path. Is the paper path free of fragments and contamination?	Go to step 3.	Go to step 2.
Step 2 Clean the paper path. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray 2 paper path. Is the paper path free of fragments and contamination?	Go to step 5.	Go to step 4.
Step 4 Clean the paper path. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check tray 3 for overfilling. Is the 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 tray 3. 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 3 separator pad for misalignment 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. See **"Separator pad removal" on page 434**. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Check the condition of the tray 3 pick roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 13.	Go to step 12.
Step 12 Replace the pick roller. See **"Pick roller removal" on page 433**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the pick roller for proper installation. **b** Fully press the pick roller assembly upward to make sure the mounting latches are properly engaging the slot on the shaft. Is the pick roller assembly properly installed?	Go to step 15.	Go to step 14.
Step 14 Reinstall the pick roller assembly. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the paper path along the tray 3 exit. Is the paper path free of fragments and contamination?	Go to step 17.	Go to step 16.
Step 16 Clean the paper path. 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** > **Sensor tests** **b** Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 20.	Go to step 18.
Step 18 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Replace the sensor. See **"Sensor (input) removal" on page 403**. Does the problem remain?	Go to step 20.	The problem is solved.

Action	Yes	No
Step 20 **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 23.	Go to step 21.
Step 21 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 **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 26.	Go to step 24.
Step 24 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Replace the motor (isolation). Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper (tray 4) failed to arrive service check

Action	Yes	No
Step 1 Check the tray 1 paper path. Is the paper path free of fragments and contamination?	Go to step 3.	Go to step 2.
Step 2 Clean the paper path. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray 2 paper path. Is the paper path free of fragments and contamination?	Go to step 5.	Go to step 4.
Step 4 Clean the paper path. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the tray 3 paper path. 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 Check tray 4 for overfilling. Is the tray overfilled?	Go to step 8.	Go to step 9.
Step 8 Remove the excess paper from the tray. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the paper condition in tray 4. Is the paper crumpled or damaged?	Go to step 10.	Go to step 11.
Step 10 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Check the tray 4 separator pad for misalignment and damage. Is the separator pad properly installed and free of damage?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the separator pad. See **"Separator pad removal" on page 434**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the condition of the tray 4 pick roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 15.	Go to step 14.
Step 14 Replace the pick roller. See **"Pick roller removal" on page 433**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Check the pick roller for proper installation. **b** Fully press the pick roller assembly upward to make sure the mounting latches are properly engaging the slot on the shaft. Is the pick roller assembly properly installed?	Go to step 17.	Go to step 16.
Step 16 Reinstall the pick roller assembly. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Check the paper path along the tray 4 exit. Is the paper path free of fragments and contamination?	Go to step 19.	Go to step 18.
Step 18 Clean the paper path. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **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 22.	Go to step 20.

Action	Yes	No
Step 20 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the sensor. See **"Sensor (input) removal" on page 403**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (MPF/pass through). Does the sensor status change while toggling the sensor?	Go to step 25.	Go to step 23.
Step 23 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. 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** > **Sensor tests** **b** Find the sensor (Pass-through (tray 2)). Does the sensor status change while toggling the sensor?	Go to step 28.	Go to step 26.
Step 26 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Replace the sensor. Does the problem remain?	Go to step 28.	The problem is solved.

Action	Yes	No
Step 28 **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 31.	Go to step 29.
Step 29 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 30.	The problem is solved.
Step 30 Replace the sensor. Does the problem remain?	Go to step 31.	The problem is solved.
Step 31 **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 34.	Go to step 32.
Step 32 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 Replace the motor (isolation). Does the problem remain?	Go to step 34.	The problem is solved.
Step 34 **a** Enter the Diagnostics menu, and then navigate to: 　**Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 2)** **b** Touch **Start**. Does the motor run?	Go to step 37.	Go to step 35.
Step 35 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 36.	The problem is solved.

Action	Yes	No
Step 36 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 37.	The problem is solved.
Step 37 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 3)** **b** Touch **Start**. Does the motor run?	Go to step 40.	Go to step 38.
Step 38 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 39.	The problem is solved.
Step 39 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 40.	The problem is solved.
Step 40 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper (tray 5) failed to arrive service check

Action	Yes	No
Step 1 Check the tray 1 paper path. Is the paper path free of fragments and contamination?	Go to step 3.	Go to step 2.
Step 2 Clean the paper path. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray 2 paper path. Is the paper path free of fragments and contamination?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Clean the paper path. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the tray 3 paper path. 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 Check the tray 4 paper path. Is the paper path free of fragments and contamination?	Go to step 9.	Go to step 8.
Step 8 Clean the paper path. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check tray 5 for overfilling. Is the tray overfilled?	Go to step 10.	Go to step 11.
Step 10 Remove the excess paper from the tray. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the paper condition in tray 5. Is the paper crumpled or damaged?	Go to step 12.	Go to step 13.
Step 12 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the tray 5 separator pad for misalignment and damage. Is the separator pad properly installed and free of damage?	Go to step 15.	Go to step 14.

Action	Yes	No
Step 14 Reinstall or replace the separator pad. See **"Separator pad removal" on page 434**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the condition of the tray 5 pick roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 17.	Go to step 16.
Step 16 Replace the pick roller. See **"Pick roller removal" on page 433**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 **a** Check the pick roller for proper installation. **b** Fully press the pick roller assembly upward to make sure the mounting latches are properly engaging the slot on the shaft. Is the pick roller assembly properly installed?	Go to step 19.	Go to step 18.
Step 18 Reinstall the pick roller assembly. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the paper path along the tray 5 exit. Is the paper path free of fragments and contamination?	Go to step 21.	Go to step 20.
Step 20 Clean the paper path. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (Input). Does the sensor status change while toggling the sensor?	Go to step 24.	Go to step 22.
Step 22 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 23.	The problem is solved.

Action	Yes	No
Step 23 Replace the sensor. See **"Sensor (input) removal" on page 403**. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 **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 27.	Go to step 25.
Step 25 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Sensor tests** **b** Find the sensor (Pass-through (tray 2)). Does the sensor status change while toggling the sensor?	Go to step 30.	Go to step 28.
Step 28 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 29.	The problem is solved.
Step 29 Replace the sensor. Does the problem remain?	Go to step 30.	The problem is solved.
Step 30 **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 33.	Go to step 31.

Action	Yes	No
Step 31 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 32.	The problem is solved.
Step 32 Replace the sensor. Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Sensor tests** **b** Find the sensor (Pass-through (tray 4)). Does the sensor status change while toggling the sensor?	Go to step 36.	Go to step 34.
Step 34 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 35.	The problem is solved.
Step 35 Replace the sensor. Does the problem remain?	Go to step 36.	The problem is solved.
Step 36 **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 39.	Go to step 37.
Step 37 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 38.	The problem is solved.
Step 38 Replace the motor (isolation). Does the problem remain?	Go to step 39.	The problem is solved.

Action	Yes	No
Step 39 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 2)** **b** Touch **Start**. Does the motor run?	Go to step 42.	Go to step 40.
Step 40 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 41.	The problem is solved.
Step 41 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 42.	The problem is solved.
Step 42 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 3)** **b** Touch **Start**. Does the motor run?	Go to step 45.	Go to step 43.
Step 43 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 44.	The problem is solved.
Step 44 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 45.	The problem is solved.
Step 45 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 4)** **b** Touch **Start**. Does the motor run?	Go to step 48.	Go to step 46.

Action	Yes	No
Step 46 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 47.	The problem is solved.
Step 47 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 48.	The problem is solved.
Step 48 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 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.
Step 6 Replace the crumpled or damaged paper. 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 (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 reseat 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 403**. 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 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 3.	Go to step 2.
Step 2 Remove the partially fed or jammed paper. 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 (Input). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Replace the sensor. See **"Sensor (input) removal" on page 403**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

201–202 paper jams

201–202 paper jam messages

Error code	Description	Action
201.91	Paper remains detected at the sensor (fuser buckle detect) after the printer is turned on.	See **"Sensor (fuser buckle) static jam service check" on page 112**.
202.02	Paper fed from the MPF was detected earlier than expected at the sensor (fuser exit).	See **"Sensor (fuser exit): Paper arrived too early service check" on page 112**.
202.03	Paper fed from the MPF never arrived at the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to arrive service check" on page 113**.
202.04	Paper fed from the MPF cleared the sensor (fuser exit) earlier than expected.	See **"Sensor (fuser exit): Paper cleared too early service check" on page 115**.
202.05	Paper fed from the MPF never cleared the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to clear service check" on page 116**.
202.07	Paper fed from the MPF never cleared the sensor (fuser exit).	
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 112**.
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 113**.
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 115**.
202.15	Paper fed from tray 1 never cleared the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to clear service check" on page 116**.
202.17	Paper fed from tray 1 never cleared the sensor (fuser exit).	
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 112**.

Error code	Description	Action
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 113**.
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 115**.
202.25	Paper fed from tray 2 never cleared the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to clear service check" on page 116**.
202.27	Paper fed from tray 2 never cleared the sensor (fuser exit).	
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 112**.
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 113**.
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 115**.
202.35	Paper fed from tray 3 never cleared the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to clear service check" on page 116**.
202.37	Paper fed from tray 3 never cleared the sensor (fuser exit).	
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 112**.
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 113**.
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 115**.
202.45	Paper fed from tray 4 never cleared the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to clear service check" on page 116**.
202.47	Paper fed from tray 4 never cleared the sensor (fuser exit).	
202.52	Paper fed from tray 5 was detected earlier than expected at the sensor (fuser exit).	See **"Sensor (fuser exit): Paper arrived too early service check" on page 112**.
202.53	Paper fed from tray 5 never arrived at the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to arrive service check" on page 113**.
202.54	Paper fed from tray 5 cleared the sensor (fuser exit) earlier than expected.	See **"Sensor (fuser exit): Paper cleared too early service check" on page 115**.
202.55	Paper fed from tray 5 never cleared the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to clear service check" on page 116**.
202.57	Paper fed from tray 5 never cleared the sensor (fuser exit).	
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 118**.

Sensor (fuser buckle) static jam service check

Action	Yes	No
Step 1 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 3.	Go to step 2.
Step 2 Remove the partially fed or jammed paper. 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 (Fuser buckle). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor (fuser buckle detect). Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 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 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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 387**. 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 (fuser exit): Paper failed to arrive service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the fuser for obstructions. Is the fuser free of obstructions?	Go to step 5.	Go to step 4.
Step 4 Remove the obstructions in the fuser area. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the fuser for damage and life expiration. Is the fuser damaged or has reached end of life?	Go to step 6.	Go to step 7.
Step 6 Replace the fuser. See **"Fuser removal" on page 387**. 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 (Fuser exit). 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 then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the transfer belt for damage. Is the transfer belt damaged?	Go to step 11.	Go to step 13.
Step 11 Replace the transfer belt. See **"Transfer belt removal" on page 431**. 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** Touch **Start**. Does the motor run?	Go to step 15.	Go to step 13.
Step 13 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Replace the motor. Does the problem remain?	Go to step 15.	The problem is solved.

Action	Yes	No
Step 15 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Transfer belt** **b** Touch **Start**. Does the motor run?	Go to step 18.	Go to step 16.
Step 16 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Replace the motor. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 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 Check the fuser rollers for damage. Are the rollers free of damage?	Go to step 3.	Go to step 2.
Step 2 Replace the fuser. See **"Fuser removal" on page 387**. 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 (Fuser exit). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Replace the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 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 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the fuser for obstructions. Is the fuser free of obstructions?	Go to step 5.	Go to step 4.
Step 4 Remove the obstructions on the fuser. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the fuser for damage and life expiration. Is the fuser damaged or has it reached end of life?	Go to step 6.	Go to step 7.
Step 6 Replace the fuser. See **"Fuser removal" on page 387**. 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 (Fuser exit). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.

Action	Yes	No
Step 8 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the fuser. See **"Fuser removal" on page 387**. 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** > **Fuser** **b** Touch **Start**. Does the motor run?	Go to step 13.	Go to step 11.
Step 11 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the motor (fuser). Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the motor (transfer belt) cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Replace the motor (transfer belt). Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 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 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 3.	Go to step 2.
Step 2 Remove the partially fed or jammed paper. 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 (Fuser exit). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

212 paper jams

212 paper jam messages

Error code	Description	Action
212.02	Paper fed from the MPF was detected earlier than expected at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper arrived too early service check" on page 120**.
212.03	Paper fed from the MPF never arrived at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to arrive service check" on page 121**.
212.04	Paper fed from the MPF cleared the sensor (deskew roller entry) earlier than expected.	See **"Sensor (deskew roller entry): Paper cleared too early service check" on page 122**.

Error code	Description	Action
212.05	Paper fed from the MPF never cleared the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to clear service check" on page 123**.
212.07	Paper fed from the MPF never cleared the sensor (deskew roller entry).	
212.12	Paper fed from tray 1 was detected earlier than expected at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper arrived too early service check" on page 120**.
212.13	Paper fed from tray 1 never arrived at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to arrive service check" on page 121**.
212.14	Paper fed from tray 1 cleared the sensor (deskew roller entry) earlier than expected.	See **"Sensor (deskew roller entry): Paper cleared too early service check" on page 122**.
212.15	Paper fed from tray 1 never cleared the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to clear service check" on page 123**.
212.17	Paper fed from tray 1 never cleared the sensor (deskew roller entry).	
212.22	Paper fed from tray 2 was detected earlier than expected at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper arrived too early service check" on page 120**.
212.23	Paper fed from tray 2 never arrived at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to arrive service check" on page 121**.
212.24	Paper fed from tray 2 cleared the sensor (deskew roller entry) earlier than expected.	See **"Sensor (deskew roller entry): Paper cleared too early service check" on page 122**.
212.25	Paper fed from tray 2 never cleared the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to clear service check" on page 123**.
212.27	Paper fed from tray 2 never cleared the sensor (deskew roller entry).	
212.32	Paper fed from tray 3 was detected earlier than expected at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper arrived too early service check" on page 120**.
212.33	Paper fed from tray 3 never arrived at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to arrive service check" on page 121**.
212.34	Paper fed from tray 3 cleared the sensor (deskew roller entry) earlier than expected.	See **"Sensor (deskew roller entry): Paper cleared too early service check" on page 122**.
212.35	Paper fed from tray 3 never cleared the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to clear service check" on page 123**.
212.37	Paper fed from tray 3 never cleared the sensor (deskew roller entry).	

Diagnostic information

Error code	Description	Action
212.42	Paper fed from tray 4 was detected earlier than expected at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper arrived too early service check" on page 120**.
212.43	Paper fed from tray 4 never arrived at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to arrive service check" on page 121**.
212.44	Paper fed from tray 4 cleared the sensor (deskew roller entry) earlier than expected.	See **"Sensor (deskew roller entry): Paper cleared too early service check" on page 122**.
212.45	Paper fed from tray 4 never cleared the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to clear service check" on page 123**.
212.47	Paper fed from tray 4 never cleared the sensor (deskew roller entry).	
212.52	Paper fed from tray 5 was detected earlier than expected at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper arrived too early service check" on page 120**.
212.53	Paper fed from tray 5 never arrived at the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to arrive service check" on page 121**.
212.54	Paper fed from tray 5 cleared the sensor (deskew roller entry) earlier than expected.	See **"Sensor (deskew roller entry): Paper cleared too early service check" on page 122**.
212.55	Paper fed from tray 5 never cleared the sensor (deskew roller entry).	See **"Sensor (deskew roller entry): Paper failed to clear service check" on page 123**.
212.57	Paper fed from tray 5 never cleared the sensor (deskew roller entry).	
212.91	Paper remains detected at the sensor (deskew roller entry) after the printer is turned on.	See **"Sensor (deskew roller entry) static jam service check" on page 125**.

Sensor (deskew roller entry): Paper arrived too early service check

Action	Yes	No
Step 1 Check the paper path just before the deskew roller for paper jams and fragments. Is the paper path free of fragments and contamination?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the deskew roller for damage. Is the roller free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the deskew roller. 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 (deskew roller entry): Paper failed to arrive service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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.
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (Deskew roller entry). 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 then reseat 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.
Step 8 **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 11.	Go to step 9.
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (deskew roller entry): Paper cleared too early service check

Action	Yes	No
Step 1 Check the deskew roller for damage. Is the roller free of damage?	Go to step 3.	Go to step 2.
Step 2 Replace the deskew roller. 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 (Deskew roller entry). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (deskew roller entry): Paper failed to clear service check

Action	Yes	No
Step 1 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.

Action	Yes	No
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (Deskew roller entry). 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 reseat 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.
Step 8 **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 11.	Go to step 9.
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (deskew roller entry) static jam service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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 (Deskew roller entry). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

213 paper jams

213 paper jam messages

Error code	Description	Action
213.02	Paper fed from the MPF was detected earlier than expected at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper arrived too early service check" on page 127**.
213.03	Paper fed from the MPF never arrived at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to arrive service check" on page 128**.
213.04	Paper fed from the MPF cleared the sensor (deskew roller exit) earlier than expected.	See **"Sensor (deskew roller exit): Paper cleared too early service check" on page 129**.

Error code	Description	Action
213.05	Paper fed from the MPF never cleared the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to clear service check" on page 130**.
213.07	Paper fed from the MPF never cleared the sensor (deskew roller exit).	
213.12	Paper fed from tray 1 was detected earlier than expected at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper arrived too early service check" on page 127**.
213.13	Paper fed from tray 1 never arrived at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to arrive service check" on page 128**.
213.14	Paper fed from tray 1 cleared the sensor (deskew roller exit) earlier than expected.	See **"Sensor (deskew roller exit): Paper cleared too early service check" on page 129**.
213.15	Paper fed from tray 1 never cleared the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to clear service check" on page 130**.
213.17	Paper fed from tray 1 never cleared the sensor (deskew roller exit).	
213.22	Paper fed from tray 2 was detected earlier than expected at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper arrived too early service check" on page 127**.
213.23	Paper fed from tray 2 never arrived at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to arrive service check" on page 128**.
213.24	Paper fed from tray 2 cleared the sensor (deskew roller exit) earlier than expected.	See **"Sensor (deskew roller exit): Paper cleared too early service check" on page 129**.
213.25	Paper fed from tray 2 never cleared the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to clear service check" on page 130**.
213.27	Paper fed from tray 2 never cleared the sensor (deskew roller exit).	
213.32	Paper fed from tray 3 was detected earlier than expected at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper arrived too early service check" on page 127**.
213.33	Paper fed from tray 3 never arrived at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to arrive service check" on page 128**.
213.34	Paper fed from tray 3 cleared the sensor (deskew roller exit) earlier than expected.	See **"Sensor (deskew roller exit): Paper cleared too early service check" on page 129**.
213.35	Paper fed from tray 3 never cleared the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to clear service check" on page 130**.
213.37	Paper fed from tray 3 never cleared the sensor (deskew roller exit).	
213.42	Paper fed from tray 4 was detected earlier than expected at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper arrived too early service check" on page 127**.
213.43	Paper fed from tray 4 never arrived at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to arrive service check" on page 128**.

Error code	Description	Action
213.44	Paper fed from tray 4 cleared the sensor (deskew roller exit) earlier than expected.	See **"Sensor (deskew roller exit): Paper cleared too early service check" on page 129**.
213.45	Paper fed from tray 4 never cleared the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to clear service check" on page 130**.
213.47	Paper fed from tray 4 never cleared the sensor (deskew roller exit).	
213.52	Paper fed from tray 5 was detected earlier than expected at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper arrived too early service check" on page 127**.
213.53	Paper fed from tray 5 never arrived at the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to arrive service check" on page 128**.
213.54	Paper fed from tray 5 cleared the sensor (deskew roller exit) earlier than expected.	See **"Sensor (deskew roller exit): Paper cleared too early service check" on page 129**.
213.55	Paper fed from tray 5 never cleared the sensor (deskew roller exit).	See **"Sensor (deskew roller exit): Paper failed to clear service check" on page 130**.
213.57	Paper fed from tray 5 never cleared the sensor (deskew roller exit).	
213.91	Paper remains detected at the sensor (deskew roller exit) after the printer is turned on.	See **"Sensor (deskew roller exit) static jam service check" on page 131**.

Sensor (deskew roller exit): Paper arrived too early service check

Action	Yes	No
Step 1 Check the paper path just before the deskew roller for paper jams and fragments. Is the paper path free of fragments and contamination?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the deskew roller for damage. Is the roller free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the deskew roller. Does the problem remain?	Go to step 5.	The problem is solved.

Action		Yes	No
Step 5 Perform a print job. Does the problem remain?		Contact the next level of support.	The problem is solved.

Sensor (deskew roller exit): Paper failed to arrive service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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.
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (Deskew roller 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 reseat 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 **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 11.	Go to step 9.
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (deskew roller exit): Paper cleared too early service check

Action	Yes	No
Step 1 Check the deskew roller for damage. Is the roller free of damage?	Go to step 3.	Go to step 2.
Step 2 Replace the deskew roller. 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 (Deskew roller exit). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Replace the sensor (deskew roller exit). Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (deskew roller exit): Paper failed to clear service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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 (Deskew roller exit). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. 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** > **Transfer belt** **b** Touch **Start**. Does the motor run?	Go to step 9.	Go to step 7.

Action	Yes	No
Step 7 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the motor. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (deskew roller exit) static jam service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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 (Deskew roller exit). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 4.
Step 4 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the deskew roller for contamination and damage. Is the roller free of contamination and damage?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 Clean or replace the deskew roller. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the sensor (deskew roller exit). 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.

221–230 paper jams

221–230 paper jam messages

Error code	Description	Action
221.91	Paper remains detected at the sensor (redrive buckle) after the printer is turned on.	See **"Sensor (redrive buckle) static jam service check" on page 134**.
230.02	Paper fed from the MPF was detected earlier than expected at the sensor (duplex path 1).	See **"Sensor (duplex path 1): Paper arrived too early service check" on page 134**.
230.03	Paper fed from the MPF never arrived at the sensor (duplex path 1).	See **"Sensor (duplex path 1): Paper failed to arrive service check" on page 135**.
230.04	Paper fed from the MPF cleared the sensor (duplex path 1) earlier than expected.	See **"Sensor (duplex path 1): Paper cleared too early service check" on page 137**.
230.05	Paper fed from the MPF never cleared the sensor (duplex path 1).	See **"Sensor (duplex path 1): Paper failed to clear service check" on page 138**.
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 134**.
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 135**.
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 137**.
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 138**.

Error code	Description	Action
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 134**.
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 135**.
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 137**.
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 138**.
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 134**.
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 135**.
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 137**.
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 138**.
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 134**.
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 135**.
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 137**.
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 138**.
230.52	Paper fed from tray 5 was detected earlier than expected at the sensor (duplex path 1).	See **"Sensor (duplex path 1): Paper arrived too early service check" on page 134**.
230.53	Paper fed from tray 5 never arrived at the sensor (duplex path 1).	See **"Sensor (duplex path 1): Paper failed to arrive service check" on page 135**.
230.54	Paper fed from tray 5 cleared the sensor (duplex path 1) earlier than expected.	See **"Sensor (duplex path 1): Paper cleared too early service check" on page 137**.
230.55	Paper fed from tray 5 never cleared the sensor (duplex path 1).	See **"Sensor (duplex path 1): Paper failed to clear service check" on page 138**.
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 140**.

Sensor (redrive buckle) static jam service check

Action	Yes	No
Step 1 Check the paper path for partially fed or jammed paper. Is the paper path free of partially fed or jammed paper?	Go to step 3.	Go to step 2.
Step 2 Remove the partially fed or jammed paper. 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 (Redrive buckle). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 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 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.

Action	135	Yes	No
Step 3 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 Check the redrive area for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the duplex 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 **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 reseat 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 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Duplex diverter** **b** Touch **Start**. Does the motor run?	Go to step 11.	Go to step 9.
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the redrive. See **"Redrive removal" on page 401**. 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** > **Redrive** **b** Touch **Start**. Does the motor run?	Go to step 14.	Go to step 12.
Step 12 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the redrive. See **"Redrive removal" on page 401**. 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** > **Duplex** **b** Touch **Start**. Does the motor run?	Go to step 17.	Go to step 15.
Step 15 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 16.	The problem is solved.

Action	Yes	No
Step 16 Replace the motor. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Check the duplex drive gears for damage. Is the duplex drive gears free of damage?	Go to step 19.	Go to step 18.
Step 18 Replace the duplex drive gears. See **"Duplex drive gears removal" on page 389**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the duplex assembly for damaged gears, belts, and rollers. Is the duplex assembly free of damage?	Go to step 21.	Go to step 20.
Step 20 Replace the duplex assembly. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 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 Check the duplex rollers for damage. Are the rollers free of damage?	Go to step 3.	Go to step 2.
Step 2 Replace the duplex assembly. 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 (Duplex path 1). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 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 clear service check

Action	Yes	No
Step 1 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 area 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.

Action	Yes	No
Step 5 Check the duplex path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 7.	Go to step 6.
Step 6 Remove the paper jams and fragments. 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 then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Duplex** **b** Touch **Start**. Does the motor run?	Go to step 13.	Go to step 11.
Step 11 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the motor. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex path 1) static jam service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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 (Duplex path 1). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 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
231.02	Paper fed from the MPF was detected earlier than expected at the sensor (duplex path 2).	See **"Sensor (duplex path 2): Paper arrived too early service check" on page 142**.
231.03	Paper fed from the MPF never arrived at the sensor (duplex path 2).	See **"Sensor (duplex path 2): Paper failed to arrive service check" on page 142**.
231.04	Paper fed from the MPF cleared the sensor (duplex path 2) earlier than expected.	See **"Sensor (duplex path 2): Paper cleared too early service check" on page 144**.

Error code	Description	Action
231.05	Paper fed from the MPF never cleared the sensor (duplex path 2).	See **"Sensor (duplex path 2): Paper failed to clear service check" on page 145**.
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 142**.
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 142**.
231.14	Paper fed from tray 1 cleared the sensor (duplex path 2) earlier than expected.	See **"Sensor (duplex path 2): Paper cleared too early service check" on page 144**.
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 145**.
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 142**.
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 142**.
231.24	Paper fed from tray 2 cleared the sensor (duplex path 2) earlier than expected.	See **"Sensor (duplex path 2): Paper cleared too early service check" on page 144**.
231.25	Paper fed from tray 2 never cleared the sensor (duplex path 2).	See **"Sensor (duplex path 2): Paper failed to clear service check" on page 145**.
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 142**.
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 142**.
231.34	Paper fed from tray 3 cleared the sensor (duplex path 2) earlier than expected.	See **"Sensor (duplex path 2): Paper cleared too early service check" on page 144**.
231.35	Paper fed from tray 3 never cleared the sensor (duplex path 2).	See **"Sensor (duplex path 2): Paper failed to clear service check" on page 145**.
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 142**.
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 142**.
231.44	Paper fed from tray 4 cleared the sensor (duplex path 2) earlier than expected.	See **"Sensor (duplex path 2): Paper cleared too early service check" on page 144**.
231.45	Paper fed from tray 4 never cleared the sensor (duplex path 2).	See **"Sensor (duplex path 2): Paper failed to clear service check" on page 145**.
231.52	Paper fed from tray 5 was detected earlier than expected at the sensor (duplex path 2).	See **"Sensor (duplex path 2): Paper arrived too early service check" on page 142**.

Error code	Description	Action
231.53	Paper fed from tray 5 never arrived at the sensor (duplex path 2).	See **"Sensor (duplex path 2): Paper failed to arrive service check" on page 142**.
231.54	Paper fed from tray 5 cleared the sensor (duplex path 2) earlier than expected.	See **"Sensor (duplex path 2): Paper cleared too early service check" on page 144**.
231.55	Paper fed from tray 5 never cleared the sensor (duplex path 2).	See **"Sensor (duplex path 2): Paper failed to clear service check" on page 145**.
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 146**.

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

Action	Yes	No
Step 1 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 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 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 arrive service check

Action	Yes	No
Step 1 Check the duplex path for paper jams and fragments Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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 (Duplex path 2). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. 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** > **Duplex** **b** Touch **Start**. Does the motor run?	Go to step 9.	Go to step 7.
Step 7 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the motor. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the duplex drive gears for damage. Is the duplex drive gears free of damage?	Go to step 11.	Go to step 10.
Step 10 Replace the duplex drive gears. See **"Duplex drive gears removal" on page 389**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the duplex assembly for damaged gears, belts, and rollers. Is the duplex assembly free of damage?	Go to step 13.	Go to step 12.

Action	Yes	No
Step 12 Replace the duplex assembly. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 Check the duplex rollers for damage. Are the rollers free of damage?	Go to step 3.	Go to step 2.
Step 2 Replace the duplex assembly. 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 (Duplex path 2). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 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 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 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 **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 reseat 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.
Step 8 **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 11.	Go to step 9.

Action	Yes	No
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 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 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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 (Duplex path 2). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 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
232.03	Paper fed from the MPF never arrived at the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to arrive service check" on page 148**.
232.04	Paper fed from the MPF cleared the sensor (input) earlier than expected during a duplex print job.	See **"Sensor (input): Paper (duplex job) cleared too early service check" on page 150**.
232.05	Paper fed from the MPF never cleared the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to clear service check" on page 151**.
232.07	Paper fed from the MPF never cleared the sensor (input) during a duplex print job.	
232.13	Paper fed from tray 1 never arrived at the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to arrive service check" on page 148**.
232.14	Paper fed from tray 1 cleared the sensor (input) earlier than expected during a duplex print job.	See **"Sensor (input): Paper (duplex job) cleared too early service check" on page 150**.
232.15	Paper fed from tray 1 never cleared the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to clear service check" on page 151**.
232.17	Paper fed from tray 1 never cleared the sensor (input) during a duplex print job.	
232.23	Paper fed from tray 2 never arrived at the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to arrive service check" on page 148**.
232.24	Paper fed from tray 2 cleared the sensor (input) earlier than expected during a duplex print job.	See **"Sensor (input): Paper (duplex job) cleared too early service check" on page 150**.
232.25	Paper fed from tray 2 never cleared the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to clear service check" on page 151**.
232.27	Paper fed from tray 2 never cleared the sensor (input) during a duplex print job.	
232.33	Paper fed from tray 3 never arrived at the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to arrive service check" on page 148**.

Error code	Description	Action
232.34	Paper fed from tray 3 cleared the sensor (input) earlier than expected during a duplex print job.	See **"Sensor (input): Paper (duplex job) cleared too early service check" on page 150**.
232.35	Paper fed from tray 3 never cleared the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to clear service check" on page 151**.
232.37	Paper fed from tray 3 never cleared the sensor (input) during a duplex print job.	
232.43	Paper fed from tray 4 never arrived at the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to arrive service check" on page 148**.
232.44	Paper fed from tray 4 cleared the sensor (input) earlier than expected during a duplex print job.	See **"Sensor (input): Paper (duplex job) cleared too early service check" on page 150**.
232.45	Paper fed from tray 4 never cleared the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to clear service check" on page 151**.
232.47	Paper fed from tray 4 never cleared the sensor (input) during a duplex print job.	
232.53	Paper fed from tray 5 never arrived at the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to arrive service check" on page 148**.
232.54	Paper fed from tray 5 cleared the sensor (input) earlier than expected during a duplex print job.	See **"Sensor (input): Paper (duplex job) cleared too early service check" on page 150**.
232.55	Paper fed from tray 5 never cleared the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed to clear service check" on page 151**.
232.57	Paper fed from tray 5 never cleared the sensor (input) during a duplex print job.	

Sensor (input): Paper (duplex job) failed to arrive service check

Action	Yes	No
Step 1 Check the sensor (input) area for paper jams and fragments Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the duplex path for paper jams and fragments Is the paper path free of jams and fragments?	Go to step 5.	Go to step 4.

Action	Yes	No
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 (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 reseat if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the sensor. See **"Sensor (input) removal" on page 403**. 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** **b** Touch **Start**. Does the motor run?	Go to step 11.	Go to step 9.
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the duplex drive gears for damage. Is the duplex drive gears free of damage?	Go to step 13.	Go to step 12.
Step 12 Replace the duplex drive gears. See **"Duplex drive gears removal" on page 389**. Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
Step 13 Check the duplex assembly for damaged gears, belts, and rollers. Is the duplex assembly free of damage?	Go to step 15.	Go to step 14.
Step 14 Replace the duplex assembly. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 Check the duplex rollers for damage. Are the rollers free of damage?	Go to step 3.	Go to step 2.
Step 2 Replace the duplex. 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 (Input). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. See **"Sensor (input) removal" on page 403**. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper (duplex job) failed to clear service check

Action	Yes	No
Step 1 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 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 **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 reseat if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the sensor. See **"Sensor (input) removal" on page 403**. 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** > **Motor tests** > **Deskew** **b** Touch **Start**. Does the motor run?	Go to step 11.	Go to step 9.
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 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
240.05	Paper fed from the MPF cleared the sensor (MPF/pass-through) later than expected.	See **"Sensor (MPF/pass-through): Paper failed to clear service check" on page 161**.
240.06	Paper fed from the MPF was picked but it never arrived at the sensor (MPF/pass-through).	See **"MPF failed to pick service check" on page 163**.
240.07	Paper fed from the MPF cleared the sensor (MPF/pass-through) later than expected.	See **"Sensor (MPF/pass-through): Paper failed to clear service check" on page 161**.
240.25	Paper fed from tray 2 cleared the sensor (MPF/pass-through) later than expected.	See **"Sensor (MPF/pass-through): Paper failed to clear service check" on page 161**.
240.26	Paper fed from tray 2 was picked but it never arrived at the sensor (MPF/pass-through).	See **"Sensor (MPF/pass-through): Tray 2 failed to pick service check" on page 165**.
240.27	Paper fed from tray 2 cleared the sensor (MPF/pass-through) later than expected.	See **"Sensor (MPF/pass-through): Paper failed to clear service check" on page 161**.

Error code	Description	Action
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 153**.
240.35	Paper fed from tray 3 cleared the sensor (MPF/pass-through) later than expected.	See **"Sensor (MPF/pass-through): Paper failed to clear service check" on page 161**.
240.37	Paper fed from tray 3 cleared the sensor (MPF/pass-through) later than expected.	
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 155**.
240.45	Paper fed from tray 4 cleared the sensor (MPF/pass-through) later than expected.	See **"Sensor (MPF/pass-through): Paper failed to clear service check" on page 161**.
240.47	Paper fed from tray 4 cleared the sensor (MPF/pass-through) later than expected.	
240.53	Paper fed from tray 5 was picked but it never arrived at the sensor (MPF/pass-through).	See **"Sensor (MPF/pass-through): Paper (tray 5) failed to arrive service check" on page 158**.
240.55	Paper fed from tray 5 cleared the sensor (MPF/pass-through) later than expected.	See **"Sensor (MPF/pass-through): Paper failed to clear service check" on page 161**.
240.57	Paper fed from tray 5 cleared the sensor (MPF/pass-through) later than expected.	
240.82	The motor (MPF pick) has stalled.	See **"Motor (MPF pick) jam service check" on page 167**.
240.84	The motor (MPF pick) has stalled.	
240.91	Paper remains detected at the sensor (MPF/pass-through) after the printer is turned on.	See **"Sensor (MPF/pass-through) static jam service check" on page 168**.

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

Action	Yes	No
Step 1 Check the tray 2 paper path guides for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the paper condition in tray 3. Is the paper crumpled or damaged?	Go to step 4.	Go to step 5.

Action	Yes	No
Step 4 Replace the crumpled or damaged 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 (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 then reseat if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. 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 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 then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the sensor. 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** > **Motor tests** > **Pass-through (tray 2)** **b** Touch **Start**. Does the motor run?	Go to step 14.	Go to step 12.

Action	Yes	No
Step 12 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 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 Check the tray 2 paper path guides for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray 3 paper path guides 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.

Action	Yes	No
Step 6 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. 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 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 then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the sensor. 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 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the sensor. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 2)** **b** Touch **Start**. Does the motor run?	Go to step 17.	Go to step 15.
Step 15 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. 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** > **Pass-through (tray 3)** **b** Touch **Start**. Does the motor run?	Go to step 20.	Go to step 18.
Step 18 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF/pass-through): Paper (tray 5) failed to arrive service check

Action	Yes	No
Step 1 Check the tray 2 paper path guides for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray 3 paper path guides 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 4 paper path guides for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 7.	Go to step 6.
Step 6 Remove the paper jams and fragments. 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 then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. 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: **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 13.	Go to step 11.
Step 11 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
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: **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 16.	Go to step 14.
Step 14 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the sensor. 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** > **Sensor tests** **b** Find the sensor (Pass-through (tray 4)). Does the sensor status change while toggling the sensor?	Go to step 19.	Go to step 17.
Step 17 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 18.	The problem is solved.

Action	Yes	No
Step 18 Replace the sensor. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 2)** **b** Touch **Start**. Does the motor run?	Go to step 22.	Go to step 20.
Step 20 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. 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** > **Motor tests** > **Pass-through (tray 3)** **b** Touch **Start**. Does the motor run?	Go to step 25.	Go to step 23.
Step 23 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 25.	The problem is solved.

Action	Yes	No
Step 25 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 4)** **b** Touch **Start**. Does the motor run?	Go to step 28.	Go to step 26.
Step 26 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 28.	The problem is solved.
Step 28 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 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.

Action	Yes	No
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 then reseat if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. 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**. Does the motor run?	Go to step 11.	Go to step 9.
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

MPF failed to pick service check

Action	Yes	No
Step 1 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 MPF 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 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 roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 9.	Go to step 8.
Step 8 Replace the pick roller. See **"MPF pick roller removal" on page 398**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the paper path along the MPF tray exit. Is the paper path free of fragments and contamination?	Go to step 11.	Go to step 10.

Action	Yes	No
Step 10 Clean the paper path. 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 (MPF/pass-through). 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 then reseat if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. 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** > **MPF pick** **b** Touch **Start**. Does the motor run?	Go to step 17.	Go to step 15.
Step 15 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the motor. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF/pass-through): Tray 2 failed to pick service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the tray 2 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 tray 2 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 tray 2. 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 tray 2 separator pad for misalignment and damage. Is the separator pad properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the separator pad. See **"Separator pad removal" on page 434**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the condition of the tray 2 pick roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 11.	Go to step 10.

Action	Yes	No
Step 10 Replace the pick roller. See **"Pick roller removal" on page 433**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the paper path along the tray 2 exit. 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 then reseat if necessary. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. 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** > **Pick (tray 2)** **b** Touch **Start**. Does the motor run?	Go to step 19.	Go to step 17.
Step 17 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Replace the motor. Does the problem remain?	Go to step 19.	The problem is solved.

Action	Yes	No
Step 19 Perform a print job. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the tray 2 paper feeder. See **"550-sheet tray paper feeder removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (MPF pick) jam service check

Action	Yes	No
Step 1 Check the MPF 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 MPF 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.
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.

Action	Yes	No
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **MPF pick** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 8.
Step 8 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor. 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 (MPF/pass-through) static jam service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. 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 (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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Replace the sensor. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. 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
241.83	The motor (tray 1 pick) has stalled.	See **"Motor (tray 1 pick) jam service check" on page 169**.
241.84	The motor (tray 1 pick) has stalled.	

Motor (tray 1 pick) jam service check

Action	Yes	No
Step 1 Check tray 1 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 tray 1. 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.
Step 5 Check the paper path along the tray 1 exit. Is the paper path free of fragments and contamination?	Go to step 7.	Go to step 6.

Action	Yes	No
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 & adjustments** > **Motor tests** > **Pick (tray 1)** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 8.
Step 8 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor. 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.

242 paper jams

242 paper jam messages

Error code	Description	Action
242.31	Paper remains detected at the sensor (tray 2 pass-through) although the printer is idle. Tray 3 is the paper source.	See **"Sensor (tray 2 pass-through) static jam service check" on page 181**.
242.32	Paper fed from tray 3 was detected earlier than expected at the sensor (tray 2 pass-through).	See **"Sensor (tray 2 pass-through): Paper arrived too early service check" on page 172**.
242.34	Paper fed from tray 3 cleared the sensor (tray 2 pass-through) earlier than expected.	See **"Sensor (tray 2 pass-through): Paper cleared too early service check" on page 174**.
242.35	Paper fed from tray 3 never cleared the sensor (tray 2 pass-through).	See **"Sensor (tray 2 pass-through): Paper failed to clear service check" on page 176**.

Error code	Description	Action
242.36	Paper fed from tray 3 was picked but it never arrived at the sensor (tray 2 pass-through).	See **"Sensor (tray 2 pass-through): Tray 3 failed to pick service check" on page 177**.
242.37	Paper fed from tray 3 never cleared the sensor (tray 2 pass-through).	See **"Sensor (tray 2 pass-through): Paper failed to clear service check" on page 176**.
242.41	Paper remains detected at the sensor (tray 2 pass-through) although the printer is idle. Tray 4 is the paper source.	See **"Sensor (tray 2 pass-through) static jam service check" on page 181**.
242.42	Paper fed from tray 4 was detected earlier than expected at the sensor (tray 2 pass-through).	See **"Sensor (tray 2 pass-through): Paper arrived too early service check" on page 172**.
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 173**.
242.44	Paper fed from tray 4 cleared the sensor (tray 2 pass-through) earlier than expected.	See **"Sensor (tray 2 pass-through): Paper cleared too early service check" on page 174**.
242.45	Paper fed from tray 4 never cleared the sensor (tray 2 pass-through).	See **"Sensor (tray 2 pass-through): Paper failed to clear service check" on page 176**.
242.47	Paper fed from tray 4 never cleared the sensor (tray 2 pass-through).	
242.51	Paper remains detected at the sensor (tray 2 pass-through) although the printer is idle. Tray 5 is the paper source.	See **"Sensor (tray 2 pass-through) static jam service check" on page 181**.
242.52	Paper fed from tray 5 was detected earlier than expected at the sensor (tray 2 pass-through).	See **"Sensor (tray 2 pass-through): Paper arrived too early service check" on page 172**.
242.53	Paper fed from tray 5 never arrived at the sensor (tray 2 pass-through).	See **"Sensor (tray 2 pass-through): Paper failed to arrive service check" on page 173**.
242.54	Paper fed from tray 5 cleared the sensor (tray 2 pass-through) earlier than expected.	See **"Sensor (tray 2 pass-through): Paper cleared too early service check" on page 174**.
242.55	Paper fed from tray 5 never cleared the sensor (tray 2 pass-through).	See **"Sensor (tray 2 pass-through): Paper failed to clear service check" on page 176**.
242.57	Paper fed from tray 5 never cleared the sensor (tray 2 pass-through).	
242.83	The motor (tray 2 pick) has stalled.	See **"Motor (tray 2 pick) jam service check" on page 179**.
242.84	The motor (tray 2 pick) has stalled.	
242.91	Paper remains detected at the sensor (tray 2 pass-through) after the printer is turned on.	See **"Sensor (tray 2 pass-through) static jam service check" on page 181**.

Error code	Description	Action
242.92	Paper was detected earlier than expected at the sensor (tray 2 pass-through). Paper source is undetermined.	See **"Sensor (tray 2 pass-through): Paper arrived too early service check" on page 172**.
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 173**.
242.94	Paper cleared the sensor (tray 2 pass-through) earlier than expected. Paper source is undetermined.	See **"Sensor (tray 2 pass-through): Paper cleared too early service check" on page 174**.
242.95	Paper never cleared the sensor (tray 2 pass-through). Paper source is undetermined.	See **"Sensor (tray 2 pass-through): Paper failed to clear service check" on page 176**.
242.96	Paper was picked but it never arrived at the sensor (tray 2 pass-through). Paper source is undetermined.	See **"Sensor (tray 2 pass-through): Tray 3 failed to pick service check" on page 177**.

Sensor (tray 2 pass-through): Paper arrived too early service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of fragments and contamination?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **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 6.	Go to step 4.
Step 4 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Perform a print job. 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 Check the tray 3 paper path guides for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **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 6.	Go to step 4.
Step 4 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **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 9.	Go to step 7.
Step 7 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Replace the sensor. 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** > **Motor tests** > **Pass-through (tray 3)** **b** Touch **Start**. Does the motor run?	Go to step 12.	Go to step 10.
Step 10 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 2 pass-through): Paper cleared too early service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the source 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 source 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 source 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: **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 6.	Go to step 8.
Step 8 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor. 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 2 pass-through): Paper failed to clear service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the source 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 paper path guides 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: **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 8.	Go to step 6.
Step 6 Check the sensor cable for proper connection, and then reseat 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.
Step 8 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 2)** **b** Touch **Start**. Does the motor run?	Go to step 11.	Go to step 9.

Action	Yes	No
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. See **"Motor (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 job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 2 pass-through): Tray 3 failed to pick service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the tray 3 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 tray 3 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 tray 3. 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.

Action	Yes	No
Step 7 Check the tray 3 separator pad for misalignment and damage. Is the separator pad properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the separator pad. See **"Separator pad removal" on page 434**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the condition of the tray 3 pick roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 11.	Go to step 10.
Step 10 Replace the pick roller. See **"Pick roller removal" on page 433**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the paper path along the tray 3 exit. 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: 　**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 16.	Go to step 14.
Step 14 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the sensor. Does the problem remain?	Go to step 16.	The problem is solved.

Action	Yes	No
Step 16 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 3)** **b** Touch **Start**. Does the motor run?	Go to step 19.	Go to step 17.
Step 17 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Replace the tray 3 paper feeder. See **"550-sheet tray paper feeder removal" on page 487**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 2 pick) jam service check

Action	Yes	No
Step 1 Check tray 2 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 tray 2. Is the paper crumpled or damaged?	Go to step 4.	Go to step 5.

Action	Yes	No
Step 4 Replace the crumpled or damaged paper. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path along the tray 2 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 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pick (tray 2)** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 8.
Step 8 Check the motor cable for proper connection,, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor. 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 2 pass-through) static jam service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 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 6.	Go to step 4.
Step 4 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

243 paper jams

243 paper jam messages

Error code	Description	Action
243.41	Paper remains detected at the sensor (tray 3 pass-through) although the printer is idle. Tray 4 is the paper source.	See **"Sensor (tray 3 pass-through) static jam service check" on page 191**.
243.42	Paper fed from tray 4 was detected earlier than expected at the sensor (tray 3 pass-through).	See **"Sensor (tray 3 pass-through): Paper arrived too early service check" on page 183**.
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 184**.

Error code	Description	Action
243.44	Paper fed from tray 4 cleared the sensor (tray 3 pass-through) earlier than expected.	See **"Sensor (tray 3 pass-through): Paper cleared too early service check" on page 187**.
243.45	Paper fed from tray 4 never cleared the sensor (tray 3 pass-through).	See **"Sensor (tray 3 pass-through): Paper failed to clear service check" on page 189**.
243.46	Paper fed from tray 4 was picked but it never arrived at the sensor (tray 3 pass-through).	See **"Sensor (tray 3 pass-through): Tray 4 failed to pick service check" on page 185**.
243.47	Paper fed from tray 4 never cleared the sensor (tray 3 pass-through).	See **"Sensor (tray 3 pass-through): Paper failed to clear service check" on page 189**.
243.51	Paper remains detected at the sensor (tray 3 pass-through) although the printer is idle. Tray 5 is the paper source.	See **"Sensor (tray 3 pass-through) static jam service check" on page 191**.
243.52	Paper fed from tray 5 was detected earlier than expected at the sensor (tray 3 pass-through).	See **"Sensor (tray 3 pass-through): Paper arrived too early service check" on page 183**.
243.53	Paper fed from tray 5 never arrived at the sensor (tray 3 pass-through).	See **"Sensor (tray 3 pass-through): Paper failed to arrive service check" on page 184**.
243.54	Paper fed from tray 5 cleared the sensor (tray 3 pass-through) earlier than expected.	See **"Sensor (tray 3 pass-through): Paper cleared too early service check" on page 187**.
243.55	Paper fed from tray 5 never cleared the sensor (tray 3 pass-through).	See **"Sensor (tray 3 pass-through): Paper failed to clear service check" on page 189**.
243.57	Paper fed from tray 5 never cleared the sensor (tray 3 pass-through).	
243.83	The motor (tray 3 pick) has stalled.	See **"Motor (tray 3 pick) jam service check" on page 190**.
243.84	The motor (tray 3 pick) has stalled.	
243.91	Paper remains detected at the sensor (tray 3 pass-through) after the printer is turned on.	See **"Sensor (tray 3 pass-through) static jam service check" on page 191**.
243.92	Paper was detected earlier than expected at the sensor (tray 3 pass-through). Paper source is undetermined.	See **"Sensor (tray 3 pass-through): Paper arrived too early service check" on page 183**.
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 184**.
243.94	Paper cleared the sensor (tray 3 pass-through) earlier than expected. Paper source is undetermined.	See **"Sensor (tray 3 pass-through): Paper cleared too early service check" on page 187**.
243.95	Paper never cleared the sensor (tray 3 pass-through). Paper source is undetermined.	See **"Sensor (tray 3 pass-through): Paper failed to clear service check" on page 189**.

Error code	Description	Action
243.96	Paper was picked but it never arrived at the sensor (tray 3 pass-through). Paper source is undetermined.	See **"Sensor (tray 3 pass-through): Tray 4 failed to pick service check" on page 185**.

Sensor (tray 3 pass-through): Paper arrived too early service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of fragments and contamination?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 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 6.	Go to step 4.
Step 4 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. 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 Check the tray paper path guides for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **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 6.	Go to step 4.
Step 4 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 4)** **b** Touch **Start**. Does the motor run?	Go to step 9.	Go to step 7.
Step 7 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the motor. See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 3 pass-through): Tray 4 failed to pick service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the tray 4 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 tray 4 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 tray 4. 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 tray 4 separator pad for misalignment and damage. Is the separator pad properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the separator pad. See **"Separator pad removal" on page 434**. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Check the condition of the tray 4 pick roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 11.	Go to step 10.
Step 10 Replace the pick roller. See **"Pick roller removal" on page 433**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the tray 4 pick roller for proper installation. **b** Fully press the pick roller assembly upward to make sure the mounting latches are properly engaging the slot on the shaft. Is the pick roller assembly properly installed?	Go to step 13.	Go to step 12.
Step 12 Reinstall the pick roller assembly. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the paper path along the tray 4 exit. 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 (Pass-through (tray 3)). Does the sensor status change while toggling the sensor?	Go to step 18.	Go to step 16.
Step 16 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Replace the sensor. Does the problem remain?	Go to step 18.	The problem is solved.

Action	Yes	No
Step 18 a Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pick (tray 4)** b Touch **Start**. Does the motor run?	Go to step 21.	Go to step 19.
Step 19 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the motor. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the tray 4 paper feeder. See **"550-sheet tray paper feeder removal" on page 487**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 3 pass-through): Paper cleared too early service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the source 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 source 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 source 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: **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 6.	Go to step 8.
Step 8 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor. 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 3 pass-through): Paper failed to clear service check

Action	Yes	No
Step 1 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 paper path guides 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: **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 8.	Go to step 6.
Step 6 Check the sensor cable for proper connection, and then reseat 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.
Step 8 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 3)** **b** Touch **Start**. Does the motor run?	Go to step 11.	Go to step 9.

Action	Yes	No
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. See **"Motor (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 job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 3 pick) jam service check

Action	Yes	No
Step 1 Check tray 3 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 tray 3. 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.
Step 5 Check the paper path along the tray 3 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.

Action	Yes	No
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pick (tray 3)** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 8.
Step 8 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor. 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 3 pass-through) static jam service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **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 6.	Go to step 4.
Step 4 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

244 paper jams

244 paper jam messages

Error code	Description	Action
244.51	Paper remains detected at the sensor (tray 4 pass-through) although the printer is idle. Tray 5 is the paper source.	See **"Sensor (tray 4 pass-through) static jam service check" on page 200**.
244.52	Paper fed from tray 5 was detected earlier than expected at the sensor (tray 4 pass-through).	See **"Sensor (tray 4 pass-through): Paper arrived too early service check" on page 193**.
244.54	Paper fed from tray 5 cleared the sensor (tray 4 pass-through) earlier than expected.	See **"Sensor (tray 4 pass-through): Paper cleared too early service check" on page 194**.
244.55	Paper fed from tray 5 never cleared the sensor (tray 4 pass-through).	See **"Sensor (tray 4 pass-through): Paper failed to clear service check" on page 195**.
244.56	Paper fed from tray 5 was picked but it never arrived at the sensor (tray 4 pass-through).	See **"Sensor (tray 4 pass-through): Tray 5 failed to pick service check" on page 196**.
244.57	Paper fed from tray 5 was picked but it never arrived at the sensor (tray 4 pass-through).	
244.83	The motor (tray 4 pick) has stalled.	See **"Motor (tray 4 pick) jam service check" on page 199**.
244.84	The motor (tray 4 pick) has stalled.	
244.91	Paper remains detected at the sensor (tray 4 pass-through) after the printer is turned on.	See **"Sensor (tray 4 pass-through) static jam service check" on page 200**.
244.92	Paper was detected earlier than expected at the sensor (tray 4 pass-through). Paper source is undetermined.	See **"Sensor (tray 4 pass-through): Paper arrived too early service check" on page 193**.
244.94	Paper cleared the sensor (tray 4 pass-through) earlier than expected. Paper source is undetermined.	See **"Sensor (tray 4 pass-through): Paper cleared too early service check" on page 194**.

Error code	Description	Action
244.95	Paper never cleared the sensor (tray 4 pass-through). Paper source is undetermined.	See **"Sensor (tray 4 pass-through): Paper failed to clear service check" on page 195**.
244.96	Paper was picked but it never arrived at the sensor (tray 4 pass-through). Paper source is undetermined.	See **"Sensor (tray 4 pass-through): Tray 5 failed to pick service check" on page 196**.

Sensor (tray 4 pass-through): Paper arrived too early service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of fragments and contamination?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Sensor tests** b Find the sensor (Pass-through (tray 4)). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 4 pass-through): Paper cleared too early service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the tray 5 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 tray 5 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 tray 5. 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: **Additional input tray diagnostics** > **Sensor tests** **b** Find the sensor (Pass-through (tray 4)). Does the sensor status change while toggling the sensor?	Go to step 6.	Go to step 8.
Step 8 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 4 pass-through): Paper failed to clear service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the tray 5 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 paper path guides 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: **Additional input tray diagnostics** > **Sensor tests** b Find the sensor (Pass-through (tray 4)). 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 reseat 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 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pass-through (tray 4)** **b** Touch **Start**. Does the motor run?	Go to step 11.	Go to step 9.
Step 9 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor. See **"Motor (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 job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 4 pass-through): Tray 5 failed to pick service check

Action	Yes	No
Step 1 Check if the paper size matches the size set on the tray 5 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 tray 5 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 5. 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 tray 5 separator pad for misalignment and damage. Is the separator pad properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the separator pad. See **"Separator pad removal" on page 434**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the condition of the tray 5 pick roller. Is the pick roller free from excess wear, contamination, and damage?	Go to step 11.	Go to step 10.
Step 10 Replace the pick roller. See **"Pick roller removal" on page 433**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the tray 5 pick roller for proper installation. **b** Fully press the pick roller assembly upward to make sure the mounting latches are properly engaging the slot on the shaft. Is the pick roller assembly properly installed?	Go to step 13.	Go to step 12.
Step 12 Reinstall the pick roller assembly. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the paper path along the tray 5 exit. Is the paper path free of fragments and contamination?	Go to step 15.	Go to step 14.

Action	Yes	No
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 (Pass-through (tray 4)). Does the sensor status change while toggling the sensor?	Go to step 18.	Go to step 16.
Step 16 Check the sensor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Replace the sensor. 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 5)** **b** Touch **Start**. Does the motor run?	Go to step 21.	Go to step 19.
Step 19 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the motor. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Perform a print job. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Replace the tray 5 paper feeder. See **"550-sheet tray paper feeder removal" on page 487**. Does the problem remain?	Go to step 23.	The problem is solved.

Action	Yes	No
Step 23 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 4 pick) jam service check

Action	Yes	No
Step 1 Check tray 4 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 tray 4. 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.
Step 5 Check the paper path along the tray 4 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 a Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pick (tray 4)** b Touch **Start**. Does the motor run?	Go to step 10.	Go to step 8.

Action	Yes	No
Step 8 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor. 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 4 pass-through) static jam service check

Action	Yes	No
Step 1 Check the paper path for paper jams and fragments. Is the paper path free of jams and fragments?	Go to step 3.	Go to step 2.
Step 2 Remove the paper jams and fragments. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Sensor tests** **b** Find the sensor (Pass-through (tray 4)). 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 then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the sensor. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Perform a print job. Does the problem remain?	Contact the next level of support.	The problem is solved.

245 paper jams

245 paper jam messages

Error code	Description	Action
245.83	The motor (tray 5 pick) has stalled.	See **"Motor (tray 5 pick) jam service check" on page 201**.
245.84	The motor (tray 5 pick) has stalled.	

Motor (tray 5 pick) jam service check

Action	Yes	No
Step 1 Check tray 5 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 tray 5. 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.
Step 5 Check the paper path along the tray 5 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.

Action	Yes	No
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pick (tray 5)** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 8.
Step 8 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor. 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.

42y paper jams

42y paper jam messages

Error code	Description	Action
420.11	The media, with the leading edge on the compiler section, remains detected by sensor (staple finisher transport) during warm-up sequence.	See **"Staple finisher compiler section jam service check" on page 204**.
420.11	The media, with the leading edge on the upper exit area, remains detected by sensor (staple finisher transport) during warm-up sequence.	See **"Staple finisher upper exit area jam service check" on page 207**.
420.12	The media reached the sensor (staple finisher transport) sooner than the specified time.	See **"Staple finisher compiler section jam service check" on page 204**.
420.13	The media is late reaching the sensor (staple finisher transport) within the specified time.	
420.15	The media reached the sensor (staple finisher transport) but did not clear it within the specified time.	
420.51	The motor (staple finisher transport) does not turn off.	
420.54	The motor (staple finisher transport) fails to achieve expected speed.	
420.55	The motor (staple finisher transport) runs too fast.	

Error code	Description	Action
421.13	The sensor (staple finisher front tamper home) was not covered at the specified time.	See **"Sensor (staple finisher front tamper home) jam service check" on page 223**.
421.15	The sensor (staple finisher front tamper home) was not cleared within the specified time.	
422.13	The sensor (staple finisher rear tamper home) was not covered at the specified time.	See **"Sensor (staple finisher rear tamper home) jam service check" on page 213**.
422.15	The sensor (staple finisher rear tamper home) was not cleared within the specified time.	
423.13	The sensor (staple finisher upper exit roller) was not covered within the specified time.	See **"Staple finisher exit jam service check" on page 333**.
423.15	The sensor (staple finisher upper exit roller) remains covered after the specified time.	
423.51	The motor (staple finisher upper exit roller) does not turn off.	
423.54	The motor (staple finisher upper exit roller) fails to achieve expected speed.	
423.55	The motor (staple finisher upper exit roller) runs too fast.	
424.13	The staple finisher paddle fails to reach home at the specified time.	See **"Staple finisher paddle jam service check" on page 215**.
424.15	The staple finisher paddle fails to leave home at the specified time.	
425.13	Staple finisher bin clamp fails to reach home at the specified time.	See **"Staple finisher bin clamp jam service check" on page 217**.
425.15	Staple finisher bin clamp fails to leave home at the specified time.	
426.13	The motor (staple finisher aligner paddle) fails to reach home at the specified time.	See **"Staple finisher decurl assembly service check" on page 219**.
426.15	The motor (staple finisher aligner paddle) fails to reach home at the specified time.	
426.51	The motor (staple finisher aligner paddle) does not turn off.	
426.54	The motor (staple finisher aligner paddle) fails to achieve expected speed.	
426.55	The motor (staple finisher aligner paddle) runs too fast.	
428.13	The staple head fails to reach home at the specified time.	See **"Staples Low [83] service check" on page 356**.
428.15	The staple head fails to leave home at the specified time.	

Error code	Description	Action
429.11	The media remains detected by the sensor (staple finisher staple unit paper present) after power-on.	See **"Staple finisher stapler throat jam service check" on page 220**.
429.13	The sensor (staple finisher staple unit paper present) does not detect the media within the specified time.	
429.14	The sensor (staple finisher staple unit paper present) was not covered by the media during stapling.	
429.15	The media does not leave the sensor (staple finisher staple unit paper present) within the specified time.	

Staple finisher compiler section jam service check

Action	Yes	No
Step 1 **a** Clear the paper path of any jams or obstructions. **b** Make sure that the jam access door is properly closed. **c** Reset the printer, and then reseat the finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Transport and exit** **b** Find the sensor (Transport). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 3.
Step 3 **a** Check the sensor (staple finisher transport) for proper installation and damage, and replace if necessary. See **"Sensor (staple finisher transport) removal" on page 601**. **b** Reseat the sensor connector on both ends. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the staple finisher entrance paper guide for proper installation and damage, and replace if necessary. See **"Staple finisher entrance paper guide removal" on page 581**. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 **a** Check the staple finisher jam access door for proper installation and damage, and replace if necessary. See **"Staple finisher jam access door removal" on page 527**. **b** Make sure that the door is properly closed. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the staple finisher compiler paper guide for proper installation and damage, and replace if necessary. See **"Staple finisher compiler paper guide removal" on page 570**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Transport), and then touch **Start**. Does the motor run?	Go to step 9.	Go to step 8.
Step 8 **a** Check the motor (staple finisher transport) for damage, and replace if necessary. See **"Motor (staple finisher transport) removal" on page 596**. **b** Check the motor for proper installation. **c** Reseat the motor connector on both ends. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the cables for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the staple finisher transport gears for proper installation and damage, and replace if necessary. See **"Staple finisher transport gears removal" on page 548**. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 **a** Check the compiler feed roller for proper installation. **b** Check the roller for wear or damage, and replace if necessary. See **"Staple finisher compiler feed roller removal" on page 572**. **c** Manually turn the roller and make sure that the compiler feed idler rolls with the roller. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check the compiler feed idler for proper installation and damage, and replace if necessary. See **"Staple finisher compiler feed idler removal" on page 574**. **b** Manually turn the mating roller and make sure that the idler rolls with the roller. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the staple finisher aligner paddle for wear or damage, and replace if necessary. See **"Staple finisher aligner paddle and upper paper guide removal" on page 575**. **b** Manually turn the paddle to check for proper operation. **c** Check the paddle for proper installation. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Aligner paddle), and then touch **Start**. Does the motor run?	Go to step 16.	Go to step 15.
Step 15 **a** Check the motor (staple finisher aligner paddle) for damage, and replace if necessary. See **"Motor (staple finisher aligner paddle) removal " on page 548**. **b** Check the motor for proper installation. **c** Reseat the connector on both ends. Does the problem remain?	Go to step 16.	The problem is solved.

Action	Yes	No
Step 16 **a** Check the staple finisher aligner paddle gears for damage, and replace if necessary. See **"Staple finisher aligner paddle gears removal" on page 550**. **b** Check the gears for proper alignment and installation. **c** Check the actuator for damage, and replace if necessary. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Reseat all cable connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher upper exit area jam service check

Action	Yes	No
Step 1 **a** Clear the paper path of any jams or obstructions. **b** Check if the jam access door is properly closed. **c** Reset the printer, and then reseat the finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the staple finisher jam access door for proper installation and damage. Is the door properly installed and free of damage?	Go to step 4.	Go to step 3.
Step 3 Reinstall or replace the door. See **"Staple finisher jam access door removal" on page 527**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the staple finisher upper paper guide for proper installation and damage. Is the paper guide properly installed and free of damage?	Go to step 6.	Go to step 5.

Action	Yes	No
Step 5 Reinstall or replace the paper guide. See **"Staple finisher aligner paddle and upper paper guide removal" on page 575**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Move the tampers from the side to the center, and then clear the area of any obstructions. **b** Check the tampers for proper installation and damage. Are the tampers properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the tampers. See **"Staple finisher tamper removal" on page 566**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Transport), and then touch **Start**. Does the motor run?	Go to step 11.	Go to step 9.
Step 9 Check the motor (staple finisher transport) for proper installation and damage. Make sure to reseat the motor connector on both ends. 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 (staple finisher transport) removal" on page 596**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the cables for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the staple finisher transport gears for proper installation and damage. Are the gears properly installed and free of damage?	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 Reinstall or replace the gears. See **"Staple finisher transport gears removal" on page 548**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the compiler feed roller for proper installation and damage. Manually turn the roller and make sure that the compiler feed idler rolls with the roller. Is the roller properly installed and free of damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the roller. See **"Staple finisher compiler feed roller removal" on page 572**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the compiler feed idler for proper installation and damage. Manually turn the mating roller and make sure that the idler rolls with the roller. Is the idler properly installed and free of damage?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the idler. See **"Staple finisher compiler feed idler removal" on page 574**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the staple finisher aligner paddle for proper installation and wear or damage. Make sure to manually turn the paddle to check for proper operation. Is the paddle properly installed and free of damage?	Go to step 20.	Go to step 19.
Step 19 Reinstall or replace the paddle. See **"Staple finisher aligner paddle and upper paper guide removal" on page 575**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 a Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** b Find the motor (Aligner paddle), and then touch **Start**. Does the motor run?	Go to step 23.	Go to step 21.

Action	Yes	No
Step 21 Check the motor for proper installation and damage. Make sure to reseat the motor connector on both ends. Is the motor properly installed and free of damage?	Go to step 23.	Go to step 22.
Step 22 Reinstall or replace the motor. See **"Motor (staple finisher aligner paddle) removal " on page 548**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Compile and staple section** **b** Find the sensor (Aligner paddle). Does the sensor status change while toggling the sensor?	Go to step 26.	Go to step 24.
Step 24 Check the sensor for proper installation and damage, and replace if necessary. Make sure to reseat the sensor connector on both ends. Is the sensor properly installed and free of damage?	Go to step 26.	Go to step 25.
Step 25 Reinstall or replace the sensor. See **"Staple finisher aligner paddle gears removal" on page 550**. Does the problem remain?	Go to step 26.	The problem is resolved.
Step 26 **a** Check the staple finisher aligner paddle gears for damage, and replace if necessary. See **"Staple finisher aligner paddle gears removal" on page 550**. **b** Check the gears for proper alignment and installation. **c** Check the actuator for damage, and replace if necessary. Does the problem remain?	Go to step 27.	The problem is resolved.
Step 27 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Upper exit), and then touch **Start**. Does the motor run?	Go to step 30.	Go to step 28.

Action	Yes	No
Step 28 Check the motor for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 30.	Go to step 29.
Step 29 Reinstall or replace the motor. See **"Motor (staple finisher upper exit roller) removal" on page 534**. Does the problem remain?	Go to step 30.	The problem is solved.
Step 30 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Transport and exit section** **b** Find the sensor (Upper exit roller). Does the sensor status change while toggling the sensor?	Go to step 33.	Go to step 31.
Step 31 Check the sensor for proper installation and damage. Make sure to reseat the sensor connector on both ends. Is the sensor properly installed and free of damage?	Go to step 33.	Go to step 32.
Step 32 Reinstall or replace the sensor. See **"Sensor (staple finisher upper exit roller) removal" on page 552**. Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 **a** Check the staple finisher front upper exit roller position gears for proper installation and damage, and replace if necessary. See **"Staple finisher front upper position exit roller gears removal" on page 553**. **b** Check the actuator and lever for proper installation and damage, and replace if necessary. **c** Make sure that the springs are properly installed. **d** Check if the roller goes up and down after moving the gears. **e** Lift the gear to check if the actuator covers the sensor. Does the problem remain?	Go to step 34.	The problem is solved.

Action	Yes	No
Step 34 **a** Check the staple finisher rear upper exit roller position gears and lever for proper installation and damage, and replace if necessary. See **"Staple finisher rear upper position exit roller gears removal" on page 535**. **b** Check if the roller goes up and down after moving the gears. Does the problem remain?	Go to step 35.	The problem is solved.
Step 35 **a** Check the staple finisher upper exit roller for proper installation and damage, and replace if necessary. See **"Staple finisher upper exit roller removal" on page 578**. **b** Check if the roller goes up and down after moving the gears. Does the problem remain?	Go to step 36.	The problem is solved.
Step 36 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Exit), and then touch **Start**. Does the motor run?	Go to step 39.	Go to step 37.
Step 37 Check the motor for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 39.	Go to step 38.
Step 38 Reinstall or replace the motor. See **"Motor (staple finisher exit) removal" on page 596**. Does the problem remain?	Go to step 39.	The problem is solved.
Step 39 Check the exit gears for proper alignment and installation. Are the gears properly aligned or installed?	Go to step 41.	Go to step 40.
Step 40 Realign or reinstall the exit gears. Does the problem remain?	Go to step 41.	The problem is solved.
Step 41 Check the exit gears for damage. Are the gears free of damage?	Go to step 43.	Go to step 42.

Action	Yes	No
Step 42 Replace the gears. See **"Staple finisher exit gears removal" on page 555**. Does the problem remain?	Go to step 43.	The problem is solved.
Step 43 Check the exit roller belts for proper installation and damage. Are the belts properly installed or free of damage?	Go to step 45.	Go to step 44.
Step 44 Reinstall or replace the belts. See **"Staple finisher exit roller belts removal" on page 557**. Does the problem remain?	Go to step 45.	The problem is solved.
Step 45 Reseat all cable connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 46.	The problem is solved.
Step 46 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher rear tamper home) jam service check

Action	Yes	No

Step 1
a Check and clear the following areas of any jams and obstructions:
   • Jam door
   • Output bin
   • Paper path
   • Staple finisher tamper area
b Move the staple finisher tampers from the side to the center, and then back to their original positions.
c Reset the printer, and then reseat the staple finisher.
 	
Does the problem remain?
	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Tamper front and rear), and then touch **Start**. Does the motor run?	Go to step 4.	Go to step 3.
Step 3 **a** Check the motor (staple finisher rear tamper) for proper installation and damage, and replace if necessary. See **"Motor (staple finisher tamper) removal" on page 562**. **b** Reseat the connector on both ends. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Tamper sensors** **b** Find the sensor (Rear tamper home). Does the sensor status change while toggling the sensor?	Go to step 6.	Go to step 5.
Step 5 **a** Check the sensor (staple finisher rear tamper home) for proper installation and damage, and replace if necessary. See **"Sensor (staple finisher tamper position) removal" on page 562**. **b** Reseat the connector on both ends. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the cables for cuts or damages, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the tamper for proper installation and damage, and replace if necessary. See **"Staple finisher tamper removal" on page 566**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Check the rear tamper belt holder for proper installation and damage, and replace if necessary. See **"Staple finisher tamper belts removal" on page 564**. **b** Check the rear tamper belt for proper alignment. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 **a** Check the rear tamper belt for proper installation and damage, and replace if necessary. See **"Staple finisher tamper belts removal" on page 564**. **b** Check the spring for proper installation. **c** Check the belt for proper alignment. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the tamper gears for proper installation and damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Reseat all cable connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher paddle jam service check

Action	Yes	No
Step 1 **a** Clear the paper path of any jams or obstructions. **b** Reset the printer, and then reseat the staple finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Compile and staple section** **b** Find the sensor (Aligner paddle). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 3.

Action	Yes	No
Step 3 Check the sensor (staple finisher aligner paddle) for proper installation and damage, and replace if necessary. See **"Staple finisher aligner paddle gears removal" on page 550**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Aligner paddle), and then touch **Start**. Does the motor run?	Go to 6.	Go to step 5.
Step 5 Check the motor (staple finisher rear tamper home) for proper installation and damage, and replace if necessary. See **"Motor (staple finisher aligner paddle) removal " on page 548**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the cables for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Check the staple finisher aligner paddle gears for proper installation and damage, and replace if necessary. See **"Staple finisher aligner paddle gears removal" on page 550**. **b** Check the actuator for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Check the staple finisher aligner paddle for any wear or damage, and replace if necessary. See **"Staple finisher aligner paddle and upper paper guide removal" on page 575**. **b** Manually turn the aligner paddle to check it for proper operation. **c** Check the aligner paddle for proper installation. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Reseat all cable connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 10.	The problem is solved.

Diagnostic information

Action	Yes	No
Step 10 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher bin clamp jam service check

Action	Yes	No
Step 1 **a** Clear the staple finisher bin. **b** Clear the paper path of any obstruction. **c** 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: **Output device diagnostics** > **Motor tests** **b** Find the motor (Bin clamp), and then touch **Start**. Does the motor run?	Go to step 4.	Go to step 3.
Step 3 **a** Check the motor (staple finisher bin clamp) for damage, and replace if necessary. See **"Motor (staple finisher bin clamp) removal" on page 591**. **b** Check the motor for proper installation. **c** Reseat the motor connector on both ends. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Transport and exit section** **b** Find the sensor (Tray holder arm). Does the sensor status change while toggling the sensor?	Go to step 6.	Go to step 5.

Action	Yes	No
Step 5 **a** Check the sensor (staple finisher bin clamp) for damage, and replace if necessary. See **"Sensor (staple finisher bin clamp) removal" on page 590**. **b** Check the sensor for proper installation. **c** Reseat the sensor connector on both ends. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the cables for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Check the staple finisher bin arms for damage, and replace if necessary. See **"Staple finisher bin clamp assembly removal" on page 582**. **b** Clear the bin arms of any obstructions. **c** Check the bin arms for proper installation and alignment. **d** Manually actuate the arm to check for proper function. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Check the staple finisher bin for damage, and replace if necessary. See **"Staple finisher bin removal" on page 569**. **b** Manually push, and then release the bin to check if it goes back to its original position. **c** Clear the bin of any obstructions. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Check the staple finisher bin link for damage, and replace if necessary. See **"Staple finisher bin link removal" on page 568**. **b** Check the links and the spring for proper installation. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reseat all cable connectors in the controller board, and then reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher decurl assembly service check

Action	Yes	No
Step 1 **a** Reset the printer. **b** Reseat the staple finisher. **c** Clear the paper path of any obstructions. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Compile and staple section** **b** Find the sensor (Decurl). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 3.
Step 3 **a** Check the sensor (staple finisher decurl) for proper installation and damage, and replace if necessary. See **"Sensor (staple finisher decurl) removal" on page 600**. **b** Reseat the connector on both ends. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Decurl), and then touch **Start**. Does the motor run?	Go to step 6.	Go to step 5.
Step 5 **a** Check the motor (staple finisher decurl) for proper installation and damage, and replace if necessary. See **"Staple finisher decurl assembly removal" on page 598**. **b** Reseat the end of the connector that is on the controller board. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Replace the staple finisher decurl paddle. See **"Staple finisher decurl assembly removal" on page 598**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the cables for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reseat all cable connectors in the controller board, and then reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher stapler throat jam service check

Action	Yes	No
Step 1 **a** Clear the paper path of any jams or obstructions. **b** Reset the printer, and then reseat the staple finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the sensor (staple finisher staple unit paper present) for proper operation. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple finisher** > **Compile and staple section** **b** Find the sensor (Staple unit paper presence). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 3.

Action	Yes	No
Step 3 **a** Check the sensor (staple finisher staple unit paper present) for proper installation and damage, and replace if necessary. See **"Sensor (staple finisher staple unit paper present) removal" on page 599**. **b** Reseat the connector on both ends. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple finisher** > **Transport and exit section** **b** Find the sensor (Upper exit roller). Does the sensor status change while toggling the sensor?	Go to step 6.	Go to step 5.
Step 5 **a** Check the sensor for proper installation and damage, and replace if necessary. See **"Sensor (staple finisher upper exit roller) removal" on page 552**. **b** Reseat the connector on both ends. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Exit assembly), and then touch **Start**. Does the motor run?	Go to step 8.	Go to step 7.
Step 7 **a** Check the motor for proper installation and damage, and replace if necessary. See **"Motor (staple finisher upper exit roller) removal" on page 534**. **b** Reseat the connector on both ends. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the cables for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 **a** Check the staple finisher upper paper guide for proper installation and damage, and replace if necessary. See **"Staple finisher aligner paddle and upper paper guide removal" on page 575**. **b** Check the paper guide bail for proper installation and damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the staple finisher front upper exit roller position gears for proper installation and damage, and replace if necessary. See **"Staple finisher front upper position exit roller gears removal" on page 553**. **b** Check the actuator and lever for proper installation and damage, and replace if necessary. **c** Make sure that the springs are properly installed. **d** Check if the roller goes up and down after moving the gears. **e** Lift the gear to check if the actuator covers the sensor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the staple finisher rear upper exit roller position gears and lever for proper installation and damage, and replace if necessary. See **"Staple finisher rear upper position exit roller gears removal" on page 535**. **b** Check if the roller goes up and down after moving the gears. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check the staple finisher upper exit roller for proper installation and damage, and replace if necessary. See **"Staple finisher upper exit roller removal" on page 578**. **b** Check if the roller goes up and down after moving the gears. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the controller board for damage, and replace if necessary. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

43y paper jams

43y paper jam messages

Error code	Description	Action
430.19	Stapler head fails to prime.	See **"Staples Low [83] service check" on page 356**.
436.13	The media fails to cover the sensor (staple finisher front tamper home) within the specified time.	See **"Sensor (staple finisher front tamper home) jam service check" on page 223**.
436.15	The media fails to leave the sensor (staple finisher front tamper home) within the specified time.	
439.19	Page ID mismatch.	See **"Staple finisher engine error service check" on page 225**.

Sensor (staple finisher front tamper home) jam service check

Action	Yes	No

Step 1
a Clear the following areas of any jams or obstructions:
   • Jam door
   • Finisher bin
   • Paper path
   • Staple finisher tamper area
b Move the tampers from one side to another, and then back to the original position.
c Reset the printer, and then reseat the staple finisher.
 	
Does the problem remain?
	Go to step 2.	The problem is solved.

Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Tamper front and rear), and then touch **Start**. Does the motor run?	Go to step 4.	Go to step 3.

Action	Yes	No
Step 3 **a** Check the motor (staple finisher front tamper home) for proper installation and damage, and replace if necessary. See **"Motor (staple finisher tamper) removal" on page 562**. **b** Reseat the connector on both ends of the motor. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Tamper sensors** **b** Find the sensor (Front tamper home). Does the sensor status change while toggling the sensor?	Go to step 6.	Go to step 5.
Step 5 **a** Check the sensor (staple finisher front tamper home) for proper installation and damage, and replace if necessary. See **"Sensor (staple finisher tamper position) removal" on page 562**. **b** Reseat the connector on both ends of the sensor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the cables for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Move the tampers from one side to another, and then make sure that the tamper area is free from any obstructions. **b** Check the tampers for any damages, and replace if necessary. See **"Staple finisher tamper removal" on page 566**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Check the tamper belt holder for damages, and replace if necessary. See **"Staple finisher tamper removal" on page 566**. **b** Check the tamper belt holder for proper installation. Make sure that the front tamper belt is properly aligned. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 **a** Check the staple finisher tamper belt for damage, and replace if necessary. See **"Staple finisher tamper belts removal" on page 564**. **b** Check the belts for proper installation. Make that the spring and the holder are properly aligned. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the stapler finisher tamper pulley gears for damage, and replace if necessary. See **"Staple finisher tamper pulley gear removal" on page 565**. **b** Make sure that the gears are properly installed. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Reseat all connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher engine error service check

Action	Yes	No
Step 1 **a** Clear the paper path of any jams or obstructions. **b** Make sure that the jam access door is properly closed. **c** Reset the printer, and then reseat the finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Transport), and then touch **Start**. Does the motor run?	Go to step 5.	Go to step 3.

Action	Yes	No
Step 3 Check the motor for proper installation and damage. Is the motor properly installed or free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (staple finisher transport) removal" on page 596**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Transport and exit** **b** Find the sensor (Transport). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 Check the sensor and the flag for proper installation and damage. Is the sensor and the flag properly installed or free of damage?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the sensor and the flag. See **"Sensor (staple finisher transport) removal" on page 601**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Aligner paddle), and then touch **Start**. Does the motor run?	Go to step 11.	Go to step 9.
Step 9 Check the motor for proper installation and damage. Is the motor properly installed or free of damage	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the motor. See **"Motor (staple finisher aligner paddle) removal " on page 548**. 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: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Transport and exit section** **b** Find the sensor (Upper exit roller). Does the sensor status change while toggling the sensor?	Go to step 14.	Go to step 12.
Step 12 Check the sensor for proper installation and damage. Is the sensor properly installed or free of damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the sensor. See **"Sensor (staple finisher upper exit roller) removal" on page 552**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Upper exit), and then touch **Start**. Does the motor run?	Go to step 17.	Go to step 15.
Step 15 Check the motor for proper installation and damage. Is the motor properly installed or free of damage?	Go to step 17.	Go to step 16.
Step 16 Reinstall or replace the motor. See **"Motor (staple finisher upper exit roller) removal" on page 534**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Exit), and then touch **Start**. Does the motor run?	Go to step 20.	Go to step 18.
Step 18 Check the motor for proper installation and damage. Is the motor properly installed or free of damage?	Go to step 20.	Go to step 19.

Action	Yes	No
Step 19 Reinstall or replace the motor. See **"Motor (staple finisher exit) removal" on page 596**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Check the upper exit roller for proper installation and damage. Make sure that the roller can move up and down. Is the roller properly installed or free of damage?	Go to step 22.	Go to step 21.
Step 21 Reinstall or replace the roller. See **"Staple finisher upper exit roller removal" on page 578**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Check the cables for any cuts or damage, and replace if necessary. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Reseat all cable connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

User attendance messages

User attendance messages (0-99)

Error code	Description	Action
31	A supply-related error was detected: • The cartridge, developer and PC unit combo, photoconductor unit, or developer unit is missing or undetected. • The cartridge, developer and PC unit combo, photoconductor unit, or developer unit is defective. • The fuser is missing or undetected.	See **"Cartridge or photoconductor error service check" on page 230**.
32	The cartridge, developer and PC unit combo, photoconductor unit, or developer unit is unsupported.	
33	The cartridge, developer and PC unit combo, photoconductor unit, or developer unit is non-Lexmark.	
34	Incorrect paper size was detected.	See **"Mismatched paper size service check" on page 231**.
35	The printer memory is insufficient to enable Resource Save.	See **"Insufficient memory service check" on page 232**.
37	The printer memory is insufficient to do the job.	
38	The memory is full.	
39	The page is too complex to properly print.	See **"Complex page service check" on page 232**.
42	The cartridge is incompatible due to printer region mismatch.	See **"Cartridge or photoconductor error service check" on page 230**.
50	PPDS font error was detected.	See **"PPDS font error service check" on page 233**.
51	The flash memory is defective.	See **"Flash memory failure service check" on page 233**.
52	The flash memory is insufficient.	See **"Insufficient flash memory service check" on page 234**.
53	The flash memory is unformatted.	See **"Flash memory failure service check" on page 233**.
54	The printer was not able to communicate with the network.	See **"Network service check" on page 234**.
55	The internal option installed is unsupported.	See **"Unsupported internal option service check" on page 237**.
56	The parallel port, serial port, or standard USB port is disabled.	See **"Disabled port service check" on page 238**.

Error code	Description	Action
58	The disks, trays, or bins installed are too many.	See **"Excess options service check" on page 238**.
59	The input option or output option is incompatible.	See **"Incompatible hardware option service check" on page 239**.
61	The hard disk is defective.	See **"Hard disk failure service check" on page 240**.
62	The hard disk is full.	
80	The printer requires maintenance. The appropriate maintenance kit needs to be installed.	See **"Maintenance kit service check" on page 241**.
84	A photoconductor unit end of life error was detected: • The photoconductor unit life is low, nearly low, or very low. • The photoconductor unit needs to be replaced.	See **"Cartridge or photoconductor error service check" on page 230**.
85	A developer unit end of life error was detected: • The developer unit life is low, nearly low, or very low. • The developer unit needs to be replaced.	See **"Cartridge or photoconductor error service check" on page 230**.
88	A toner cartridge end of life error was detected: • The toner cartridge supply is low, nearly low, or very low. • The toner cartridge needs to be replaced.	See **"Cartridge or photoconductor error service check" on page 230**.

Cartridge or photoconductor error service check

Action	Yes	No
Step 1 a Make sure that the cartridge or photoconductor unit is installed. b Check if the cartridge or photoconductor unit is supported, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Make sure that the cartridge or photoconductor unit 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.

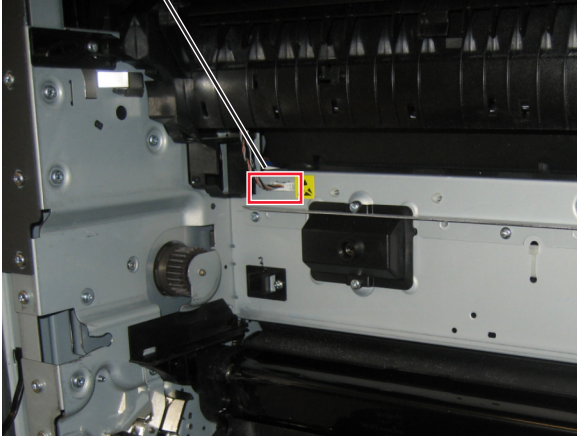| Action	Yes	No
Step 3 Check the cartridge or photoconductor contacts for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Mismatched paper size service check

Action	Yes	No
Step 1 **a** Make sure that the tray paper length and tray paper width guides are properly installed. **b** Check the guides for wear or damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the paper width and paper length sensor actuators for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Reseat the paper width and paper length sensor cables. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the paper width and paper length sensors 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, and replace if necessary. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Insufficient memory service check

Action	Yes	No
Step 1 Reset the printer, and then navigate to: **Paper Menu** > **Print Settings** > **Download Target** > **Disk** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 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 3.	The problem is solved.
Step 3 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 457**. 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: **Paper Menu** > **Print Settings** > **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: **PRINTER TESTS** > **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.
Step 4 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

PPDS font error service check

Action	Yes	No
Step 1 Navigate to **Settings** > **PPDS Menu** > **Best Fit**. Make sure that the value is set to **On**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that the font is supported by the memory card. Replace the memory card if necessary. 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 457**. 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 settings** > **Job Accounting Menu Settings** > **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 457**. Does the problem remain?	Go to step 4.	The problem is solved.
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** > **Print settings** > **Utilities Menu** > **Format Flash** > **Yes**. 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 457**. 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.

Network service check

Note: Before starting this service check, print the network setup page. This page is found under **Menu** > **Reports** > **Network Settings**. Consult the network administrator to make sure that the physical and wireless network settings displayed on the network settings page for the printer are properly configured. If a wireless network is used, then make sure that the printer is in the range of the host computer or wireless access point. Make sure that there is no electronic interference in the wireless network. Have the network administrator check that the printer 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 457**. 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 457**. 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, and replace if necessary. See **"Controller board removal" on page 457**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 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.

Disabled port service check

Action	Yes	No
Step 1 **a** Make sure that the cables connected to 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, and replace if necessary. See **"Controller board removal" on page 457**. 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.

Excess options service check

Action	Yes	No
Step 1 Reset the printer, 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.

Action	Yes	No
Step 3 **a** If applicable, remove all internal options. **b** Reset the printer, 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 remove the excess option. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check if the number of input options installed is allowed, and remove the excess option. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Incompatible hardware option service check

Action	Yes	No
Step 1 **Warning—Potential Damage:** 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 the firmware version of the hardware option if it is supported by the engine firmware. 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: • Navigate to **Settings** > **Print Settings** > **Utilities Menu** > **Delete Downloads on Disk** > **Yes**. • Enter the Configuration menu, and then navigate to **Settings** > **Jobs on Disk** > **Delete**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that the firmware version is the latest. **Note:** The latest firmware versions are available on the Technical service bulletins at **support.lexmark.com**. 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, and replace if necessary. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Maintenance kit service check

Action	Yes	No
Warning—Potential Damage: Do not perform this step if the printer is on. **a** Replace the required maintenance kit. **b** Reset the maintenance counter: • For 300K, enter the Configuration menu, and then navigate to **Reset Maintenance counter** > **Reset 300K Maintenance Kit**. • For 600K, enter the Diagnostics menu, and then navigate to **Reset Maintenance counter** > **Reset 600K Maintenance Kit**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Printer hardware errors

10y errors

100–101 error messages

Error code	Description	Action
100.01	Engine software error was detected.	See **"Weather station failure service check" on page 243**.
101.20	Tray 2 product ID is invalid.	See **"Invalid input option type or ID is detected service check" on page 242**.
101.21	Tray 2 controller board ID is invalid.	
101.22	The input option type is invalid.	
101.30	Tray 3 product ID is invalid.	
101.31	Tray 3 controller board ID is invalid.	
101.32	The input option type is invalid.	See **"Invalid input option type or ID is detected service check" on page 242**.
101.40	Tray 4 product ID is invalid.	
101.41	Tray 4 controller board ID is invalid.	
101.42	The input option type is invalid.	
101.50	Tray 5 product ID is invalid.	
101.51	Tray 5 controller board ID is invalid.	
101.52	The input option 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 *Printer, Option, and Stand Compatibility Guide*. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the interface cable for proper connection, and reseat if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the interface cable for damage. Is the cable free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the cable. See **"550-sheet tray interface cable removal" on page 492** or **"2200-sheet tray interface cable removal" on page 504**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the interface cable of the printer and adjacent options for damage. Is the cable free of damage?	Go to step 7.	Go to step 6.
Step 6 Replace the cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the input option controller board. See **"550-sheet tray controller board removal" on page 492** or **"2200-sheet tray controller board removal" on page 503**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Weather station failure service check

Action	Yes	No
Step 1 Check the cable JWTHR1 on the controller board for proper connection. Is the cable properly connected?	Go to step 3.	Go to step 2.
Step 2 Reseat the cable. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the weather station cable for proper connection. Is the cable properly connected?	Go to step 5.	Go to step 4.
Step 4 Reseat the cable. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 5 Replace the weather station. See **"Weather station removal" on page 462**. 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	Printhead error (mirror motor lock is asserted) was detected before the motor was turned on.	See **"Printhead failure service check" on page 244**.
110.21	No printhead power (+5V) when the laser servo started.	
110.31	Printhead error (no first Hysnc) was detected.	
110.32	Printhead error (lost first Hysnc) was detected.	
110.33	Printhead error (lost first Hysnc) was detected during servo.	
110.34	Printhead error (mirror motor lost lock) was detected.	
110.35	Printhead error (mirror motor no first lock) was detected.	
110.36	Printhead error (mirror motor never stabilized) was detected.	
110.41	Printhead NVRAM read failure occurred.	
110.70	Printhead NVRAM values were incorrect.	
110.91	Printhead timing error was detected.	
110.92	Printhead NVRAM checksum mismatch occurred.	

Printhead 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 controller board sockets JWPR1 and JVD01 connections. Are the cables properly connected?	Go to step 4.	Go to step 3.
Step 3 Reseat the cables. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Check the printhead connections. Is the printhead properly connected?	Go to step 6.	Go to step 5.
Step 5 Reseat the cables. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the printhead cables for damage. Are the cables free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the cables. 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 printhead. See **"Printhead removal" on page 416**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

120–126 errors

120 error messages

Error code	Description	Action
120.80	Motor (fuser) did not turn on.	See **"Motor (fuser) failure service check" on page 249**.
120.81	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.	

121 error messages

Error code	Description	Action
121.00	Fuser did not reach the required temperature (during warmup).	See **"Fuser failure service check" on page 251**.
121.01	During an attempt to heat up, the fuser was not detected.	
121.02	Fuser went over the required temperature (during EWC/Line voltage detection).	
121.03	Fuser hardware and driver are mismatched.	
121.04	During an attempt to heat up, the fuser relay was open and the microcontroller was not reporting an error.	
121.05	During an attempt to heat up, the fuser relay was open and the microcontroller was reporting an error.	
121.09	Fuser did not reach the required temperature for motors (not applicable to standby mode).	

Error code	Description	Action
121.10	Fuser did not reach the required temperature (during start of EWC/Line voltage detection).	See **"Fuser failure service check" on page 251**.
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.	
121.15	Power of fuser heater is too high.	
121.16	Power of fuser heater is too low.	
121.17	Fuser heater error (runaway on LV machine) was detected.	
121.18	Fuser heater error (runaway on HV machine) was detected.	
121.22	Open fuser relay was detected.	See **"Fuser failure service check" on page 251**.
121.25	After line voltage detection, control did not roll over to steady state in time.	
121.28	Fuser did not reach the required temperature (during EP warmup).	
121.32	Fuser did not reach the required temperature (on 100% power).	
121.33	Fuser did not reach the required temperature (while page is in fuser).	
121.34	Fuser did not reach the required temperature (during steady state control).	
121.36	Open fuser relay was detected with very cold or unknown ambient temperature.	
121.38	Fuser UBER defect was detected. Belt to heater temperature delta is too high.	
121.41	Fuser mechanism failed to detect the expected cam sensor transition.	See **"Fuser failure service check" on page 251**.
121.42	Fuser gate time has increased out of control.	

Diagnostic information

Error code	Description	Action
121.50	Fuser went over the required temperature (during global overtemp check).	See **"Fuser failure service check" on page 251**.
121.52	Main thermistor temperature is out of range.	
121.53	Main thermistor temperature change rate is out of range.	
121.54	Secondary thermistor temperature is out of range.	
121.55	Secondary thermistor temperature change rate is out of range.	
121.56	Middle thermistor temperature is out of range.	
121.57	Middle thermistor temperature change rate is out of range.	
121.58	Edge thermistor temperature is out of range.	
121.59	Edge thermistor temperature change rate is out of range.	
121.60	Belt contact thermistor temperature is out of range.	See **"Fuser failure service check" on page 251**.
121.61	Belt contact thermistor temperature change rate is out of range.	
121.62	Belt non-contact thermistor 1 temperature is out of range.	
121.63	Belt non-contact thermistor 1 temperature change rate is out of range.	
121.64	Belt non-contact thermistor 2 temperature is out of range.	
121.65	Belt non-contact thermistor 2 temperature change rate is out of range.	
121.66	Narrow media thermistor temperature is out of range.	
121.67	Narrow media thermistor temperature change rate is out of range.	
121.70	Heater resistance is too high.	See **"Fuser failure service check" on page 251**.
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.	

Diagnostic information

Error code	Description	Action
121.81	Open fuser backup roll thermistor was detected.	See **"Fuser failure service check" on page 251**.
121.82	Open fuser second backup roll thermistor was detected.	
121.84	Non-contact BUR sensor is missing.	
121.86	Backup roller thermistor 1 temperature is out of range.	
121.87	Backup roller thermistor 1 temperature change rate is out of range.	
121.88	Backup roller thermistor 2 temperature is out of range.	
121.89	Backup roller thermistor 2 temperature change rate is out of range.	
121.90	Non-contact backup roller thermistor temperature is out of range.	
121.91	Non-contact backup roller thermistor temperature change rate is out of range.	

126 error messages

Error code	Description	Action
126.06	LVPS 25V line error was detected.	See **"LVPS failure service check" on page 252**.
126.07	LVPS 5V rail was down during power-on.	
126.10	No line frequency was detected.	
126.11	Line frequency has gone outside the operating range.	

Motor (fuser) 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 fuser for damage and life expiration. Is the fuser damaged or has it reached end of life?	Go to step 3.	Go to step 4.
Step 3 Replace the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 a Remove the fuser, and then manually turn the fuser drive gears. b Check the movement of the gears. Does the fuser drive gear properly turn?	Go to step 6.	Go to step 5.
Step 5 Replace the fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board sockets JFIS1 and JFIP1 connections. Are the cables properly connected?	Go to step 8.	Go to step 7.
Step 7 Reseat the cables. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the motor (fuser) connections. Is the motor properly connected?	Go to step 10.	Go to step 9.
Step 9 Reseat the cables. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the motor (fuser) cables for damage. Are the cables free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the cables. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the fuser/transfer belt motor gearbox. See **"Fuser/transfer belt motor gearbox removal" on page 471**. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 Reset the printer. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fuser failure 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 Remove the fuser, and then install a different fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board socket JFSR1 connection. Is the cable properly connected?	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 Reset the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the LVPS. See **"LVPS removal" on page 459**. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the fuser cables for damage. Are the cables free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the cables. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the LVPS. See **"LVPS removal" on page 459**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

LVPS failure 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.

Action	Yes	No
Step 3 Remove the fuser, and then install a different fuser. See **"Fuser removal" on page 387**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board sockets JFSR1 and CN1 connections. Is the cable properly connected?	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 Reset the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the LVPS. See **"LVPS removal" on page 459**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the LVPS cables for damage. Are the cables free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the cables. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the LVPS. See **"LVPS removal" on page 459**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
Step 13 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

127–128 errors

127–128 error messages

Error code	Description	Action
127.01	The main HVPS was not detected.	See **"Main HVPS undetected service check" on page 254**.
127.02	The charge roller HVPS was not detected.	See **"Charge roller HVPS undetected service check" on page 255**.
128.00	Toner patch sensor error was detected.	See **"Sensor (TPS) failure service check" on page 256**.

Main HVPS undetected service check

Action	Yes	No
Step 1 Check the controller board socket JHVPS1 connection. Is the cable properly connected?	Go to step 3.	Go to step 2.
Step 2 Reseat the cable. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the main HVPS cable. Is the cable properly connected?	Go to step 5.	Go to step 4.
Step 4 Reseat the cable. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Replace the main HVPS. See **"Main HVPS removal" on page 440**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Charge roller HVPS undetected service check

Action	Yes	No
Step 1 Check the controller board socket JHVPS2 connection. Is the cable properly connected?	Go to step 3.	Go to step 2.
Step 2 Reseat the cable. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the charge roller HVPS cable. Is the cable properly connected?	Go to step 5.	Go to step 4.
Step 4 Reseat the cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the charge roller HVPS. See **"Charge roller HVPS removal" on page 453**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (TPS) failure service check

Action	Yes	No
Step 1 Check the cable JTPS1 on the controller board for proper connection. Is the cable properly connected?	Go to step 3.	Go to step 2.
Step 2 Reseat the cable. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor (TPS) cable for proper connection. Is the cable properly connected?	Go to step 5.	Go to step 4.
Step 4 Reseat the cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Perform the Toner patch sensing service check. Does the problem remain?	Contact the next level of support.	The problem is solved.

13y errors

130–137 error messages

Error code	Description	Action
130.80	The motor (printhead wiper) did not turn on.	See **"Motor (printhead wiper) failure service check" on page 257**.
130.81	The motor (printhead wiper) did not turn off.	
130.82	The motor (printhead wiper) speed did not ramp up to the required level.	
130.83	The motor (printhead wiper) stalled.	
130.84	The motor (printhead wiper) ran too slow.	
130.85	The motor (printhead wiper) ran too fast.	

Error code	Description	Action
136.80	The motor (K developer) did not turn on.	See **"Motor (K developer) failure service check" on page 258**.
136.81	The motor (K developer) did not turn off.	
136.82	The motor (K developer) speed did not ramp up to the required level.	
136.83	The motor (K developer) stalled.	
136.84	The motor (K developer) ran too slow.	
136.85	The motor (K developer) ran too fast.	
137.80	The motor (CMY developers) did not turn on.	See **"Motor (CMY developers) failure service check" on page 260**.
137.81	The motor (CMY developers) did not turn off.	
137.82	The motor (CMY developers) speed did not ramp up to the required level.	
137.83	The motor (CMY developers) stalled.	
137.84	The motor (CMY developers) ran too slow.	
137.85	The motor (CMY developers) ran too fast.	

Motor (printhead wiper) 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 controller board socket JWPR1 connection. Is the cable 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 (printhead wiper) connection. Is the motor properly connected?		
Step 5 Reseat the cable. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Check the motor (printhead wiper) cables for damage. Are the cables free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the cables. 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 motor (printhead wiper). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (K developer) 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 K developer unit for damage and life expiration. Is the developer unit damaged or has it reached end of life?	Go to step 3.	Go to step 4.
Step 3 Replace the developer unit. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 **a** Remove the K developer unit, and then manually turn the developer drive gear. **b** Check the movement of the gear. Does the developer drive gear properly turn?	Go to step 6.	Go to step 5.
Step 5 Replace the developer unit. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board socket JMAG1 connection. Is the cable properly connected?	Go to step 8.	Go to step 7.
Step 7 Reseat the cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the motor (K developer) connection. Is the motor properly connected?	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 (K developer) cable for damage. Is the cable free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
Step 13 Replace the EP/developer/toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reset the printer. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (CMY developers) 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 CMY developer units for damage and life expiration. Are the developer units damaged or have they reached end of life?	Go to step 3.	Go to step 4.
Step 3 Replace the affected developer unit. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Remove the CMY developer units, and then manually turn the developer drive gears. **b** Check the movement of the gears. Do the developer drive gears properly turn?	Go to step 6.	Go to step 5.
Step 5 Replace the affected developer unit. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Check the controller board socket JMAG1 connection. Is the cable properly connected?	Go to step 8.	Go to step 7.
Step 7 Reseat the cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the motor (CMY developers) connection. Is the motor properly connected?	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 (CMY developers) cable for damage. Is the cable free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the EP/developer/toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reset the printer. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

14y errors

141–149 error messages

Error code	Description	Action
141.80	The motor (K photoconductor) did not turn on.	See **"Motor (K photoconductor) failure service check" on page 263**.
141.81	The motor (K photoconductor) did not turn off.	
141.82	The motor (K photoconductor) speed did not ramp up to the required level.	
141.83	The motor (K photoconductor) stalled.	
141.84	The motor (K photoconductor) ran too slow.	
141.85	The motor (K photoconductor) ran too fast.	
142.80	The motor (CMY photoconductors) did not turn on.	See **"Motor (CMY photoconductors) failure service check" on page 265**.
142.81	The motor (CMY photoconductors) did not turn off.	
142.82	The motor (CMY photoconductors) speed did not ramp up to the required level.	
142.83	The motor (CMY photoconductors) stalled.	
142.84	The motor (CMY photoconductors) ran too slow.	
142.85	The motor (CMY photoconductors) ran too fast.	
145.80	The motor (CMY photoconductors) did not turn on.	See **"Motor (black only retract) failure service check" on page 267**.
145.81	The motor (CMY photoconductors) did not turn off.	
145.82	The motor (CMY photoconductors) speed did not ramp up to the required level.	
145.83	The motor (CMY photoconductors) stalled.	
145.84	The motor (CMY photoconductors) ran too slow.	
145.85	The motor (CMY photoconductors) ran too fast.	
147.80	The motor (deskew) did not turn on.	See **"Motor (deskew) failure service check" on page 268**.
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.	

Error code	Description	Action
148.80	The motor (duplex diverter) did not turn on.	See **"Motor (duplex diverter) failure service check" on page 269**.
148.81	The motor (duplex diverter) did not turn off.	
148.82	The motor (duplex diverter) speed did not ramp up to the required level.	
148.83	The motor (duplex diverter) stalled.	
148.84	The motor (duplex diverter) ran too slow.	
148.85	The motor (duplex diverter) ran too fast.	
149.80	The motor (redrive) did not turn on.	See **"Motor (redrive) failure service check" on page 271**.
149.81	The motor (redrive) did not turn off.	
149.82	The motor (redrive) speed did not ramp up to the required level.	
149.83	The motor (redrive) stalled.	
149.84	The motor (redrive) ran too slow.	
149.85	The motor (redrive) ran too fast.	

Motor (K photoconductor) 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 K photoconductor unit for damage and life expiration. Is the photoconductor unit damaged or has it reached end of life?	Go to step 3.	Go to step 4.
Step 3 Replace the photoconductor unit. See **"Repeating defects check" on page 71**. Does the problem remain?	Go to step 4.	The problem is solved.

Step 4
  a Remove the K photoconductor unit, and then manually turn the photoconductor drive gear.
  b Check the movement of the gear.
 	
Does the photoconductor drive gear properly turn?
	Go to step 6.	Go to step 5.

Action	Yes	No
Step 5 Replace the photoconductor unit. See **"Repeating defects check" on page 71**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board sockets JPCS1 and JPCP1 connections. Are the cables properly connected?	Go to step 8.	Go to step 7.
Step 7 Reseat the cables. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the motor (K photoconductor) connection. Is the motor properly connected?	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 (K photoconductor) cable for damage. Is the cable free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the EP/developer/toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reset the printer. Does the problem remain?	Go to step 15.	The problem is solved.

Action	Yes	No
Step 15 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (CMY photoconductors) 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 CMY photoconductor units for damage and life expiration. Are the photoconductor units damaged or have they reached end of life?	Go to step 3.	Go to step 4.
Step 3 Replace the affected photoconductor unit. See **"Developer unit and photoconductor unit removal" on page 426**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Remove the CMY developer units, and then manually turn the developer drive gears. **b** Check the movement of the gears. Do the developer drive gears properly turn?	Go to step 6.	Go to step 5.
Step 5 Replace the affected developer unit. See **"Developer unit and photoconductor unit removal" on page 426** Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board sockets JPCS1 and JPCP1 connections. Are the cables properly connected?	Go to step 8.	Go to step 7.
Step 7 Reseat the cables. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the motor (CMY photoconductors) connection. Is the motor properly connected?	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 (CMY photoconductors) cable for damage. Is the cable free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the EP/developer/toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reset the printer. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (black only retract) 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 controller board socket JMAG1 connection. Is the cable 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 (black only retract) connection. Is the motor properly connected?	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 motor (black only retract) cable for damage. Is the cable free of damage?	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 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (black only retract). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. 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 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (deskew) 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 controller board socket JMTR2 connection. Is the cable 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 (deskew) connection. Is the motor properly connected?	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 motor (deskew) cable for damage. Is the cable free of damage?	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 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Replace the motor (deskew). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (duplex diverter) 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 controller board socket JMTR1 connection. Is the cable 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 (duplex diverter) connection. Is the motor properly connected?	Go to step 5.	Go to step 6.

Action	Yes	No
Step 5 a Remove the fuser. See **"Fuser removal" on page 387**. b Check the in-line cable (A) connection. **A** Is the cable properly connected?	Go to step 7.	Go to step 6.
Step 6 Reseat the cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the motor (duplex diverter) cable for damage. Is the cable free of damage?	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 Reset the printer. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the redrive. See **"Redrive removal" on page 401**. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Reset the printer. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (redrive) 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 controller board socket JMTR1 connection. Is the cable 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 (redrive) connection. Is the motor properly connected?	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 motor (redrive) cable for damage. Is the cable free of damage?	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.

Action	Yes	No
Step 8 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (redrive). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

15y errors

150–158 error messages

Error code	Description	Action
150.80	The motor (duplex) did not turn on.	See **"Motor (duplex) failure service check" on page 274**.
150.81	The motor (duplex) did not turn off.	
150.82	The motor (duplex) speed did not ramp up to the required level.	
150.83	The motor (duplex) stalled.	
150.84	The motor (duplex) ran too slow.	
150.85	The motor (duplex) ran too fast.	
151.80	The motor (transfer belt) did not turn on.	See **"Motor (transfer belt) failure service check" on page 275**.
151.81	The motor (transfer belt) did not turn off.	
151.82	The motor (transfer belt) speed did not ramp up to the required level.	
151.83	The motor (transfer belt) stalled.	
151.84	The motor (transfer belt) ran too slow.	
151.85	The motor (transfer belt) ran too fast.	

Error code	Description	Action
153.80	The motor (isolation) did not turn on.	See **"Motor (isolation) failure service check" on page 277**.
153.81	The motor (isolation) did not turn off.	
153.82	The motor (isolation) speed did not ramp up to the required level.	
153.83	The motor (isolation) stalled.	
153.84	The motor (isolation) ran too slow.	
153.85	The motor (isolation) ran too fast.	
155.80	The motor (K toner add) did not turn on.	See **"Motor (K toner add) failure service check" on page 278**.
155.81	The motor (K toner add) did not turn off.	
155.82	The motor (K toner add) speed did not ramp up to the required level.	
155.83	The motor (K toner add) stalled.	
155.84	The motor (K toner add) ran too slow.	
155.85	The motor (K toner add) ran too fast.	
156.80	The motor (C toner add) did not turn on.	See **"Motor (C toner add) failure service check" on page 281**.
156.81	The motor (C toner add) did not turn off.	
156.82	The motor (C toner add) speed did not ramp up to the required level.	
156.83	The motor (C toner add) stalled.	
156.84	The motor (C toner add) ran too slow.	
156.85	The motor (C toner add) ran too fast.	
157.80	The motor (M toner add) did not turn on.	See **"Motor (M toner add) failure service check" on page 283**.
157.81	The motor (M toner add) did not turn off.	
157.82	The motor (M toner add) speed did not ramp up to the required level.	
157.83	The motor (M toner add) stalled.	
157.84	The motor (M toner add) ran too slow.	
157.85	The motor (M toner add) ran too fast.	
158.80	The motor (Y toner add) did not turn on.	See **"Motor (Y toner add) failure service check" on page 286**.
158.81	The motor (Y toner add) did not turn off.	
158.82	The motor (Y toner add) speed did not ramp up to the required level.	
158.83	The motor (Y toner add) stalled.	
158.84	The motor (Y toner add) ran too slow.	
158.85	The motor (Y toner add) ran too fast.	

Motor (duplex) 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 controller board socket JMTR2 connection. Is the cable 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 (duplex) connection. Is the motor properly connected?	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 motor (duplex) cable for damage. Is the cable free of damage?	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 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (duplex). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. 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 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (transfer belt) 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 transfer belt for damage and life expiration. Is the transfer belt damaged or has it reached end of life?	Go to step 3.	Go to step 4.
Step 3 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Remove the transfer belt, and then manually turn the transfer belt drive gears. **b** Check the movement of the gears. Do the drive gears properly turn?	Go to step 6.	Go to step 5.
Step 5 Replace the transfer belt. See **"Transfer belt removal" on page 431**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board sockets JFIP1 and JFIS1 connections. Are the cables properly connected?	Go to step 8.	Go to step 7.
Step 7 Reseat the cables. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the motor (transfer belt) connection. Is the motor properly connected?	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 (transfer belt) cable for damage. Is the cable free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the fuser/transfer belt motor gearbox. See **"Fuser/transfer belt motor gearbox removal" on page 471**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reset the printer. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (isolation) failure service check
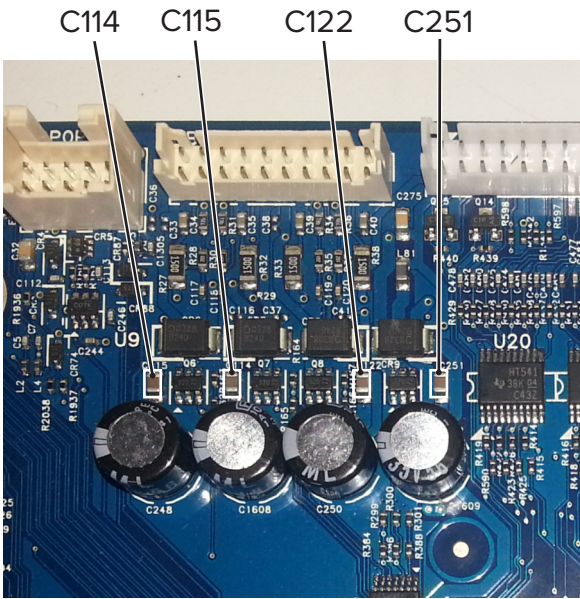
Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the controller board socket JMTR3 connection. Is the cable properly connected?	Go to step 4.	Go to step 3.
Step 3 Reseat the cable. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the motor (isolation) connection. Is the motor properly connected?	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 motor (isolation) cable for damage. Is the cable free of damage?	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 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (isolation). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. 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 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (K toner add) failure service check
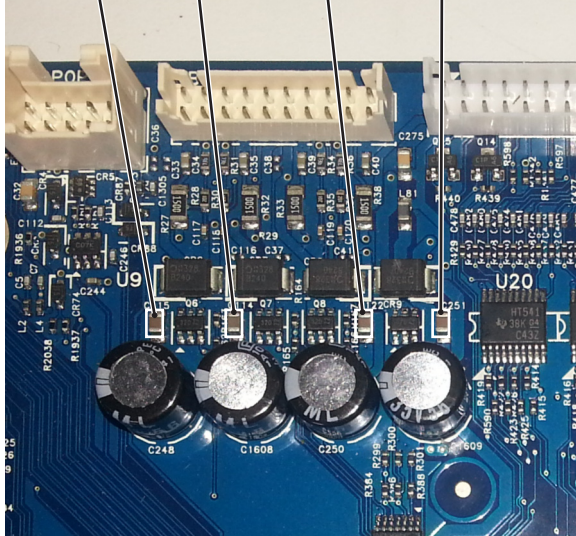
Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Remove the K toner cartridge, and then manually turn the drive gear. **b** Check the movement of the gear. Does the drive gear properly turn?	Go to step 4.	Go to step 3.
Step 3 Replace the toner cartridge. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the motor (K toner add) cable for proper connection. • Check the connector on the motor. • Check the connector JBTLM1 on the controller board. Is the cable properly connected?	Go to step 6.	Go to step 5.

Action	Yes	No
Step 5 Reseat the cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the motor (K toner add) cable for damage. Is the cable free of damage?	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 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (K toner add). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 On the upper part of the controller board, check the K toner add capacitor C251 for damage. **Note:** Blown capacitors may look deformed or bulged. Is the capacitor free of damage?	Contact the next level of support.	Go to step 12.
Step 12 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (C toner add) 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 **a** Remove the C toner cartridge, and then manually turn the drive gear. **b** Check the movement of the gear. Does the drive gear properly turn?	Go to step 4.	Go to step 3.
Step 3 Replace the toner cartridge. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the motor (C toner add) cable for proper connection. • Check the connector on the motor. • Check the connector JBTLM1 on the controller board. Is the cable properly connected?	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.
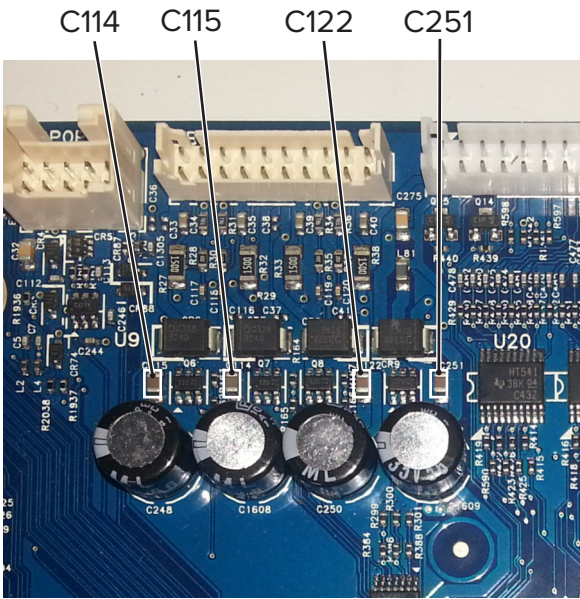
Action	Yes	No
Step 6 Check the motor (C toner add) cable for damage. Is the cable free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (C toner add). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 On the upper part of the controller board, check the C toner add capacitor C114 for damage. **Note:** Blown capacitors may look deformed or bulged. C114 C115 C122 C251 Is the capacitor free of damage?	Contact the next level of support.	Go to step 12.

Action	Yes	No
Step 12 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (M toner add) 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 **a** Remove the M toner cartridge, and then manually turn the drive gear. **b** Check the movement of the gear. Does the drive gear properly turn?	Go to step 4.	Go to step 3.
Step 3 Replace the toner cartridge. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the motor (M toner add) cable for proper connection. • Check the connector on the motor. • Check the connector JBTLM1 on the controller board. Is the cable properly connected?	Go to step 6.	Go to step 5.

Action	Yes	No
Step 5 Reseat the cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the motor (M toner add) cable for damage. Is the cable free of damage?	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 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (M toner add). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 On the upper part of the controller board, check the M toner add capacitor C122 for damage. **Note:** Blown capacitors may look deformed or bulged. C114　　C115　　C122　　C251 Is the capacitor free of damage?	Contact the next level of support.	Go to step 12.
Step 12 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (Y toner add) 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 **a** Remove the Y toner cartridge, and then manually turn the drive gear. **b** Check the movement of the gear. Does the drive gear properly turn?	Go to step 4.	Go to step 3.
Step 3 Replace the toner cartridge. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the motor (Y toner add) cable for proper connection. • Check the connector on the motor. • Check the connector JBTLM1 on the controller board. Is the cable properly connected?	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.

Action	Yes	No
Step 6 Check the motor (Y toner add) cable for damage. Is the cable free of damage?	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 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (Y toner add). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 On the upper part of the controller board, check the Y toner add capacitor C115 for damage. **Note:** Blown capacitors may look deformed or bulged. C114 C115 C122 C251 Is the capacitor free of damage?	Contact the next level of support.	Go to step 12.

Action	Yes	No
Step 12 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

160–161 errors

160–161 error messages

Error code	Description	Action
160.80	The motor (MPF pick) did not turn on.	See **"Motor (MPF pick) failure service check" on page 288**.
160.81	The motor (MPF pick) did not turn off.	
160.82	The motor (MPF pick) speed did not ramp up to the required level.	
160.83	The motor (MPF pick) stalled.	
160.84	The motor (MPF pick) ran too slow.	
160.85	The motor (MPF pick) ran too fast.	
161.80	The motor (tray 1 pick) did not turn on.	See **"Motor (tray 1 pick) failure service check" on page 290**.
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.	

Motor (MPF pick) 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 controller board socket JMTR3 connection. Is the cable properly connected?	Go to step 4.	Go to step 3.

Action	Yes	No
Step 3 Reseat the cable. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the motor (MPF pick) connection. Is the motor properly connected?	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 motor (MPF pick) cable for damage. Is the cable free of damage?	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 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the motor (MPF pick). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 1 pick) 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 controller board socket JTRAY1 connection. Is the cable 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 Remove tray 1, and then check the paper feeder connection. Is the feeder properly connected?	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 motor (tray 1 pick) connection. Is the motor properly connected?	Go to step 8.	Go to step 7.
Step 7 Reseat the cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the motor (tray 1 pick) cable for damage. Is the cable free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Replace the tray 1 paper feeder. See **"Paper feeder removal" on page 444**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

162–165 errors

162–165 error messages

Error code	Description	Action
162.80	The motor (tray 2 pick) did not turn on.	See **"Motor (tray 2 pick) failure service check" on page 292**.
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.	
163.80	The motor (tray 3 pick) did not turn on.	See **"Motor (tray 3 pick) failure service check" on page 293**.
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.	

Error code	Description	Action
164.80	The motor (tray 4 pick) did not turn on.	See **"Motor (tray 4 pick) failure service check" on page 294**.
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.	
165.80	The motor (tray 5 pick) did not turn on.	See **"Motor (tray 5 pick) failure service check" on page 295**.
165.81	The motor (tray 5 pick) did not turn off.	
165.82	The motor (tray 5 pick) speed did not ramp up to the required level.	
165.83	The motor (tray 5 pick) stalled.	
165.84	The motor (tray 5 pick) ran too slow.	
165.85	The motor (tray 5 pick) ran too fast.	

Motor (tray 2 pick) 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 2 pick) 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 2 pick) 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.

Action	Yes	No
Step 6 Reset the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the motor (tray 2 pick). 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. See **"550-sheet tray controller board removal" on page 492** or **"2200-sheet tray controller board removal" on page 503**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 3 pick) 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 3 pick) 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 3 pick) 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.

Action	Yes	No
Step 6 Reset the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the motor (tray 3 pick). 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. See **"550-sheet tray controller board removal" on page 492** or **"2200-sheet tray controller board removal" on page 503**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 4 pick) 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 4 pick) 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 4 pick) 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.

Action	Yes	No
Step 6 Reset the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the motor (tray 4 pick). 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. See **"550-sheet tray controller board removal" on page 492**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 5 pick) 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 5 pick) 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 5 pick) 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.

Action	Yes	No
Step 6 Reset the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the motor (tray 5 pick). 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. See **"550-sheet tray controller board removal" on page 492**. Does the problem remain?	Contact the next level of support.	The problem is solved.

166–169 errors

166 error messages

Error code	Description	Action
166.70	The motor (tray 2 elevator) does not turn on.	See **"Motor (tray [x] elevator) failure service check" on page 300**.
166.71	The motor (tray 2 elevator) does not turn off.	
166.72	The motor (tray 2 elevator) fails to achieve the required speed.	
166.73	The motor (tray 2 elevator) fails during operation.	
166.74	The motor (tray 2 elevator) fails to reach the required speed.	
166.75	The motor (tray 2 elevator) runs faster than the required speed.	

Error code	Description	Action
166.80	The motor (tray 2 pass-through) does not turn on.	See **"Motor (tray [x] pass-through) failure service check" on page 299**.
166.81	The motor (tray 2 pass-through) does not turn off.	
166.82	The motor (tray 2 pass-through) fails to achieve the required speed.	
166.83	The motor (tray 2 pass-through) fails during operation.	
166.84	The motor (tray 2 pass-through) fails to reach the required speed.	
166.85	The motor (tray 2 pass-through) runs faster than the required speed.	

167 error messages

Error code	Description	Action
167.70	The motor (tray 3 elevator) does not turn on.	See **"Motor (tray [x] elevator) failure service check" on page 300**.
167.71	The motor (tray 3 elevator) does not turn off.	
167.72	The motor (tray 3 elevator) fails to achieve the required speed.	
167.73	The motor (tray 3 elevator) fails during operation.	
167.74	The motor (tray 3 elevator) fails to reach the required speed.	
167.75	The motor (tray 3 elevator) runs faster than the required speed.	
167.80	The motor (tray 3 pass-through) does not turn on.	See **"Motor (tray [x] pass-through) failure service check" on page 299**.
167.81	The motor (tray 3 pass-through) does not turn off.	
167.82	The motor (tray 3 pass-through) fails to achieve the required speed.	
167.83	The motor (tray 3 pass-through) fails during operation.	
167.84	The motor (tray 3 pass-through) fails to reach the required speed.	
167.85	The motor (tray 3 pass-through) runs faster than the required speed.	

168 error messages

Error code	Description	Action
168.70	The motor (tray 4 elevator) does not turn on.	See **"Motor (tray [x] elevator) failure service check" on page 300**.
168.71	The motor (tray 4 elevator) does not turn off.	
168.72	The motor (tray 4 elevator) fails to achieve the required speed.	
168.73	The motor (tray 4 elevator) fails during operation.	
168.74	The motor (tray 4 elevator) fails to reach the required speed.	
168.75	The motor (tray 4 elevator) runs faster than the required speed.	
168.80	The motor (tray 4 pass-through) does not turn on.	See **"Motor (tray [x] pass-through) failure service check" on page 299**.
168.81	The motor (tray 4 pass-through) does not turn off.	
168.82	The motor (tray 4 pass-through) fails to achieve the required speed.	
168.83	The motor (tray 4 pass-through) fails during operation.	
168.84	The motor (tray 4 pass-through) fails to reach the required speed.	
168.85	The motor (tray 4 pass-through) runs faster than the required speed.	

169 error messages

Error code	Description	Action
169.70	The motor (tray 5 elevator) does not turn on.	See **"Motor (tray [x] elevator) failure service check" on page 300**.
169.71	The motor (tray 5 elevator) does not turn off.	
169.72	The motor (tray 5 elevator) fails to achieve the required speed.	
169.73	The motor (tray 5 elevator) fails during operation.	
169.74	The motor (tray 5 elevator) fails to reach the required speed.	
169.75	The motor (tray 5 elevator) runs faster than the required speed.	

Error code	Description	Action
169.80	The motor (tray 5 pass-through) does not turn on.	See **"Motor (tray [x] pass-through) failure service check" on page 299**.
169.81	The motor (tray 5 pass-through) does not turn off.	
169.82	The motor (tray 5 pass-through) fails to achieve the required speed.	
169.83	The motor (tray 5 pass-through) fails during operation.	
169.84	The motor (tray 5 pass-through) fails to reach the required speed.	
169.85	The motor (tray 5 pass-through) runs faster than the required speed.	

Motor (tray [x] pass-through) 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 cable connecting the motor (tray [x] pass-through) to the 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 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.

Action	Yes	No
Step 7 Replace the motor (tray [x] pass-through). See **"Motor (550-sheet tray pass-through) removal" on page 497**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray [x] elevator) 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 Clear the motor (tray [x] elevator) gears of any obstructions. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the gears for damage. Are the gears free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the gears. See **"2200-sheet tray elevator gears removal" on page 506**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the cable connecting the motor (tray [x] elevator) to the controller board. Is the motor properly connected?	Go to step 7.	Go to step 6.
Step 6 Reseat the cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the cable for damage. Is the cable free of damage?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Replace the cable. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Reset the printer. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the motor (tray [x] elevator). See **"Motor (2200-sheet tray elevator) removal" on page 507**. Does the problem remain?	Contact the next level of support.	The problem is solved.

17y errors

171–179 error messages

Error code	Description	Action
171.82	The main fan speed did not ramp up to the required level.	See **"Main fan failure service check" on page 302**.
171.83	The main fan stalled.	
171.84	The main fan ran too slow.	
171.85	The main fan ran too fast.	
178.82	The EP fan speed did not ramp up to the required level.	See **"EP fan failure service check" on page 307**.
178.83	The EP fan stalled.	
178.84	The EP fan ran too slow.	
178.85	The EP fan ran too fast.	
179.80	The main HVPS fan did not turn on.	See **"Main HVPS fan failure service check" on page 308**.
179.81	The main HVPS fan did not turn off.	
179.82	The main HVPS fan speed did not ramp up to the required level.	
179.83	The main HVPS fan stalled.	
179.84	The main HVPS fan ran too slow.	
179.85	The main HVPS fan ran too fast.	

Main fan 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 connection between the main fan and controller board. Is the fan 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 main fan 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 fan. See **"Main fan removal" on page 458**. 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. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

LVPS fan 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 connection between the LVPS fan and controller board. Is the fan 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 LVPS fan 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 fan. 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. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Toner cartridge fan 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 connection between the toner cartridge fan and controller board. Is the fan 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 toner cartridge fan 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 fan. 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. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Photoconductor fan 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 connection between the photoconductor fan and controller board. Is the fan 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 photoconductor fan 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 fan. 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. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Controller board fan 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 connection between the controller board fan and controller board. Is the fan 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 controller board fan 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 controller board. See **"Controller board removal" on page 457**. 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. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

EP fan 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 connection between the EP fan and controller board. Is the fan 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 EP fan 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 EP fan. 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. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Main HVPS fan 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 connection between the main HVPS fan and controller board. Is the fan 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 main HVPS fan 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 main HVPS fan. See **"Main HVPS fan removal" on page 437**. 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. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

600 errors

600 error messages

Error code	Description	Action
600.00	The image was not ready during a print job from the MPF.	See **"Unready image service check" on page 309**.
600.01	The image was not ready during a print job from tray 1.	
600.02	The image was not ready during a print job from tray 2.	
600.03	The image was not ready during a print job from tray 3.	
600.04	The image was not ready during a print job from tray 4.	
600.05	The image was not ready during a print job from tray 5.	
600.10	The image was not ready during a duplex print job.	

Unready image service check

Action	Yes	No
Step 1 Make sure that the Page description language (PDL) of the print job is supported. Install the supporting option card if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **PRINT TESTS** > **Tray 1** Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a Make sure that the printhead and board cables are properly connected. b Check the cables 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 457**. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 **a** Make sure that the printhead is properly installed. **b** Check the printhead for damage, and replace if necessary. See **"Printhead removal" on page 416**. Does the problem remain?	Contact the next level of support.	The problem is solved.

6yy errors

655–658 error messages

Error code	Description	Action
655.84	The motor (K toner add) stalled.	See **"Motor (toner add) stalled service check" on page 311**.
656.84	The motor (C toner add) stalled.	
657.84	The motor (M toner add) stalled.	
658.84	The motor (Y toner add) stalled.	

660–669 error messages

Error code	Description	Action
660.83	The motor (MPF pick) stalled.	See **"Motor (MPF pick) stalled service check" on page 312**.
661.83	The motor (tray 1 pick) stalled.	See **"Motor (tray 1 pick) stalled service check" on page 313**.
662.23	The tray 2 lift plate failed to lift.	See **"Motor (option tray pick) lifting error service check" on page 321**.
662.83	The motor (tray 2 pick) stalled.	See **"Motor (tray 2 pick) stalled service check" on page 314**.
663.33	The tray 3 lift plate failed to lift.	See **"Motor (option tray pick) lifting error service check" on page 321**.
663.83	The motor (tray 3 pick) stalled.	See **"Motor (tray 3 pick) stalled service check" on page 316**.
664.43	The tray 4 lift plate failed to lift.	See **"Motor (option tray pick) lifting error service check" on page 321**.
664.83	The motor (tray 4 pick) stalled.	See **"Motor (tray 4 pick) stalled service check" on page 317**.
665.53	The tray 5 lift plate failed to lift.	See **"Motor (option tray pick) lifting error service check" on page 321**.
665.83	The motor (tray 5 pick) stalled.	See **"Motor (tray 5 pick) stalled service check" on page 318**.

Error code	Description	Action
666.83	The motor (tray 2 pass-through) stalled.	See **"Motor (tray [x] pass-through) failure service check" on page 299**.
667.83	The motor (tray 3 pass-through) stalled.	See **"Motor (tray [x] pass-through) failure service check" on page 299**.
668.83	The motor (tray 4 pass-through) stalled.	See **"Motor (tray [x] pass-through) failure service check" on page 299**.
669.83	The motor (tray 5 pass-through) stalled.	See **"Motor (tray [x] pass-through) failure service check" on page 299**.

Motor (toner add) stalled service check

Action	Yes	No
Step 1 **a** Remove the affected toner cartridge, and then shake it. **b** Reinstall the toner cartridge. **c** Enter the Diagnostics menu, and then navigate to: **Advanced Print Quality Samples** > **Advanced Print Quality Samples** Check the test page. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the shutter under the affected toner cartridge for proper operation. Does the shutter properly open and retract?	Go to step 3.	Go to step 8.
Step 3 Check the shutter for damage. Is the shutter free of damage?	Go to step 4.	Go to step 8.
Step 4 **a** Remove the affected developer and PC unit combo. **b** Check the shutter at the rear of the developer and PC unit combo for proper operation. Does the shutter properly open and retract?	Go to step 5.	Go to step 6.
Step 5 Check the shutter for damage. Is the shutter free of damage?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 Replace the developer and PC unit combo. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Using a toner vacuum, clean the toner add tubes. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the affected toner cartridge. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the affected toner add tube. See **"Toner add tube removal" on page 479**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (MPF pick) stalled service check

Action	Yes	No
Step 1 Check the pick roller for proper installation. Is the pick roller properly installed?	Go to step 3.	Go to step 2.
Step 2 Reinstall the pick roller. 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** > **Motor tests** > **MPF pick** b Touch **Start**. Does the motor run?	Go to step 6.	Go to step 4.
Step 4 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Replace the motor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the motor for noise. Does the motor sound abnormal or do the gears make a grinding sound?	Go to step 7.	Go to step 8.
Step 7 Replace the MPF/reference edge gearbox. See **"Reference edge motor gearbox removal" on page 405**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print job. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 1 pick) stalled service check

Action	Yes	No
Step 1 Check the pick roller for proper installation. Is the pick roller properly installed?	Go to step 3.	Go to step 2.
Step 2 Reinstall the pick roller. 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** > **Motor tests** > **Pick (tray 1)** b Touch **Start**. Does the motor run?	Go to step 6.	Go to step 4.

Action	Yes	No
Step 4 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the motor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the motor (tray 1 pick) for noise. Does the motor sound abnormal or do the gears make a grinding sound?	Go to step 7.	Go to step 8.
Step 7 Replace the tray 1 paper feeder. See **"Paper feeder removal" on page 444**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print job. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See **"Controller board removal" on page 457**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 2 pick) stalled service check

Action	Yes	No
Step 1 Check the pick roller for proper installation. Is the pick roller properly installed?	Go to step 3.	Go to step 2.
Step 2 Reinstall the pick roller. 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** > **Motor tests** > **Pick (tray 2)** **b** Touch **Start**. Does the motor run?	Go to step 6.	Go to step 4.
Step 4 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the motor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the motor (tray 2 pick) for noise. Does the motor sound abnormal or do the gears make a grinding sound?	Go to step 7.	Go to step 8.
Step 7 Replace the tray 2 paper feeder. See **"550-sheet tray paper feeder removal" on page 487** or **"2200-sheet tray paper feeder removal" on page 509**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print job. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See **"550-sheet tray controller board removal" on page 492** or **"2200-sheet tray controller board removal" on page 503**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 3 pick) stalled service check

Action	Yes	No
Step 1 Check the pick roller for proper installation. Is the pick roller properly installed?	Go to step 3.	Go to step 2.
Step 2 Reinstall the pick roller. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pick (tray 3)** **b** Touch **Start**. Does the motor run?	Go to step 6.	Go to step 4.
Step 4 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the motor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the motor (tray 3 pick) for noise. Does the motor sound abnormal or do the gears make a grinding sound?	Go to step 7.	Go to step 8.
Step 7 Replace the tray 3 paper feeder. See **"550-sheet tray paper feeder removal" on page 487** or **"2200-sheet tray paper feeder removal" on page 509**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print job. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Replace the controller board. See **"550-sheet tray controller board removal" on page 492** or **"2200-sheet tray controller board removal" on page 503**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 4 pick) stalled service check

Action	Yes	No
Step 1 Check the pick roller for proper installation. Is the pick roller properly installed?	Go to step 3.	Go to step 2.
Step 2 Reinstall the pick roller. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Pick (tray 4)** **b** Touch **Start**. Does the motor run?	Go to step 6.	Go to step 4.
Step 4 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the motor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the motor (tray 4 pick) for noise. Does the motor sound abnormal or do the gears make a grinding sound?	Go to step 7.	Go to step 8.
Step 7 Replace the tray 4 feeder. See **"550-sheet tray paper feeder removal" on page 487**. 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?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See **"550-sheet tray controller board removal" on page 492**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (tray 5 pick) stalled service check

Action	Yes	No
Step 1 Check the pick roller for proper installation. Is the pick roller properly installed?	Go to step 3.	Go to step 2.
Step 2 Reinstall the pick roller. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a Enter the Diagnostics menu, and then navigate to: 　　**Additional input tray diagnostics** > **Motor tests** > **Pick (tray 5)** b Touch **Start**. Does the motor run?	Go to step 6.	Go to step 4.
Step 4 Check the motor cable for proper connection, and then reseat if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the motor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the motor (tray 5 pick) for noise. Does the motor sound abnormal or do the gears make a grinding sound?	Go to step 7.	Go to step 8.

Action	Yes	No
Step 7 Replace the tray 5 feeder. See **"550-sheet tray paper feeder removal" on page 487**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print job. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the controller board. See **"550-sheet tray controller board removal" on page 492**. Does the problem remain?	Contact the next level of support.	The problem is solved.

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 Check if 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.

Action	Yes	No
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 pick roller index) removal" on page 495**. 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.
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 **"550-sheet tray paper feeder removal" on page 487**. 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 (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 Check if 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: **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 pick roller index) removal" on page 495** or **"Sensor (2200-sheet tray pick roller index) removal" on page 510**. 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.

Action	Yes	No
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.
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 **"550-sheet tray paper feeder removal" on page 487** or **"2200-sheet tray paper feeder removal" on page 509**. 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 reseat 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 497**. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
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.
Step 6 Replace the controller board. See **"550-sheet tray controller board removal" on page 492** or **"2200-sheet tray controller board removal" on page 503**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Procedure before starting the 9yy service checks

You will need to retrieve certain information. This information will aid your next level of support in diagnosing the problem before replacing the controller board.

Warning—Potential Damage: Do not replace the controller board unless directed 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 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.

- Fwedebugs can also be referred to as LBtrace. If FWEdebugs does not appear in the list, then look for LBtrace. Multiple LBtrace logs can appear in the list of links referred to in step 2.

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

2 Click **List Fwedebugs captured during reboots**.

   Note: A list of the secondary crash codes retrieved from previous reboots will be generated. If there are Fwedebugs listed, then click **Dump Fwedebug log0**, **Dump Fwedebug log1**, and **Dump Fwedebug log2**. Clicking these links will dump the debug logs to the computer. Take note of the destination folder where the logs are saved.

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

   Note: Some printer SE menus give you the option of clicking **Logs Gzip Compressed**. If this option is shown in the menu, then click it and retrieve the compressed log file. Take note of the destination folder where the log file is saved.

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

Diagnostic information

900 errors

900 error messages

Error code	Description	Action
900.xx	RIP firmware errors	See **"System software error service check" on page 325**.

System software error service check

There are different types of 900.xx errors that can occur. There may be a communication problem (bad cable, network connection, and so on) software issue, or a hardware problem with the controller board, or ISP (internal solutions port). The communication and software aspects should be checked first. Determine if the problem is constant or intermittent. Use the following troubleshooting procedure to isolate the issue. Take notes as instructed. You will need that information in the event that you need to contact your next level of support.

Before troubleshooting:

1 Perform the **"Procedure before starting the 9yy service checks" on page 323**.

2 Determine the operating system used when the error occurred. If possible, determine whether a PostScript or PCL file was sent to the printer when the error occurred. Ask the customer which Lexmark Solutions applications are installed on the printer.

Action	Yes	No
Step 1 Reset the printer. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 a Write down the exact 900.xx error code that appears on the display. b Turn off the printer. c Clear the print queues. d Disconnect all communication cables, and then remove all memory options. e Remove any installed ISP. f Reset the printer into the Diagnostics menu. Does the problem remain?	Go to step 3.	Go to step 6.
Step 3 Check all the cables on the controller board for proper connection. Are the cables properly connected?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 **a** Reconnect the cables. **b** Reset the printer into the Diagnostics menu. Does the problem remain?	Go to step 5.	Go to step 6.
Step 5 **a** Replace the controller board. See **"Controller board removal" on page 457**. **b** Reset the printer. **Note:** If a different error code displays, then go to the service check for that error code. Does the problem remain?	Go to step 31.	The problem is solved.
Step 6 Print the following: • Error log • Menu settings page • Network settings page Does the problem remain while printing these pages?	Go to step 31.	Go to step 7.
Step 7 **Note:** Before performing this step, write down the following information about the file being sent to the printer: • Application used • Operating system • Driver type • File type (PCL, PostScript, XPS, etc.) **a** Reattach the communications cable. **b** Reset the printer. **c** Perform a print job. Does the problem remain?	Go to step 8.	Go to step 10.
Step 8 **a** Reset the printer. **b** Perform a different print job. Does the problem remain?	Go to step 9.	Go to step 10.

Action	Yes	No
Step 9 **a** Upgrade the firmware. **Note:** Contact your next level of support for the correct firmware level to use. **b** Reset the printer. **c** Perform a print job. Does the problem remain?	Go to step 31.	Go to step 10.
Step 10 Verify if the printer is an MFP? Is the printer an MFP?	Go to step 11.	Go to step 13.
Step 11 Perform a copy job. Does the problem remain?	Go to step 31.	Go to step 12.
Step 12 Perform a scan to PC job. Does the problem remain?	Go to step 31.	Go to step 13.
Step 13 Verify if an optional memory is installed. Is there an optional memory installed?	Go to step 14.	Go to step 16.
Step 14 **a** Reinstall the memory. **b** Perform a print job. Does the problem remain?	Go to step 15.	Go to step 16.
Step 15 **a** Install a Lexmark-recommended memory option. **b** Perform a print job. Does the problem remain?	Go to step 31.	The problem is solved.
Step 16 Verify if a modem is installed. Is a modem installed?	Go to step 17.	Go to step 21.

Action	Yes	No
Step 17 **a** Reinstall the modem. **b** Reset the printer. Does the problem remain?	Go to step 18.	Go to step 20.
Step 18 **a** Upgrade the firmware if it was not upgraded in a previous step. **Note:** Contact your next level of support for the correct firmware level to use. **b** Reset the printer. **c** Perform a print job. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **a** Replace the modem. **b** Reset the printer. Does the problem remain?	Go to step 31.	The problem is solved.
Step 20 Perform a fax job. Does the problem remain?	Go to step 31.	Go to step 21.
Step 21 Verify if an ISP option is installed. Is an ISP option installed?	Go to step 22.	The problem is solved.
Step 22 **a** Reinstall the first ISP option. **b** Reset the printer. Does the problem remain?	Go to step 24.	Go to step 23.
Step 23 Perform a job to test the option. Does the problem remain?	Go to step 24.	Go to step 26.

Action	Yes	No
Step 24 **a** Upgrade the firmware if it was not upgraded in a previous step. **Note:** Contact your next level of support for the correct firmware level to use. **b** Reset the printer. **c** Perform a print job. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 **a** Replace the faulty ISP option. **b** Reset the printer. Does the problem remain?	Go to step 31.	Go to step 26.
Step 26 Verify if there are more ISP options to install? Are there more ISP options to install?	Go to step 27.	The problem is solved.
Step 27 **a** Install the next ISP option. **b** Reset the printer. Does the problem remain?	Go to step 29.	Go to step 28.
Step 28 Perform a job to test the option. Does the problem remain?	Go to step 29.	Go to step 26.
Step 29 **a** Upgrade the firmware if it was not upgraded in a previous step. **Note:** Contact your next level of support for the correct firmware level to use. **b** Reset the printer. **c** Send a print job. Does the problem remain?	Go to step 30.	Go to step 26.
Step 30 **a** Replace the faulty ISP option. **b** Reset the printer. Does the problem remain?	Go to step 31.	Go to step 26.

Action	Yes	No
Step 31 Contact your next level of support. You will need the following information: • Exact 900.xx error digits and complete error message • Printed menu settings page • Printed network settings page • Device error log • A sample print file if the error appears to be isolated to a single file • File/Application used if the error is related to specific print file • Device operating system • Driver used (PCL/PS) • Frequency of the occurrence of the error		

98y errors

980–984 error messages

Error code	Description	Action
980.xx	Engine experiencing unreliable communication with the specified device. **Note:** *<device>* can be one of the following: • Optional 550-sheet tray • Optional 2200-sheet tray • Optional staple finisher	See **"Options communication error service check" on page 331**.
981.xx	Engine protocol violation detected by the specified device. **Note:** *<device>* can be one of the following: • Optional 550-sheet tray • Optional 2200-sheet tray • Optional staple finisher	
982.xx	Communications error detected by the specified device. **Note:** *<device>* can be one of the following: • Optional 550-sheet tray • Optional 2200-sheet tray • Optional staple finisher	

Error code	Description	Action
983.xx	Invalid command received by the specified device. **Note:** *<device>* can be one of the following: • Optional 550-sheet tray • Optional 2200-sheet tray • Optional staple finisher	See **"Options communication error service check" on page 331**.
984.xx	Invalid command parameter received by the specified device. **Note:** *<device>* can be one of the following: • Optional 550-sheet tray • Optional 2200-sheet tray • Optional staple finisher	

Options communication error service check

Action	Yes	No
Step 1 Disconnect the output option. Does the problem remain?	Go to step 2.	Go to step 9.
Step 2 a Check if the firmware is updated, and then update if necessary. b Make sure that the printer supports the input option. c Make sure that the input option is properly attached to the printer or adjacent option. d Reset the printer. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Reseat the printer interface cable on the printer controller board. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Do the following to each input option: a Reinstall the input option. b Print a test page, and then check if the input option is defective. Is there an input option that is not properly working?	Go to step 5.	If the error persists, then contact the next level of support.
Step 5 Reseat the interface cable of the affected input option. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Check the input option interface cable for damage. Is the cable free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the input option interface cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the input option controller board. Does the problem remain?	Contact the next level of support	The problem is solved.
Step 9 Check the output option locking mechanism for damage. Is the lock free of damage?	Go to step 11.	Go to step 10.
Step 10 Replace the lock. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Reinstall the output option. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the output option interface cable: • Check the connectors and its pins for damage. • Check the cable for cuts and exposed wires. Is the cable free of damage?	Go to step 14.	Go to step 13.
Step 13 Replace the output option interface cable. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reseat all connectors on the output option controller board. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the output option controller board. Does the problem remain?	Contact the next level of support	The problem is solved.

Output option hardware errors

302 and 323 errors

320 and 323 error messages

Error code	Description	Action
320.00	The motor (staple finisher transport) does not turn on.	See **"Staple finisher compiler section jam service check" on page 204**.
323.80	The motor (staple finisher upper exit roller) does not turn on.	See **"Staple finisher exit jam service check" on page 333**.

Staple finisher exit jam service check

Action	Yes	No
Step 1 a Clear the paper path of any jams or obstructions. b Reset the printer, and then reseat the staple finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Transport and exit section** b Find the sensor (Upper exit roller). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 Check the sensor (staple finisher upper exit roller) for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the sensor. See **"Sensor (staple finisher upper exit roller) removal" on page 552**. Does the motor run?	Go to step 5.	The problem is solved.
Step 5 a Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** b Find the motor (Upper exit roller), and then touch **Start**. Does the motor run?	Go to step 8.	Go to step 6.

Action	Yes	No
Step 6 Check the motor (staple finisher upper exit) for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the motor. See **"Motor (staple finisher upper exit roller) removal" on page 534**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the cables for cuts or damages, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Check the front upper exit roller position gears, actuator, and lever for damage. **b** Check the gears for proper installation and alignment. **c** Check the spring for proper installation. **d** Move the gears, and then check if the roller moves up and down. **e** Check if the actuator can cover the sensor. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the staple finisher front upper exit roller position gears. See **"Staple finisher front upper position exit roller gears removal" on page 553**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the rear upper exit roller position gears, actuator, and lever for damage. **b** Check the gears for proper installation and alignment. **c** Check the spring for proper installation. **d** Move the gears, and then check if the roller moves up and down. **e** Check if the actuator can cover the sensor. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Replace the staple finisher rear upper exit roller position gears. See **"Staple finisher rear upper position exit roller gears removal" on page 535**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the staple finisher upper exit roller for proper installation. **b** Check the roller for wear or damage, and replace if necessary. See **"Staple finisher upper exit roller removal" on page 578**. **c** Check if the roller can move up and down. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reseat all cable connectors in the controller board, and then reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Service option software error service check

Action	Yes	No
Step 1 **a** Clear the paper path of any jams or obstructions. **b** Make sure that the jam access door is properly closed. **c** Reset the printer, and then reseat the finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Transport), and then touch **Start**. Does the motor run?	Go to step 5.	Go to step 3.
Step 3 Check the motor for proper installation and damage. Is the motor properly installed or free of damage?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Reinstall or replace the motor. See **"Motor (staple finisher transport) removal" on page 596**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests** **b** Find the motor (Exit), and then touch **Start**. Does the motor run?	Go to step 8.	Go to step 6.
Step 6 Check the motor for proper installation and damage. Is the motor properly installed or free of damage	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the motor. See **"Motor (staple finisher exit) removal" on page 596**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher transport gears for proper installation and damage. Make sure to manually turn the roller to check if the gears are properly working. Are the gears properly installed or free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the gears. See **"Staple finisher transport gears removal" on page 548**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the aligner paddle gears for proper alignment and installation. Are the gears properly aligned or installed?	Go to step 12.	Go to step 11.
Step 11 Realign or reinstall the gears. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Check the gears and the flag for damage. Are the gears and the flag free of damage?	Go to step 14.	Go to step 13.
Step 13 Replace the gears. See **"Staple finisher aligner paddle gears removal" on page 550**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the exit roller belts for proper installation and damage. Are the belts properly installed or free of damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the belts. See **"Staple finisher exit roller belts removal" on page 557**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the exit gears for proper alignment and installation. Are the gears properly aligned or installed?	Go to step 18.	Go to step 17.
Step 17 Realign or reinstall the exit gears. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the exit gears for damage. Are the gears free of damage?	Go to step 20.	Go to step 19.
Step 19 Replace the gears. See **"Staple finisher exit gears removal" on page 555**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Check the cables for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 21.	The problem is solved.

Action	Yes	No
Step 21 Reseat all cable connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Symptoms

Printer symptoms

Auto alignment service check

Pre-check procedure

1 Enter the Diagnostics menu, and then navigate to:

Printer setup > **EP setup** > **Toner patch sensor adjust** > **Clean sensing and laser optics**

Let the operation run for three minutes.

2 Perform color alignment adjustment. See **"Color alignment adjustment" on page 386**.

3 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Color alignment adjust**

On the AA Adjustment row, touch **Start**.

Note: This triggers the Auto Align routine which performs correction of color alignment errors (0.42 mm—Normal, 0.84 mm—Coarse, and 3 mm—Factory ranges).

The following lists the different Auto Align routine results:
- AA Result 1—Failed to complete
- AA Result 2—Normal Data Deficient
- AA Result 3—All OK. Normal data within limits
- AA Result 4—Normal exceeds sense limits
- AA Result 5—Normal exceeds margin limits
- AA Result 6—All OK. Normal corrections applied
- AA Result 7—Coarse data within limits
- AA Result 8—Coarse data deficient
- AA Result 9—Coarse failed to converse
- AA Result 10—Coarse exceeds sense limits
- AA Result 11—Coarse exceeds margin limits

- AA Result 12—Coarse corrections applied
- AA Result 13—Normal exceeds skew limits
- AA Result 14—Coarse exceeds skew limits
- AA Result 15—Coarse new ITU speed
- AA Result 16—AA characterization successfully completed
- AA Result 17—AA characterization deficient, using defaults
- AA Result 18—AA Manufacturing mode successfully completed
- AA Result 19—AA Manufacturing mode deficient, not updating the results

4 Enter the Diagnostics menu, and then navigate to:

Printer setup > **EP setup** > **Toner patch sensor adjust** > **Full calibration**

Let the calibration run for one minute.

Note: This will also trigger the Auto Align routine (0.42 mm—Normal range only).

Action	Yes	No
Step 1 **a** From the home screen, touch **Settings** > **Reports** > **Print quality pages**. **b** On the Device information section of the Print quality test page, check the Color Alignment Stat value. **Note:** If the value is 1, then the sensors (auto alignment) are working. Is the value equal to 0?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **a** Perform the blank page check. See **"Blank or white pages, or one color missing check" on page 43**. **b** Enter the Diagnostics menu, and then navigate to: **Printer setup** > **EP setup** > **Toner patch sensor adjust** On the Sensor gain characterization row, touch **Start**. Wait for the operation to finish. **c** On the Sensor gain verification row, touch **Start**. **d** Check the graph generated on the printed page. The following sample graph shows good values. **Note:** Normal range of values for the sensor voltage is 1.5–2 volts. Does the graph show good values?	The problem is solved.	Go to step 3.
Step 3 Check the TPS sensor wiper for proper movement. **a** Remove the transfer belt. See **"Transfer belt removal" on page 431**. **b** Close door B and door A. **c** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Printhead wiper** **d** Open door A, and then touch **Start**. Does the sensor wiper properly move?	Go to step 7.	Go to step 4.
Step 4 Check the TPS wiper actuator for alignment and proper connection. Is the wiper actuator properly aligned and connected with the TPS sensor wiper and K printhead wiper rail?	Go to step 5.	Reinstall, repair, or replace the wiper actuator, and then perform again the Auto alignment service check.

Action	Yes	No
Step 5 Check the K printhead wiper for proper movement. **a** Remove the transfer belt. See **"Transfer belt removal" on page 431**. **b** Close door B and door A. **c** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Printhead wiper** **d** Open door A, and then touch **Start**. Does the printhead wiper properly move?	Go to step 7.	Go to step 6.
Step 6 Check the motor (printhead wiper) cable and socket JPWR1 on the controller board for proper connection. Is the motor cable properly connected?	Replace the motor. See **"Motor (printhead wiper) removal" on page 419**. Perform again the Auto alignment service check.	Reseat the cable, and then perform again the Auto alignment service check.
Step 7 Check the sensor (auto alignment) cables and socket JTPS2 on the controller board for proper connection. Are the sensor cables properly connected?	Go to step 8.	Reseat the cable, and then perform again the Auto alignment service check.

Action	Yes	No
Step 8 **a** Replace the two sensors. See **"Sensor (auto alignment) removal" on page 446**. **b** Enter the Diagnostics menu, and then navigate to: **Printer setup** > **EP setup** > **Toner patch sensor adjust** On the Sensor gain characterization row, touch **Start**. Wait for the operation to finish. **c** On the Sensor gain verification row, touch **Start**. **d** Check the graph generated on the printed page. The following sample graph shows good values. **Note:** Normal range of values for the sensor voltage is 1.5–2 volts. Does the graph show good values?	The problem is solved.	Contact the next level of support.

Toner patch sensing service check

Pre-check procedure

1 Enter the Diagnostics menu, and then navigate to:

Printer setup > **EP setup** > **Toner patch sensor adjust** > **Clean sensing and laser optics**

Let the operation run for three minutes.

2 Perform color alignment adjustment. See **"Color alignment adjustment" on page 386**.

3 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Color alignment adjust**

On the AA Adjustment row, touch **Start**.

Note: This triggers the Auto Align routine which performs correction of color alignment errors (0.42 mm—Normal, 0.84 mm—Coarse, and 3 mm—Factory ranges).

The following lists the different Auto Align routine results:

- AA Result 1—Failed to complete
- AA Result 2—Normal Data Deficient

- AA Result 3—All OK. Normal data within limits
- AA Result 4—Normal exceeds sense limits
- AA Result 5—Normal exceeds margin limits
- AA Result 6—All OK. Normal corrections applied
- AA Result 7—Coarse data within limits
- AA Result 8—Coarse data deficient
- AA Result 9—Coarse failed to converse
- AA Result 10—Coarse exceeds sense limits
- AA Result 11—Coarse exceeds margin limits
- AA Result 12—Coarse corrections applied
- AA Result 13—Normal exceeds skew limits
- AA Result 14—Coarse exceeds skew limits
- AA Result 15—Coarse new ITU speed
- AA Result 16—AA characterization successfully completed
- AA Result 17—AA characterization deficient, using defaults
- AA Result 18—AA Manufacturing mode successfully completed
- AA Result 19—AA Manufacturing mode deficient, not updating the results

4 Enter the Diagnostics menu, and then navigate to:

Printer setup > **EP setup** > **Toner patch sensor adjust** > **Full calibration**

Let the calibration run for one minute.

Note: This will also trigger the Auto Align routine (0.42 mm—Normal range only).

Action	Yes	No
Step 1 **a** From the home screen, touch **Settings** > **Reports** > **Print quality pages**. **b** On the Device information section of the Print quality test page, check the following CalSet values. • 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 Is there a Calset value equal to 0?	Go to step 2.	The problem is solved.

Diagnostic information

Action	Yes	No
Step 2 Perform the blank page check. See **"Blank or white pages, or one color missing check" on page 43**. During the check, was there an issue found and then resolved?	Perform again the Toner patch sensing service check.	Go to step 3.
Step 3 a Enter the Diagnostics menu, and then navigate to: **Printer setup** > **EP setup** > **Toner patch sensor adjust** > **Full calibration** On the Sensor gain characterization row, touch **Start**. Wait for the operation to finish. b On the Sensor gain verification row, touch **Start**. c On the top portion of the printed verification page, check the Patch Average from TPS values. Are the Avg Signal (Volts) values within range of the Requirement values?	The problem is solved.	Go to step 4.
Step 4 Check the TPS sensor wiper for proper movement. a Remove the transfer belt. See **"Transfer belt removal" on page 431**. b Close door B and door A. c Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Printhead wiper** d Open door A, and then touch **Start**. Does the sensor wiper properly move?	Go to step 8.	Go to step 5.
Step 5 Check the TPS wiper actuator for alignment and proper connection. Is the wiper actuator properly aligned and connected with the TPS sensor wiper and K printhead wiper rail?	Go to step 6.	Reinstall, repair, or replace the wiper actuator, and then perform again the Toner patch sensing service check.

Action	Yes	No
Step 6 Check the K printhead wiper for proper movement. **a** Remove the transfer belt. See **"Transfer belt removal" on page 431**. **b** Close door B and door A. **c** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Printhead wiper** **d** Open door A, and then touch **Start**. Does the printhead wiper properly move?	Go to step 8.	Go to step 7.
Step 7 Check the motor (printhead wiper) cable and socket JPWR1 on the controller board for proper connection. Is the motor cable properly connected?	Replace the motor. See **"Motor (printhead wiper) removal" on page 419**. Perform again the Toner patch sensing service check.	Reseat the cable, and then perform again the Toner patch sensing service check.
Step 8 Check the sensor (TPS) cable and socket JTPS1 on the controller board for proper connection. Is the sensor cable properly connected?	Go to step 9.	Reseat the cable, and then perform again the Toner patch sensing service check.
Step 9 **a** Replace sensor (TPS). See **"Sensor (TPS) removal" on page 446**. **b** Enter the Diagnostics menu, and then navigate to: **Printer setup** > **EP setup** > **Toner patch sensor adjust** > **Full calibration** On the Sensor gain characterization row, touch **Start**. Wait for the operation to finish. **c** On the Sensor gain verification row, touch **Start**. **d** On the top portion of the printed verification page, check the Patch Average from TPS values. Are the Avg Signal (Volts) values within range of the Requirement values?	The problem is solved.	Contact the next level of support.

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.

Input option symptoms

Input option symptoms

Symptom	Action
The input option is not detected or recognized.	See **"Input option is not detected or recognized service check" on page 348**.
"Missing tray" error message persistently prompts even if tray is inserted.	See **"Persistent 'tray (x) missing' prompt even if tray is inserted service check" on page 349**.
"Tray empty" error message persistently prompts even if tray is loaded.	See **"Persistent 'tray (x) empty' prompt even if paper is present service check" on page 350**.

Input option is not detected or recognized service check

Action	Yes	No
Step 1 **a** Make sure that the printer supports the input option. See the *Printer, Option, and Stand Compatibility Guide*. **b** Check if the option is properly attached to the printer or adjacent option. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the option interface cable is properly connected to the option controller board. Is the cable properly connected?	Go to step 4.	Go to step 3.
Step 3 Reseat the connection. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the interface cable for damage. Is the cable free of damage?	Go to step 6.	Go to step 5.
Step 5 Replace the cable. See **"550-sheet tray interface cable removal" on page 492** or **"2200-sheet tray interface cable removal" on page 504**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Persistent "tray (x) missing" prompt even if tray is inserted service check

Action	Yes	No
Step 1 Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove, and then reinstall the tray insert. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **For the 550-sheet tray** **a** Check the tray rails for obstructions and damage, and replace if necessary. See **"550-sheet tray right rail removal" on page 486** and **"550-sheet tray left rail removal" on page 496**. **b** Reinstall the tray insert. **For the 2200-sheet tray** **a** Check the tray rails for obstructions and damage, and replace if necessary. See **"2200-sheet tray rail removal" on page 500**. **b** Check the bellcrank assembly for proper installation or damage, and replace if necessary. See **"Bell crank removal" on page 500**. **c** Reinstall the tray insert. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the media size sensor actuators for damage, and replace if necessary. See **"550-sheet tray media size sensor actuators removal" on page 484**. 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 trays diagnostics** > **Sensor tests** **b** Find the sensor (Media size (tray [x]) switch [x]). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 **a** Check if the media size sensor cable is properly connected to the option controller board. **b** Reseat the connection if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the media size sensor for damage, and replace if necessary. See **"Sensor (550-sheet tray media size) removal" on page 485** or **"Sensor (2200-sheet tray media size) removal" on page 502**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Persistent "tray (x) empty" prompt even if paper is present 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: **Additional input trays diagnostics** > **Sensor tests** **b** Find the sensor (Media out (tray [x])). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 3.
Step 3 **a** Check if the paper feeder cable is properly connected to the option controller board. **b** Reseat the connection if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the media out sensor actuator for damage, and replace if necessary. See **"Sensor (550-sheet tray media out) removal" on page 487** or **"2200-sheet tray media out sensor actuator removal" on page 512**. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the sensor (media out) for damage, and replace if necessary. See **"Sensor (550-sheet tray media out) removal" on page 487** or **"Sensor (2200-sheet tray media out) removal" on page 509**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher symptoms

Staple finisher symptoms

Symptom	Action
A message to close the staple finisher top door prompts even after the door is closed.	See **"Close staple finisher top door service check" on page 351**.
A message to close the staple cartridge door prompts even after the door is closed.	See **"Close staple finisher staple cartridge door service check" on page 352**.
A bin full message prompts even after the bin is cleared or empty.	See **"Staple finisher bin full service check" on page 353**.
`Staples Low [83]` prompts.	See **"Staples Low [83] service check" on page 356**.
Staple finisher is not detected or recognized.	See **"Staple finisher is not detected service check" on page 357**.

Close staple finisher top door service check

Action	Yes	No
Step 1 **a** Clear the jam access door of any obstruction, and then close it. **b** Reset the printer, and then reseat the staple finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the staple finisher jam access door for proper installation and damage, and replace if necessary. See **"Staple finisher jam access door removal" on page 527**. **Note:** Make sure that the jam door closes correctly. 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: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Door test** **b** Find the switch (Jam door switch). Does the switch status change while toggling the switch?	Go to step 6.	Go to step 4.
Step 4 **a** Check the staple finisher jam door switch for proper installation. **b** Reseat the jam door switch cable on both ends. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the staple finisher jam door switch for damage, and replace if necessary. See **"Staple finisher jam door switches removal" on page 542**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the cables for cuts or any damages, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Reseat all connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Close staple finisher staple cartridge door service check

Action	Yes	No
Step 1 **a** Check if the staple cartridge door is properly closed. **b** Reset the printer, and then reseat the staple finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the staple finisher staple cartridge door for proper installation and damage, and replace if necessary. See **"Staple finisher staple cartridge door removal" on page 526**. **Note:** Make sure that the door closes correctly. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the staple finisher rear cover for proper installation and damage, and replace if necessary. See **"Staple finisher rear cover removal" on page 523**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Door test** **b** Find the switch (Staple door). Does the switch status change while toggling the switch?	Go to step 6.	Go to step 5.
Step 5 **a** Check the staple finisher staple cartridge door switch for proper installation and damage, and replace if necessary. See **"Staple finisher staple cartridge door switch removal" on page 529**. **b** Reseat the switch cable.	Go to step 6.	The problem is solved.
Step 6 Check the cables for cuts or damages, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Reseat all connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher bin full service check

Action	Yes	No
Step 1 **a** Clear the staple finisher bin. **b** Clear the paper path of any obstruction. **c** Reset the printer, and then reseat the staple finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Clear the finisher bin. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the sensor (staple finisher front upper bin full) for proper operation. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Transport and exit section** **b** Find the sensor (Staple finisher bin full). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 4.
Step 4 **a** Check the sensor (staple finisher front upper bin full) for proper installation and damage, and replace if necessary. See **"Sensor (staple finisher upper bin full) removal" on page 531**. **b** Reseat the cable on both ends of the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the sensor (staple finisher rear upper bin full) for proper operation. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Transport and exit section** **b** Find the sensor (Staple finisher bin full). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 6.
Step 6 **a** Check the sensor (staple finisher rear upper bin full) for proper installation and damage, and replace if necessary. See **"Sensor (staple finisher upper bin full) removal" on page 531**. **b** Reseat the cable on both ends of the sensor. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Clear the area between the sensors (staple finisher front and rear lower bin full) of any obstructions. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the sensor (staple finisher front lower bin full) for proper operation. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Staple Finisher** > **Transport and exit section** **b** Find the sensor (Staple finisher bin full). Does the sensor status change while toggling the sensor?	Go to step 10.	The problem is solved.
Step 9 **a** Check the sensor (staple finisher front lower bin full) for proper installation and damage, and replace if necessary. See **"Sensor (staple finisher lower bin full) removal" on page 530**. **b** Reseat the cable on both ends of the sensor. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the cables for cuts or any damages, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the staple finisher bin for damages, and replace if necessary. See **"Staple finisher bin removal" on page 569**. **b** Manually push, and then release the bin. Make sure that it returns to its default position. **c** Clear the bin of any obstructions. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check the staple finisher bin arms for damages, and replace if necessary. See **"Staple finisher bin clamp assembly removal" on page 582**. **b** Check the bin arms and spring for proper installation. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the staple finisher interface cable for cuts or any damages, and replace if necessary. **b** Reseat the cable. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 Reseat all connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staples Low [83] service check

Action	Yes	No
Step 1 **a** Remove any jammed or loose staples, and then remove the partial slab of staples so only the full slabs remain. **b** Reseat the staple cartridge and the cartridge holder. **c** Check if the staple cartridge door is closed properly. **d** Reset the printer, and then reseat the staple finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Check the staple finisher staple cartridge holder for damage, and replace if necessary. **b** Reseat the staple cartridge. 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** > **Output device diagnostics** > **Staple test** **b** Select a staple job. Is the job stapled?	Go to step 5.	Go to step 4.
Step 4 **a** Check the staple finisher staple unit for proper installation and damage, and replace if necessary. See **"Staple finisher staple unit removal" on page 540**. **b** Reseat the cables on both ends of the staple unit. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the cables for cuts or any damages, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 **a** Check the staple finisher staple unit ejector for damage, and replace if necessary. See **"Staple finisher staple unit ejector removal" on page 538**. **b** Check the ejector for proper installation and operation. Make sure to clear the area of any obstructions. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Check the staple finisher staple cartridge door for damage, and replace if necessary. See **"Staple finisher staple cartridge door removal" on page 526**. **b** Check the door for proper installation. Make sure that it closes correctly. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reseat all cable connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher is not detected service check

Action	Yes	No
Step 1 Reset the printer, and then reseat the staple finisher. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Reseat the staple finisher interface cable. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the interface cable connector for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the interface cable for cuts or damage, and replace if necessary. See **"Staple finisher interface cable removal" on page 533**. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the cables for cuts or damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reseat all cable connectors in the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the controller board. See **"Staple finisher controller board removal" on page 525**. 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	• View the printer messages and supply status. • Set up and operate the printer.
2	Home button	Go to the home screen.
3	Keypad	Enter numbers or symbols in an input field.
4	Power button	• Turn on or turn off the printer. **Note:** To turn off the printer, press and hold the power button for five seconds. • Set the printer to Sleep or Hibernate mode. • Wake the printer from Sleep or Hibernate mode.
5	Stop or Cancel button	Stop the current job.
6	Indicator light	Check the status of the printer.
7	Volume buttons	Adjust the volume of the headset or speaker.
8	Headset or speaker port	Attach a headset or speaker.
9	Backspace button	Move the cursor backward and delete a character in an input field.

Understanding the status of the power button and indicator light

Indicator light	Printer status
Off	The printer is off or in Hibernate mode.
Blue	The printer is ready or processing data.

Indicator light	Printer status
Red	The printer requires user intervention.

Power button light	Printer status
Off	The printer is off, ready, or processing data.
Solid amber	The printer is in sleep mode.
Blinking amber	The printer is in hibernate mode.

Using the home screen

When the printer is turned on, the display shows the home screen. Use the home screen buttons and icons to initiate an action.

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

Touch		To
1	Status/Supplies	• Show a printer warning or error message whenever the printer requires intervention to continue processing. • View more information on the printer warning or message, and on how to clear it. **Note:** You can also access this setting by touching the top section of the home screen.
2	Job Queue	Show all the current print jobs. **Note:** You can also access this setting by touching the top section of the home screen.
3	Change Language	Change the language on the printer display.
4	Settings	Access the printer menus.
5	USB Drive	View, select, or print photos and documents from a flash drive.

Touch		To
6	Held Jobs	Show all the current held print jobs.

These settings may also appear on the home screen

Touch	To
Bookmarks	Access bookmarks.
App Profiles	Access application profiles.
Lock Device	Prevent users from accessing any printer functions from the home screen.

Printing a menu settings page

From the home screen, touch **Settings** > **Reports** > **Menu Settings Page**.

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 without running the POST tests:

1 Press and hold the **3** and **6** buttons while turning on the printer.

2 Release the buttons when the splash screen appears.

To access the Diagnostics menu from the home screen, press * * **3 6** on the control panel.

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 allows you to 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.

1 Enter the Diagnostics menu, and then navigate to:

Printer Setup > **Enable edge-to-edge (printing)**

2 Select a setting.

Note: This feature does not work in PPDS emulation.

Enable edge-to-edge (copy)

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

1 Enter the Diagnostics menu, and then navigate to:

Printer Setup > **Enable edge-to-edge (copy)**

2 Select a setting.

Processor ID

This setting 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.

Registration adjust

This setting allows you to adjust the skew, margins, or perform a Quick Test.

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Registration adjust**

2 Select a setting.

Color alignment adjust

This setting allows you to adjust the color alignments and to print or reset the default settings.

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Color alignment adjust**

2 Select a setting.

Supply reset

The setting resets the fuser and ITM counter values to zero.

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Supply reset**

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

Add-on cards tests

This setting allows you to test the add-on cards installed on the printer.

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Add-on cards tests**

2 Select a card.

Printhead diagnostics

This setting allows you to test the printhead.

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Printhead diagnostics**

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

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.

Output device diagnostics

Sensor tests

1 Enter the Diagnostics menu, and then navigate to:

Output device diagnostics > **Sensor tests**

2 Select the output device where the sensor is located.

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:

Output device diagnostics > **Motor tests**

2 Select the output device where the motor is located.

3 Find the 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.

Staple test

Note: This menu appears only when a finisher is installed.

1 Enter the Diagnostics menu, and then navigate to:

Output device diagnostics > **Staple test**

2 Select a staple job, and then check the output for any issues.

Punch tests

Note: This menu appears only when a finisher is installed.

1 Enter the Diagnostics menu, and then navigate to:

Output device diagnostics > **Punch tests**

2 Select a punch job, and then check the output for any issues.

Offset tests

Note: This menu appears only when a finisher is installed.

1 Enter the Diagnostics menu, and then navigate to:

Output device diagnostics > **Offset tests**

2 Select a bin.

Service Engineer menu

Entering Invalid engine mode

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

1 Turn off the printer.

2 Press and hold **3**, **4**, and **6** while turning on the printer.

3 Release the buttons after 10 seconds.

Entering the Service Engineer (SE) menu

To access the Service Engineer (SE) menu:

1 Turn on the printer.

2 When the home screen appears, press * * **41 1** on the control panel.

General SE

This setting allows you to save a log file to a USB drive.

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

General SE > **Capture Logs to USB Drive**

Network SE

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

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

Top level menu	Intermediate menu
Print SE Menus	Print SE Menus
History	• Print History • Mark History
MAC	• Set Card Speed • LAA • Keep Alive
NPAP	Print Alerts
TCP/IP	• netstat • arp • Allow SNMP Set • MTU • Meditech Mode • RAW LPR Mode
Wireless	Enable Wi-Fi Direct Sigma Control Agent
Ping Test	• Ping • Ping6
Other Actions	• ifconfig • IPtables [Firewall Dump] • IP6tables [Firewall Dump] • IPsec Dump

Repair information

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 and disconnect all connections to any external devices before you connect or disconnect any cable, electronic board, or assembly.

⚠️ **CAUTION—POTENTIAL INJURY:** The printer weighs 61-84 kg (135-185 lb) and requires three or more trained personnel to lift it safely. Always use the handholds on the printer to lift it. 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 it.

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.

Handling ESD-sensitive parts

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

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

Controller board/control panel replacement

This procedure should be followed only if both the controller board and the control panel fail. If you need to replace only one of the FRUs, follow the startup procedure described in the FRU's removal procedure.

⚠ **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.

Warning—Potential Damage: If the control panel and the controller board are being replaced at the same time, replace the parts in this order to avoid damage to the machine.

1 Replace the controller board first.

> **Note:** Do not replace the new control panel and controller board in the machine at the same time.

2 After installing the new controller board, and before installing the new control panel, start the printer into diagnostics mode.

3 After the printer has completed startup, turn off the printer and replace the control panel.

> **Note:** If the control panel display has failed, the printers' startup cycle is complete when the driver motor and fans shut down, and the machine is quiet.

4 After installing the new control panel, start the printer into diagnostics mode, and allow the printer to go through a complete startup cycle and the display to go to Ready.

5 If the problems persist, leave the new control panel in the machine, place the old controller board back in the machine, and start it up. After the machine startup, shut down the machine, and install the new controller board. After installing the new controller board, restart the machine, and let it go through the startup cycle.

After this procedure is completed successfully, there is no need to adjust any settings.

If the above procedure fails, you must contact the technical support center for further instructions.
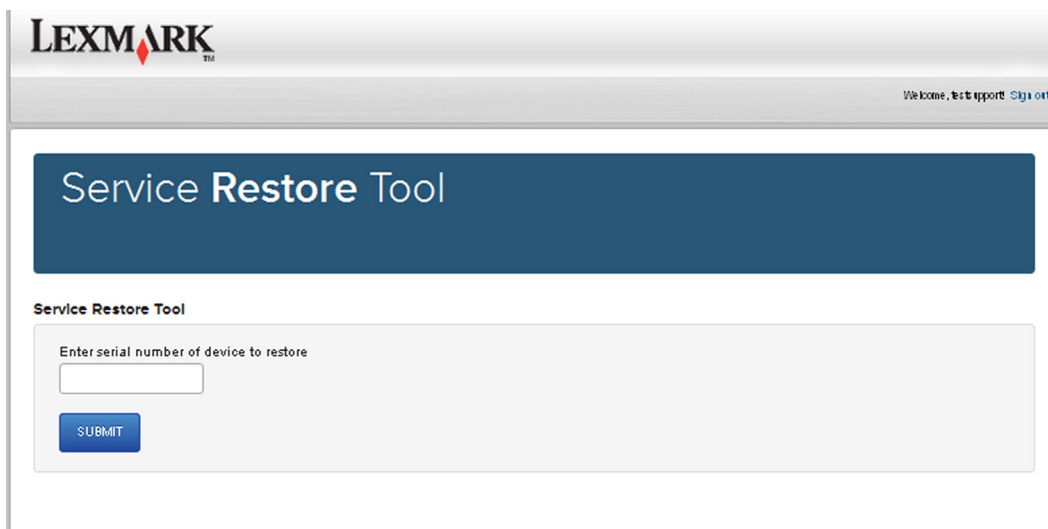
Restoring the printer configuration after replacing the controller board

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

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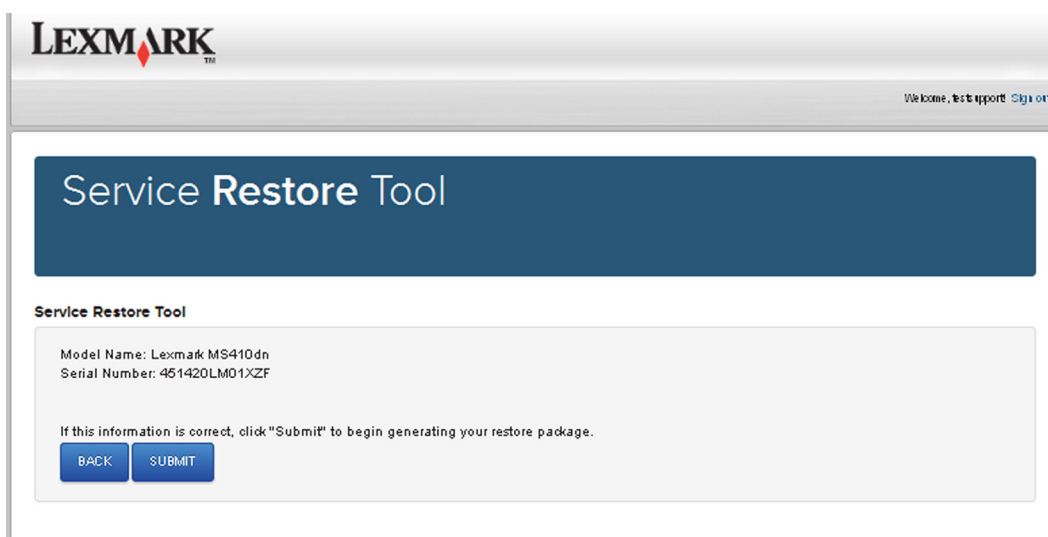
Using the Service Restore Tool

1 Go to **https://cdp.lexmark.com/service-restore-tool/** to access the tool.

2 Log in using your Lexmark or partner login.

If your login fails, then contact your next level of support.

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

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

4 Save the zip file.

> **Note:** Make sure that the serial number in the zip file matches the serial number of the printer being restored.
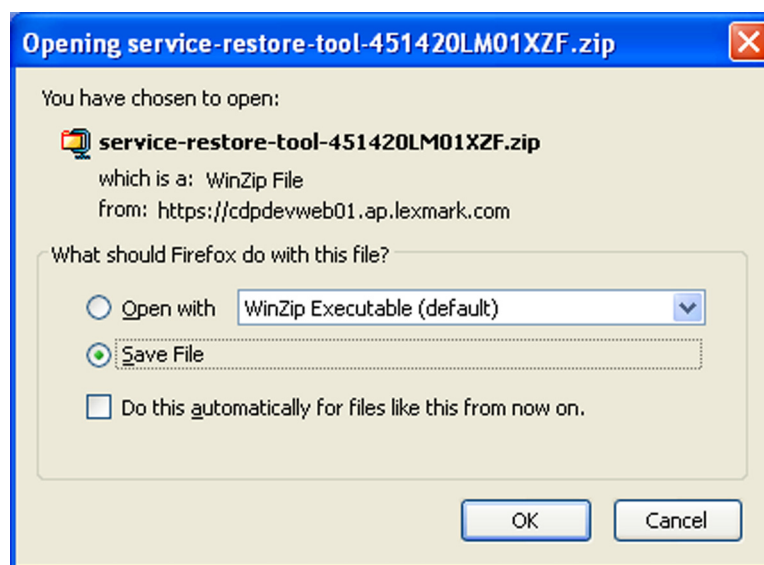
5 Extract the contents of the zip file, open the *Readme* file, and then follow the instructions in the file.

> **Notes:**
>
> - Perform the install instructions on the *Readme* file in the exact order shown. Only restart the printer when instructed to in the file.
> - For more information on how to flash the downloaded files, see **"Updating the printer firmware " on page 377**.
> - To load the zip files that are extracted from the Service Restore Tool, see **"Restoring solutions, licenses, and configuration settings" on page 376**.
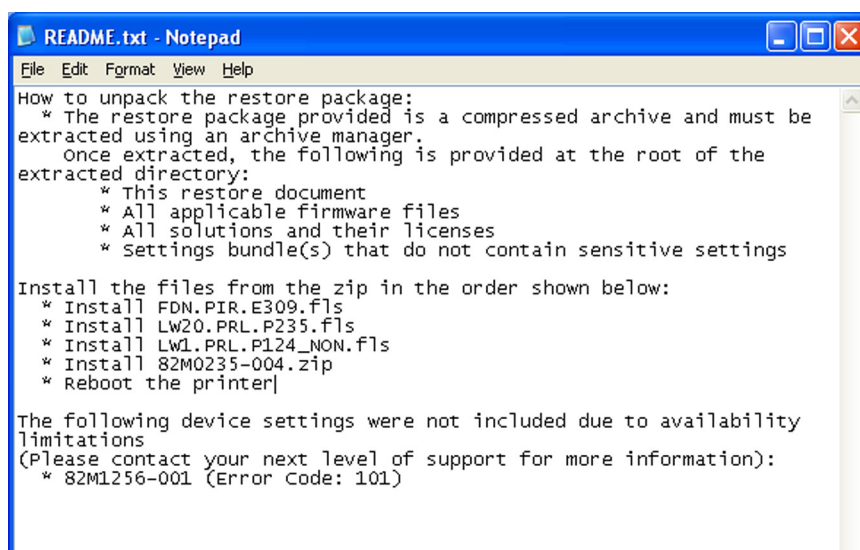
6 After performing the installation instructions in the *Readme* file, confirm from the customer if all the eSF apps have been installed.

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 is displayed 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 Navigate to **Settings** > **Configuration Files**.
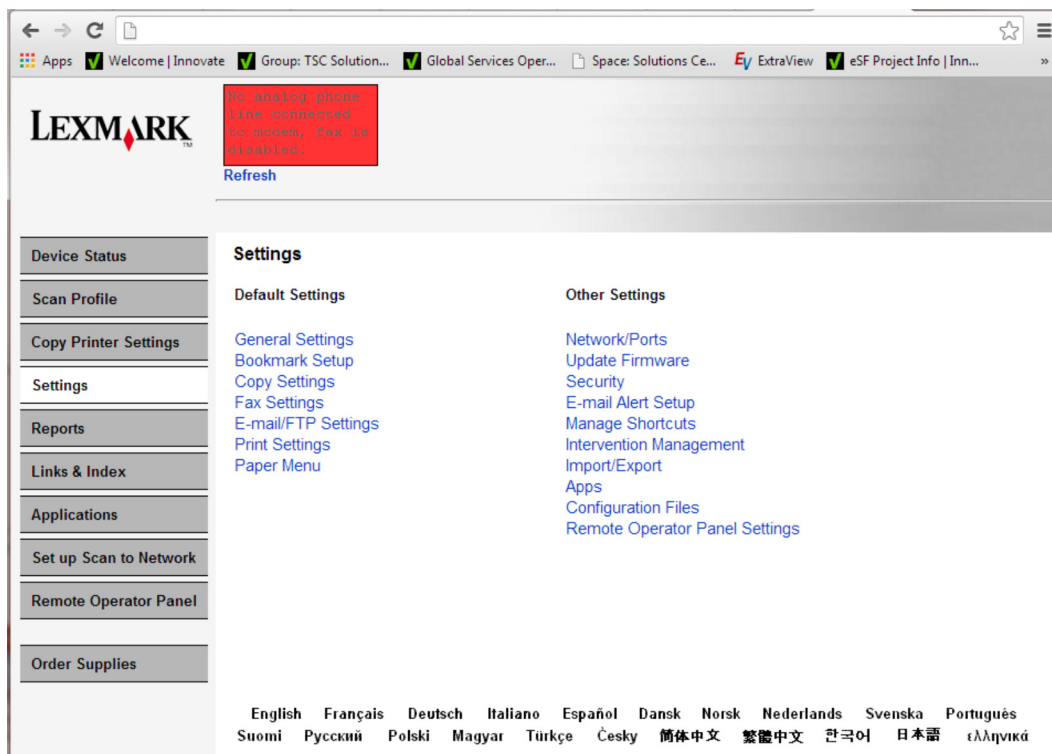
3 From the Configuration File History tab, navigate to **Import** > **Choose File**.

4 Select the zip file from the expanded Service Restore Tool package.

5 Click **Import**.
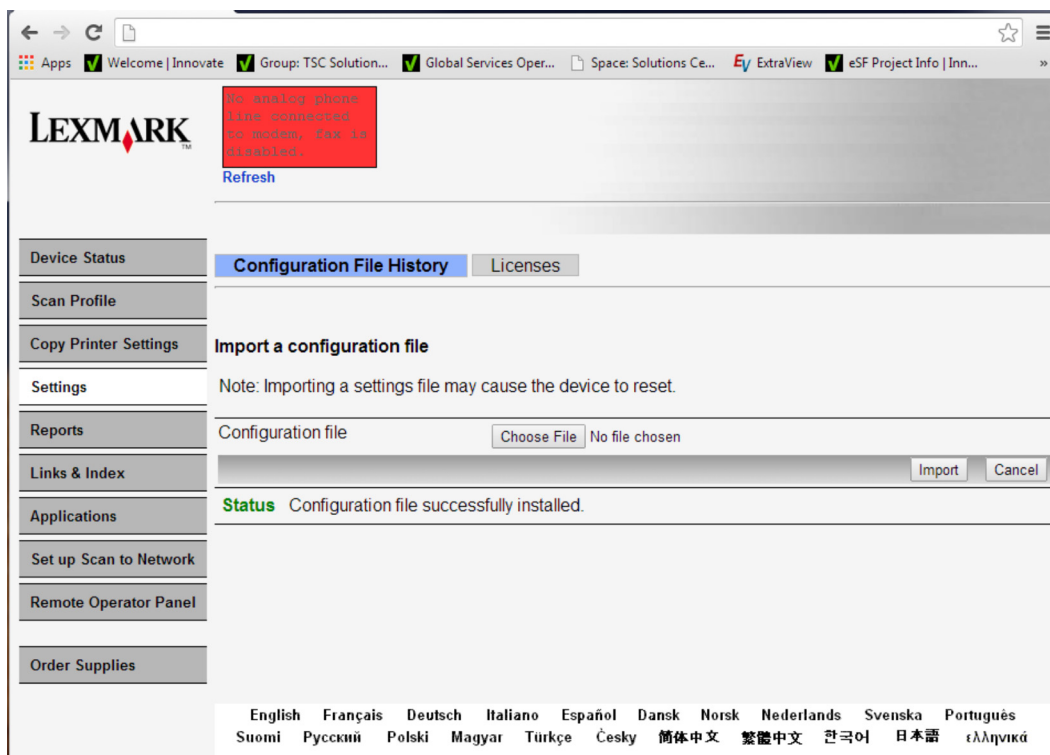
6 Repeat steps 3 through 5 for the other zip files that are included in the expanded zip file.

Updating the printer firmware

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

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

Using a flash drive

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

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

1 Insert the flash drive into the USB port.

2 From the home screen, navigate to **USB Menu: Print from USB** > **Accept** or **OK**.

3 Select the file that you need to flash.

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

Using a network computer

Using the File Transfer Protocol (FTP)

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

1 Turn on the printer.

2 Obtain the IP address:

- From the home screen
- From the TCP/IP section of the Network/Ports menu

3 From the command prompt of a network computer, open an FTP session to the printer IP address.

4 Use a PUT command to place the firmware file on the printer.

The printer performs a POR sequence and terminates the FTP session.

5 Repeat steps 2 through 4 for the other files.

Using the Embedded Web Server

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

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

2 From the home page, navigate to **Configuration** > **Update Firmware**.

3 Select the file to use.

The printer performs a POR sequence and terminates the FTP session.

4 Repeat steps 2 through 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 .

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

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

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

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

5 Click **Export**.

Note: There is a size limit of 128 KB on the export file.

Importing eSF solutions and settings file

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

1 Reset the printer into Invalid engine mode. See **"Entering Invalid engine mode" on page 368**.

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

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

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

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

5 Click **Import**.

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.
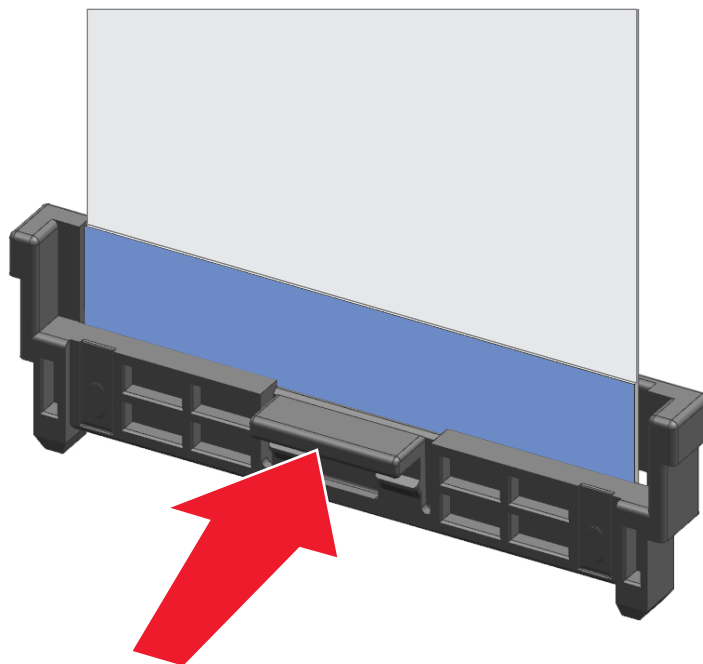
Adjustments

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:
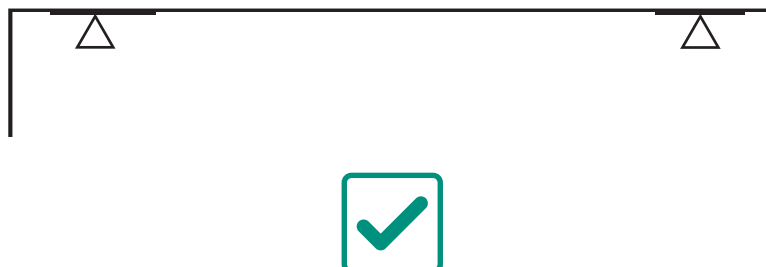
Aligning a printhead skewed in the clockwise direction

The following test page result shows a test page skewed in the clockwise direction:
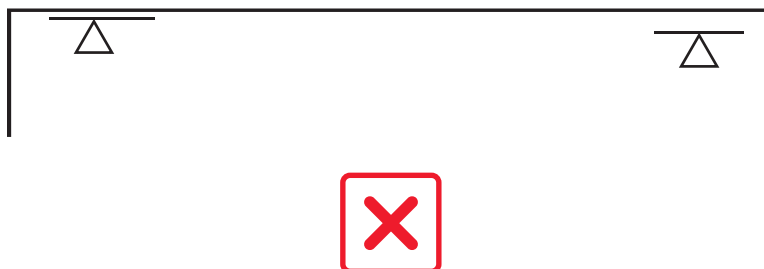
1 Remove the vent cover, see **"Vent cover removal" on page 410**, or remove the inner right cover, see **"Printhead fan removal" on page 415**.

2 Using a 3‑mm ball hex wrench (B), turn the printhead clamp hex screw (A) counterclockwise by one turn.
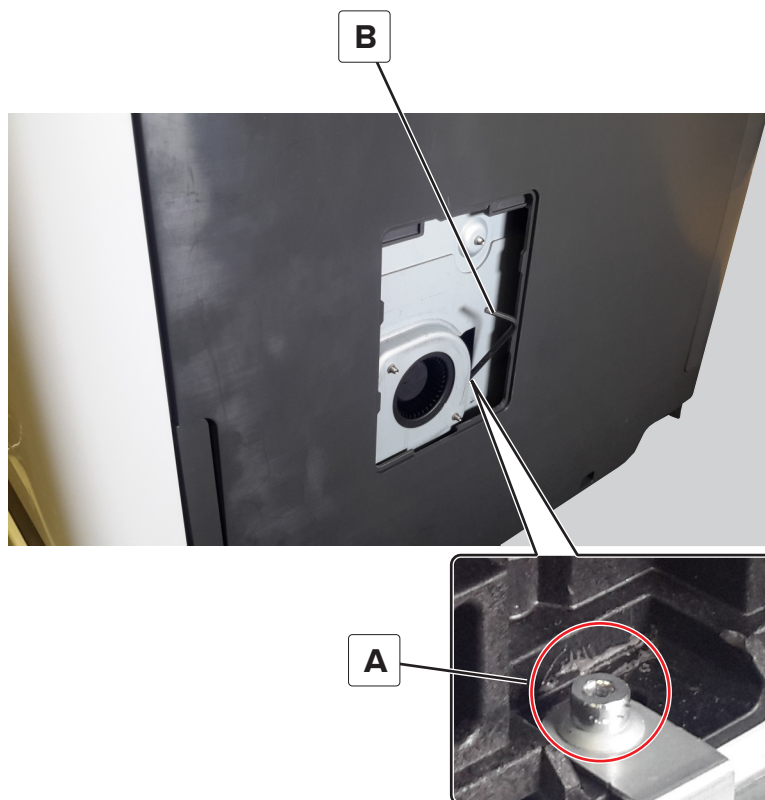
The printhead clamp hex screw (A) with the right covers removed is shown below.
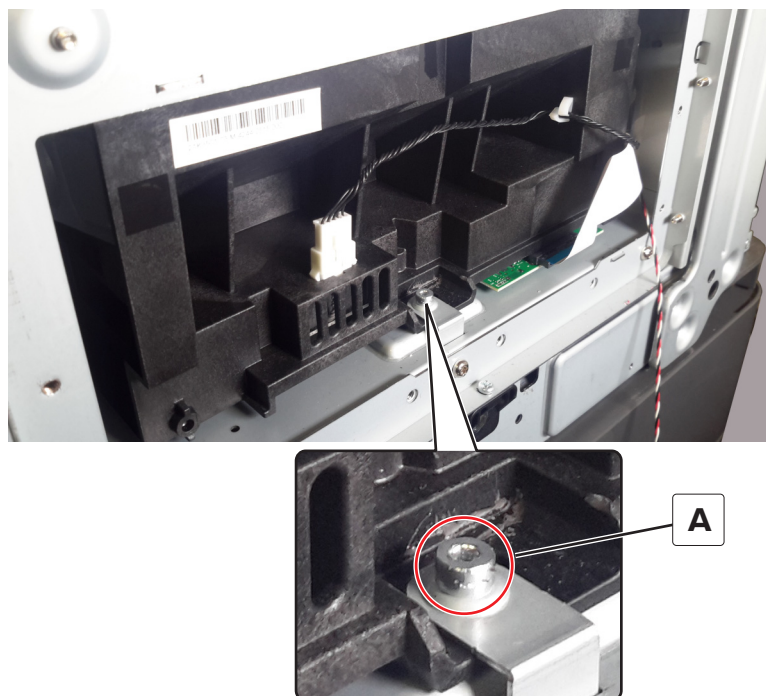
3 Remove tray 1, and then find the adjustment screw (C).
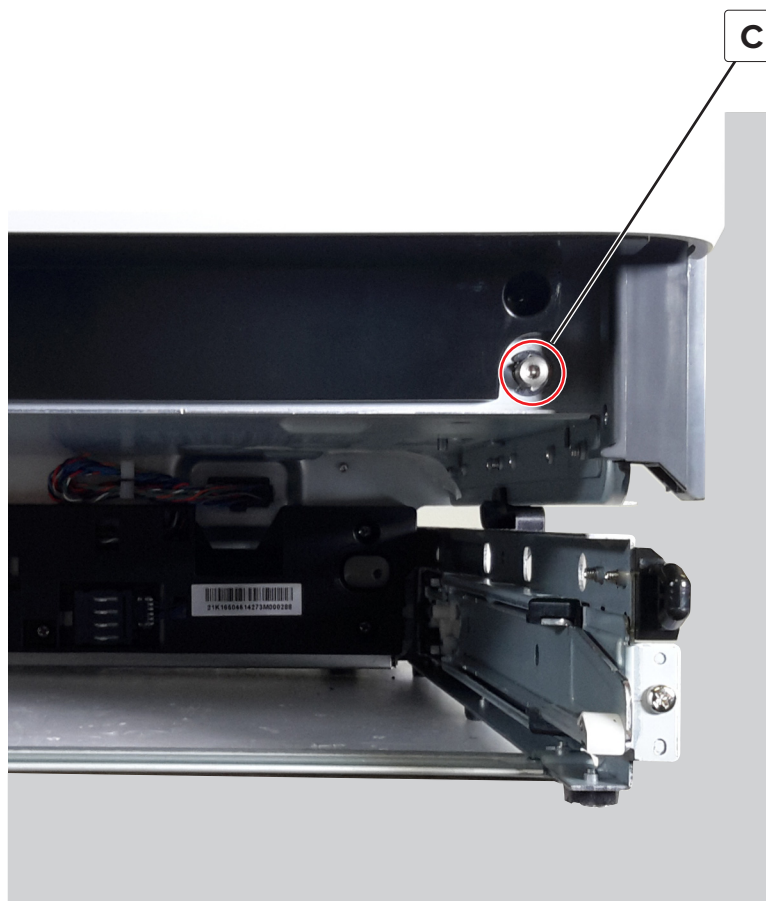
4 Turn the screw clockwise in half turn increments to adjust the printhead. Check the test page for alignment.

Note: Repeat this step until the skew on the test page is corrected.

5 Tighten the printhead clamp screw.

Aligning a printhead skewed in the counterclockwise direction

The following test page result shows a test page skewed in the counterclockwise direction:
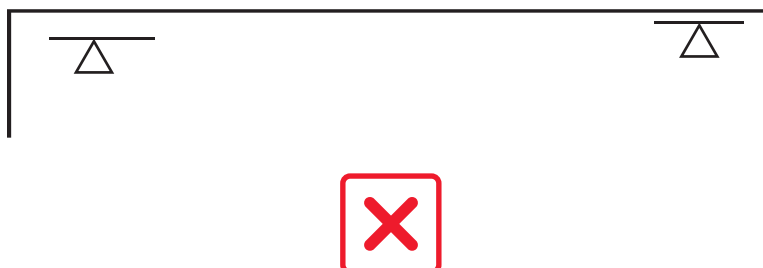
1   Remove the vent cover, see **"Vent cover removal" on page 410**, or remove the inner right cover, see **"Printhead fan removal" on page 415**.

2   Using a 3-mm ball hex wrench (B), turn the printhead clamp hex screw (A) counterclockwise by one turn.
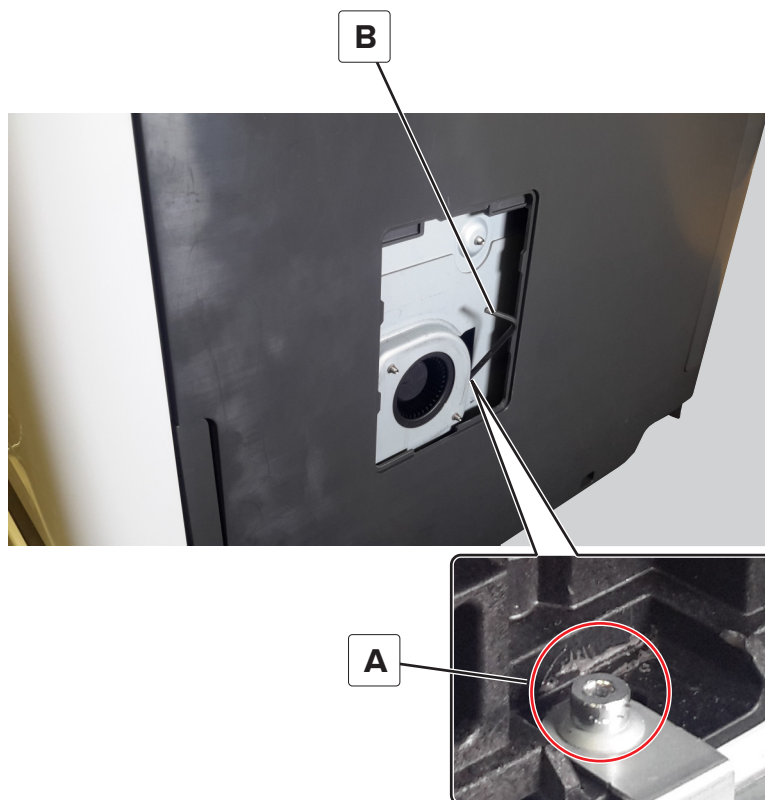
The printhead clamp hex screw (A) with the right covers removed is shown below.
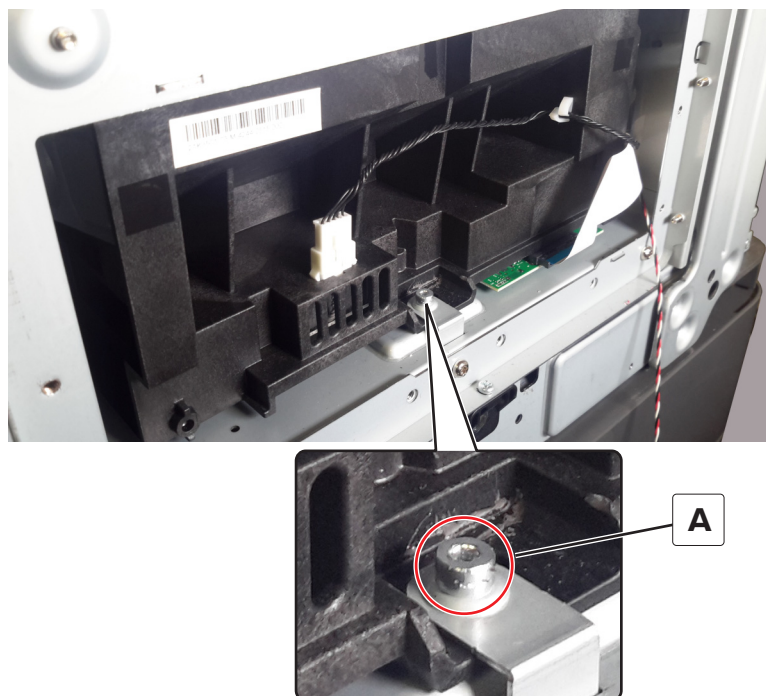
3 Remove tray 1, and then find the adjustment screw (C).
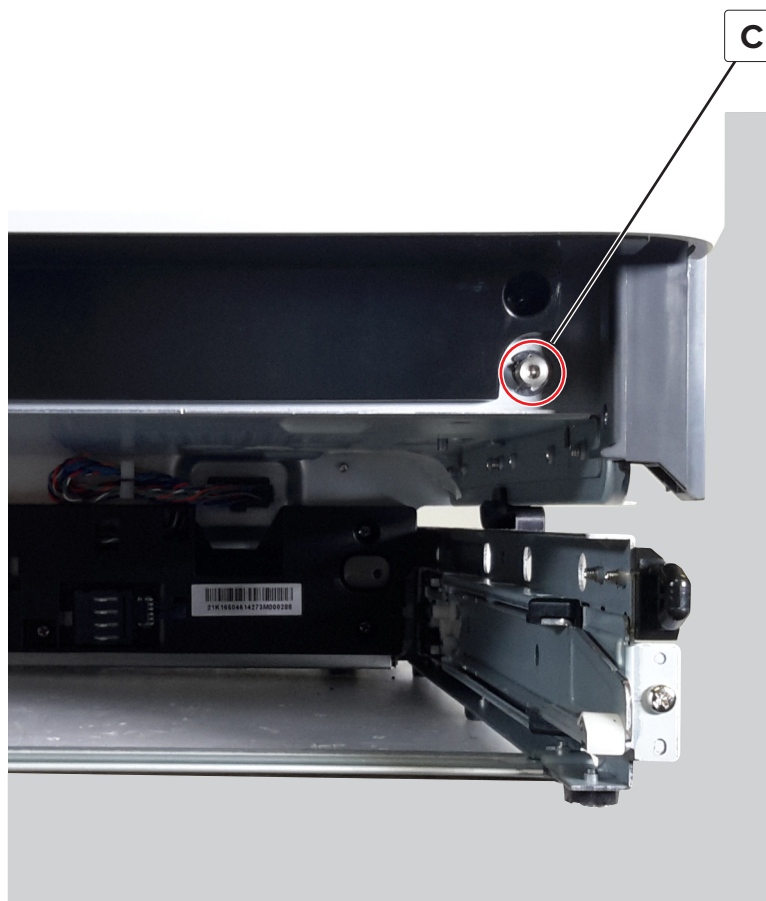
4 Turn the screw counterclockwise in half turn increments to adjust the printhead. Check the test page for alignment.

Note: Repeat this step until the skew on the test page is corrected.

5 Tighten the printhead clamp screw.

Registration adjustment

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

Generating a test page for margin alignment

Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Registration adjust** > **Quick test**

A test page showing the margins is generated.
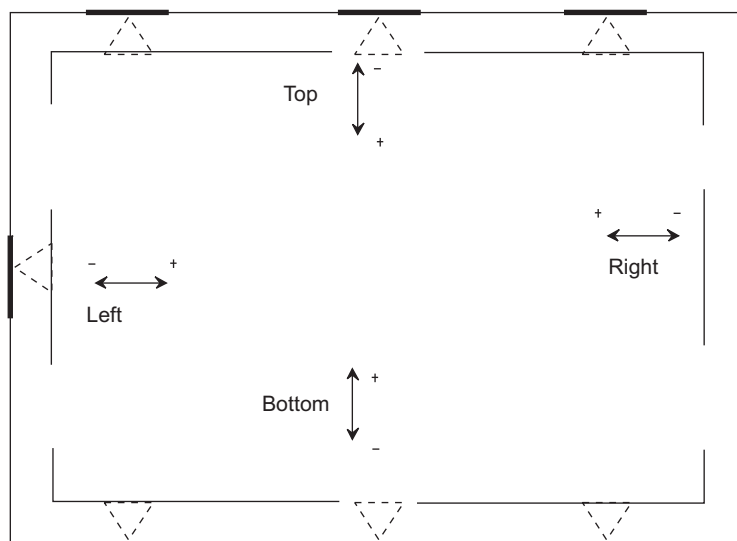
Adjusting the margins

Note: The procedure may not work for old firmware versions. Make sure that the latest firmware version is installed.

1 Refer to the test page generated for margin alignment.

Check the arrows along the margin.
- The arrows should be completely visible along the edge.
- The tip of the arrows should point to the edge.

If the arrows are misaligned, then adjust the Top margin setting:

Enter the Diagnostics menu, and then navigate to **Printer diagnostics & adjustments** > **Registration adjust** > **Top Margin**.

2 If necessary, perform printhead alignment until the test page arrows are squarely aligned. See **"Printhead alignment adjustment" on page 379**.

Note: After printhead alignment, make sure that the printhead clamp hex screw is properly locked.

3 Generate a new test page for margin alignment, check the arrows, and if necessary, adjust the following settings:
- Top margin
- Bottom margin
- Left margin
- Right margin

Note: Correcting the printhead and margin settings is necessary before proceeding with the Color alignment procedure.

4 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Color alignment adjust**

On the AA adjustment row, touch **Start**. The Color alignment procedure is performed on the cyan, magenta, and yellow colors.

Note: The procedure may not work for old firmware versions. Make sure that the latest firmware version is installed.

5 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.

6 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.

7 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.

8 If color misalignment still occurs, then repeat steps 4 to 7.

Color alignment adjustment

Color misalignment may cause blurred print or color misalignment. Perform this procedure to align the colors.

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Color alignment adjust**

2 Select the color to align, and then touch **Quick test**. Follow the alignment procedure on the test page.

Note: Repeat this step until the color misalignment in the test page is corrected.

Removal procedures

When replacing printer parts, consider the following:

- Some removal procedures require removing cable ties. Replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.
- Remove the toner cartridges, developer units, photoconductor units, and trays before removing other printer parts.
- Place the imaging or photoconductor unit on a clean, smooth, and flat surface. Do not expose the photoconductor drum to light.
- 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 by several screws, start all screws before the final tightening.

Left side removals

Left upper cover removal

1 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

2 Open door B.

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

3 Remove the two screws (A), and then remove the cover.
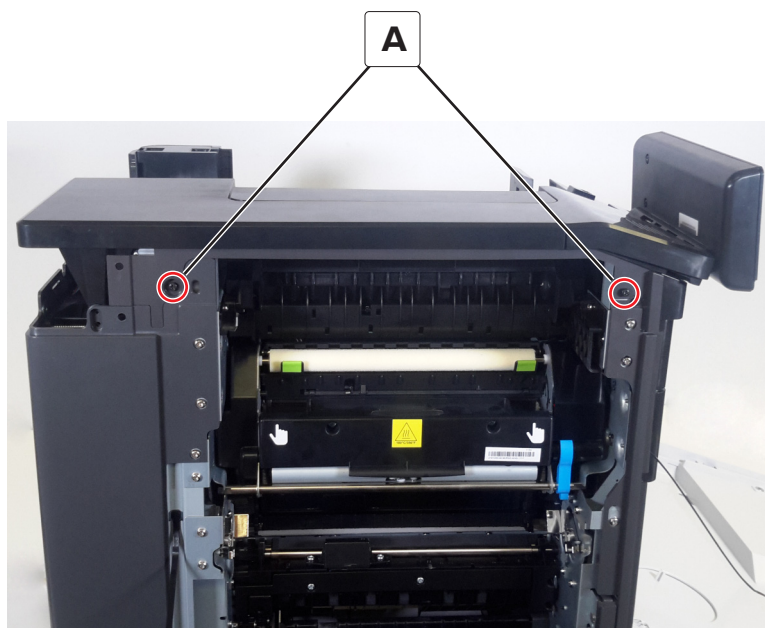
Fuser removal

1 Open door B.

> ⚠ **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.
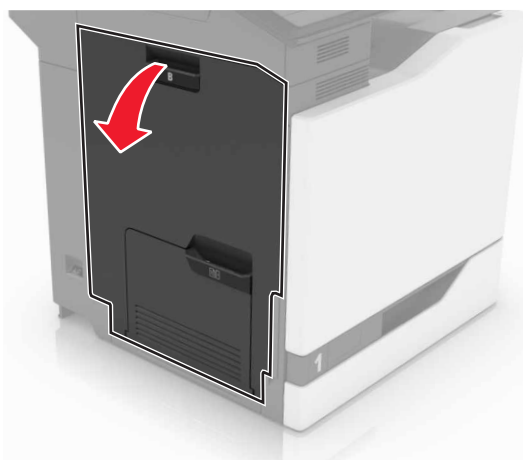
2 Remove the fuser.
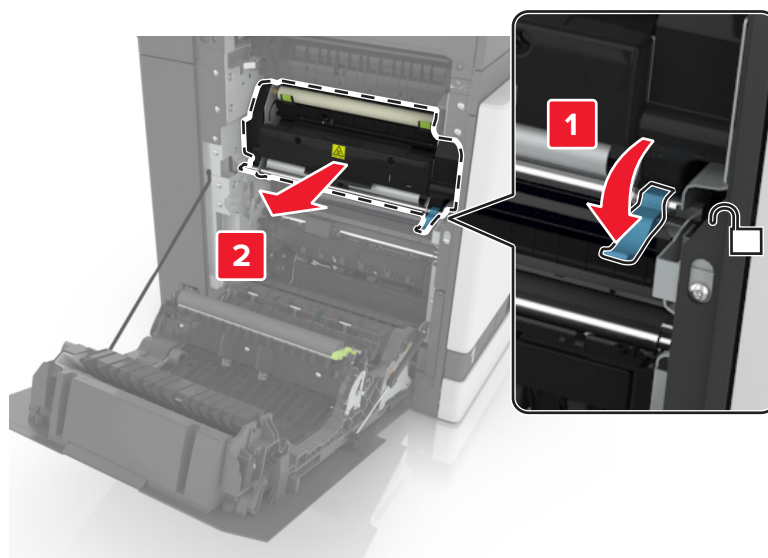
Transfer roller removal

1 Open door B.

⚠ **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.
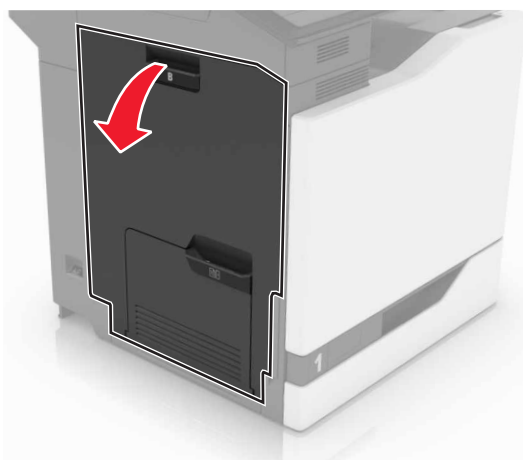
2 Remove the roller.

Duplex drive gears removal

1 Open door B, and then remove the two E-clips (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.
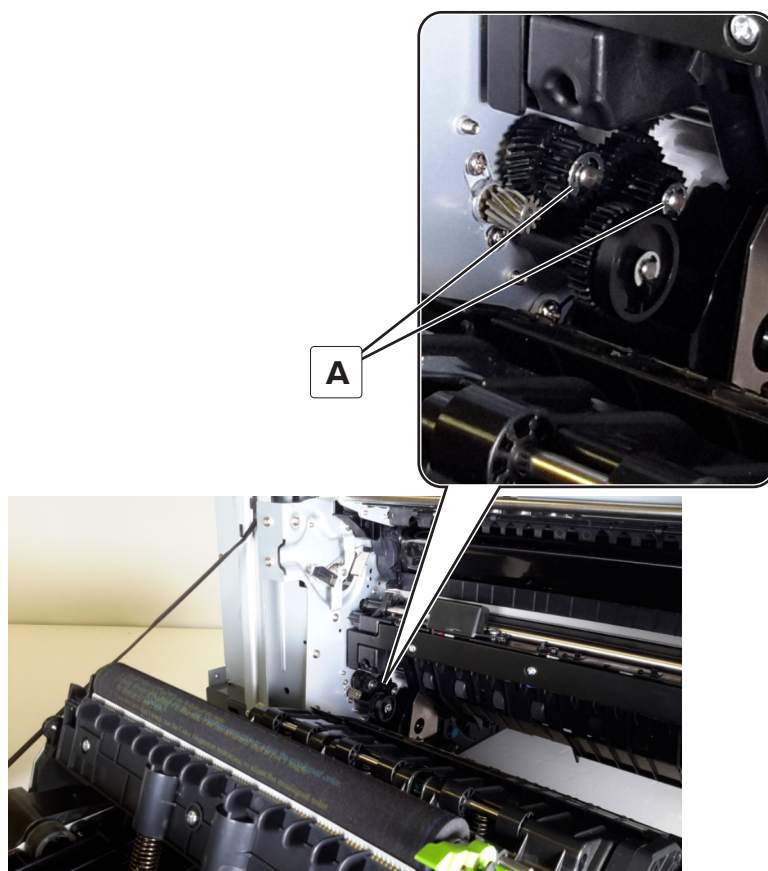
2 Remove the gears.

Installation warning: Make sure that the torsion spring is properly installed.

Duplex release latch removal

1 Open door B.

⚠ **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 Release the inner duplex guide, and then swing it toward the printer.

3 Remove the 14 screws (A and B), and then remove the outer duplex guide.

4 Remove the two screws (C), and then release the spring (D).
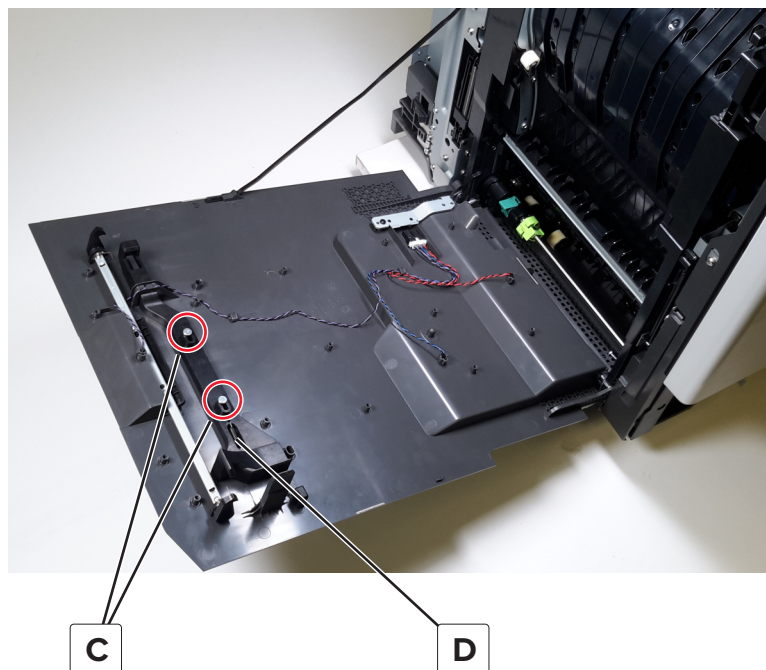
5 Remove the latch.

Deskew roller sensor guide removal

1 Open door B, and then remove the two screws (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.
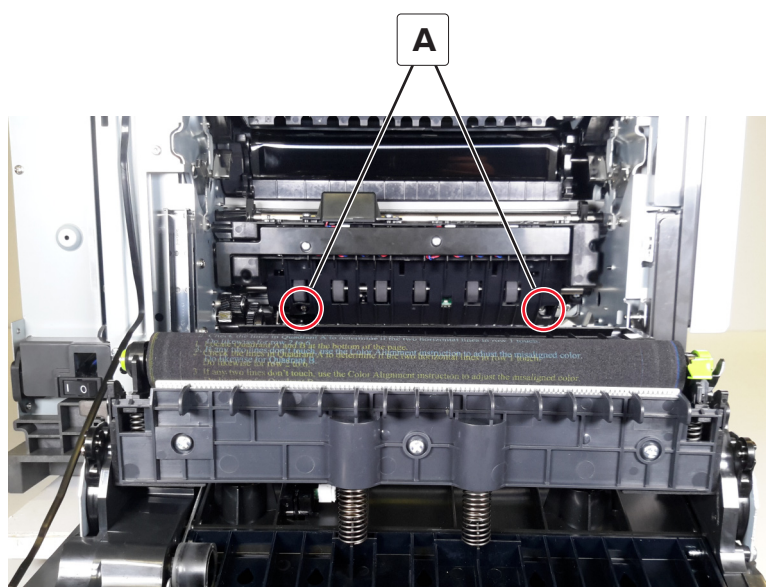
2 Open door A, and then remove the waste toner bottle.

3 Open door A1, and then remove the screw (B).
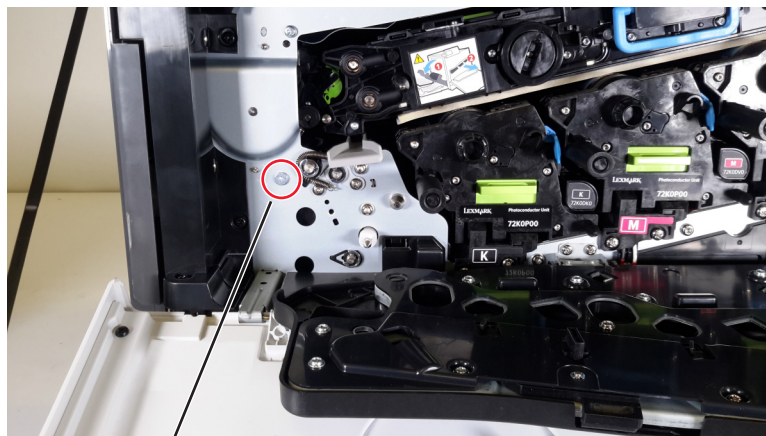
4 From the left, remove the two screws (C), and then remove the cover.

Repair information
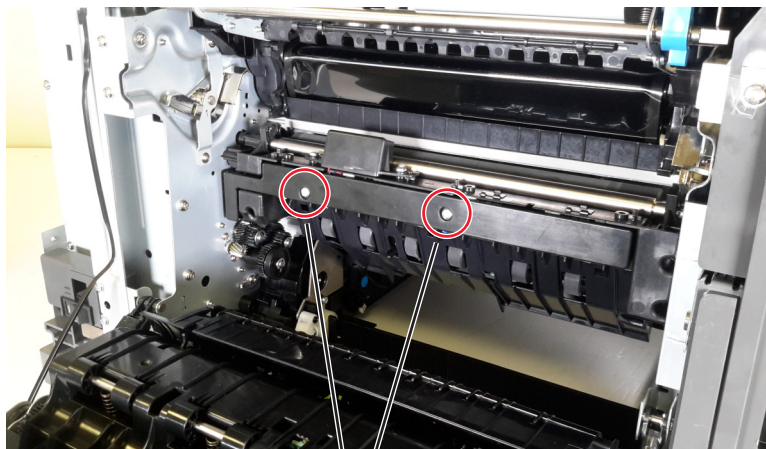
5 Disconnect the cable (D), and then remove the guide.
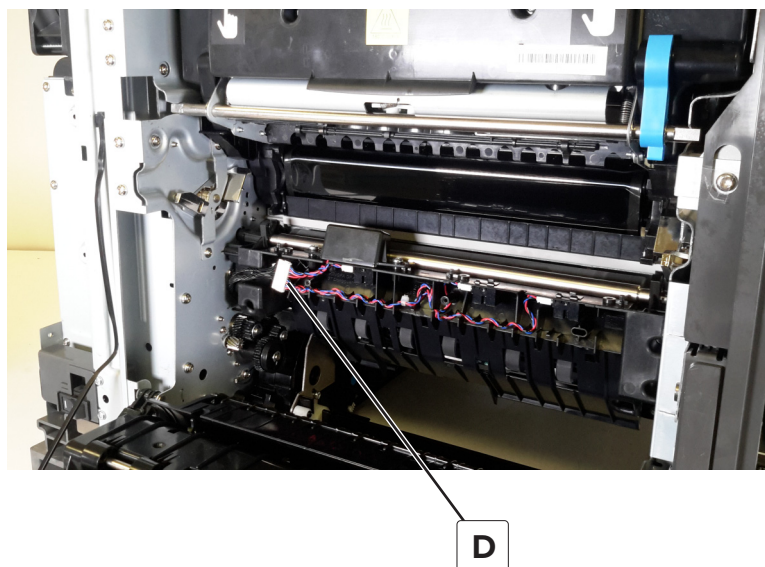
Plastic connector cover removal

1 Open door B.

> ⚠ **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 screw (A), and then remove the plastic connector cover.
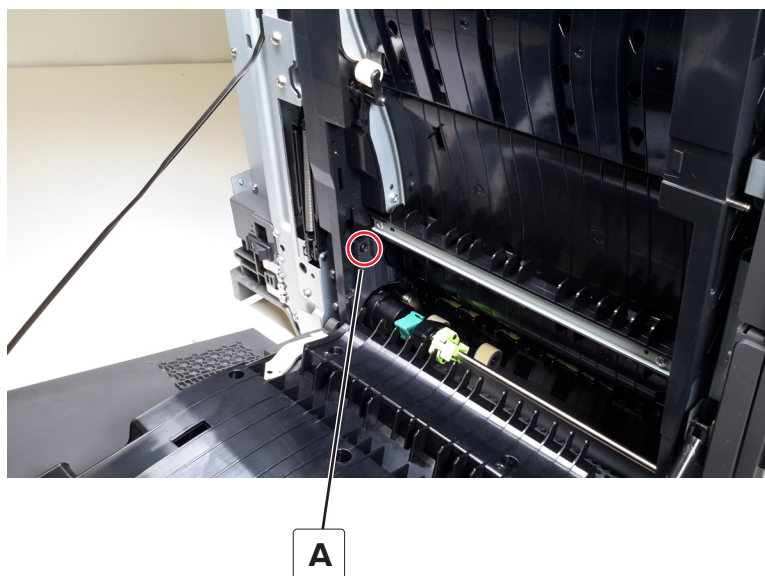
Metal connector cover removal

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

Repair information

⚠ **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.

A
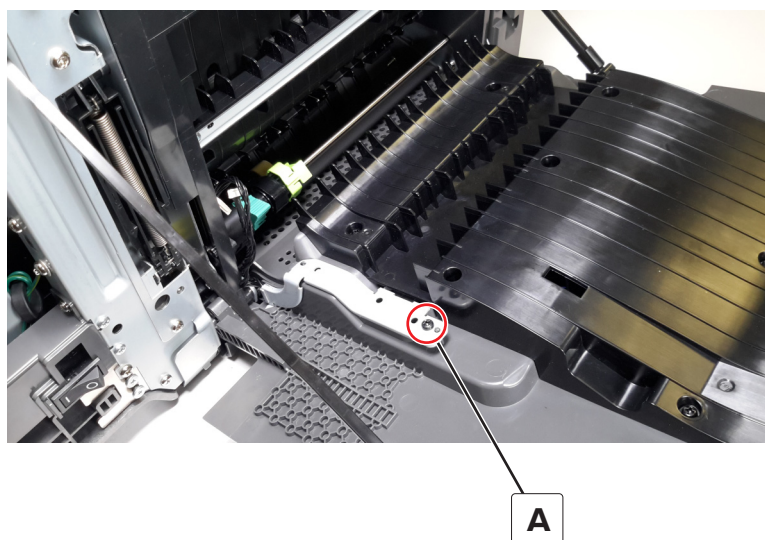
2 Remove the cover.

Left door, duplex, and MPF removal

⚠ **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.

1 Remove the plastic connector cover. See **"Plastic connector cover removal" on page 394**.

2 Remove the door rod cover. See **"Door rod cover removal" on page 435**.

3 Disconnect the cable (A).

A
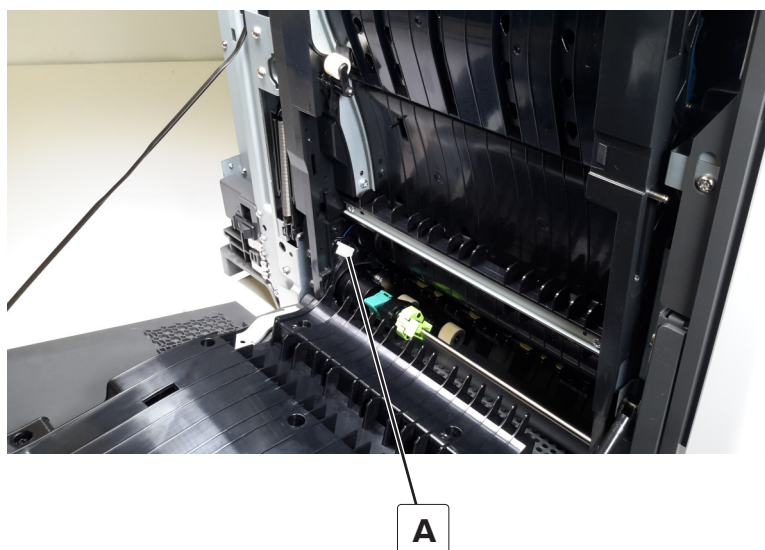
4 Remove the retainer (B).

5 Using a spring hook, disconnect the spring (C) from the door damper.
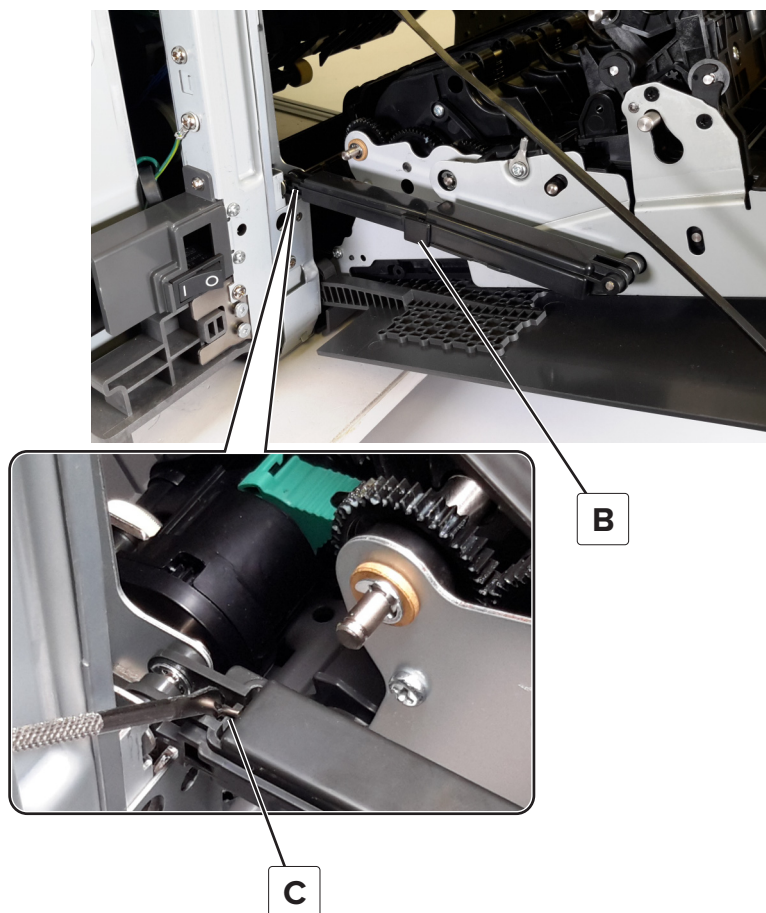
6 Separate the two damper parts (D), and then disconnect the support strap (E).

Repair information
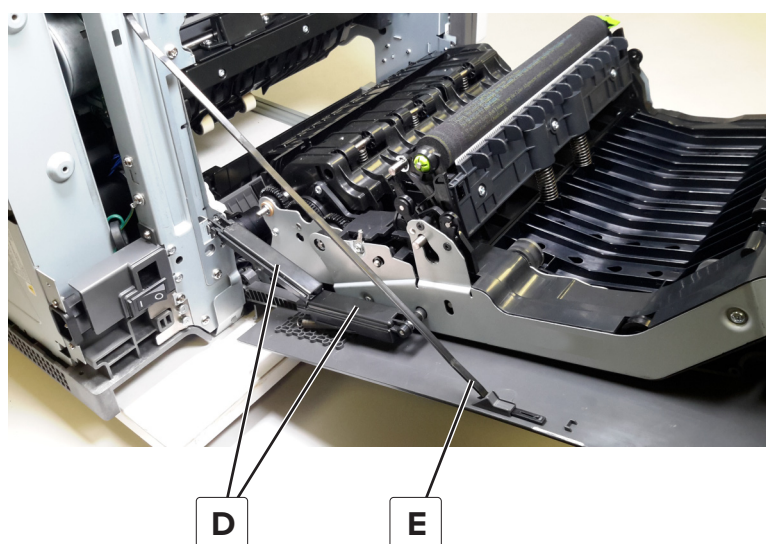
7 Remove the screw (F), and then remove the retainer plate.

F
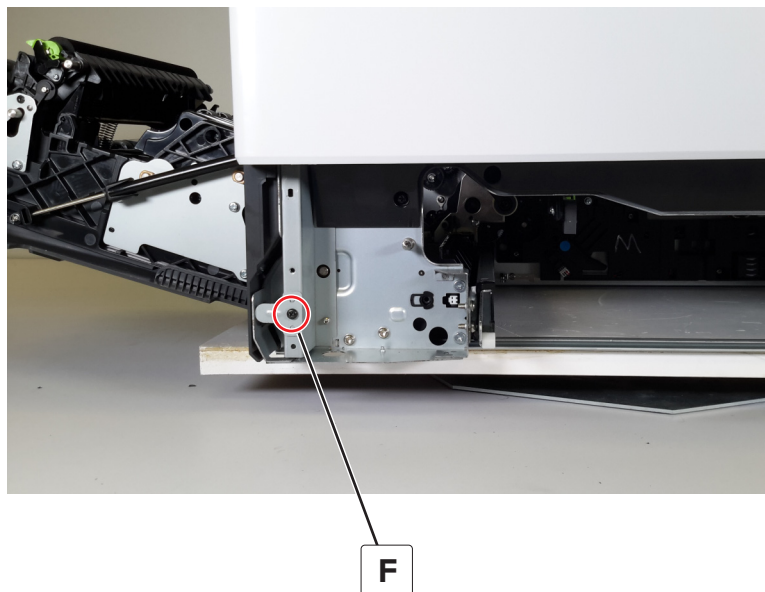
8 Release the retainer (G), and then disconnect the door support.

9 Pull out, and then remove the door rod (H).

Installation warning: Make sure that the left door, duplex, and MPF are properly aligned and engaged with the door rod. Improper installation may cause damage.

G H
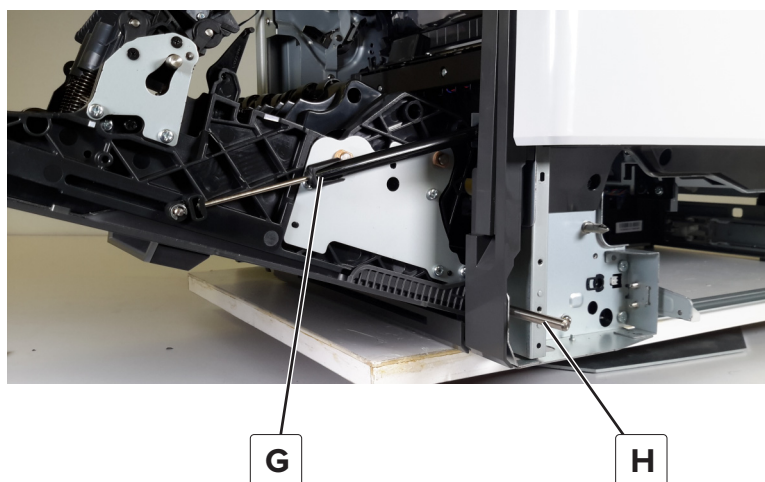
10 Remove the left door, duplex, and MPF.
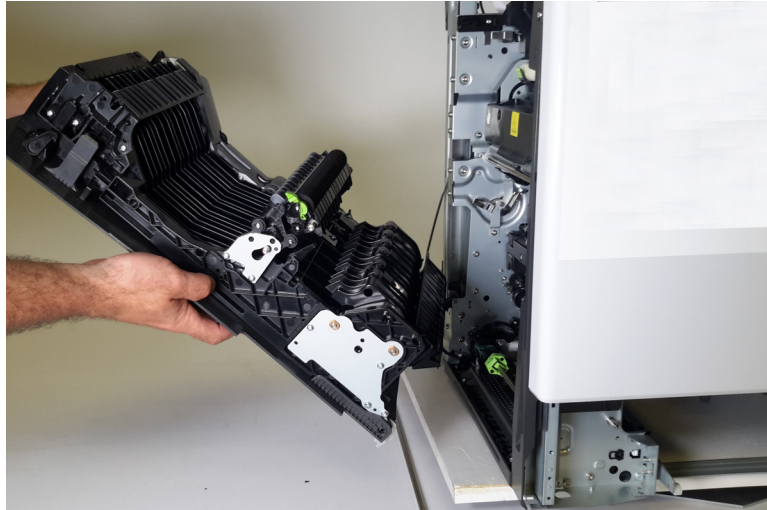
MPF pick roller removal

1 Remove the left door, duplex, and MPF. See **"Left door, duplex, and MPF removal" on page 395**.

2 Release the E-clip (A), and then slide the pick roller to the center of the shaft.

A
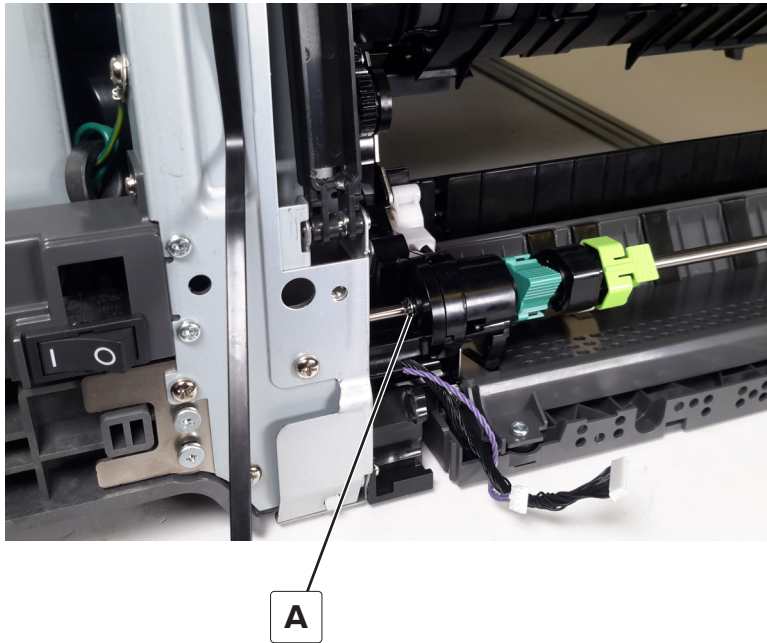
3 Rotate the retainer (B) clockwise by a quarter turn, and then remove.
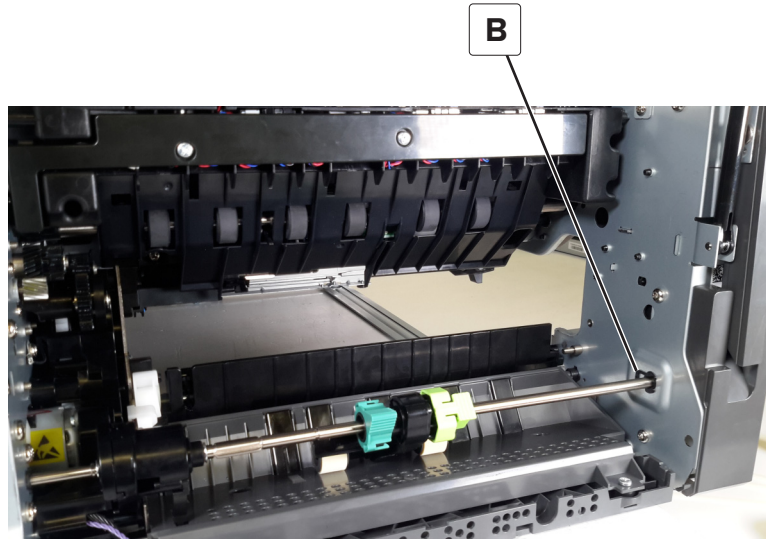
4 Slide the shaft out of the printer, and then remove the pick roller.

MPF pick guide removal

1 Remove the left door, duplex, and MPF. See **"Left door, duplex, and MPF removal" on page 395**.

2 Remove the MPF pick roller. See **"MPF pick roller removal" on page 398**.

3 From the front, carefully rotate the retainer by a quarter turn to release, and then remove using a pliers.
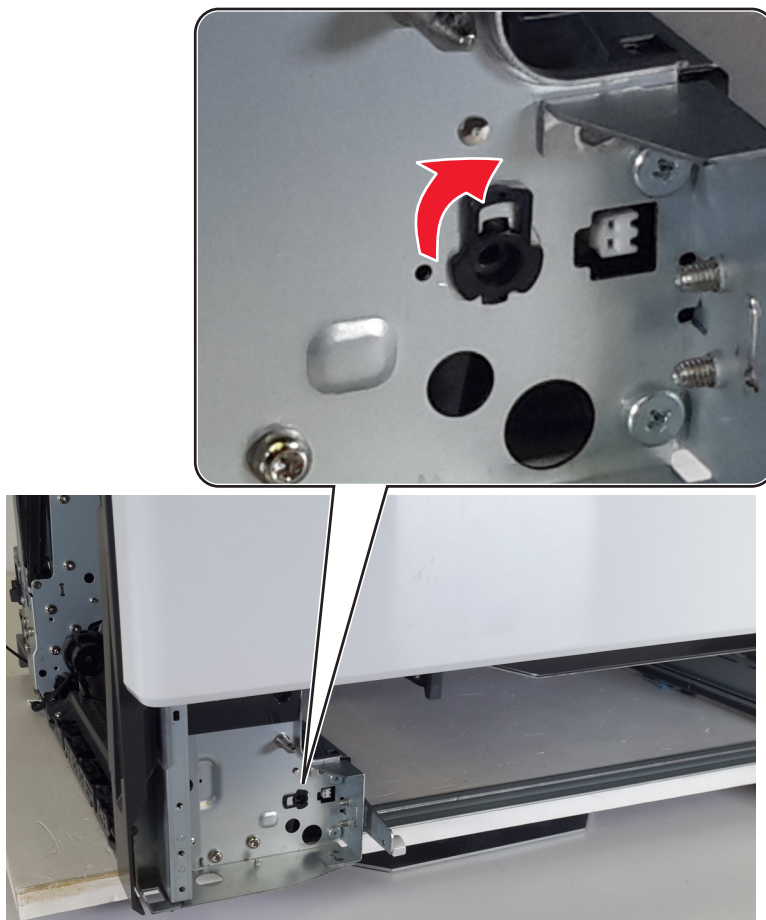
4 Pull the pick guide, and then disconnect the cable (A).

A
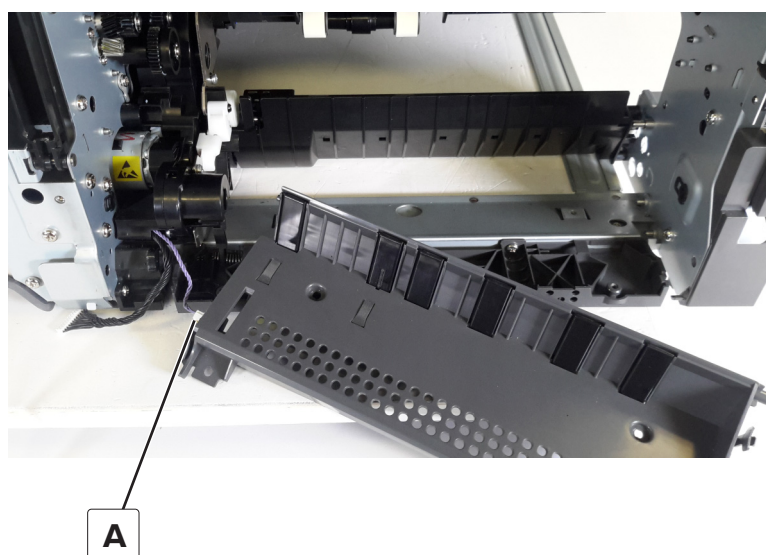
5 Remove the pick guide.

MPF tray stop removal

1 Remove the left door, duplex, and MPF. See **"Left door, duplex, and MPF removal" on page 395**.

2 Remove the MPF pick roller. See **"MPF pick roller removal" on page 398**.

3 Remove the MPF pick guide. See **"MPF pick guide removal" on page 399**.

4 Remove the two screws (A), and then remove the tray stop.
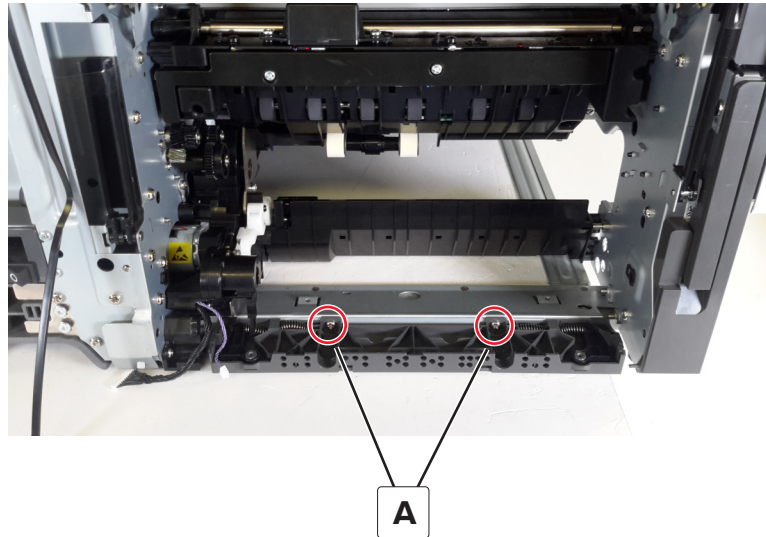
Redrive removal

1 Remove the fuser. See **"Fuser removal" on page 387**.

2 Open door A.

Warning—Potential Damage: The redrive may get damaged during removal if door A is closed.

3 Remove the screw (A), and then remove the rear fuser guide and grounding strip (B).
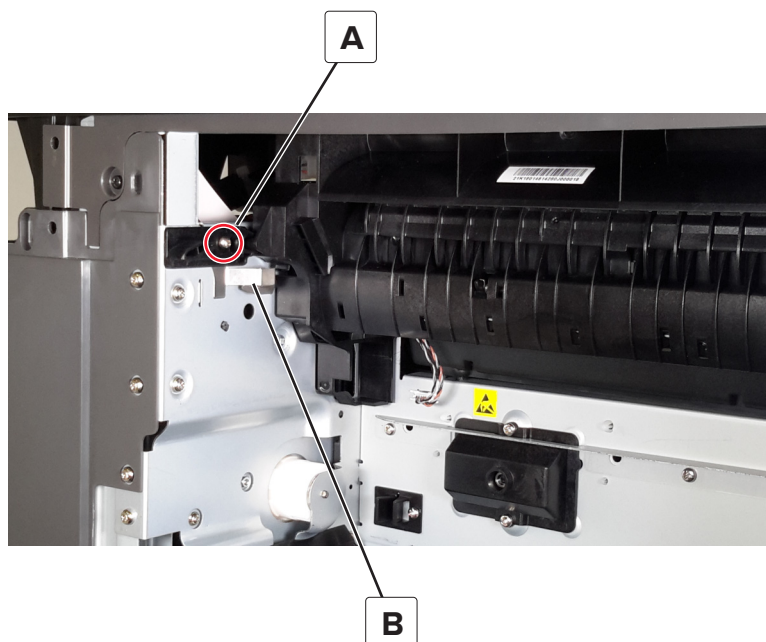
4 Remove the screw (C), and then remove the front fuser guide.
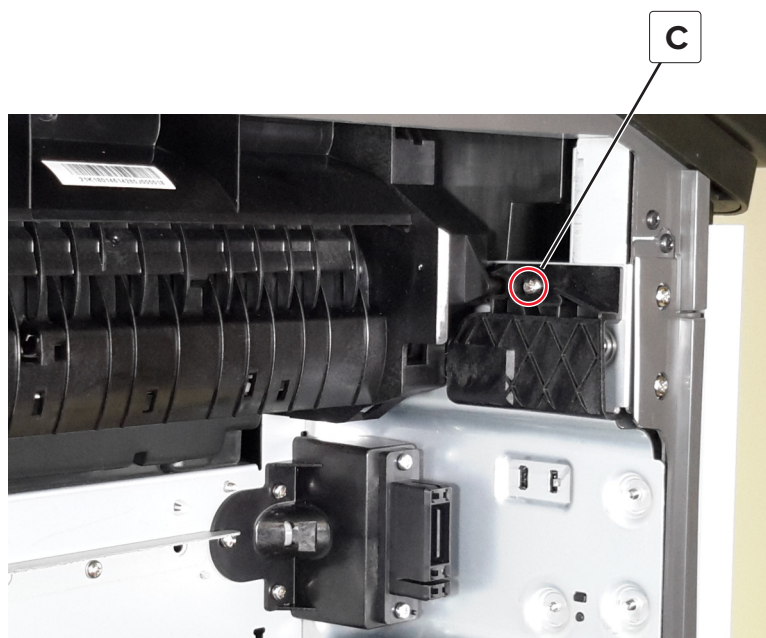
5 Disconnect the cable (D), remove the two screws (E), and then remove the redrive.

Warning—Potential Damage: The redrive may get damaged during removal if door A is closed.

Warning—Potential Damage: Be careful not to damage or change the position of the coil spring (F).
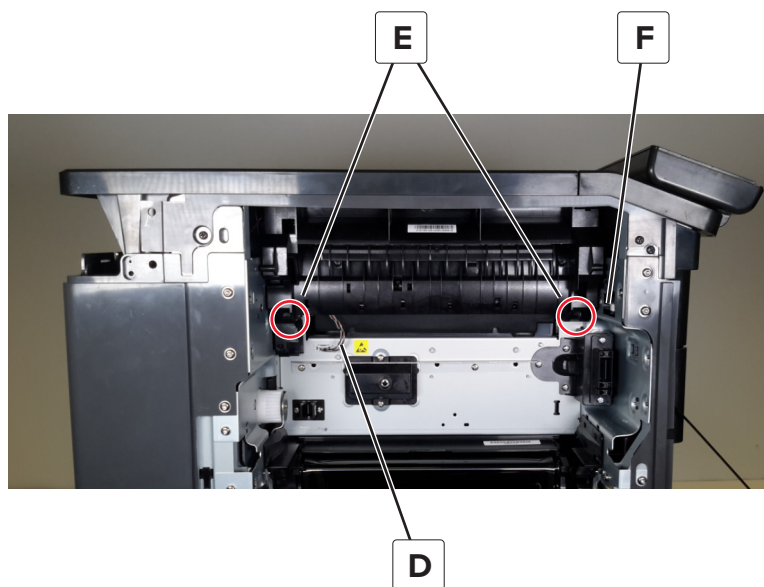
Redrive gear removal

1 Remove the fuser. See **"Fuser removal" on page 387**.

2 Remove the redrive. See **"Redrive removal" on page 401**.

3 Remove the E-clip (A), and then remove the gear.
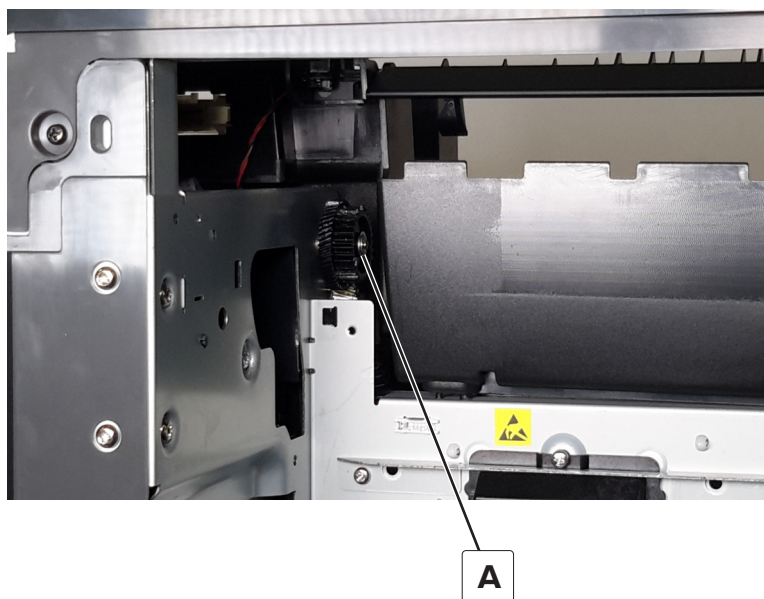
Sensor (input) removal

1 Remove the deskew roller sensor guide. See **"Deskew roller sensor guide removal" on page 392**.

2 Gently flex the shaft, and then remove the three screws (A).

3 Pull the sensor, disconnect its cable (B), and then remove it.
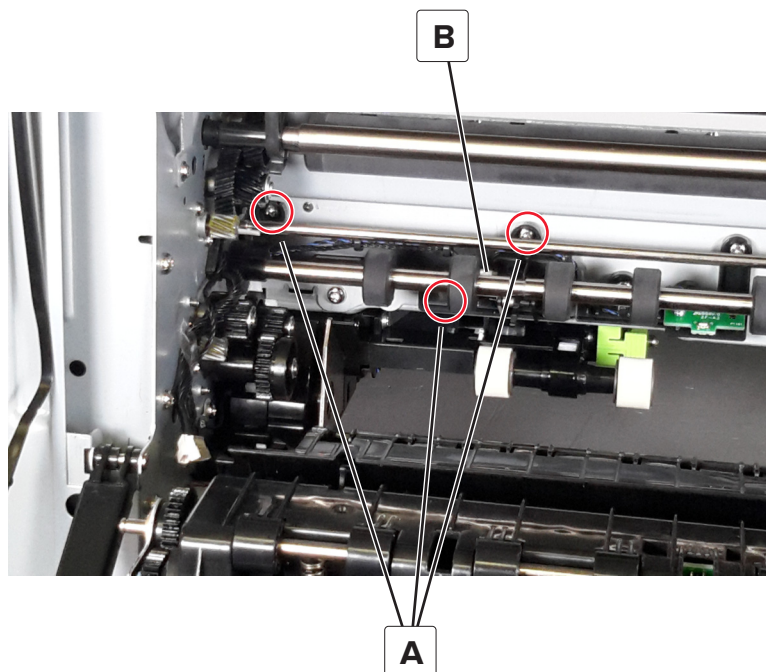
Sensor (MPF/pass-through) with deflector removal

1 Remove the left door, duplex, and MPF. See **"Left door, duplex, and MPF removal" on page 395**.

2 Remove the MPF pick roller. See **"MPF pick roller removal" on page 398**.

3 Remove the MPF pick guide. See **"MPF pick guide removal" on page 399**.

4 Remove the MPF tray stop. See **"MPF tray stop removal" on page 401**.

5 From the front, remove the two screws (A).

Repair information
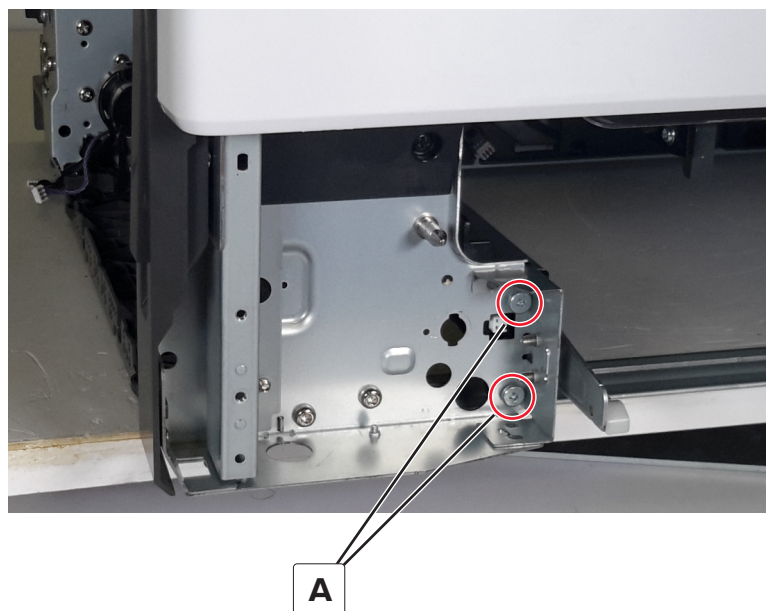
6 Release the guide, disconnect its cable (B), and then remove it.
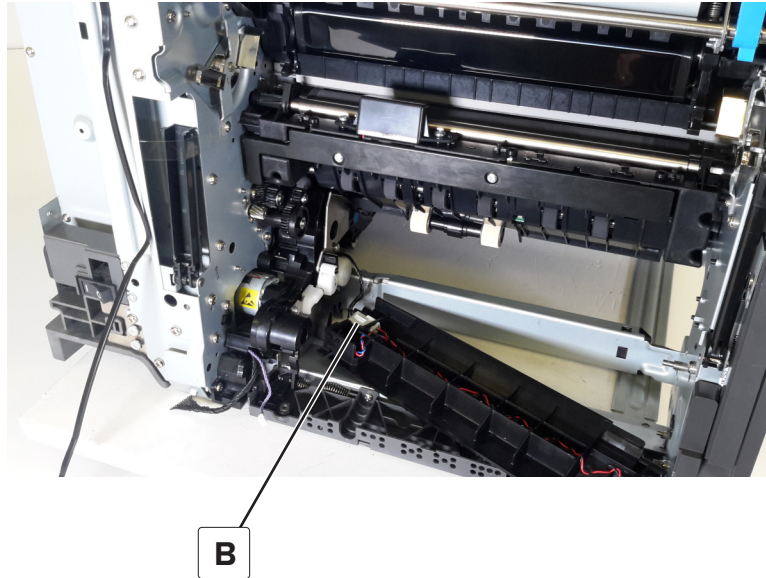
Reference edge motor gearbox removal

1 Remove the left door, duplex, and MPF. See **"Left door, duplex, and MPF removal" on page 395**.

2 Remove the MPF pick roller. See **"MPF pick roller removal" on page 398**.

3 Remove the MPF pick guide. See **"MPF pick guide removal" on page 399**.

4 Remove the MPF tray stop. See **"MPF tray stop removal" on page 401**.

5 Remove the sensor (MPF/pass-through) with deflector. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**.

6 Remove the two screws (A), and then remove the hinge support.
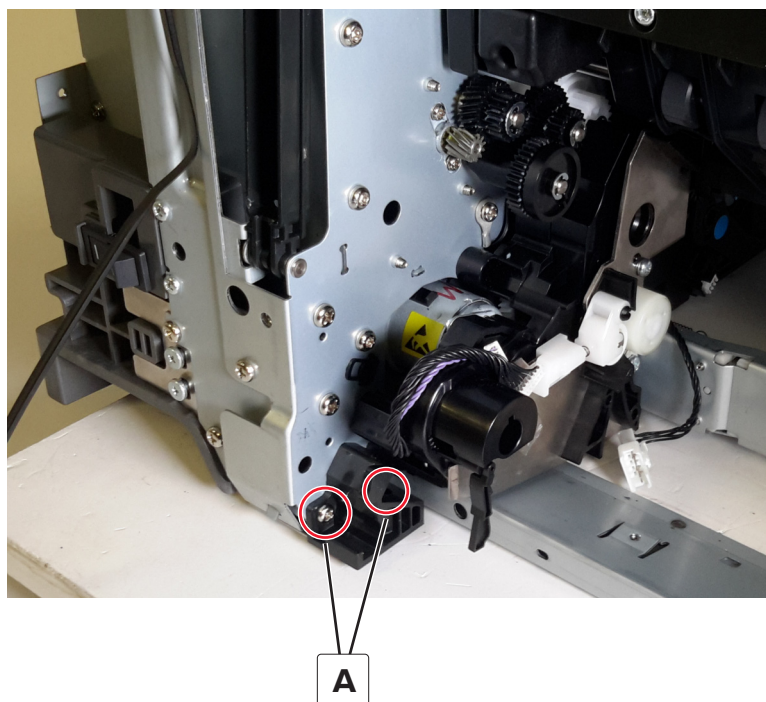
7 Remove the three screws (B).

8 Remove the screw (D) behind the isolation roller (C) guide.

Repair information
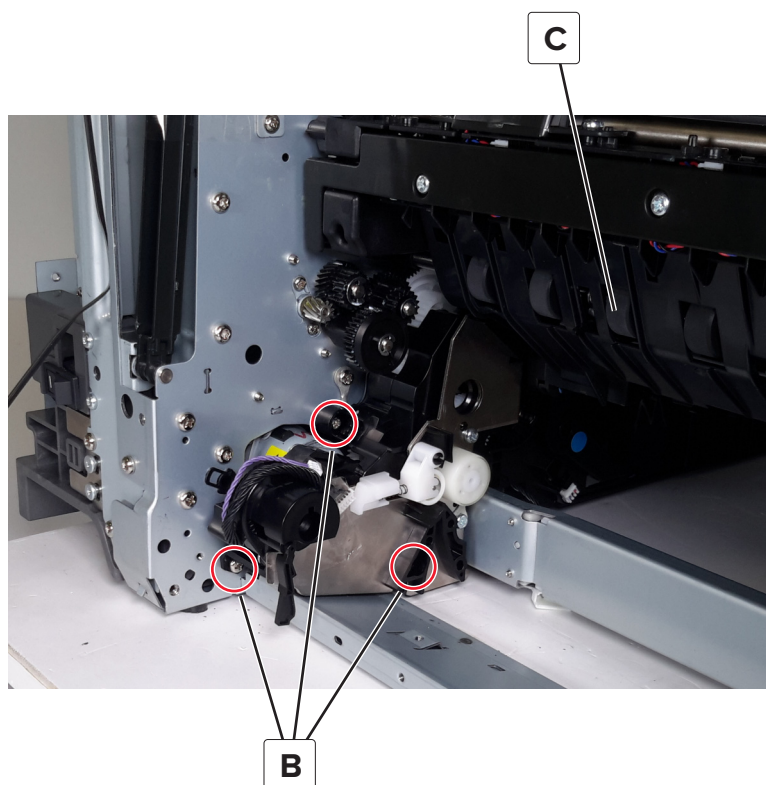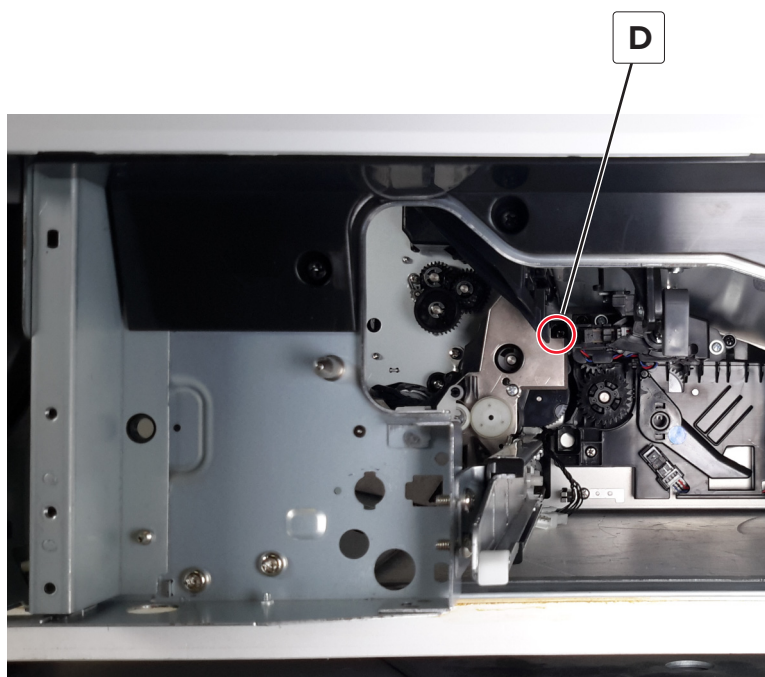
9 Carefully pull out the gearbox, and then cut the cable ties (E).

Repair information
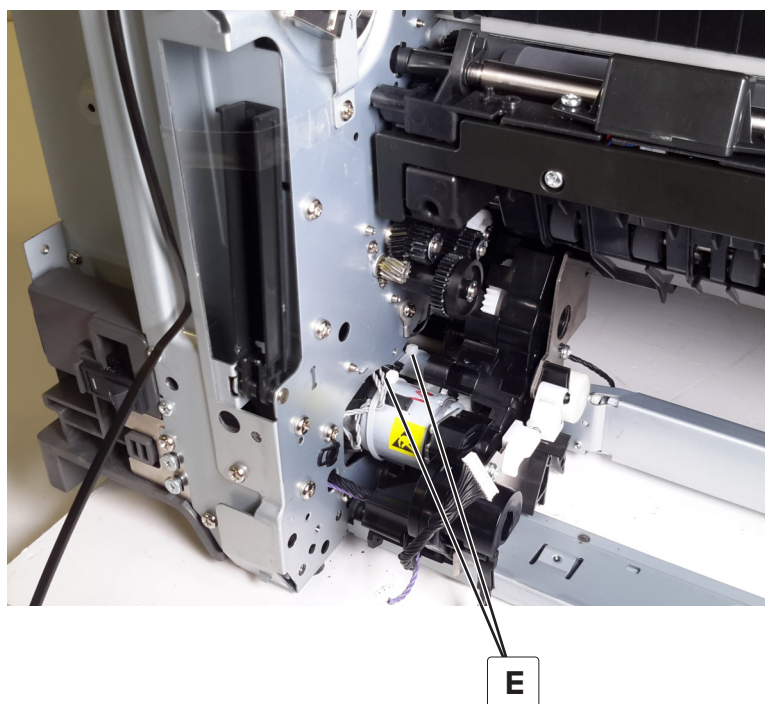
10 Remove the ground screw (F), and then disconnect the cables (G).
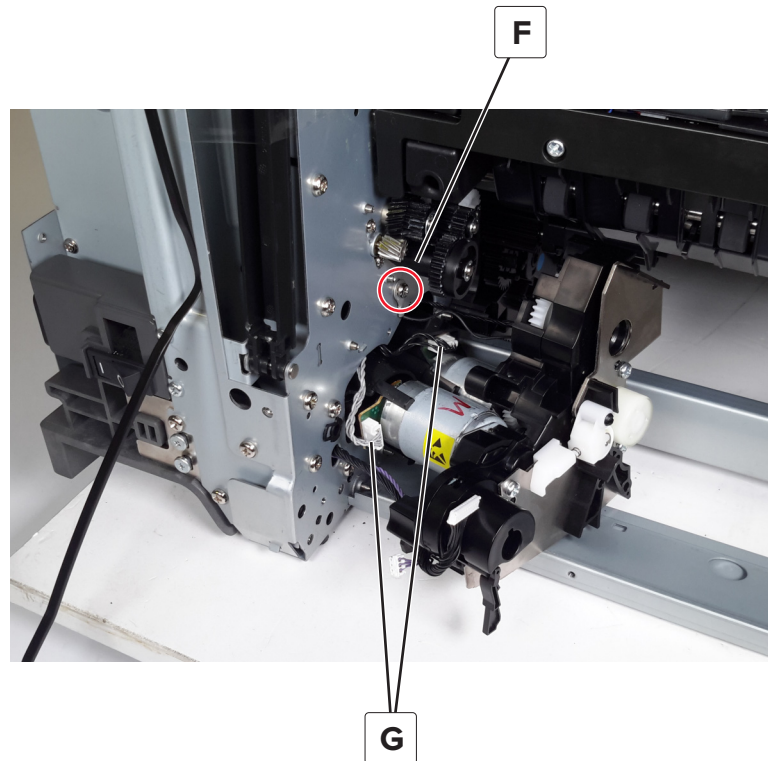
11 Remove the gearbox.

Installation note: Make sure that the motor covers are installed and the cable ties are replaced.

Isolation roller gear removal

1 Remove the left door, duplex, and MPF. See **"Left door, duplex, and MPF removal" on page 395**.

2 Remove the MPF pick roller. See **"MPF pick roller removal" on page 398**.

3 Remove the MPF pick guide. See **"MPF pick guide removal" on page 399**.

4 Remove the MPF tray stop. See **"MPF tray stop removal" on page 401**.

5 Remove the sensor (MPF/pass-through) with deflector. See **"Sensor (MPF/pass-through) with deflector removal" on page 404**.

6 To access the isolation roller gear, pull out the reference edge motor gearbox. See **"Reference edge motor gearbox removal" on page 405**.

7 Remove the E-clip (A), and then remove the duplex gears.

Installation note: Make sure that the duplex gear spring is properly installed.

8 Remove the E-clip (B), and then remove the roller gear.
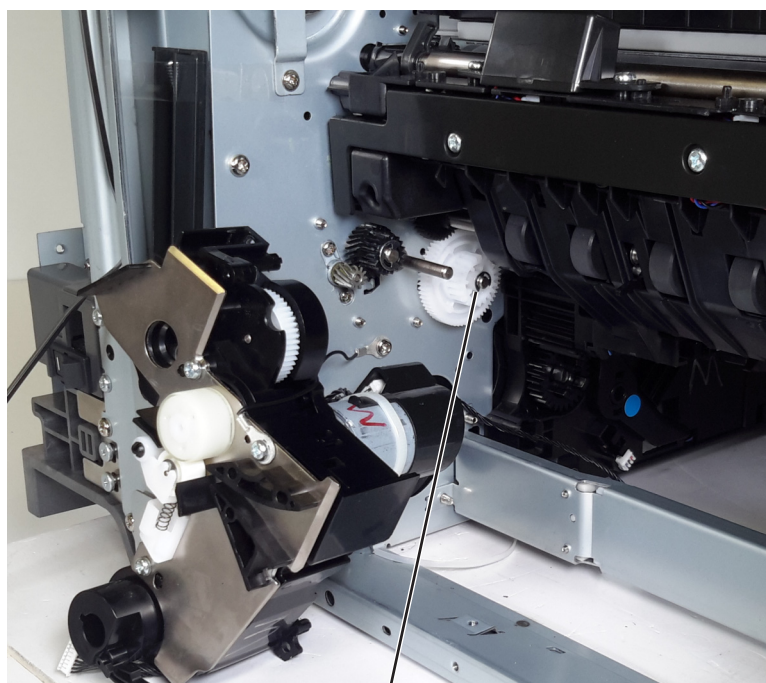
Right side removals

Vent cover removal

1 Pry the bottom edge of the cover to release.

2 Remove the cover.

Column outer cover removal

1 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

2 Remove the screw (A), and then remove the cover.

Right cover removal

1 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

2 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

3 Remove the column outer cover. See **"Column outer cover removal" on page 411**.

4 Remove the six screws (A) from the right side.

5 Remove the screw (B) from the rear side.
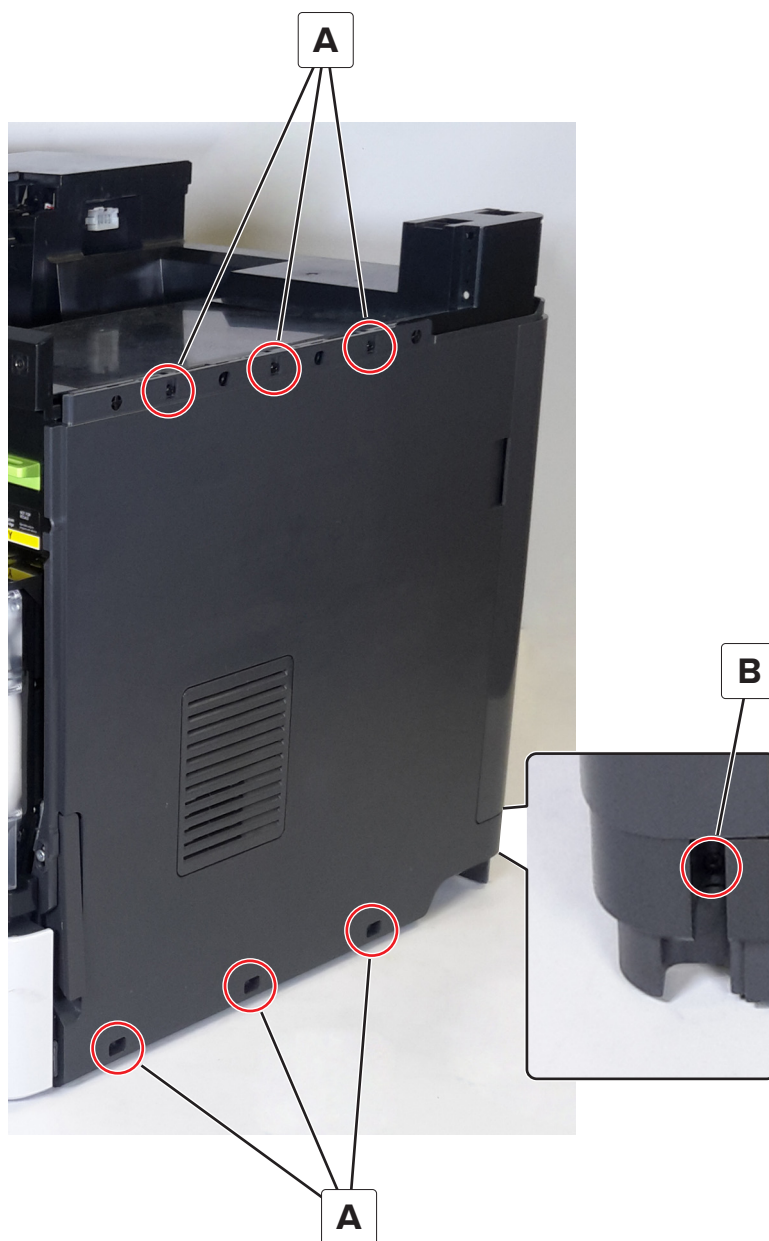
6 Open door A, and then remove the screw (C).

C

7 Raise the handhold (D), and then remove the right cover (E).

Printhead fan removal

1 Remove the right cover. See **"Right cover removal" on page 411**.

2 Remove the 10 screws (A), and then pull the inner right cover.
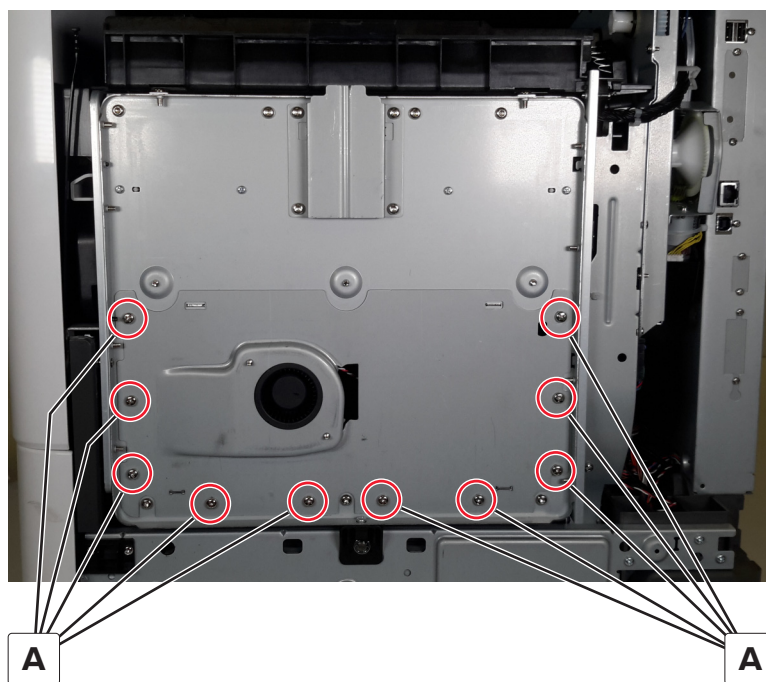
3 Disconnect the cable (B).
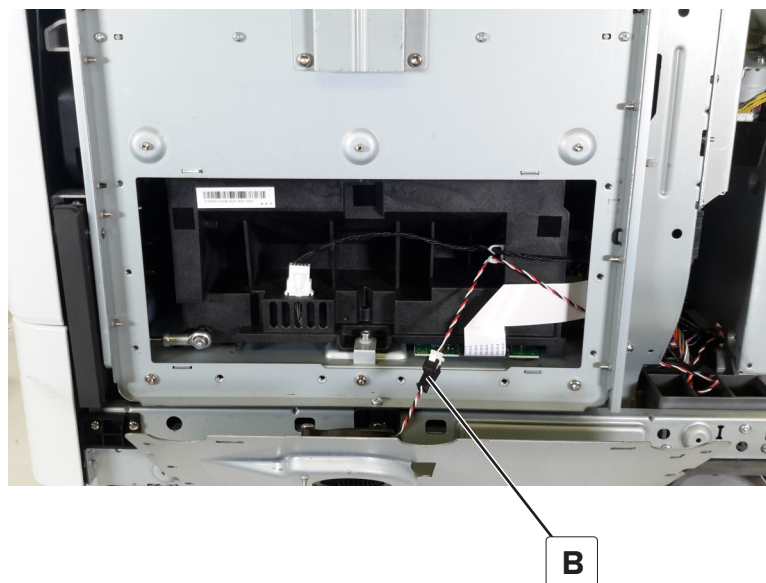
4 Remove the two screws (C), and then remove the fan.
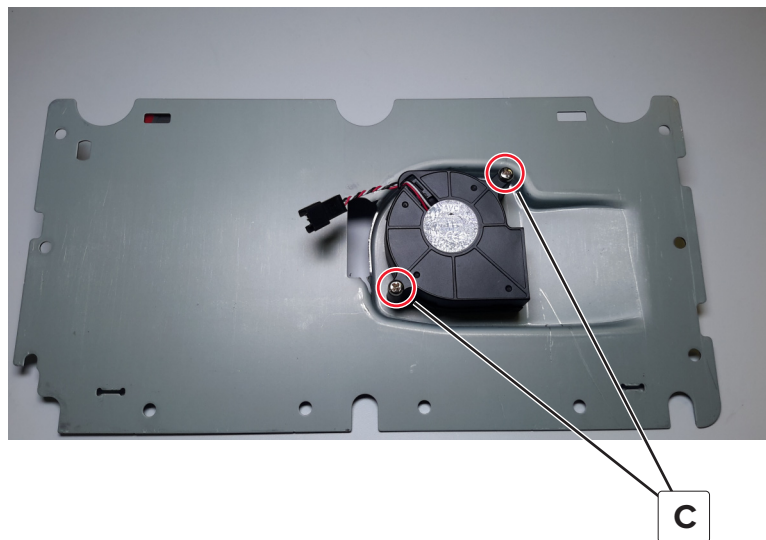
Printhead removal

1 Remove the right cover. See **"Right cover removal" on page 411**.

2 Remove the 10 screws (A).
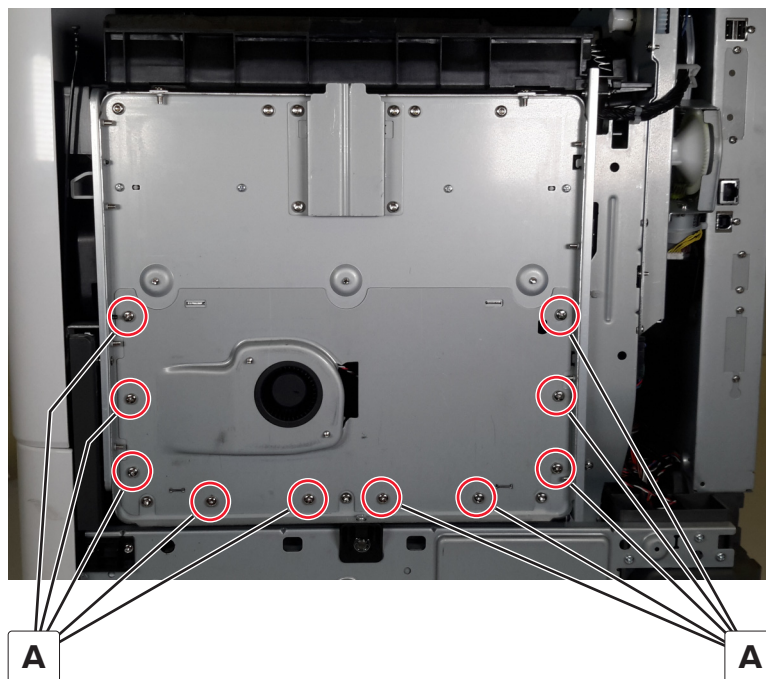
3 Pull the plate, and then disconnect the cables (B).

Warning—Potential Damage: Do not yank the ribbon cable. See **"Disconnecting ribbon cables" on page 379**.

4 Remove the screw (C), and then remove the bracket.

5 Remove the screw (D).

Warning—Potential Damage: Do not change the position of the adjuster link (E).

Installation warning: Do not overtighten the adjuster link screw.
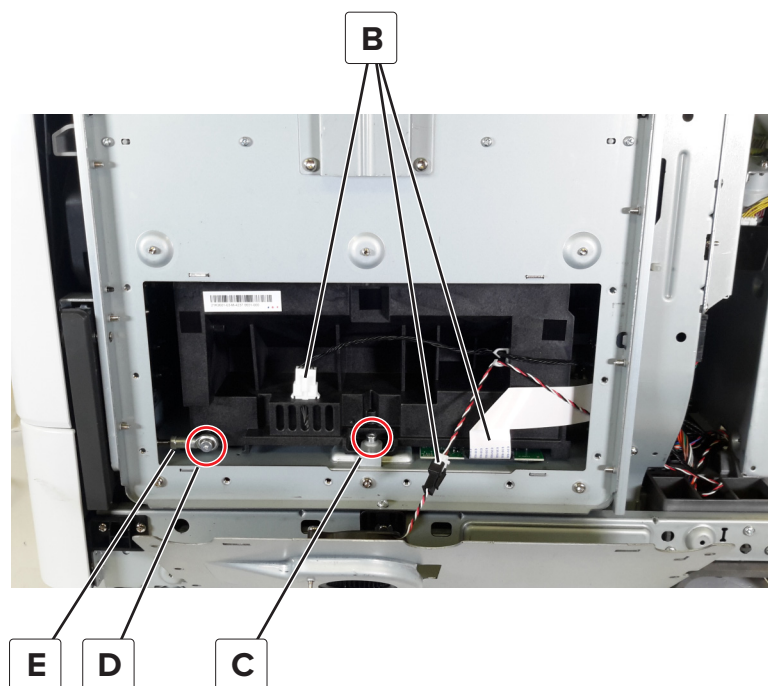
6 Release the cables from the cable guide.

7 Remove tray 1, and then remove the screw (F).

Repair information

417
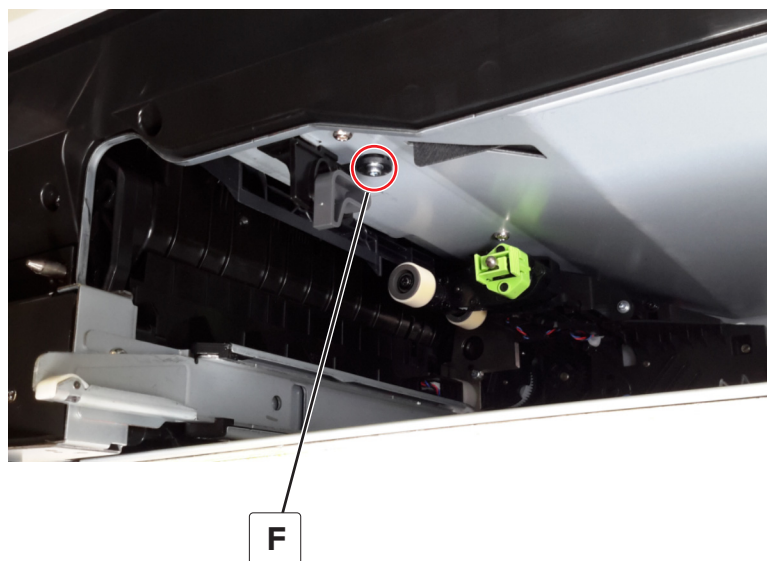
8 Release the E-clip (G).
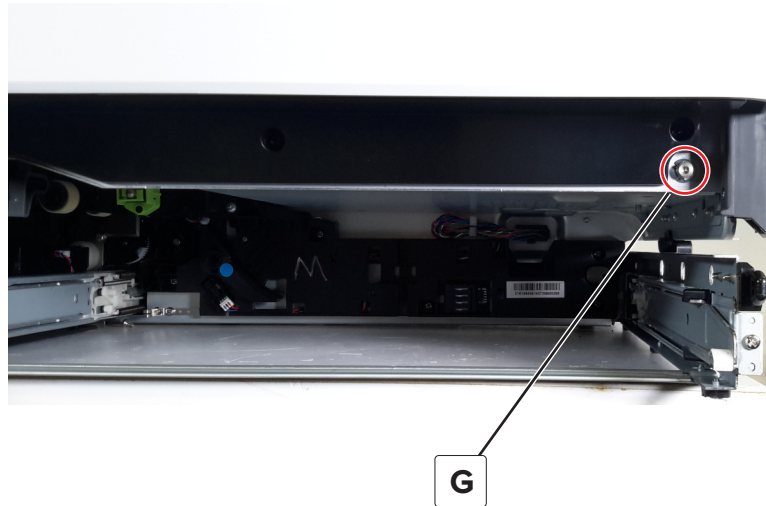
9 Remove the adjuster assembly (H), and then carefully remove the printhead (J).

Note: To minimize printhead misalignment, do not change the length of the adjuster assembly during removal.
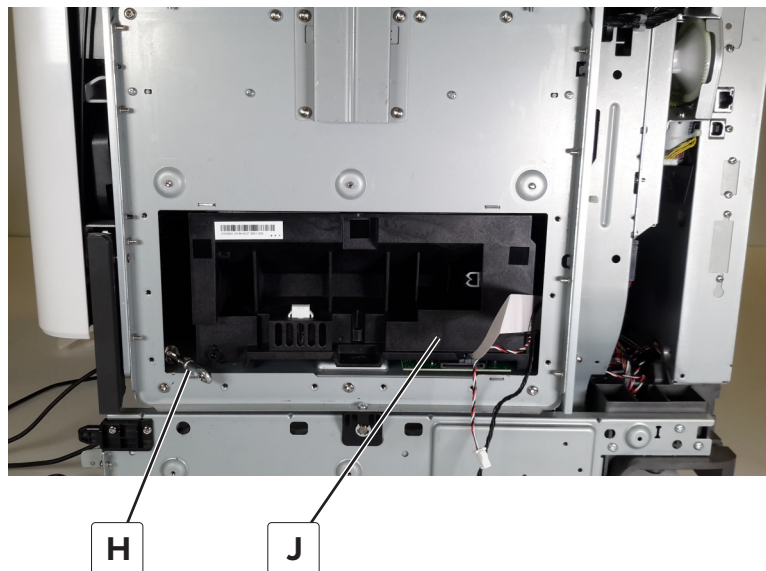
Installation warning: The edges of the frame may be sharp. Do not let the edges of the frame scrape the printhead or cables. Scraped strips or shavings may contaminate the printhead and cause print quality issues.
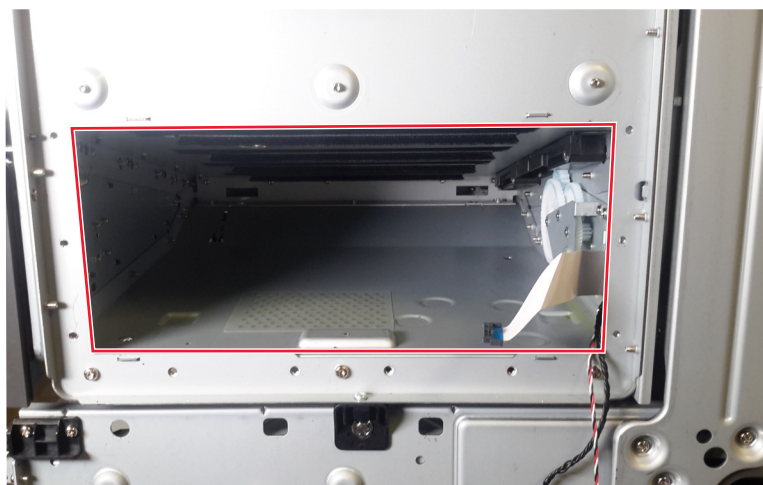
Installation notes:

a Perform the printhead alignment adjustment. See **"Printhead alignment adjustment" on page 379**.

b Perform the registration adjustment. See **"Registration adjustment" on page 384**.

Motor (printhead wiper) removal

1 Remove the right cover. See **"Right cover removal" on page 411**.

2 Remove the printhead. See **"Printhead removal" on page 416**.

3 Remove the two screws (A).

A
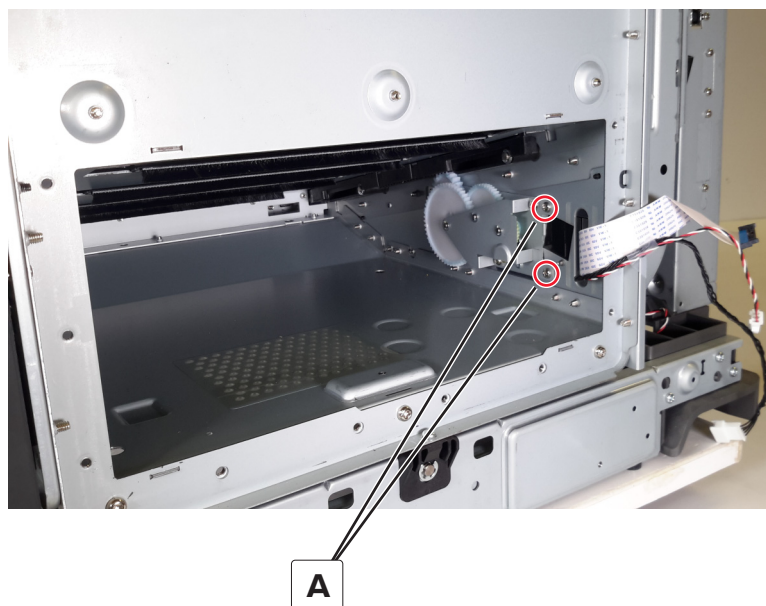
4 Pull the bracket, cut the cable tie (B), and then disconnect the cable (C).
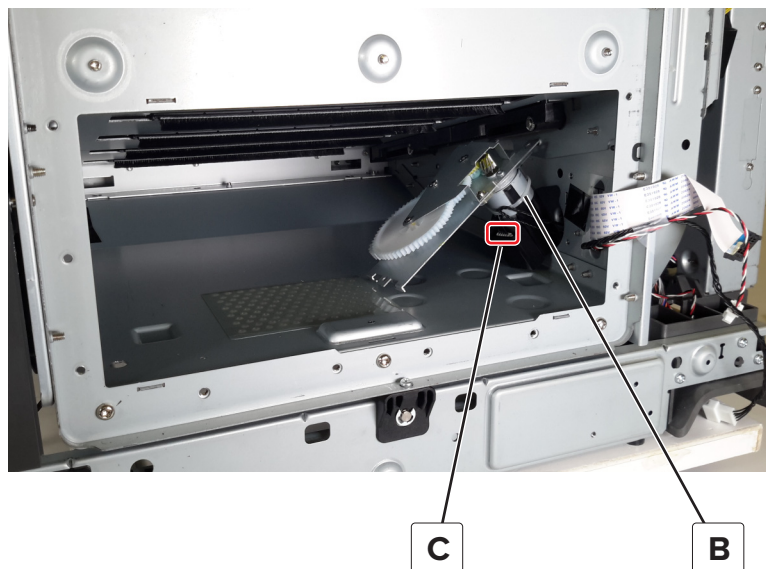
5 Remove the motor.

> **Installation note:** Make sure that the dust cover and cable tie are reinstalled.

Front side removals

Keyboard attach cover removal

1 Open door A.
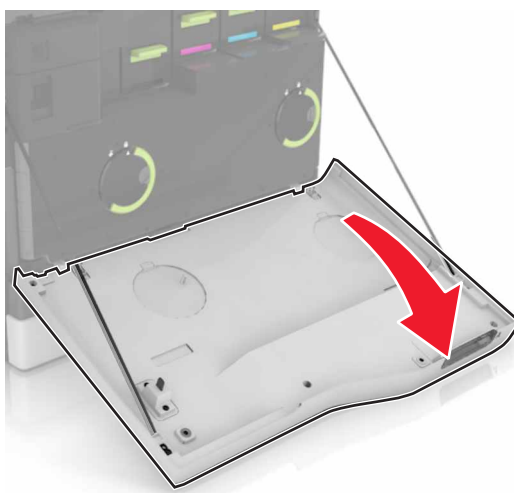
2 Remove the cover.
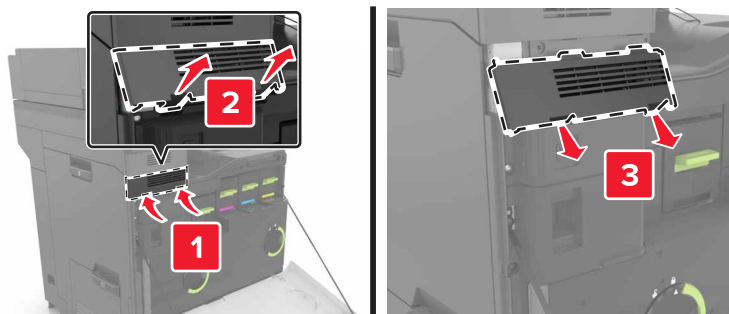
Control panel support cover removal

1 Lift the control panel.

2 Remove the standard bin insert cover. See **"Standard bin insert cover removal" on page 482**.

3 Remove the screw (A), and then gently lift and detach the cover from the printer.
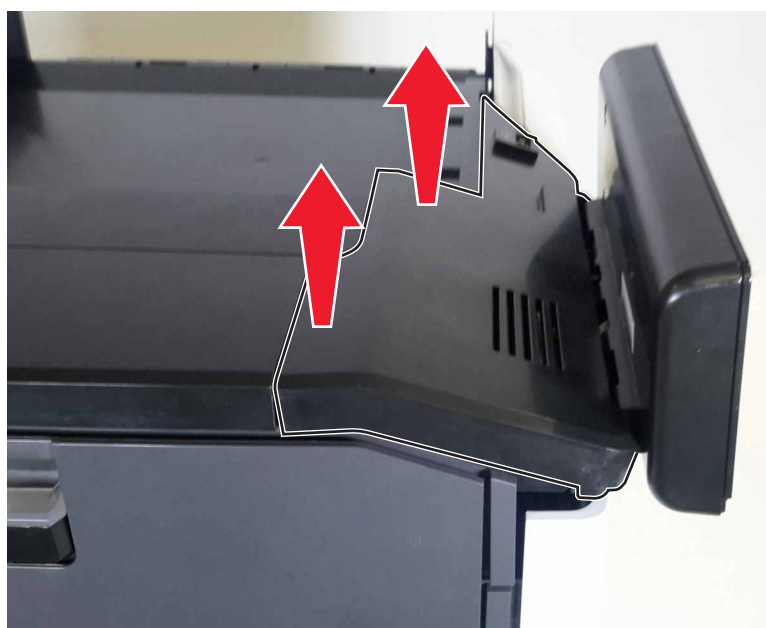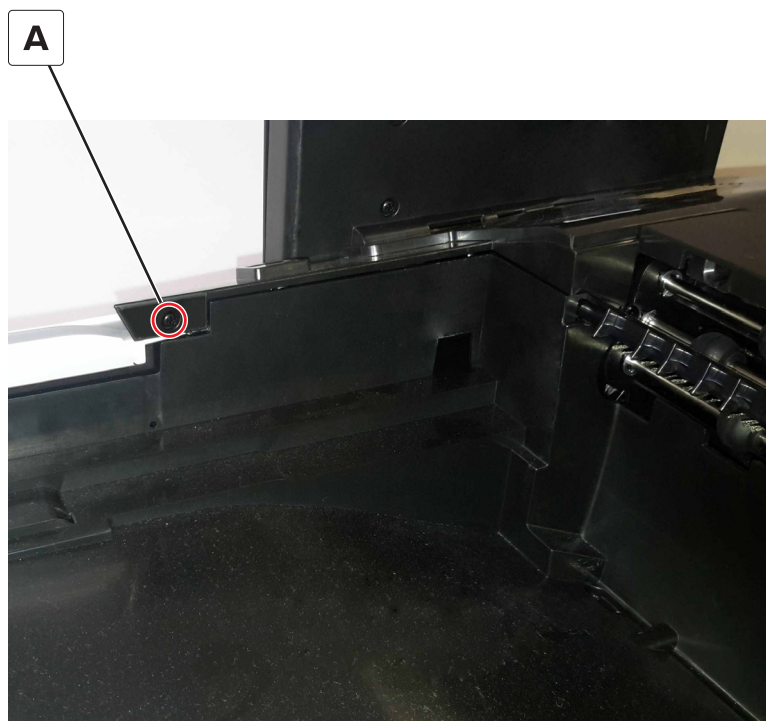
Control panel button kit removal

1 Remove the bezel.

2 Remove the four screws (A).
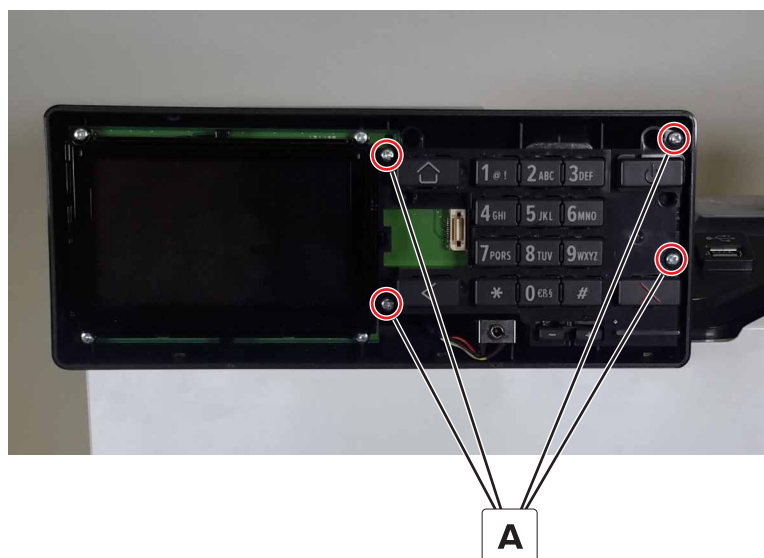
3 Remove the control panel buttons.

Control panel board removal

1 Remove the control panel button assembly. See **"Control panel button kit removal" on page 423**.

2 Remove the four screws (A).
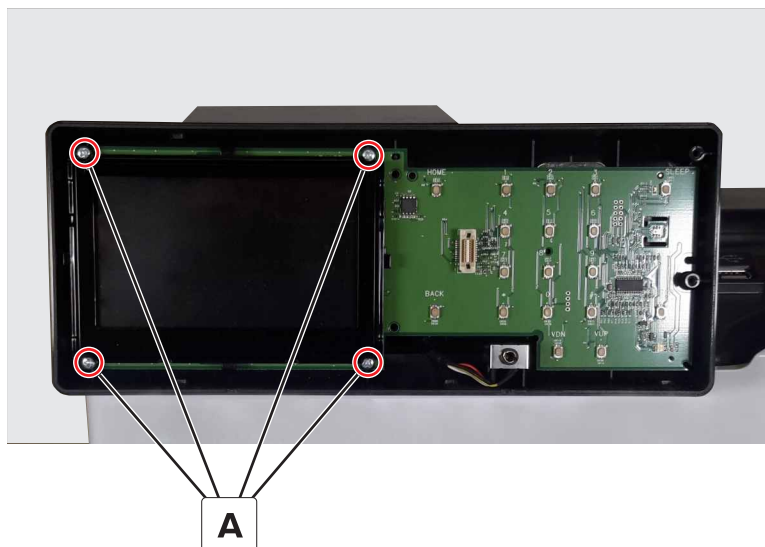
3 Disconnect the two cables (B).
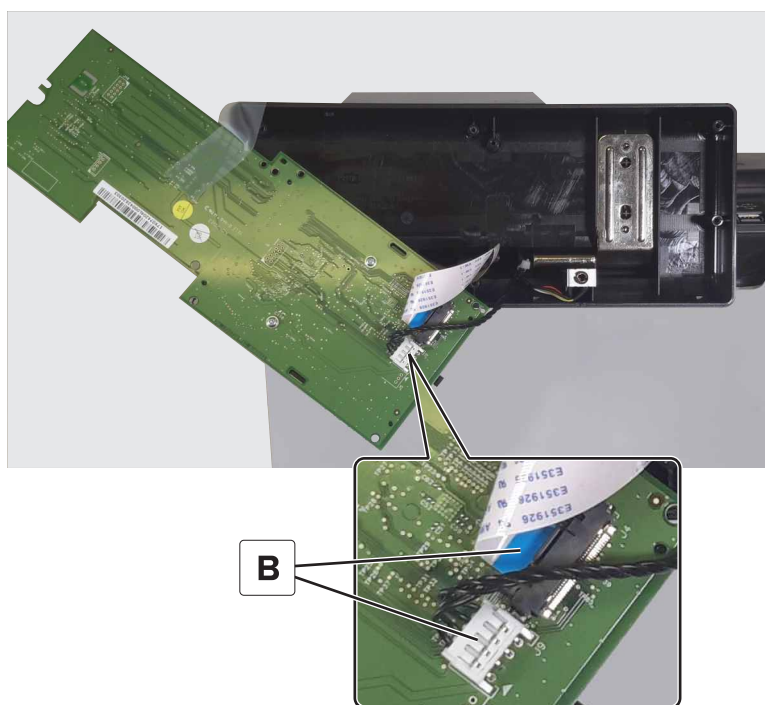
4 Remove the board.

Control panel removal

1 Remove the control panel support cover. See **"Control panel support cover removal" on page 421**.

2 Remove the control panel button kit. See **"Control panel button kit removal" on page 423**.

3 Remove the control panel board. See **"Control panel board removal" on page 424**.

4 Detach the retainer (A).
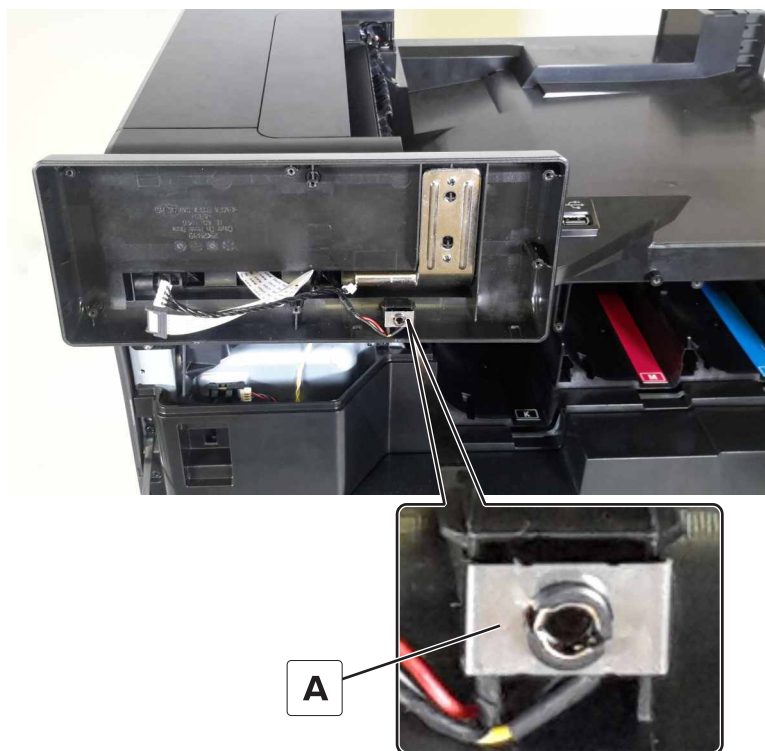
5 Remove the four screws (B).

B
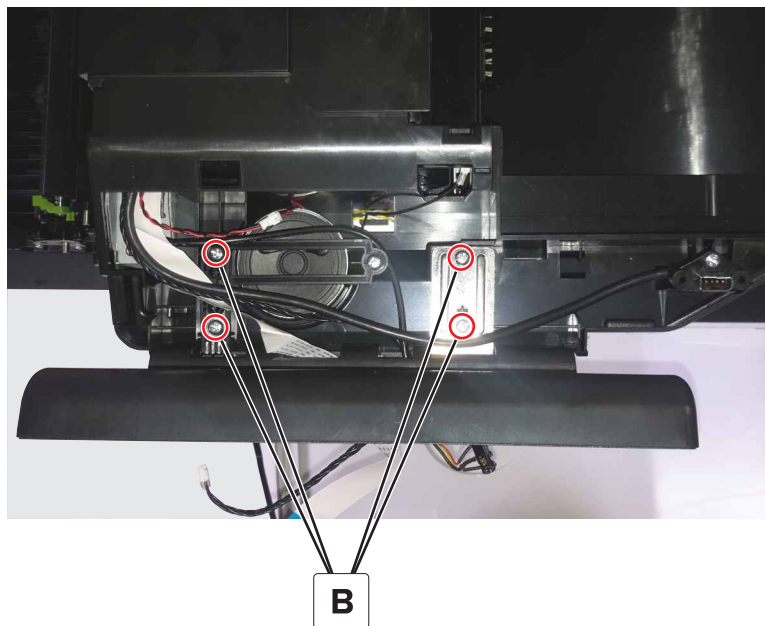
6 Remove the support.

Developer unit and photoconductor unit removal

1 Open door B.

⚠ **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.
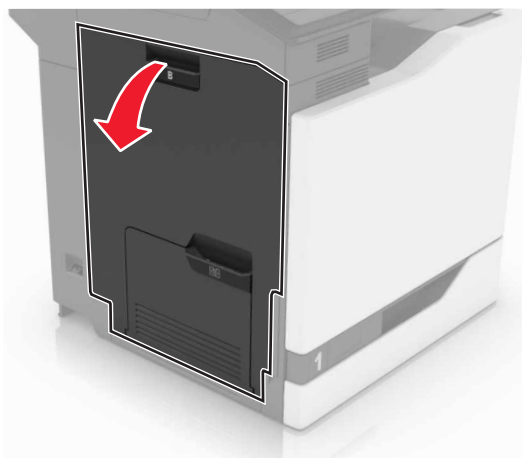
2 Open door A.
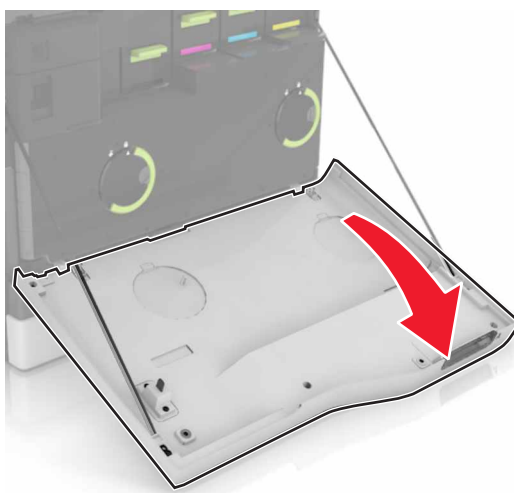
3 Remove the waste toner bottle.
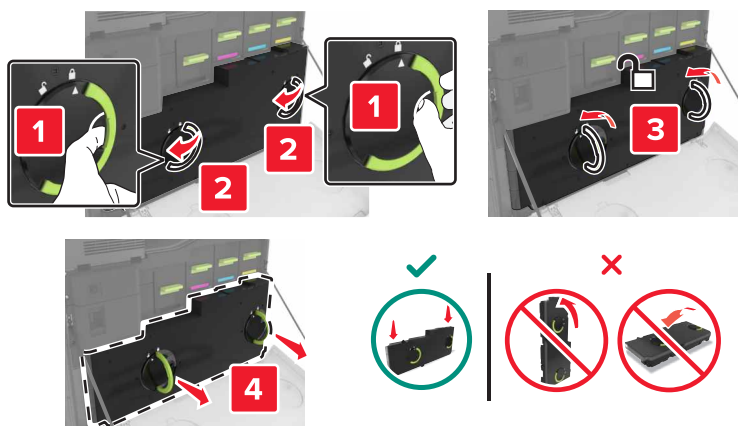
4 Remove the developer and PC unit combo.
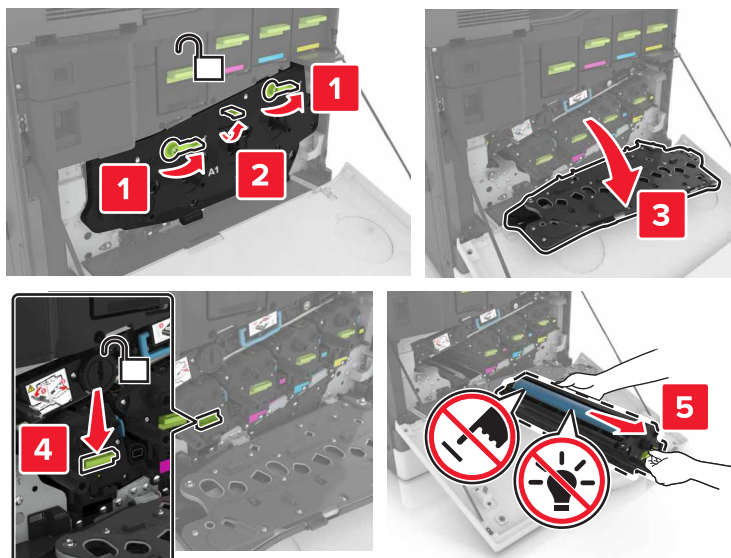
5 Remove the developer unit from the photoconductor unit.
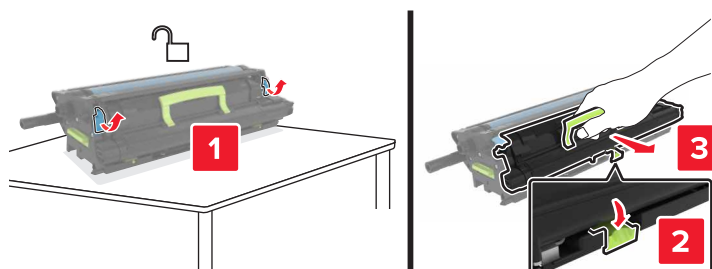
Inner upper cover removal

1 Remove the keyboard attach cover. See **"Keyboard attach cover removal" on page 420**.

2 Remove the eight screws (A), and then remove the cover.
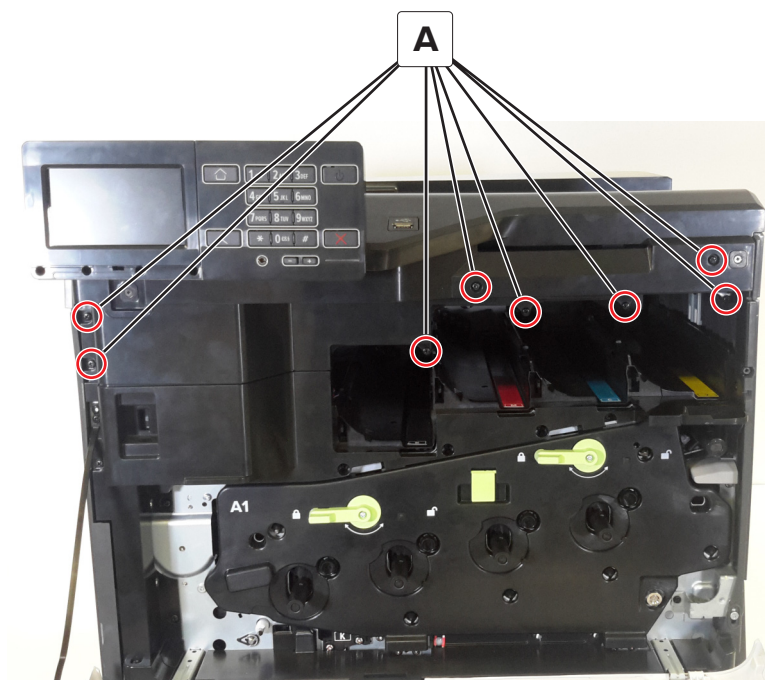
Inner lower cover removal

1 Remove the keyboard attach cover. See **"Keyboard attach cover removal" on page 420**.

2 Remove the inner upper cover. See **"Inner upper cover removal" on page 429**.

3 Remove the 10 screws (A).

Repair information
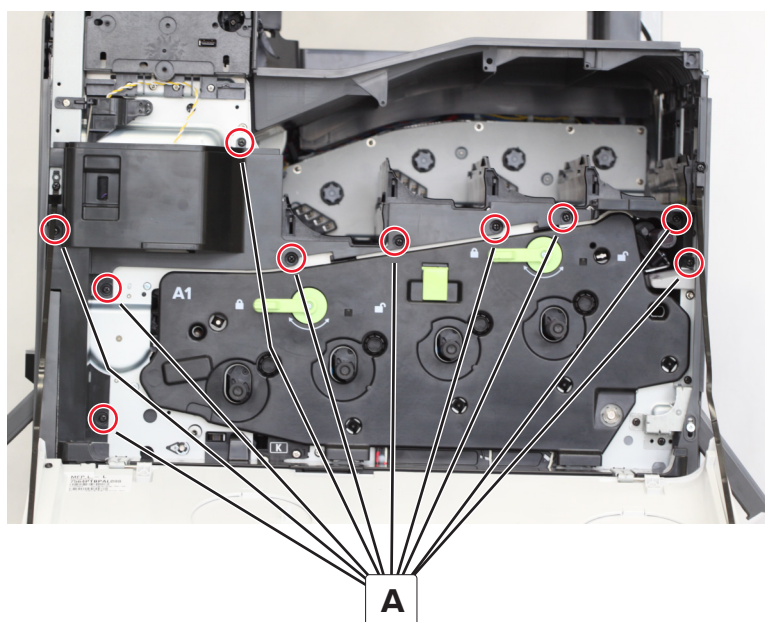
4 Remove the screw (B), and then remove the connector cover.
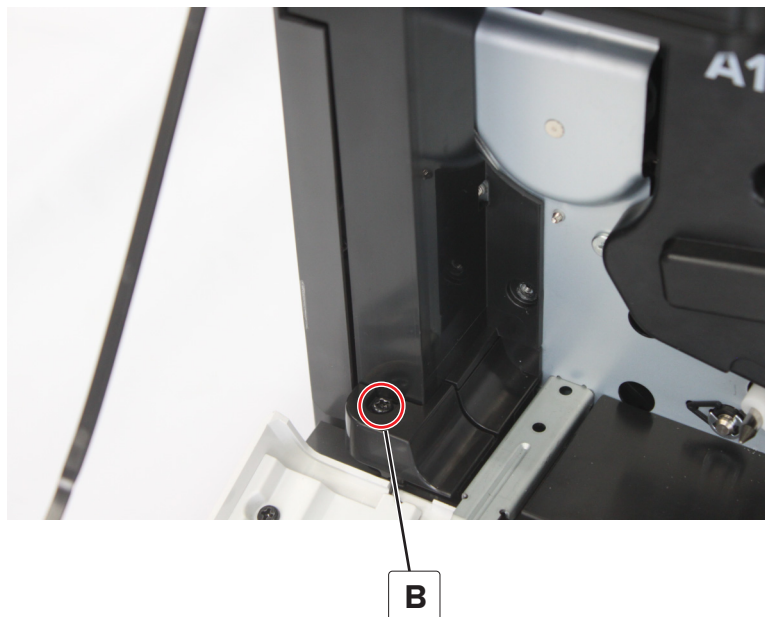
5 Remove the cover.

Front door removal

1 Open the door, and then remove the two screws (A).
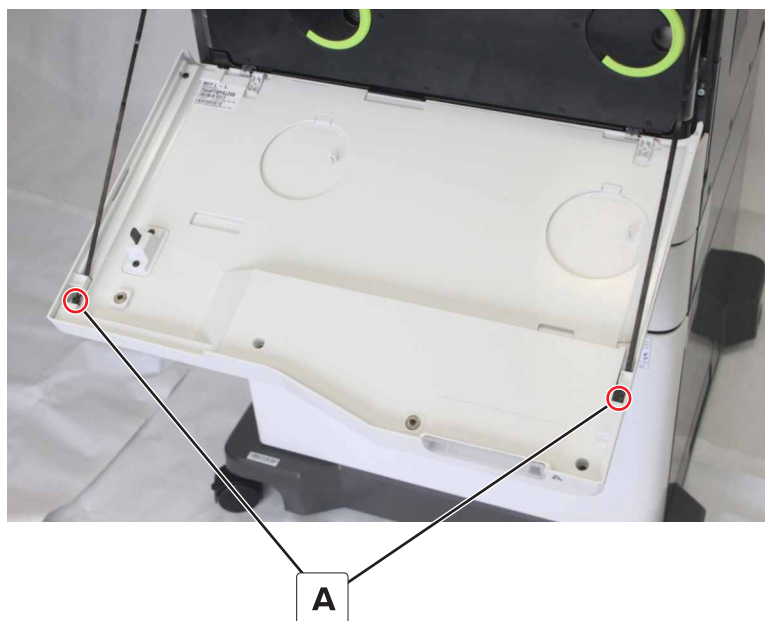
2 Remove the two screws (B) and the bracket (C).
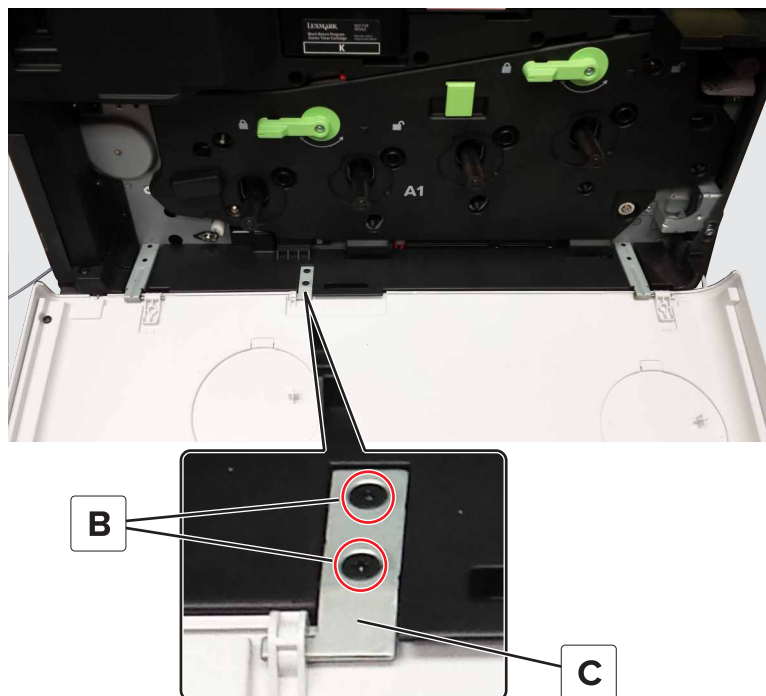
3 Move the door to the right to remove it.

Transfer belt removal

1 Open door B.

> ⚠ **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.
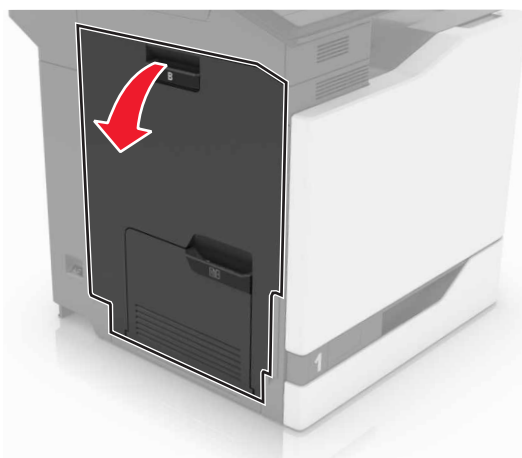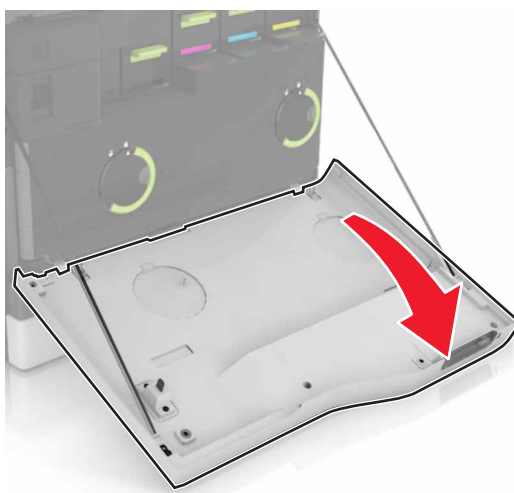
2 Open door A.

3 Remove the waste toner bottle.
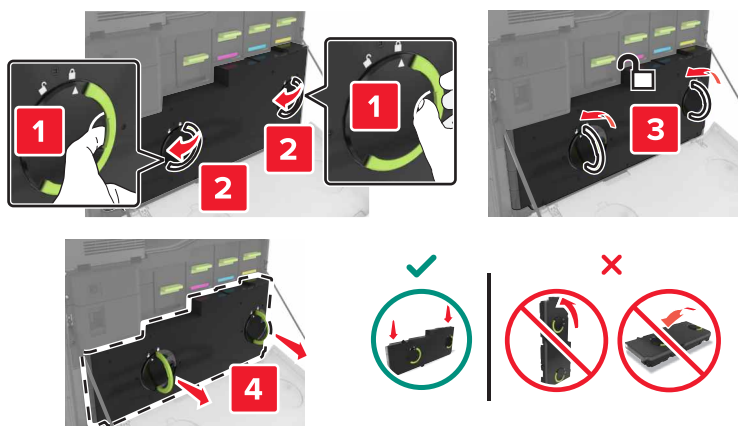
4 Open door A1.
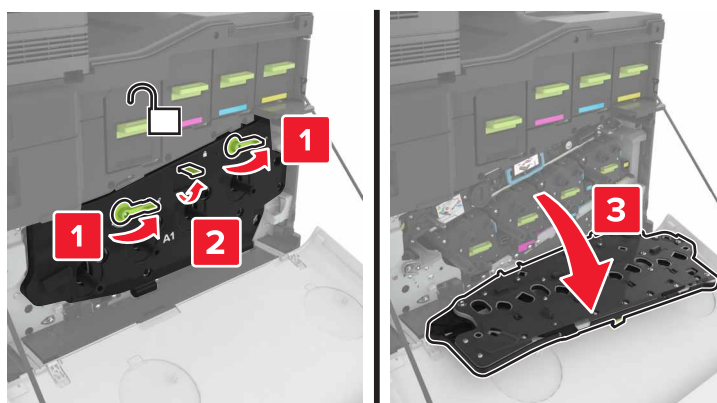
5 Remove the transfer belt.
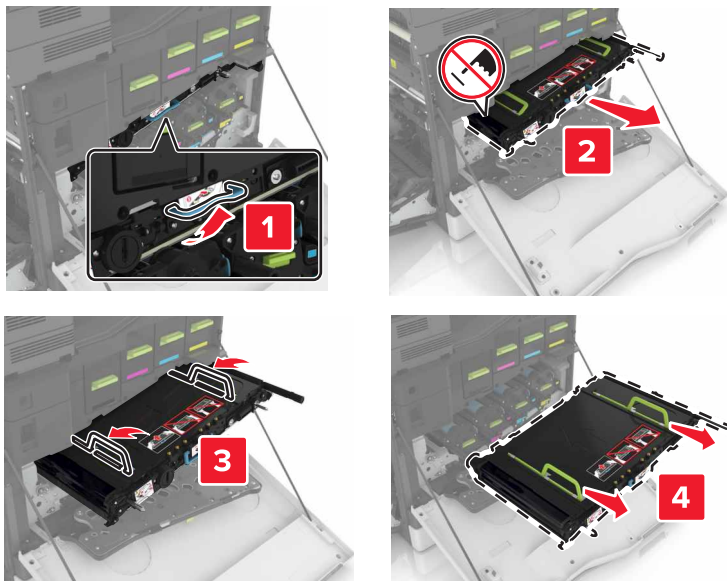
Pick roller removal
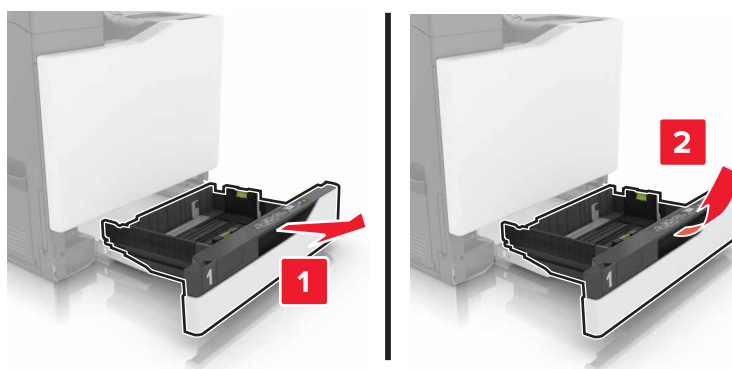
1 Remove the tray.

2 Remove the pick roller.
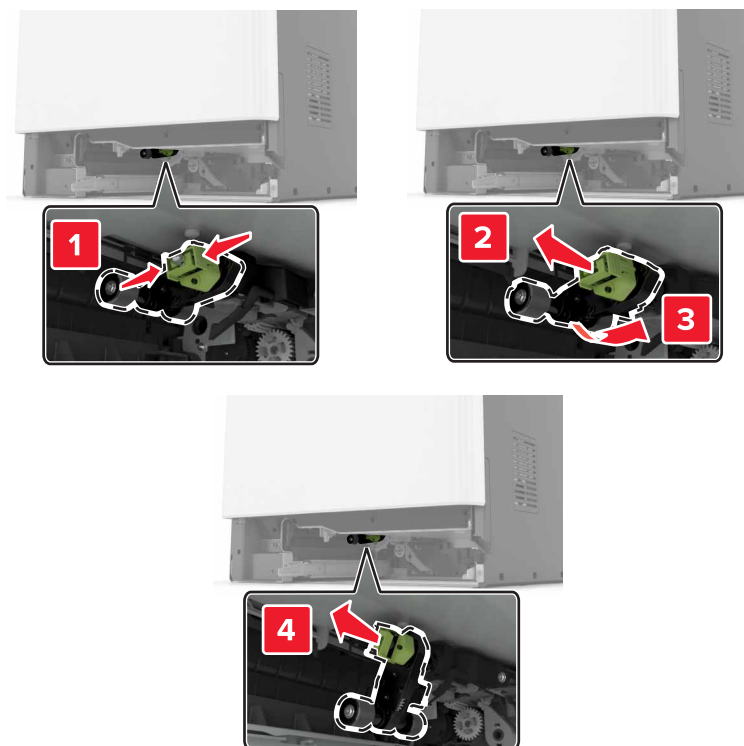
Separator pad removal

1 Pull out the tray.
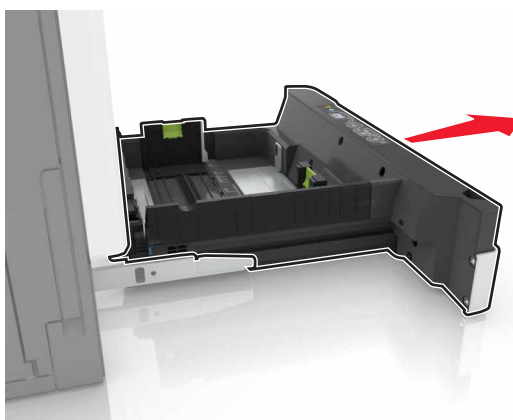
2 Remove the separator pad.
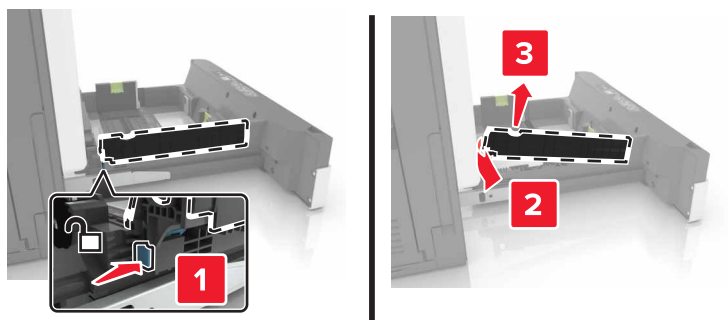
Door rod cover removal

1 Remove tray 1.
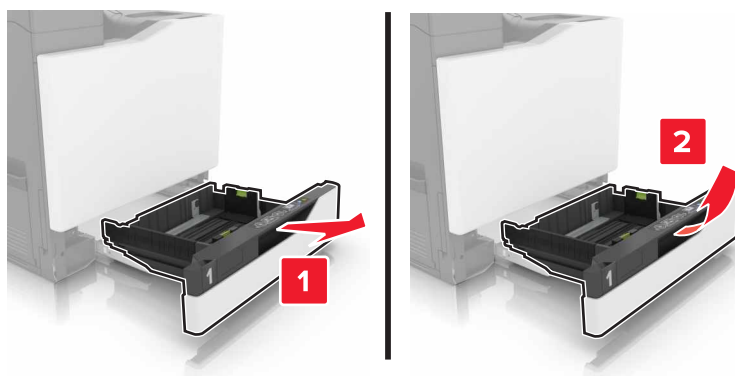
2 Remove the screw (A), and then remove the cover.
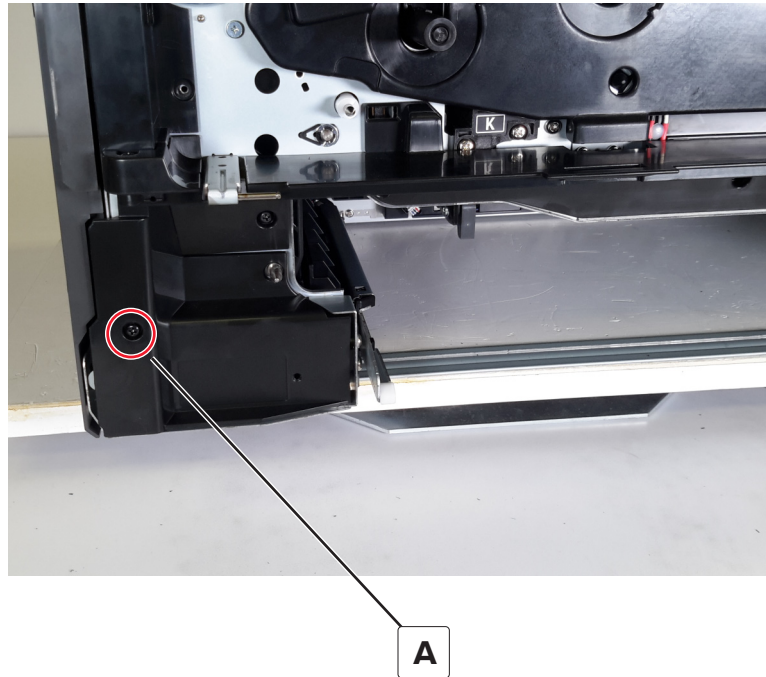
Sensor (door interlock) removal

1 Remove the keyboard attach cover. See **"Keyboard attach cover removal" on page 420**.

2 Remove the inner upper cover. See **"Inner upper cover removal" on page 429**.

3 Remove the inner lower cover. See **"Inner lower cover removal" on page 429**.

4 Remove the two screws (A), and then remove the actuator.

5 Disconnect the cable (B), and then remove the sensor.
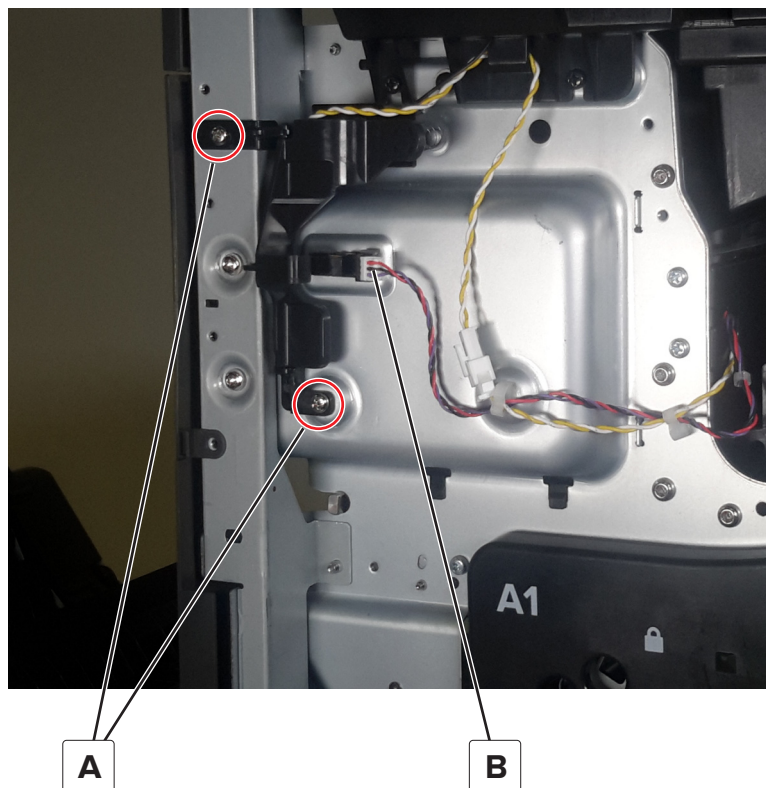
Main HVPS fan removal

1 Open door B, and then remove the screw (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.
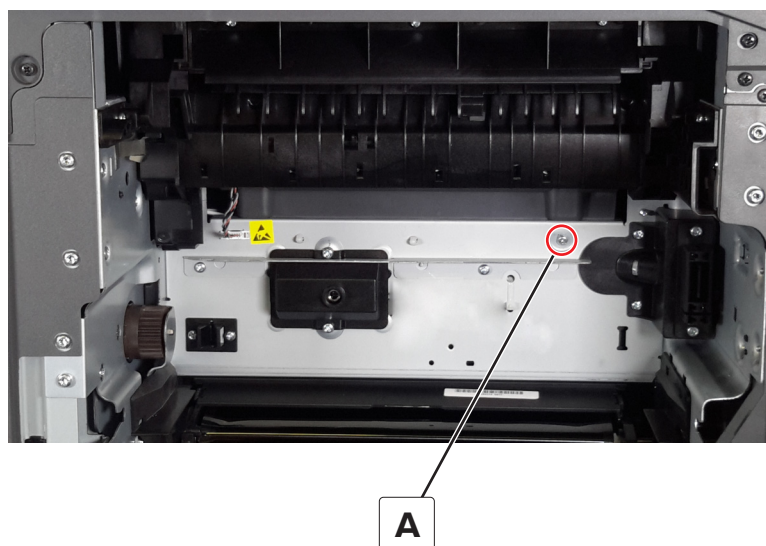
2 Open door A.

3 Remove the inner upper cover. See **"Inner upper cover removal" on page 429**.

4 Remove the inner lower cover. See **"Inner lower cover removal" on page 429**.

5 Remove the screw (B) and the duct (C).
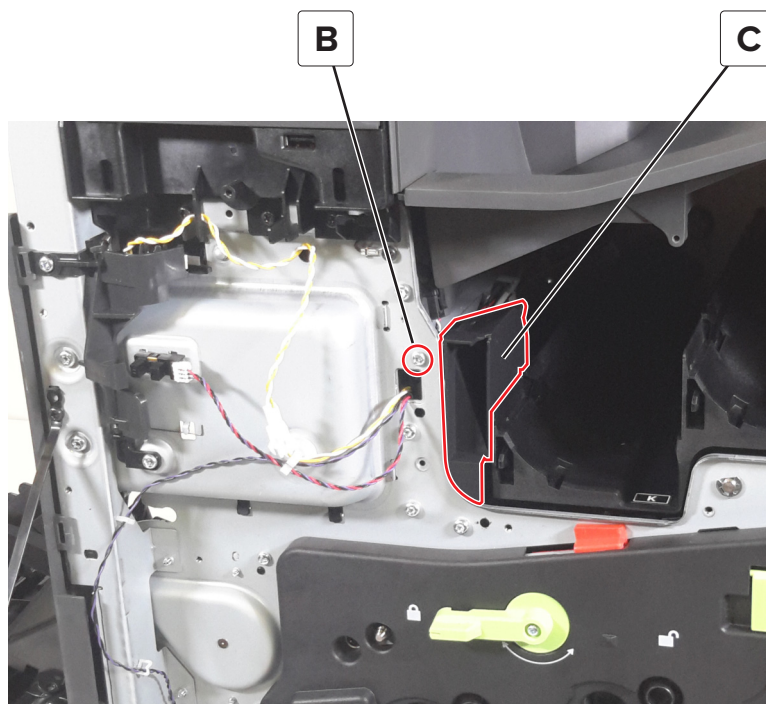
6 Remove the fan (D).
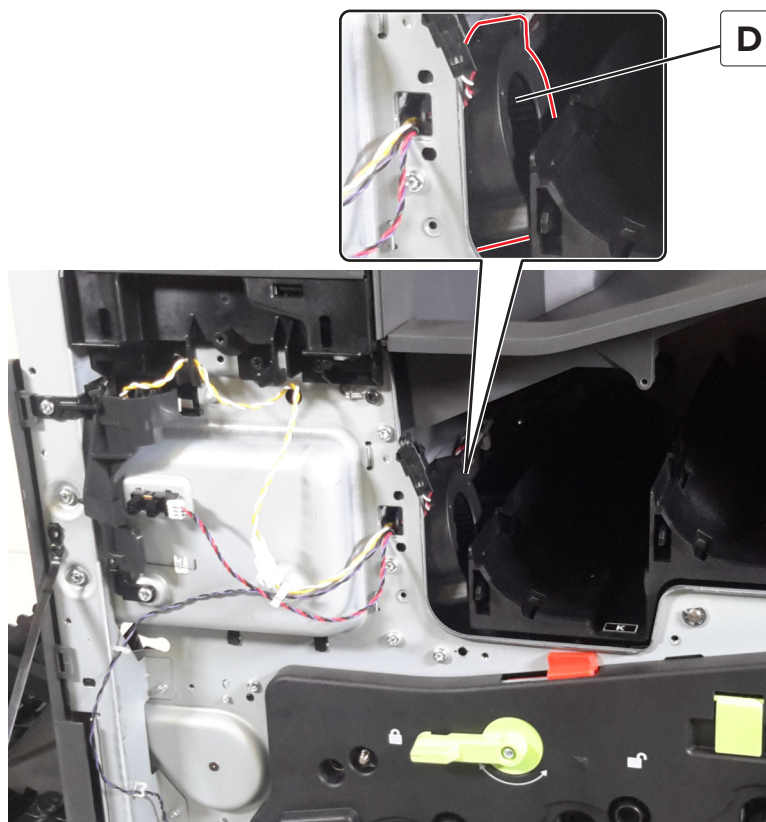
7 Disconnect the cable (E).
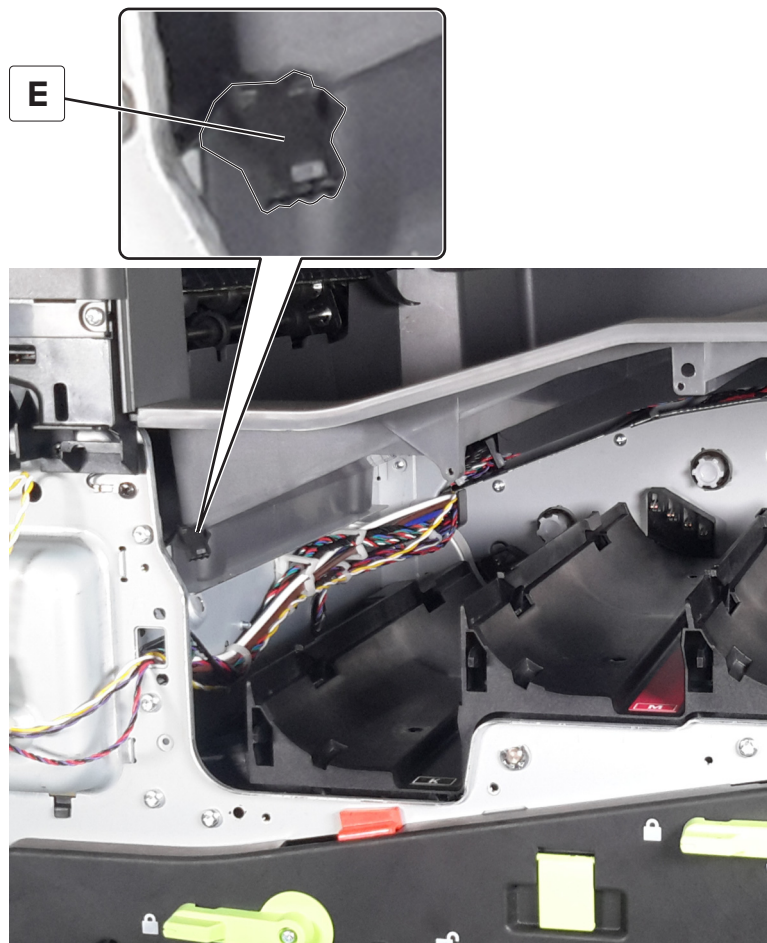
Main HVPS removal

1 Remove the keyboard attach cover. See **"Keyboard attach cover removal" on page 420**.

2 Remove the inner upper cover. See **"Inner upper cover removal" on page 429**.

3 Remove the inner lower cover. See **"Inner lower cover removal" on page 429**.

4 Remove the HVPS fan. See **"Main HVPS fan removal" on page 437**.

5 Remove the two screws (A), and then remove the bezel (B).

6 Remove the three screws (C).
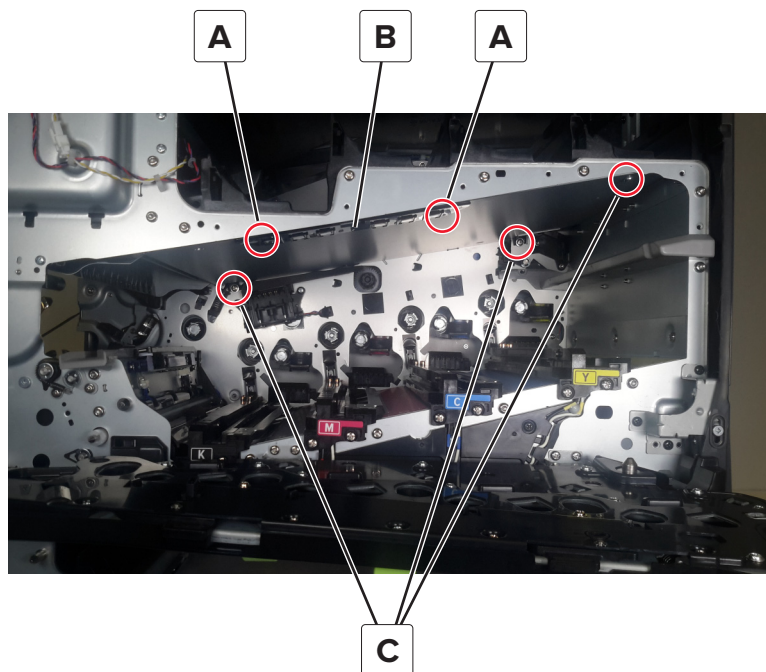
7 Remove the toner cartridge guide.

8 Disconnect the cable (D).
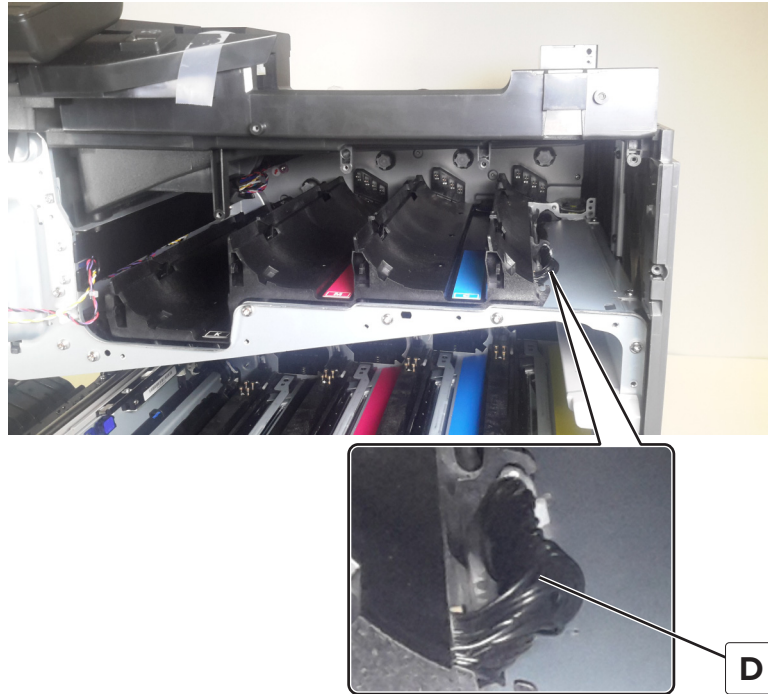
9 Lift the rear end of the HVPS to release, and then remove the HVPS.

PC unit/developer door removal

1 Remove the keyboard attach cover. See **"Keyboard attach cover removal" on page 420**.

2 Remove the inner upper cover. See **"Inner upper cover removal" on page 429**.

3 Remove the inner lower cover. See **"Inner lower cover removal" on page 429**.

4 Remove the front door. See **"Front door removal" on page 430**.

5 Remove the four screws (A).
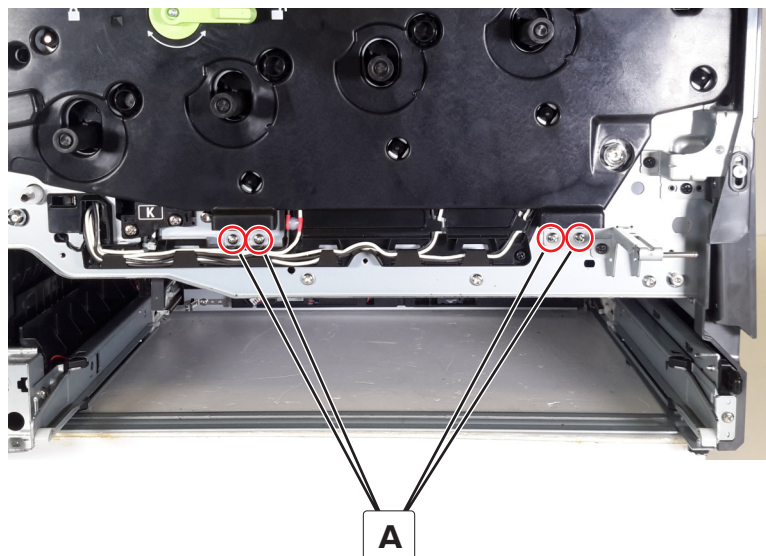
6 Open door A1, remove the four screws (B), and then remove the door.
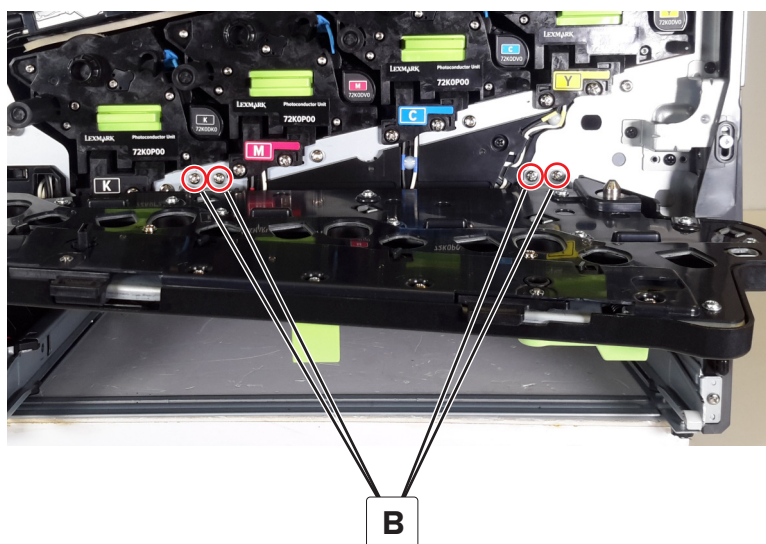
Lower front cover removal

1 Remove the keyboard attach cover. See **"Keyboard attach cover removal" on page 420**.

2 Remove the inner upper cover. See **"Inner upper cover removal" on page 429**.

3 Remove the inner lower cover. See **"Inner lower cover removal" on page 429**.

4 Remove the front door. See **"Front door removal" on page 430**.

5 Remove the door rod cover. See **"Door rod cover removal" on page 435**.

6 Remove the four screws (A), and then remove the cover.
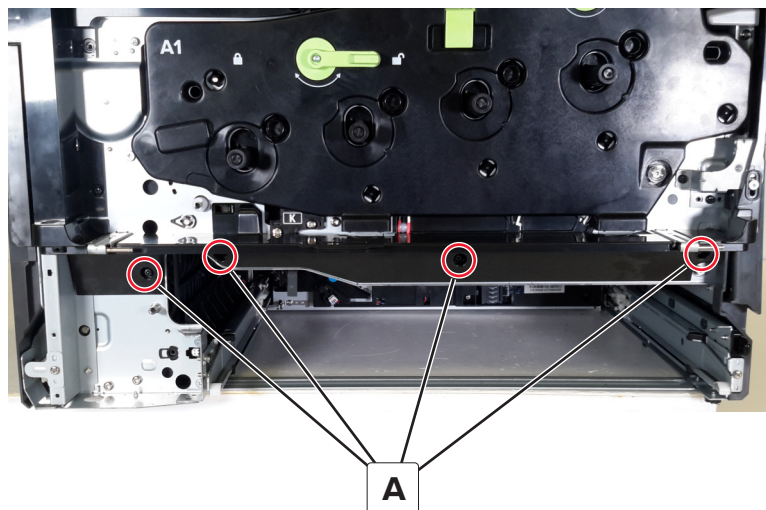
Paper feeder removal

1 Remove the pick roller. See .

2 Press and hold the latch (A), and then rotate and remove the paper stopper (B).
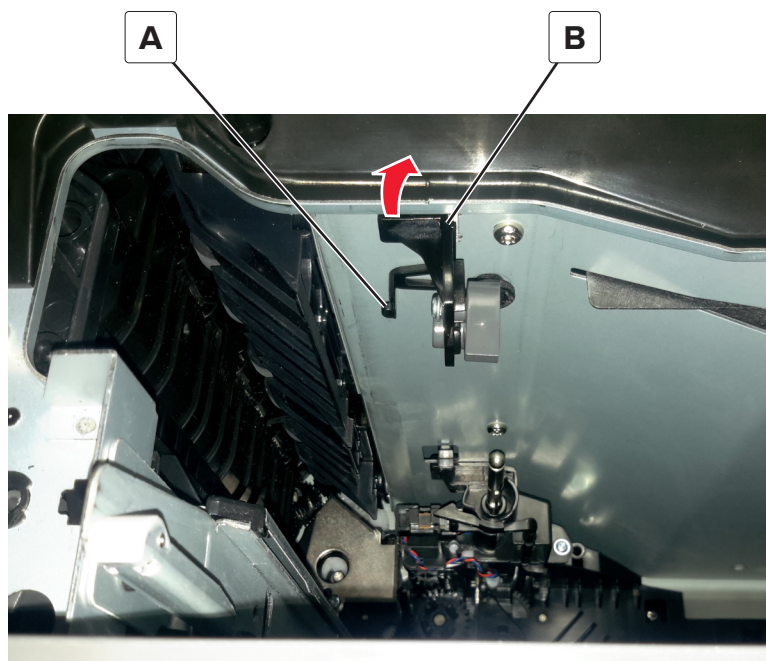
3 Lower the latch (C) to release, and then remove the feeder bearing (D).

   Note: The shaft may need to be slightly rotated to align it with the hole on the feeder bearing.
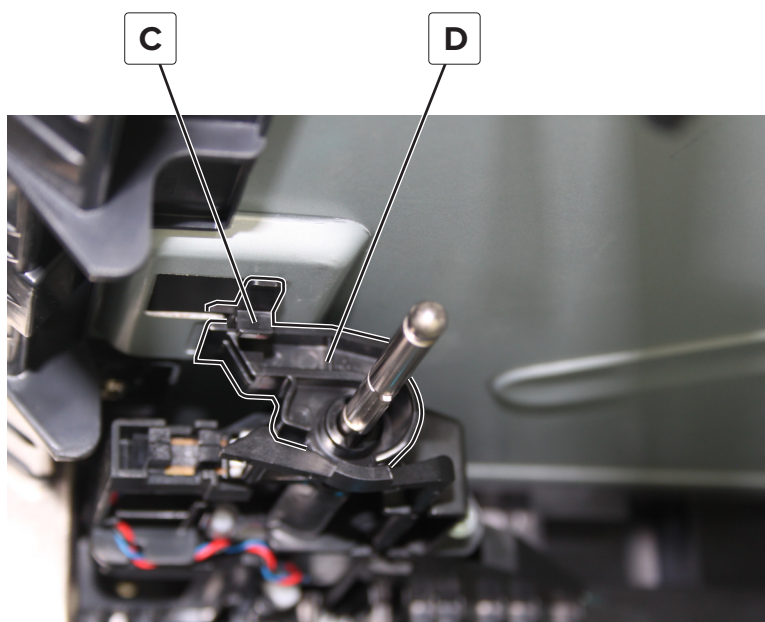
4 Release the cable from its guide (E), and then disconnect it (F).

5 Remove the five screws (G).
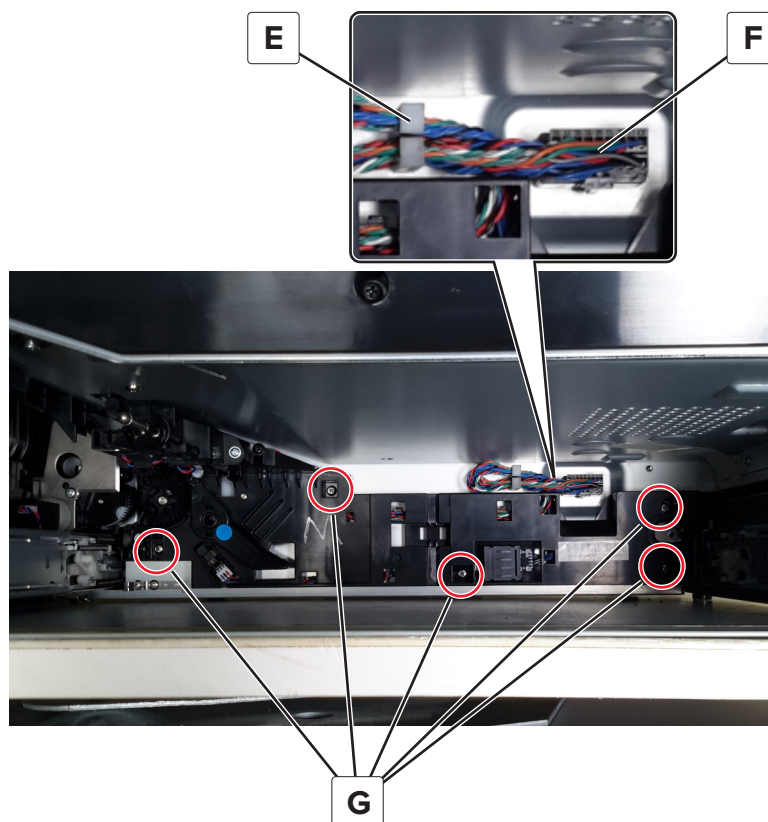
6 Pull out, and then remove the feeder.

Sensor (auto alignment) removal

1 Remove the developer and PC unit combos.

2 Remove the transfer belt. See **"Transfer belt removal" on page 431**.

3 Remove the screw (A) from the appropriate sensor.
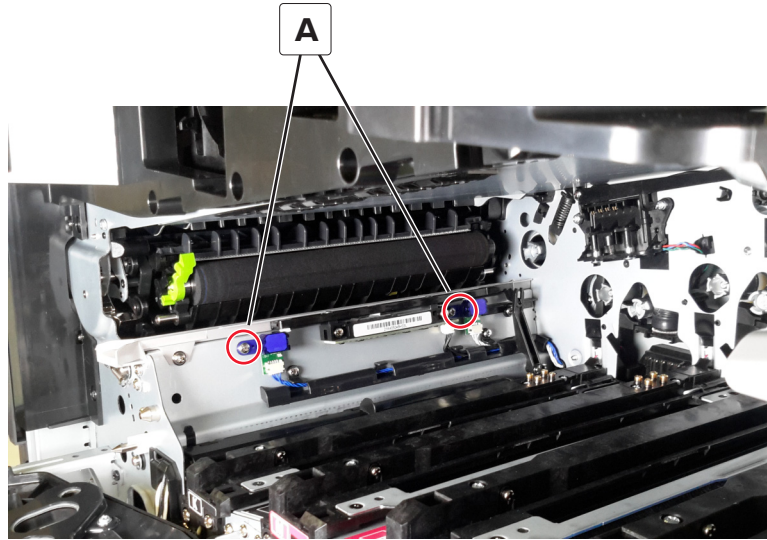
4 Disconnect, and then remove the sensor.

Sensor (TPS) removal

1 Remove the developer and PC unit combos.

2 Remove the transfer belt. See **"Transfer belt removal" on page 431**.

3 Remove the two screws (A), and then release the sensor from the fork (B).

Installation note: Engage the sensor tab with the fork properly.
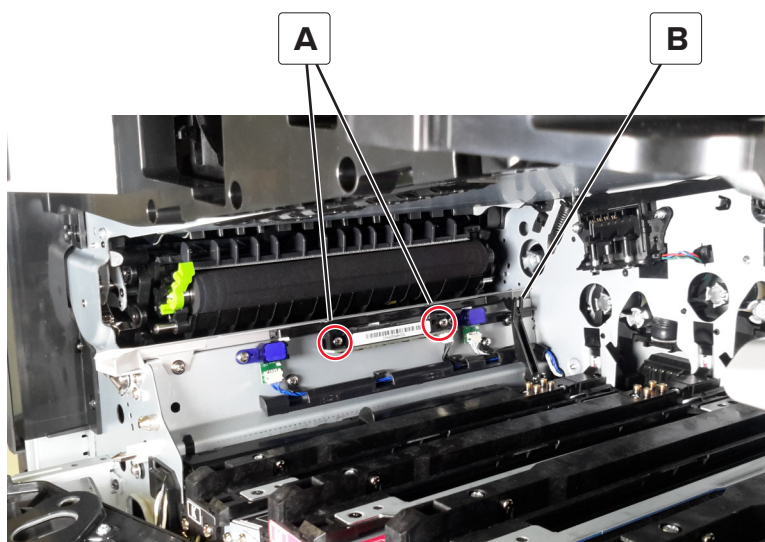
4 Disconnect, and then remove the sensor.

> **Warning—Potential Damage:** Press the latch on the connector to unlock. Do not pull the connector without unlocking it.

TPS sensor wiper removal

1 Remove the developer and PC unit combos.

2 Remove the transfer belt. See **"Transfer belt removal" on page 431**.

3 Remove the sensor (TPS). See **"Sensor (TPS) removal" on page 446**.

4 Remove the two screws (A), and then remove the wiper.
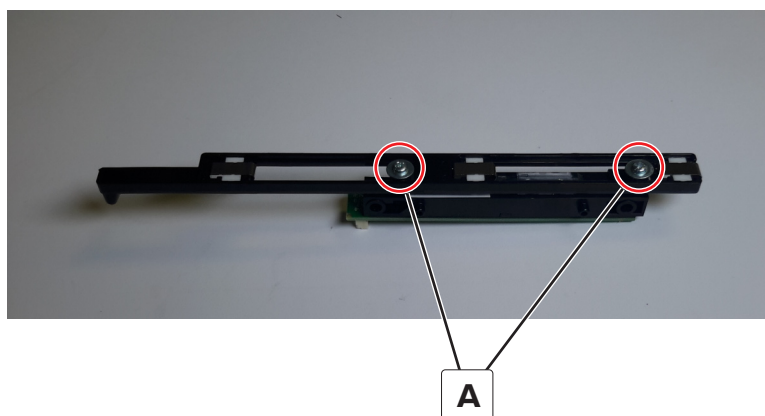
Developer/PC unit CMY wiper rail removal

1 Remove the developer and PC unit combos.

2 Remove the transfer belt. See **"Transfer belt removal" on page 431**.

3 Remove the two screws (A) from the appropriate wiper rail.
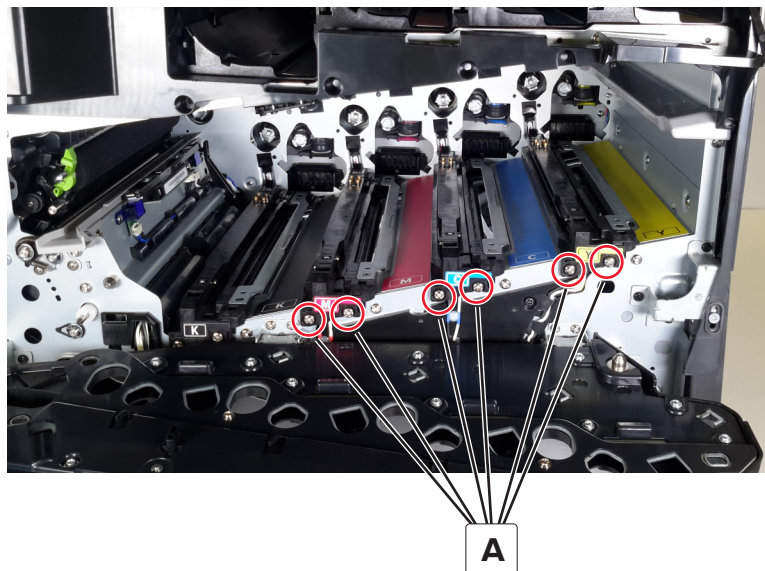
4 Disconnect, and then remove the wiper rail.

Installation warning: Align the peg with the slot, or damage may occur.
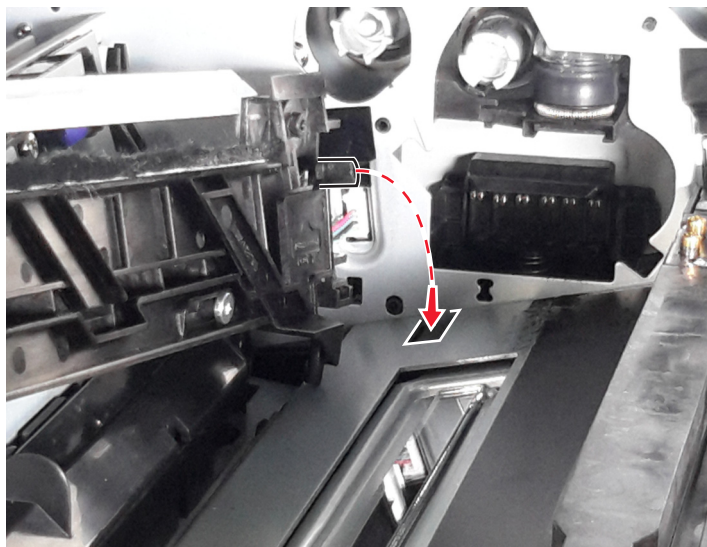
Developer/PC unit K wiper rail removal

1 Remove the developer and PC unit combos.

2 Remove the transfer belt. See **"Transfer belt removal" on page 431**.

3 Remove the PC unit/developer door. See **"PC unit/developer door removal" on page 442**.

4 Remove the two screws (A).
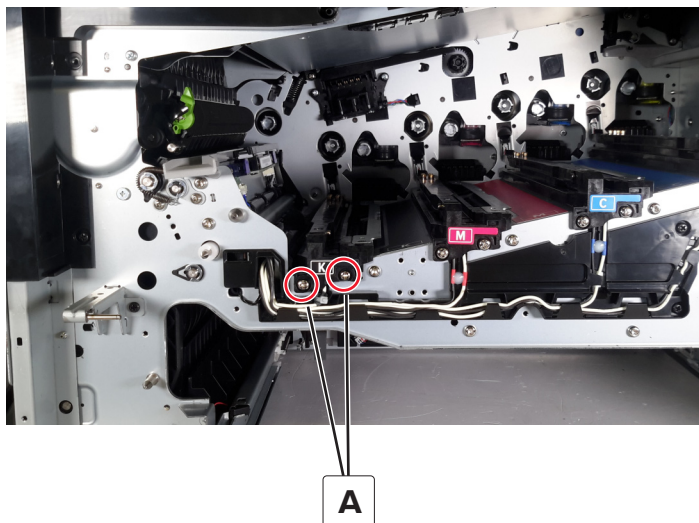
5 Disconnect, and then remove the wiper rail.

Installation warning: Align the peg with the slot, or damage may occur.
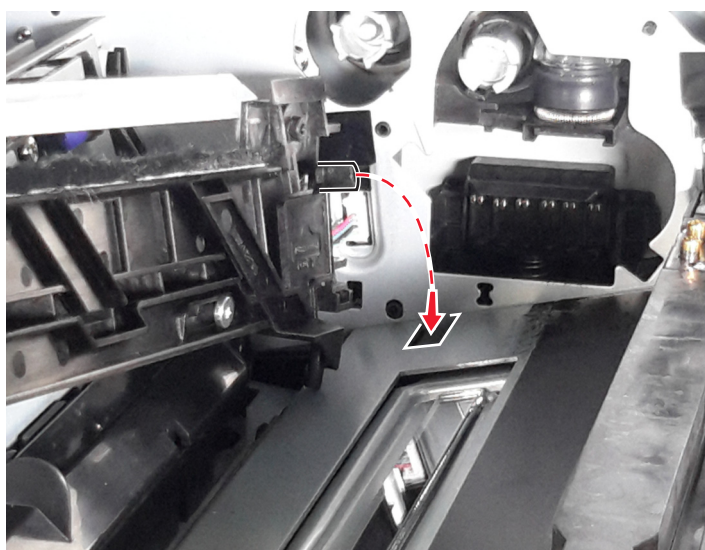
Rear side removals

Controller board cover removal

1 Remove the four screws (A).
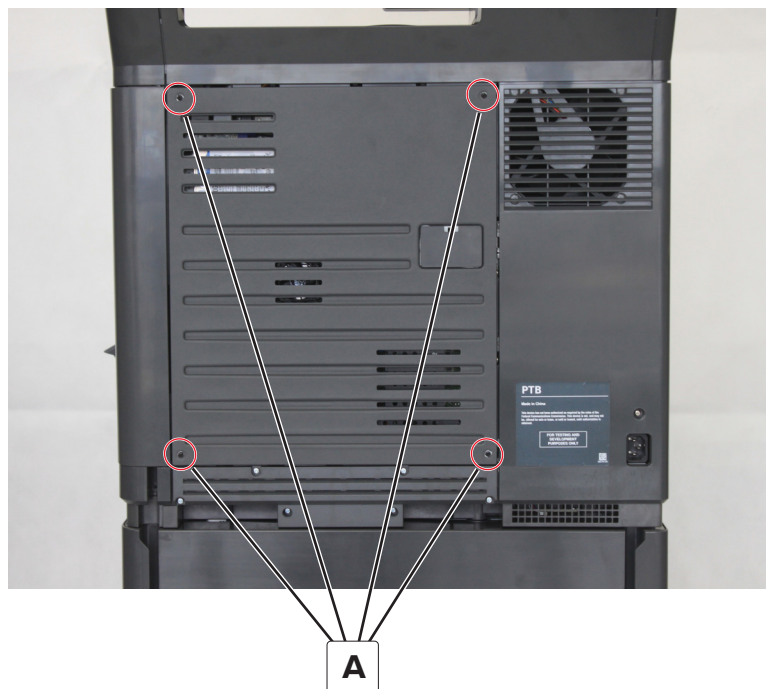
2 Remove the cover.

Rear lower cover removal

1 Remove the six screws (A).
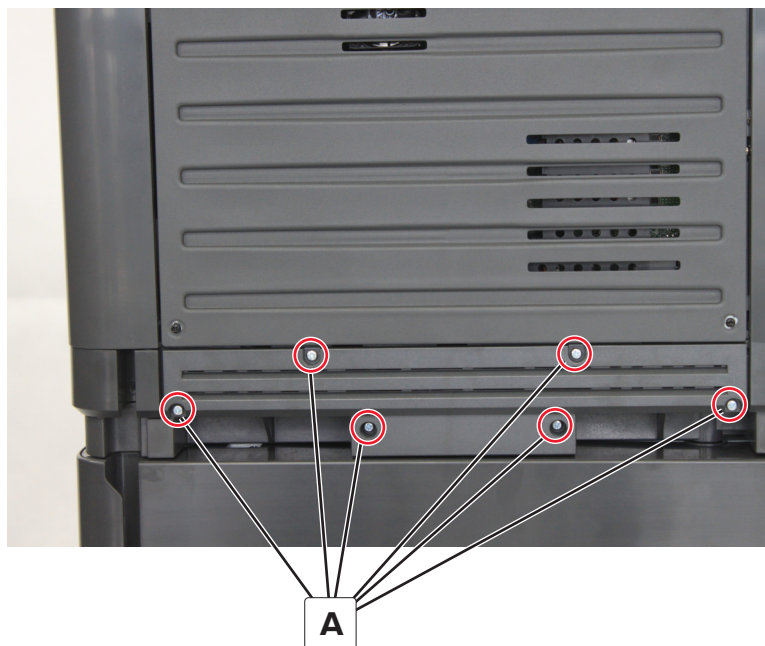
2 Remove the cover.

Rear left cover removal

1 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

2 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

3 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

4 Open door B, and then remove the three screws (A).

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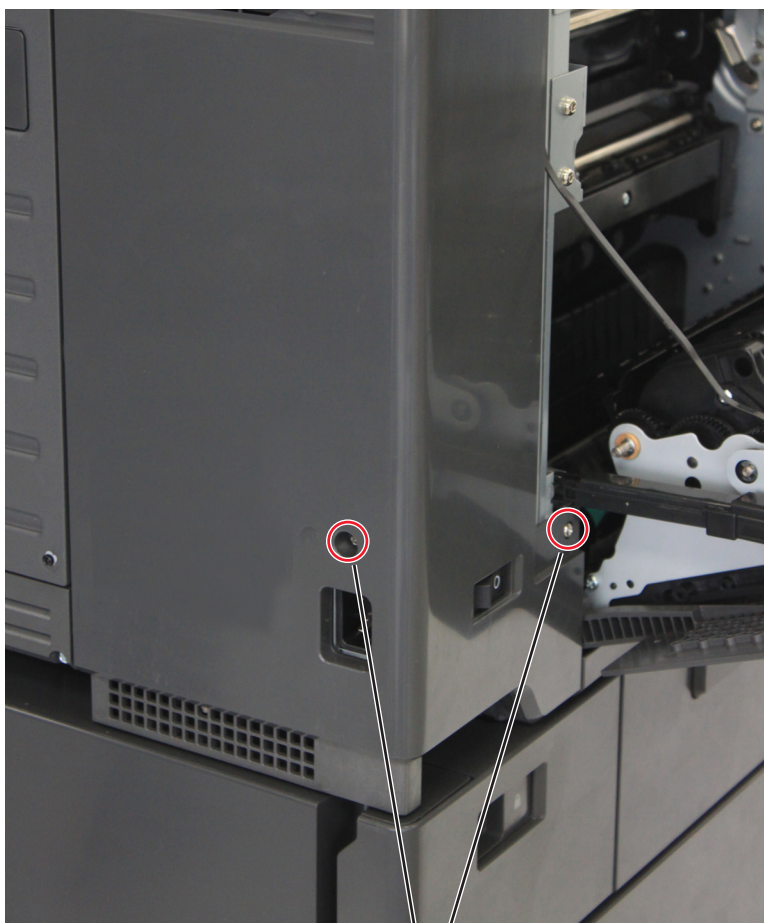
5 Remove the cover.

Rear upper cover removal

1 Open door B.
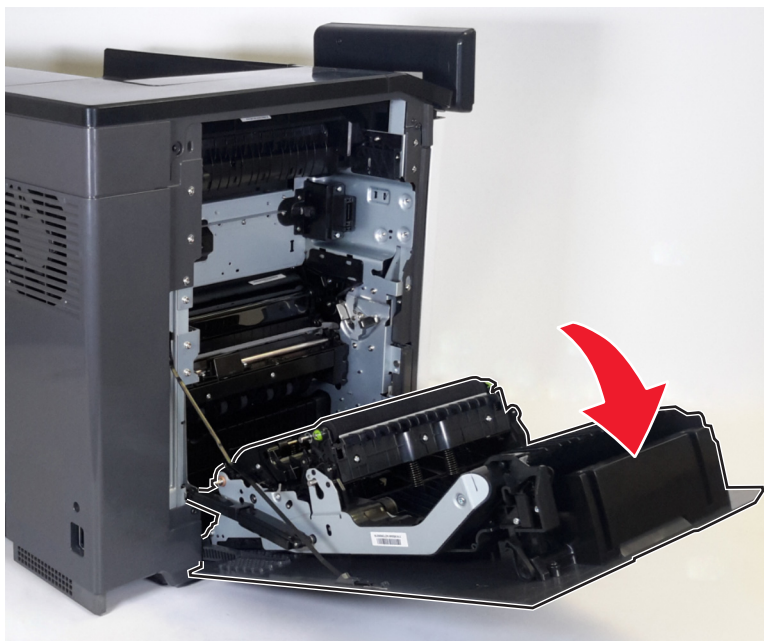
2 Remove the cover.
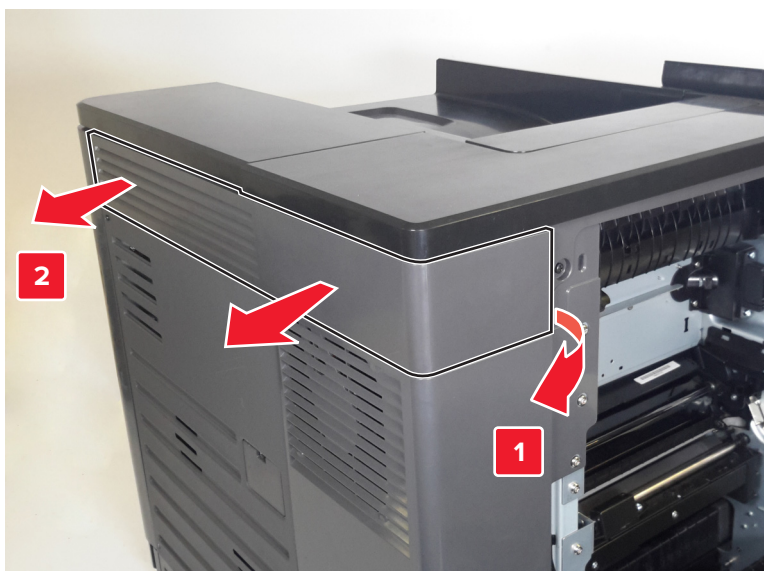
Charge roller HVPS removal

1 Remove the rear lower cover. See .

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

Warning—Potential Damage: Do not touch the HVPS circuit components. Only handle it by its edges.

Installation warning: Print quality issues may occur if the screws (B) are loose.
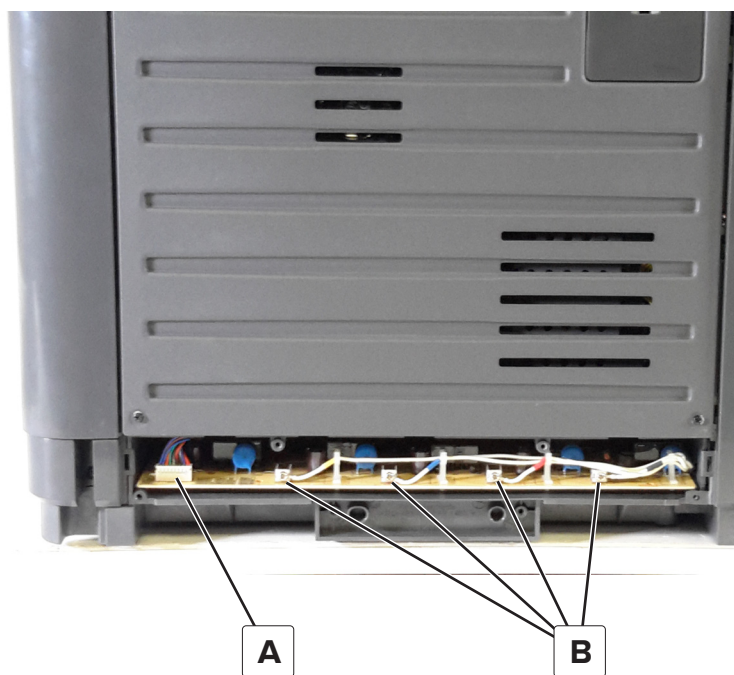
3 Remove the HVPS.

Controller board SIM removal

Note: The printer controller board may contain a Secure Element SIM. This SIM contains software and security settings that are unique to the printer. The SIM must be transferred from the old controller board to the new controller board.

1 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

2 Slide the SIM lock to the open position.
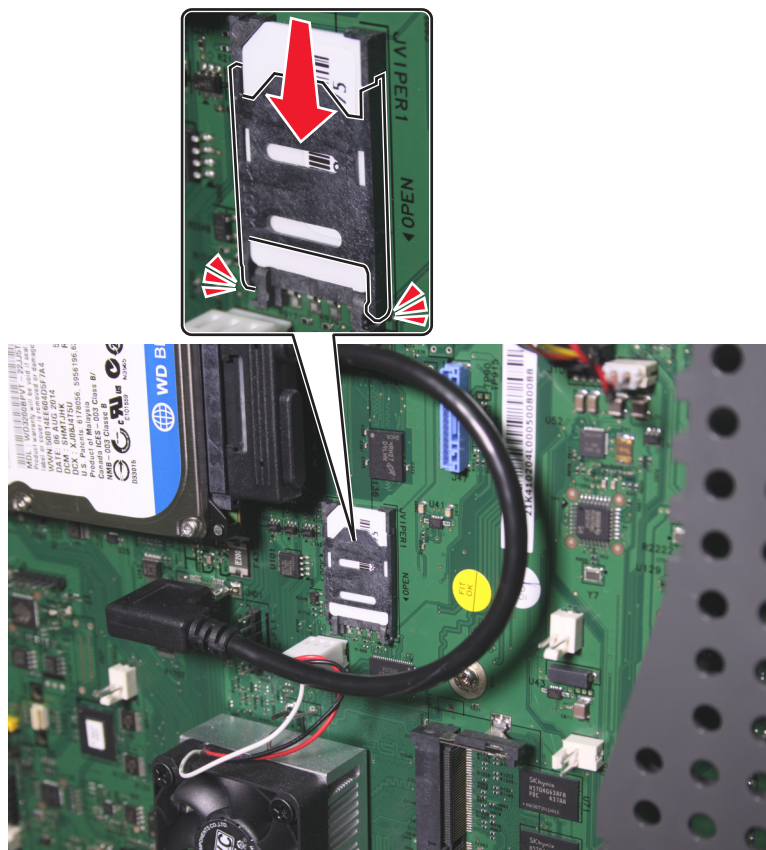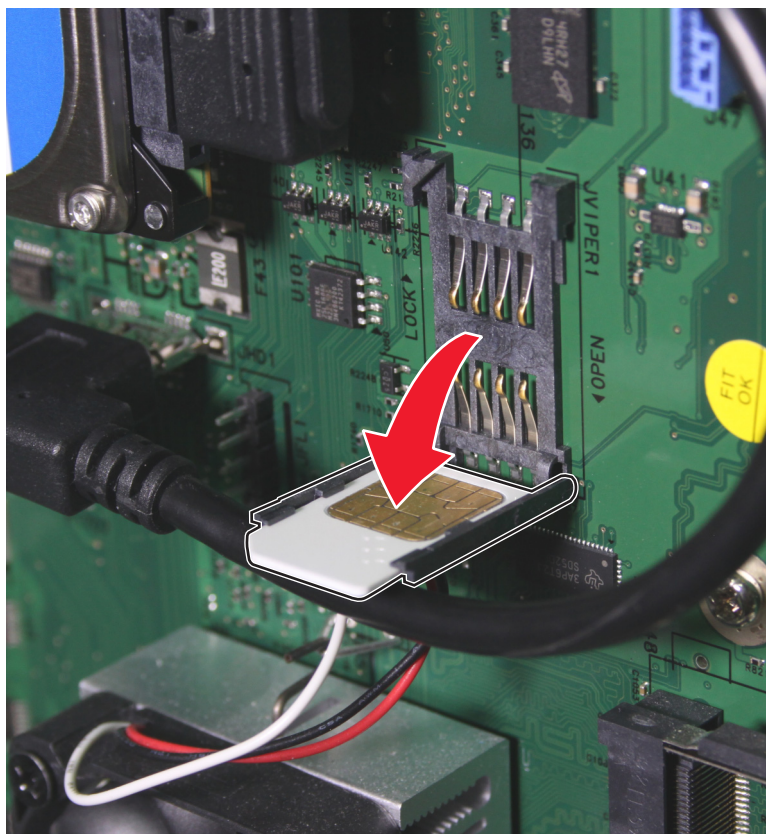
3 Remove the SIM.
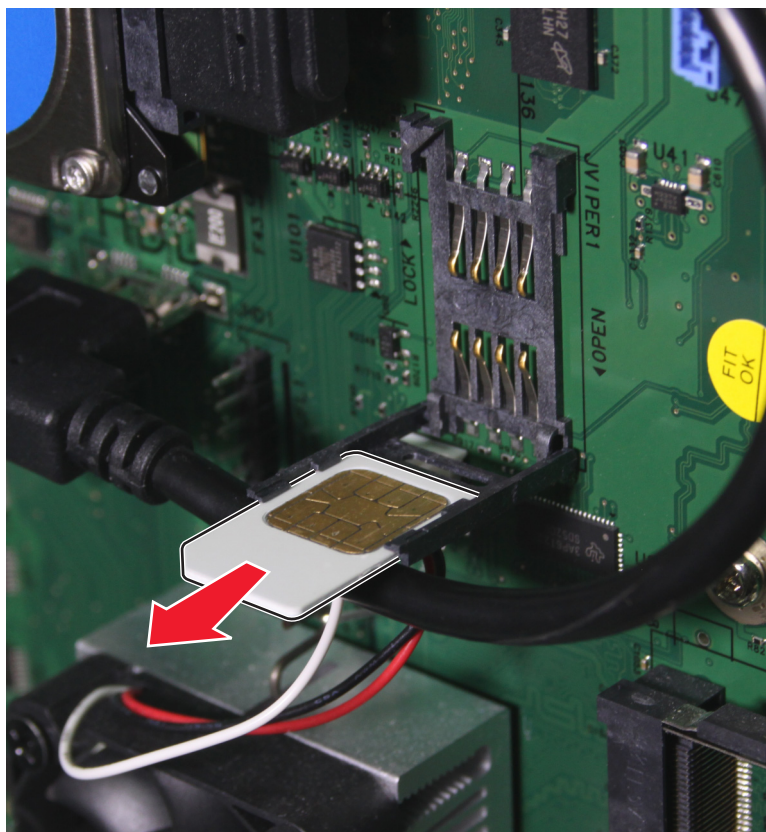
Repair information

Controller board removal

1 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

2 Disconnect all the cables from the board.

   Warning—Potential Damage: Do not yank the ribbon cables. See **"Disconnecting ribbon cables" on page 379**.

3 Remove the 12 screws (A), and then remove the board shield (B).

4 From the right, open the connector access cover, and then remove the two screws (C).
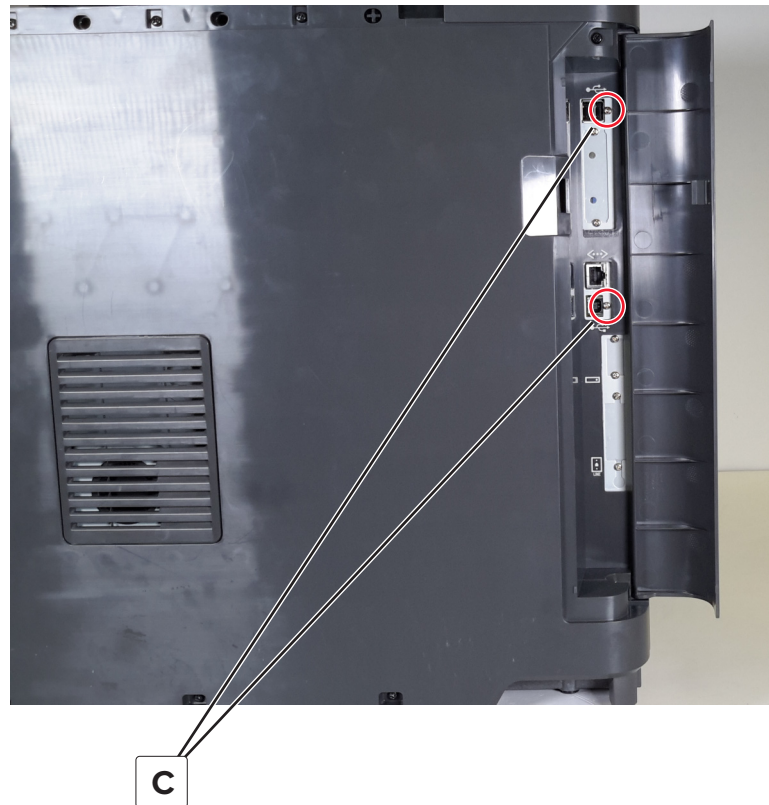
5 Remove the board.

Installation note: Make sure that the shield is reinstalled after replacing the board.

Main fan removal

1 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

2 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

3 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

4 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

5 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

6 Disconnect the cable JF1 from the controller board, and then remove the four screws (A).
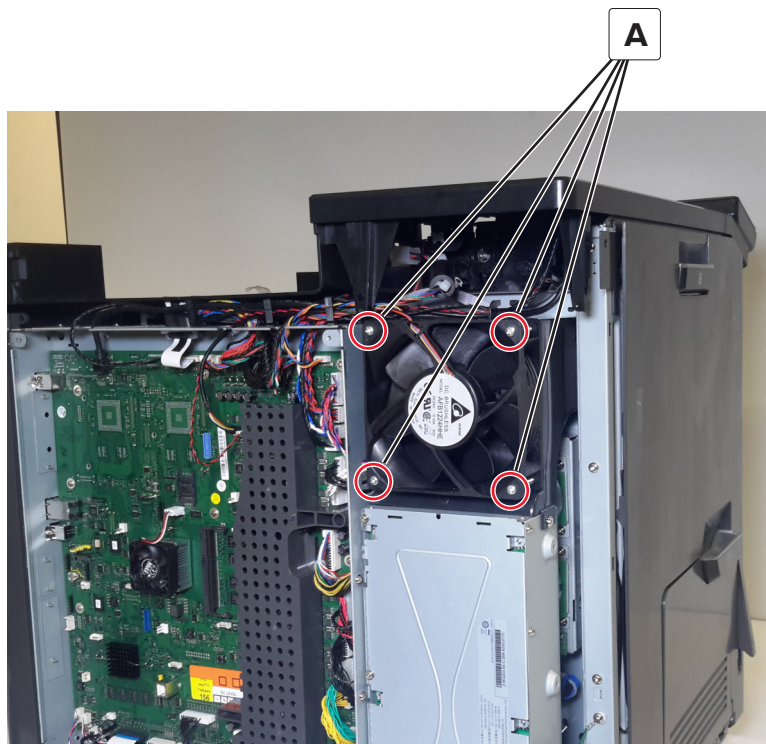
Note: Take note of the correct fan direction and position.

7 Remove the fan.

Installation note: Route the cables through the guides properly.

LVPS removal

⚠ **CAUTION—SHOCK HAZARD:** The low-voltage power supply (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 Turn off the printer.

2 Unplug the power cord from the electrical outlet, and then from the printer.

3 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

4 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

5 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

6 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

7 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

8 Disconnect the cable JLVPS1 from the controller board, and then remove the three screws (A).
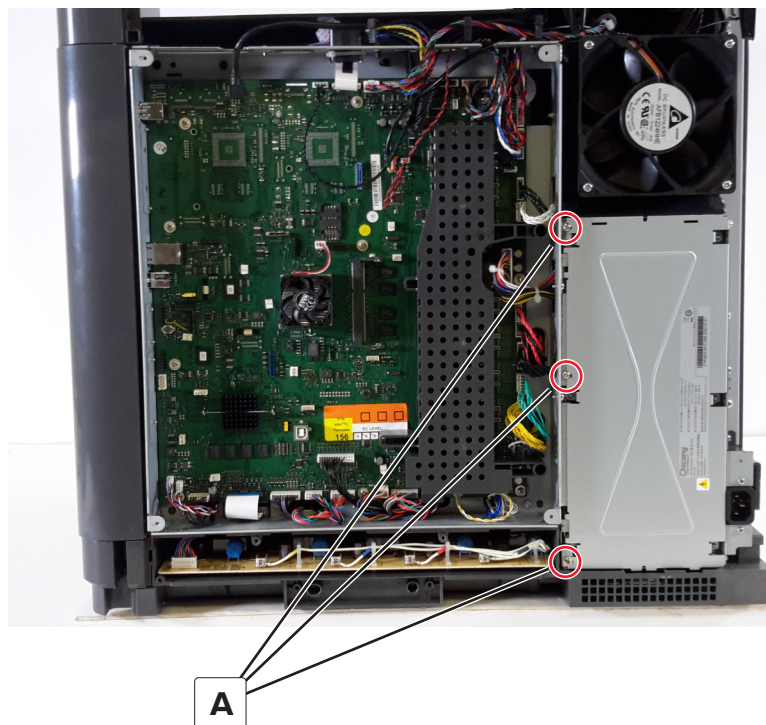
9 Remove the four screws (B) from the side, and then carefully open the LVPS.
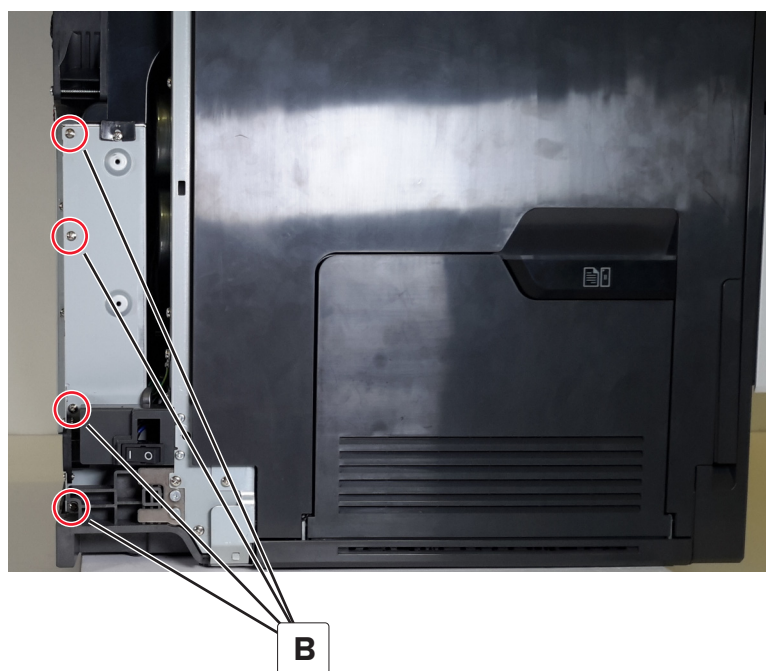
10 Disconnect the three cables (C), and then remove the LVPS.

⚠ **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.

Warning—Potential Damage: Do not put too much strain on the LVPS cables and sockets.
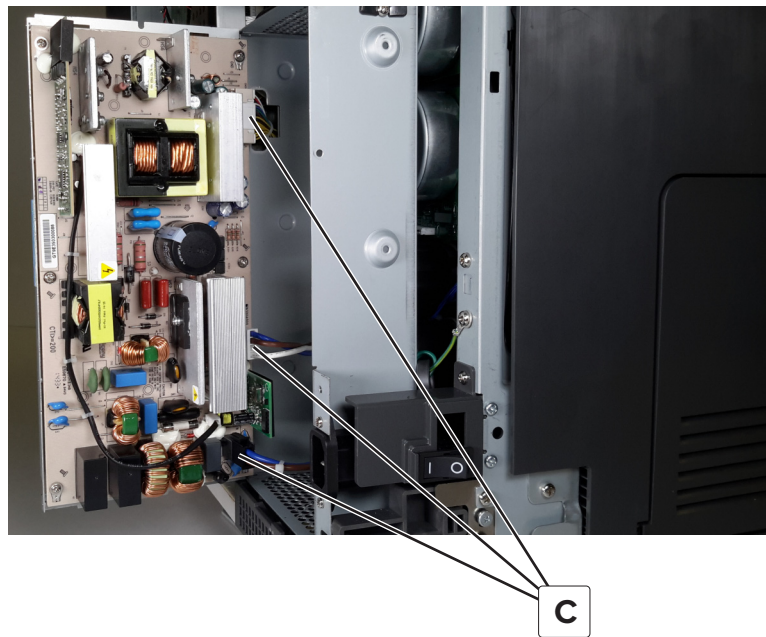
LVPS cage removal

1 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

2 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

3 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

4 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

5 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

6 Remove the LVPS. See **"LVPS removal" on page 459**.

7 Remove the seven screws (A).
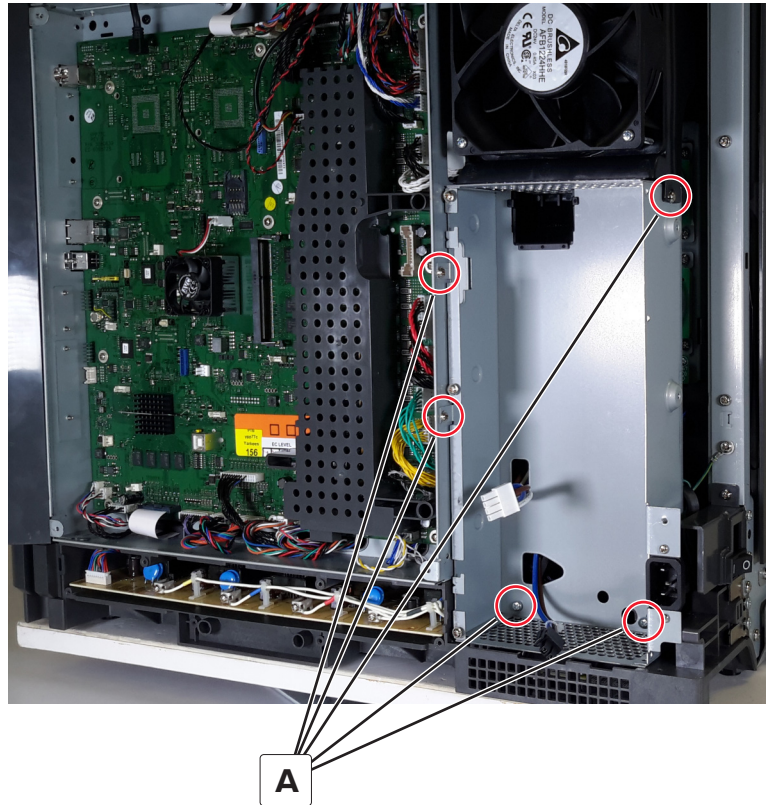
8 Remove the cage.

Installation note: Route the cables through the cage holes properly.

Weather station removal

1 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

2 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

3 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

4 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

5 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

6 Remove the LVPS. See **"LVPS removal" on page 459**.

7 Remove the LVPS cage. See **"LVPS cage removal" on page 461**.

8 Disconnect the cable (A), and then remove the screw (B).
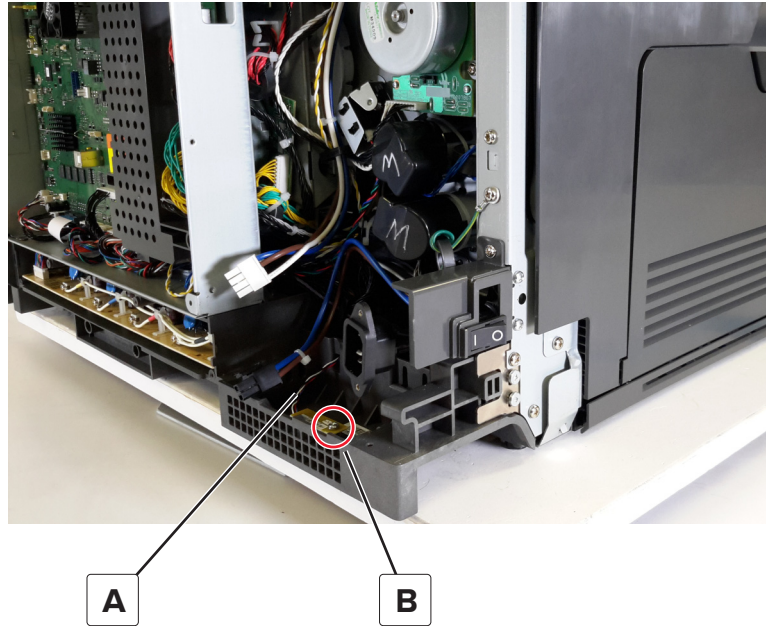
9 Remove the weather station.

Controller board cage removal

Note: This part is not a FRU.

1 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

2 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

3 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

4 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

5 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

6 Disconnect all the cables from the board, and then remove the seven screws (A).

7 Release the cables from the controller board cage, and then remove the cage.

Installation note: Route the cables to its appropriate holes and guides properly.

- Top side
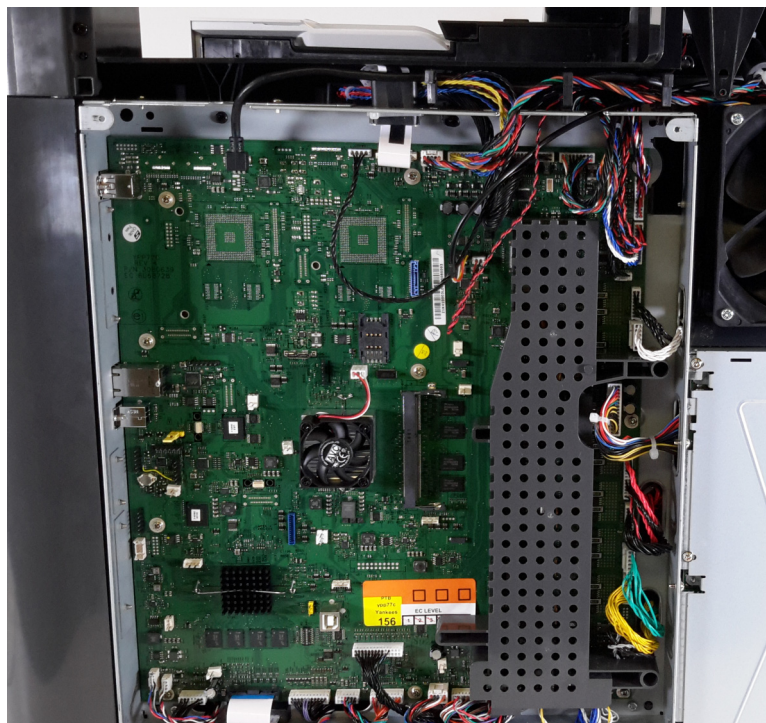
- Bottom side
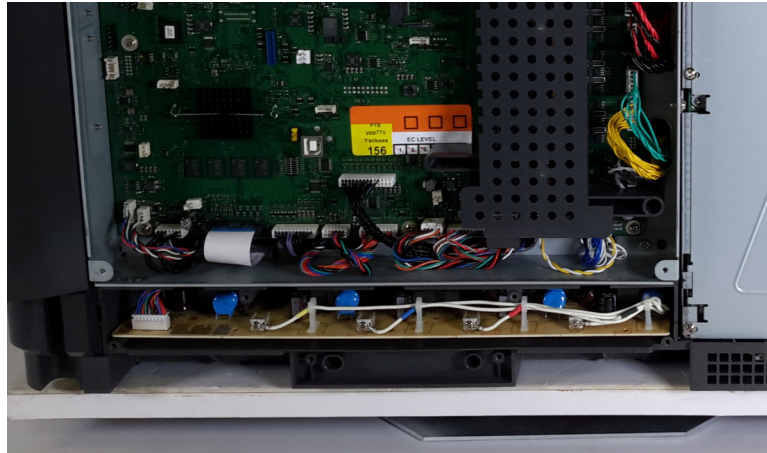
Toner add motor gearbox (K, C, and M) removal

1 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

2 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

3 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

4 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

5 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

6 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

7 Cut the cable tie (A), and then disconnect the cable from the appropriate motor (B).

8 Remove the three screws (C), and then remove the motor gearbox.
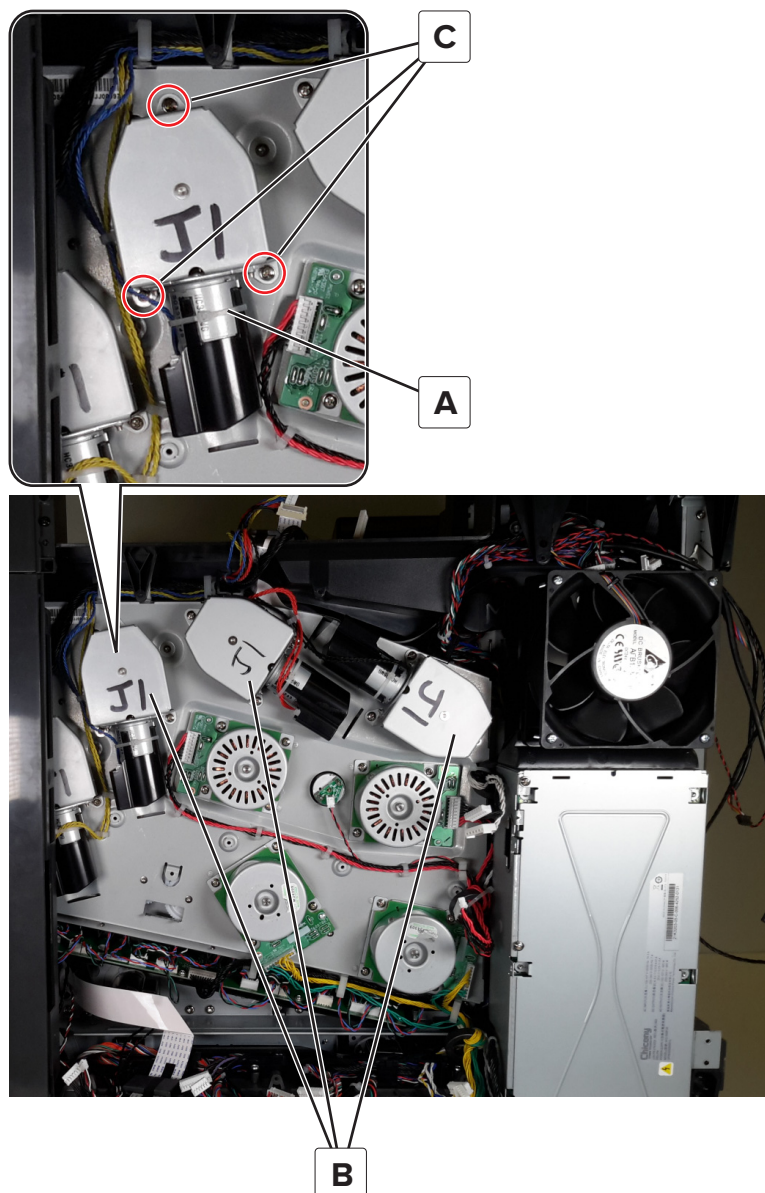
Installation note: Make sure to replace the cable tie and reinstall the motor cover.

Toner add motor gearbox (Y) removal

1 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

2 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

3 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

4 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

5 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

6 Remove the column outer cover. See **"Column outer cover removal" on page 411**.

Repair information

7 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

8 Remove the right cover. See **"Right cover removal" on page 411**.

9 Cut the cable tie (A), and then disconnect the cable from the motor (B).

10 Remove the three screws (C), and then remove the motor gearbox.
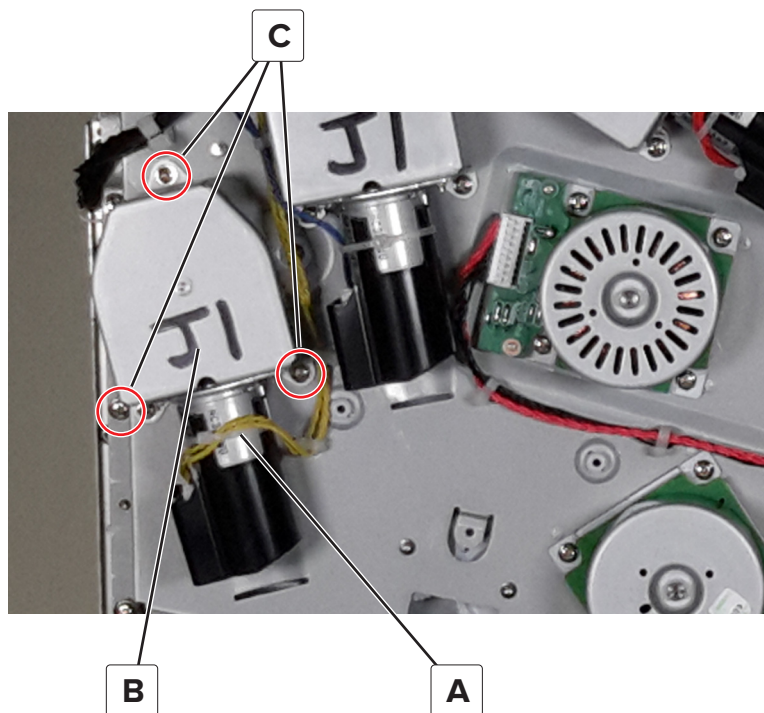
Installation note: Make sure to replace the cable tie, and reinstall the motor cover.

Main fan duct removal

1 Open door B, and then remove the fuser.

⚠ **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 controller board cover. See **"Controller board cover removal" on page 450**.

3 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

4 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

5 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

6 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

7 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

8 Release the cables from the fan duct.

9 Open door B, remove the screw (B) behind the duct, and then pull the fan duct.

⚠️ **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.
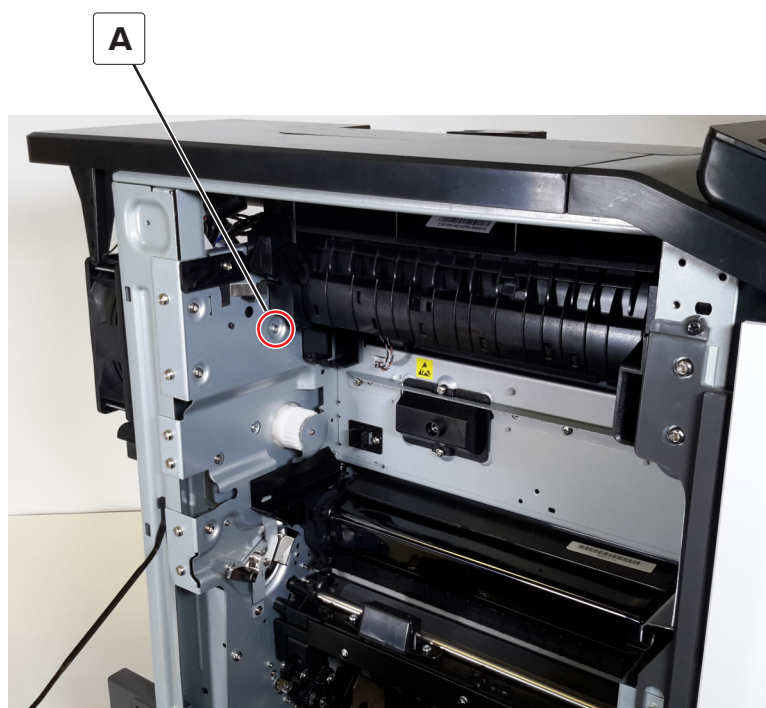
10 Remove the four screws from the fan, and then remove the duct.

EP, developer, toner add gearbox removal

1 Remove the toner cartridges, developer and PC unit combos, and transfer belt.

2 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

3 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

4 Remove the column outer cover. See **"Column outer cover removal" on page 411**.

5 Remove the right cover. See **"Right cover removal" on page 411**.

6 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

7 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

8 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

9 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

10 Remove the LVPS cage. See **"LVPS cage removal" on page 461**.

11 Remove the main fan duct. See **"Main fan duct removal" on page 467**.

12 Remove the seven screws (A), and then release the cables from the cable guides.

Warning—Potential Damage: The flat cable is fragile. Be careful when detaching the cable from the gearbox.
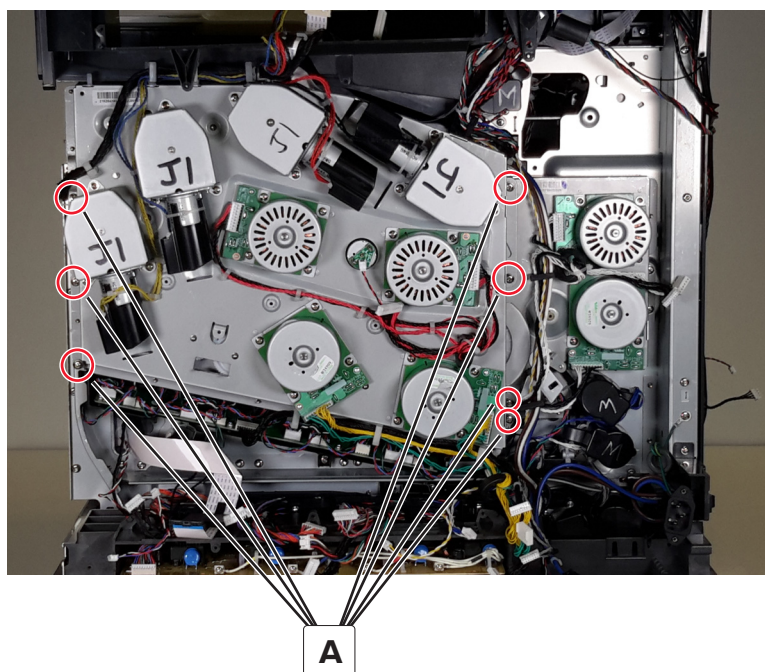
13 Remove the gearbox.

Installation notes:

a Position the toner supply actuator (A) as far to the right as possible.

A
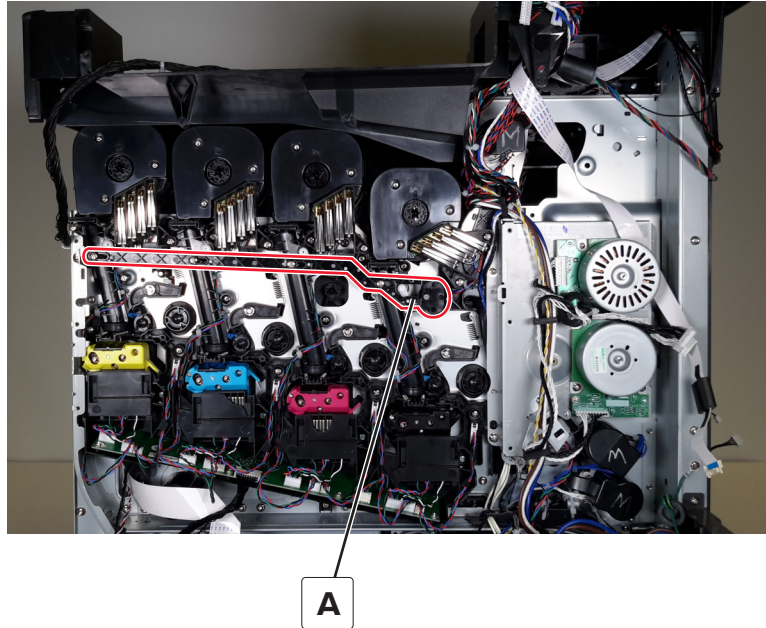
b Take note of the correct position of the cam gear (B). Make sure that the arrow indicators (C) align.

C   **B**
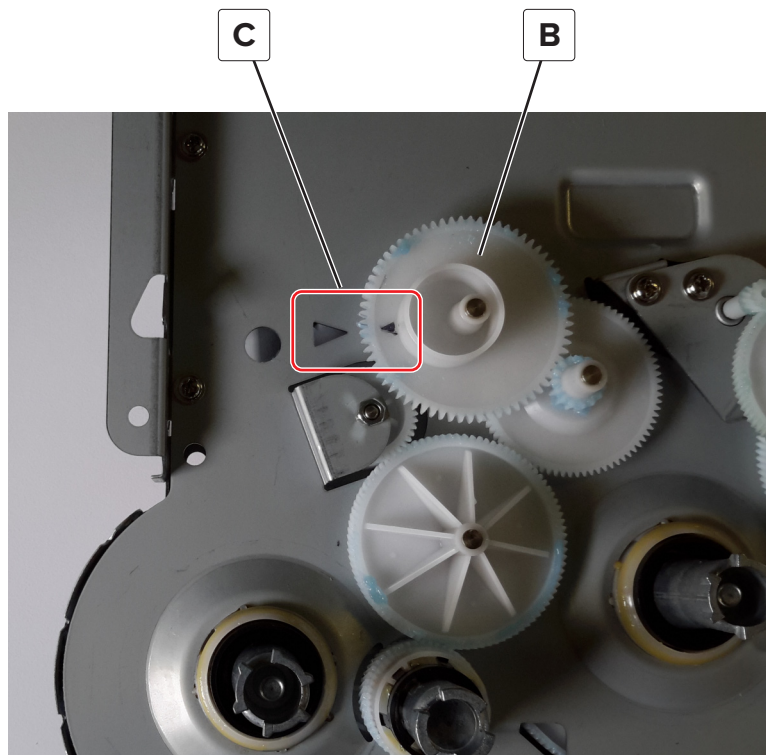
c Make sure that the cables under the gearbox are properly routed.

Warning—Potential Damage: Cables (D) may get pinched if they are not properly installed.
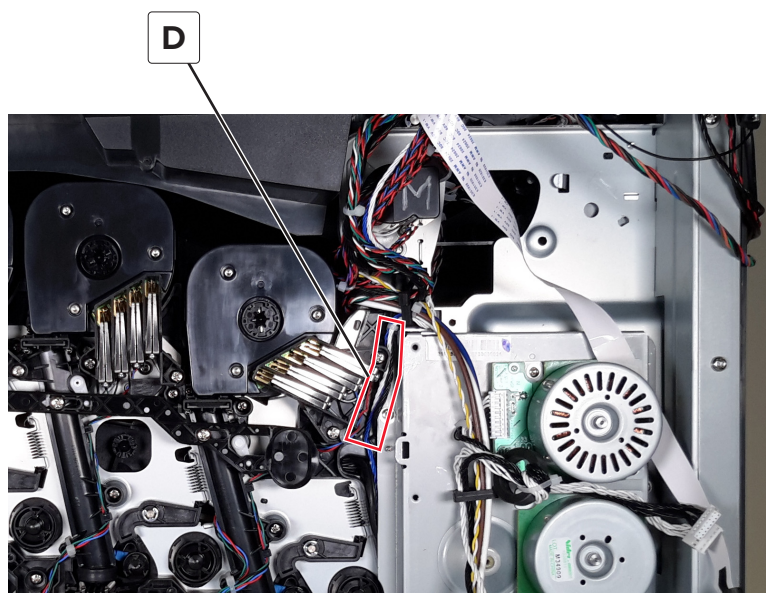
d Align the bottom edge of the gearbox first, and then swing up to align the cam gear to the toner supply actuator.

e Route the cables properly.

Fuser/transfer belt motor gearbox removal

1 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

2 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

3 Remove the column outer cover. See **"Column outer cover removal" on page 411**.

4 Remove the right cover. See **"Right cover removal" on page 411**.

5 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

6 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

7 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

8 Remove the LVPS cage. See **"LVPS cage removal" on page 461**.

9 Remove the main fan duct. See **"Main fan duct removal" on page 467**.

10 Remove the EP, developer, toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**.

11 Release the cables from the cable guides (A).

12 Remove the four screws (B), and then disconnect the sensor cable (C).
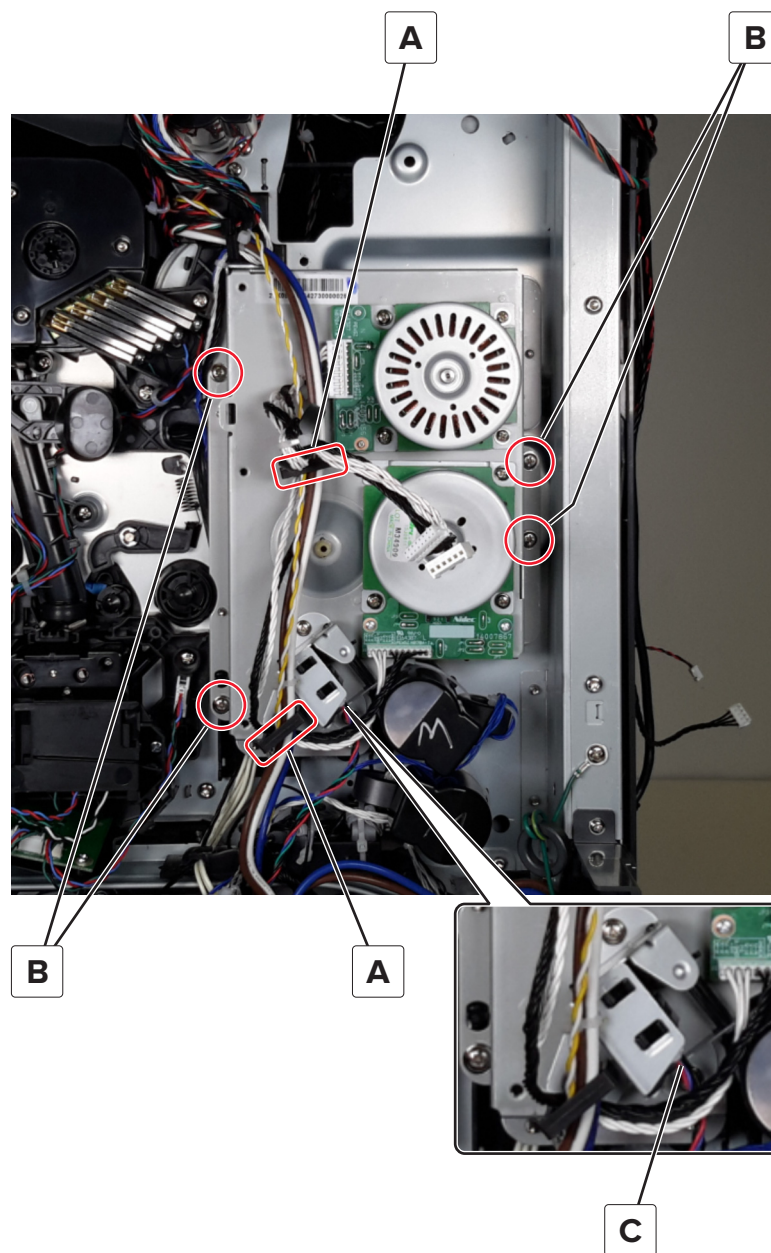
13 Remove the gearbox.

Installation note: Insert the waste toner shaft (A) into the bushing (B) on the gearbox.

Waste toner gear removal

1 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

2 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

3 Remove the column outer cover. See **"Column outer cover removal" on page 411**.

4 Remove the right cover. See **"Right cover removal" on page 411**.

5 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

6 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

7 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

8 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

9 Remove the LVPS cage. See **"LVPS cage removal" on page 461**.

10 Remove the main fan duct. See **"Main fan duct removal" on page 467**.

11 Remove the EP, developer, toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**.

12 Remove the fuser/transfer belt motor gearbox. Seee **"Fuser/transfer belt motor gearbox removal" on page 471**.

13 Pull out the waste toner shaft (A).
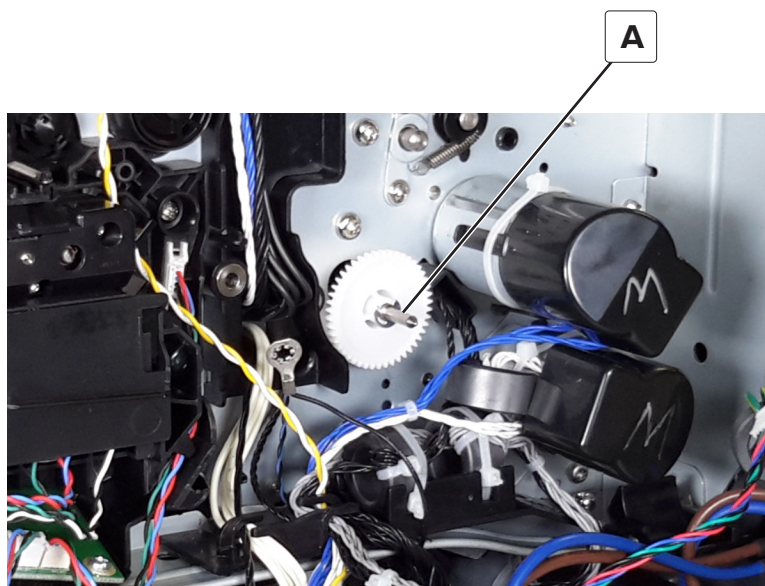
14 Remove the E-clip (B), release the latch (C), and then remove the gear.

Toner supply actuator removal

1 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

2 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

3 Remove the column outer cover. See **"Column outer cover removal" on page 411**.

4 Remove the right cover. See **"Right cover removal" on page 411**.

5 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

6 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

7 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

8 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

9 Remove the LVPS cage. See **"LVPS cage removal" on page 461**.

10 Remove the main fan duct. See **"Main fan duct removal" on page 467**.

11 Remove the EP, developer, toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**.

12 Remove the four screws (A), and then remove the actuator.

Smart chip interface board removal

1 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

2 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

3 Remove the column outer cover. See **"Column outer cover removal" on page 411**.

4 Remove the right cover. See **"Right cover removal" on page 411**.

5 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

6 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

7 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

8 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

9 Remove the LVPS cage. See **"LVPS cage removal" on page 461**.

10 Remove the main fan duct. See **"Main fan duct removal" on page 467**.

11 Remove the EP, developer, toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**.

12 Disconnect, and then release all the cables from their guides.

13 Remove the six screws (A), and then remove the board.
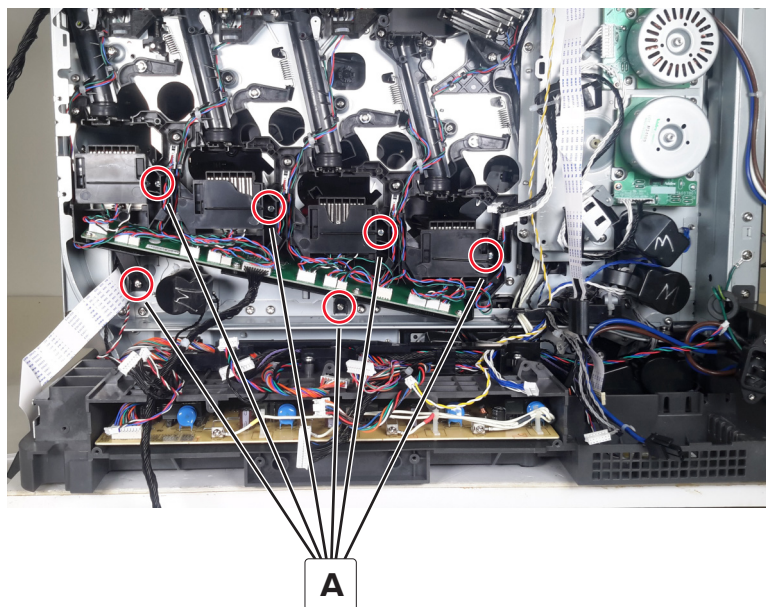
Toner cartridge contact removal

1 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

2 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

3 Remove the column outer cover. See **"Column outer cover removal" on page 411**.

4 Remove the right cover. See **"Right cover removal" on page 411**.

5 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

6 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

7 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

8 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

9 Remove the LVPS cage. See **"LVPS cage removal" on page 461**.

10 Remove the main fan duct. See **"Main fan duct removal" on page 467**.

11 Remove the EP, developer, toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**.

12 Remove the two screws (A) from the appropriate contact (B).

13 Pull the contact, and then disconnect the spring (B).
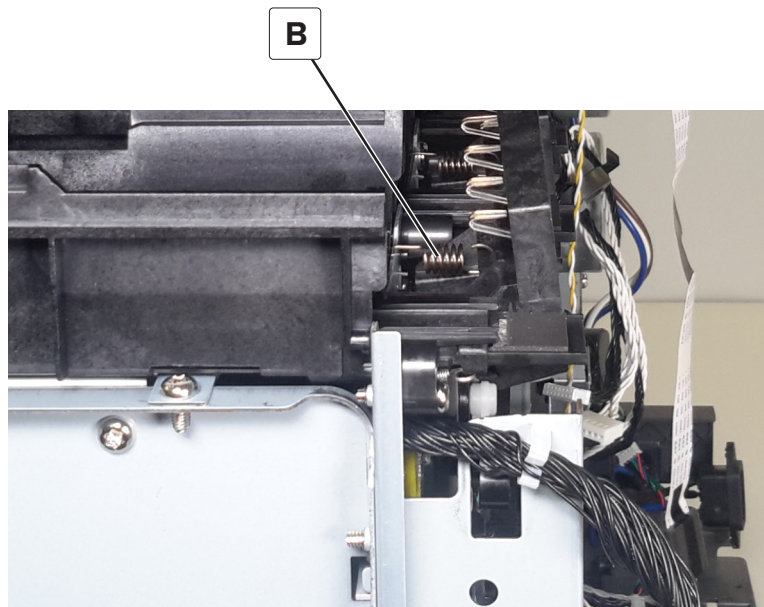
14 Release the contact cable from the cable guides.

15 Disconnect the contact cable from the smart chip board.

16 Remove the contact.

Toner add tube removal

1 Remove the rear lower cover. See **"Rear lower cover removal" on page 451**.

2 Remove the rear upper cover. See **"Rear upper cover removal" on page 453**.

3 Remove the column outer cover. See **"Column outer cover removal" on page 411**.

4 Remove the right cover. See **"Right cover removal" on page 411**.

5 Remove the controller board cover. See **"Controller board cover removal" on page 450**.

6 Remove the left upper cover. See **"Left upper cover removal" on page 387**.

7 Remove the rear left cover. See **"Rear left cover removal" on page 451**.

8 Remove the controller board cage. See **"Controller board cage removal" on page 463**.

9 Remove the LVPS cage. See **"LVPS cage removal" on page 461**.

10 Remove the main fan duct. See **"Main fan duct removal" on page 467**.

11 Remove the EP, developer, toner add gearbox. See **"EP, developer, toner add gearbox removal" on page 468**.

12 Remove the two screws (A) from the appropriate contact (B).

13 Carefully lift the contact, and then remove the screw (C) under it.

Repair information
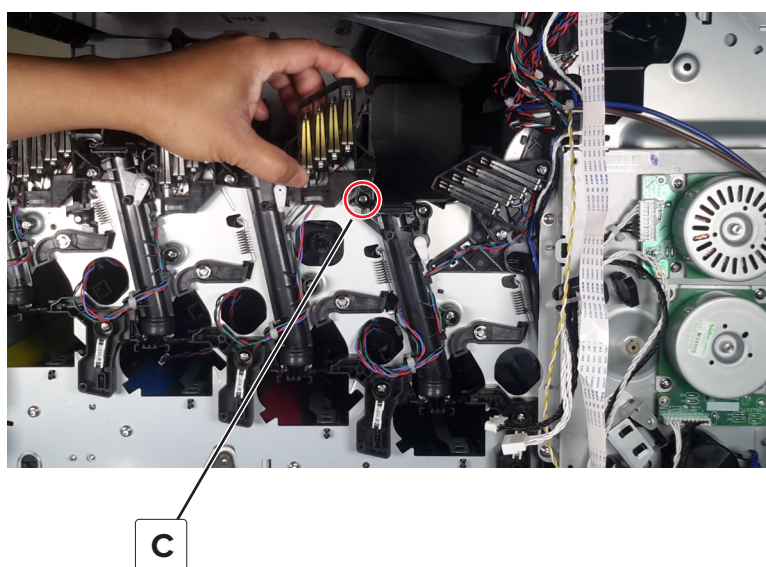
14 Release the appropriate cables from the cable guides.

15 Remove the appropriate screw (D), and then carefully remove the toner port retainer.
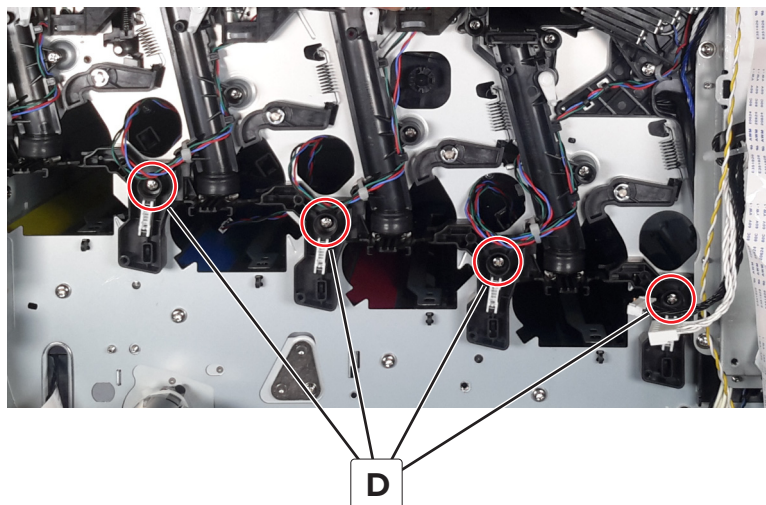
16 Remove the three screws (E), and then remove the appropriate tube.

Warning—Potential Damage: The tube is fragile. Do not disconnect the tube from the nozzle.

Repair information
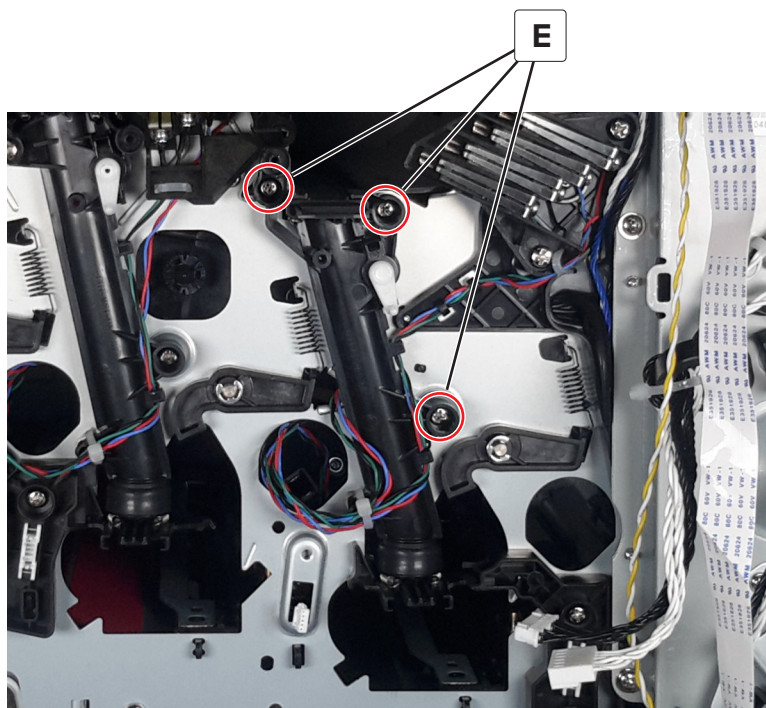
Top side removals

Standard bin insert cover removal

1 Open door A.

2 Push the cover to release the latches, and then lift the cover to detach it.
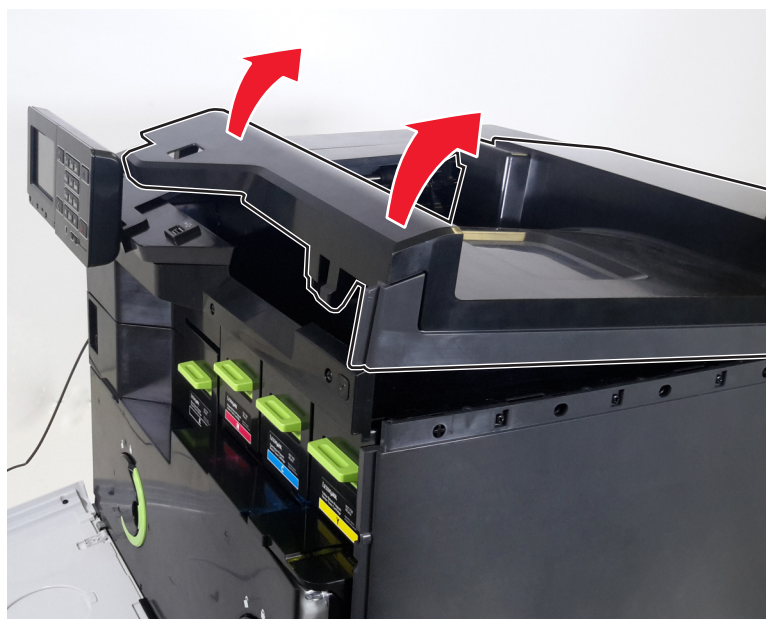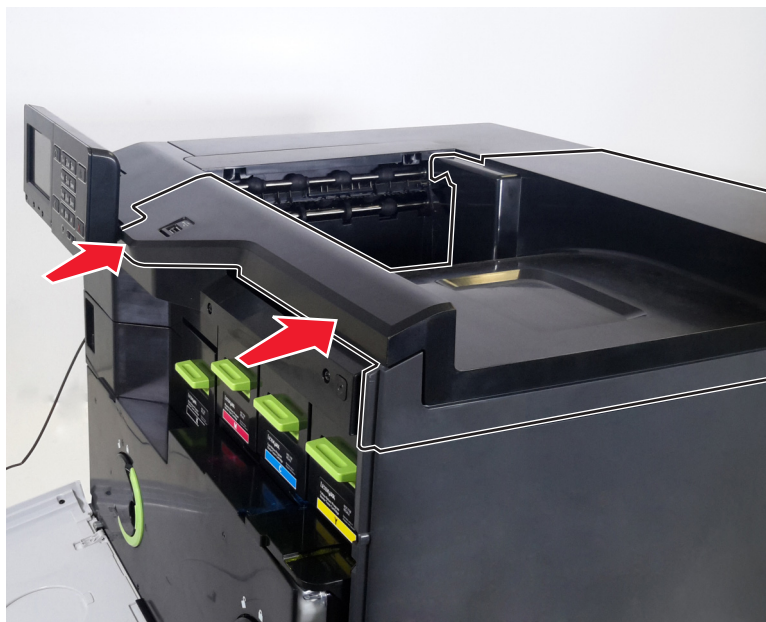
3 Remove the cover.

Sensor cover removal

1 Open door C, and then remove the screw.

⚠️ **CAUTION—PINCH HAZARD:** To avoid the risk of a pinch injury, keep hands clear of the labeled area when closing door C.

2 Lift the flag (A) to release, and then lift the cover (B).
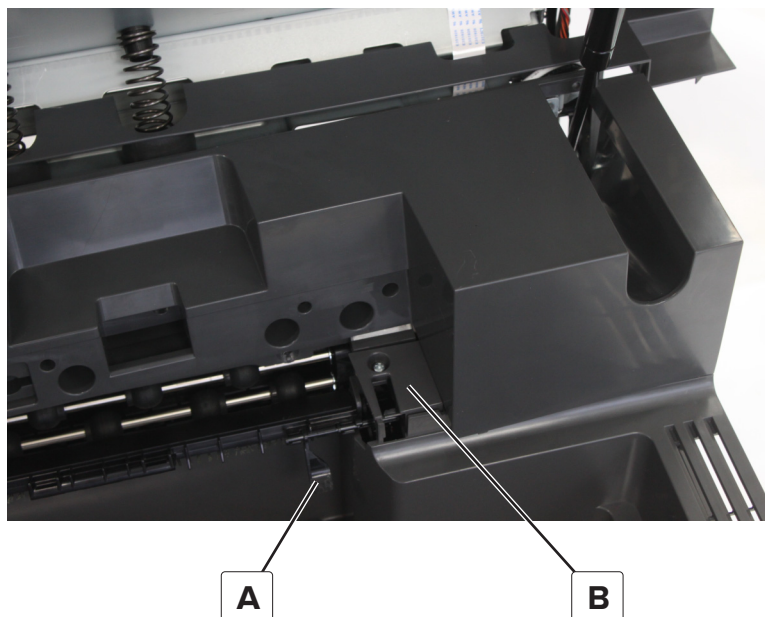
3 Disconnect the cable (C), and then remove the sensor.
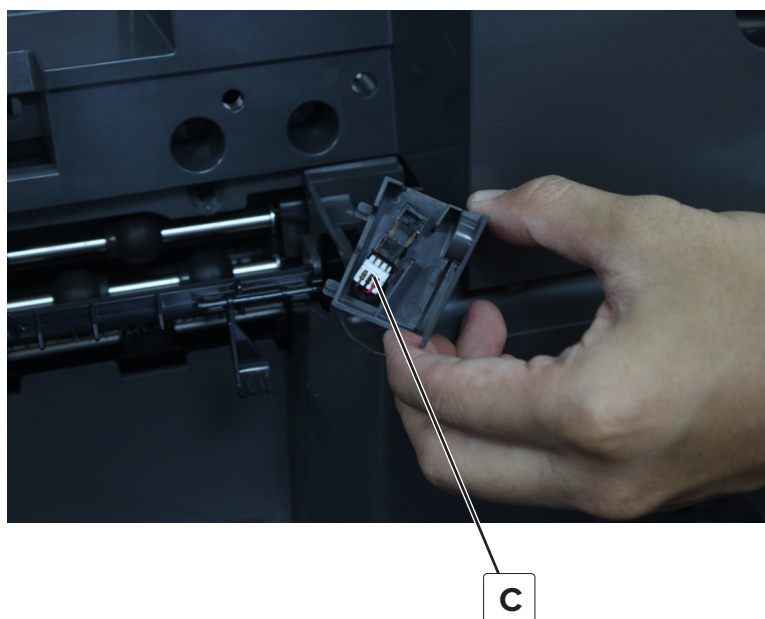
Installation note: Reinstall the strip (A) to secure the sensor latches properly.

A
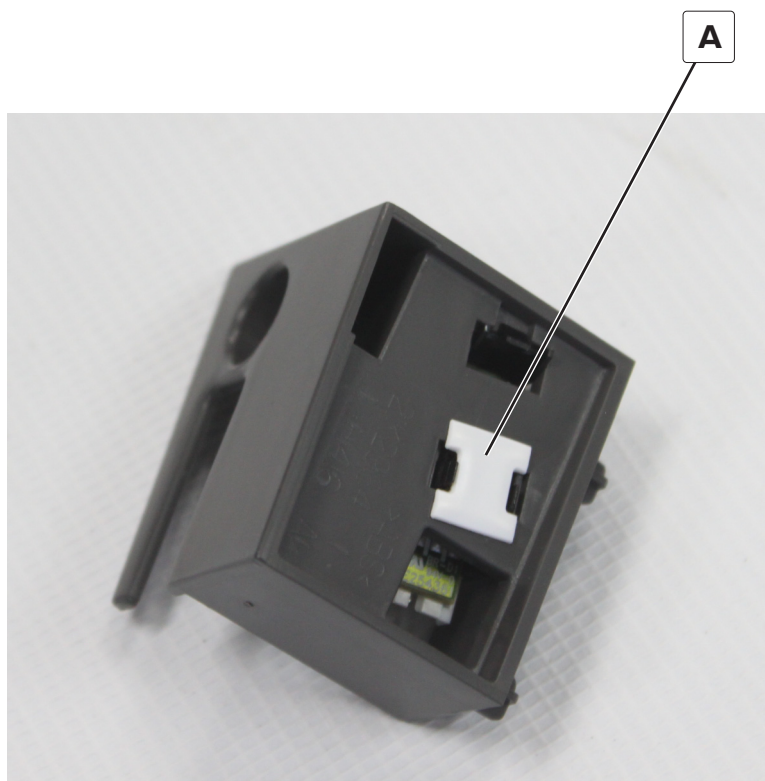
550-sheet tray removals

550-sheet tray media size sensor actuators removal

1 Remove the tray insert.

2 Pry, and then remove the actuators.

Sensor (550-sheet tray media size) removal
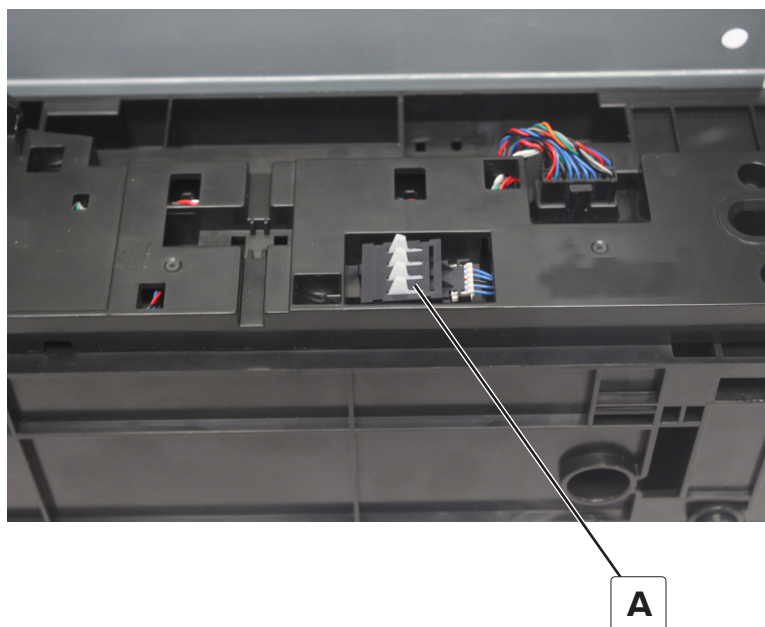
1 Remove the tray insert.

2 Remove the sensor (A), and then disconnect the cable from the sensor.

Sensor (550-sheet tray media low) removal

1 Remove the tray insert.

2 Remove the sensor (A), and then disconnect the cable from the sensor.

Repair information
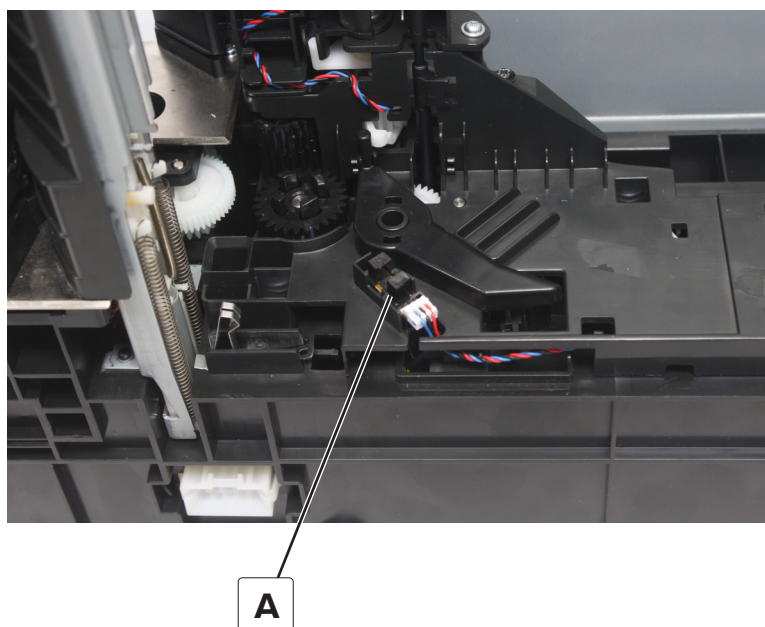
Sensor (550-sheet tray jam door)

1 Open the jam door.

2 Remove the sensor (A), and then disconnect the cable from the sensor.
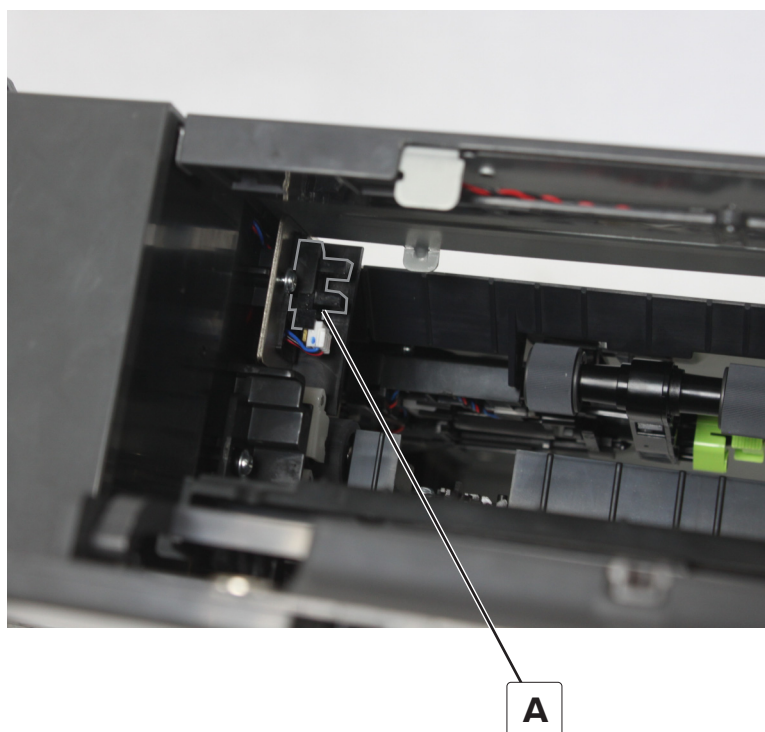
550-sheet tray right rail removal

1 Remove the tray insert.

2 Remove the screw (A), and then remove the rail.

Repair information
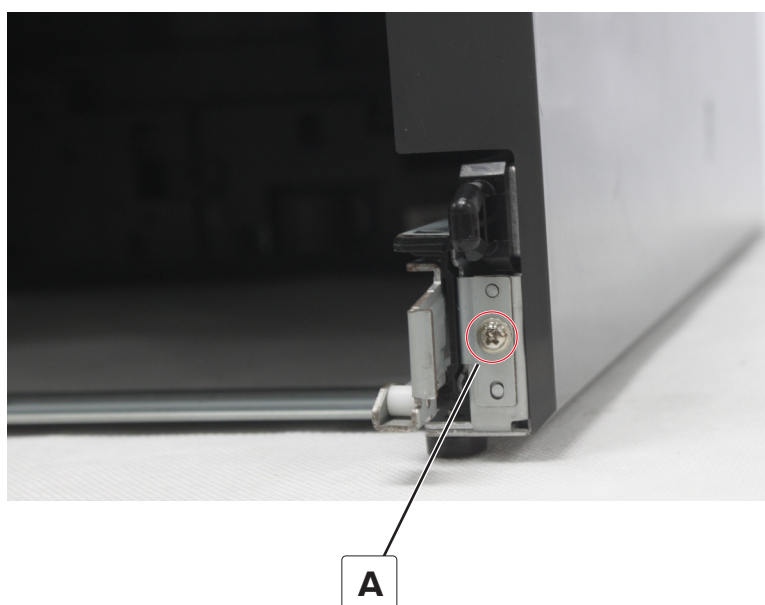
550-sheet tray paper feeder removal

1 Remove the tray insert.

2 Remove the pick roller.

3 Press, and then slide to remove the bracket.
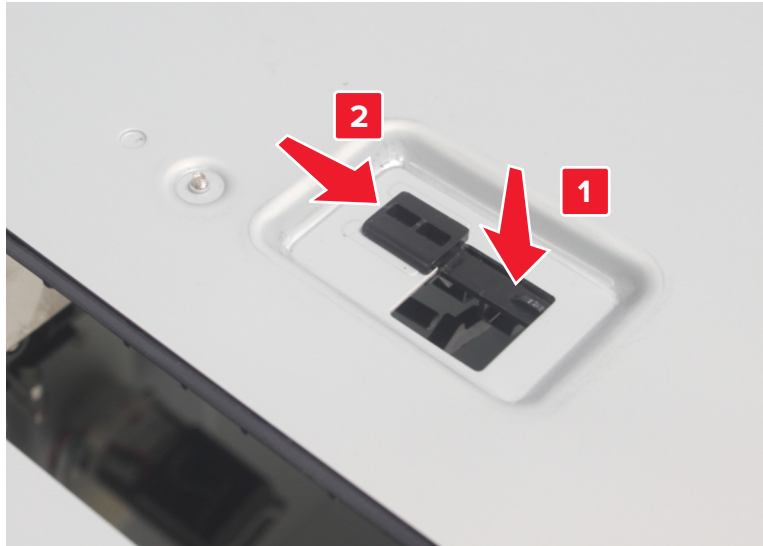
4 Disconnect the cable (A), and then remove the five screws (B).
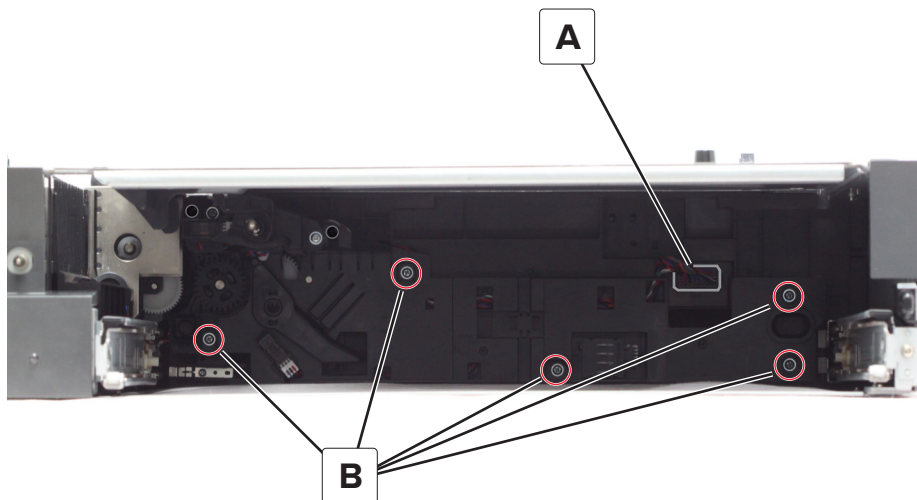
5 Remove the feeder.

Sensor (550-sheet tray media out) removal

1 Remove the tray insert.

2 Remove the paper feeder. See **"550-sheet tray paper feeder removal" on page 487**.

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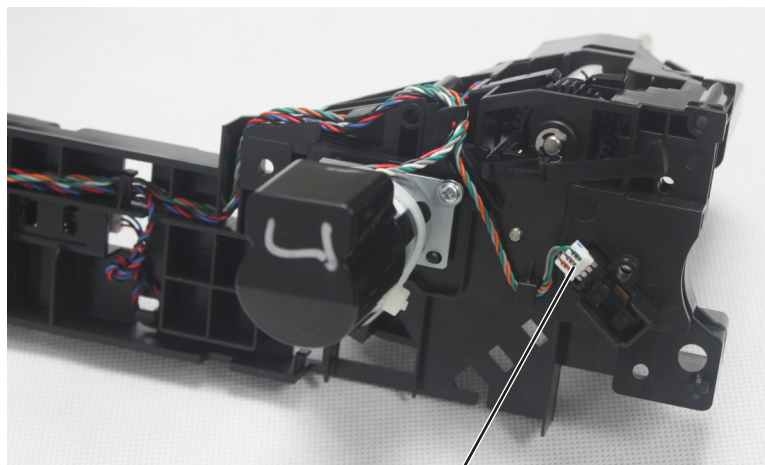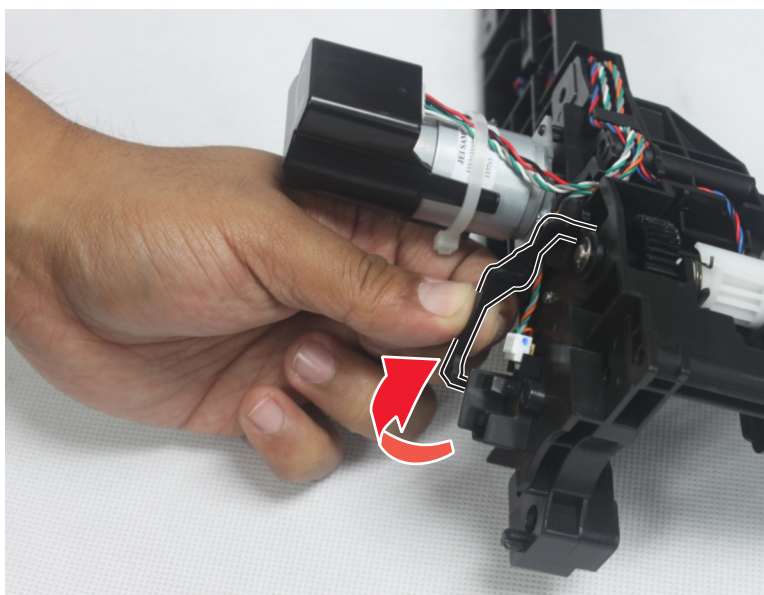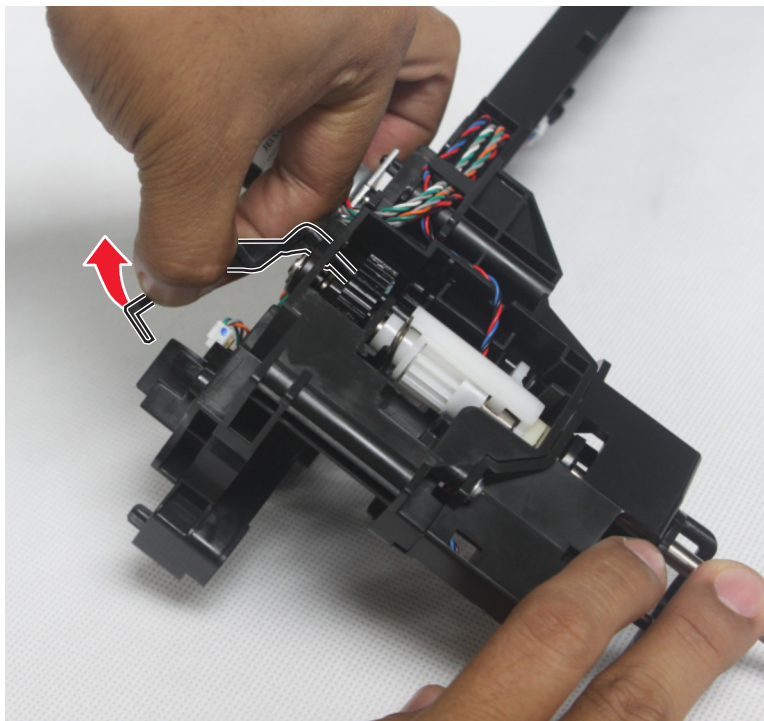
A

550-sheet tray media out sensor actuator removal

1 Remove the tray insert.

2 Remove the paper feeder. See **"550-sheet tray paper feeder removal" on page 487**.

3 Remove the bracket.
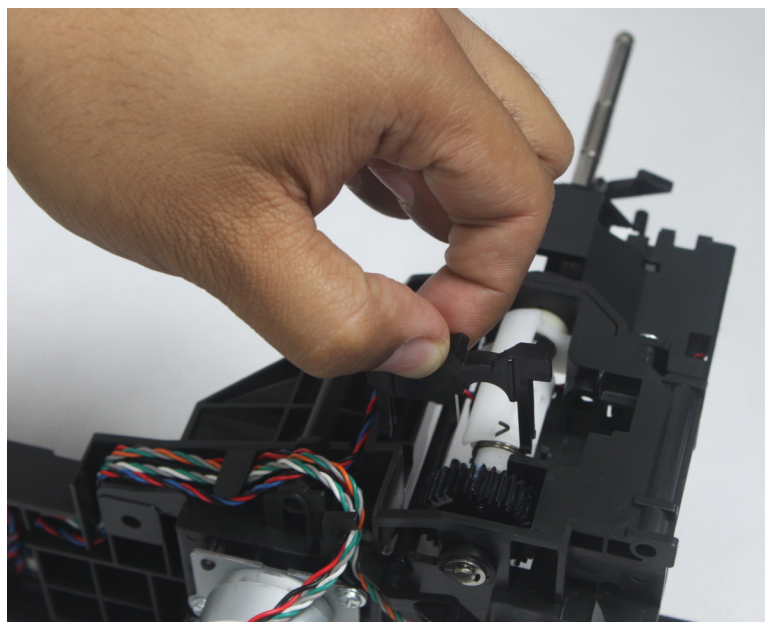
4 Move the actuator away, and then behind the sensor.

5 Rotate the actuator to align the two notches (A) with the slots.

A

A
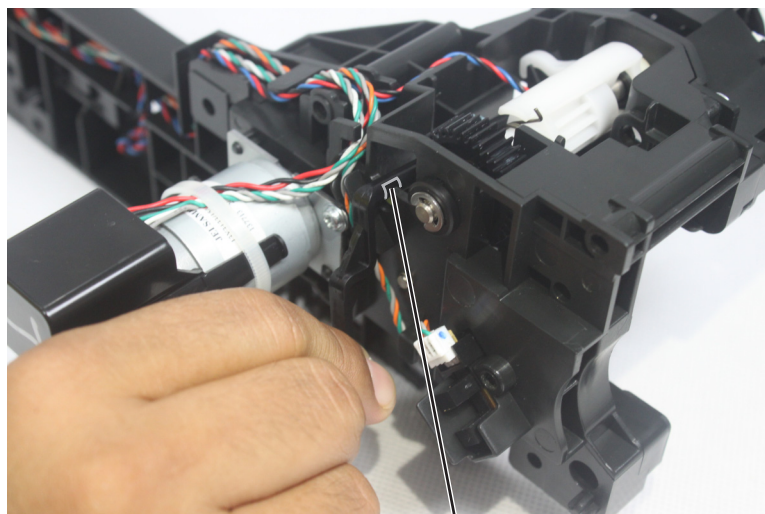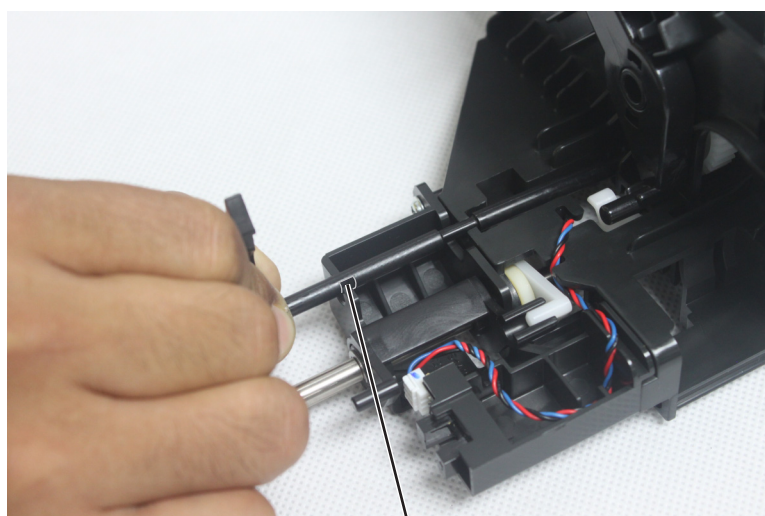
6 Remove the actuator.

550-sheet tray rear cover removal

1 Remove the three screws (A).
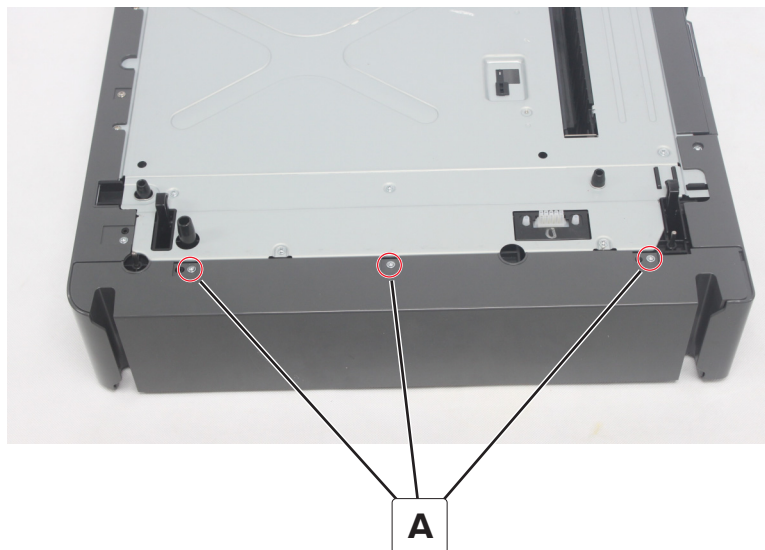
2 Slide and hold the latch to the right, and then remove the cover.

550-sheet tray controller board removal

1 Remove the rear cover. See **"550-sheet tray rear cover removal" on page 491**.

2 Disconnect the cables, and then remove the two screws (A).
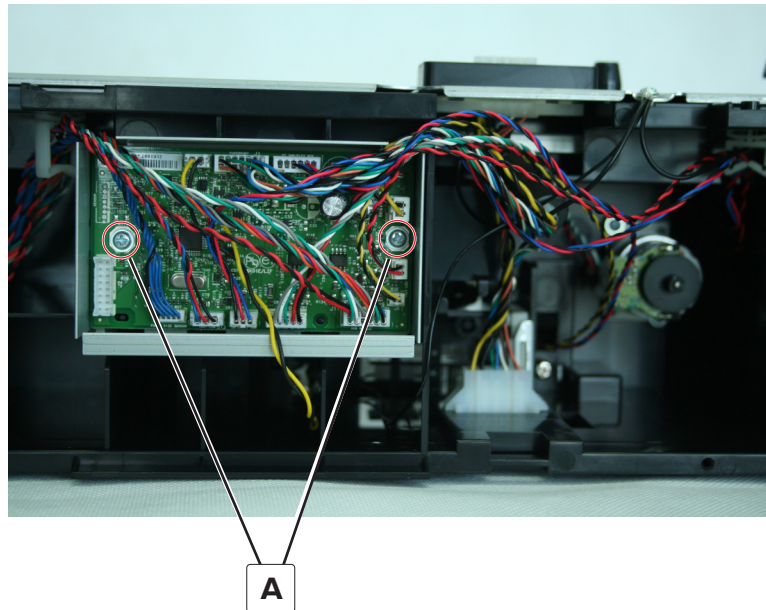
3 Remove the controller board.

550-sheet tray interface cable removal

1 Remove the tray insert.

2 Remove the rear cover. See **"550-sheet tray rear cover removal" on page 491**.

3 Disconnect the two cables (A) from the controller board.

Repair information

4 Remove the screw (B), and then remove the ground cable.

B
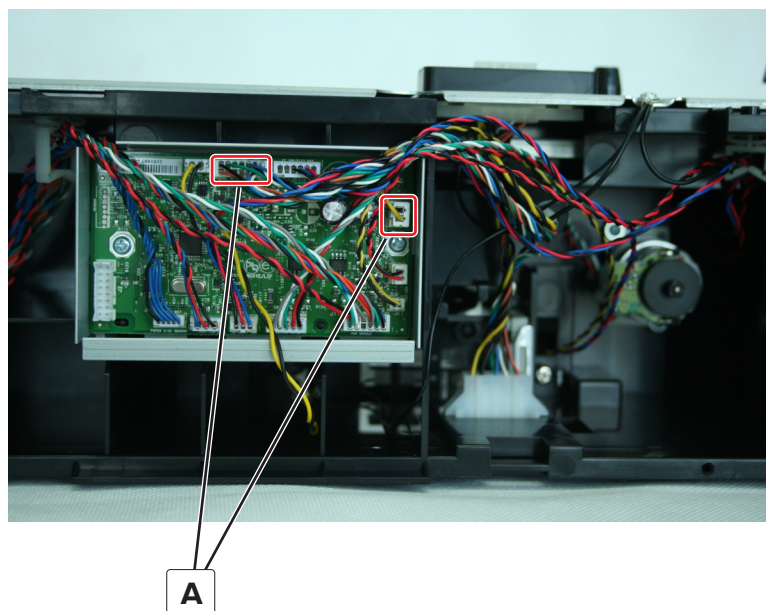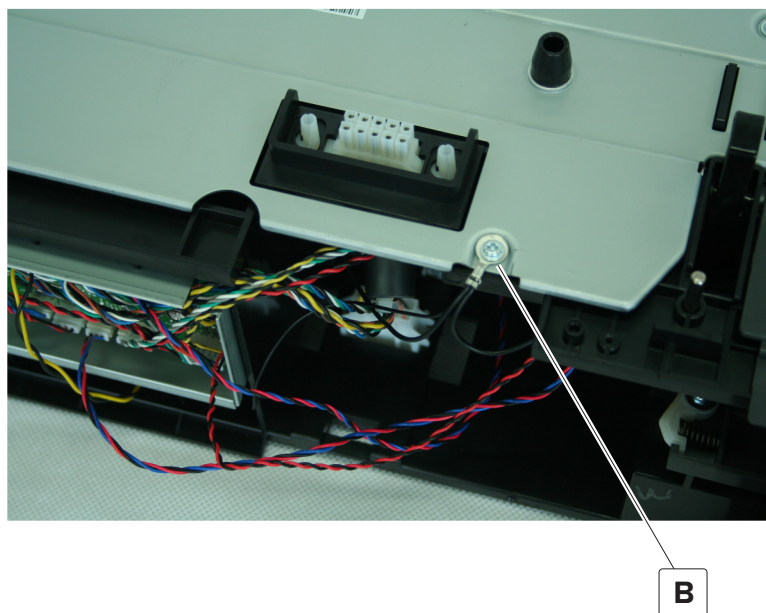
5 Using needle-nose pliers, remove the top interface cable.
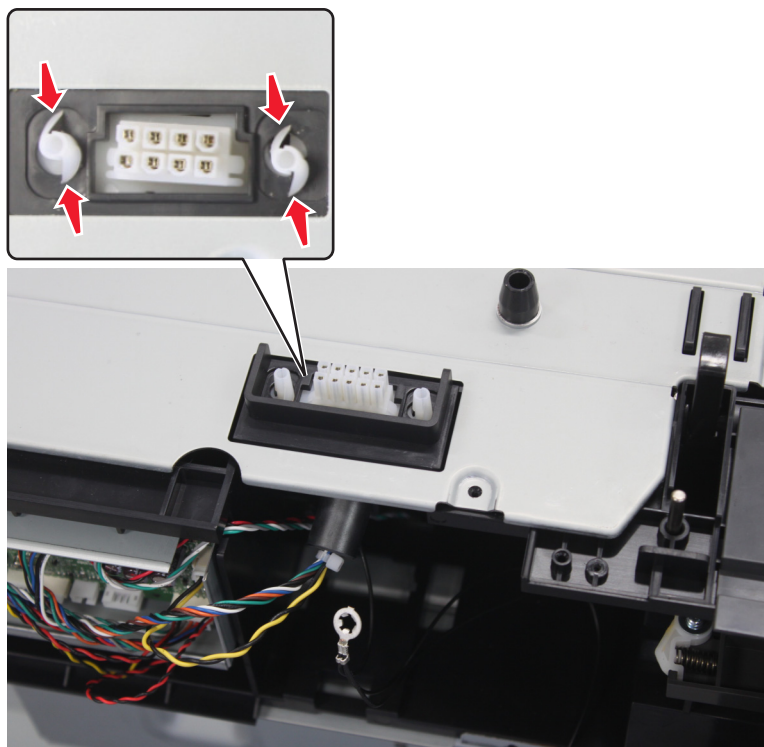
6 Open the jam door.

7 Remove the screw (C), and then remove the ground cable.
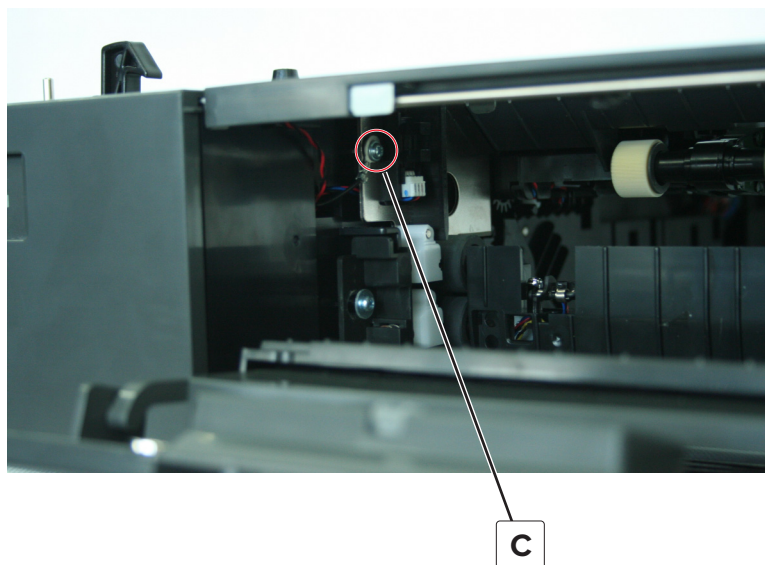
8 Remove the bottom interface cable.
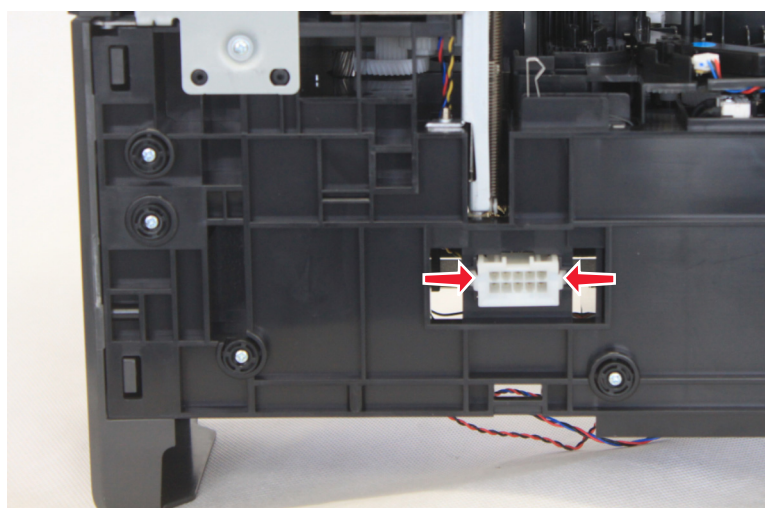
9 Remove the screw (D), and then remove the ground cable.
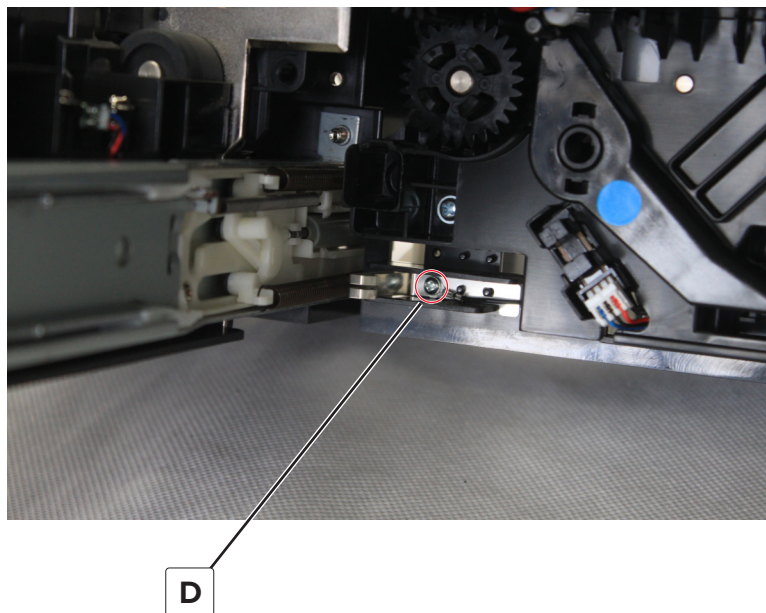
D

Sensor (550-sheet tray pick roller index) removal

1 Remove the tray insert.

2 Remove the pick roller assembly.

3 Press, and then slide to remove the bracket.
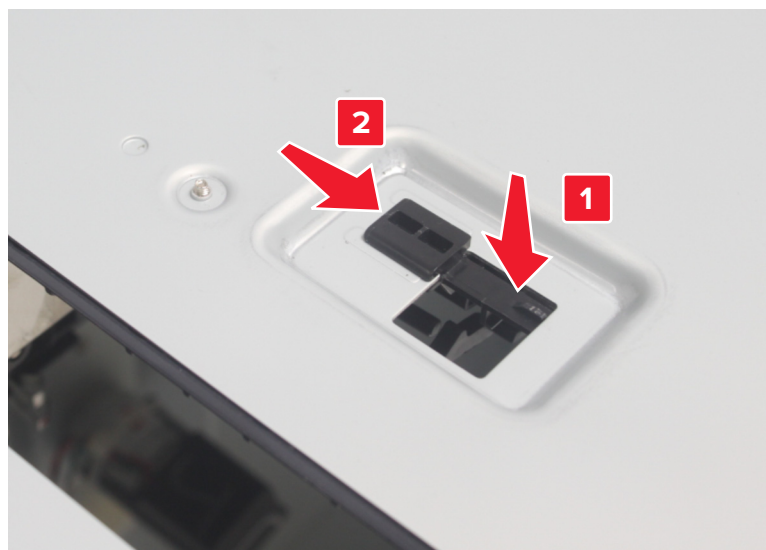
4 Remove the sensor (A), and then remove the cable.
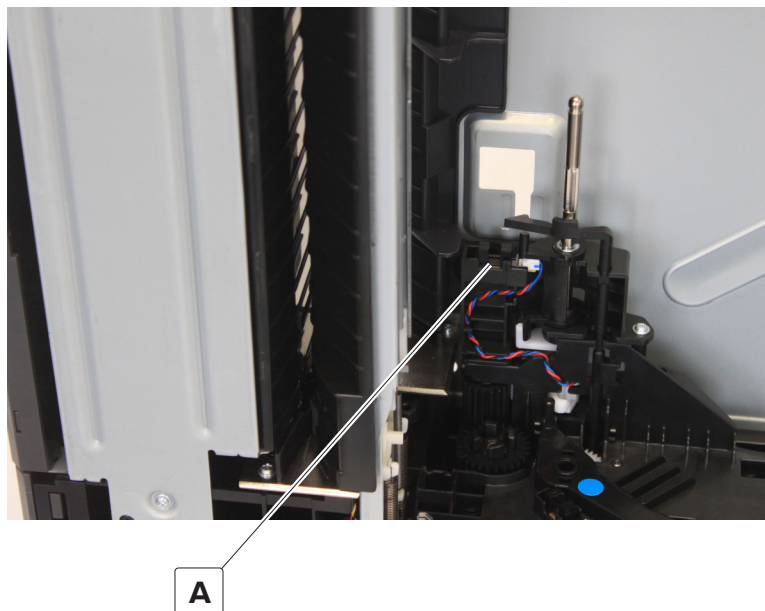
550-sheet tray left rail removal

1 Remove the tray insert.

2 Remove the rear cover. See **"550-sheet tray rear cover removal" on page 491**.

3 Remove the two screws (A).

4 Remove the two screws (B), and then remove the rail.

B
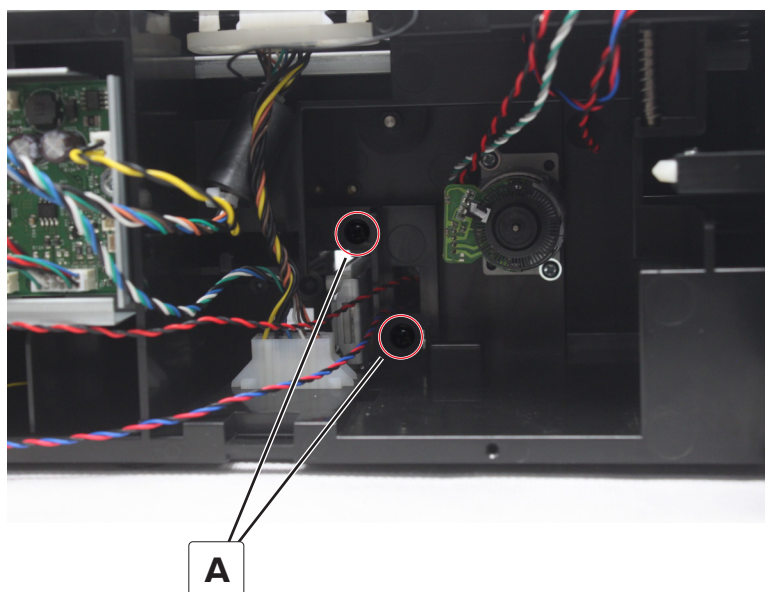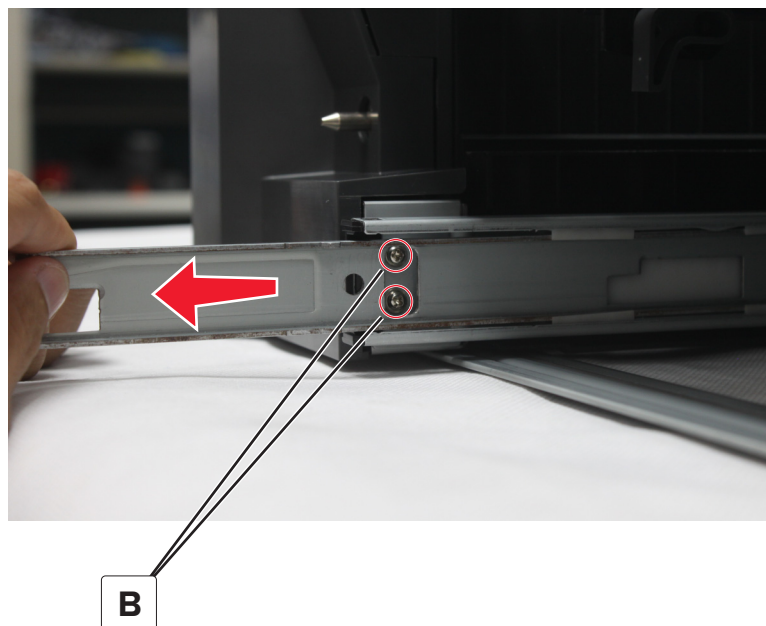
Motor (550-sheet tray pass-through) removal

1 Remove the tray insert.

2 Remove the rear cover. See **"550-sheet tray rear cover removal" on page 491**.

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

A
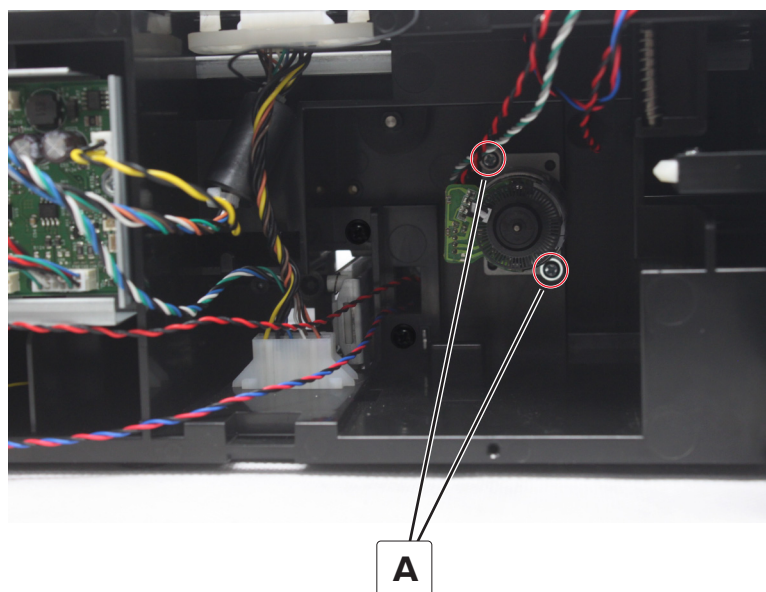
4 Disconnect the cable from the motor.

5 Remove the two screws (B), and then remove the bracket.

Note: Pay attention to the type of bracket used.

550-sheet tray wake up switch removal

1 Remove the tray insert.

2 Remove the rear cover. See **"550-sheet tray rear cover removal" on page 491**.

3 Remove the paper feeder. See **"550-sheet tray paper feeder removal" on page 487**.

4 Disconnect the cable (A) from the controller board.

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

B
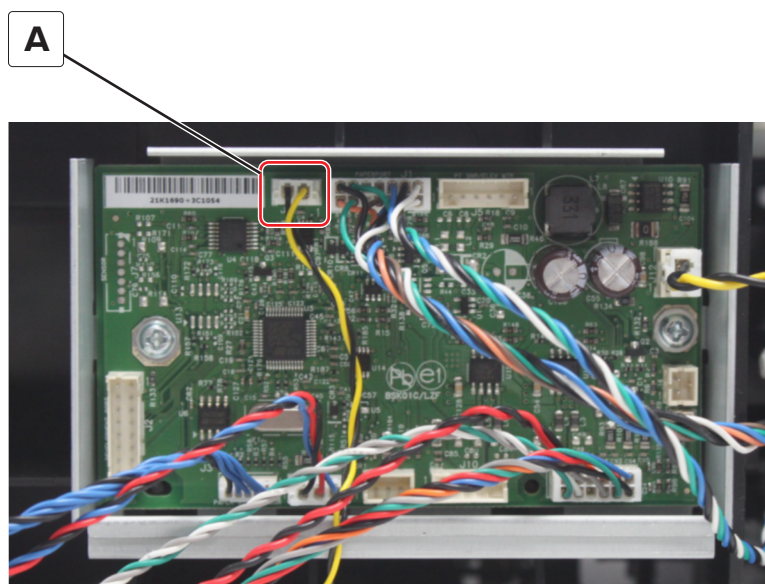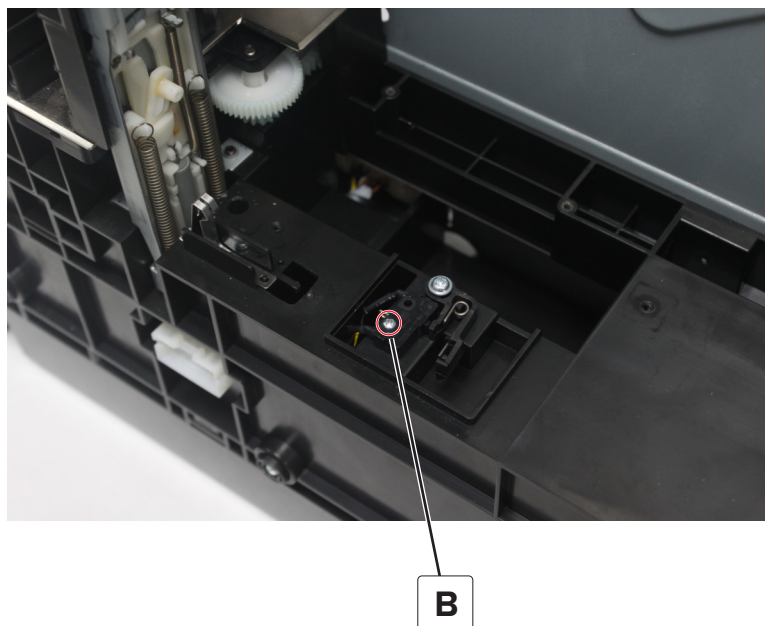
2200-sheet tray removals

2200-sheet tray insert removal

1 Fully extend the tray, and then press the left and right latches to release the tray.
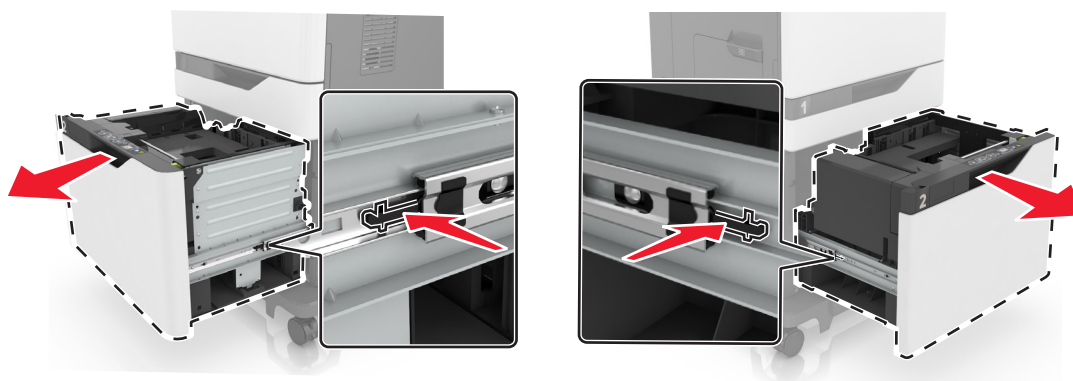
2 Remove the tray.

Bell crank removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Remove the clip (A), and then remove the washer.
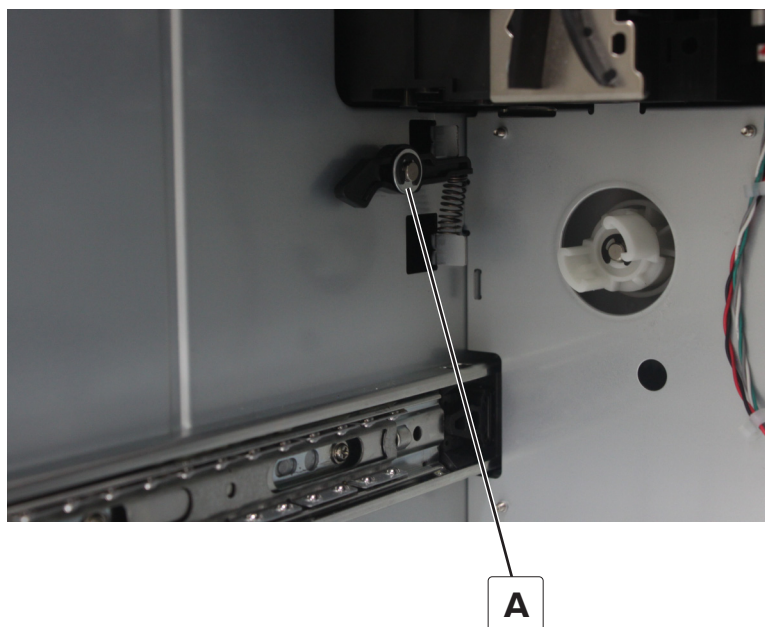
3 Remove the bell crank and spring.

> **Note:** The same steps apply when removing the other crank.

2200-sheet tray rail removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Remove the three screws (A).

> **Note:** Move the rail to the front to show the third screw.
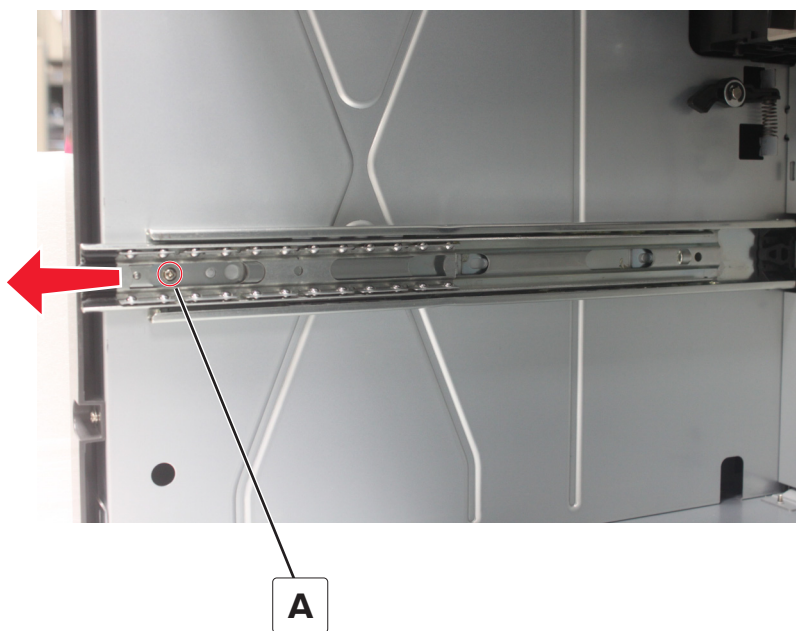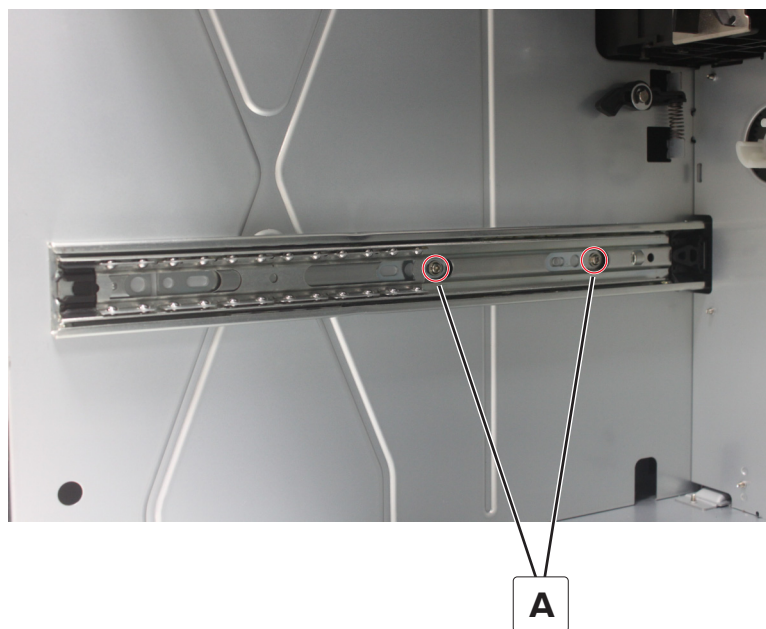
3 Remove the rail.

   Note: The same steps apply when removing the other rail.

Sensor (2200-sheet tray media low) removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Remove the sensor (A).
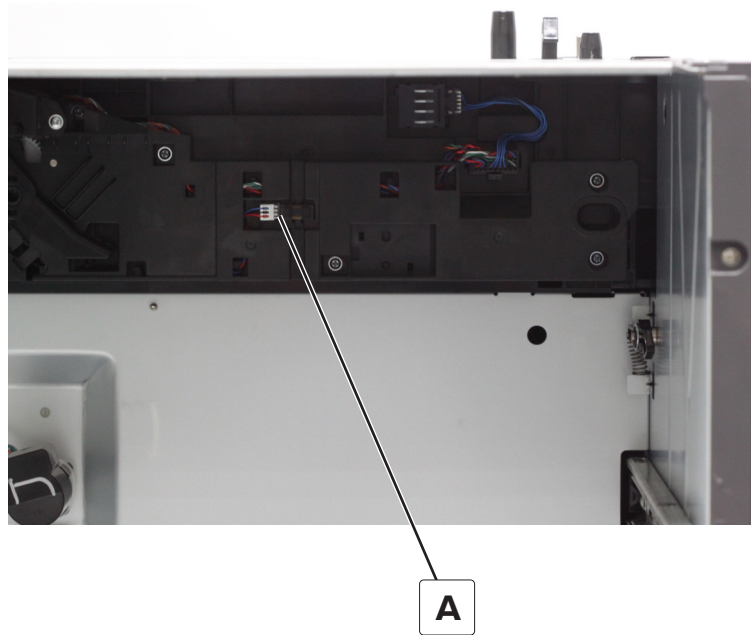
3 Disconnect the cable from the sensor.

Sensor (2200-sheet tray media size) removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Disconnect the cable (A).
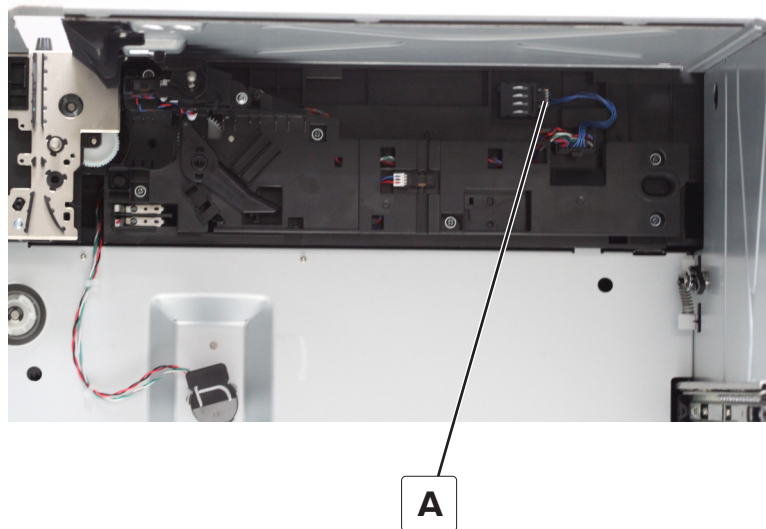
3 Remove the sensor.

2200-sheet tray rear cover removal

1 Remove the three screws (A).
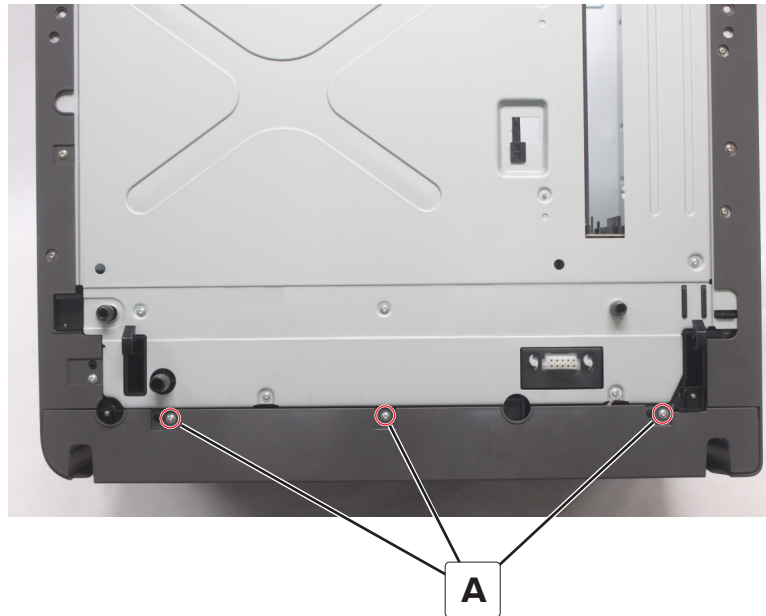
2 Remove the cover.

2200-sheet tray controller board removal

1 Remove the tray rear cover. See **"2200-sheet tray rear cover removal" on page 503**.

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

Repair information
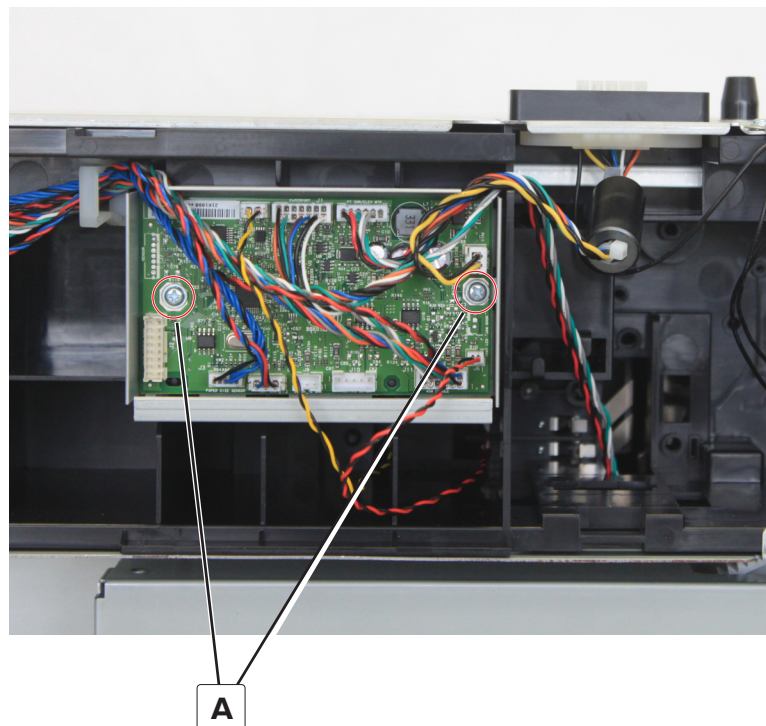
3 Remove the controller board.

2200-sheet tray interface cable removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Remove the tray rear cover. See **"2200-sheet tray rear cover removal" on page 503**.

3 Disconnect the two cables (A).
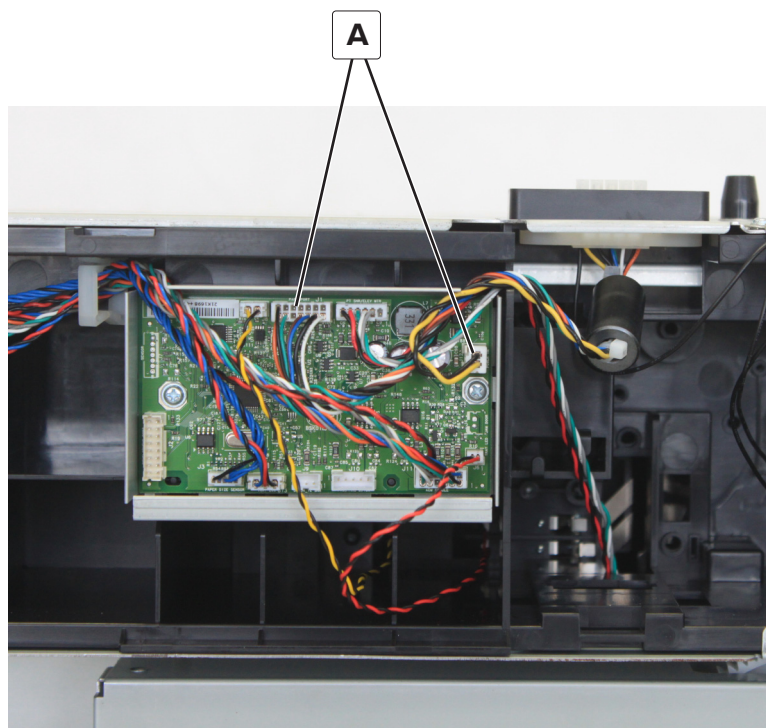
4 Remove the two screws (B), and then remove the ground cable.
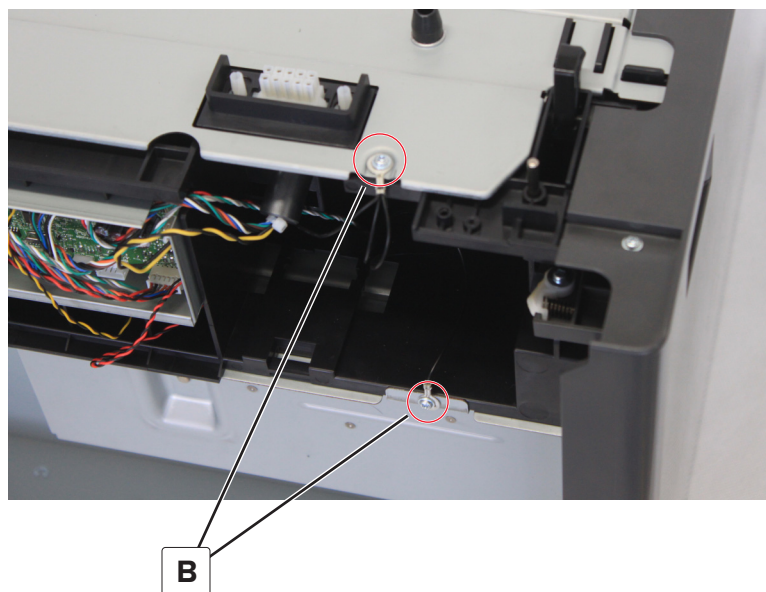
5 Using needle-nose pliers, remove the interface cable.
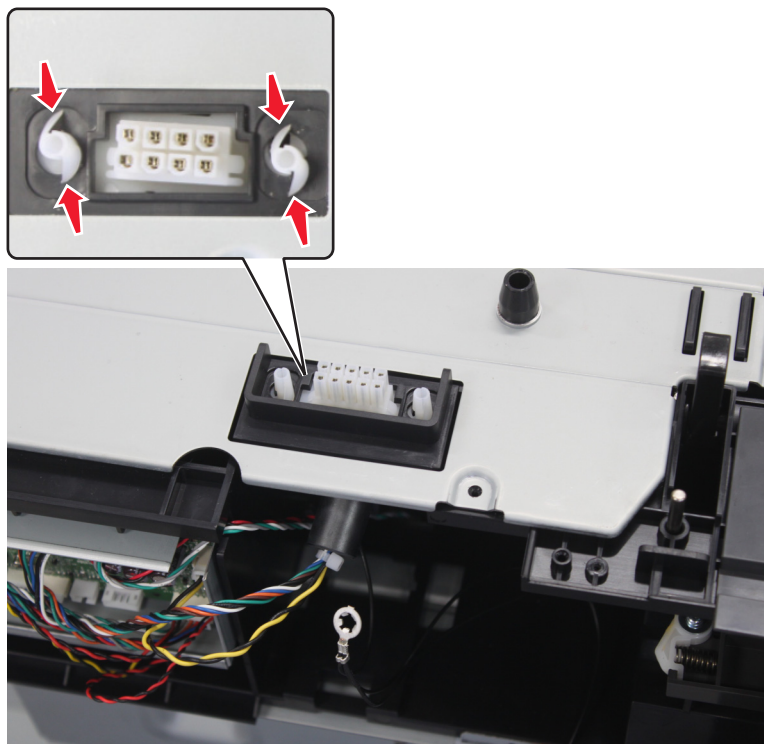
6 Remove the screw (C), and then remove the ground cable.
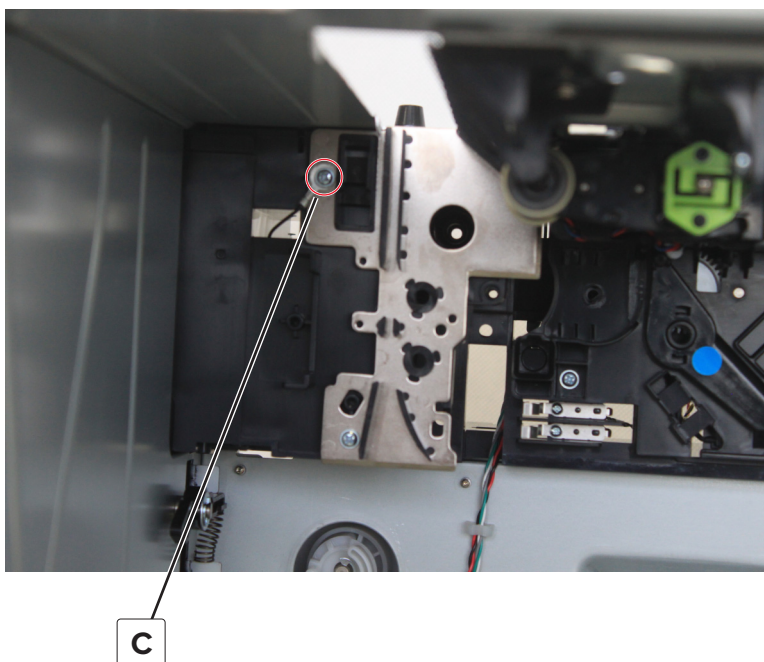
2200-sheet tray elevator gears removal

1 Remove the rear cover. See **"2200-sheet tray rear cover removal" on page 503**.

2 Remove the six screws (A), and then remove the gear bracket.
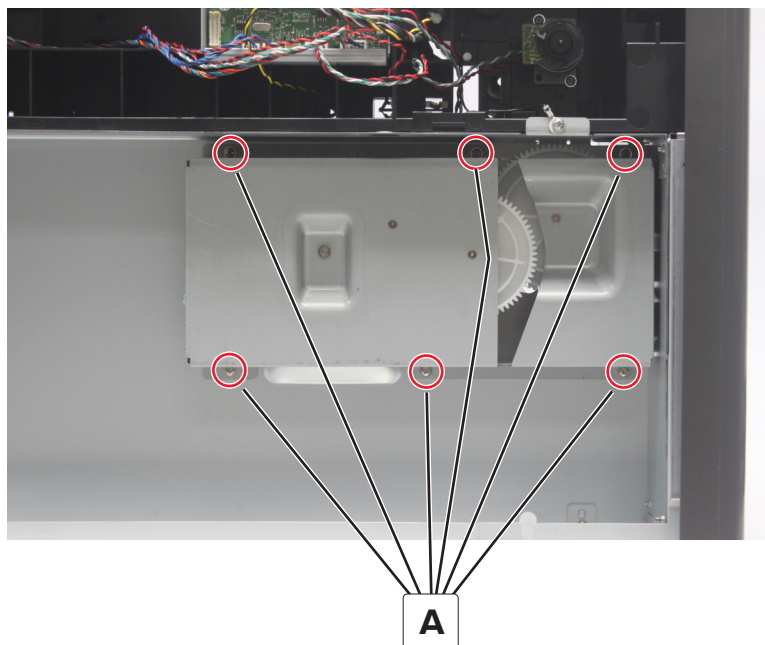
3 Remove the clip (B), and then remove the gear.
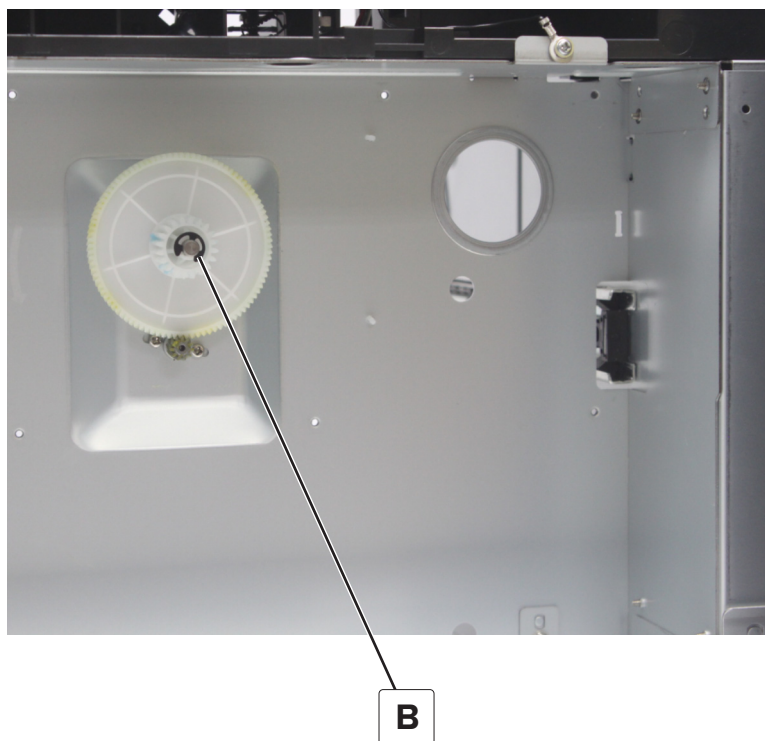
4 Remove the three clips (C), and then remove the gears.
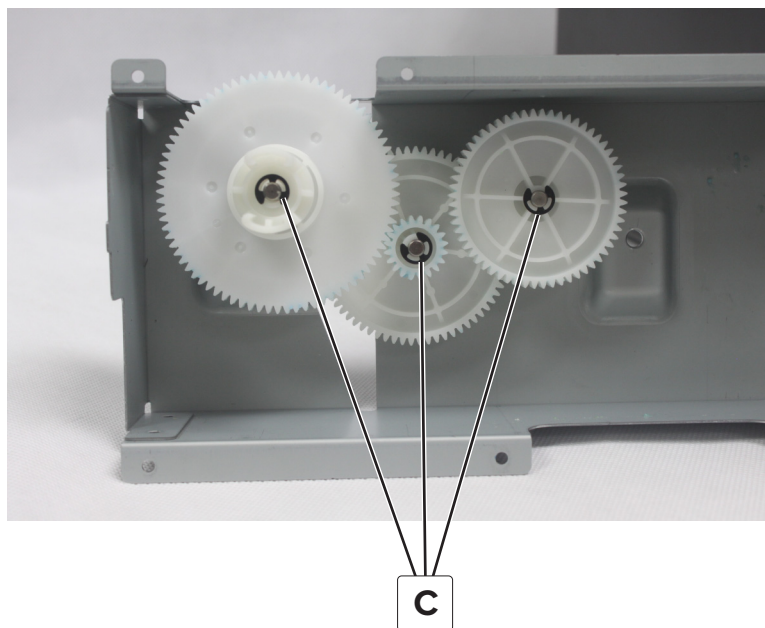
Motor (2200-sheet tray elevator) removal

1 Remove the rear cover. See **"2200-sheet tray rear cover removal" on page 503**.

2 Remove the elevator gear bracket. See **"2200-sheet tray elevator gears removal" on page 506**.

3 Disconnect the cable.

4 Remove the two screws (A), and then remove the motor.
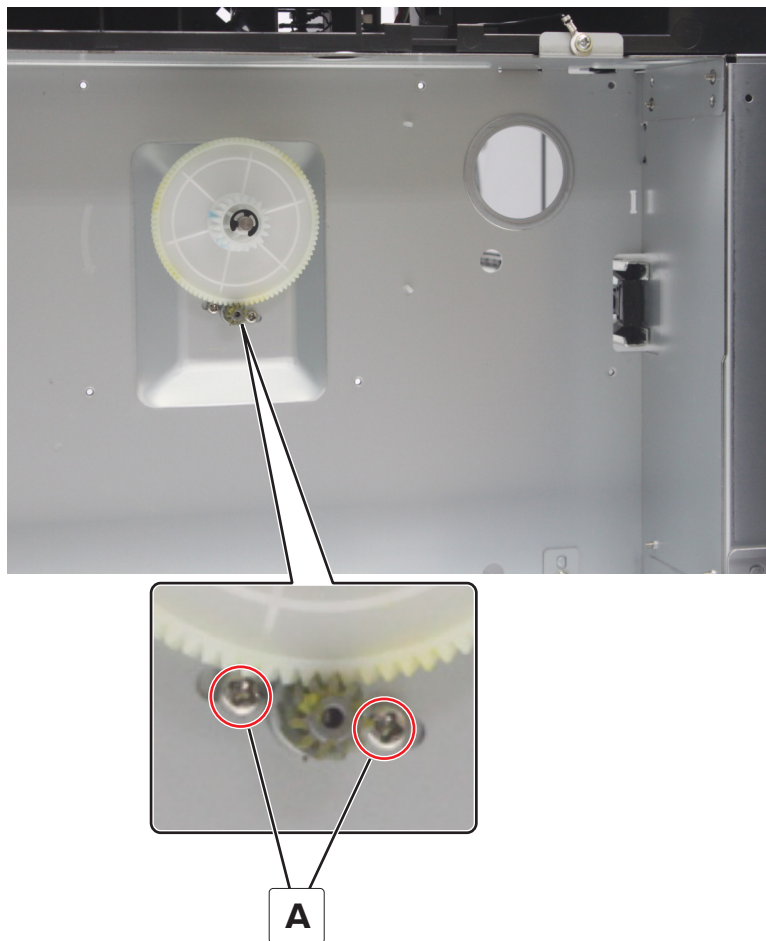
2200-sheet tray paper feeder removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Press, and then slide to remove the bracket.
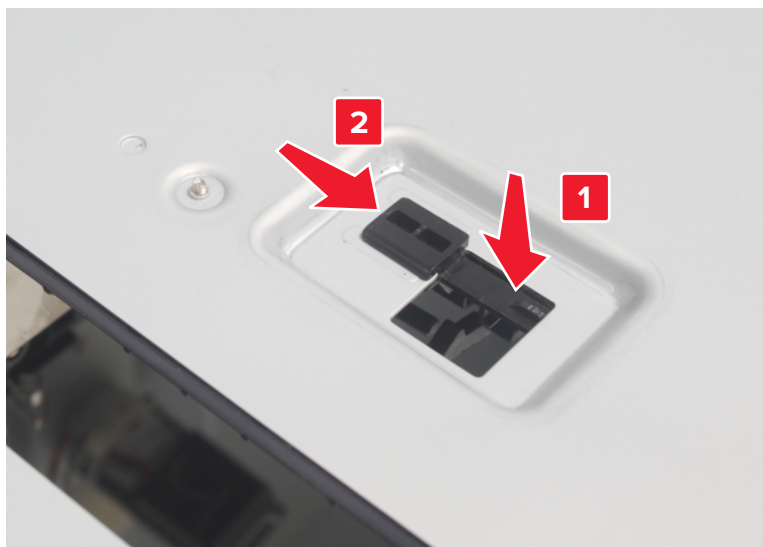
3 Disconnect the two cables (A).

4 Remove the five screws (B), and then remove the feeder.
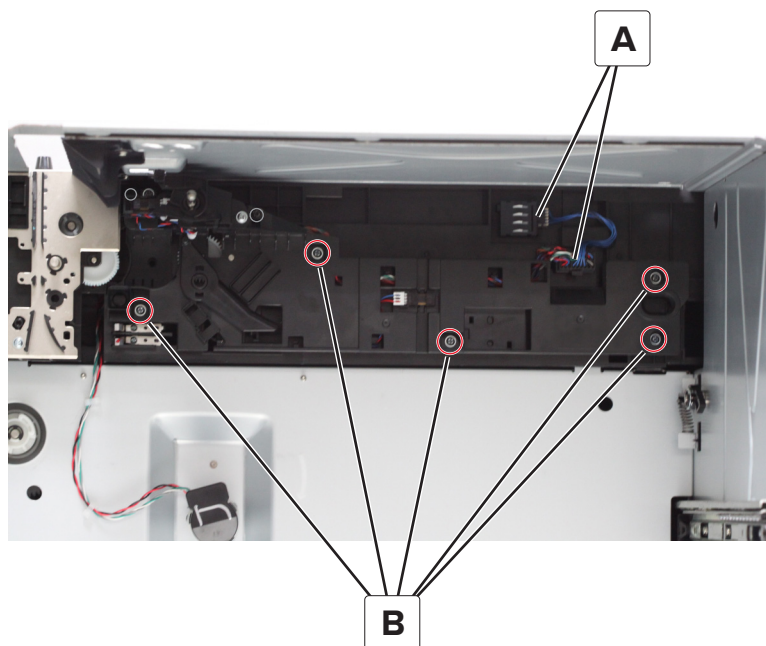
Sensor (2200-sheet tray media out) removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Remove the paper feeder. See **"2200-sheet tray paper feeder removal" on page 509**.

Repair information

3 Disconnect the cable (A), and then remove the sensor.
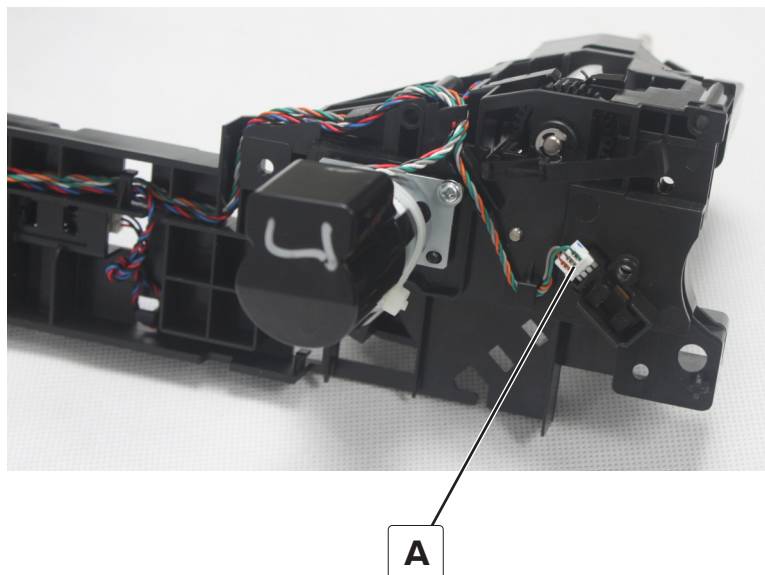
Sensor (2200-sheet tray pick roller index) removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Remove the paper feeder. See **"2200-sheet tray paper feeder removal" on page 509**.

3 Remove the pick roller.

4 Remove the bracket.
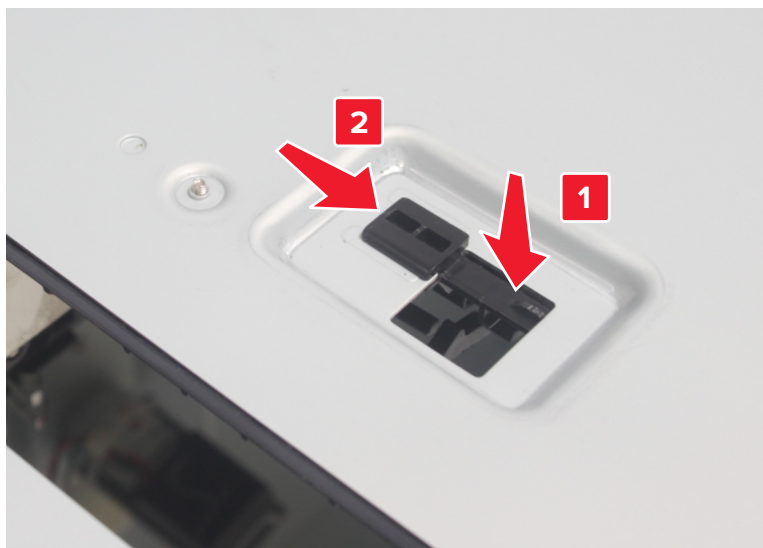
5 Remove the sensor (A), and then disconnect the cable.
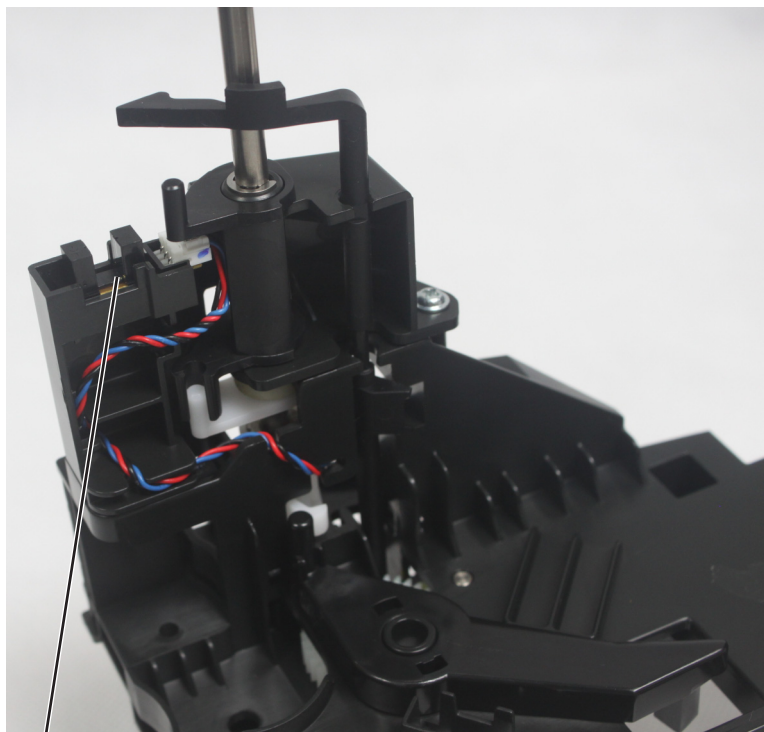
A

Motor (2200-sheet tray pick) removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Remove the paper feeder. See **"2200-sheet tray paper feeder removal" on page 509**.

3 Remove the two screws (A).

A
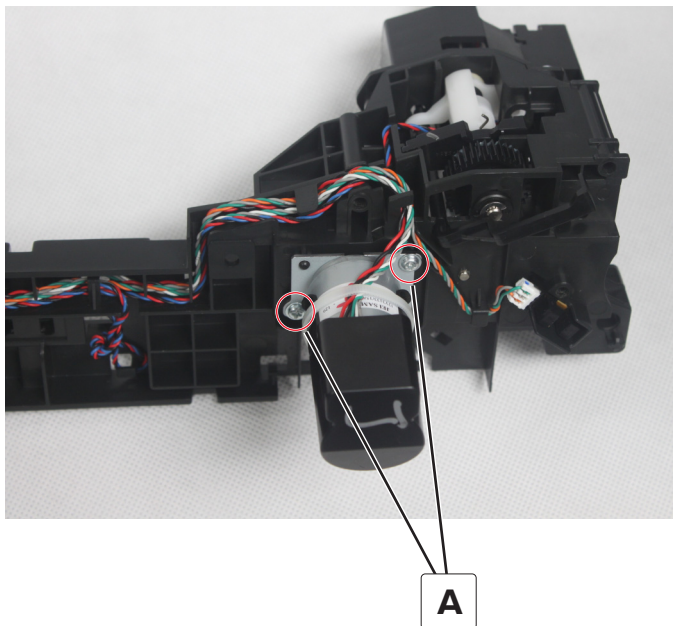
4 Cut the zip tie, disconnect the cable (B), and then remove the motor.

B
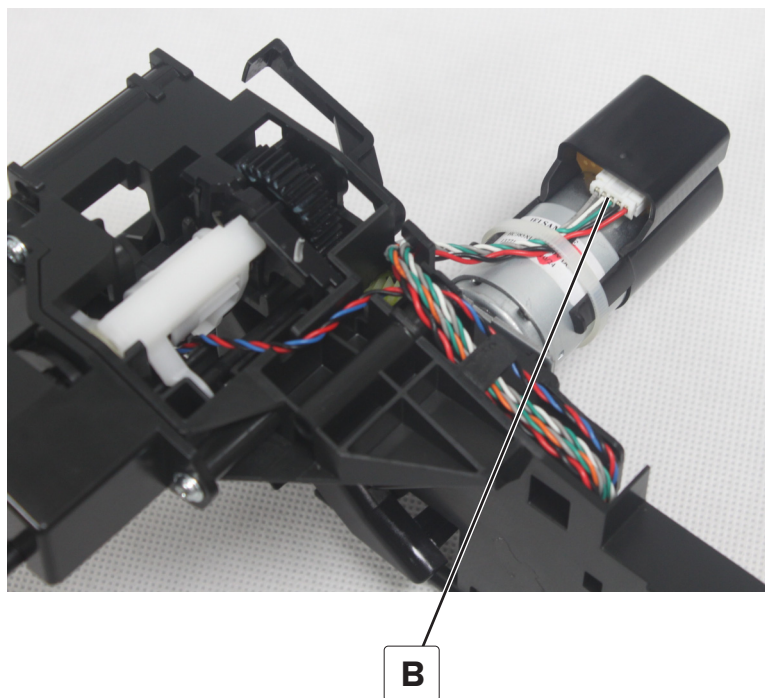
5 Remove the cover from the motor.

2200-sheet tray media out sensor actuator removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Remove the paper feeder. See **"2200-sheet tray paper feeder removal" on page 509**.

Repair information

3 Remove the bracket.

4 Move the actuator away, and then behind the sensor.

5 Rotate the actuator to align the two notches (A) with the slots.

A

A
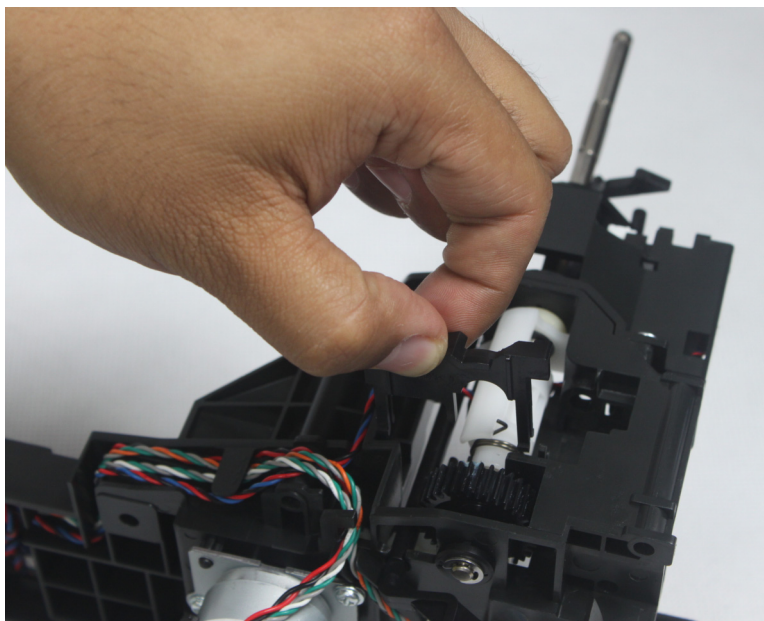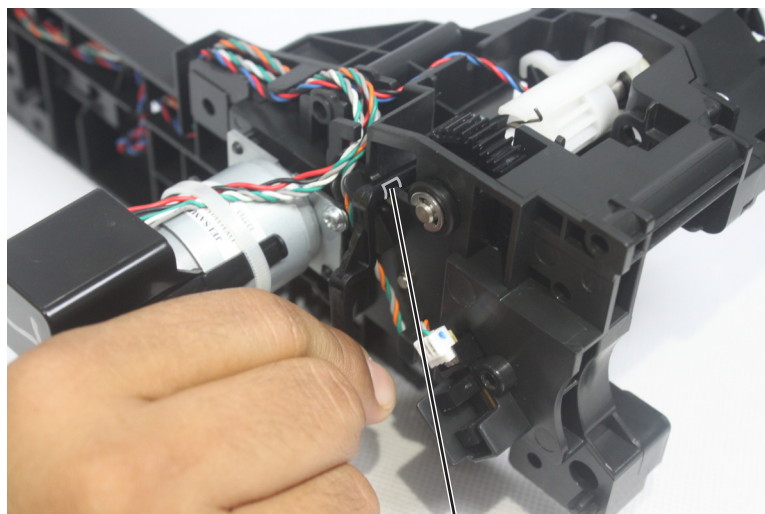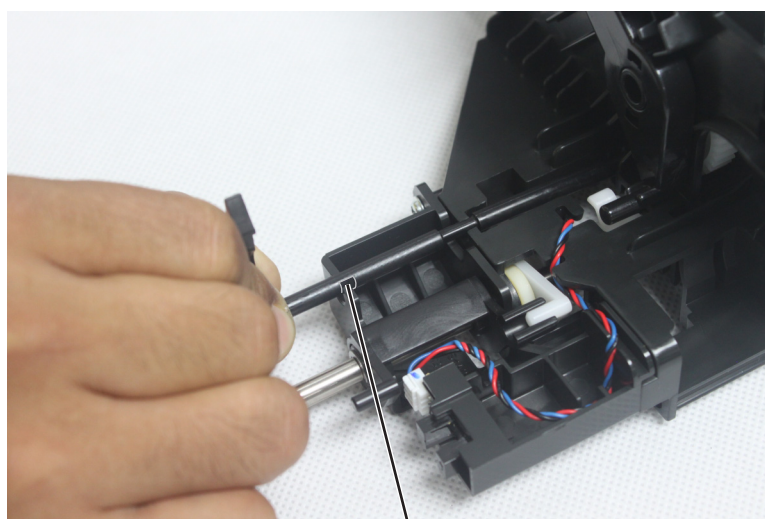
6 Remove the actuator.

2200-sheet tray wake up switch removal

1 Remove the tray insert. See **"2200-sheet tray insert removal" on page 499**.

2 Remove the paper feeder. See **"2200-sheet tray paper feeder removal" on page 509**.

3 Remove the rear cover. See **"2200-sheet tray rear cover removal" on page 503**.

Repair information

4 Disconnect the cable (A).
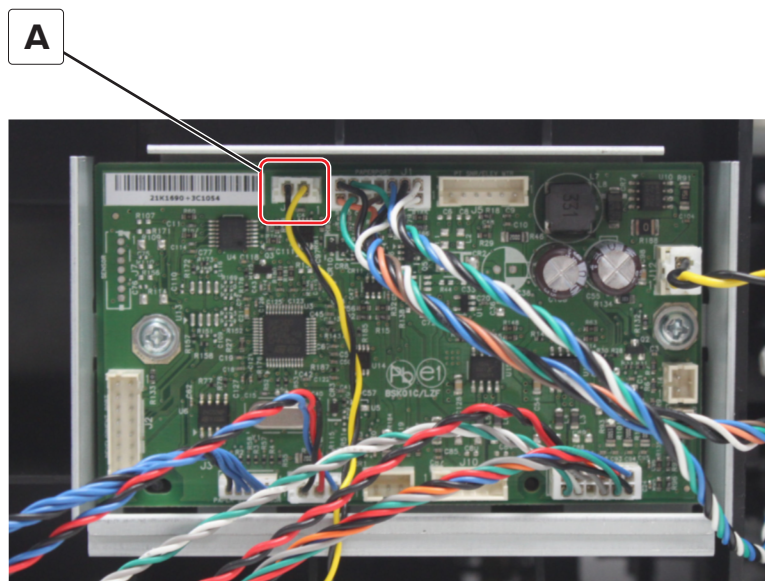
5 Remove the screw (B), and then remove the switch.
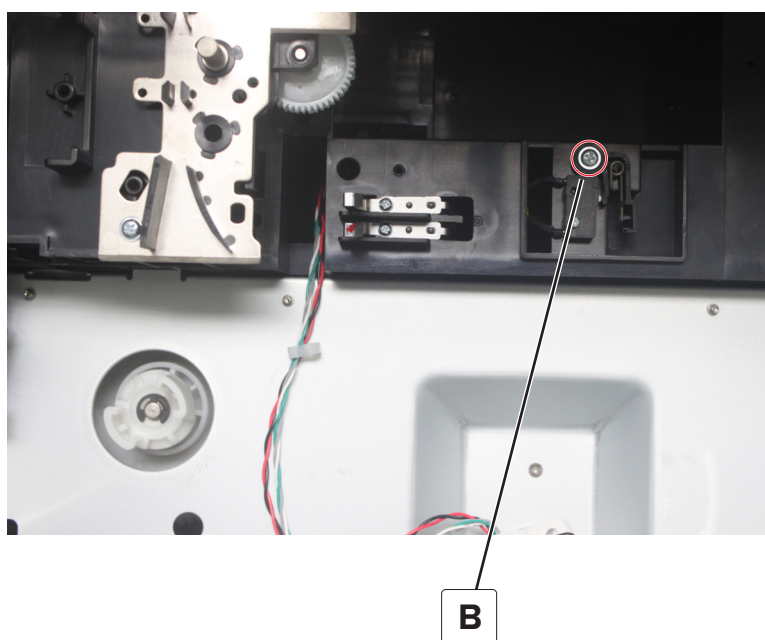
Caster base removals

Locking caster removal

1 Slide the latch to the right to unlock, and then remove the printer base or input option from the caster base.

⚠️ **CAUTION—POTENTIAL INJURY:** The printer weighs 61-84 kg (135-185 lb) and requires three or more trained personnel to lift it safely. Always use the handholds on the printer to lift it. Make sure that your fingers are not under the printer when you lift or set the printer down.

2 Remove the four screws (A).

Repair information

3 Slide the latch to the right, and then remove the caster base cover.

4 Remove the three screws (B), and then remove the locking caster.

Note: Remove and replace the damaged caster only. The left and right locking casters do not wear and tear at the same time.
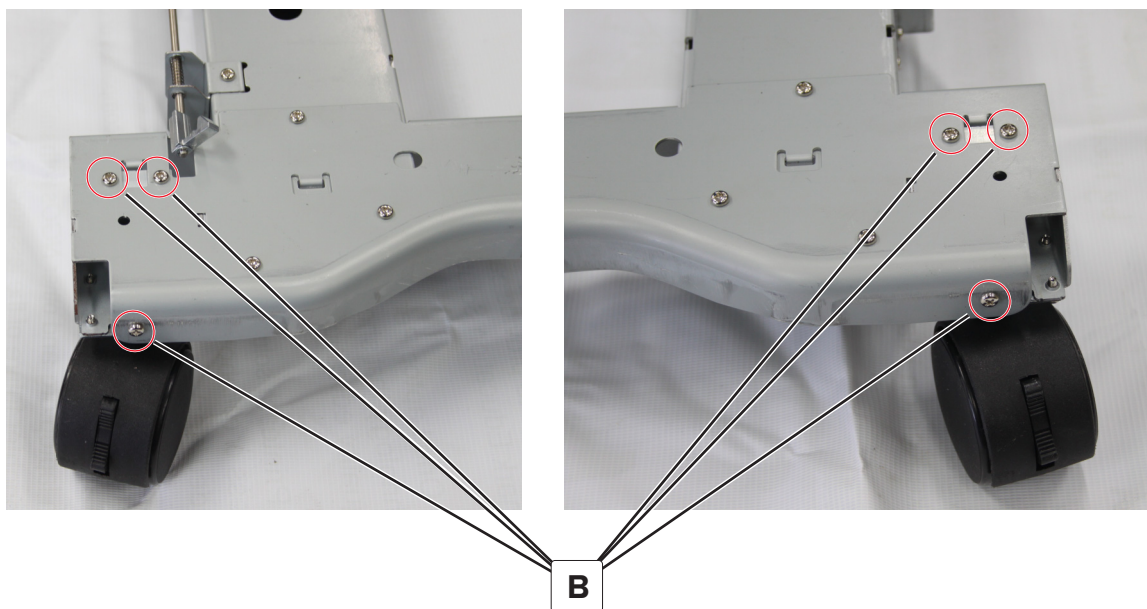
Installation note: When installing the left or right locking caster, make sure to position the caster and the screws as shown.

Non-locking caster removal

1 Slide the latch to the right to unlock, and then remove the printer base or input option from the caster base.

⚠️ **CAUTION—POTENTIAL INJURY:** The printer weighs 61-84 kg (135-185 lb) and requires three or more trained personnel to lift it safely. Always use the handholds on the printer to lift it. Make sure that your fingers are not under the printer when you lift or set the printer down.

2 Remove the four screws (A).

3 Slide the latch to the right, and then remove the caster base cover.
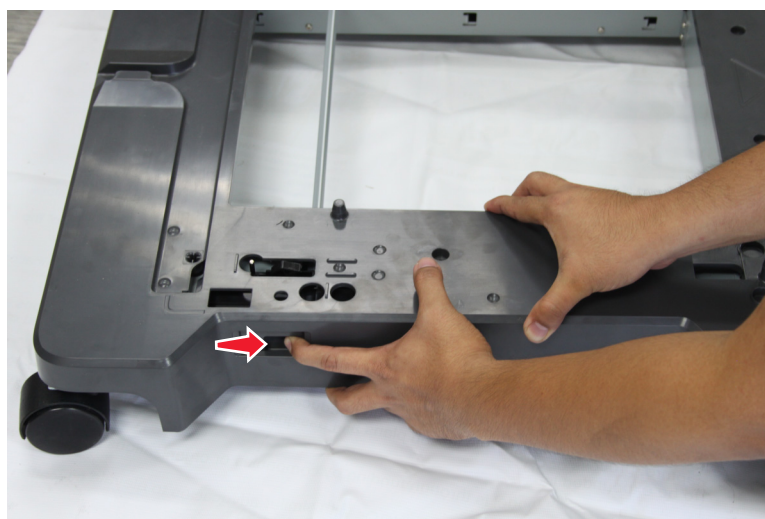
4 Remove the three screws (B), and then remove the non-locking caster.

Note: Remove and replace the damaged caster only. The left and right non-locking casters do not wear and tear at the same time.

Repair information
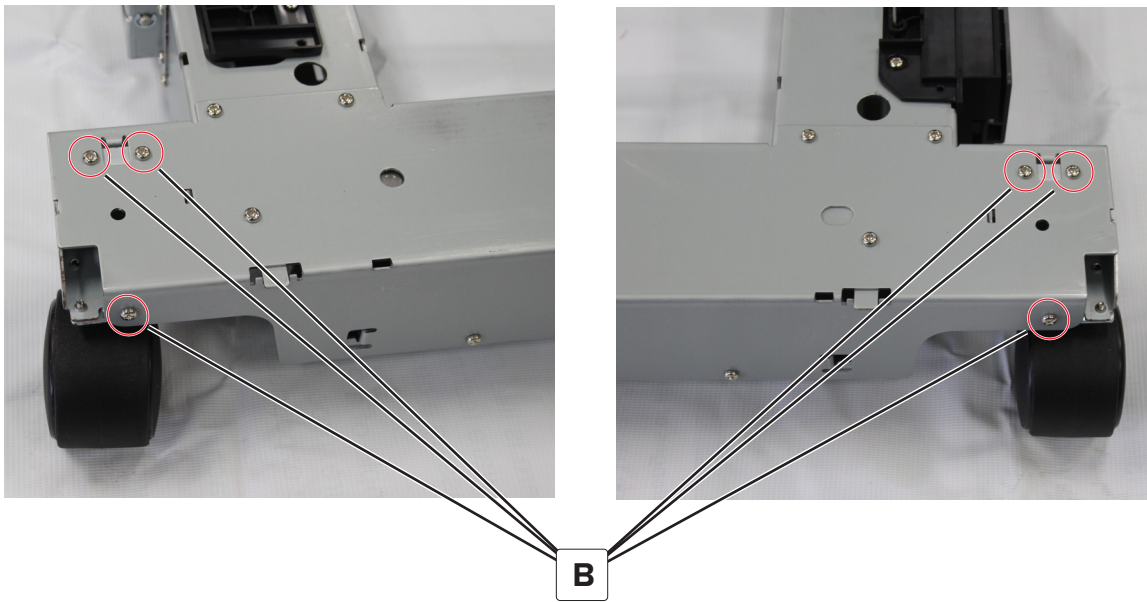
Installation note: When installing the left or right non-locking caster, make sure to position the screws as shown.
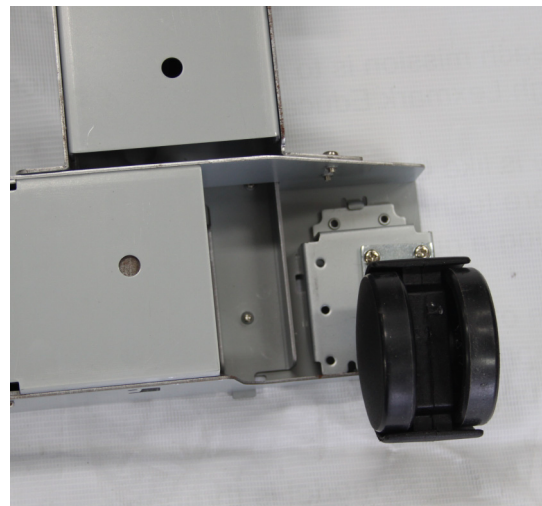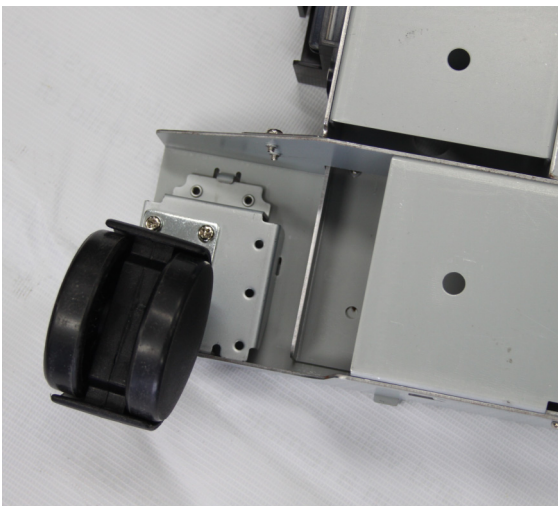
Staple finisher removals

Staple finisher right cover removal

1 Remove the two screws (A).
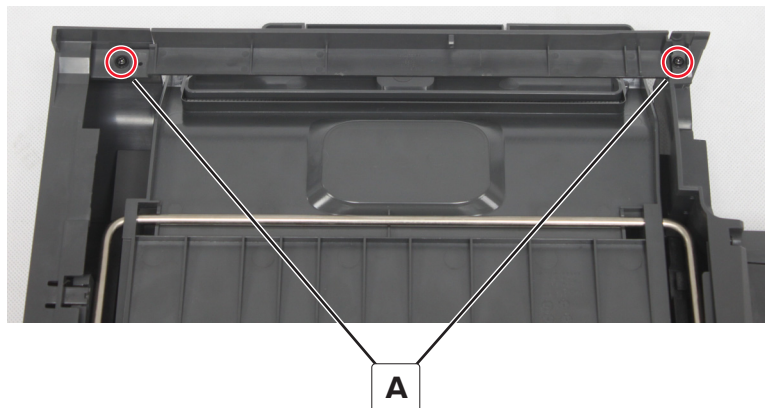
2 Remove the cover.

Staple finisher front cover removal

1 Remove the right cover. See .

2 Remove the screw (A).

3 Release the two latches (B), and then remove the cover.
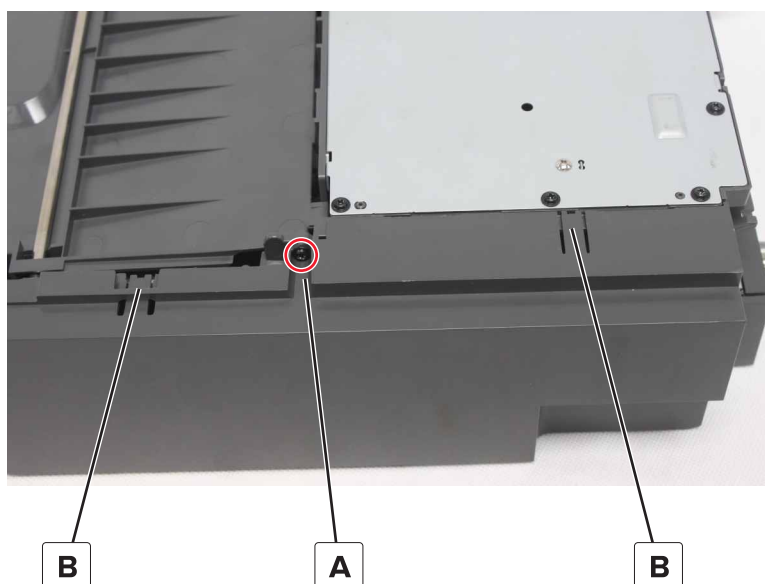
Staple finisher rear cover removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Open the staple cartridge door, and then remove the two screws (A).
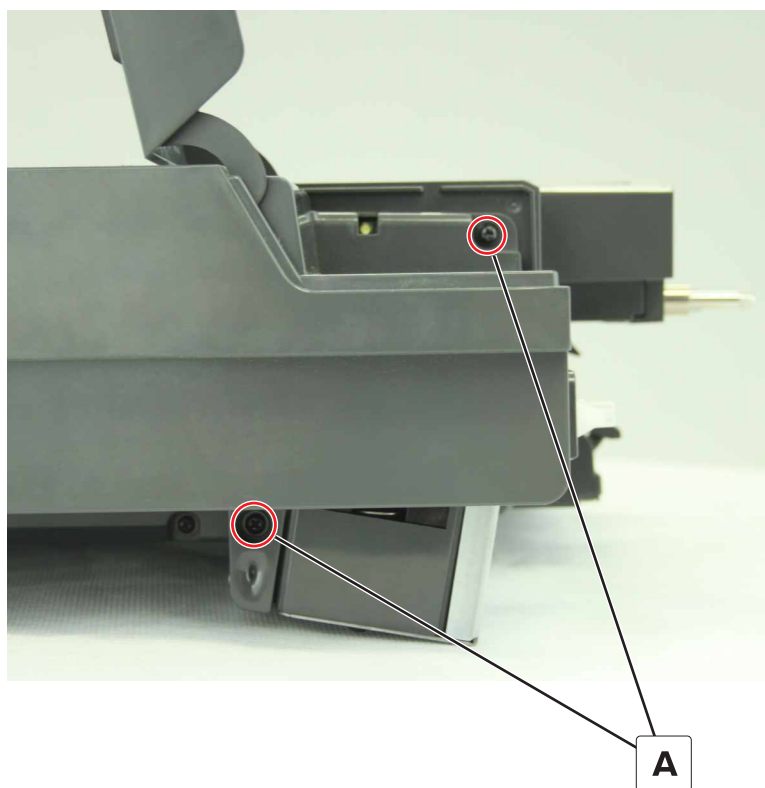
3 Swing out the cover to remove.

Repair information
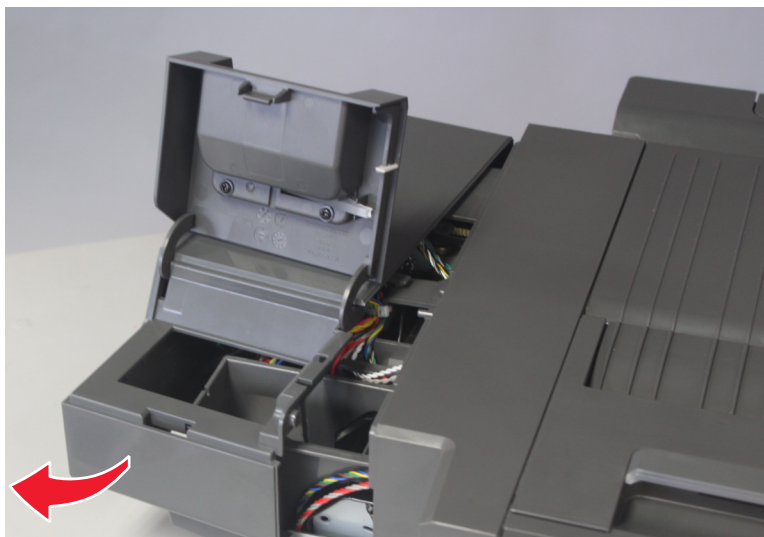
Installation notes:

a Make sure to align the two tabs (A).
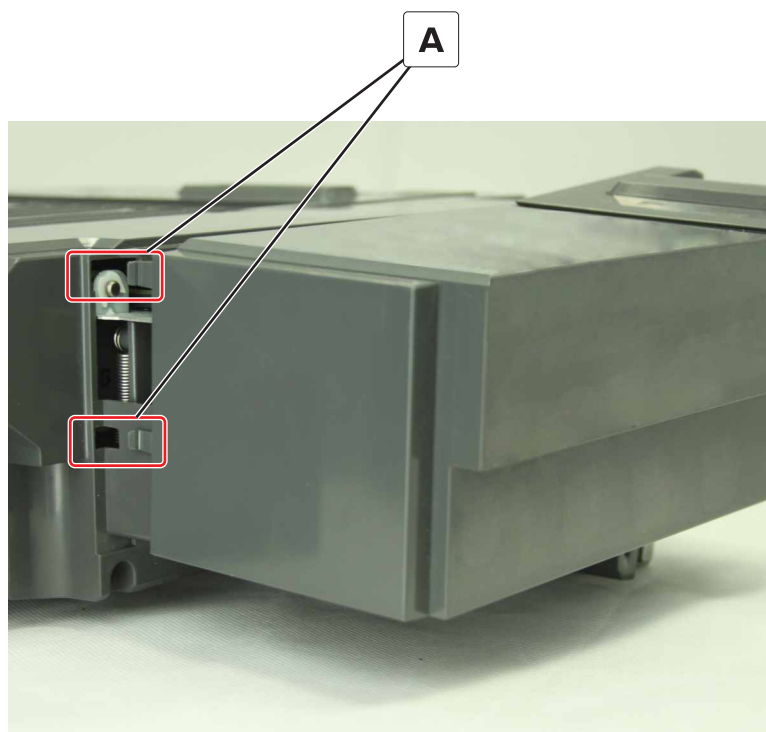
b Make sure that the pin is aligned with the hole on the staple cartridge door arm.
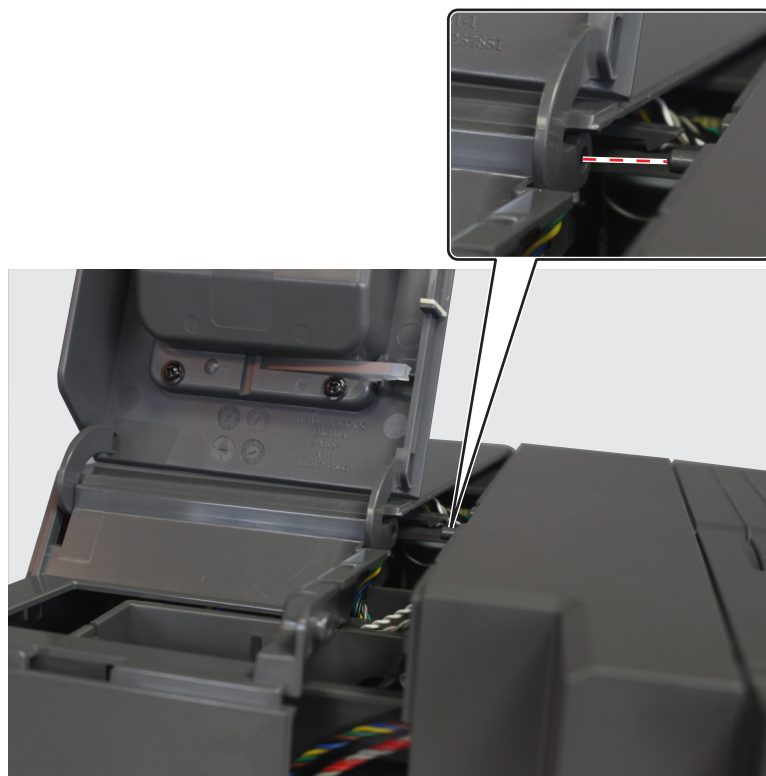
Staple finisher controller board removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Disconnect the cables, and then remove the four screws (A).
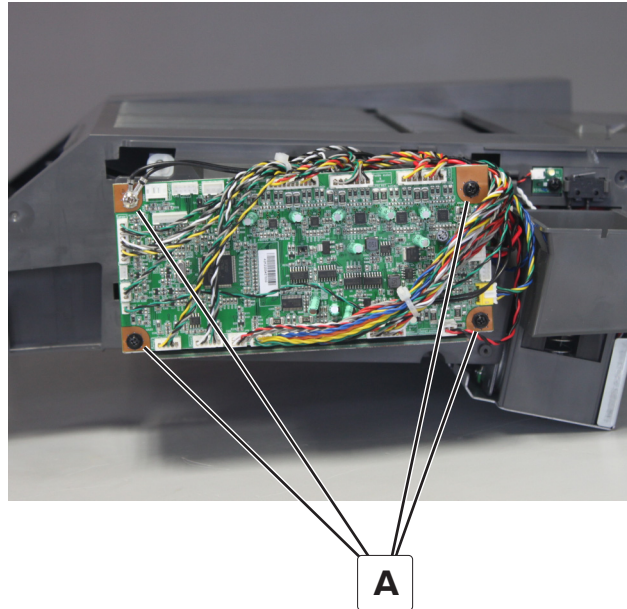
Staple finisher inner rear cover removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

4 Remove the screws (A), and then remove the cover.
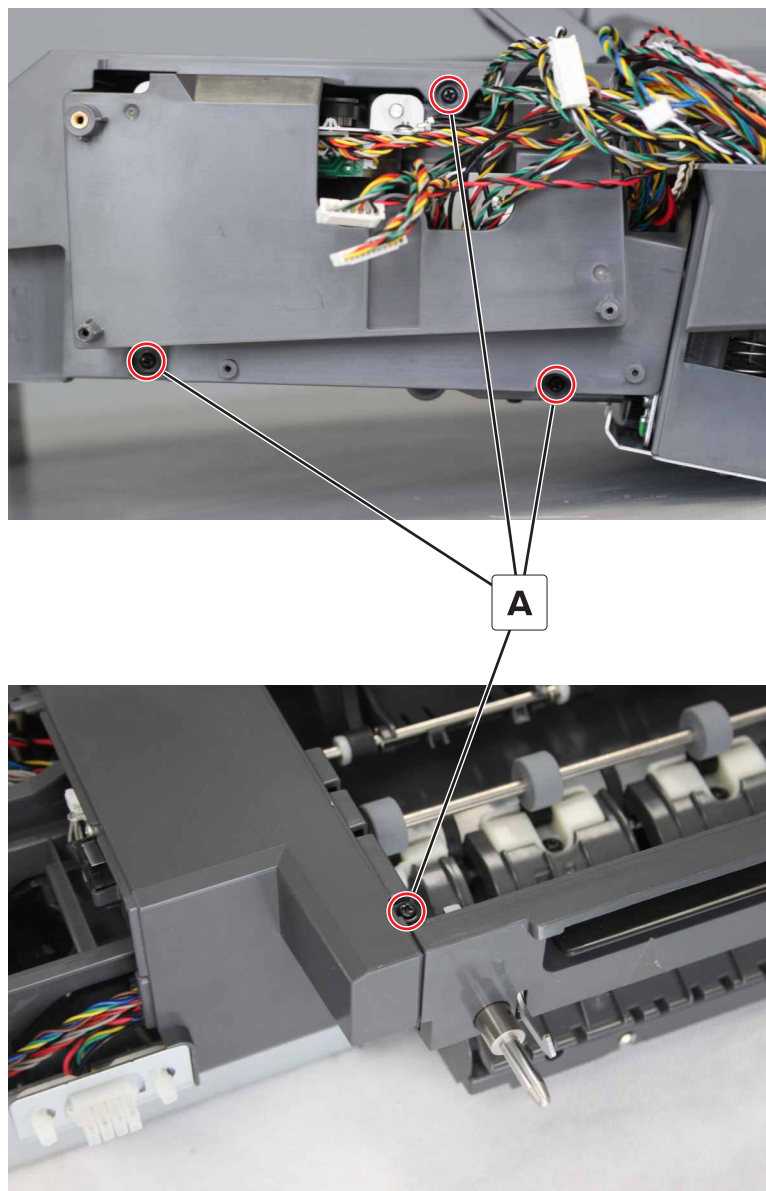
Staple finisher staple cartridge door removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Release the arm from the pin, and then remove the door.
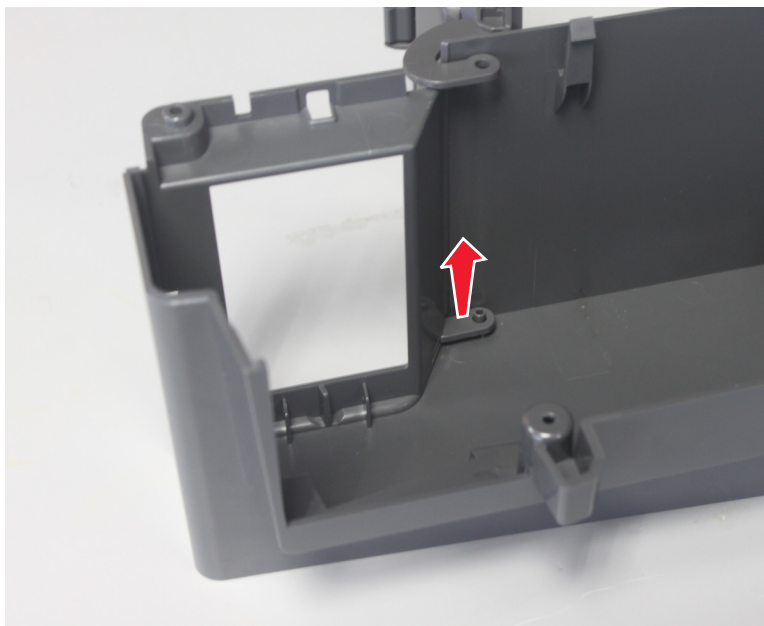
Staple finisher jam access door removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the door.

Installation note: When installing the door, insert the pin into the hole first.

Repair information

Staple finisher lock assembly removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Set aside the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Open the jam access door.

5 Remove the two screws (A), and then remove the assembly.
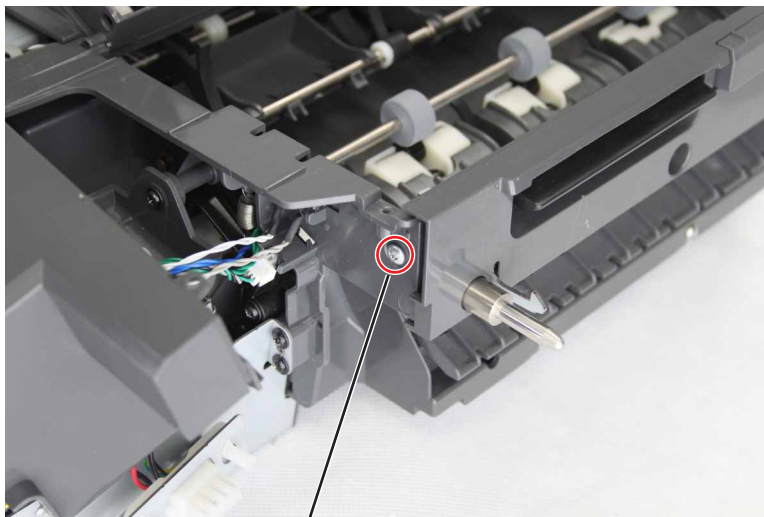
Staple finisher bottom cover removal

1 Remove the 14 screws (A).
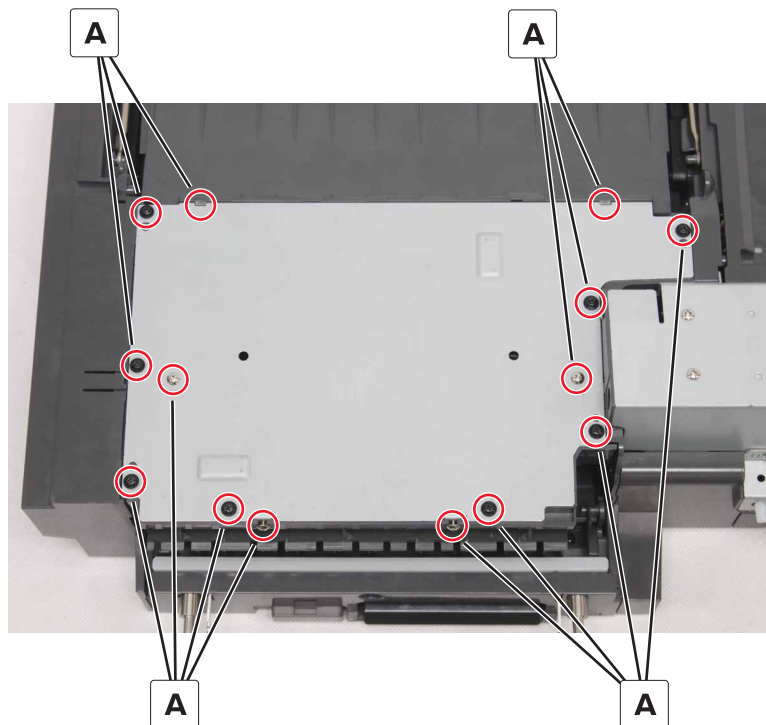
2 Remove the cover.

Staple finisher staple cartridge door switch removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Release the latches (A), and then remove the switch (B).
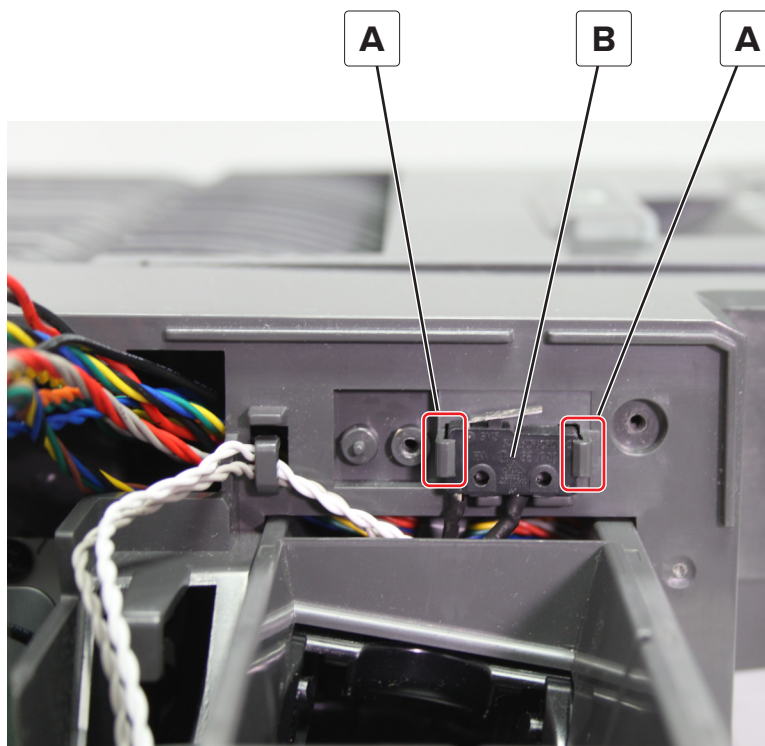
Sensor (staple finisher lower bin full) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the screw (A), and then remove the sensor (staple finisher front lower bin full—transmitter).

3 Disconnect the cable (B).
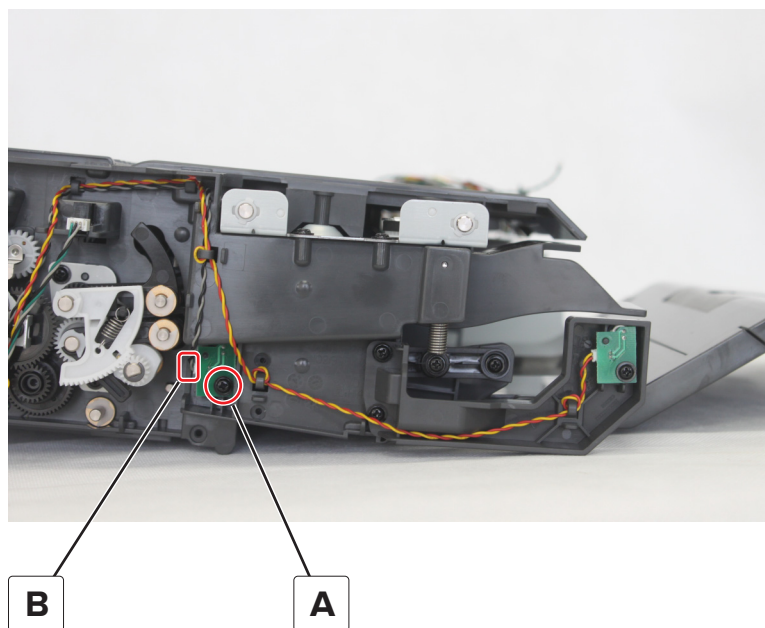
4 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

5 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

6 Set aside the inner rear cover.

7 Remove the screw (C), and then remove the sensor (staple finisher rear lower bin full—transmitter).

8 Disconnect the cable (D).
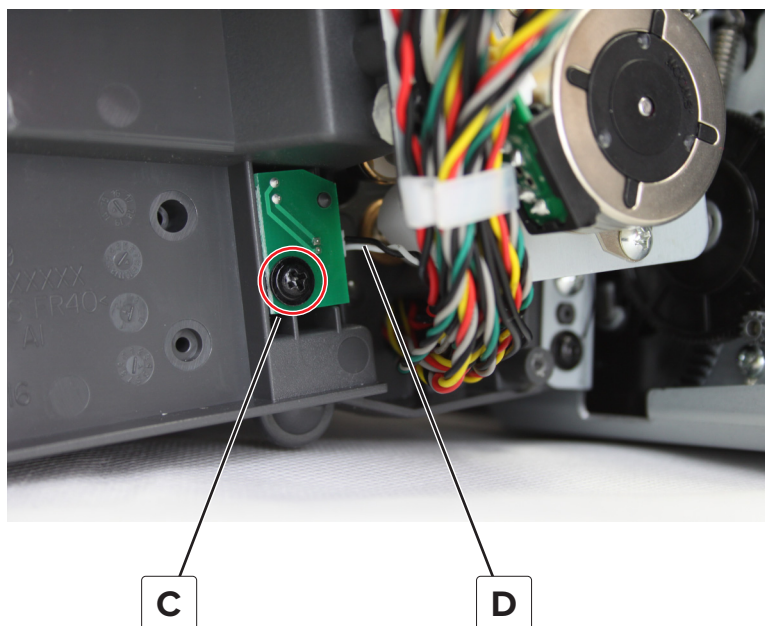
Sensor (staple finisher upper bin full) removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

4 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

5 Remove the two screws (A).

A
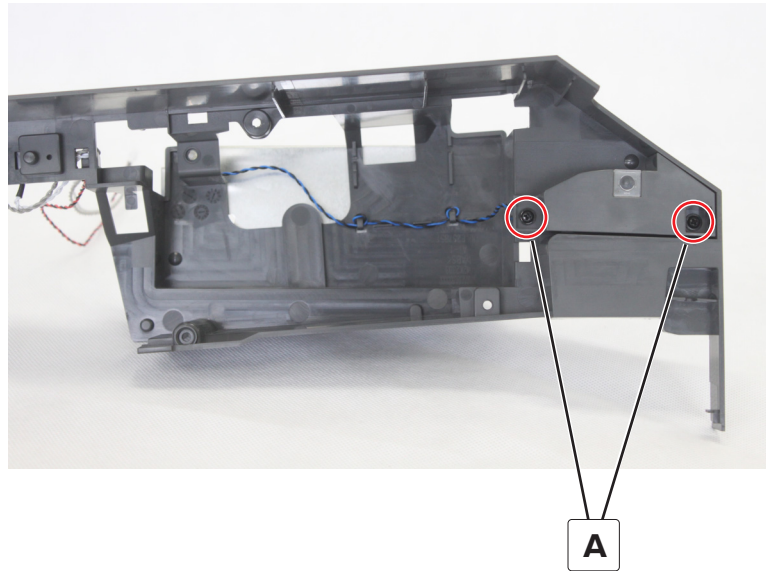
6 Remove the screw (B), disconnect the cable (C), and then remove the sensor (staple finisher rear upper bin full—receiver).

B   C
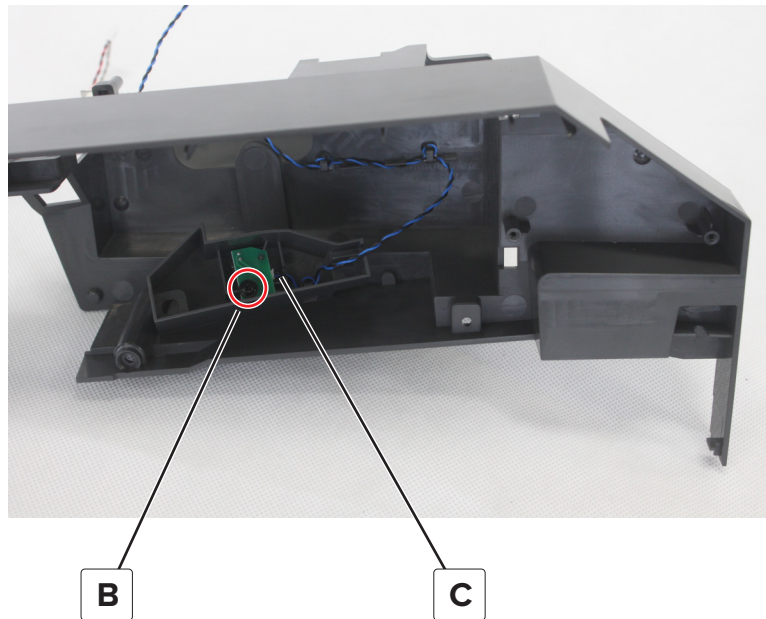
7 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

8 Remove the screw (D), and then disconnect the cable (E).
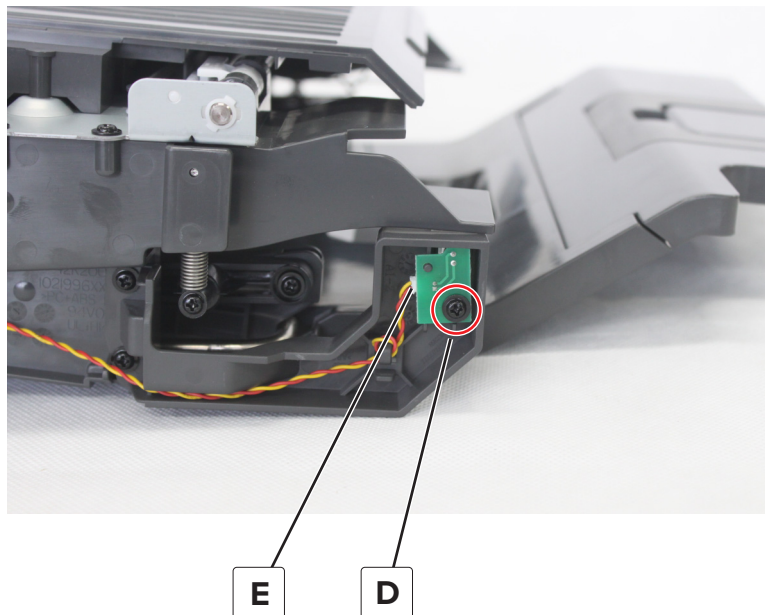
9 Remove the sensor (staple finisher front upper bin full—receiver).

Staple finisher interface cable removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the two screws (A).
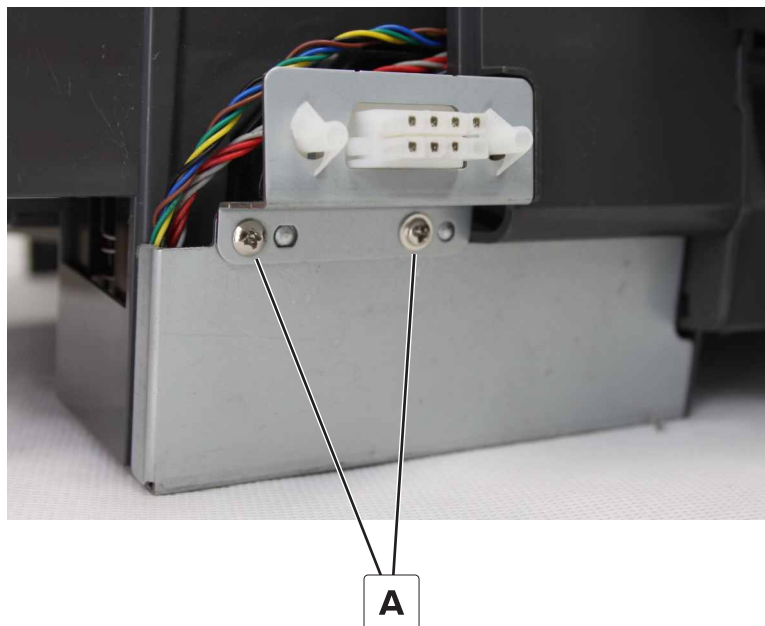
4 Using needle-nose pliers, disconnect the cable.
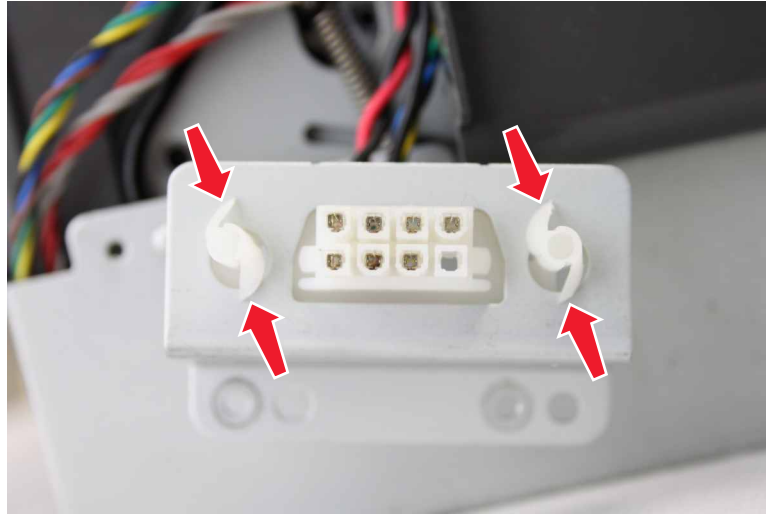
5 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

6 Disconnect the other end of the cable from the controller board.

Motor (staple finisher upper exit roller) removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

4 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

5 Disconnect the cable (A).

6 Remove the two screws (B), and then remove the motor.
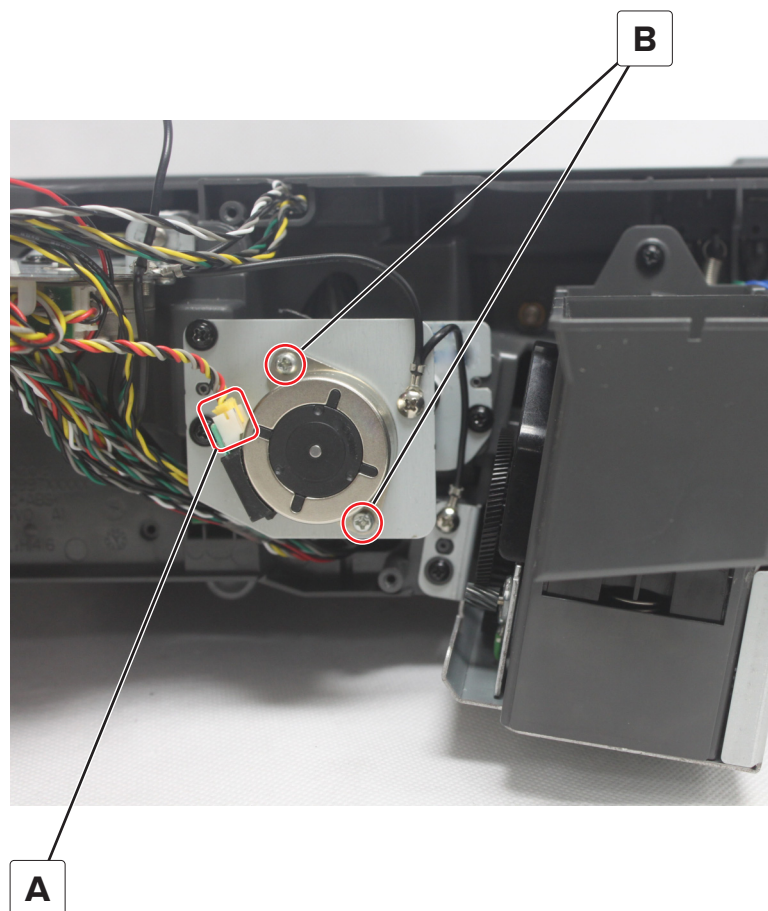
Staple finisher rear upper position exit roller gears removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

4 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

5 Remove the upper exit motor. See **"Motor (staple finisher upper exit roller) removal" on page 534**.

6 Remove the clip (A) and the gear (B), and then remove the spring (C).

A   **B**   **C**
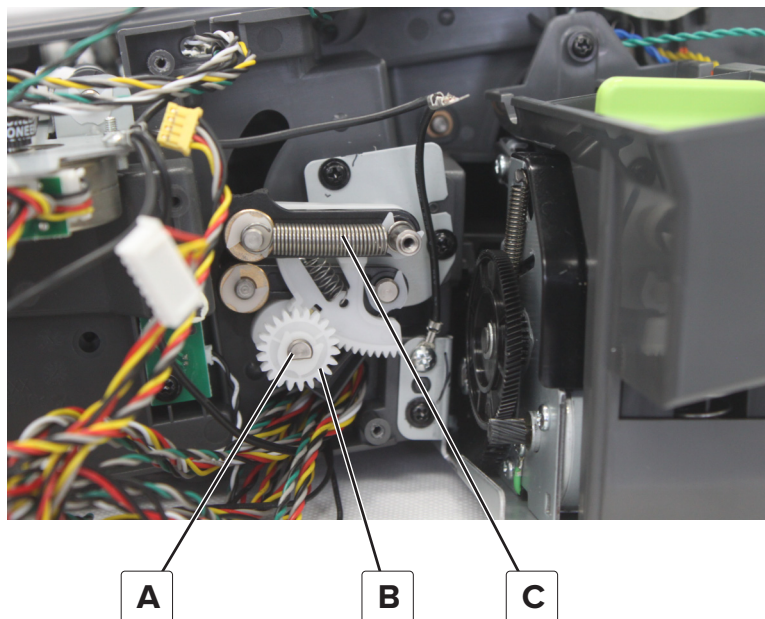
7 Remove the two clips (D) and the bushing, remove the lever (E), and then remove the gear (F).

F   **E**

D
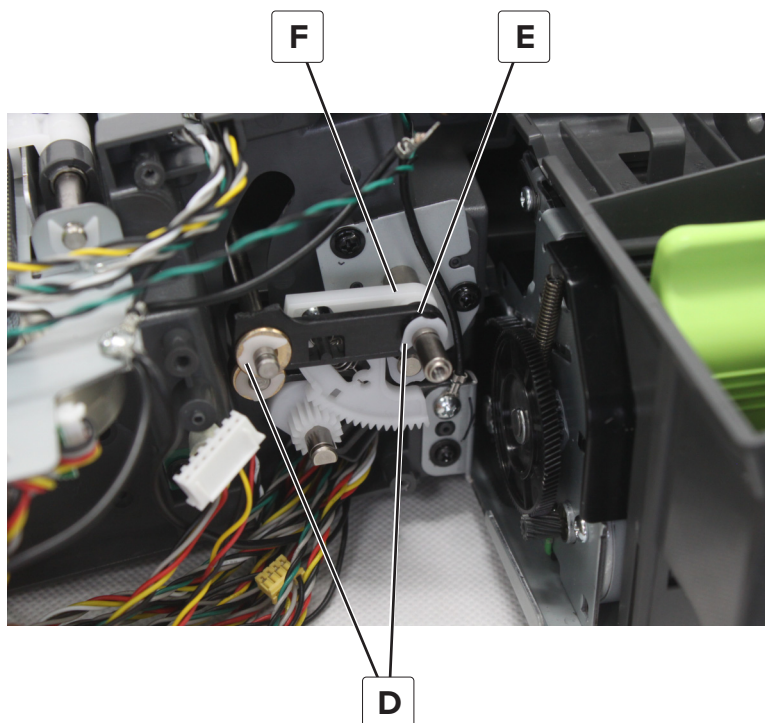
8 Remove the two clips (G), and then remove the bushing.

9 Remove the cam (H), and then remove the lever (J).
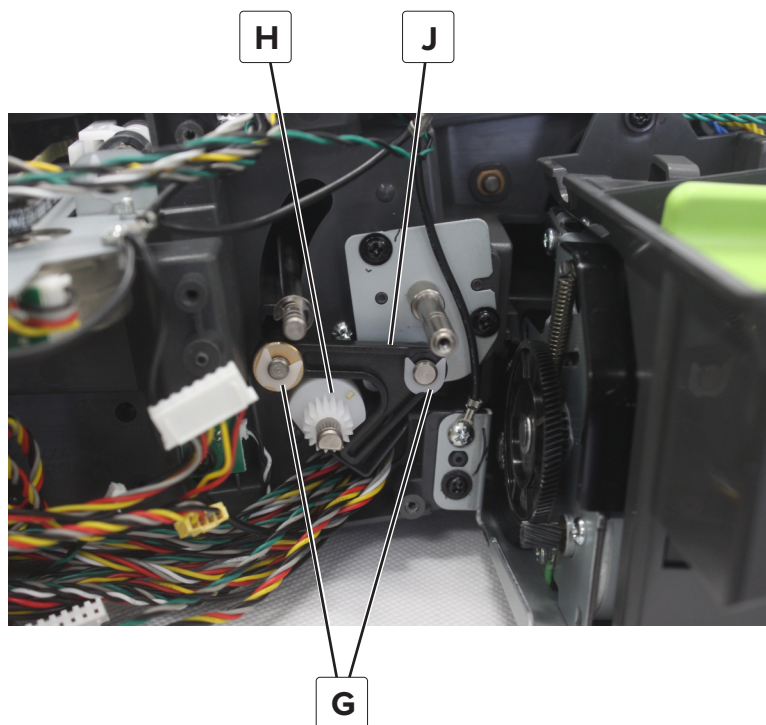
10 Remove the gear.

Installation note: Make sure that the hole (A) aligns with the gold, rectangular marker (B).
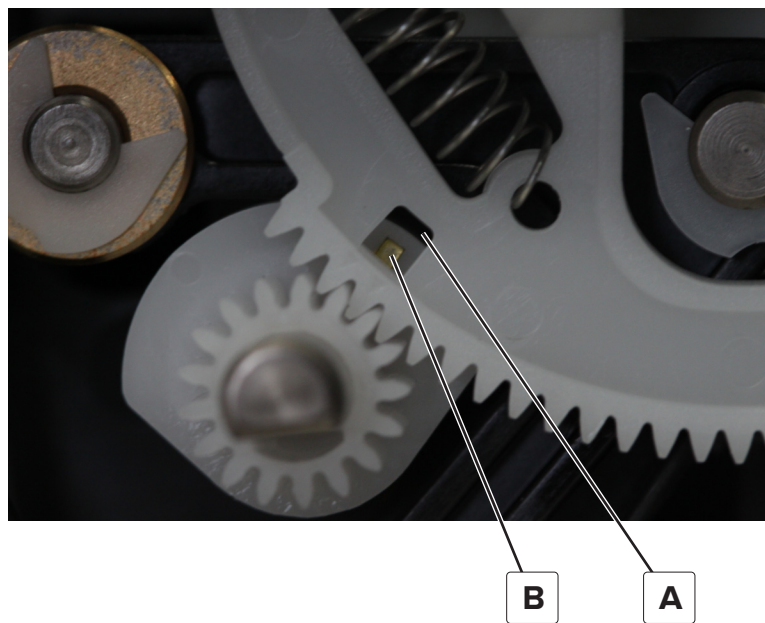
Staple finisher staple unit ejector removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Set aside the cables from the top of the ejector.

5 Remove the two screws (A), and then remove the ejector.
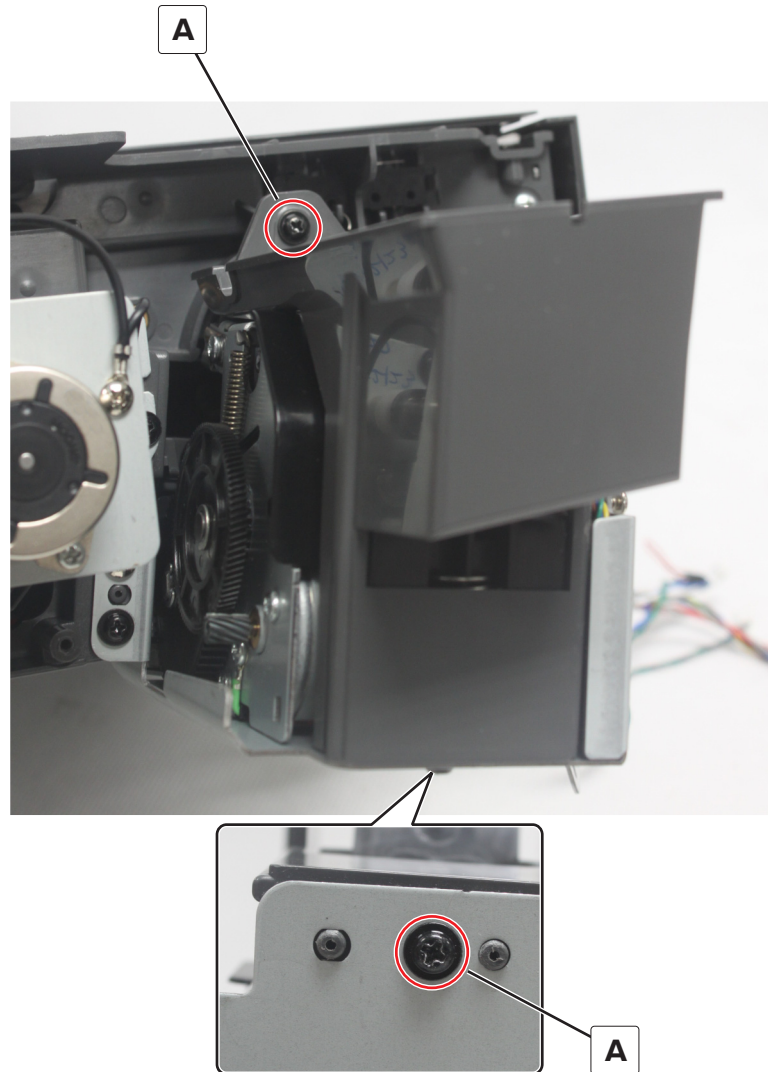
Sensor (staple finisher stack clamp) removal

1 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

2 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the ejector. See **"Staple finisher staple unit ejector removal" on page 538**.

5 Push down the stack clamp, remove the adhesive, and then remove the sensor (A).

A
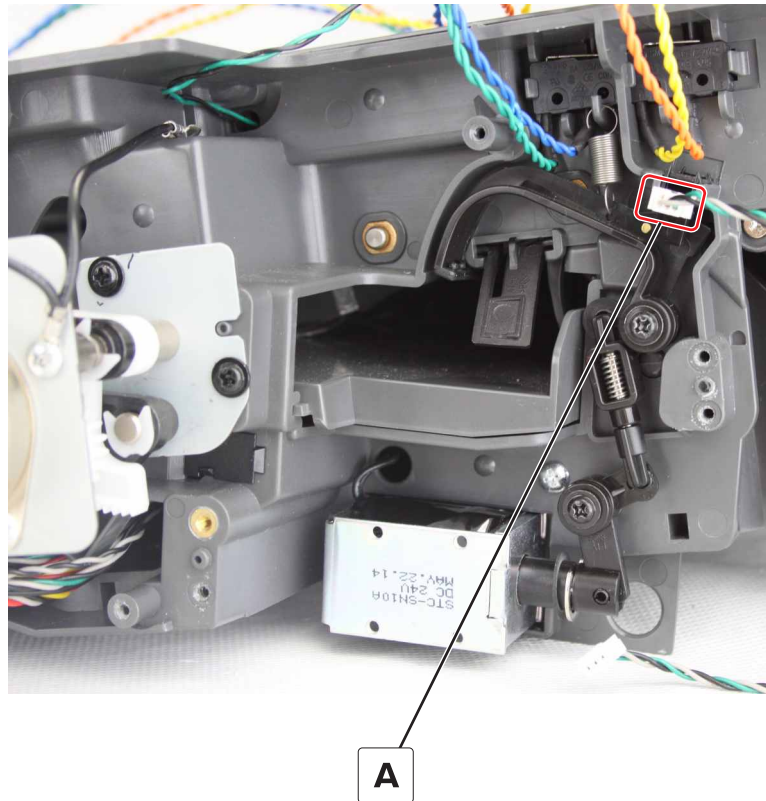
Staple finisher staple unit removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the ejector. See **"Staple finisher staple unit ejector removal" on page 538**.

5 Disconnect the two cables (A).
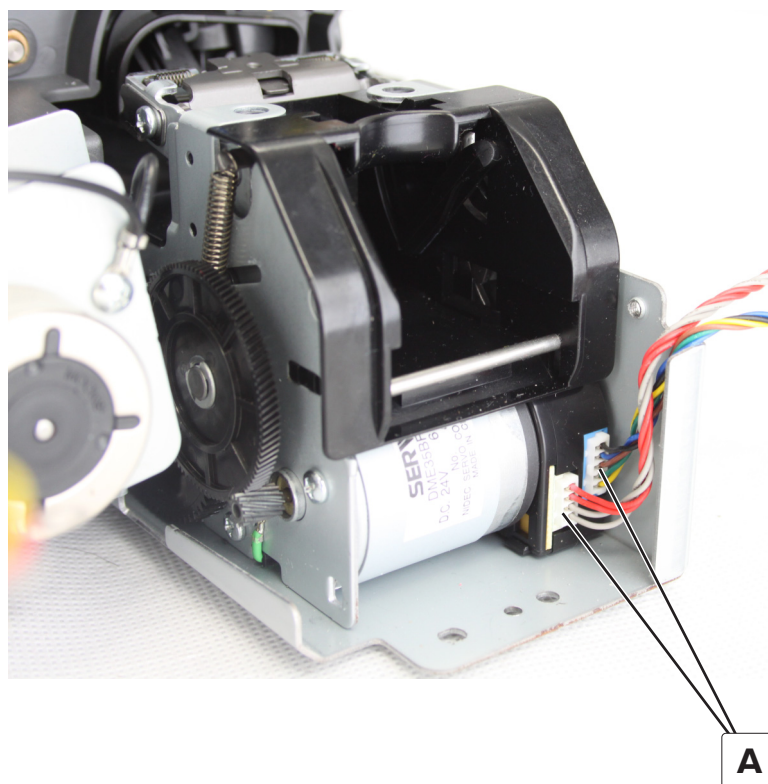
6 Remove the four screws (B), and then remove the bracket.
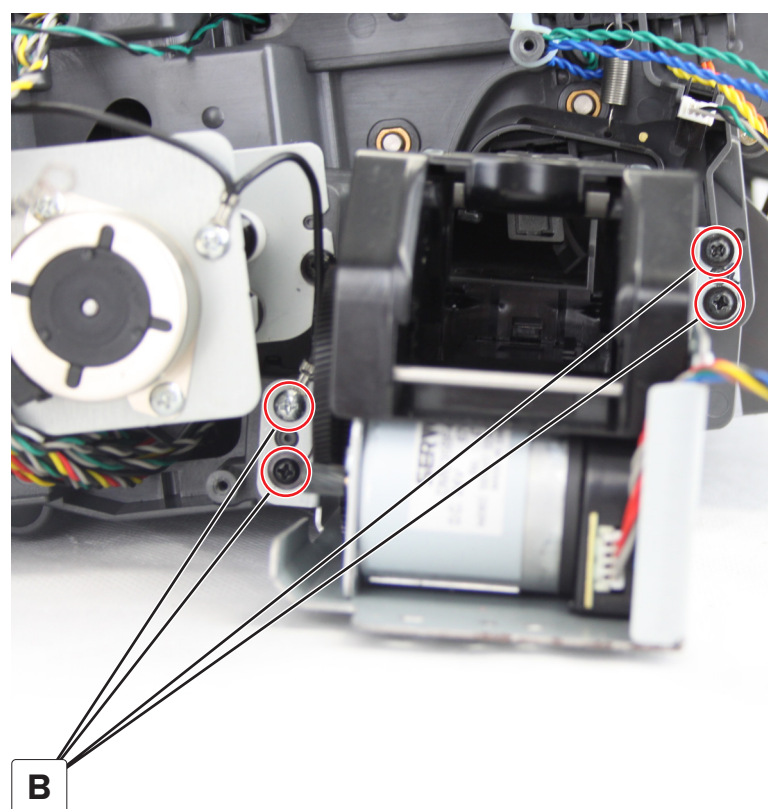
Repair information

7 Remove the two screws (C), and then remove the staple unit.
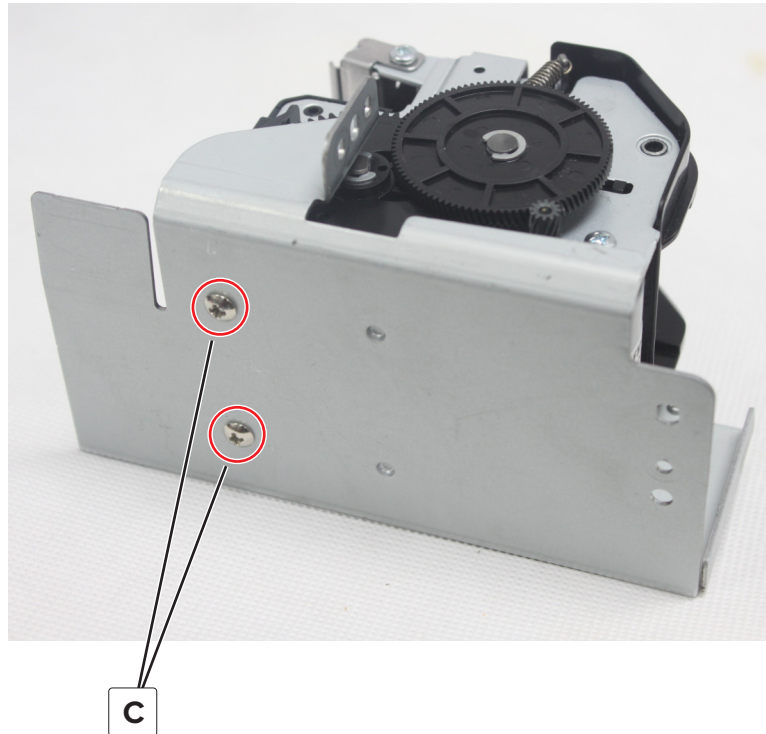
Staple finisher jam door switches removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

4 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

5 Remove the ejector. See **"Staple finisher staple unit ejector removal" on page 538**.

6 Remove the spring (A).

7 Release the two latches (B), and then remove the switches.

   Note: Pay attention to the switch assignments based on the cable colors.

B   A   B
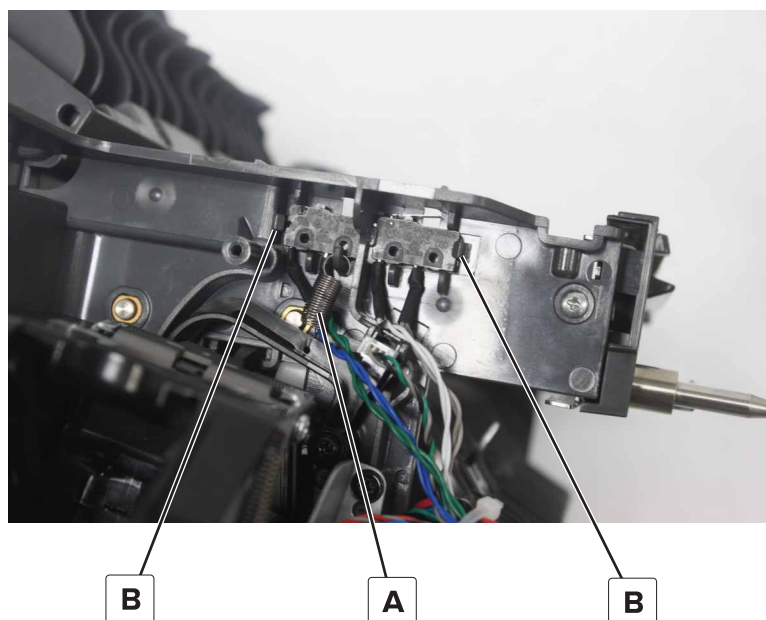
Staple finisher stack clamp solenoid removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the ejector. See **"Staple finisher staple unit ejector removal" on page 538**.

5 Remove the staple unit bracket. See **"Staple finisher staple unit removal" on page 540**.

6 Remove the bottom cover. See **"Staple finisher bottom cover removal" on page 529**.

7 Remove the two screws (A).

A

Repair information
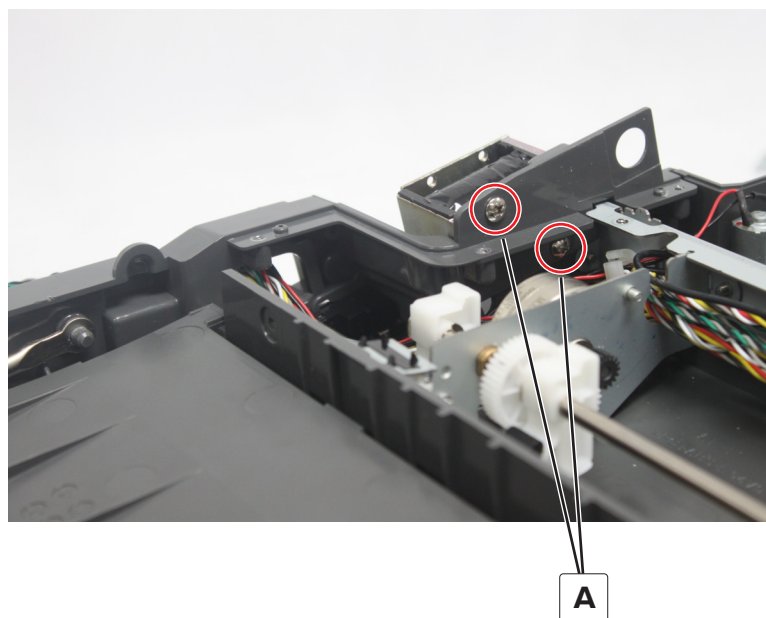
8 Remove the screw (B), and then remove the solenoid.
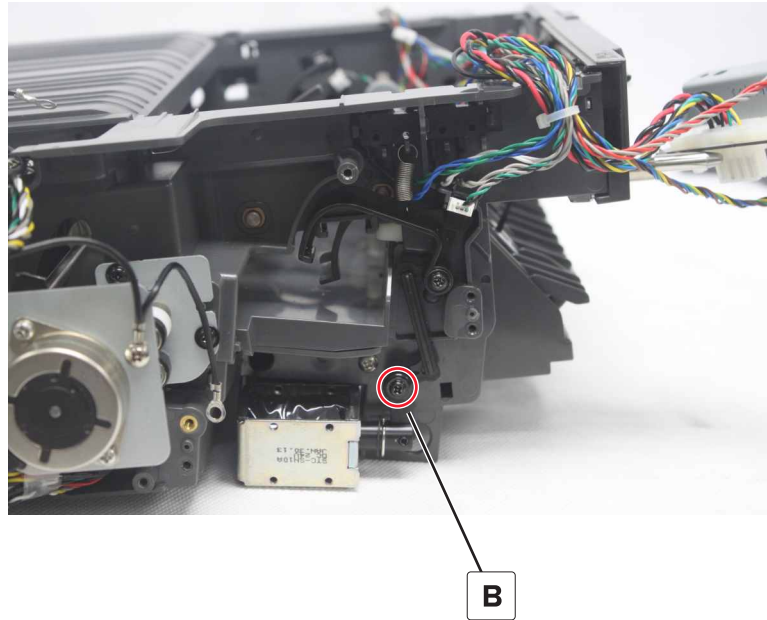
B

Staple finisher stack clamp removal

1 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

2 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Set aside the staple unit. See **"Staple finisher staple unit removal" on page 540**.

5 Remove the staple unit bail.
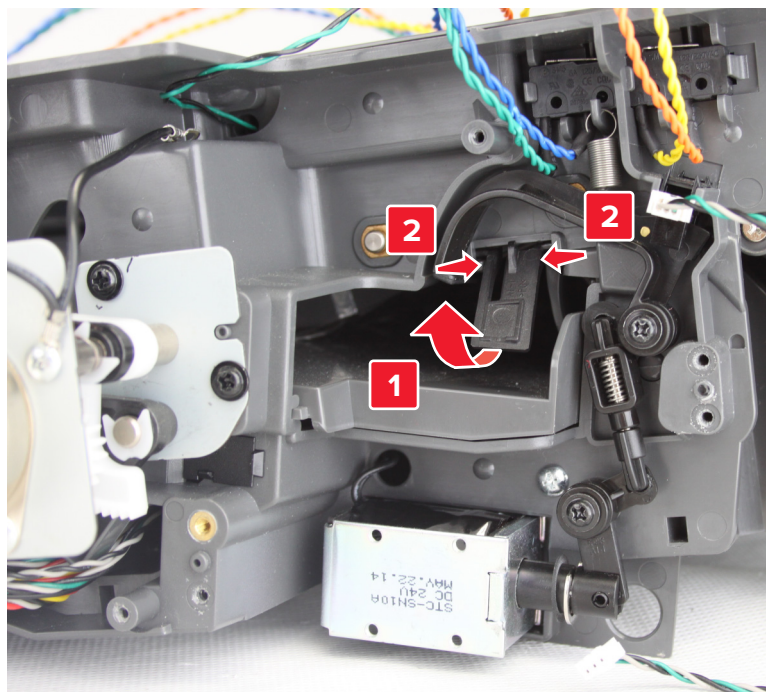
6 Remove the screw (A), remove the spring (B), and then push down the clamp (C).
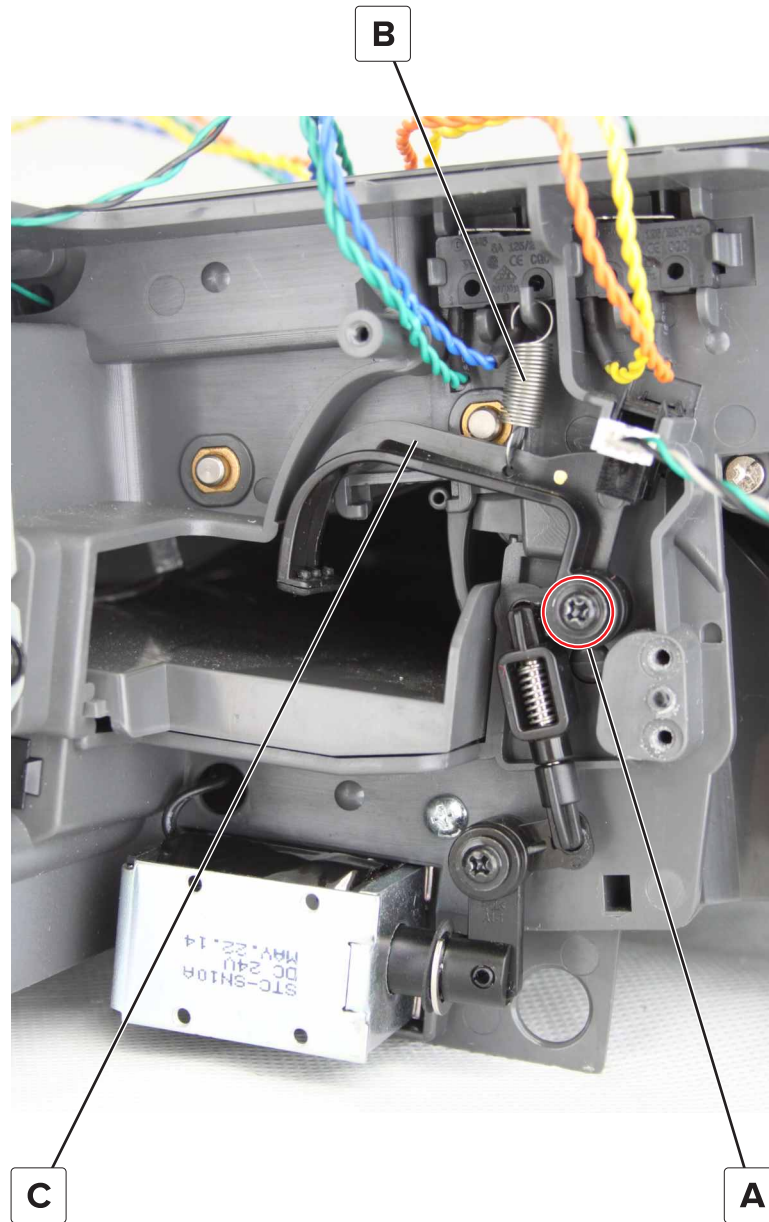
7 Remove the stack clamp solenoid. See **"Staple finisher stack clamp solenoid removal" on page 543**.

8 Remove the clamp.

When installing the stack clamp:

- Pay attention to the exact position of the lower part of the clamp.
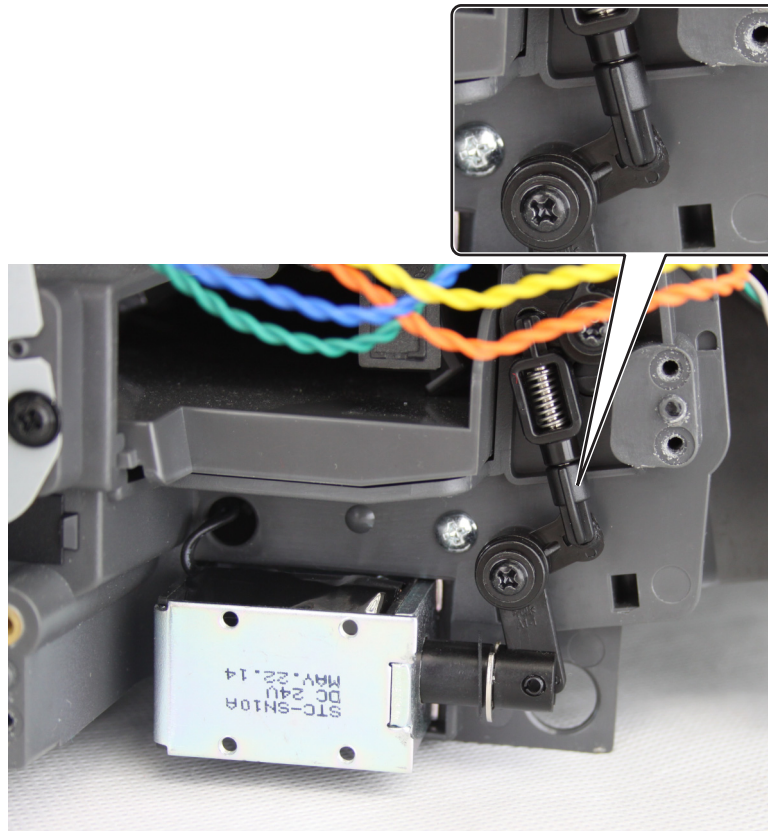
- Push down, and then release the clamp to verify if it is properly installed.

Motor (staple finisher aligner paddle) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Set aside the cables, and then remove the four screws (A).
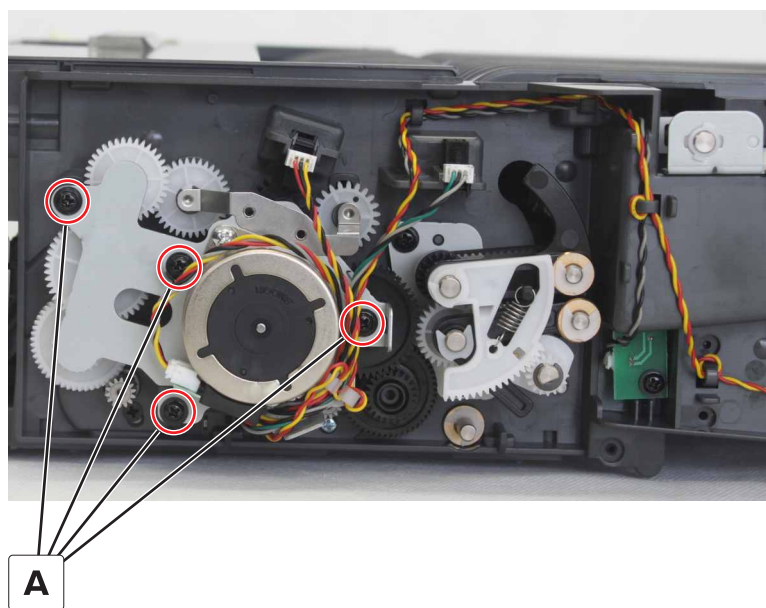
3 Remove the motor from the bracket.

Staple finisher transport gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Disconnect the three cables (A), and then remove the four screws (B).

Repair information

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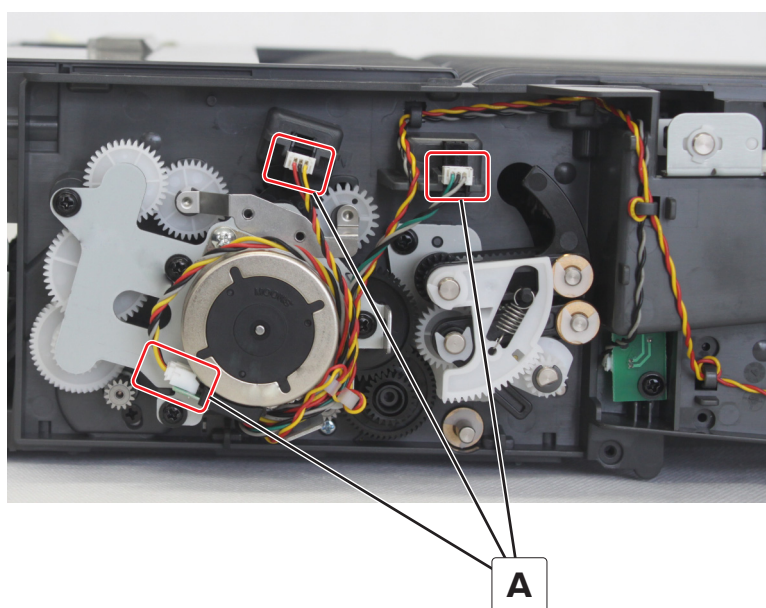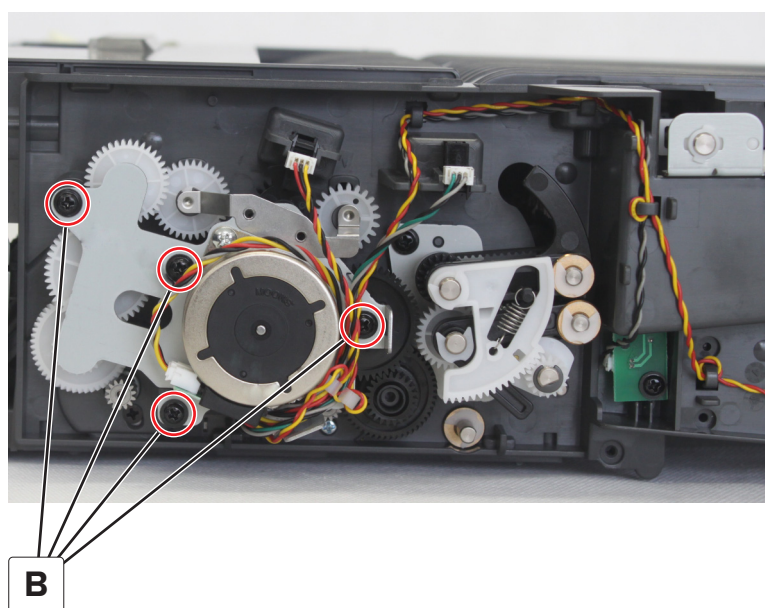
3 Set aside the aligner paddle motor and the bracket.

4 Remove the clip (C), and then remove the four gears (D).

Repair information
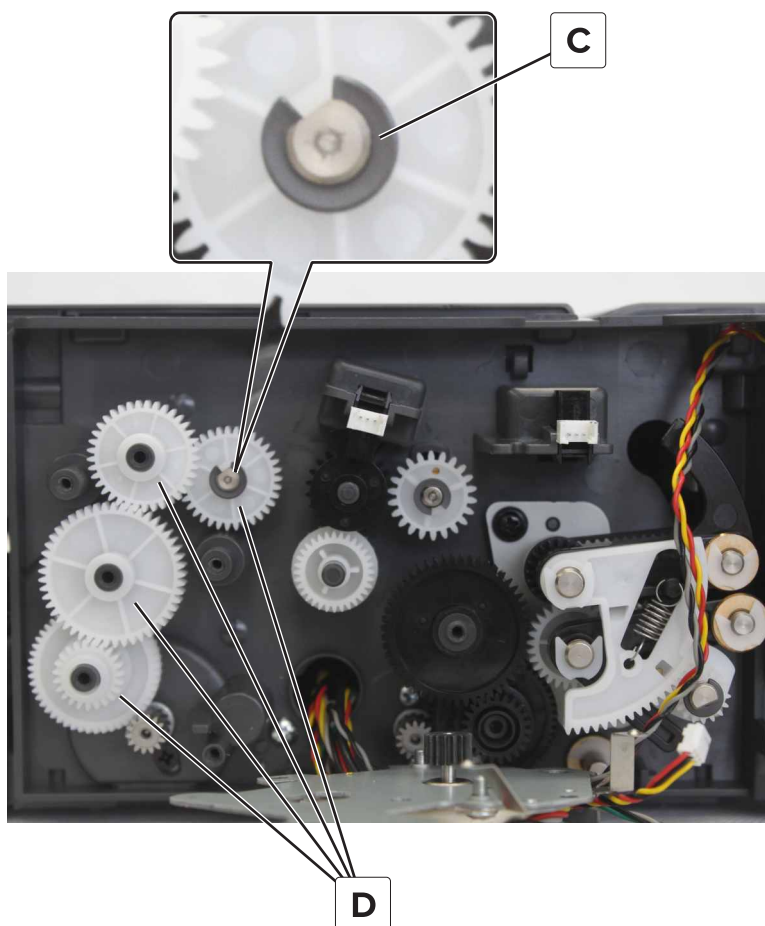
Staple finisher aligner paddle gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Disconnect the three cables (A), and then remove the four screws (B).
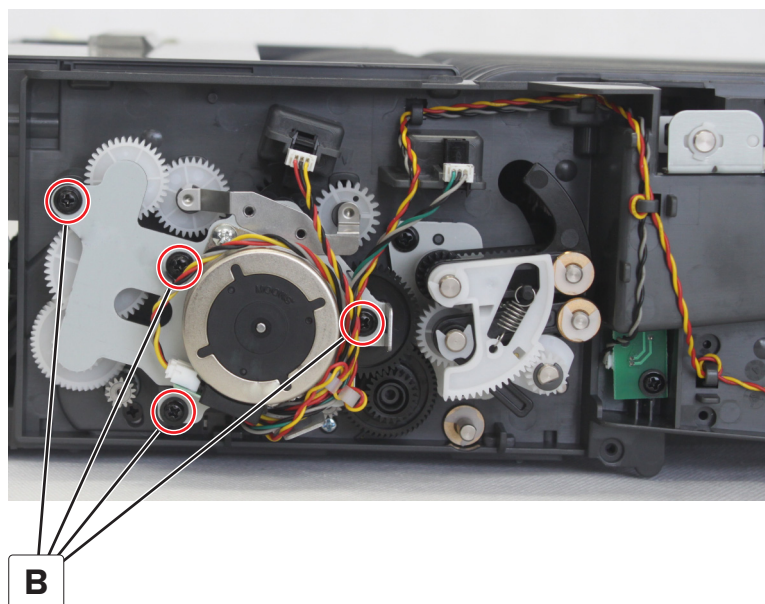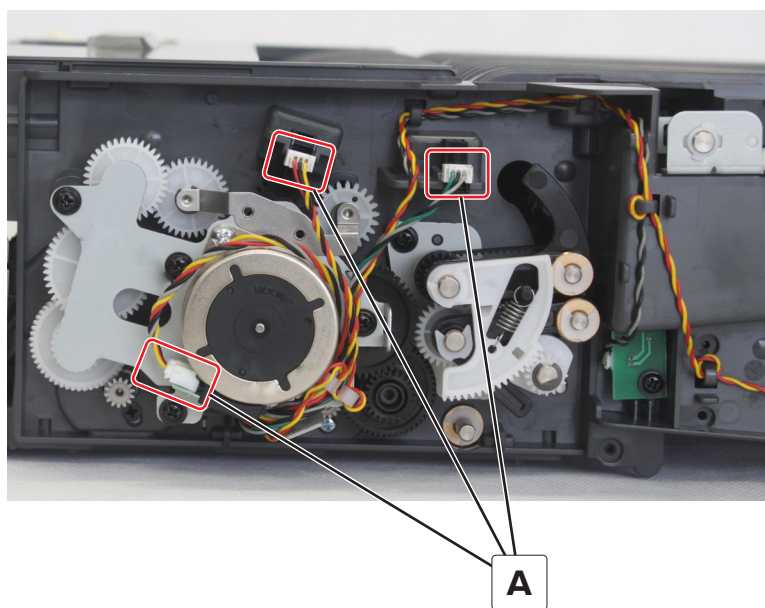
3 Set aside the aligner paddle motor and bracket.

4 Remove the sensor (staple finisher aligner paddle) (C), and then remove the clip (D).

5 Remove the three gears (E).
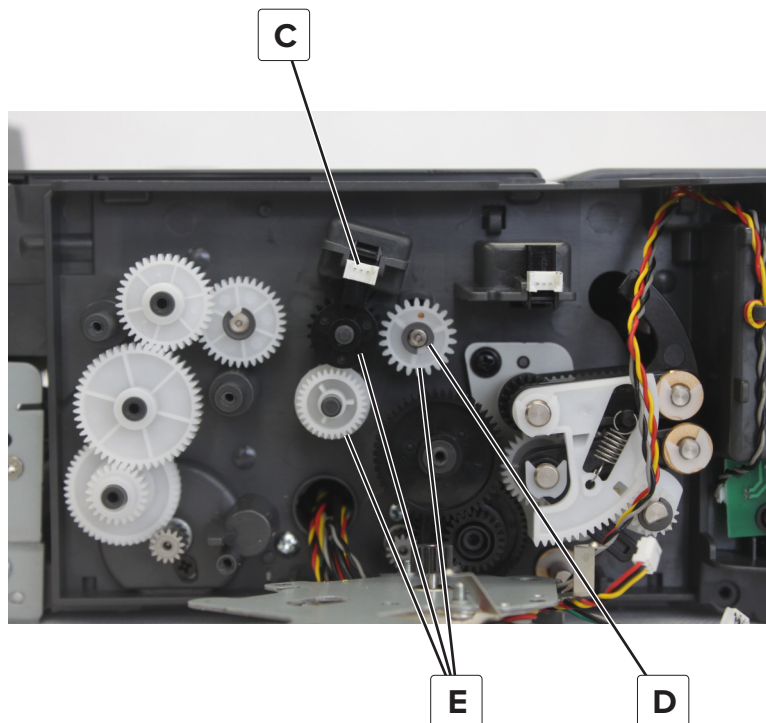
Installation note: Make sure that the hole (A) on the white gear is aligned with the arrow (B) and the hole on the black gear (C) is centered with the sensor. Align both at the same time.
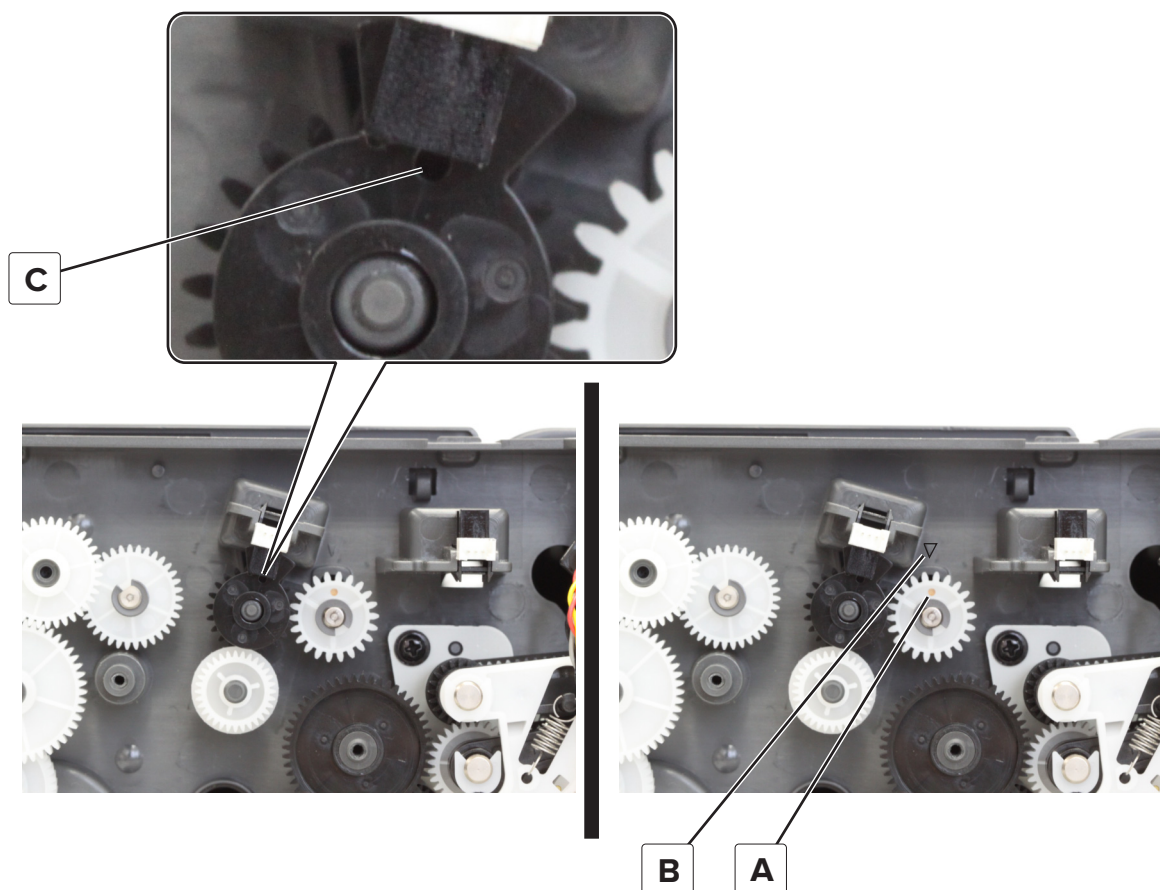
Sensor (staple finisher upper exit roller) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Disconnect the cable (A), and then remove the sensor.
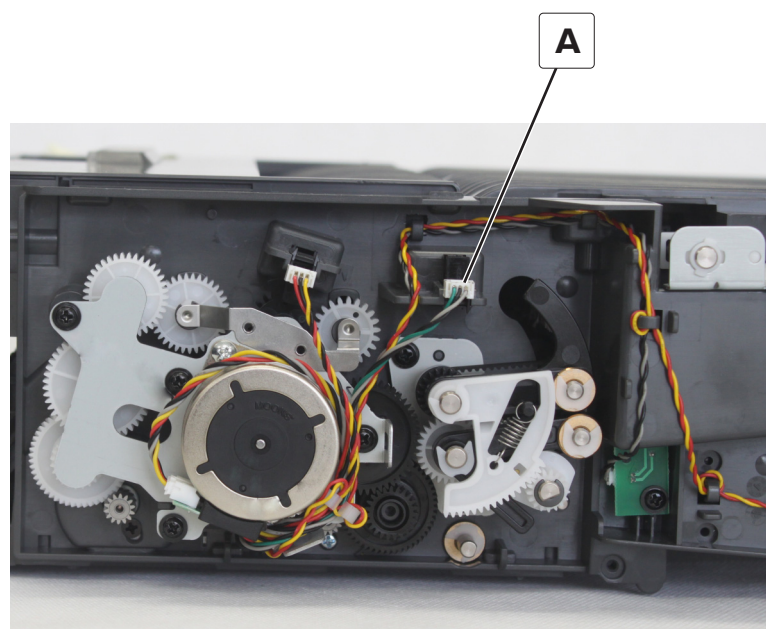
Staple finisher front upper position exit roller gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the clip (A), and then remove the spring (B).

3 Remove the gear (C).
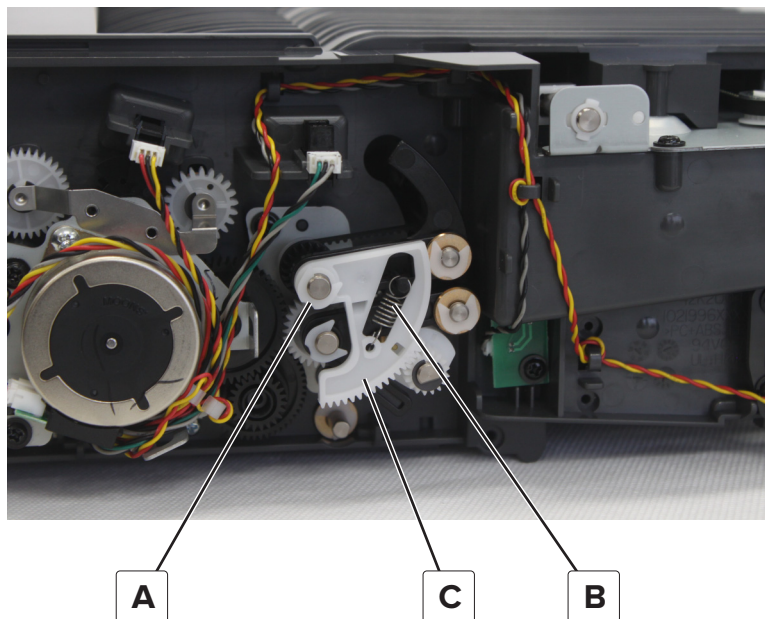
4 Remove the remaining four clips (D) and the bushings, and then remove the gear (E).

5 Remove the actuator (F), and then remove the lever (G).

Repair information
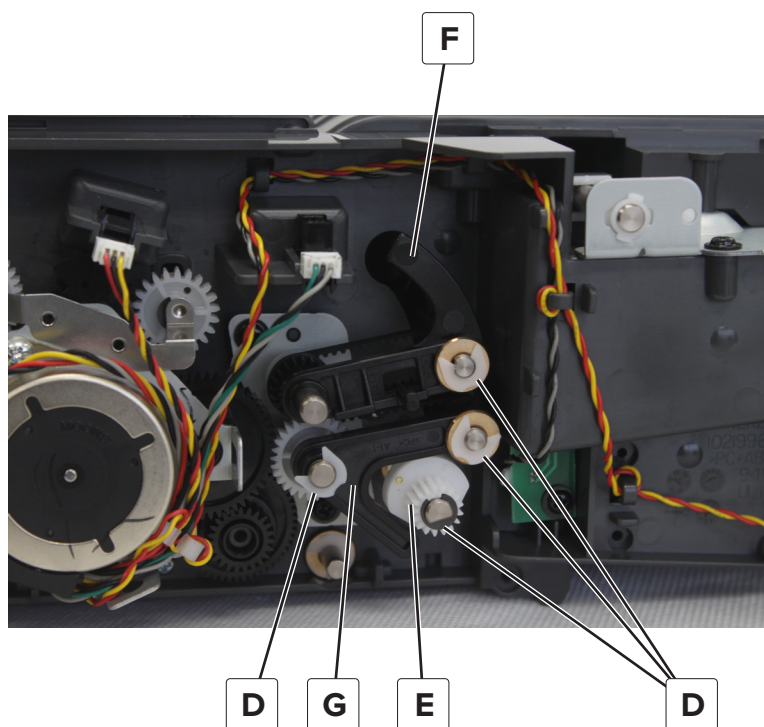
When installing the gears, make sure:

- That the tab on the gear is under the actuator.
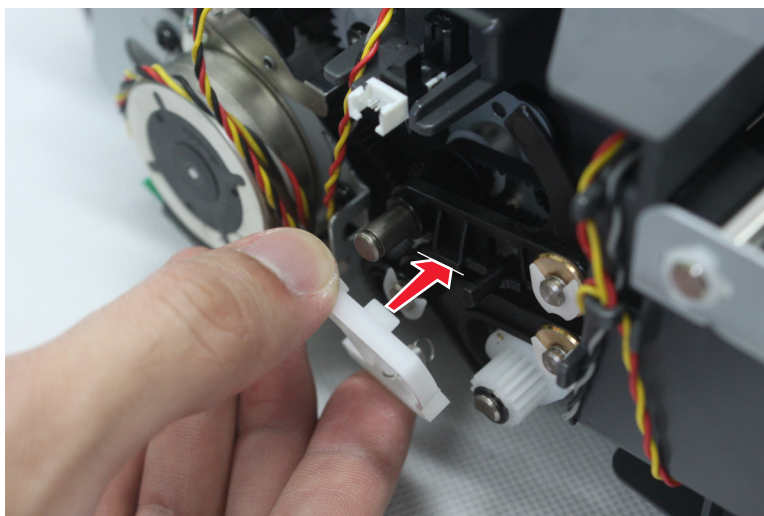
- That the hole (A) aligns with the gold, circle marker (B).

A   B
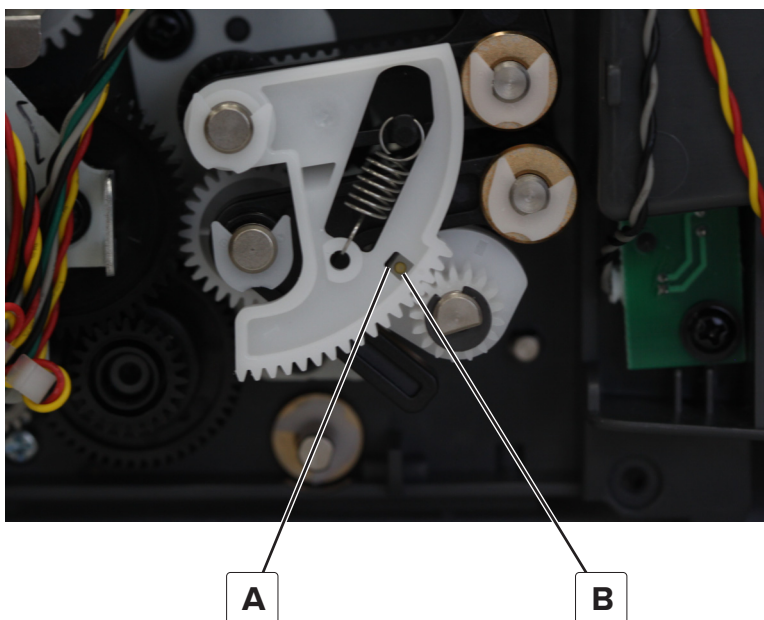
- To lift the gear to check if the actuator covers the sensor.
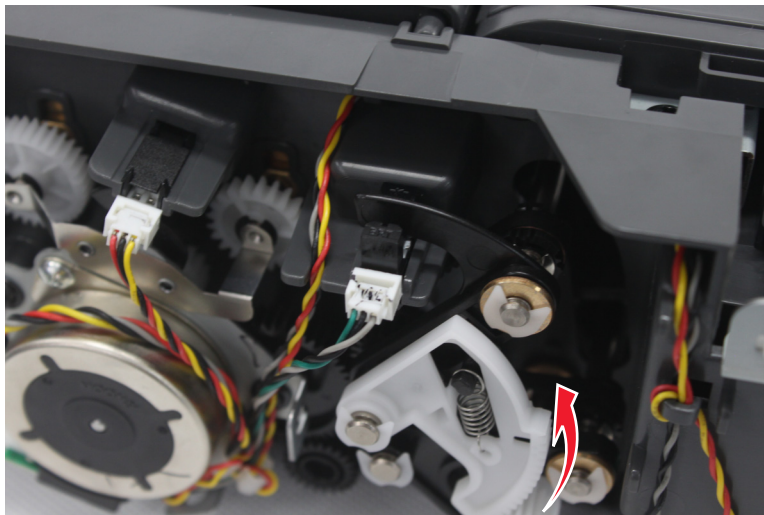
Staple finisher exit gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Disconnect the three cables (A), and then remove the four screws (B).
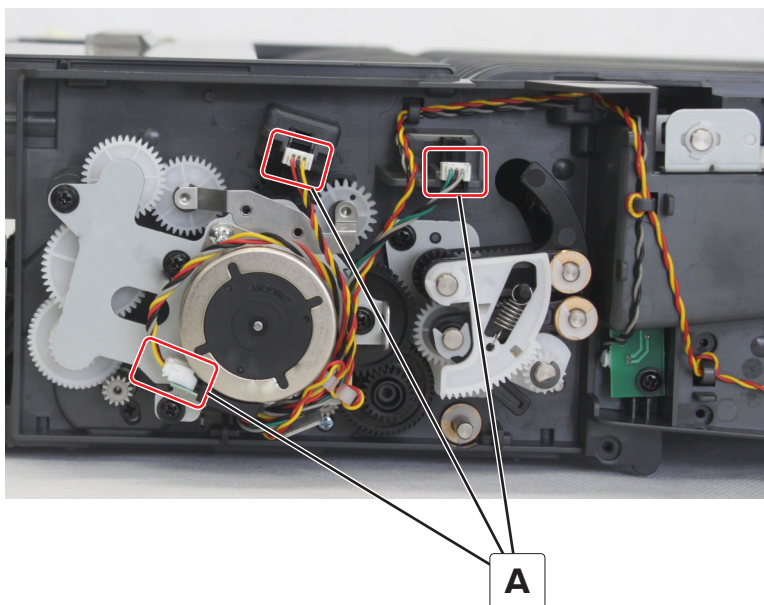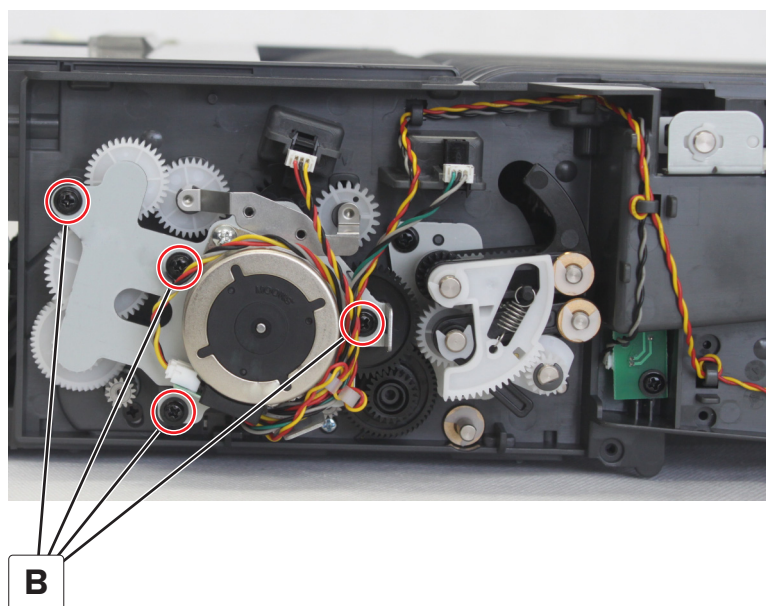
3 Set aside the aligner paddle motor and bracket.

4 Remove the front upper position exit roller gears. See **"Staple finisher front upper position exit roller gears removal" on page 553**.

5 Remove the four clips (C).
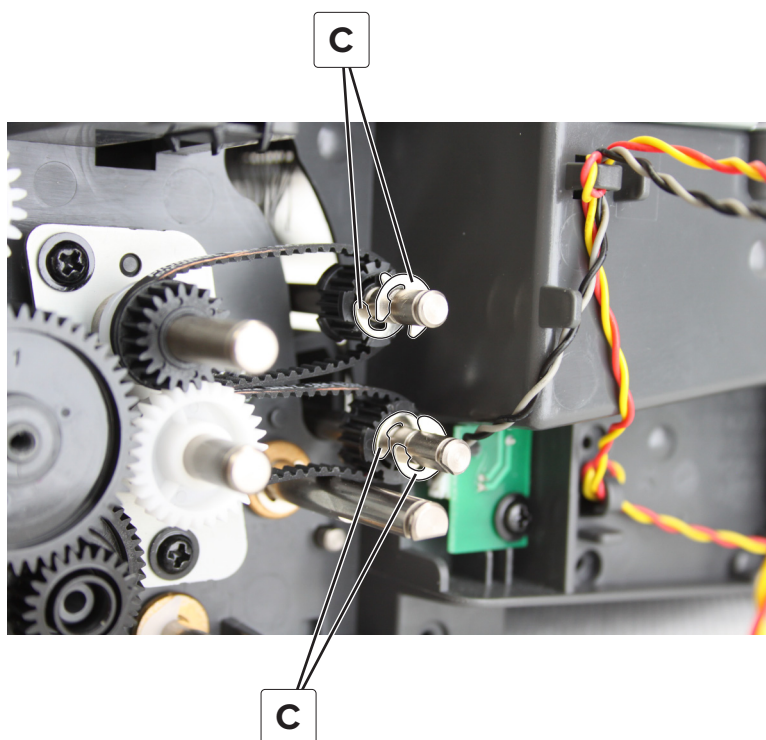
6 Remove the six exit gears (D), and then remove the two exit roller belts (E).
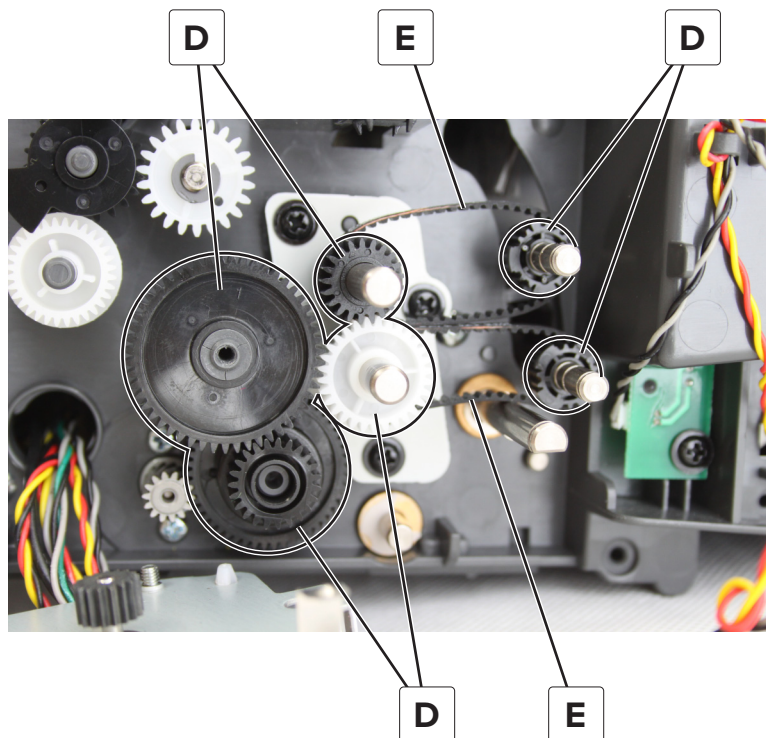
Installation note: Make sure that the washers (A) are installed together with the belts.
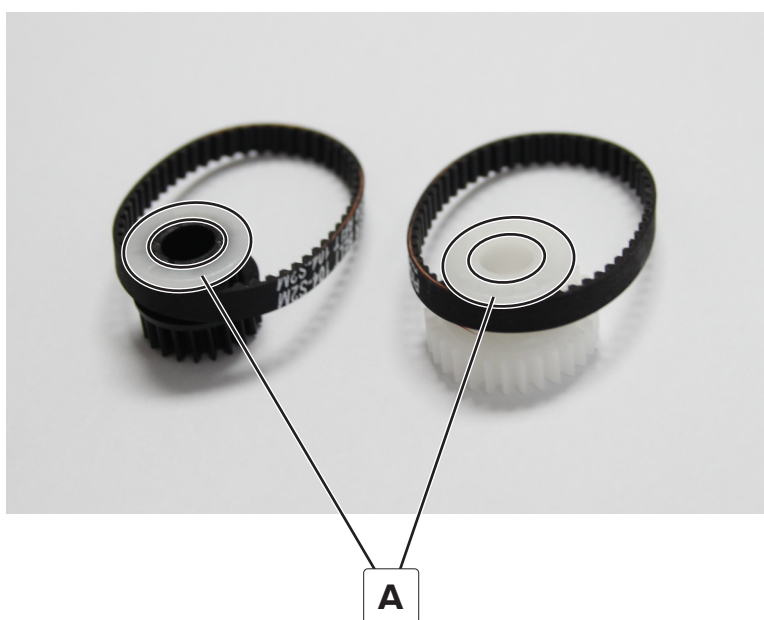
Staple finisher exit roller belts removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

3 Remove the upper position exit roller gears. See **"Staple finisher front upper position exit roller gears removal" on page 553**.

4 Remove the two belts (A).
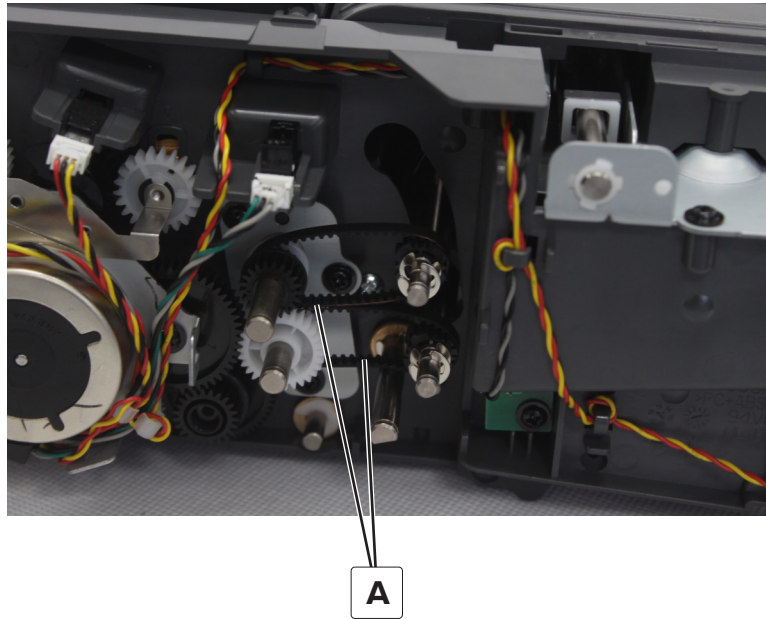
Staple finisher tamper assembly removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

5 Remove the two screws (A), and then set aside the cables.
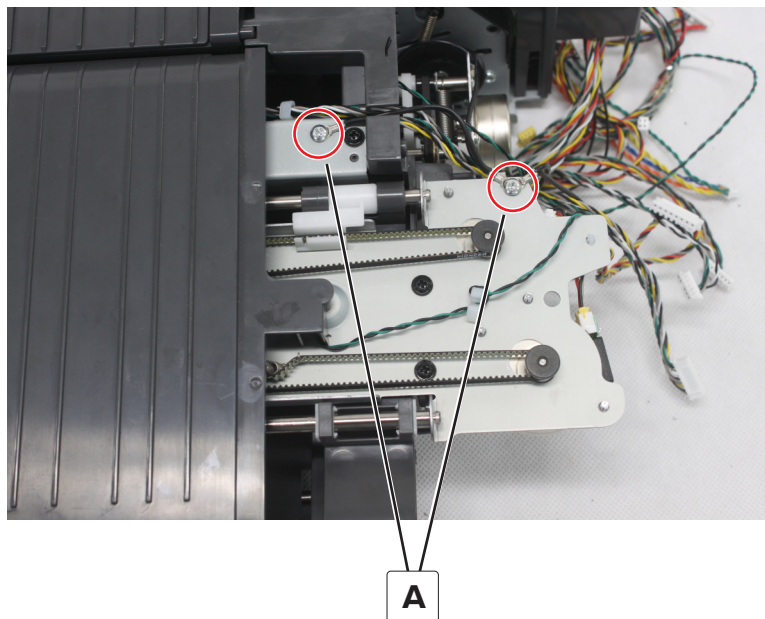
6 Remove the six screws (B).
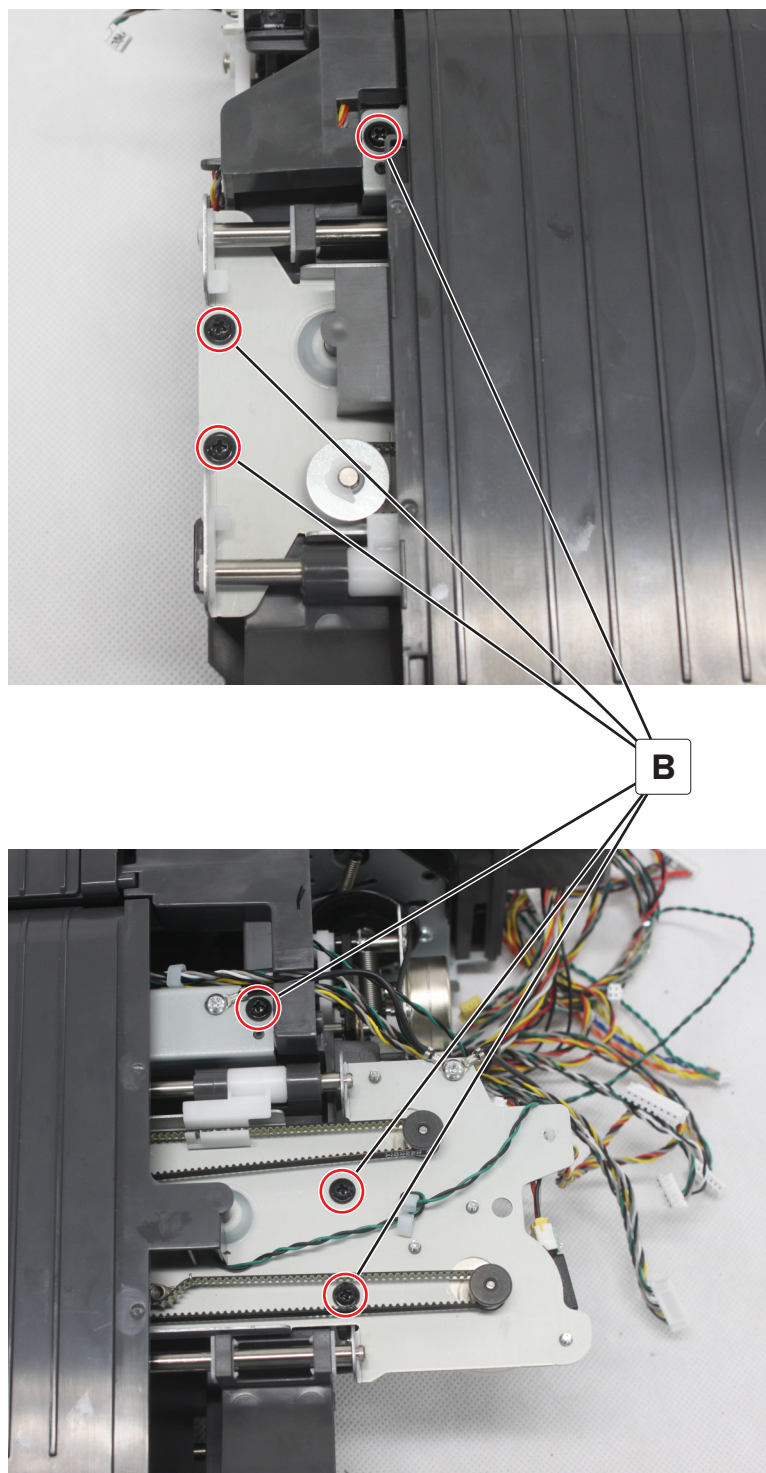
7 Set aside the cable, and then pull up the assembly.

Staple finisher tamper top cover removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

5 Remove the tamper assembly. See **"Staple finisher tamper assembly removal" on page 558**.

6 Remove the four screws (A), and then separate the top cover from the tamper.
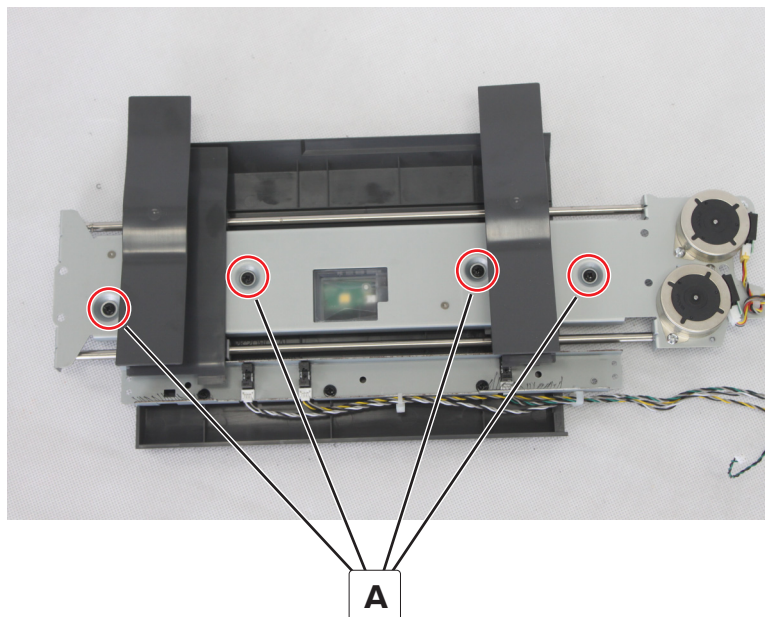
7 Remove the four screws (B), and then remove the cave light and the metal bracket.
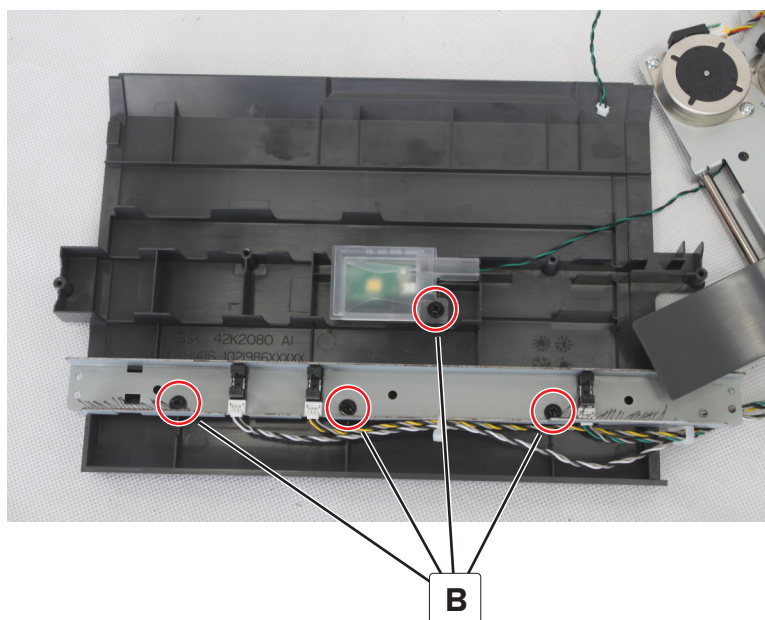
Sensor (staple finisher tamper position) removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

5 Remove the tamper assembly. See **"Staple finisher tamper assembly removal" on page 558**.

6 Remove the tamper top cover. See **"Staple finisher tamper top cover removal" on page 561**.

7 Remove the sensor holders, and then remove the sensors.
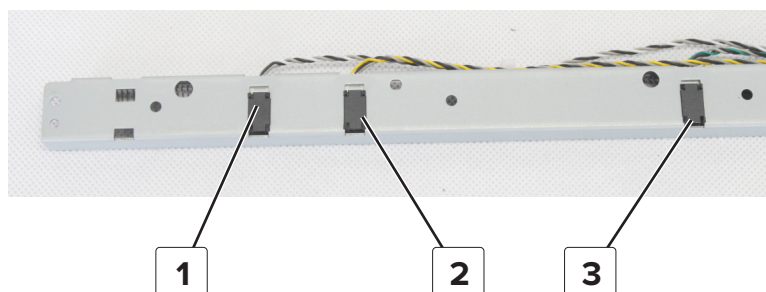
1	Sensor (staple finisher front tamper home)
2	Sensor (staple finisher narrow media tamper)
3	Sensor (staple finisher rear tamper home)

Motor (staple finisher tamper) removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher right cover removal" on page 522**.

3 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

4 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

5 From the rear or front tamper motor, remove the two screws.
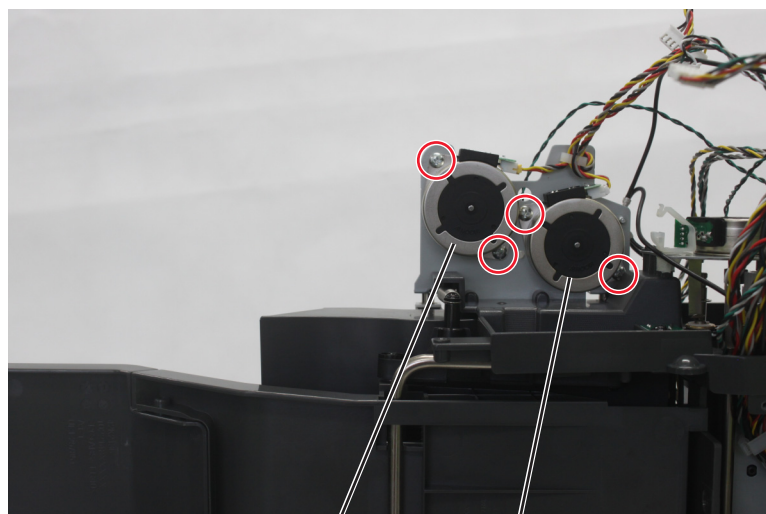
1	Motor (staple finisher front tamper)
2	Motor (staple finisher rear tamper)

6 Release the rear or front tamper belt (A) from the gear, and then remove the motor.

Repair information
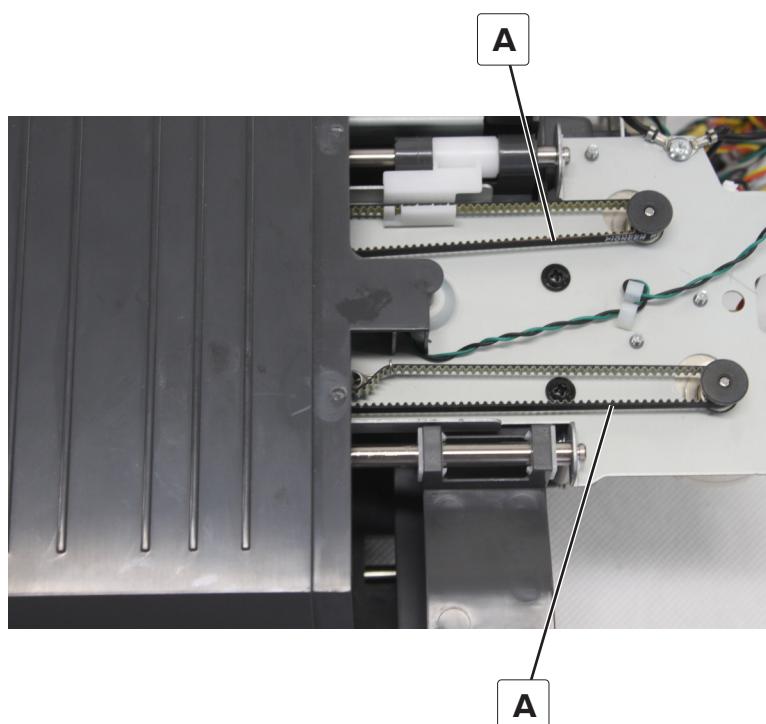
Staple finisher tamper belts removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

5 Remove the tamper assembly. See **"Staple finisher tamper assembly removal" on page 558**.

6 Remove the tamper top cover. See **"Staple finisher tamper top cover removal" on page 561**.

7 Release the belt from the belt holder (A).

8 Remove the clip (B), and then remove the washer.
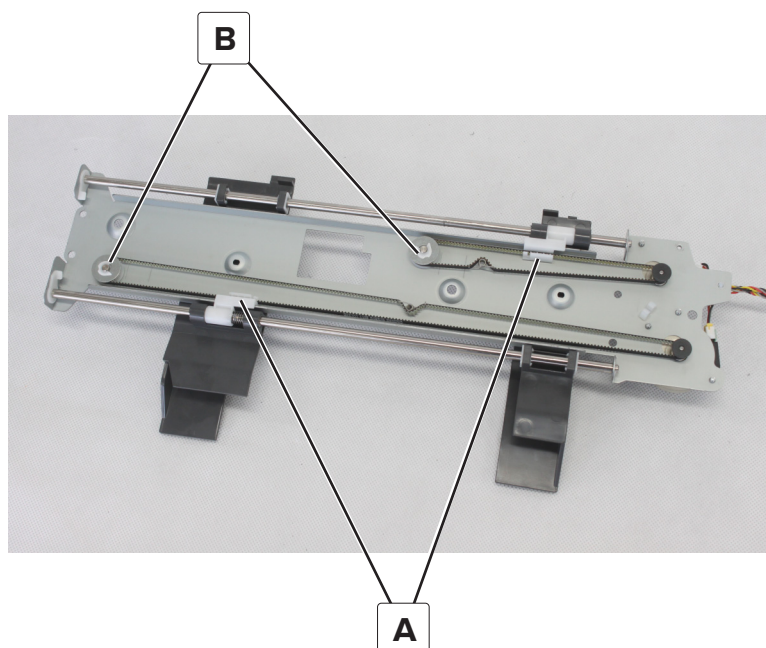
9 Remove the belt.

Installation notes:

a Move the tampers (A) to the right.

b Align the edges of the spring with the markings on the plate.
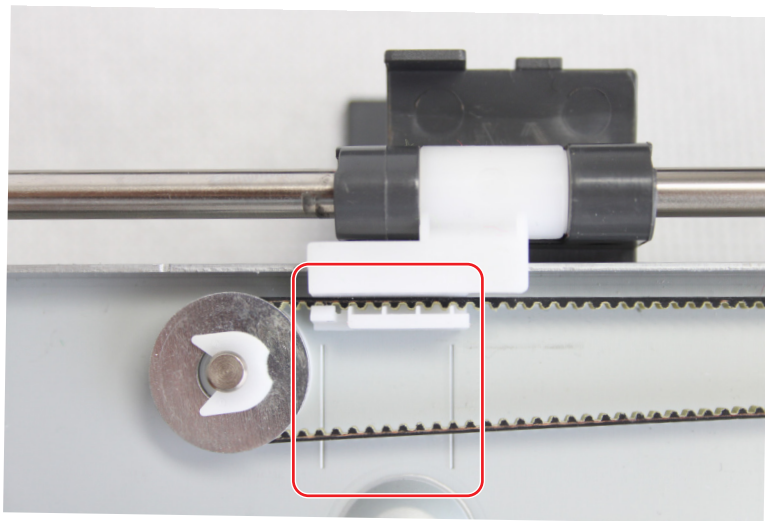
c Insert the belt into the belt holder (B).
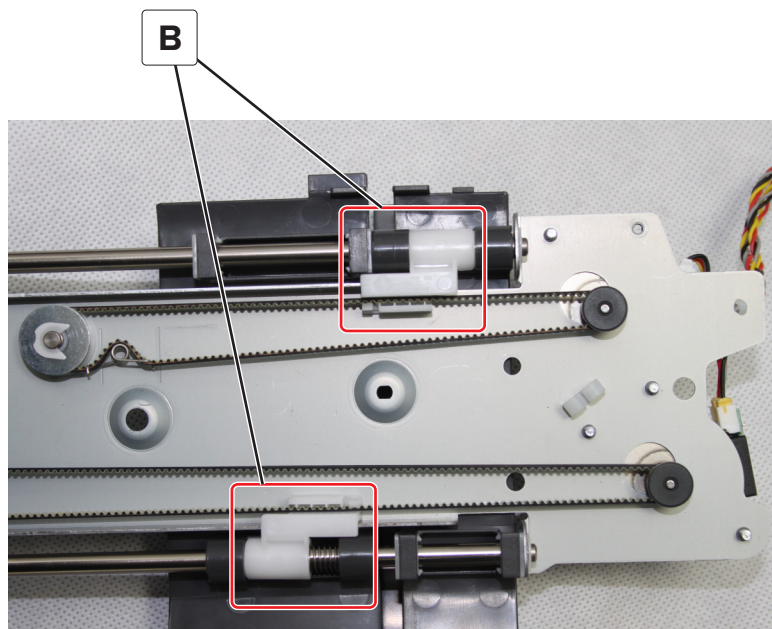
Staple finisher tamper pulley gear removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

5 Remove the tamper assembly. See **"Staple finisher tamper assembly removal" on page 558**.

6 Remove the tamper top cover. See **"Staple finisher tamper top cover removal" on page 561**.

7 Remove the tamper belts. See **"Staple finisher tamper belts removal" on page 564**.

8 Remove the clip (A), and then remove the gear.
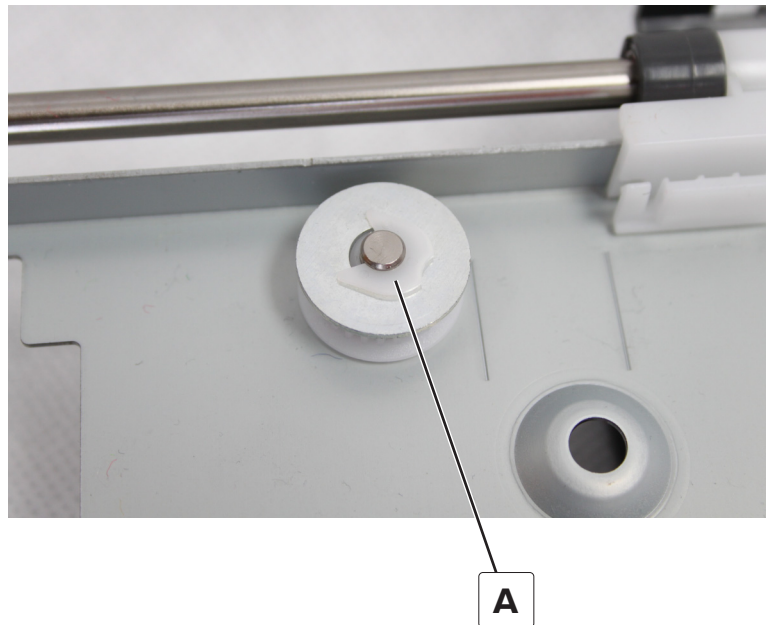
A

Staple finisher tamper removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

5 Remove the tamper assembly. See **"Staple finisher tamper assembly removal" on page 558**.

6 Release the belts from the holders (A).
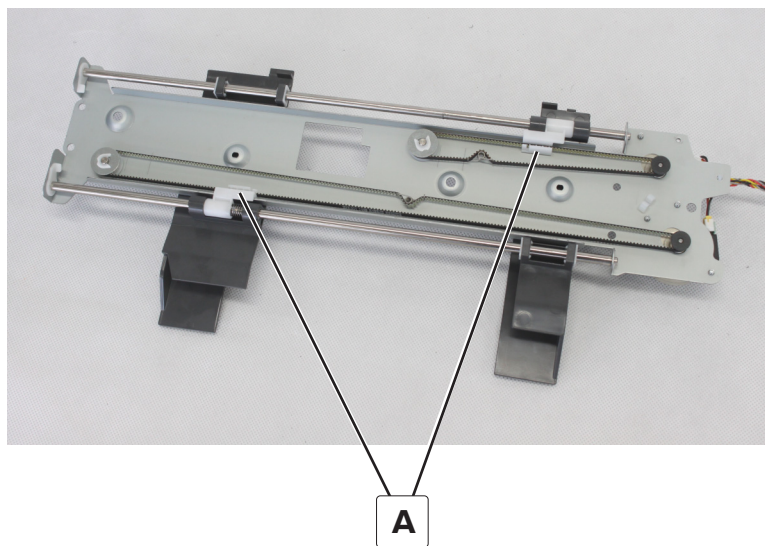
7 Remove the two clips (B).
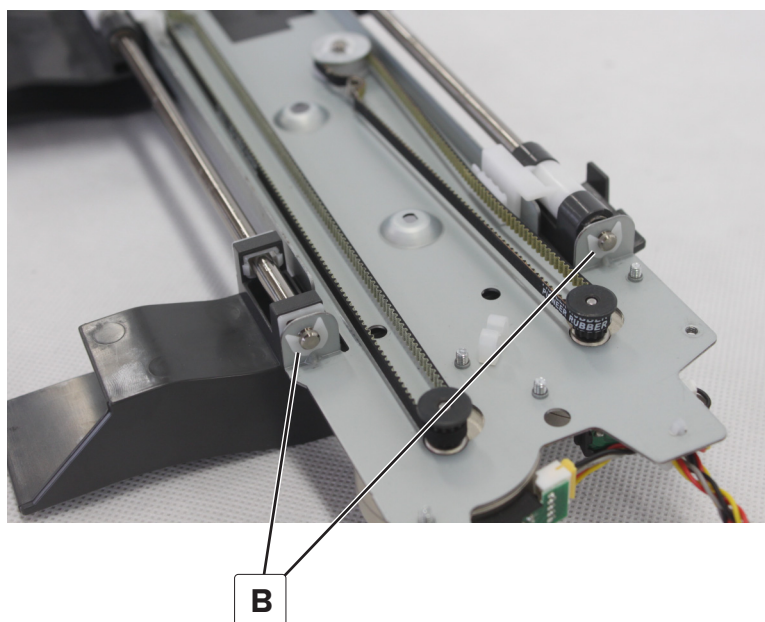
8 Remove the shafts.
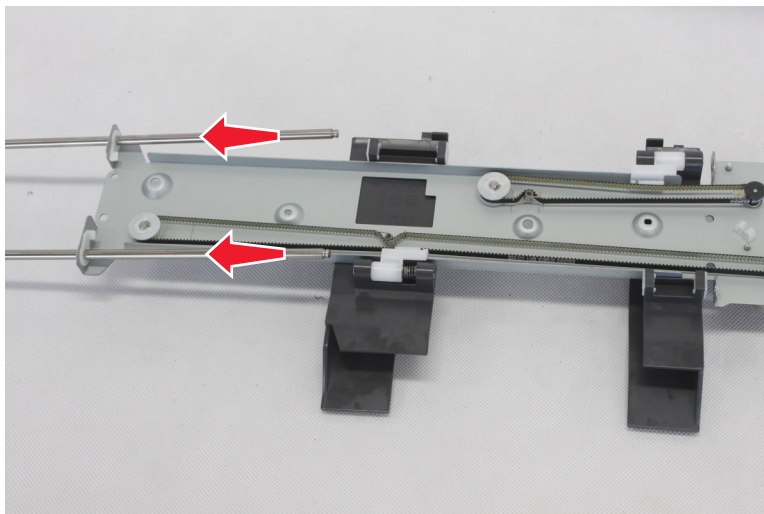
9 Remove the holder, and then remove the spring.

Staple finisher bin link removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Set aside the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the two screws (A), and then release the spring. Do the same for the two screws and the spring on the other side.
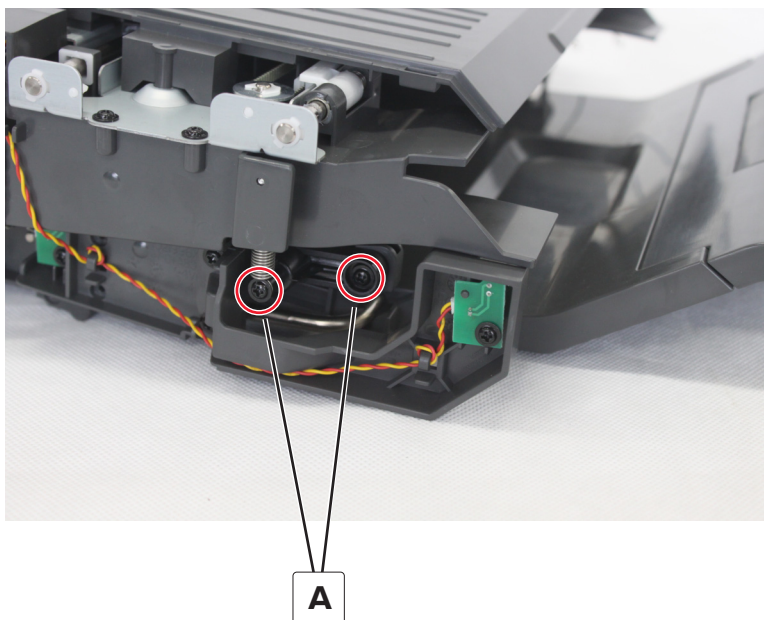
5 Remove the screw (B), and then remove the link from both sides of the finisher.

B
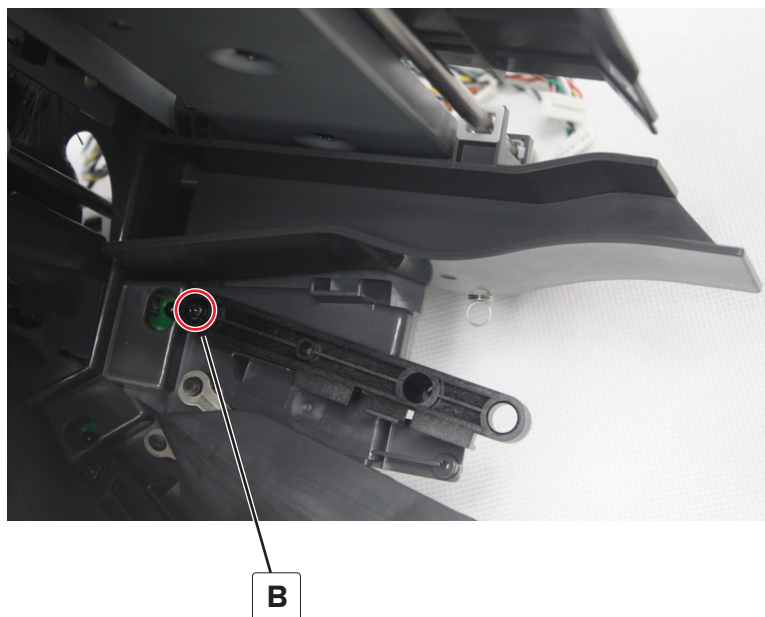
Staple finisher bin removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Set aside the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the screw (A), and then release the spring. Do the same for the screw and the spring on the other side.

A

Repair information
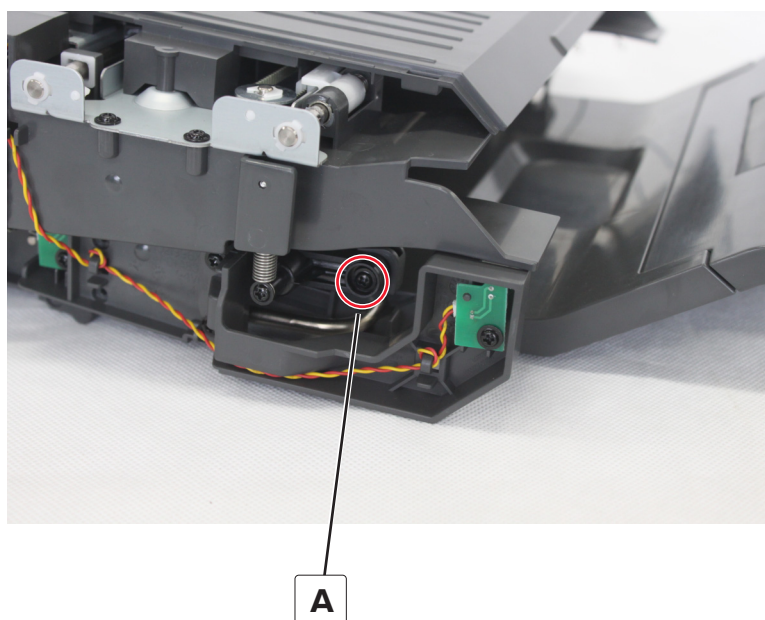
5 Release the plastic bin link. Do the same for the link on the other side.
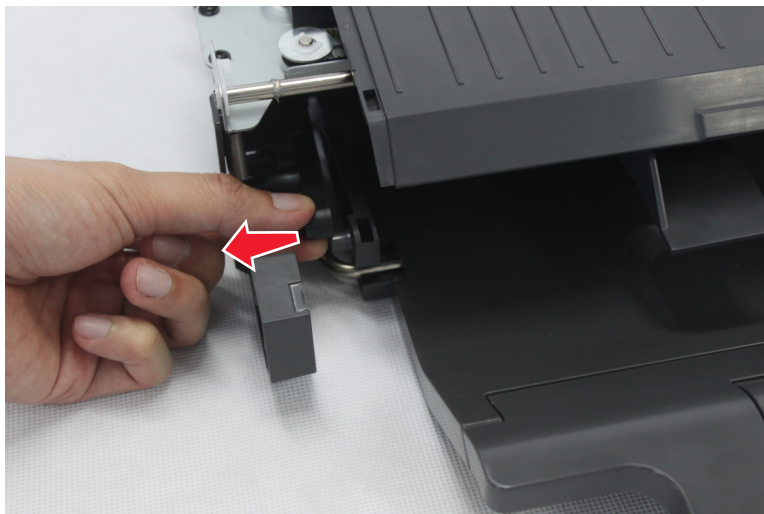
6 Release both sides of the bin support bar, and then remove the bin.
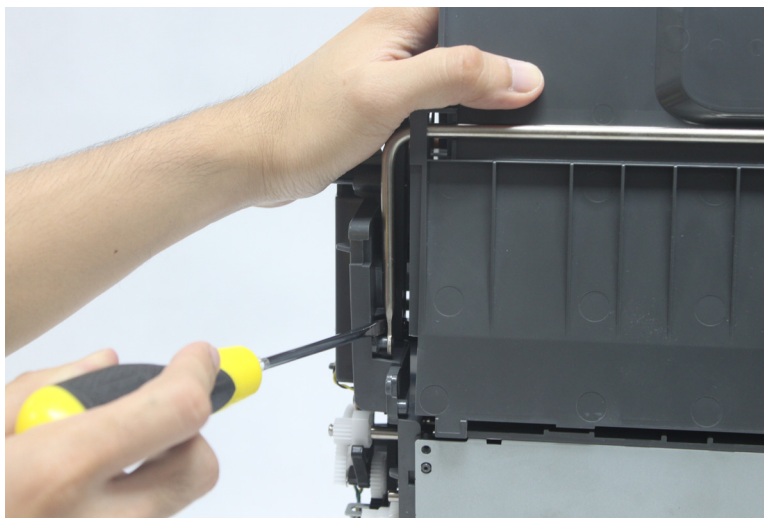
Staple finisher compiler paper guide removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the compiler feed roller. See **"Staple finisher compiler feed roller removal" on page 572**.

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

B　　**A**

Installation note: Make sure that the tab (A) is inside the slot.

A
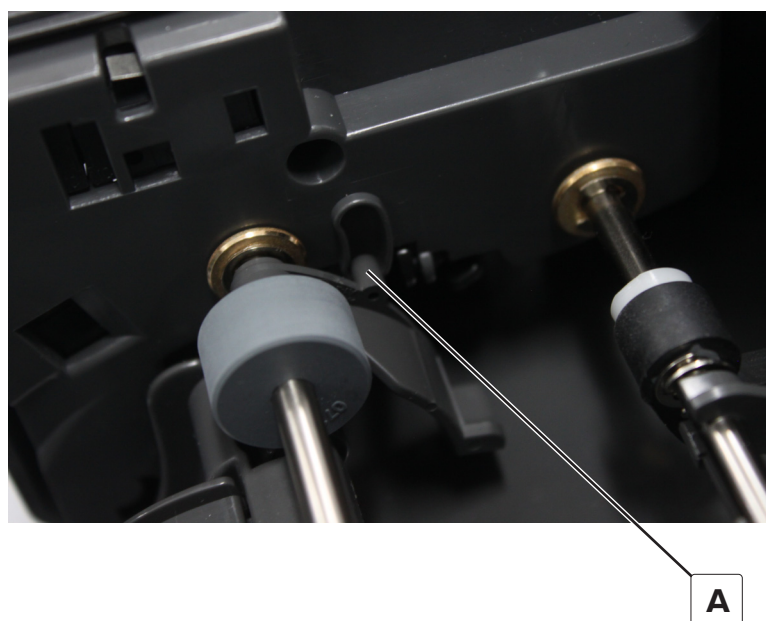
Staple finisher compiler feed roller removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Disconnect the three cables (A), and then remove the four screws (B).
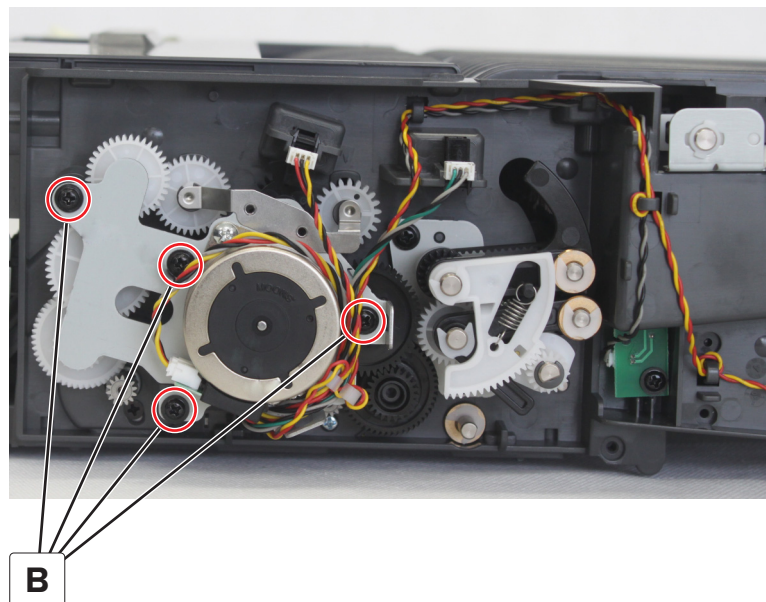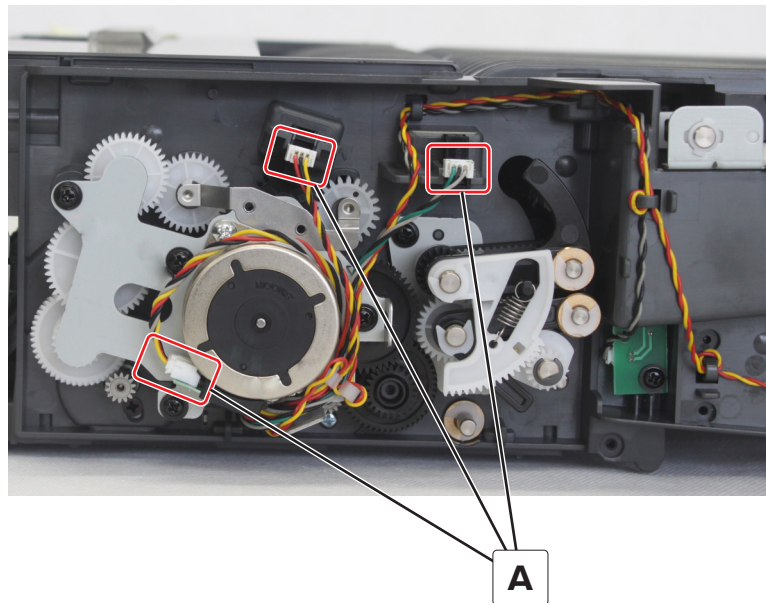
3 Set aside the aligner paddle motor and bracket.

4 Remove the clip (C), and then remove the two gears (D).
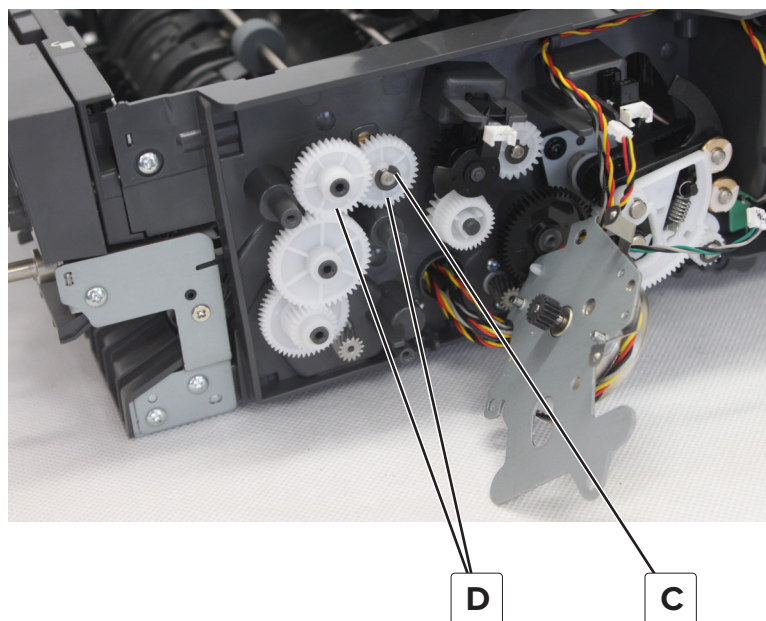
5 Remove the clip (E).

6 Push, and then swing out to remove the roller.
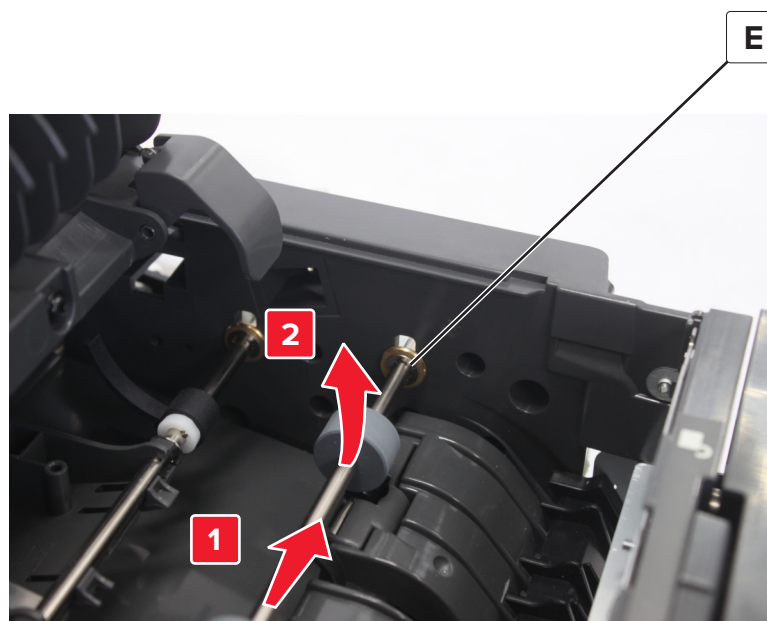
7 Remove the compiler paper guide. See **"Staple finisher compiler paper guide removal" on page 570**.

Installation note: Make sure that the tab (A) is inside the slot.
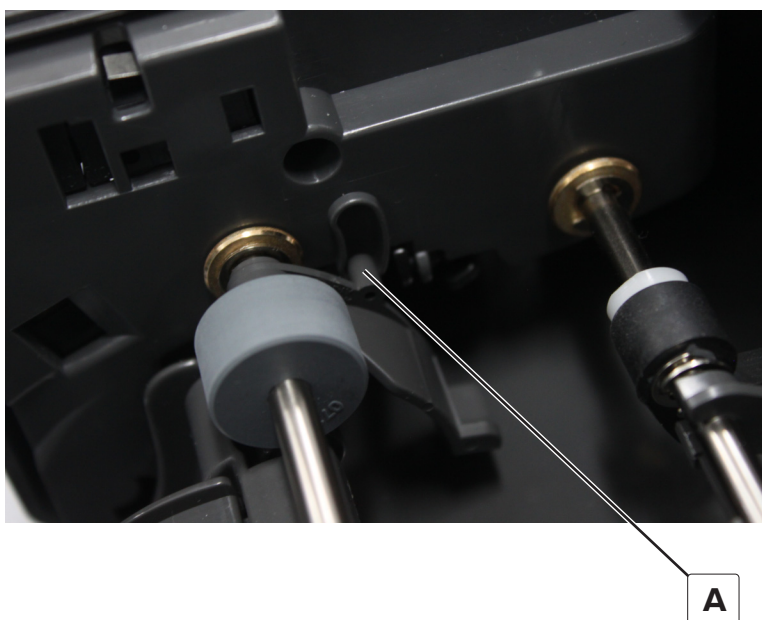
Staple finisher compiler feed idler removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the compiler feed roller. See **"Staple finisher compiler feed roller removal" on page 572**.

3 Remove the two screws (A).
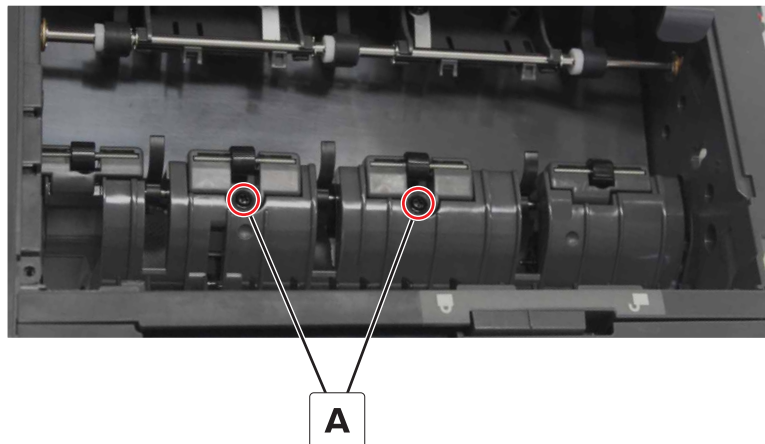
4 Remove the roller, and then remove the spring.
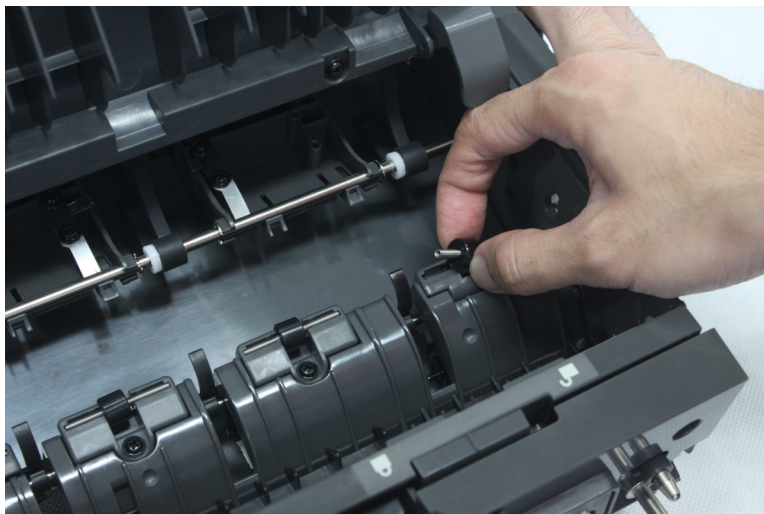
5 Remove the screw (B), and then remove the holder (C).
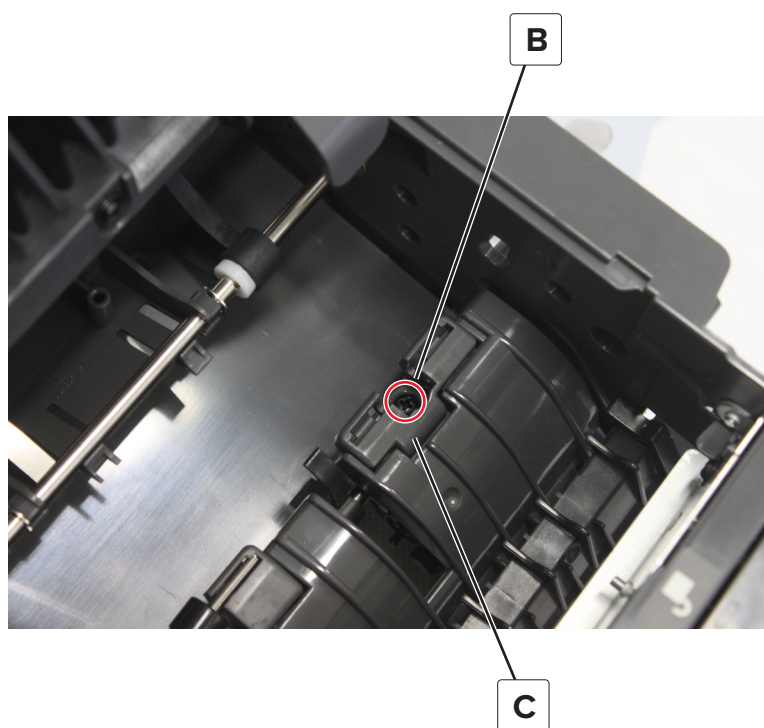
Staple finisher aligner paddle and upper paper guide removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the paddle motor and bracket. See **"Motor (staple finisher aligner paddle) removal " on page 548**.

3 Remove the clip (A), and then remove the gear (B).

B   **A**
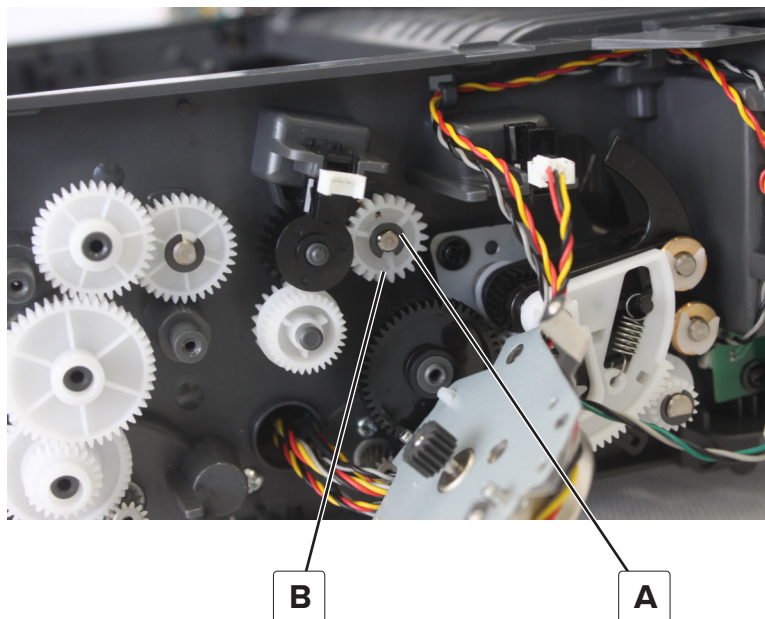
4 Set aside Door F.

5 Remove the clip (C).

C
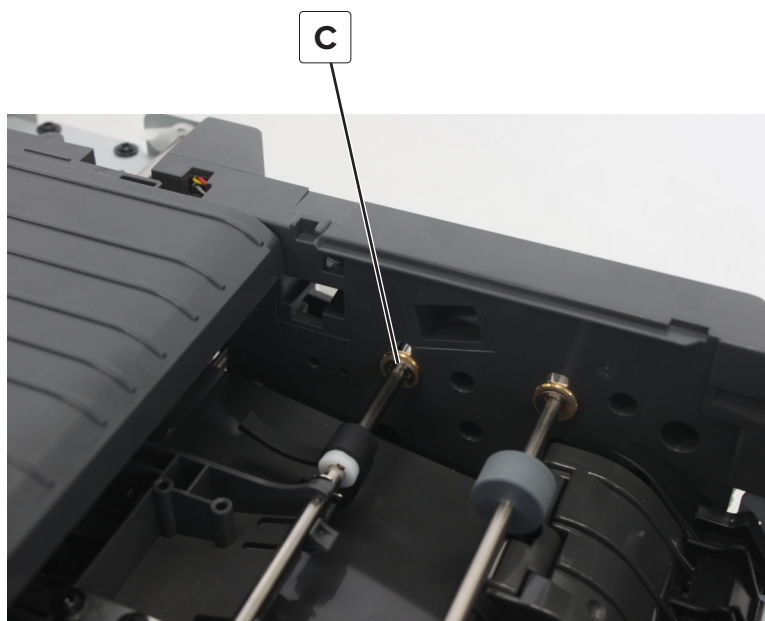
6 Remove the paddle.
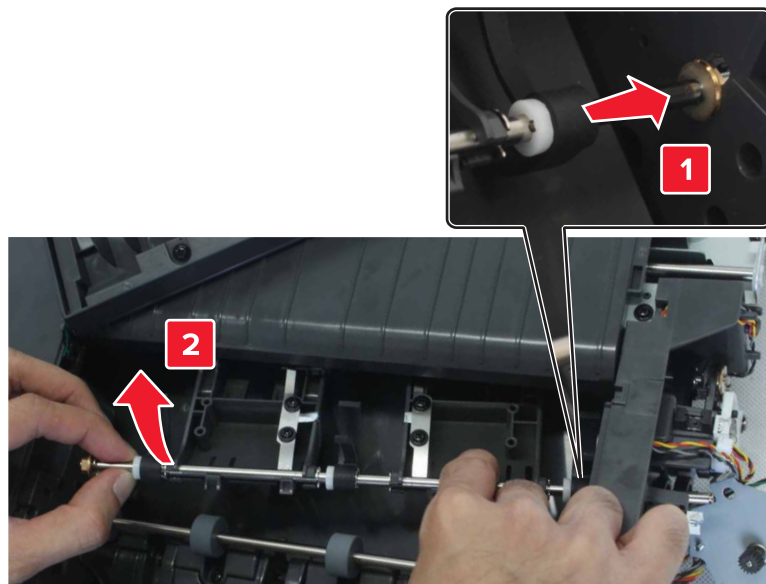
7 Remove the upper paper guide.

Installation note: Pay attention to the correct position of the upper exit roller and paddle.
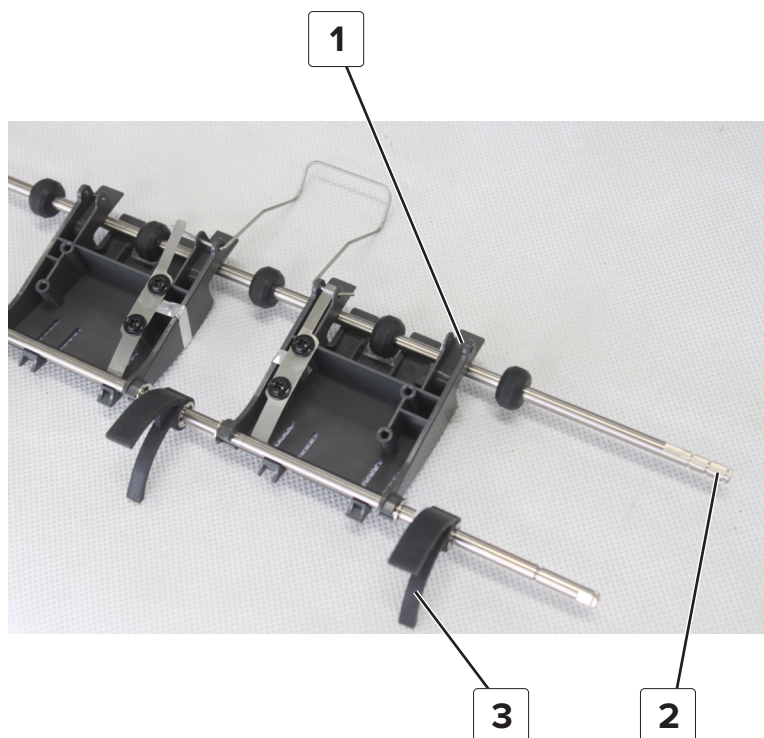
1	Staple finisher upper paper guide
2	Staple finisher upper exit roller
3	Staple finisher aligner paddle

Staple finisher upper exit roller removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the paddle motor and bracket. See **"Motor (staple finisher aligner paddle) removal " on page 548**.

3 Remove the paddle. See **"Staple finisher aligner paddle and upper paper guide removal" on page 575**.

4 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

5 Remove the controller board. See **"Staple finisher controller board removal" on page 525**.

6 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

7 Remove the motor (staple finisher upper exit roller). See **"Motor (staple finisher upper exit roller) removal" on page 534**.

8 Set aside the spring (A), and then remove the clip (B) and bushing.

B   A
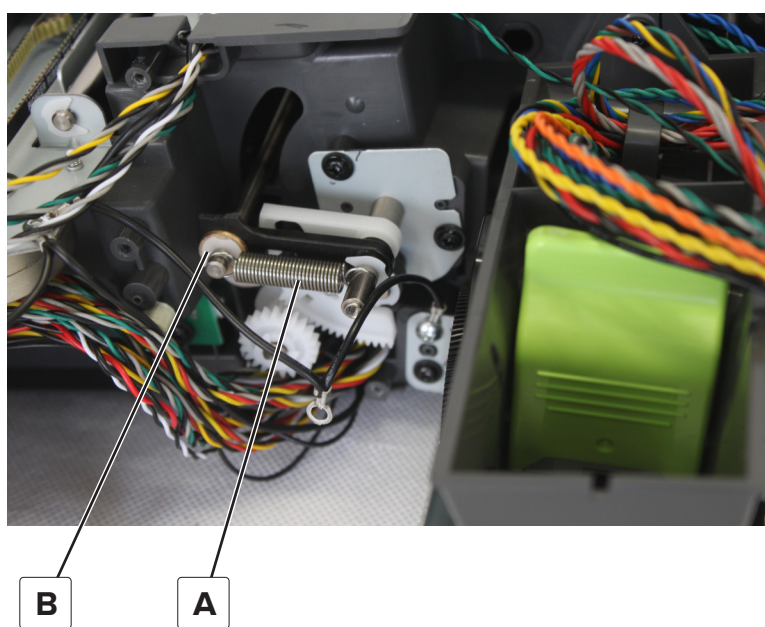
9 Remove the clip (C), release the spring (D), and then remove the gear (E).

| C | D | E |
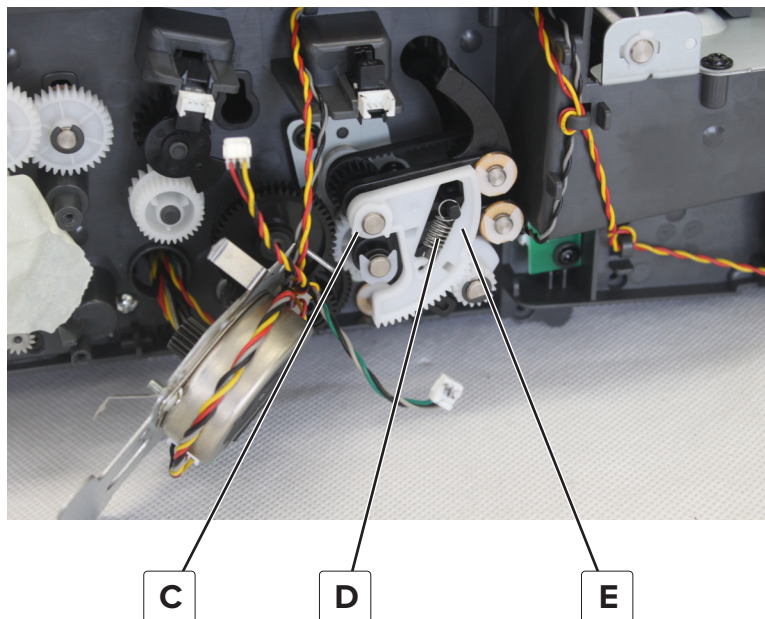
10 Remove the clip (F) and the bushing, and then remove the flag (G).

| G | F |

Repair information
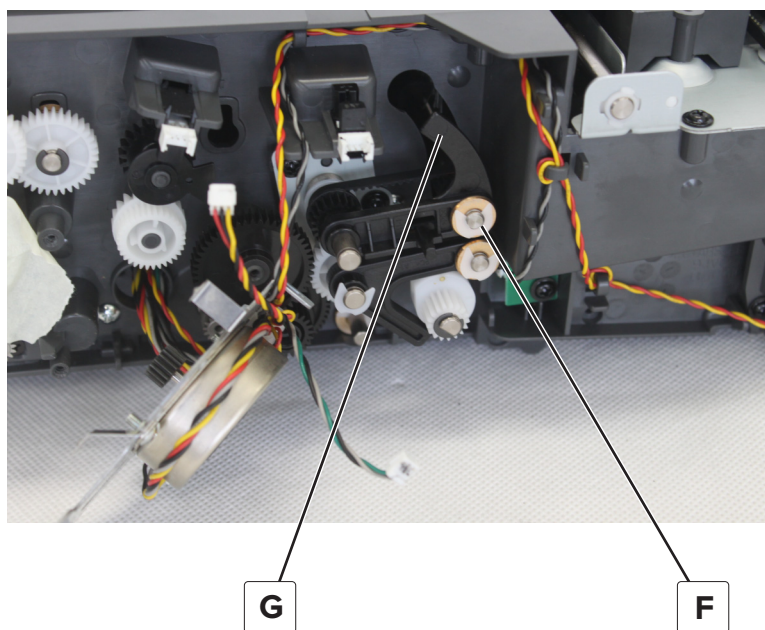
11 Detach the belt (H), remove the two clips (J), and then remove the gear.
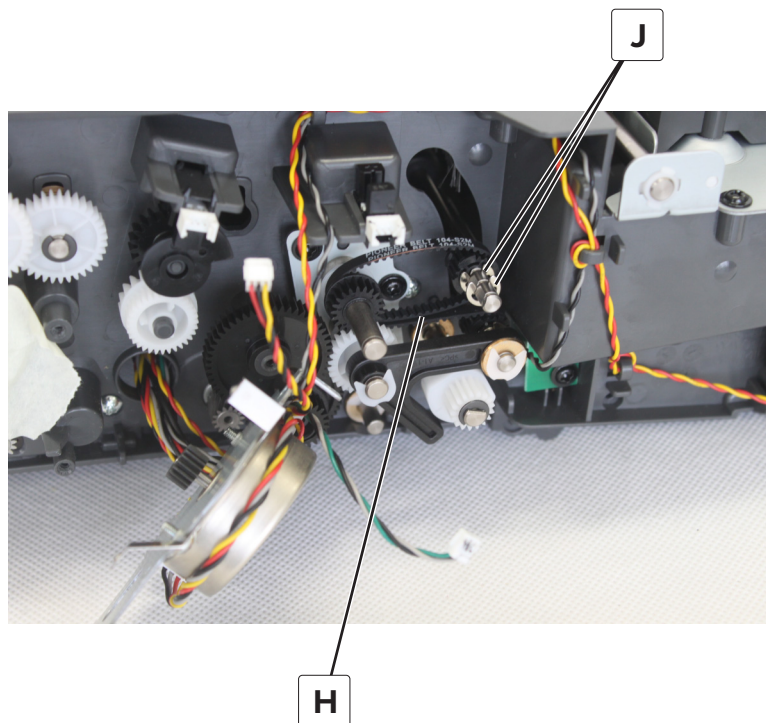
12 Remove the exit roller.
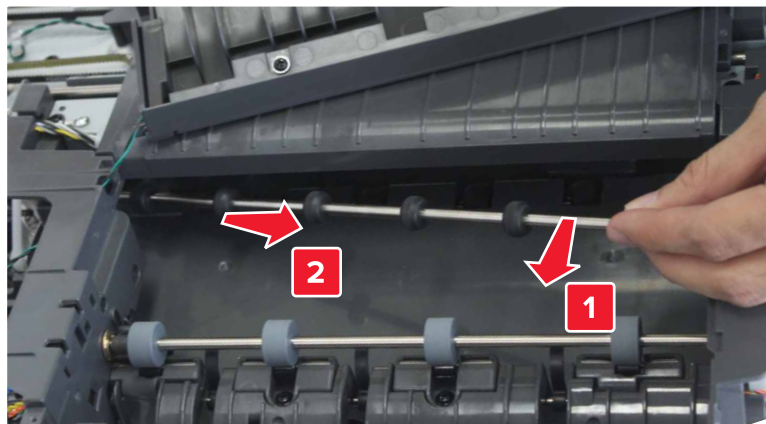
Installation note: Make sure that this side of the exit roller is installed into the front.
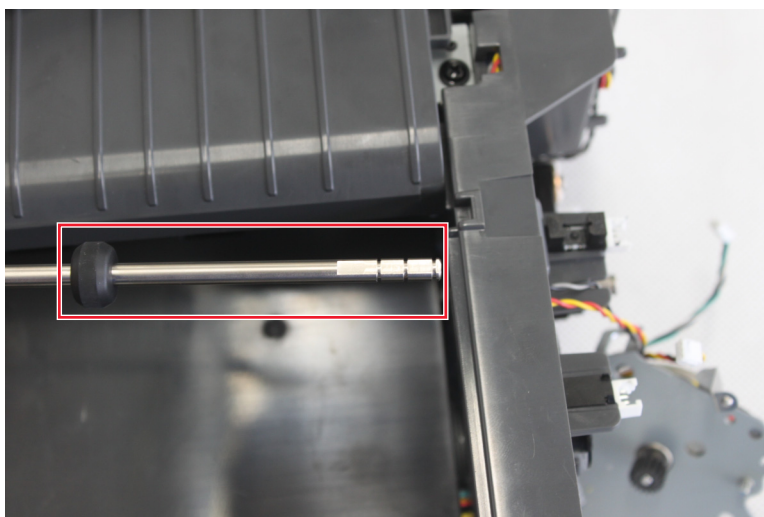
Staple finisher entrance paper guide removal

1 Release the three latches.
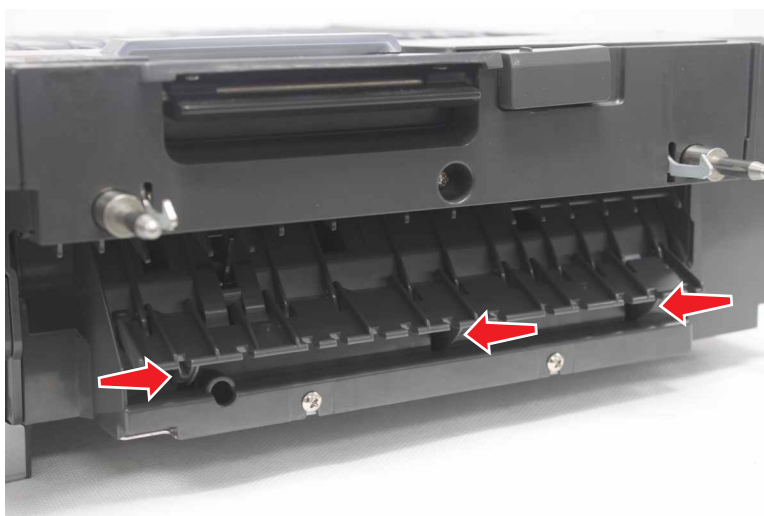
2 Release the four pins, and then remove the paper guide.

Installation note: Secure the guide on the first set of slots (A).
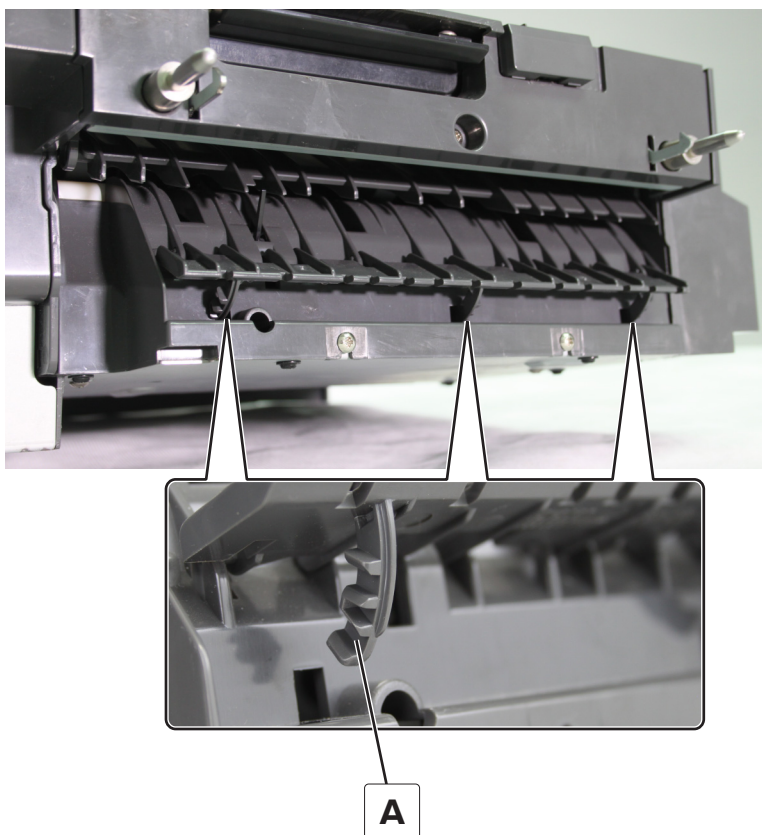
Staple finisher bin clamp assembly removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the bottom cover. See **"Staple finisher bottom cover removal" on page 529**.

3 Remove the sensor (staple finisher bin clamp). See **"Sensor (staple finisher bin clamp) removal" on page 590**.

4 Remove the clip (A) and the bushing.
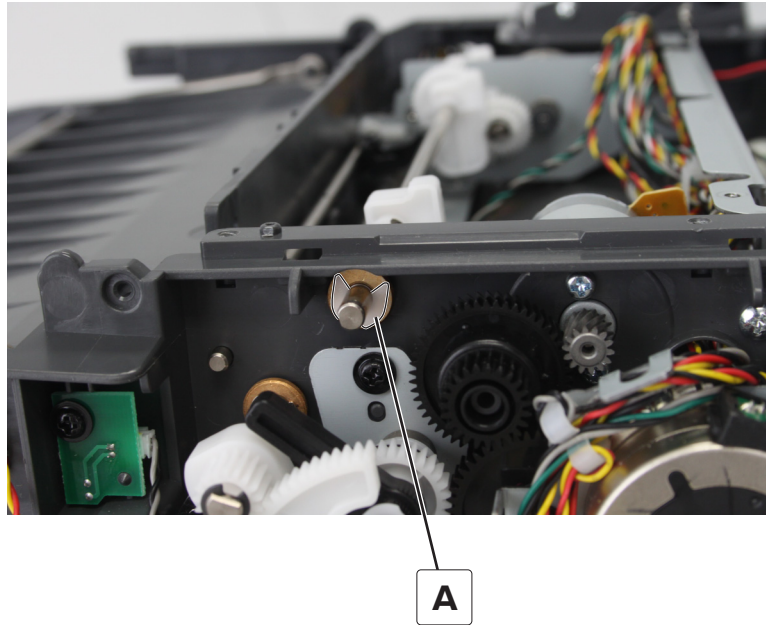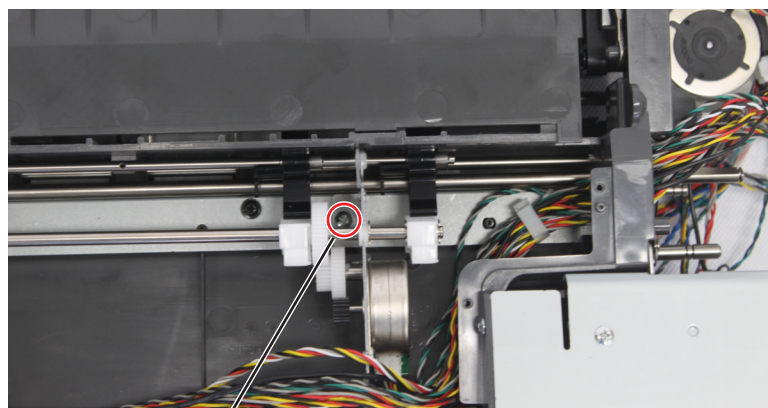
5 Remove the two screws (B).
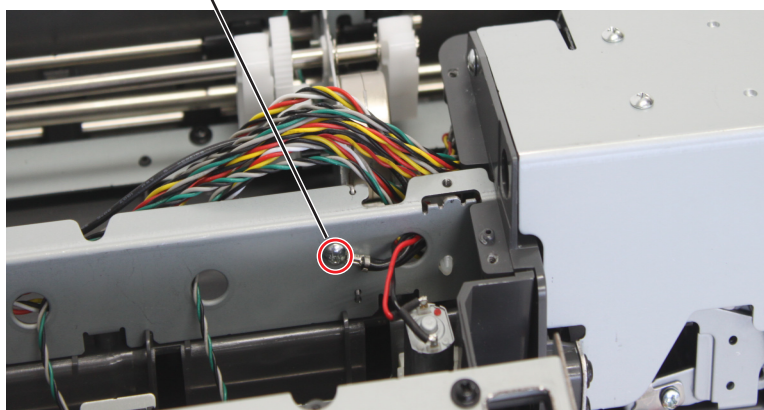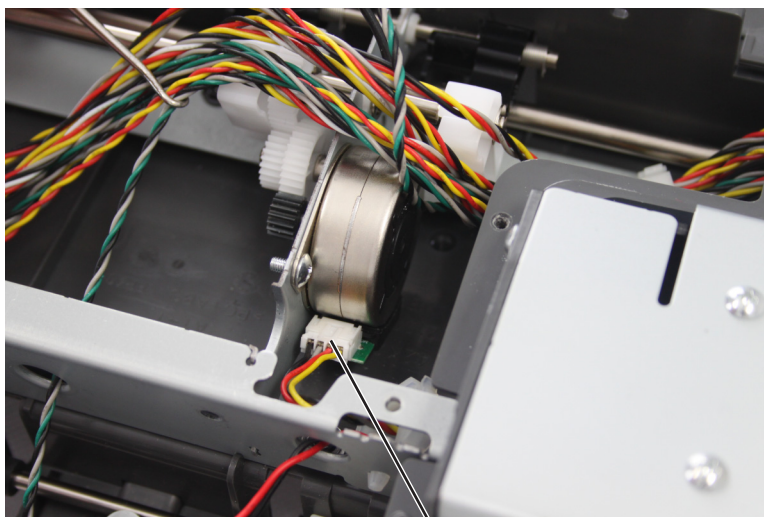
6 Disconnect the cable (C).

Repair information

7 Pry the retainer counterclockwise to unlock, and then loosen it.
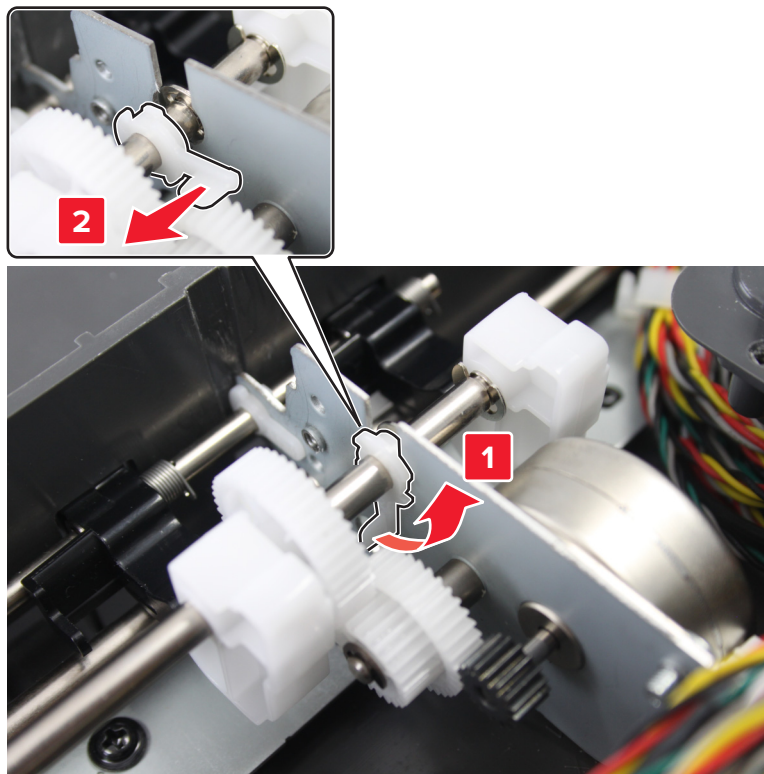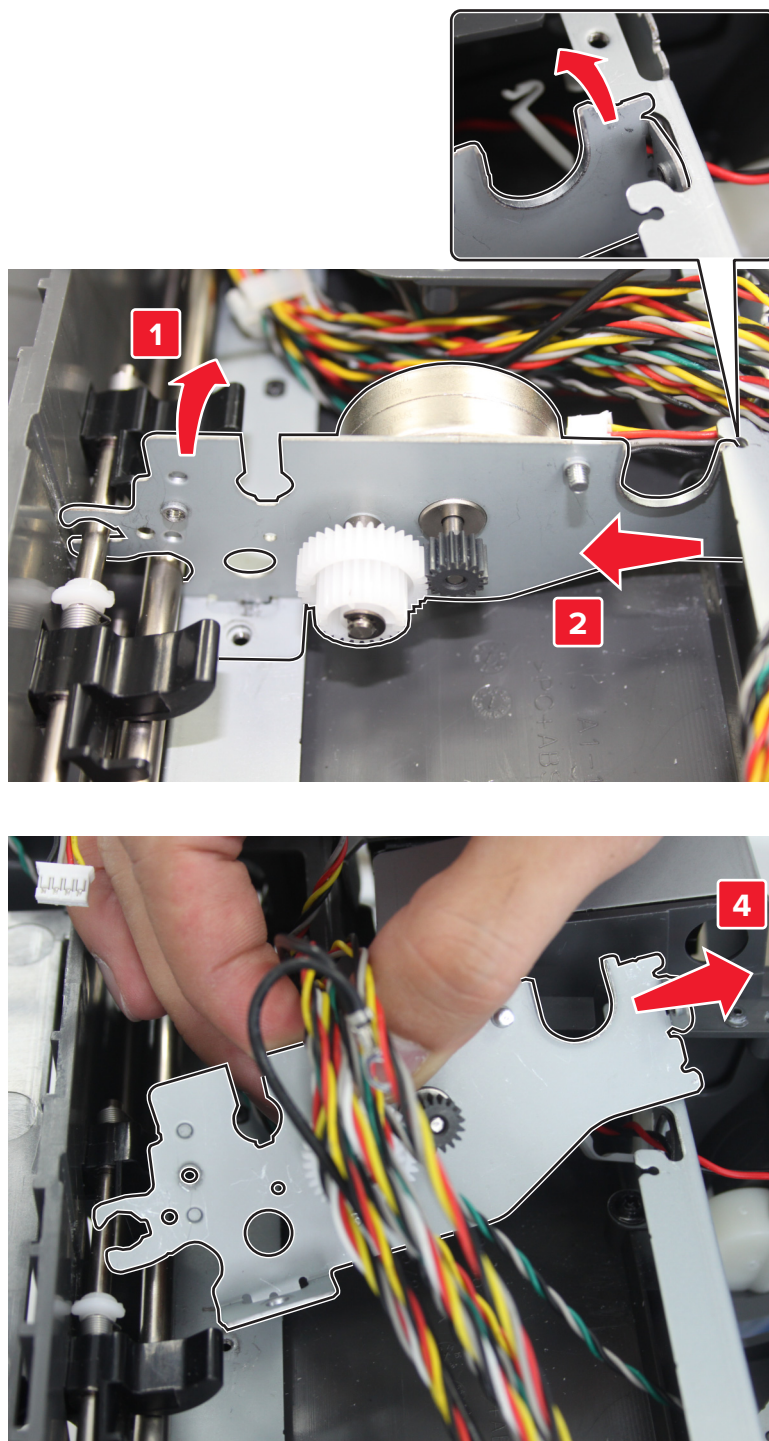
8 Remove the cam gear assembly.

9 Pry the retainer clockwise to unlock, and then loosen it.
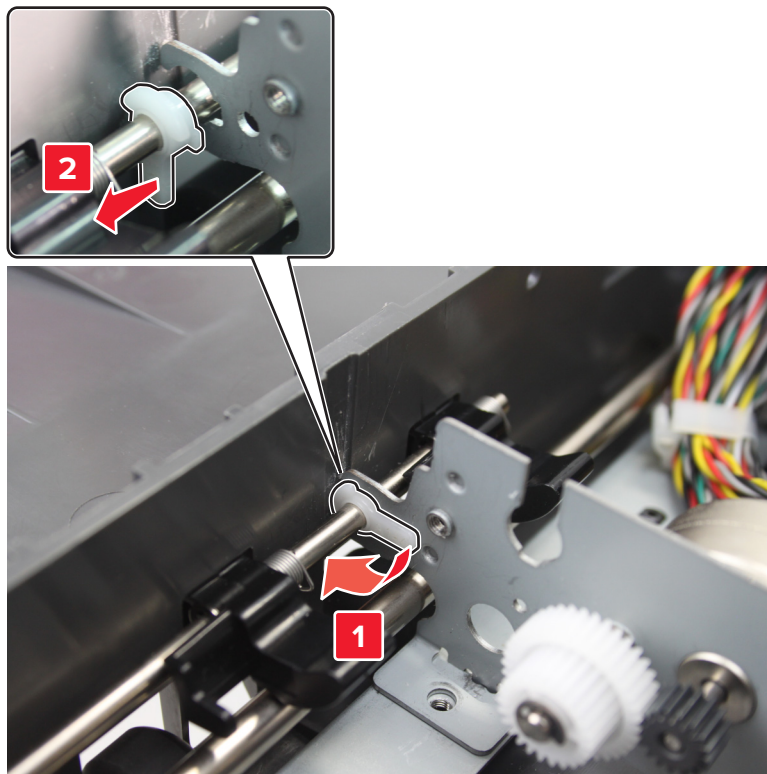
10 Release, and then remove the bracket.

11 Remove the bin clamp.

Note: Pay attention to the default position of the arms.
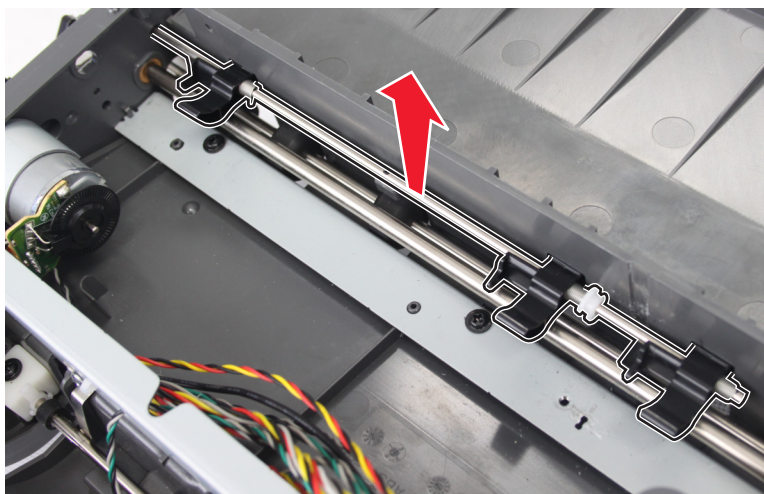
When installing the bin clamp:

- Make sure that the left side of the shaft is inserted into the D-shaped hole and the pin is placed facedown and aligned with hole.
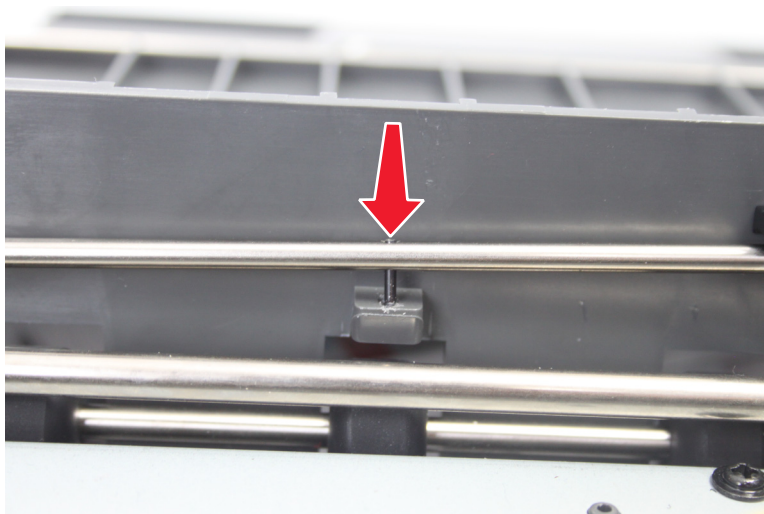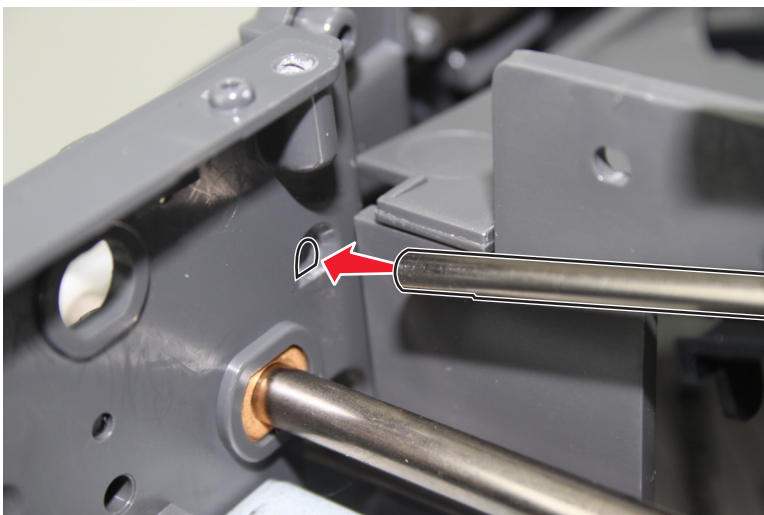
Repair information

- With the pin placed facedown, turn the arm clockwise until the other side of the arm is aligned with the hole, and then insert the arm.
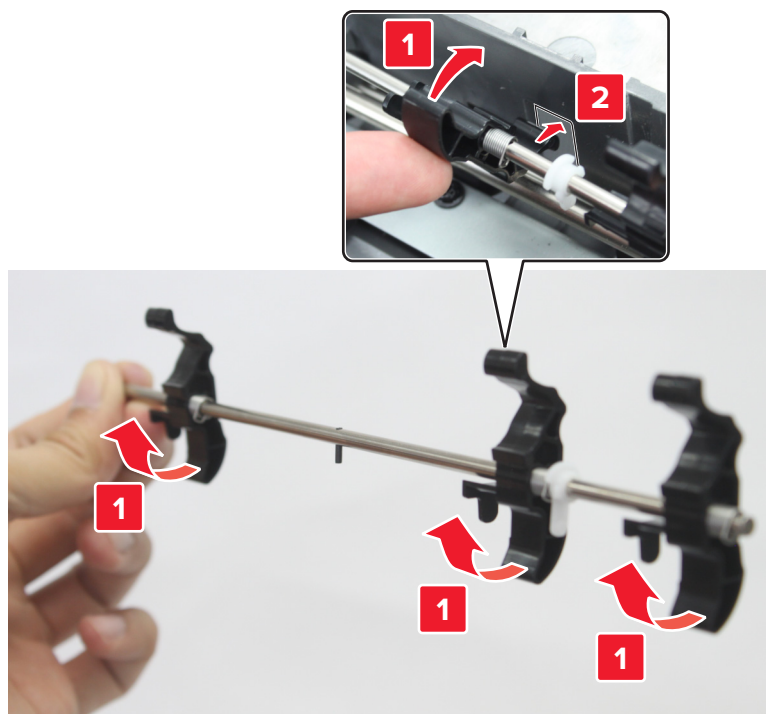
- Raise the arm, and then release it. If the arm goes back to the original position, and with a tension load, then it is properly installed.
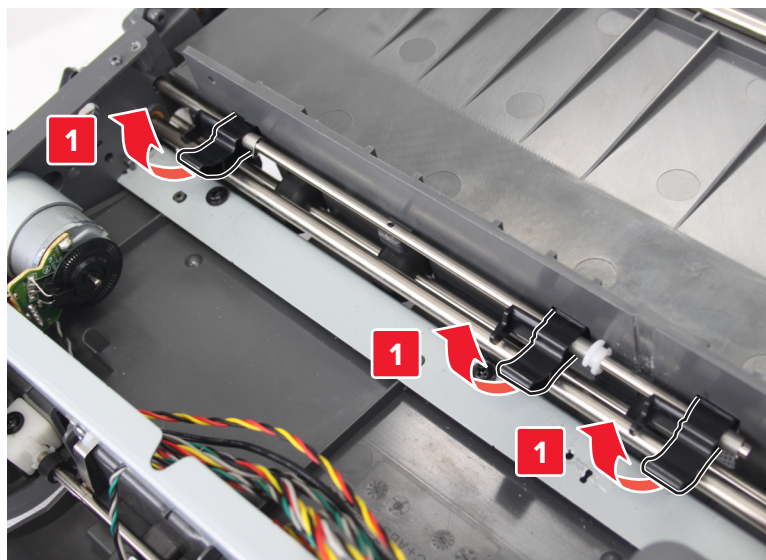
Note: For a video demonstration, see the *CS82x and CX8xx Staple finisher staple bin clamp assembly removal* at **infoserve.lexmark.com/videos/stfin_bin_clamp_asm_removal.html**.

Sensor (staple finisher bin clamp) removal

1 Remove the bottom cover. See **"Staple finisher bottom cover removal" on page 529**.

2 Disconnect the cable (A).
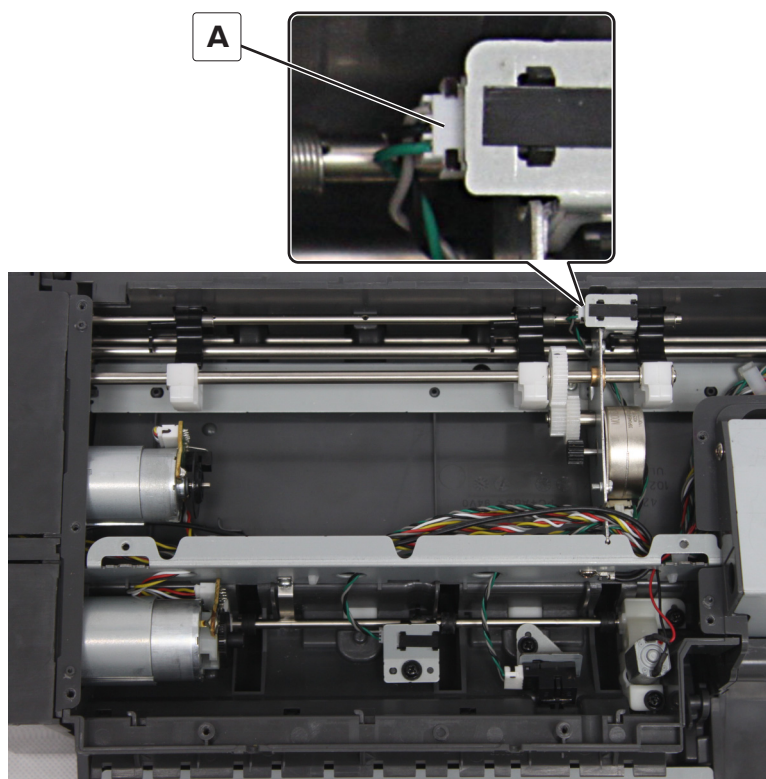
3 Remove the screw (B), and then remove the bracket.
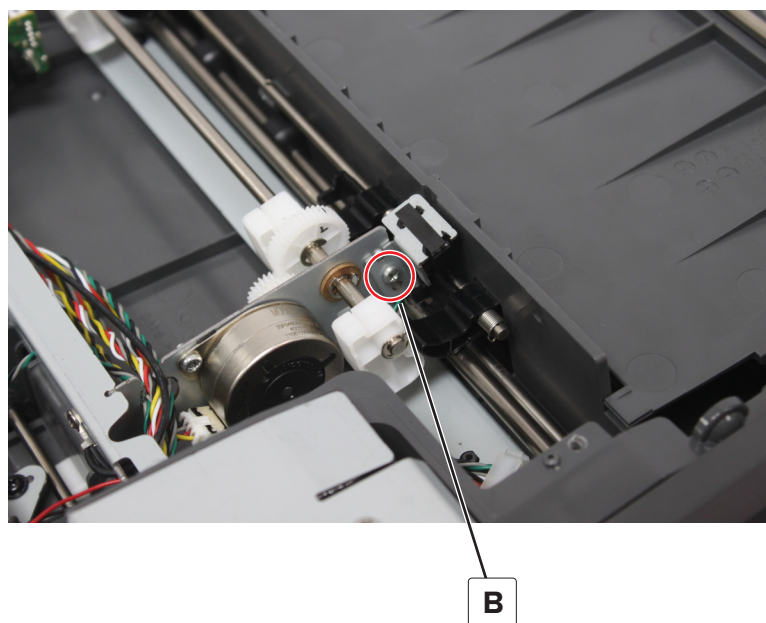
4 Remove the adhesive, and then remove the sensor.

Motor (staple finisher bin clamp) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the sensor (staple finisher bin clamp). See **"Sensor (staple finisher bin clamp) removal" on page 590**.

3 Remove the two screws (A).
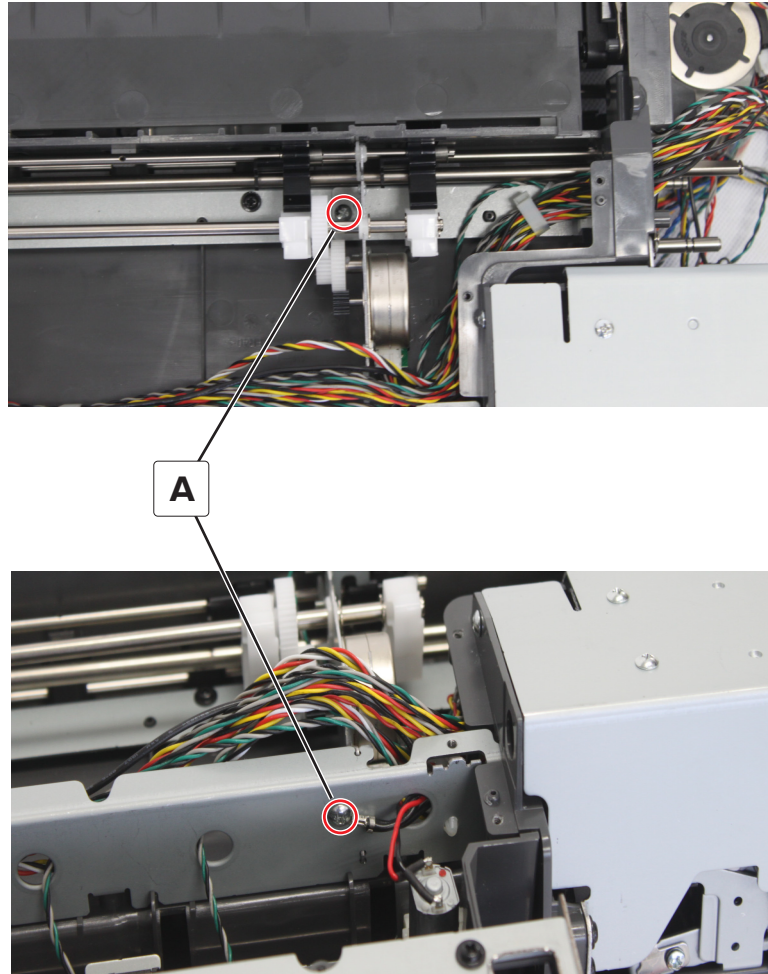
4 Disconnect the cable (B).
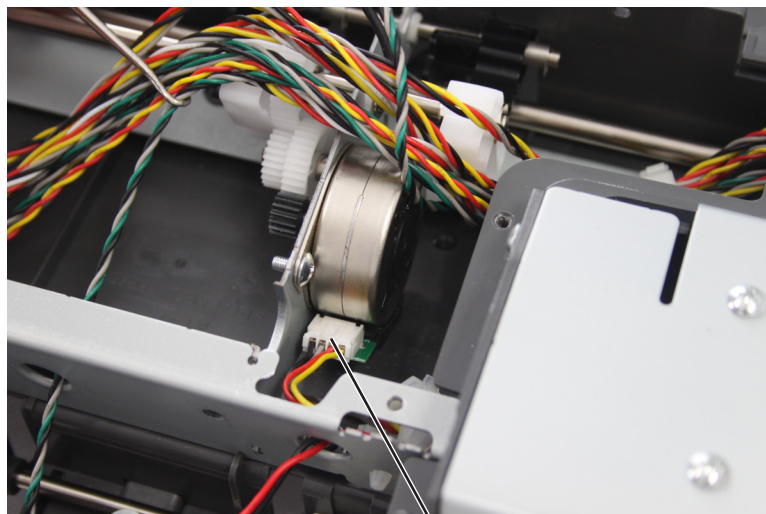
B

5 Remove the clip (C) and the bushing.
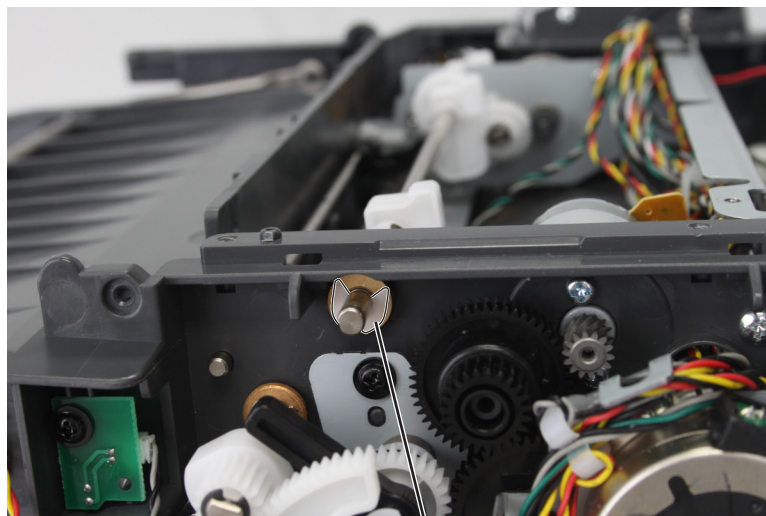
C

6 Pry the retainer counterclockwise to unlock, and then loosen it.
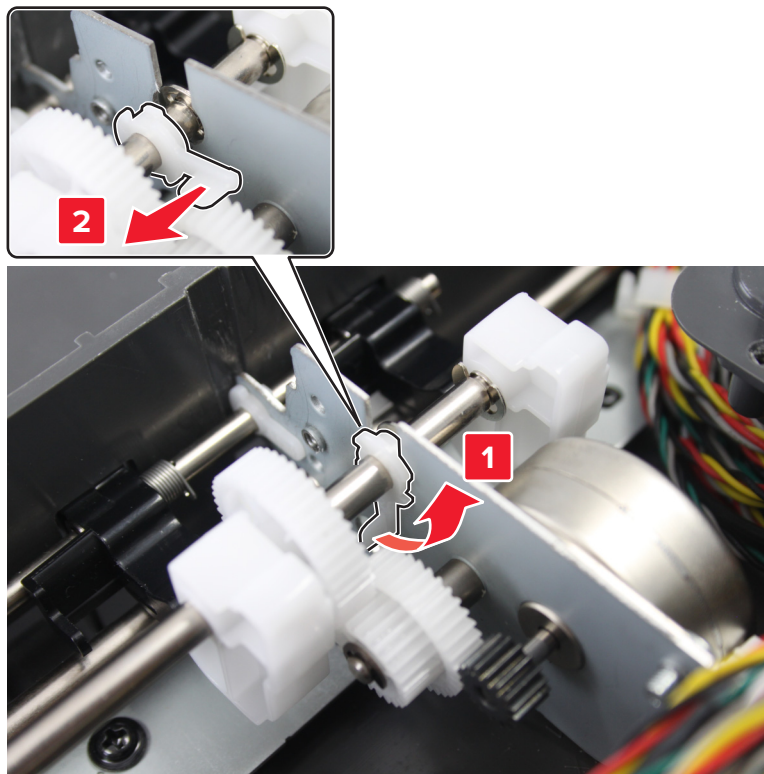
7 Remove the cam gear assembly.

8 Pry the retainer clockwise to unlock, and then loosen it.
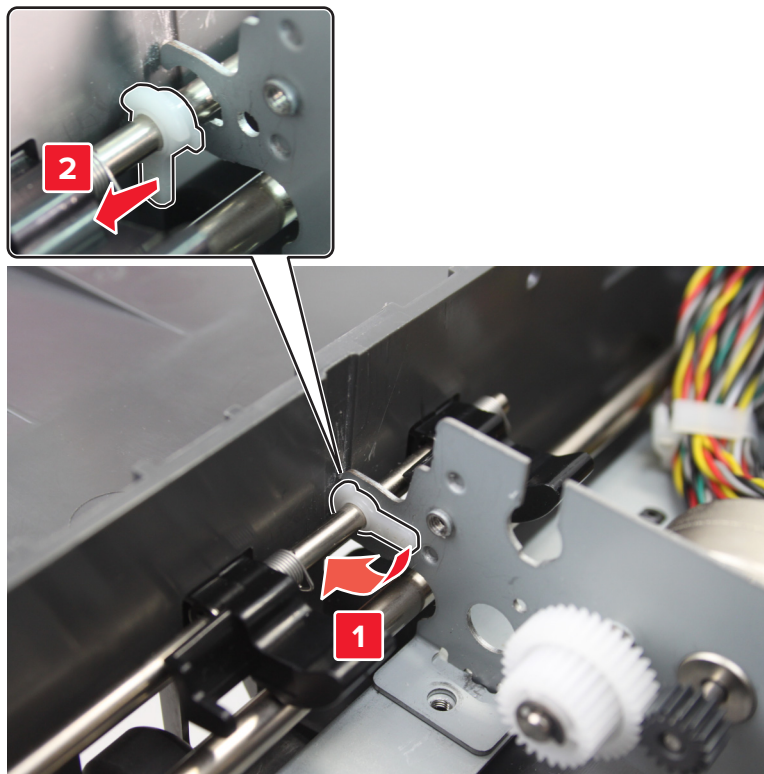
9 Release, and then remove the bracket.

10 Remove the two screws (D), and then remove the motor.
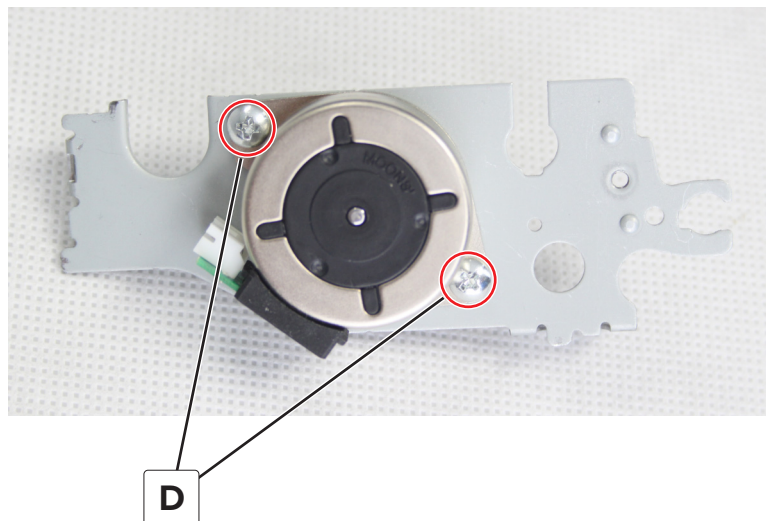
Motor (staple finisher exit) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the bottom cover. See **"Staple finisher bottom cover removal" on page 529**.

3 Remove the two screws (A).
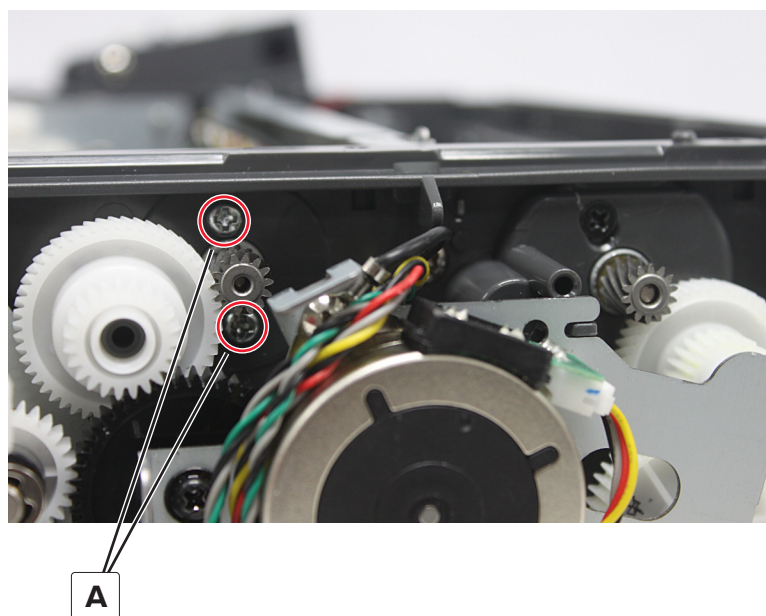
4 Remove the motor, and then disconnect the cable from the motor.

Motor (staple finisher transport) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the bottom cover. See **"Staple finisher bottom cover removal" on page 529**.

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

A
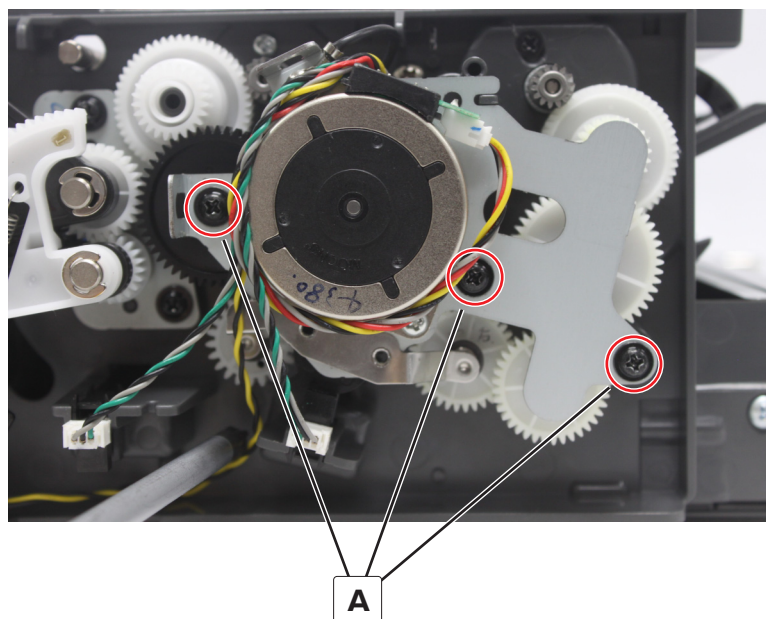
4 Remove the two gears (B).

B

Repair information
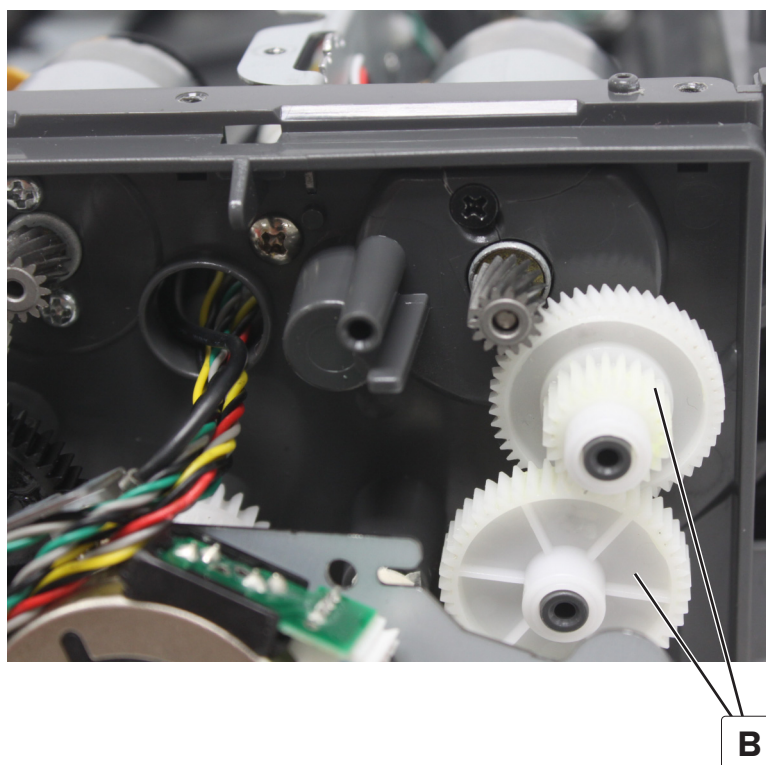
5 Remove the two screws (C), and then remove the motor.
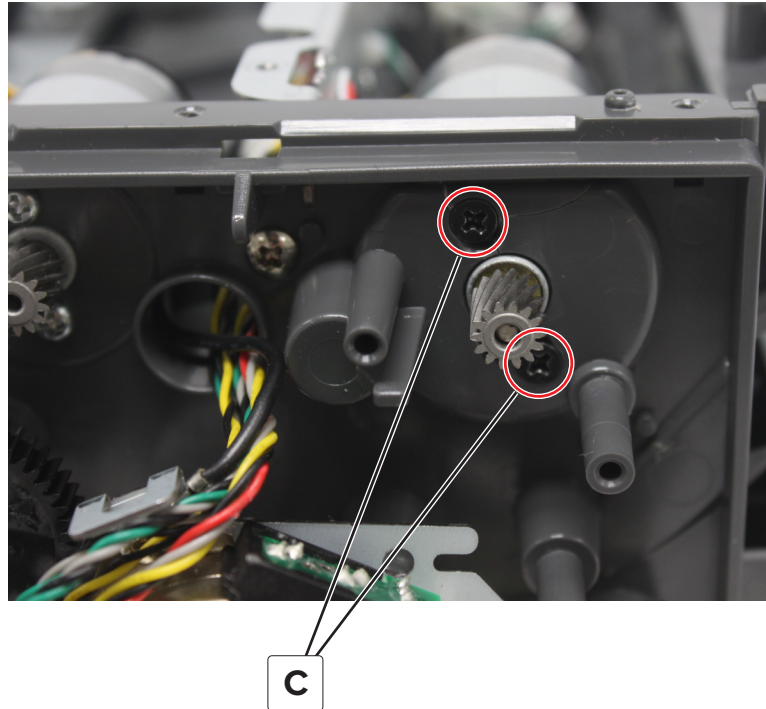
6 Disconnect the cable from the motor.

Staple finisher decurl assembly removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 522**.

2 Remove the bottom cover. See **"Staple finisher bottom cover removal" on page 529**.

3 Remove the sensor (staple finisher decurl). See **"Sensor (staple finisher decurl) removal" on page 600**.

4 Remove the sensor (staple finisher transport). See **"Sensor (staple finisher transport) removal" on page 601**.

5 Remove the motor (staple finisher transport). See **"Motor (staple finisher transport) removal" on page 596**.

6 Disconnect the decurl motor cable from the controller board, and then unroute the cable.

7 Remove the three screws (A), and then remove the assembly.
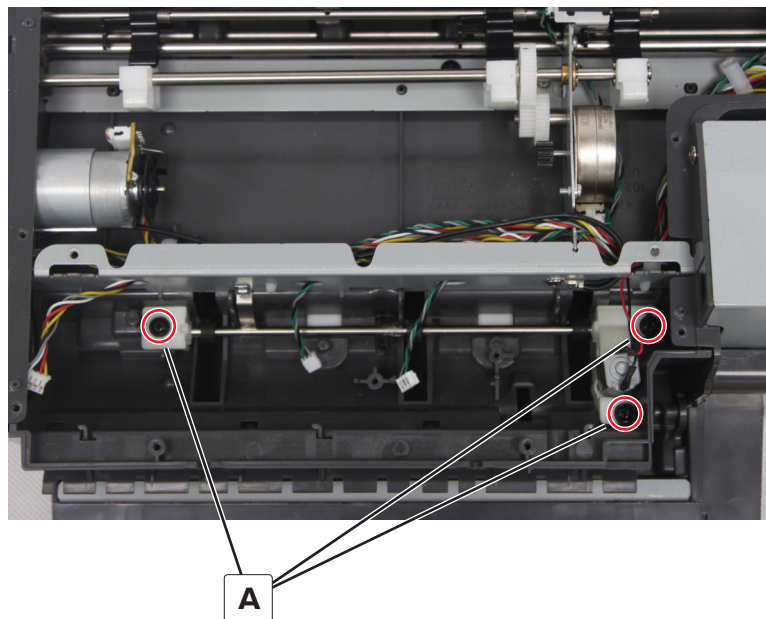
Sensor (staple finisher staple unit paper present) removal

1 Remove the right cover. See **"Staple finisher right cover removal" on page 522**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 523**.

3 Remove the inner rear cover. See **"Staple finisher inner rear cover removal" on page 525**.

4 Remove the ejector. See **"Staple finisher staple unit ejector removal" on page 538**.

5 Remove the staple unit bracket. See **"Staple finisher staple unit removal" on page 540**.

6 Remove the bottom cover. See **"Staple finisher bottom cover removal" on page 529**.

7 Disconnect the cable (A).
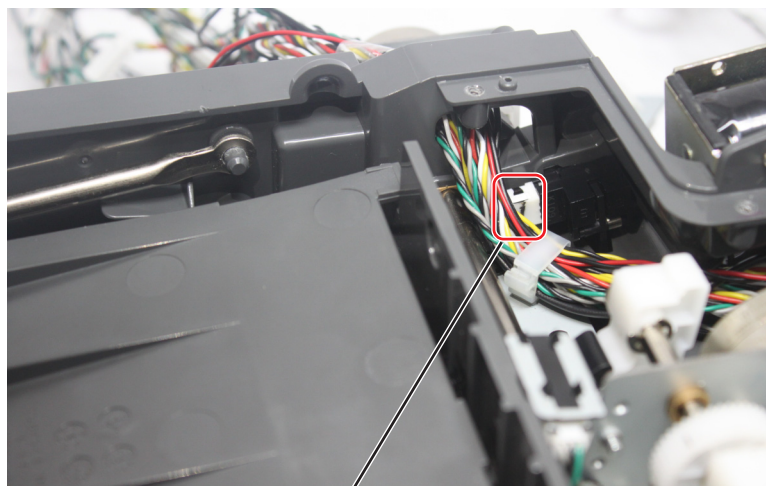
A

8 Remove the adhesive (B), and then remove the sensor.

B
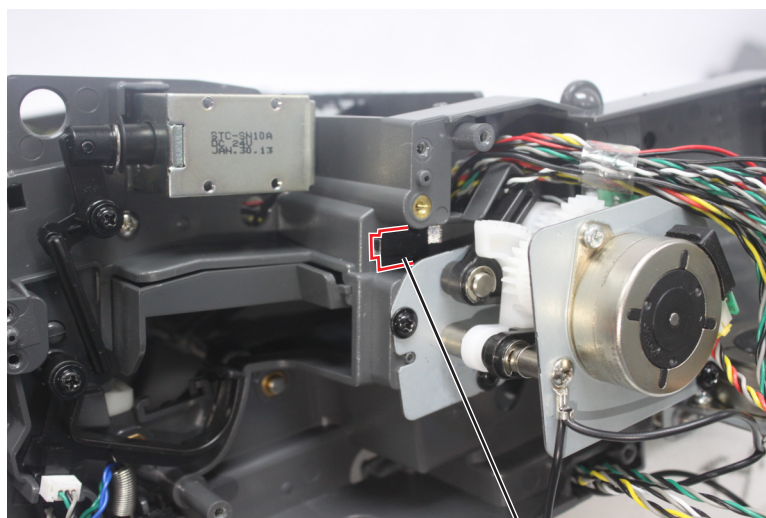
Sensor (staple finisher decurl) removal

1 Remove the bottom cover. See **"Staple finisher bottom cover removal" on page 529**.

2 Disconnect the cable (A).

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

A   B
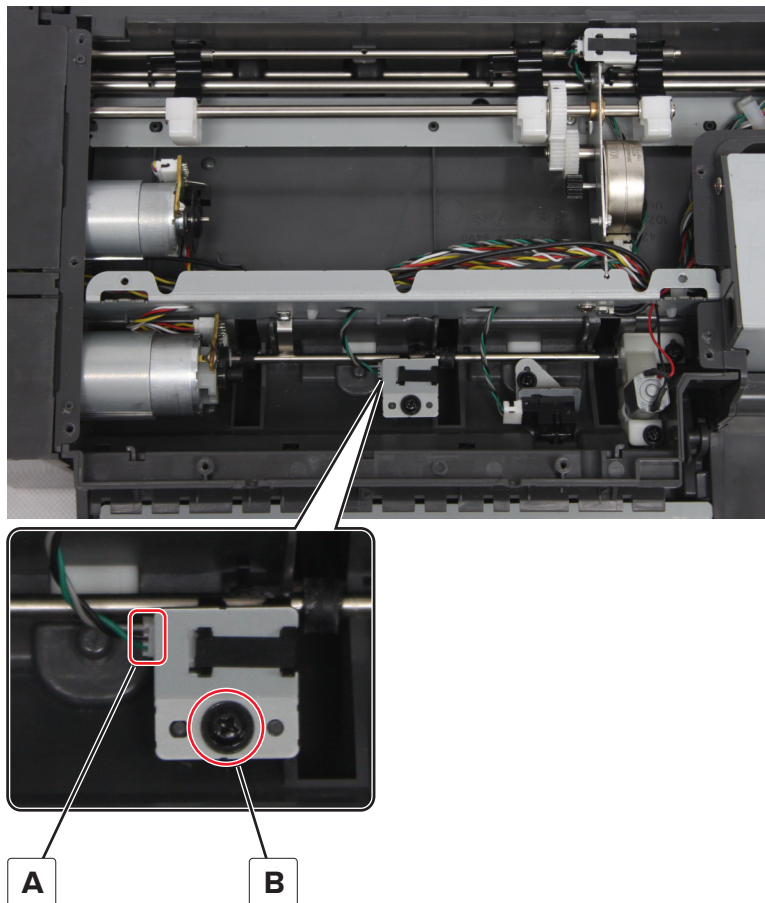
4 Remove the adhesive, and then remove the sensor.

Sensor (staple finisher transport) removal

1 Remove the bottom cover. See **"Staple finisher bottom cover removal" on page 529**.

2 Disconnect the cable (A).

3 Remove the screw (B), and then remove the bracket.
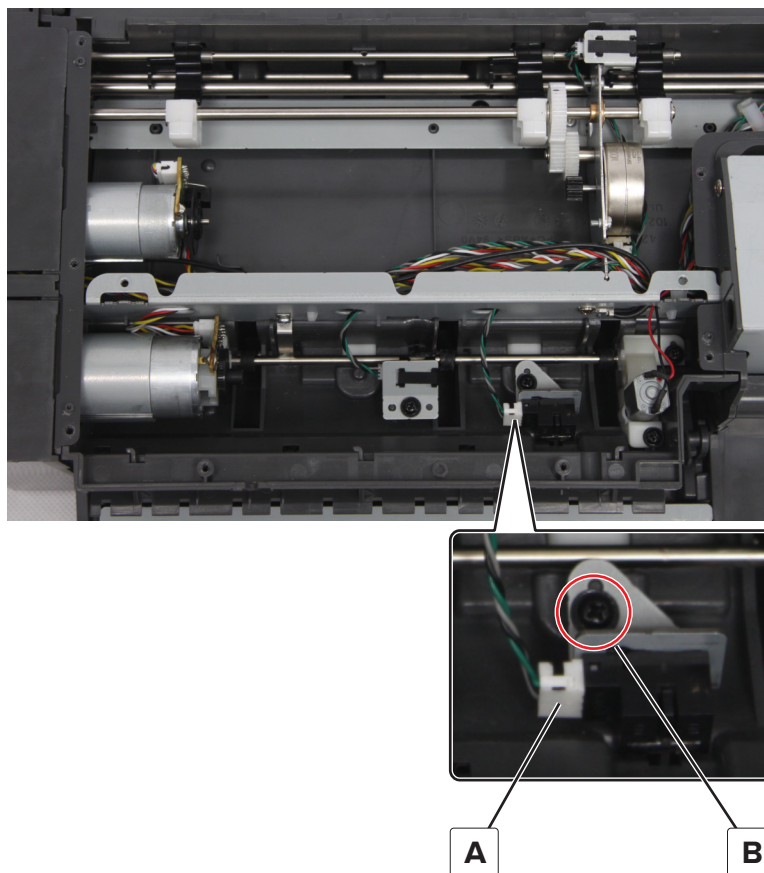
4 Remove the adhesive, and then remove the sensor.

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**.

You can configure your printer by adding three optional 550-sheet trays or an optional 2200-sheet tray.
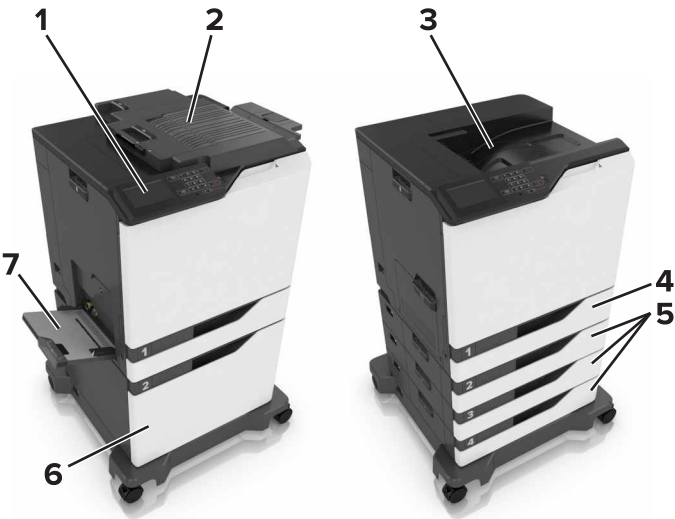
1	Control panel
2	Staple finisher
3	Standard bin
4	Standard 550-sheet tray
5	Optional 550-sheet trays
6	Optional 2200-sheet tray
7	Multipurpose feeder

Printer roller locations

Standard path rollers
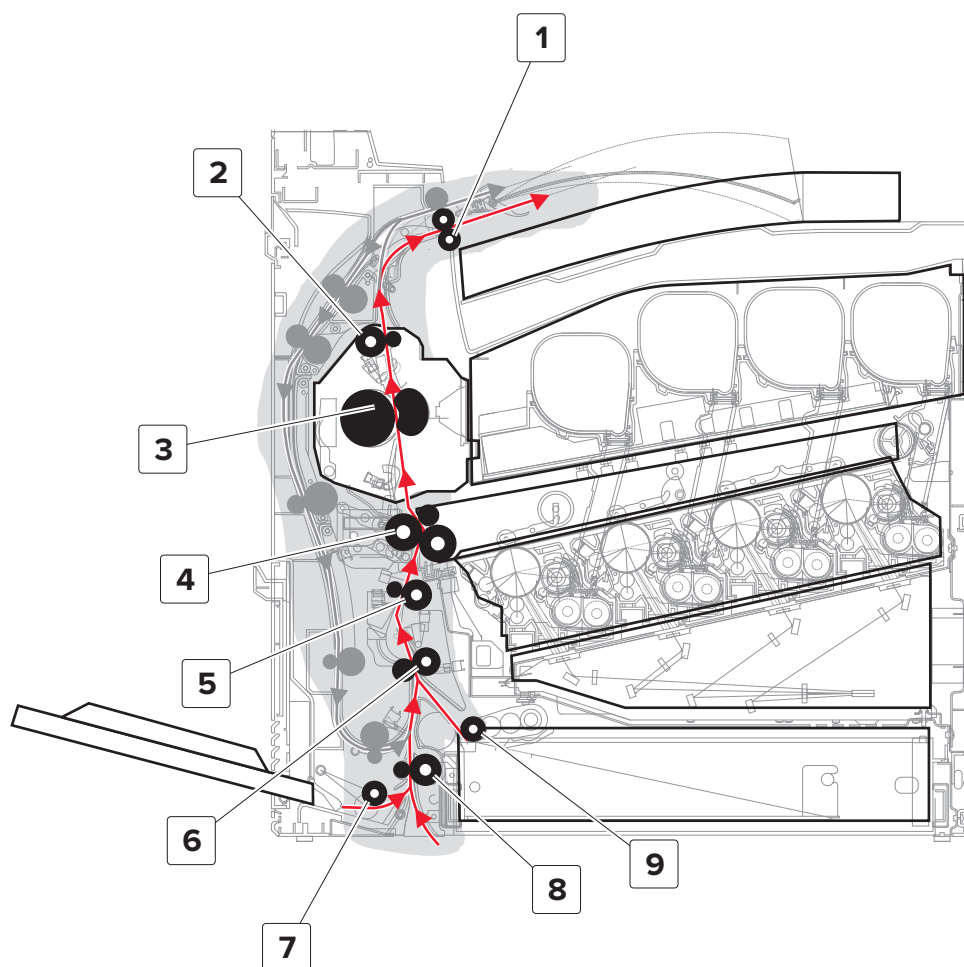
1	Media exit roller
2	Fuser decurler roller
3	Fuser heat belt
4	2nd transfer roller
5	Deskew roller
6	Isolation roller
7	MPF pick roller
8	MPF/pass-through roller
9	Tray 1 pick roller

Component locations

Duplex path rollers
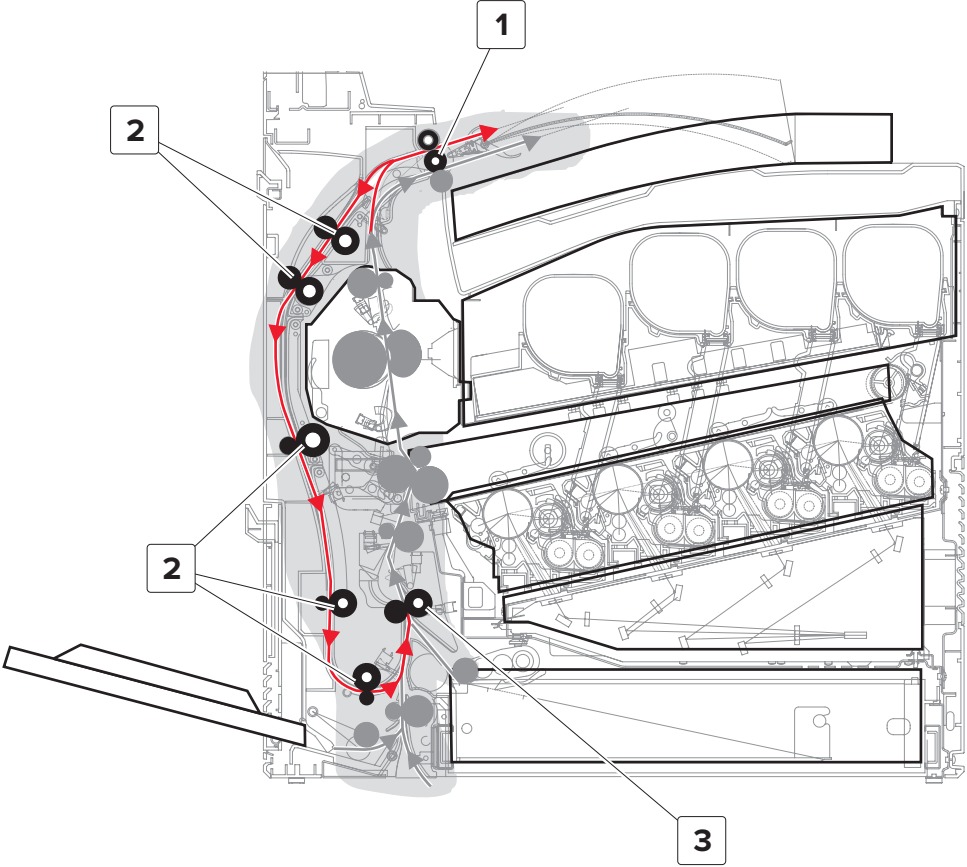
1	Duplex exit roller
2	Duplex path rollers
3	Isolation roller

Printer sensor locations

Standard path sensors
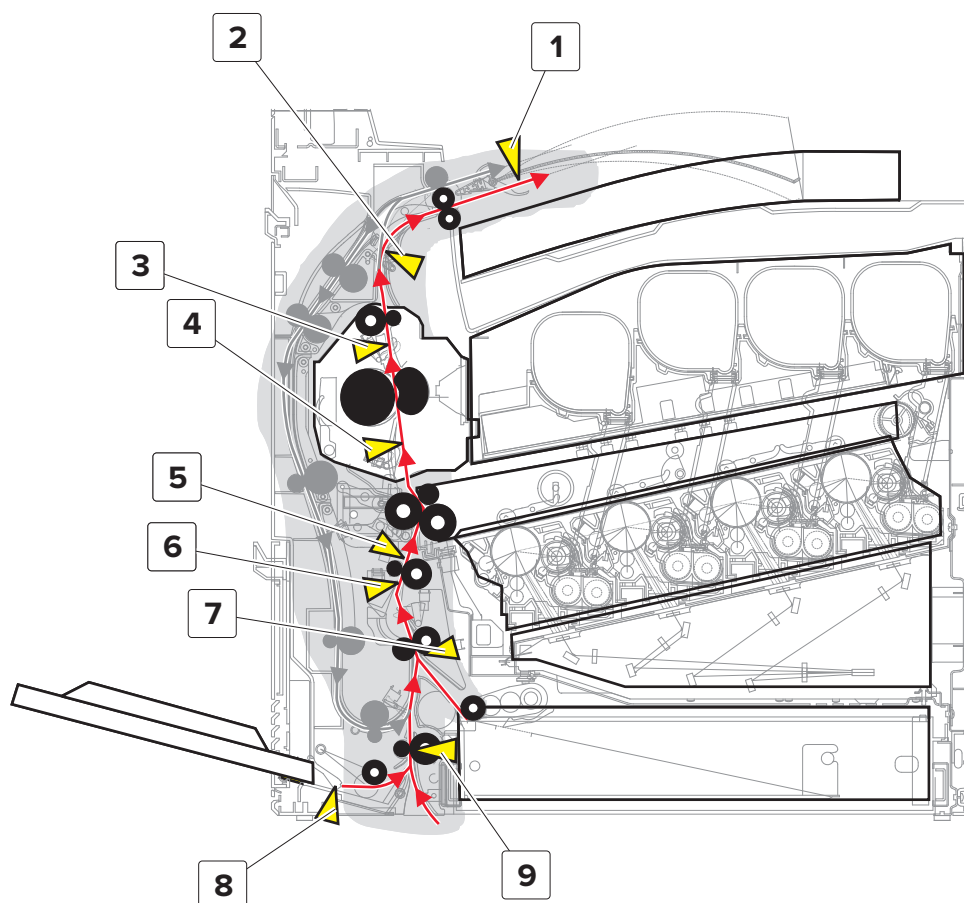
1	Sensor (output bin)
2	Sensor (redrive buckle)
3	Sensor (fuser exit)
4	Sensor (fuser buckle)
5	Sensor (deskew roller exit)
6	Sensor (deskew roller entry)
7	Sensor (input)
8	Sensor (MPF media present)
9	Sensor (MPF/pass-through)

Duplex path sensors

1	Sensor (duplex path 1)
2	Sensor (duplex path 2)

Component locations
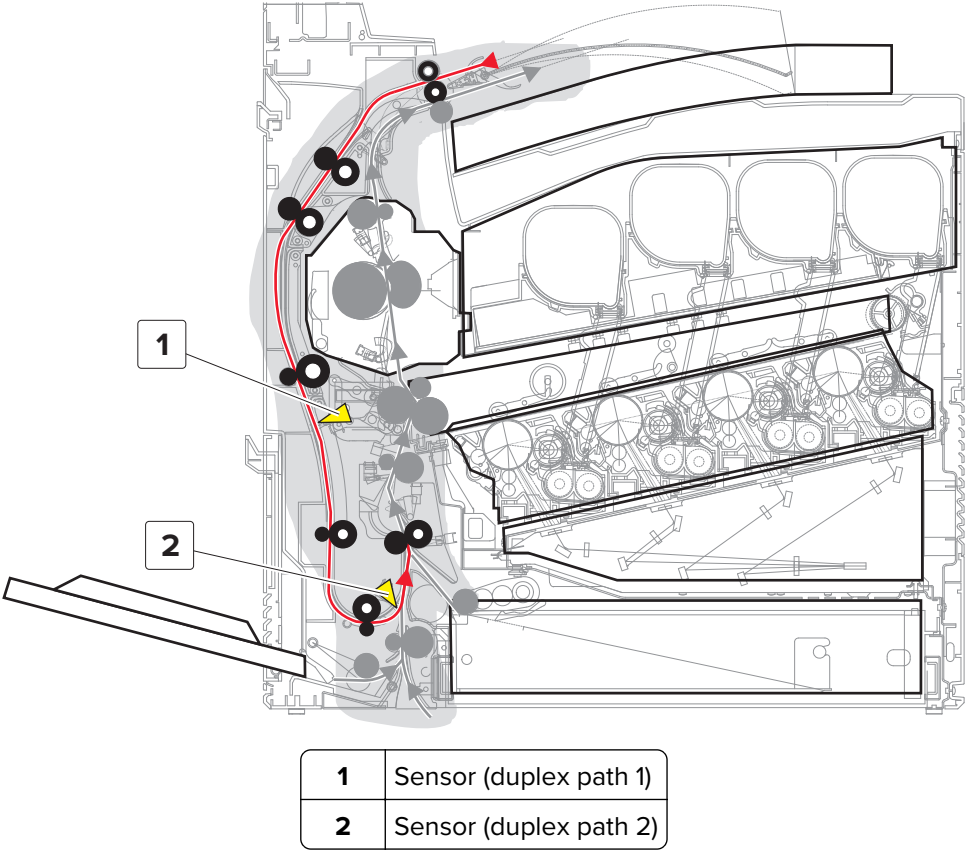
Printer motor locations

Print engine motors—Rear
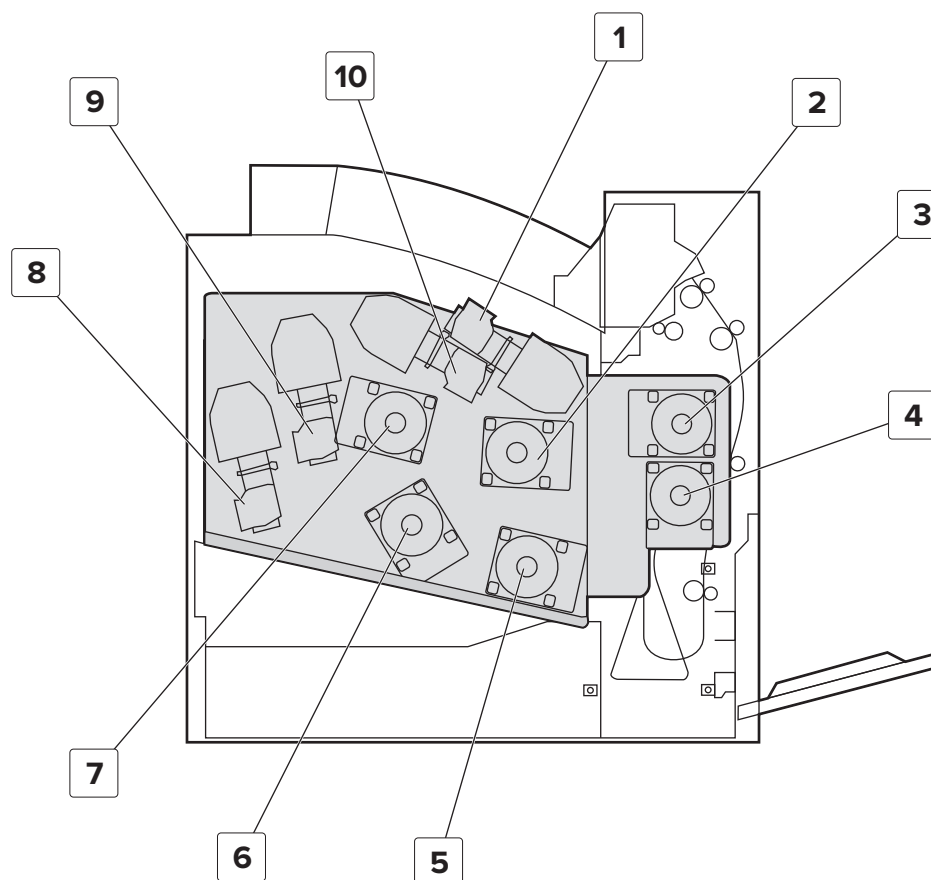
1	Motor (K toner add)
2	Motor (K developer)
3	Motor (fuser)
4	Motor (transfer belt)
5	Motor (K photoconductor)
6	Motor (CMY photoconductors)
7	Motor (CMY developers)
8	Motor (Y toner add)
9	Motor (C toner add)
10	Motor (M toner add)

Paper path motors—Rear
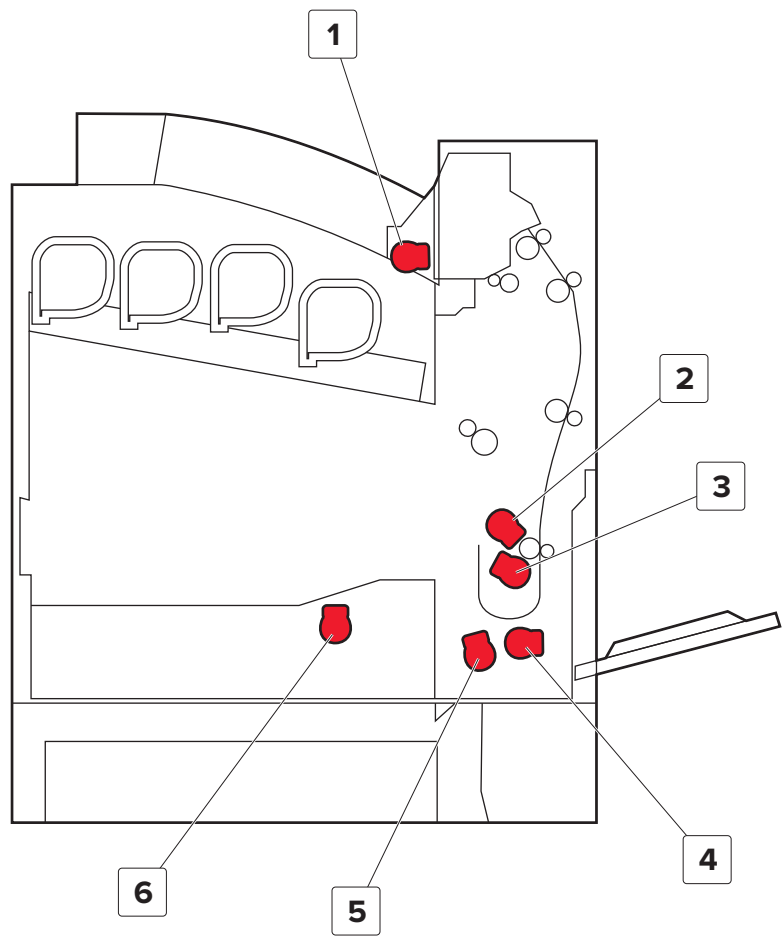
1	Motor (redrive)
2	Motor (deskew)
3	Motor (duplex)
4	Motor (MPF pick)
5	Motor (isolation)
6	Motor (tray 1 pick)

Component locations

Power supply locations—Rear
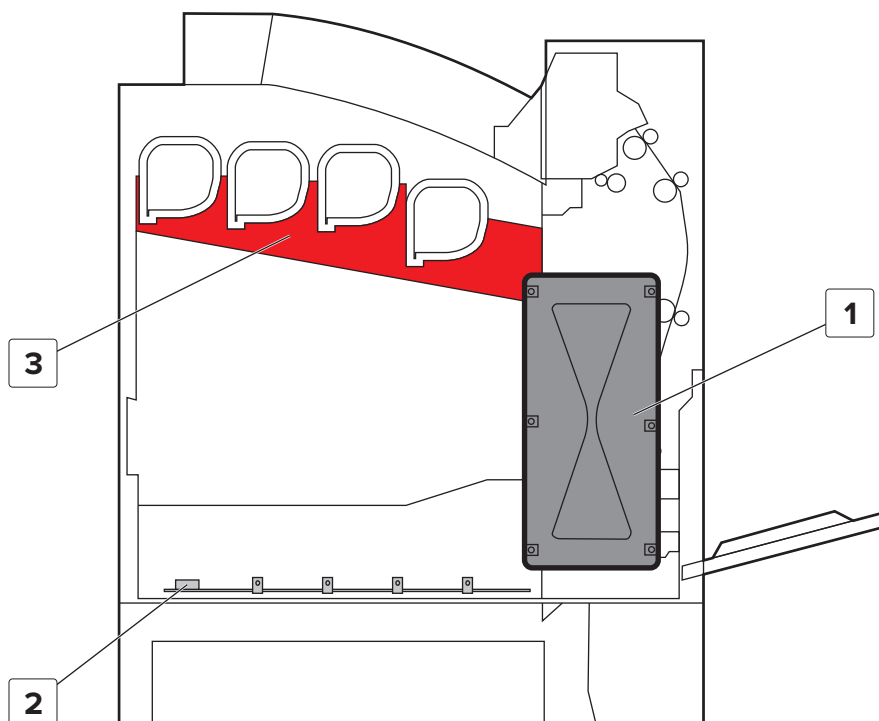
1	LVPS
2	Charge roller HVPS
3	Main HVPS

Staple finisher locations

Motors and solenoid
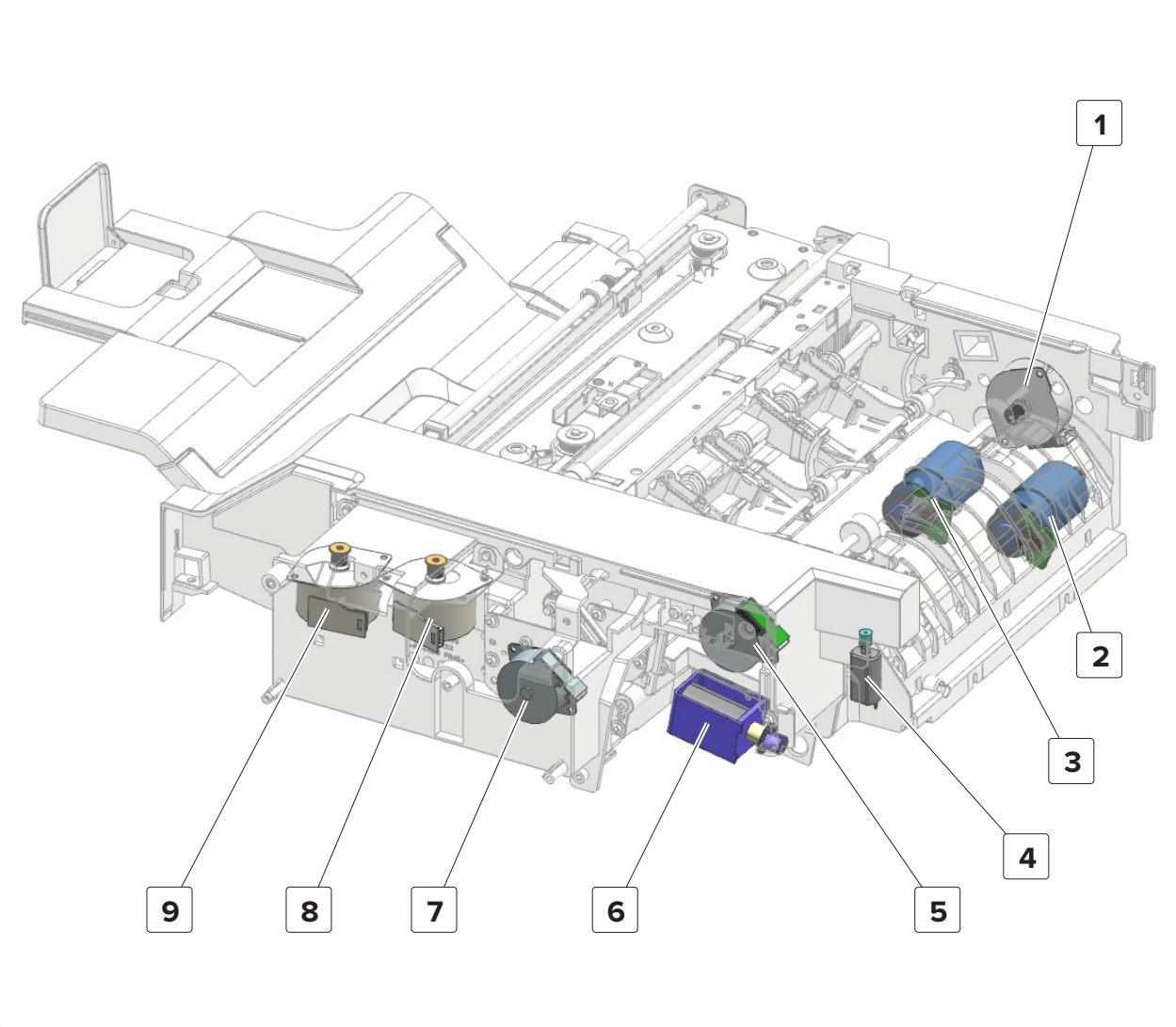
1	Motor (staple finisher aligner paddle)
2	Motor (staple finisher transport)
3	Motor (staple finisher exit)
4	Motor (staple finisher decurl)
5	Motor (staple finisher bin clamp)
6	Staple finisher stack clamp solenoid
7	Motor (staple finisher upper exit roller)
8	Motor (staple finisher rear tamper)
9	Motor (staple finisher front tamper)

Sensors and switches
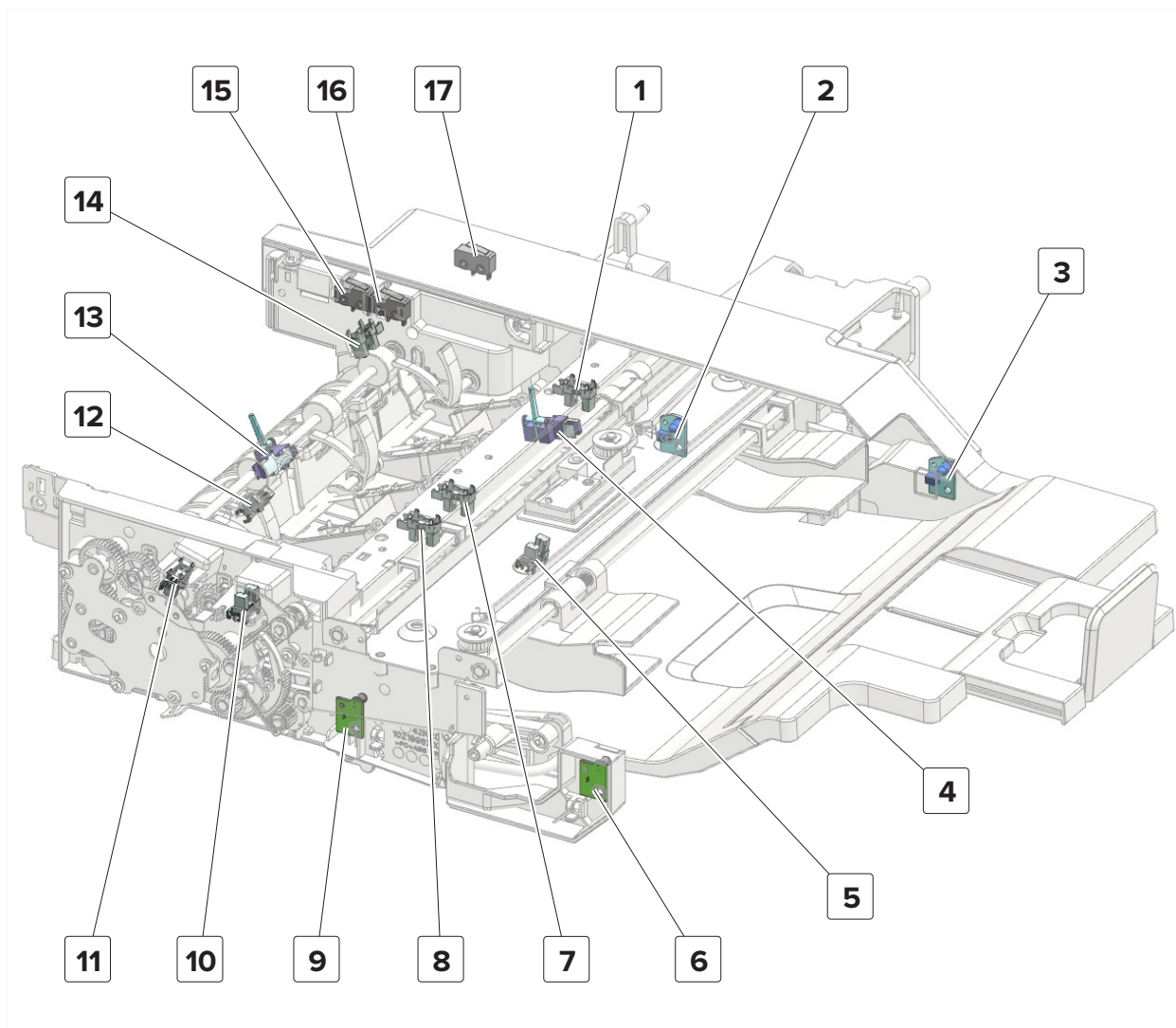
1	Sensor (staple finisher rear tamper home)
2	Sensor (staple finisher rear lower bin full—receiver)
3	Sensor (staple finisher rear upper bin full—receiver)
4	Sensor (staple finisher staple unit paper present)
5	Sensor (staple finisher bin clamp)
6	Sensor (staple finisher front upper bin full—transmitter)
7	Sensor (staple finisher narrow media tamper)
8	Sensor (staple finisher front tamper home)
9	Sensor (staple finisher front lower bin full—transmitter)
10	Sensor (staple finisher upper exit roller)
11	Sensor (staple finisher aligner paddle)
12	Sensor (staple finisher decurl)

Component locations

13	Sensor (staple finisher transport)
14	Sensor (staple finisher stack clamp)
15	Staple finisher jam door switch 1
16	Staple finisher jam door switch 2
17	Staple finisher staple cartridge door switch

Component locations

Maintenance

Scheduled maintenance

The control panel displays an 80.xx error when the printer reaches a preset number of page counts. It is necessary to install the appropriate maintenance kit to maintain the print quality and reliability of the printer. Reset the maintenance counter after replacing the maintenance kit.

Maintenance kits

Part number and kit	Contents
41X0927—250K Combo fuser and transfer module maintenance kit, 100 V	• 41X0248—Fuser (100 V) • 41X0245—Transfer belt • 41X0154—Transfer roller • 41X0999—Pick roller and separator pad, 3 units
41X0928—250K Combo fuser and transfer module maintenance kit, 115 V	• 41X0246—Fuser (115 V) • 41X0245—Transfer belt • 41X0154—Transfer roller • 41X0999—Pick roller and separator pad, 3 units
41X0929—250K Combo fuser and transfer module maintenance kit, 220 V	• 41X0247—Fuser (220 V) • 41X0245—Transfer belt • 41X0154—Transfer roller • 41X0999—Pick roller and separator pad, 3 units

Resetting the maintenance counter

Separator pad and pick roller counter reset

Reset the counter after installing the new separator pad and pick roller.

1 From the control panel, navigate to:

Settings > **Maintenance** > **Configuration menu** > **Supply usage and counters**

2 On the Reset Separator Roll and Pick Assembly Counter row, touch **Start**.

Automatic counter reset

The counter automatically resets after installing the following replacement parts:

• Developer unit (C, M, Y, and K)

• Photoconductor unit (C, M, Y, and K)

• Toner cartridge (C, M, Y, and K)

   Note: The waste toner bottle counter resets when the toner supply is replaced.

• Transfer belt

• Fuser

Cleaning the printer parts

Cleaning the printer

⚠ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock when cleaning the exterior of the printer, unplug the power cord from the electrical outlet and disconnect all cables from the printer before proceeding.

Notes:

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

1 Turn off the printer, and then unplug the power cord from the electrical outlet.

2 Remove paper from the standard bin and multipurpose feeder.

3 Remove any dust, lint, and pieces of paper around the printer using a soft brush or vacuum.

4 Wipe the outside of the printer with a damp, soft, lint-free cloth.

  Notes:

  - Do not use household cleaners or detergents, as they may damage the finish of the printer.
  - Make sure that all areas of the printer are dry after cleaning.

5 Connect the power cord to the electrical outlet, and then turn on the printer.

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

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
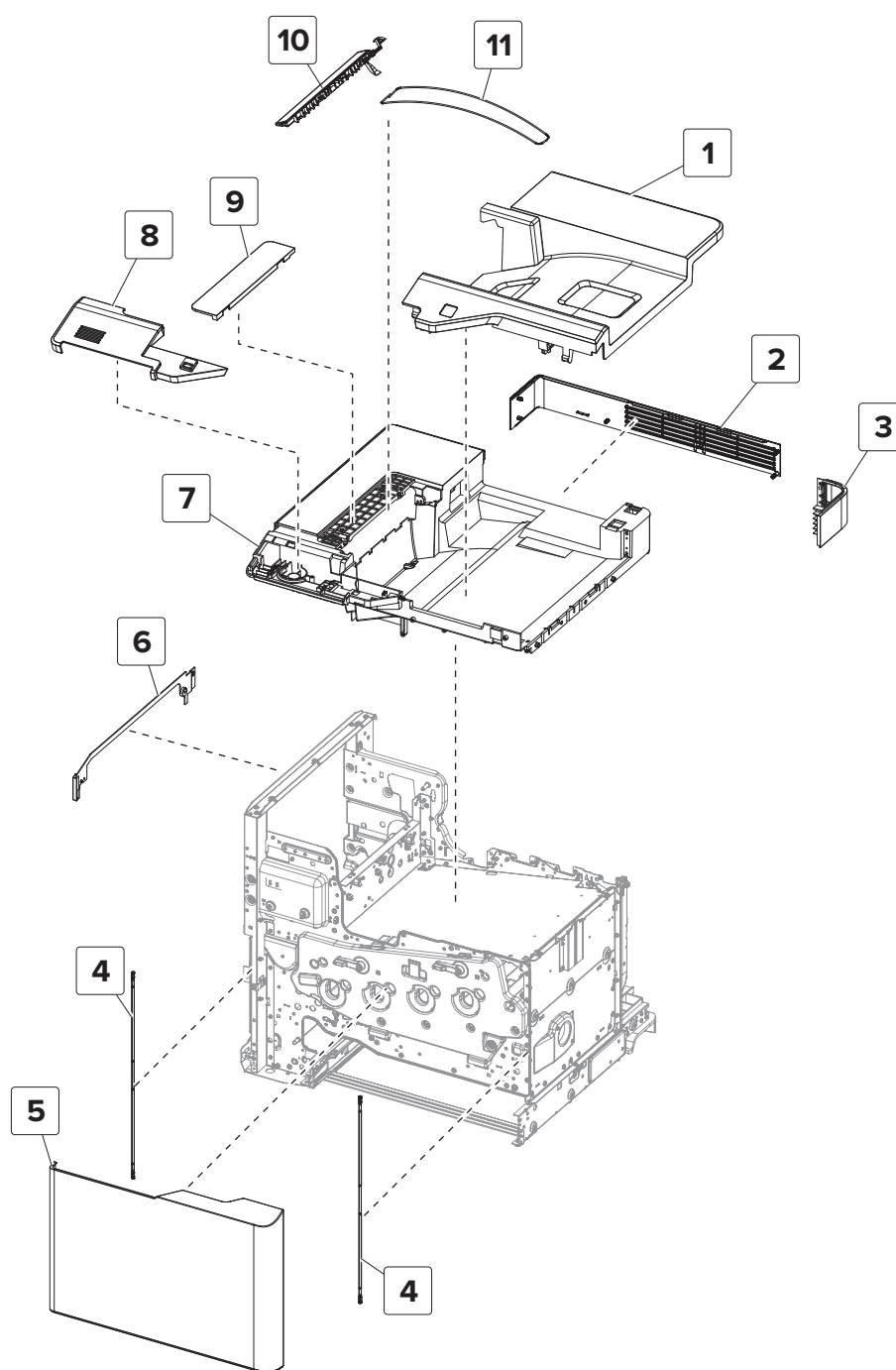
Assembly 1: Covers 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0183	1	1	Standard bin insert cover	**"Standard bin insert cover removal" on page 482**
2	41X0185	1	1	Rear upper cover	**"Rear upper cover removal" on page 453**
3	41X0186	1	1	Rear corner cover	--
4	41X0780	1	1	Front door strap	--
5	41X0192	1	1	Front door	**"Front door removal" on page 430**
6	41X0187	1	1	Left spacer	--
7	41X0182	1	1	Standard bin cover	--
8	41X0188	1	1	Control panel support cover	**"Control panel support cover removal" on page 421**
9	41X0184	1	1	Redrive cover	--
10	41X0212	1	1	Static brush and bin full actuator	--
11	41X0716	1	1	Stacking bail	--

Assembly 2: Covers 2
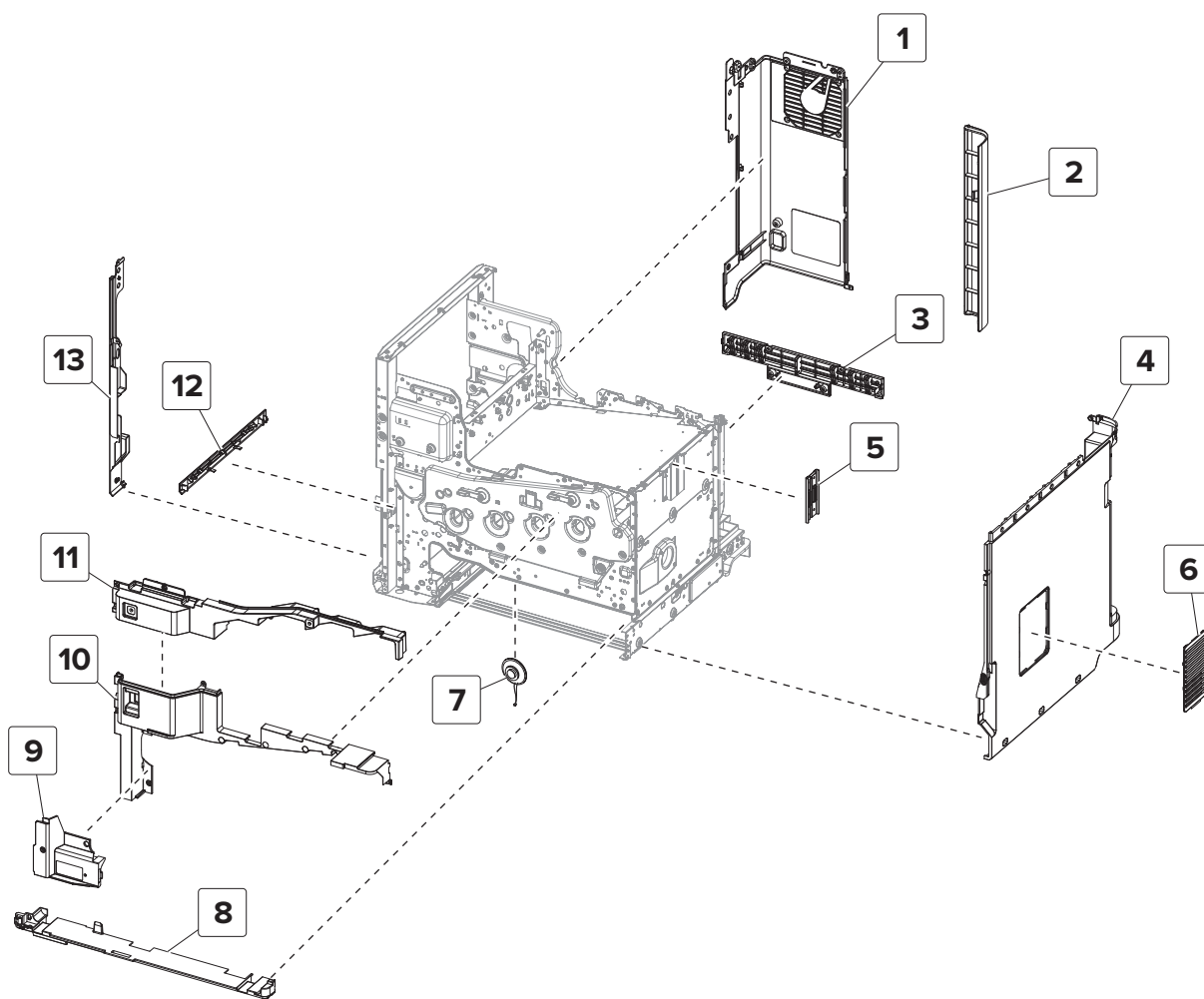
Assembly 2: Covers 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0089	1	1	Rear left cover	**"Rear left cover removal" on page 451**
2	41X0099	1	1	Connector access cover	--
3	41X0088	1	1	Rear lower cover	**"Rear lower cover removal" on page 451**
4	41X0092	1	1	Right cover	**"Right cover removal" on page 411**
5	41X0070	1	1	Right cover bracket	--
6	41X0090	1	1	Vent cover	**"Vent cover removal" on page 410**
7	40X9079	1	1	Audio speaker	--
8	41X0094	1	1	Lower front cover	**"Lower front cover removal" on page 443**
9	41X0097	1	1	Door rod cover	**"Door rod cover removal" on page 435**
10	41X0093	1	1	Inner lower cover	**"Inner lower cover removal" on page 429**
11	41X0715	1	1	Inner upper cover	**"Inner upper cover removal" on page 429**
12	41X0096	1	1	Left lower cover	--
13	41X0091	1	1	Left front cover	--

Assembly 3: Control panel
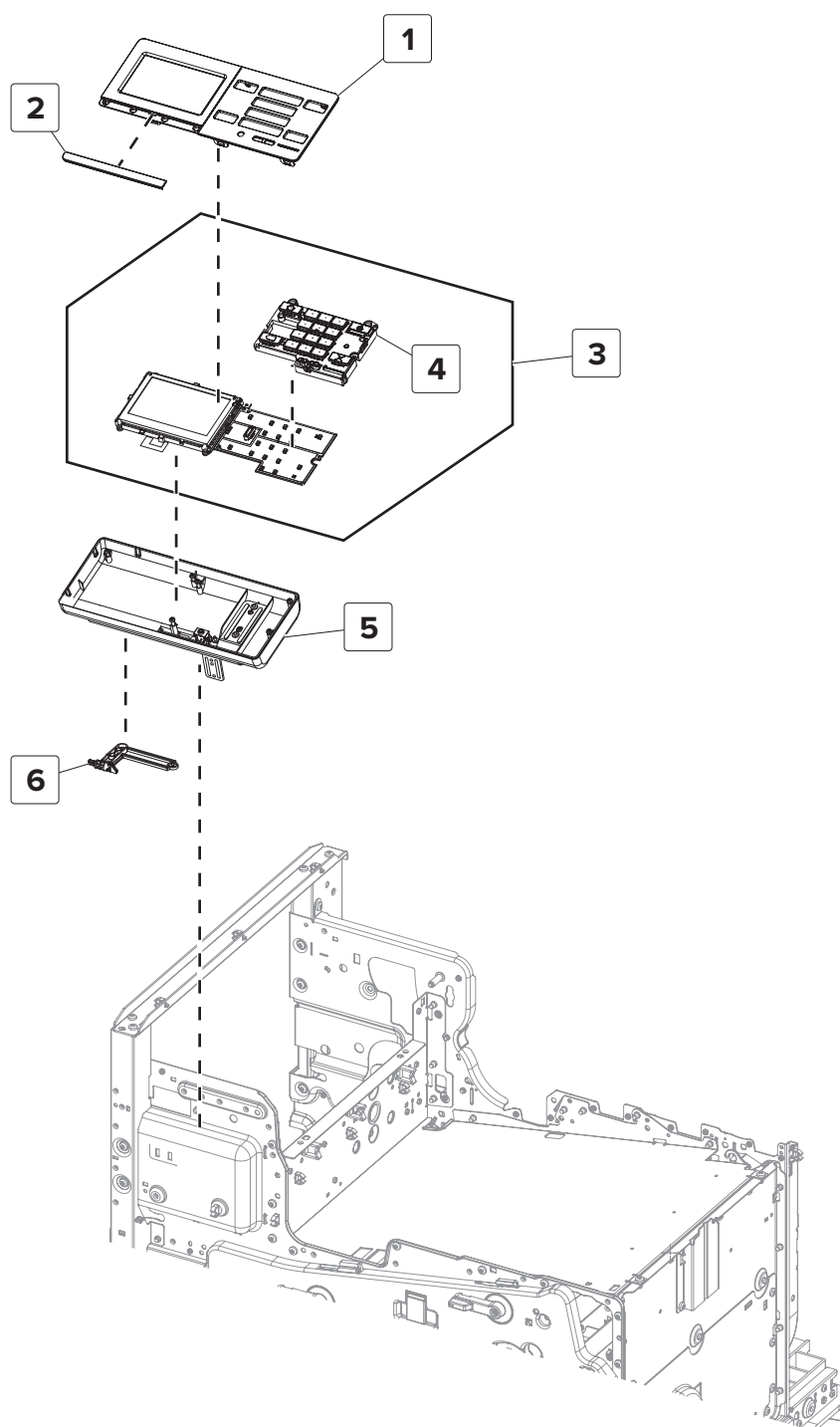
Assembly 3: Control panel

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0542	1	1	Bezel, 4.3-inch control panel	--
2	41X0898	1	1	Model plate (CS820)	--
2	41X0899	1	1	Model plate (C6160)	--
3	41X0050	1	1	Board, control panel	**"Control panel board removal" on page 424**
4	41X0191	1	1	Button kit, 4.3-inch control panel	**"Control panel button kit removal" on page 423**
5	41X0541	1	1	Control panel	**"Control panel removal" on page 425**
6	41X0189	1	1	Pivot, control panel	--

Assembly 4: Duplex
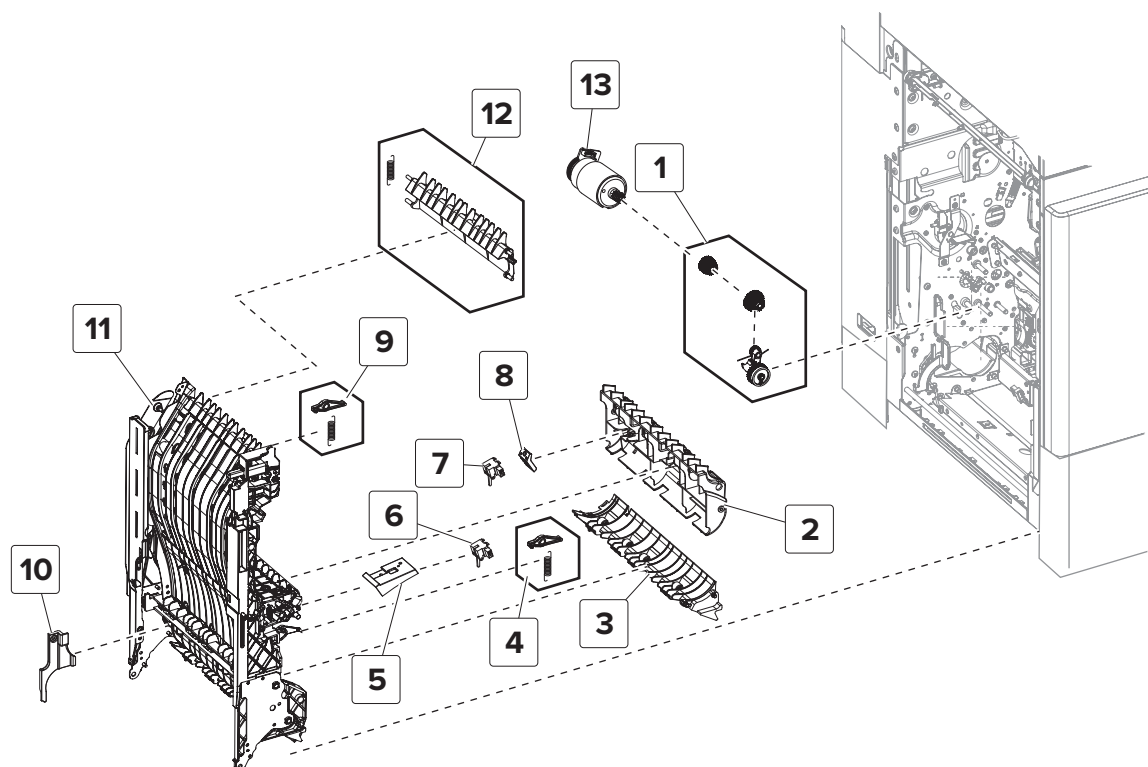
Assembly 4: Duplex

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0133	1	1	Duplex drive gears	**"Duplex drive gears removal" on page 389**
2	41X0123	1	1	Duplex lower pinch roller guide	--
3	41X0121	1	1	Duplex turn guide	--
4	41X0066	1	1	Front nip release arm	--
5	41X0072	1	1	Lower duplex sensor bracket	--
6	41X0446	1	1	Sensor (duplex path 2)	--
7	41X0446	1	1	Sensor (duplex path 1)	--
8	41X0071	1	1	Upper duplex sensor bracket	--
9	41X0065	1	1	Rear nip release arm	--
10	41X0098	1	1	Connector cover, plastic	**"Plastic connector cover removal" on page 394**
11	41X0105	1	1	Duplex	**"Left door, duplex, and MPF removal" on page 395**
12	41X0122	1	1	Duplex upper guide	--
13	41X0140	1	1	Motor (duplex)	--

Assembly 5: Left door

Assembly 5: Left door

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0173	1	1	Left door support strap	--
2	41X0174	1	1	Left door support	--
3	41X0073	1	1	Connector cover, metal	--
4	41X0684	1	1	Sensor (MPF paper present)	--
5	41X0058	1	1	MPF media present actuator	--
6	41X0914	1	1	Sensor (MPF/pass-through)	**"Sensor (MPF/pass-through) with deflector removal" on page 404**
7	41X0120	1	1	Deflector with sensor (MPF/pass-through)	**"Sensor (MPF/pass-through) with deflector removal" on page 404**
8	41X0172	1	1	MPF tray stop	**"MPF tray stop removal" on page 401**
9	41X0119	1	1	MPF pick guide	**"MPF pick guide removal" on page 399**
10	41X0124	1	1	Left door paper guide	--
11	41X0081	1	1	Left door front catch	--
12	41X0100	1	1	Left door damper	--
13	41X0080	1	1	Left door rear catch	--
14	41X0101	1	1	Left door	**"Left door, duplex, and MPF removal" on page 395**
15	41X0136	1	1	Left door release latch	--
16	41X0135	1	1	Duplex release latch	**"Duplex release latch removal" on page 390**
17	41X0059	1	1	MPF tray front actuator	--
18	41X0250	1	1	Left door rod	**"Door rod cover removal" on page 435**
19	41X0993	1	1	Pick roller	**"MPF pick roller removal" on page 398**
20	41X0167	1	1	MPF pick shaft	--
21	41X0060	1	1	MPF tray rear actuator	--
22	41X0176	1	1	MPF tray	**"Left door, duplex, and MPF removal" on page 395**

Assembly 6: Feeder
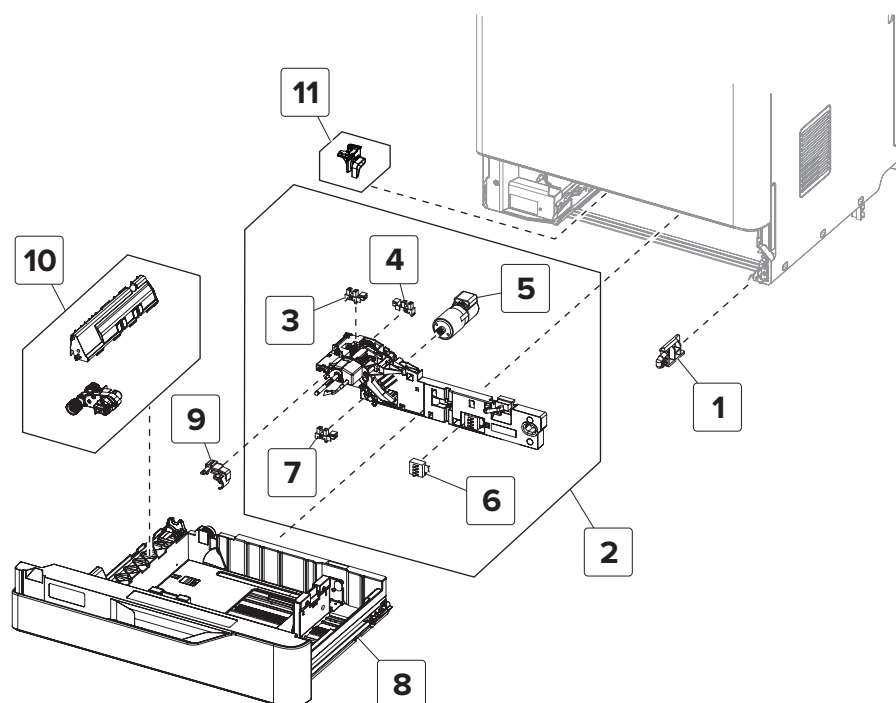
Assembly 6: Feeder

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0129	1	1	Paper tray guide	--
2	41X0106	1	1	Paper feeder	**"Paper feeder removal" on page 444**
3	41X0470	1	1	Sensor (pick roller index)	--
4	41X0470	1	1	Sensor (media out)	--
5	41X0140	1	1	Motor (pick)	--
6	40X7911	1	1	Sensor (media size)	--
7	41X0470	1	1	Sensor (media low)	--
8	41X0175	1	1	Media tray	--
9	41X0067	1	1	Feeder bearing	**"Paper feeder removal" on page 444**
10	41X0999	1	1	Pick roller and separator pad	**"Pick roller removal" on page 433**
11	41X1033	1	1	Paper overfill stop	--

Assembly 7: Frame
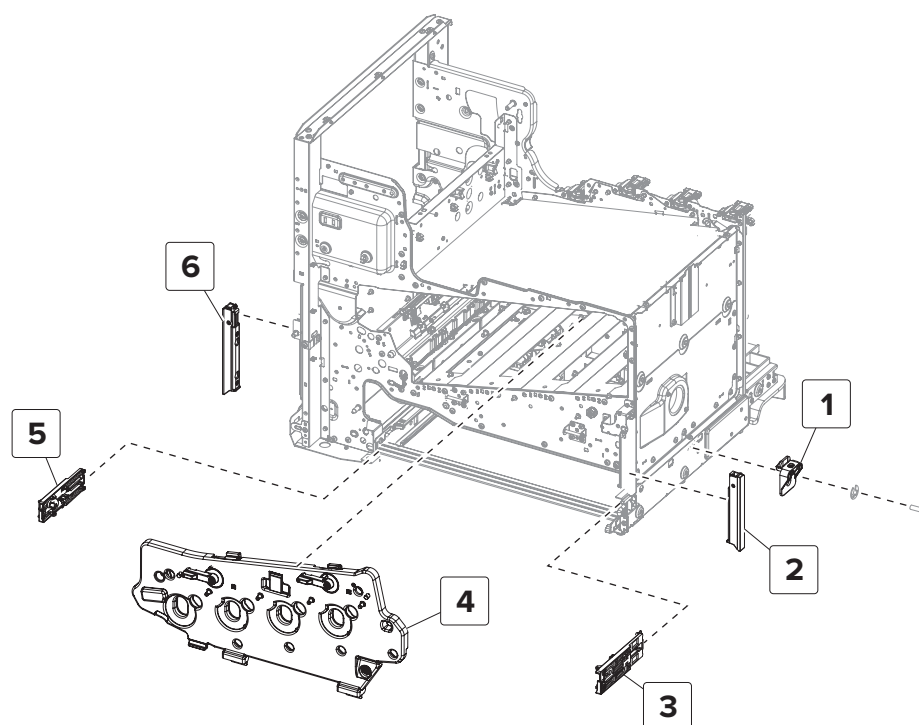
Assembly 7: Frame

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0074	1	1	Frame connector bracket	--
2	41X0131	1	1	Right handle	--
3	41X0991	1	1	Tray close rail, right	--
4	41X0103	1	1	PC unit/developer door	**"Developer unit and photoconductor unit removal" on page 426**
5	41X0992	1	1	Tray close rail, left	--
6	41X0130	1	1	Left handle	--

Assembly 8: Fuser
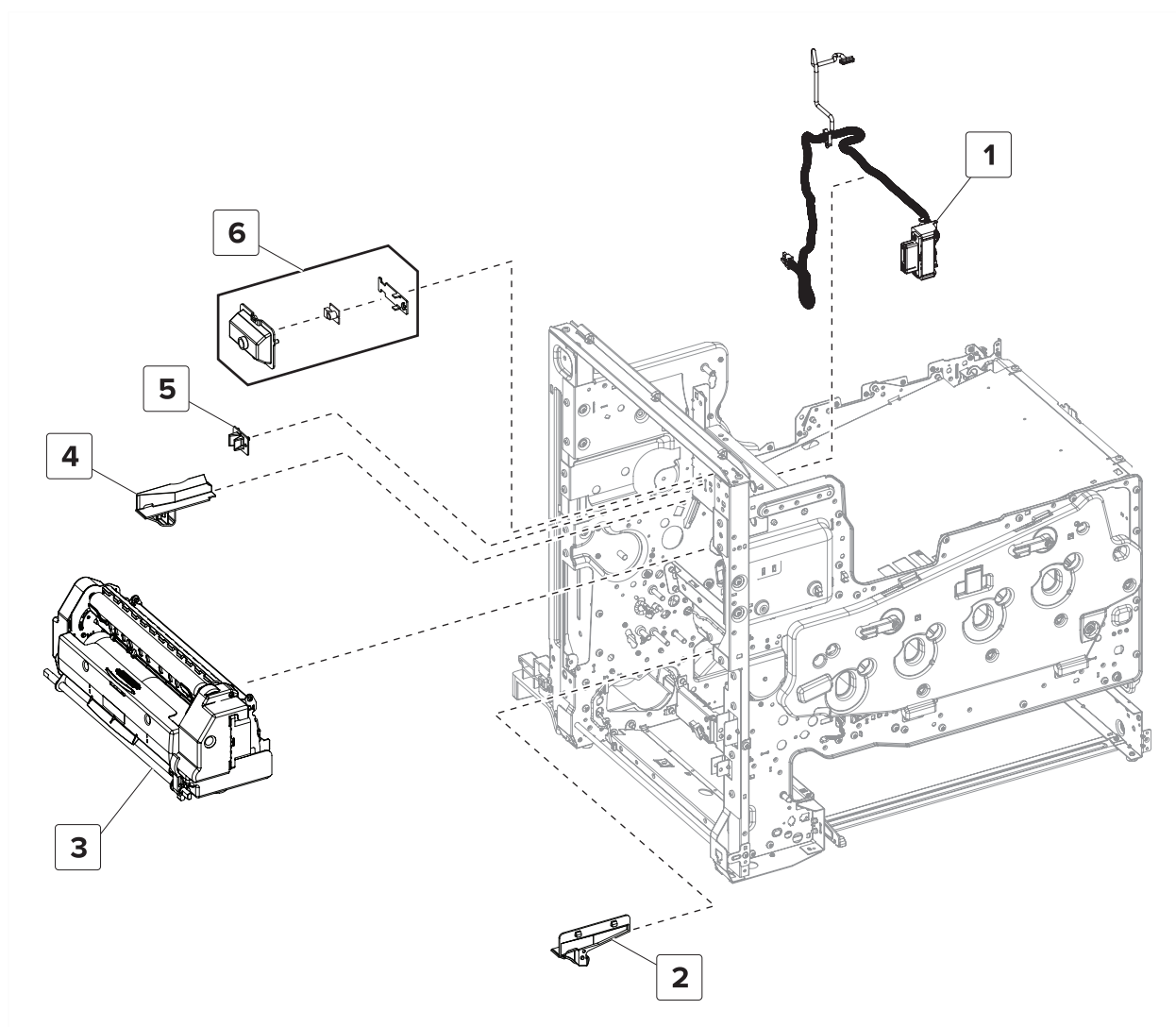
Assembly 8: Fuser

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0078	1	1	Fuser connect cable	--
2	41X0125	1	1	Fuser front loading guide	--
3	41X0248	1	1	Fuser (100 V)	**"Fuser removal" on page 387**
3	41X0246	1	1	Fuser (115 V)	**"Fuser removal" on page 387**
3	41X0247	1	1	Fuser (230 V)	**"Fuser removal" on page 387**
4	41X0126	1	1	Fuser rear loading guide	--
5	41X0127	1	1	Fuser alignment guide	--
6	41X0165	1	1	Sensor (fuser temperature)	--

Assembly 9: Electronics—Front
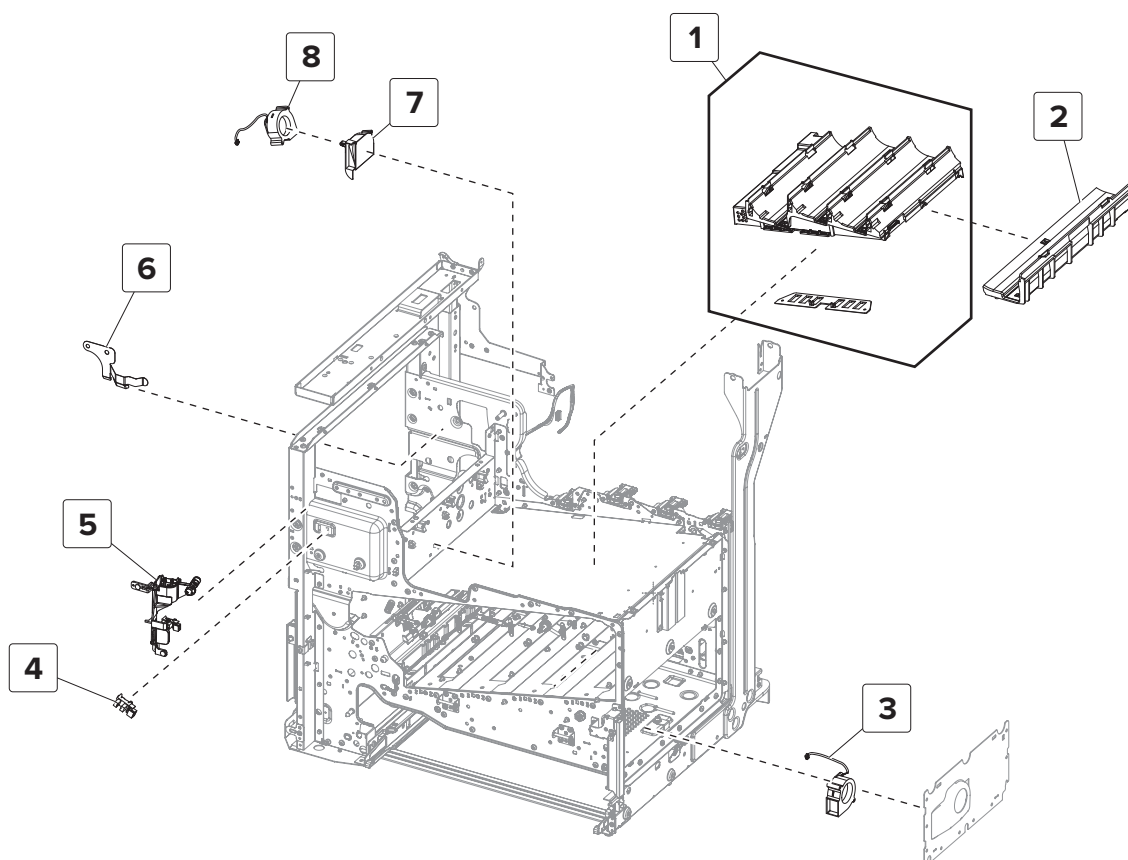
Assembly 9: Electronics—Front

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0143	1	1	Main HVPS	**"Main HVPS removal" on page 440**
2	41X0117	1	1	Toner cartridge guide	--
3	41X0975	1	1	Printhead fan	**"Printhead fan removal" on page 415**
4	41X0684	1	1	Sensor (door interlock)	**"Sensor (door interlock) removal" on page 436**
5	41X0162	1	1	Door interlock actuator	--
6	41X0141	1	1	Grounding plate	--
7	41X0973	1	1	Fan duct	--
8	41X0974	1	1	HVPS fan	**"Main HVPS fan removal" on page 437**

Assembly 10: Electronics—Rear
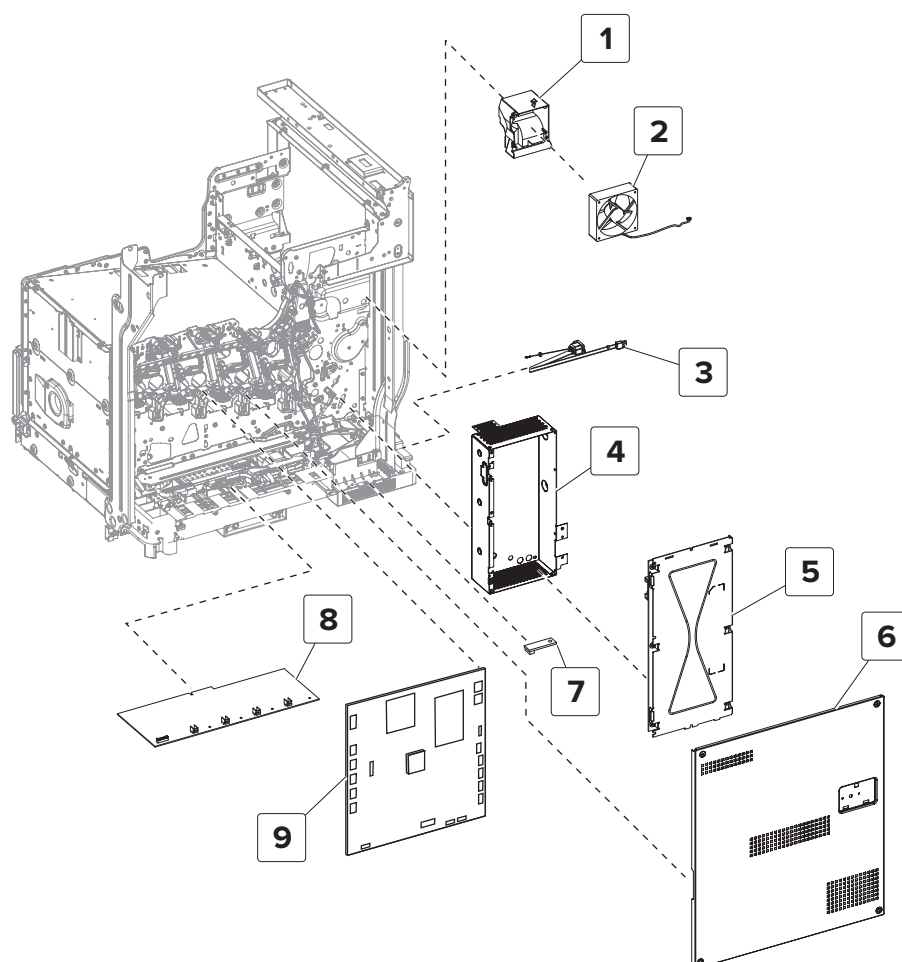
Assembly 10: Electronics—Rear

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0104	1	1	Main fan duct	**"Main fan duct removal" on page 467**
2	41X0954	1	1	Main fan	**"Main fan removal" on page 458**
3	41X0260	1	1	AC power input cable	--
4	41X0244	1	1	LVPS cage	**"LVPS cage removal" on page 461**
5	41X0242	1	1	LVPS	**"LVPS removal" on page 459**
6	41X0087	1	1	Controller board cover	**"Controller board cover removal" on page 450**
7	41X0785	1	1	Weather station	**"Weather station removal" on page 462**
8	41X0241	1	1	Charge roller HVPS	**"Charge roller HVPS removal" on page 453**
9	41X0368	1	1	Controller board	**"Controller board removal" on page 457**

Assembly 11: Registration
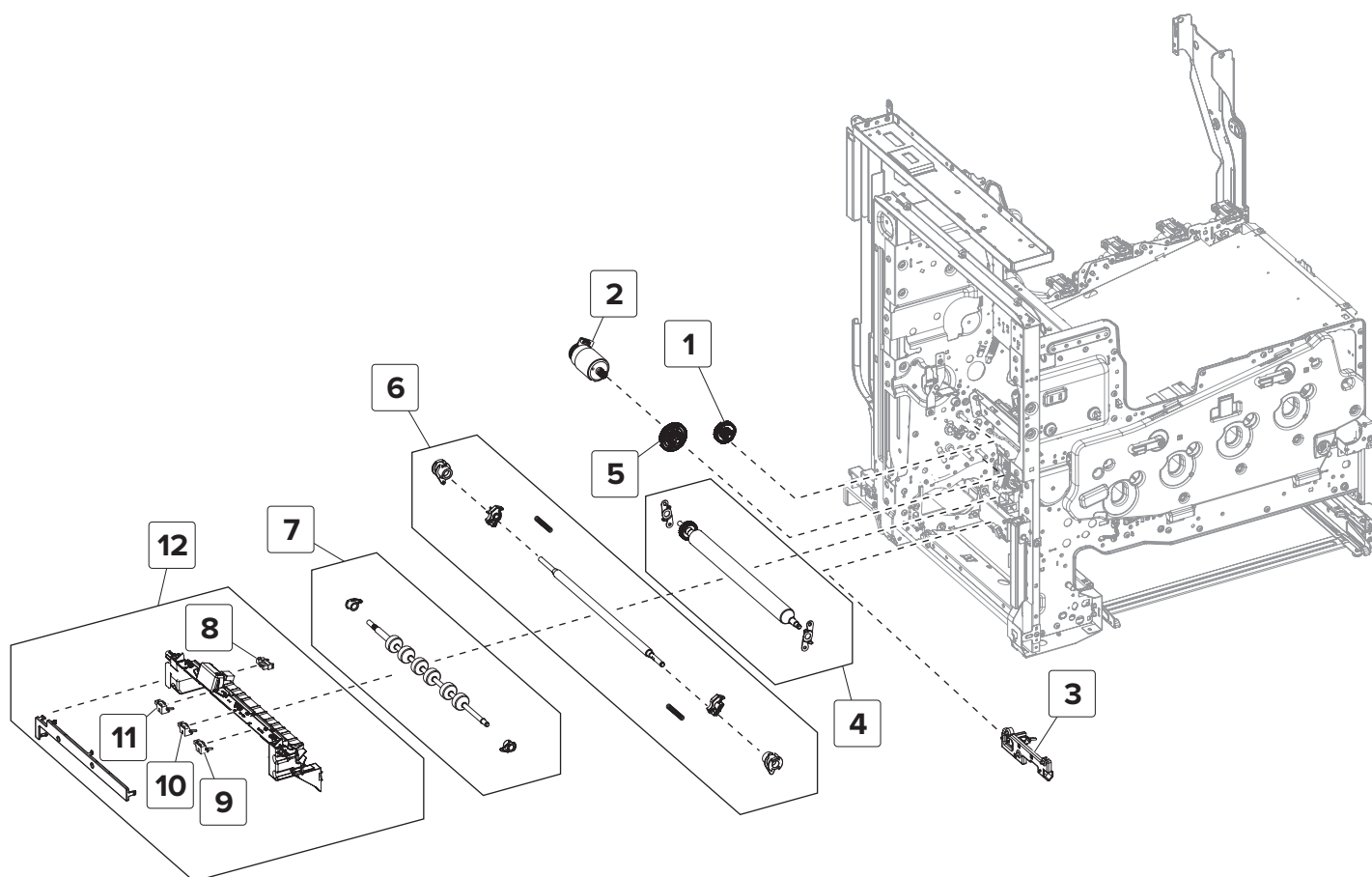
Assembly 11: Registration

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0108	1	1	Deskew roller gear	--
2	41X0140	1	1	Motor (deskew)	--
3	41X0163	1	1	Sensor (input)	**"Sensor (input) removal" on page 403**
4	41X0155	1	1	Deskew roller	--
5	41X0107	1	1	Isolation roller gear	**"Isolation roller gear removal" on page 408**
6	41X0156	1	1	Deskew pinch roller	--
7	41X0168	1	1	Isolation roller shaft	--
8	40X7779	1	1	Sensor (deskew roller exit)	--
9	41X0914	1	1	Sensor (near narrow media)	--
10	41X0914	1	1	Sensor (narrow media)	--
11	41X0914	1	1	Sensor (deskew roller entry)	--
12	41X0128	1	1	Deskew roller sensor guide	**"Deskew roller sensor guide removal" on page 392**

Assembly 12: Motors
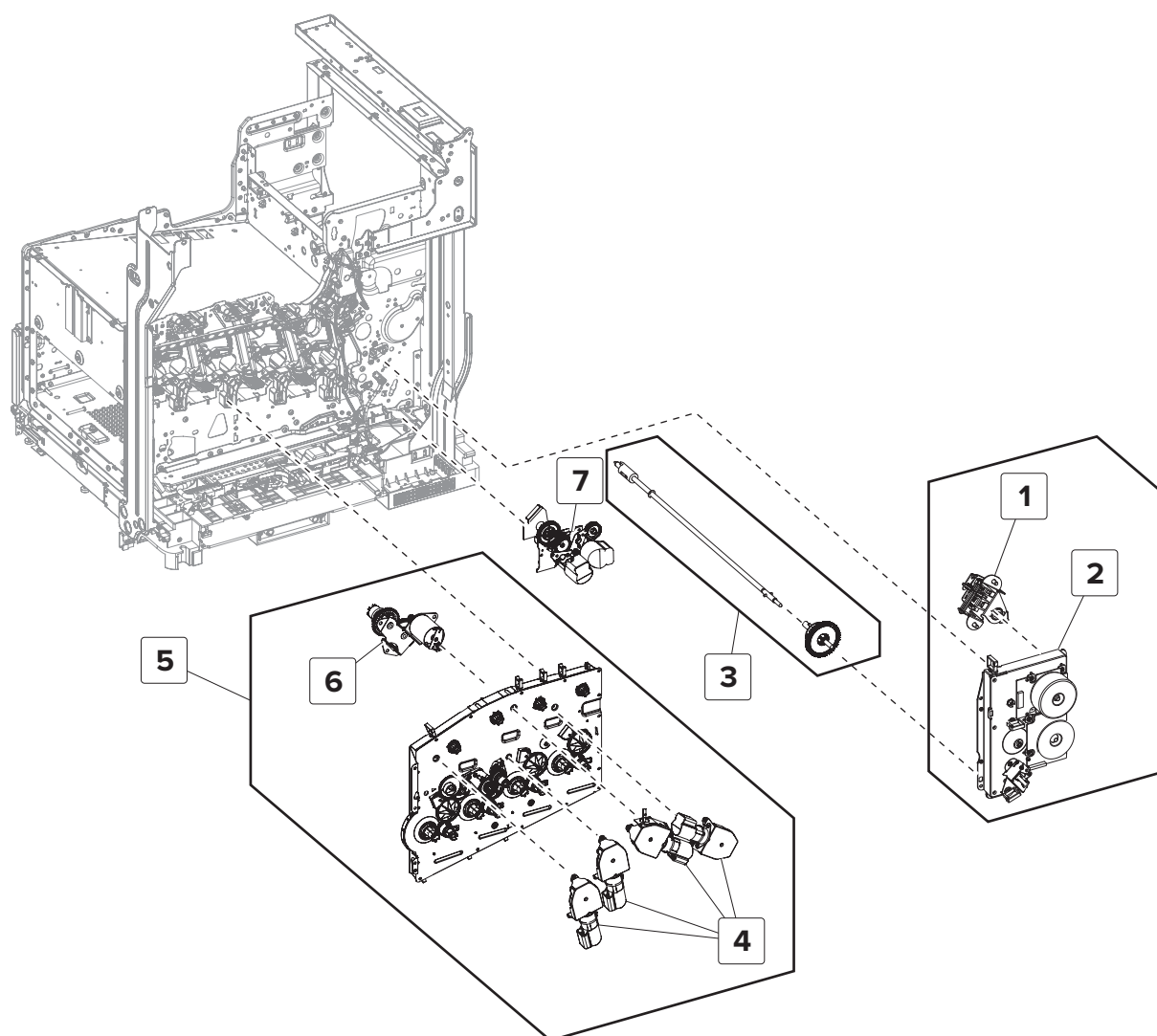
Assembly 12: Motors

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0159	1	1	Sensor (waste toner full)	--
2	41X0111	1	1	Fuser/transfer belt motor gearbox	**"Fuser/transfer belt motor gearbox removal" on page 471**
3	41X0109	1	1	Waste toner gear and shaft	**"Waste toner gear removal" on page 473**
4	41X0113	3	1	Toner add motor gearbox (K, C, and M)	**"Toner add motor gearbox (K, C, and M) removal" on page 465**
4	41X0113	1	1	Toner add motor gearbox (Y)	**"Toner add motor gearbox (Y) removal" on page 466**
5	41X0112	1	1	EP, developer, toner add gearbox	**"EP, developer, toner add gearbox removal" on page 468**
6	41X0114	1	1	Motor (black only retract)	--
7	41X0115	1	1	MPF, reference edge gearbox	**"Reference edge motor gearbox removal" on page 405**

Assembly 13: Printhead
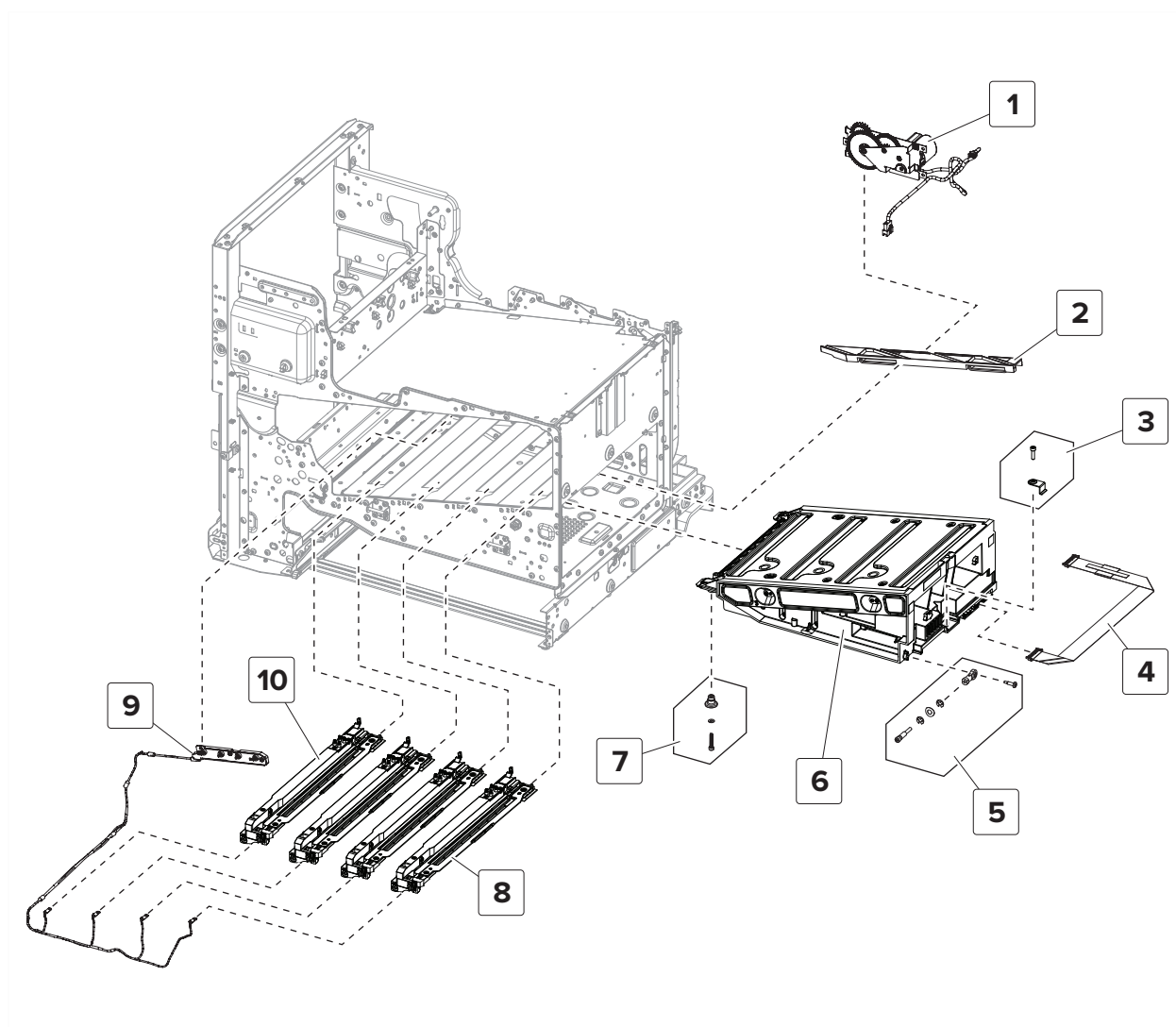
Assembly 13: Printhead

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0139	1	1	Motor (printhead wiper)	**"Motor (printhead wiper) removal" on page 419**
2	41X0145	1	1	Printhead wiper actuator rack	--
3	41X0082	1	1	Printhead clamp	--
4	41X0076	1	1	Printhead data cable	--
5	41X0240	1	1	Printhead adjustment parts pack	--
6	41X0144	1	1	Laser printhead	**"Printhead removal" on page 416**
7	41X0132	1	1	Printhead post	--
8	41X0147	3	1	Developer/PC unit CMY wiper rail	**"Developer/PC unit CMY wiper rail removal" on page 447**
9	41X0086	1	1	Developer roll power contact	--
10	41X0146	1	1	Developer/PC unit K wiper rail	**"Developer/PC unit K wiper rail removal" on page 448**

Assembly 14: Toner supply
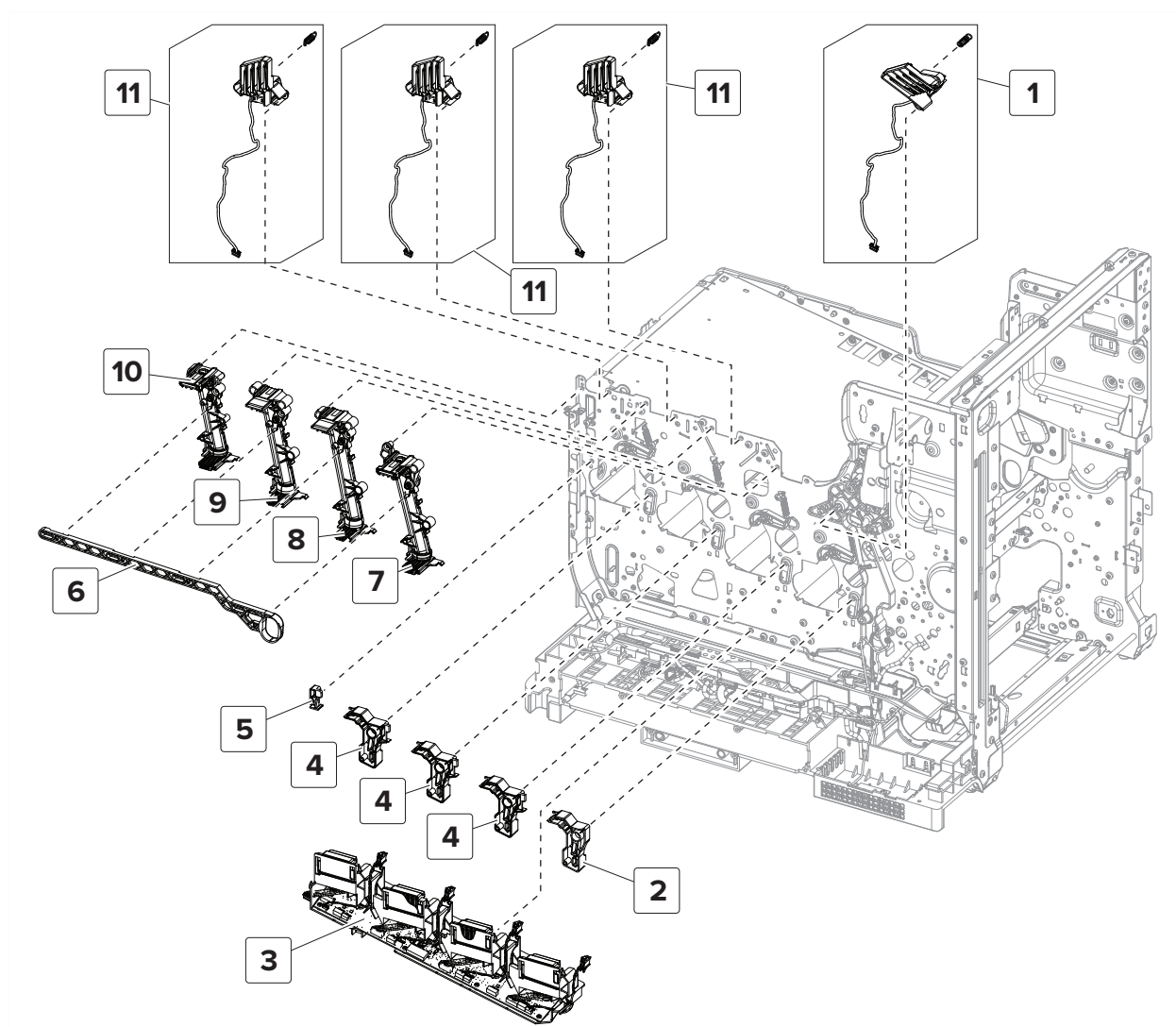
Assembly 14: Toner supply

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0084	1	1	Toner cartridge contact (K)	**"Toner cartridge contact removal" on page 477**
2	41X0152	1	1	Toner port retainer (K)	--
3	41X0069	1	1	smart chip interface board	**"Smart chip interface board removal" on page 476**
4	41X0151	3	1	Toner port retainer (CMY)	--
5	41X0150	1	1	Toner port retainer	--
6	41X0056	1	1	Toner supply actuator	**"Toner supply actuator removal" on page 475**
7	41X0180	1	1	Toner add tube (K)	**"Toner add tube removal" on page 479**
8	41X0178	1	1	Toner add tube (M)	**"Toner add tube removal" on page 479**
9	41X0177	1	1	Toner add tube (C)	**"Toner add tube removal" on page 479**
10	41X0179	1	1	Toner add tube (Y)	**"Toner add tube removal" on page 479**
11	41X0083	3	1	Toner cartridge contact (CMY)	**"Toner cartridge contact removal" on page 477**

Assembly 15: Redrive
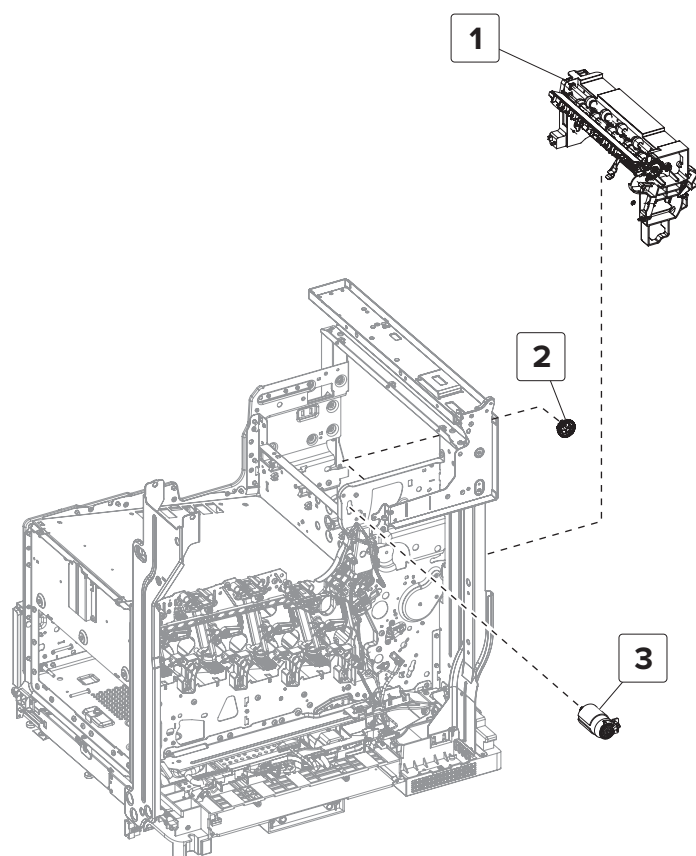
Assembly 15: Redrive

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0148	1	1	Redrive	**"Redrive removal" on page 401**
2	41X0110	1	1	Redrive gear	**"Redrive gear removal" on page 403**
3	41X0451	1	1	Motor (redrive)	--

Assembly 16: Transfer—Front
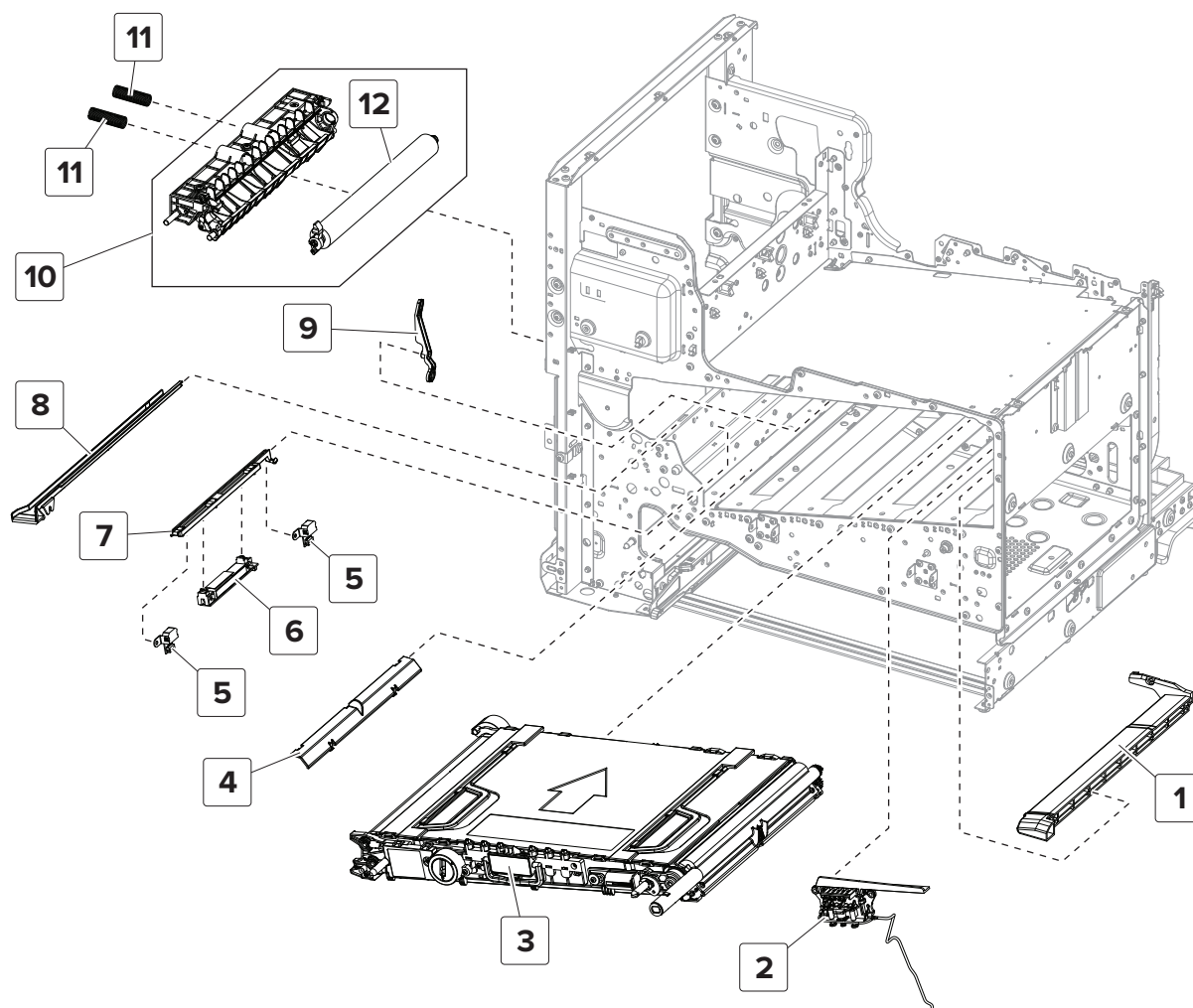
Assembly 16: Transfer—Front

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0116	1	1	Transfer belt right guide	--
2	41X0085	1	1	Transfer belt contact	--
3	41X0245	1	1	Transfer belt	**"Transfer belt removal" on page 431**
4	41X0095	1	1	Wiring cover	--
5	41X0161	2	1	Sensor (auto alignment)	**"Sensor (auto alignment) removal" on page 446**
6	41X0160	1	1	Sensor (TPS)	**"Sensor (TPS) removal" on page 446**
7	41X0181	1	1	TPS sensor wiper	**"TPS sensor wiper removal" on page 447**
8	41X0118	1	1	Transfer belt left guide	--
9	41X0057	1	1	TPS wiper actuator	--
10	41X0079	1	1	Transfer roller housing	--
11	41X0171	2	1	Transfer roller carriage spring	--
12	41X0154	2	1	Transfer roller	**"Transfer roller removal" on page 388**

Assembly 17: Transfer—Rear
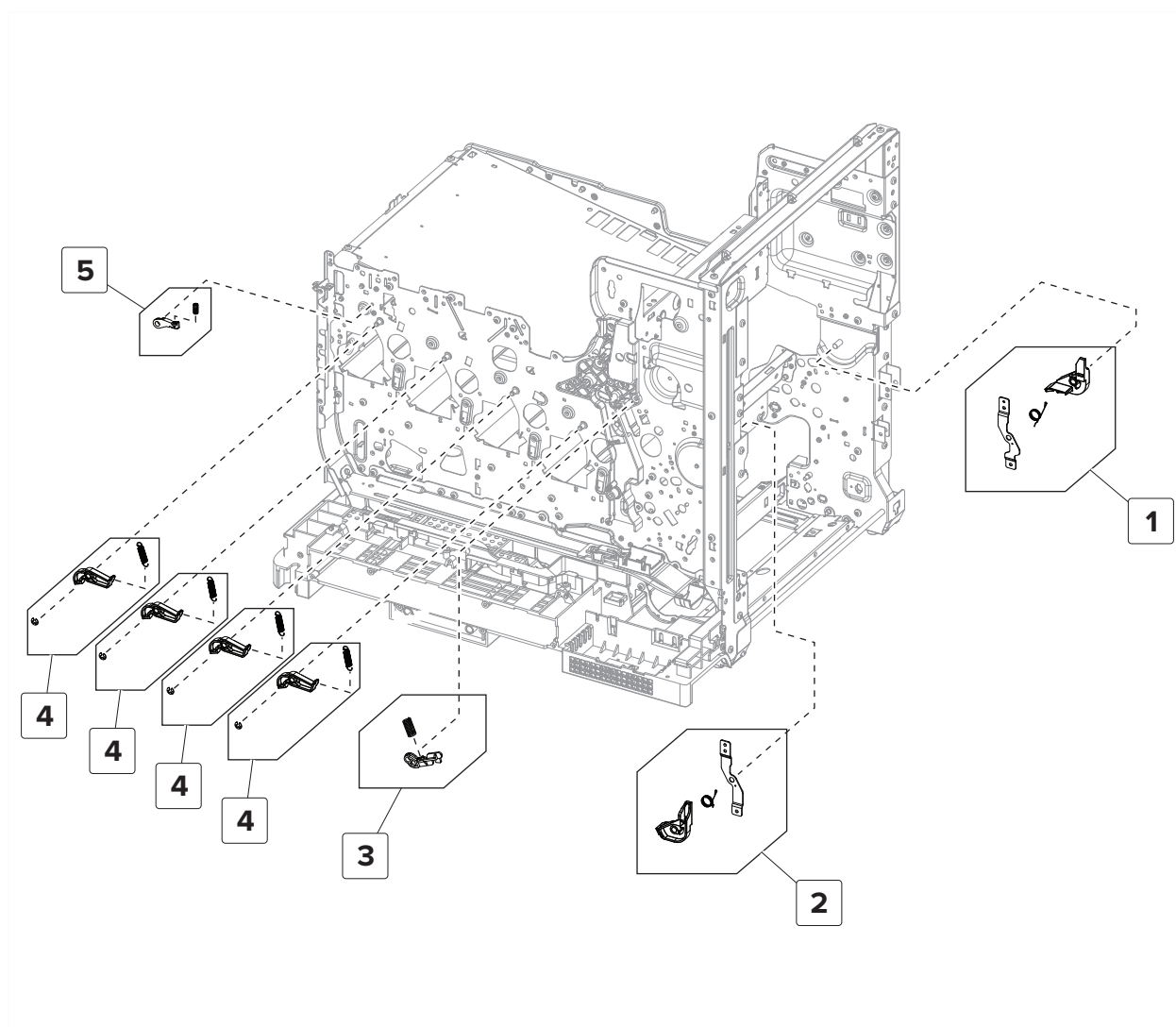
Assembly 17: Transfer—Rear

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0137	1	1	Transfer roller front latch	--
2	41X0138	1	1	Transfer roller rear latch	--
3	41X0064	1	1	Transfer belt left bias arm	--
4	41X0062	4	1	Hold down arm	--
5	41X0063	1	1	Transfer belt right bias arm	--

Assembly 18: 550-sheet tray
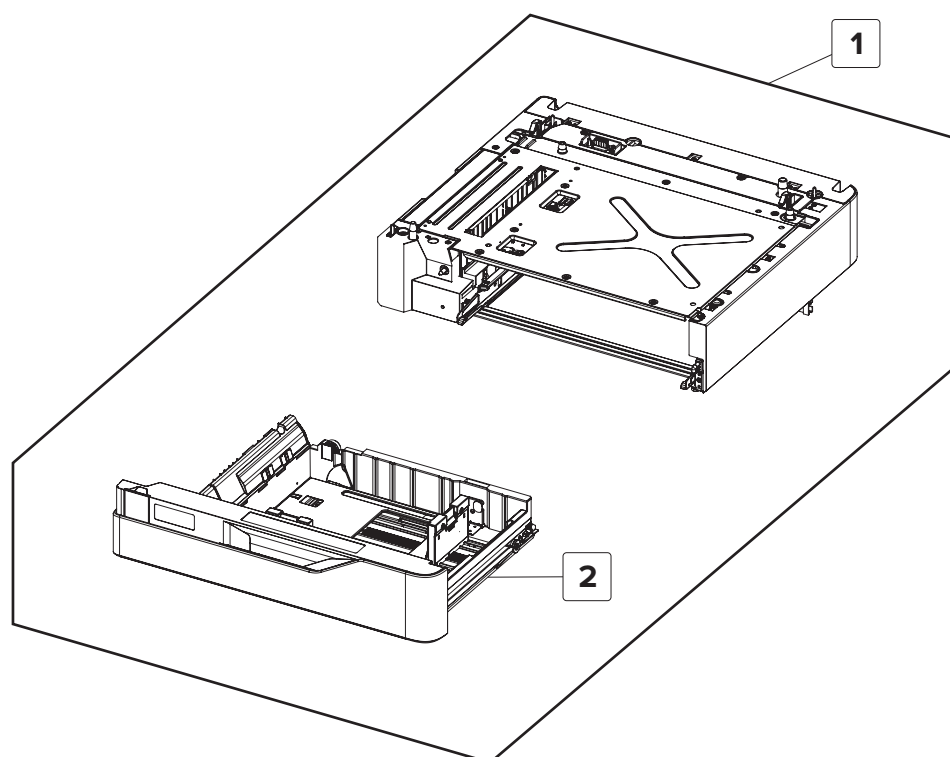
Assembly 18: 550-sheet tray

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0326	1	1	550-sheet tray	--
2	41X0175	1	1	550-sheet tray insert	--

Assembly 19: 550-sheet tray—Rear
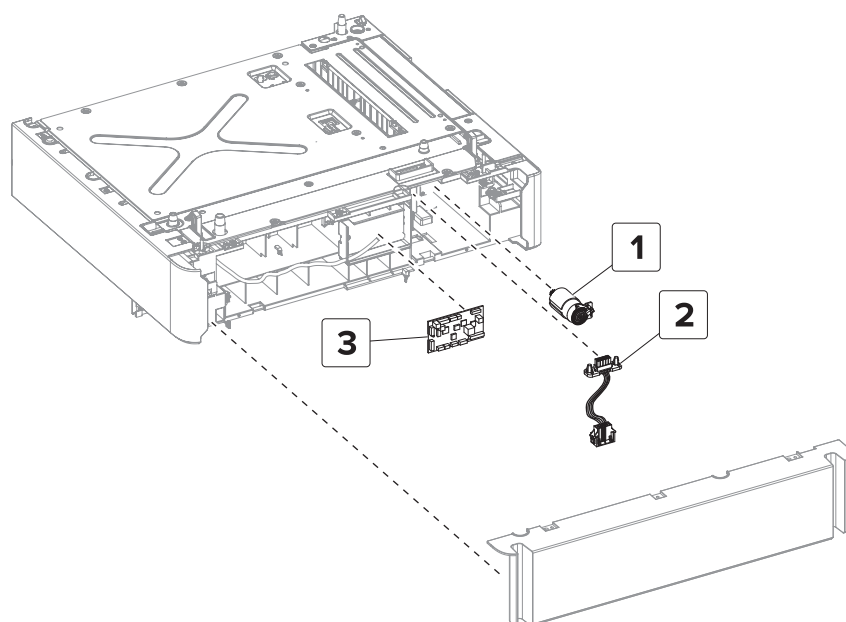
Assembly 19: 550-sheet tray—Rear

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0451	1	1	Motor (550-sheet tray pass-through)	**"Motor (550-sheet tray pass-through) removal" on page 497**
2	41X0336	1	1	550-sheet tray interface cable	**"550-sheet tray interface cable removal" on page 492**
3	41X0331	1	1	550-sheet tray controller board	**"550-sheet tray controller board removal" on page 492**

Assembly 20: 550-sheet tray—Front
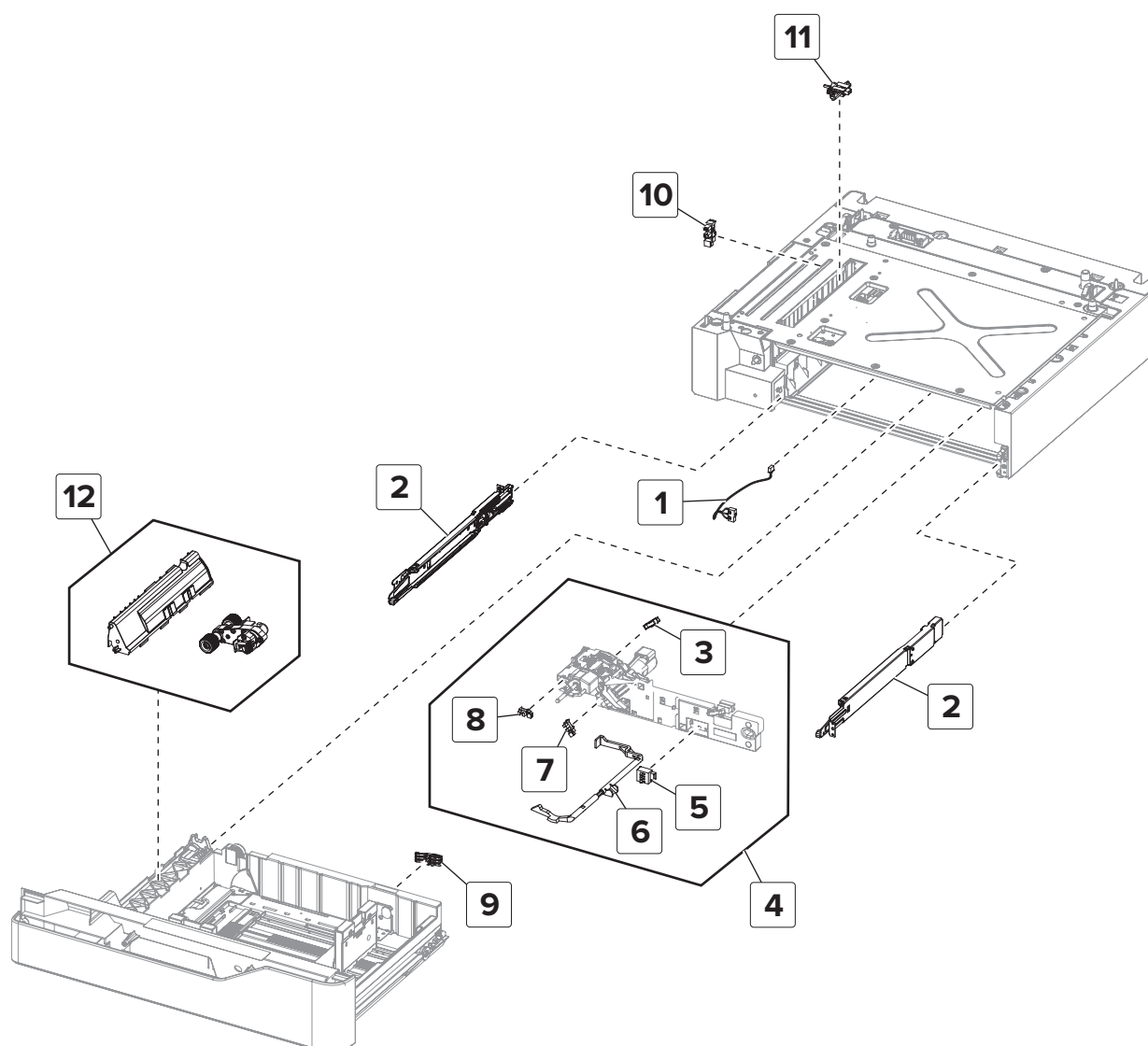
Assembly 20: 550-sheet tray—Front

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0335	1	1	550-sheet tray wake-up switch	**"550-sheet tray wake up switch removal" on page 498**
2	41X0342	1	1	550-sheet tray rails	**"550-sheet tray right rail removal" on page 486** **"550-sheet tray left rail removal" on page 496**
3	41X0470	1	1	Sensor (550-sheet tray media out)	**"Sensor (550-sheet tray media out) removal" on page 487**
4	41X0106	1	1	550-sheet tray paper feeder	**"550-sheet tray paper feeder removal" on page 487**
5	40X7911	1	1	Sensor (550-sheet tray media size)	**"Sensor (550-sheet tray media size) removal" on page 485**
6	41X0338	1	1	550-sheet tray media out sensor actuator	**"Sensor (550-sheet tray media out) removal" on page 487**
7	41X0470	1	1	Sensor (550-sheet tray media low)	**"Sensor (550-sheet tray media low) removal" on page 485**
8	41X0470	1	1	Sensor (550-sheet tray pick roller index)	**"Sensor (550-sheet tray pick roller index) removal" on page 495**
9	40X8541	1	1	550-sheet tray media size sensor actuators	**"550-sheet tray media size sensor actuators removal" on page 484**
10	41X0470	1	1	Sensor (550-sheet tray jam door)	**"Sensor (550-sheet tray jam door)" on page 486**
11	41X0951	1	1	Sensor (550-sheet tray pass-through)	--
12	41X0999	1	1	Pick roller and separator pad	**"Pick roller removal" on page 433**

Assembly 21: 2200-sheet tray
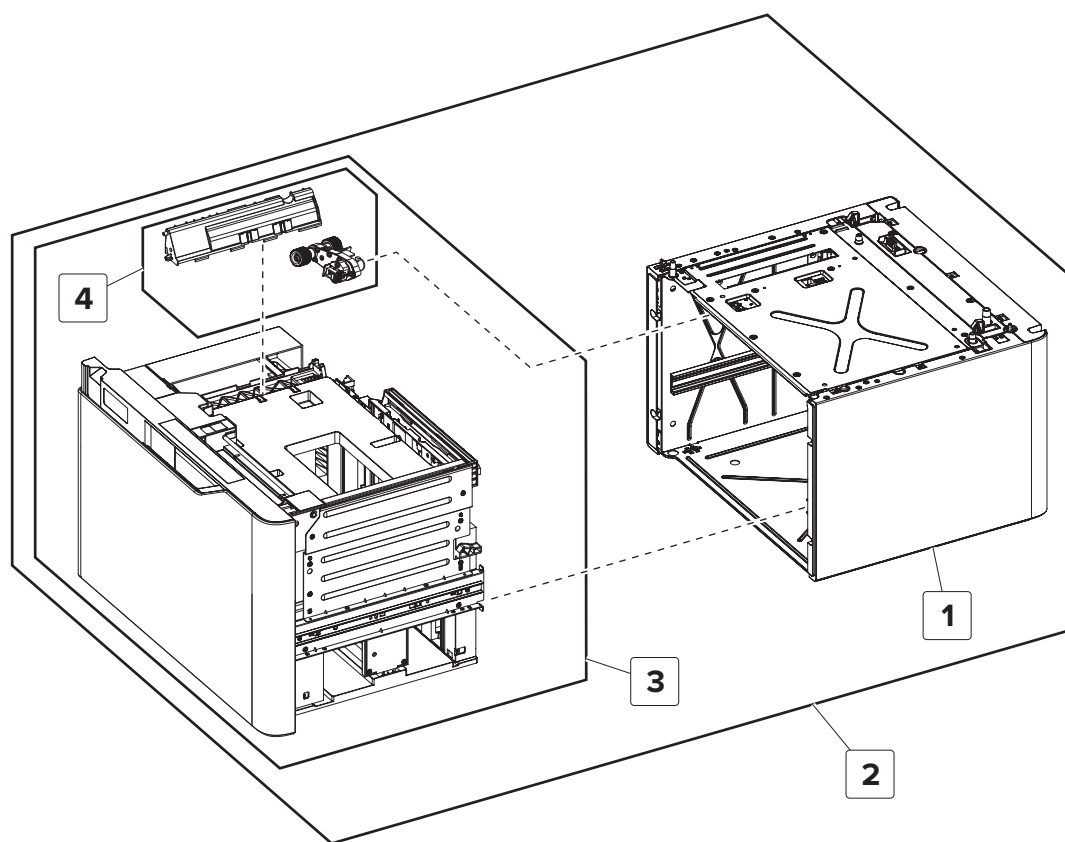
Assembly 21: 2200-sheet tray

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0329	1	1	2200-sheet tray base	--
2	41X0328	1	1	2200-sheet tray	--
3	41X0330	1	1	2200-sheet tray insert	**"2200-sheet tray insert removal" on page 499**
4	41X0999	1	1	Pick roller and separator pad	--

Assembly 22: 2200-sheet tray—Front
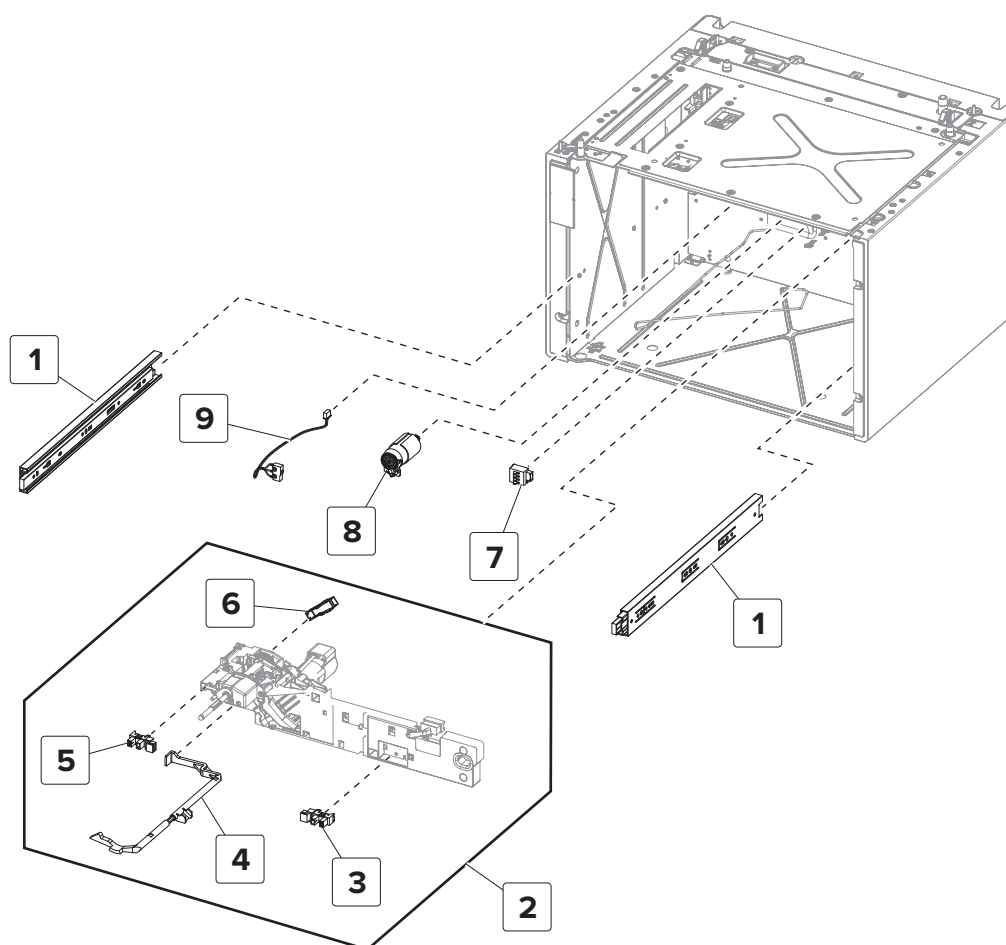
Assembly 22: 2200-sheet tray—Front

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0343	1	1	2200-sheet tray rails	**"2200-sheet tray rail removal" on page 500**
2	41X0369	1	1	2200-sheet tray paper feeder	**"2200-sheet tray paper feeder removal" on page 509**
3	41X0470	1	1	Sensor (2200-sheet tray media low)	**"Sensor (2200-sheet tray media low) removal" on page 502**
4	41X0338	1	1	2200-sheet tray media out sensor actuator	**"2200-sheet tray media out sensor actuator removal" on page 512**
5	41X0470	1	1	Sensor (2200-sheet tray pick roller index)	**"Sensor (2200-sheet tray pick roller index) removal" on page 510**
6	41X0470	1	1	Sensor (2200-sheet tray media out)	**"Sensor (2200-sheet tray media out) removal" on page 509**
7	40X7911	1	1	Sensor (2200-sheet tray media size)	**"Sensor (2200-sheet tray media size) removal" on page 502**
8	41X0140	1	1	Lift motor	**"Motor (2200-sheet tray elevator) removal" on page 507**
9	41X0335	1	1	2200-sheet tray wake up switch	**"2200-sheet tray wake up switch removal" on page 515**

Assembly 23: 2200-sheet tray—Rear
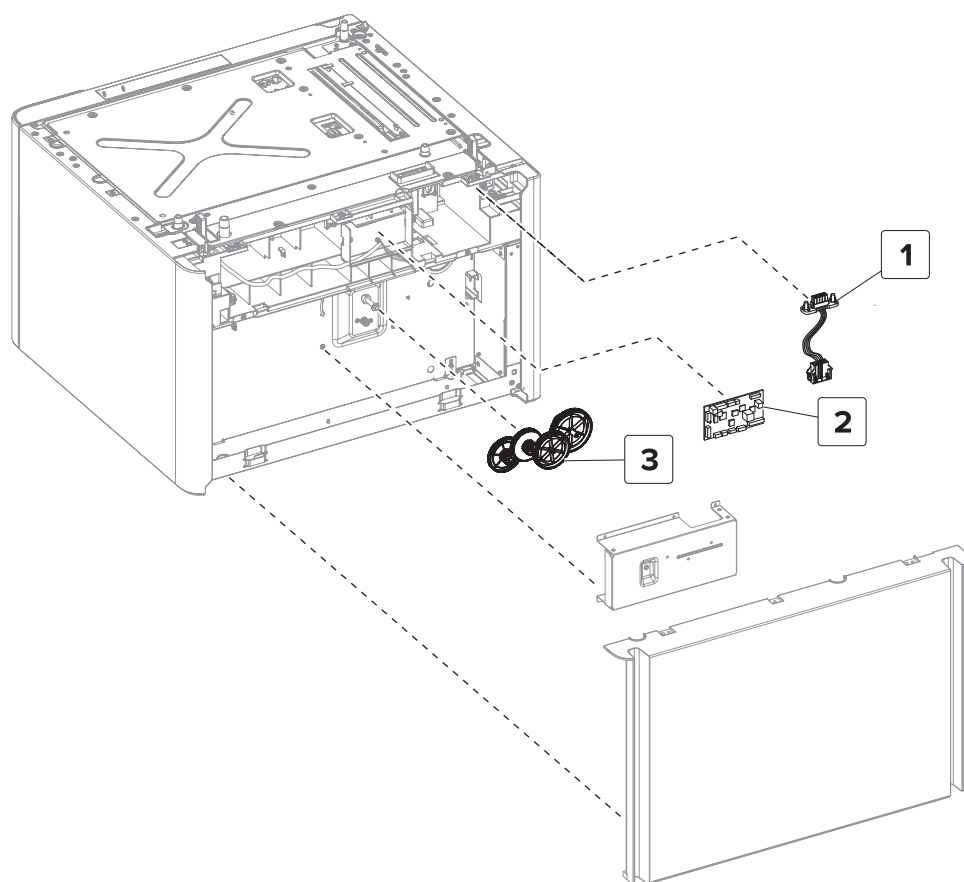
Assembly 23: 2200-sheet tray—Rear

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0337	1	1	2200-sheet tray interface cable	**"2200-sheet tray interface cable removal" on page 504**
2	41X0332	1	1	2200-sheet tray controller board	**"2200-sheet tray controller board removal" on page 503**
3	41X0351	1	1	2200-sheet tray elevator gears	**"2200-sheet tray elevator gears removal" on page 506**

Assembly 24: Caster base
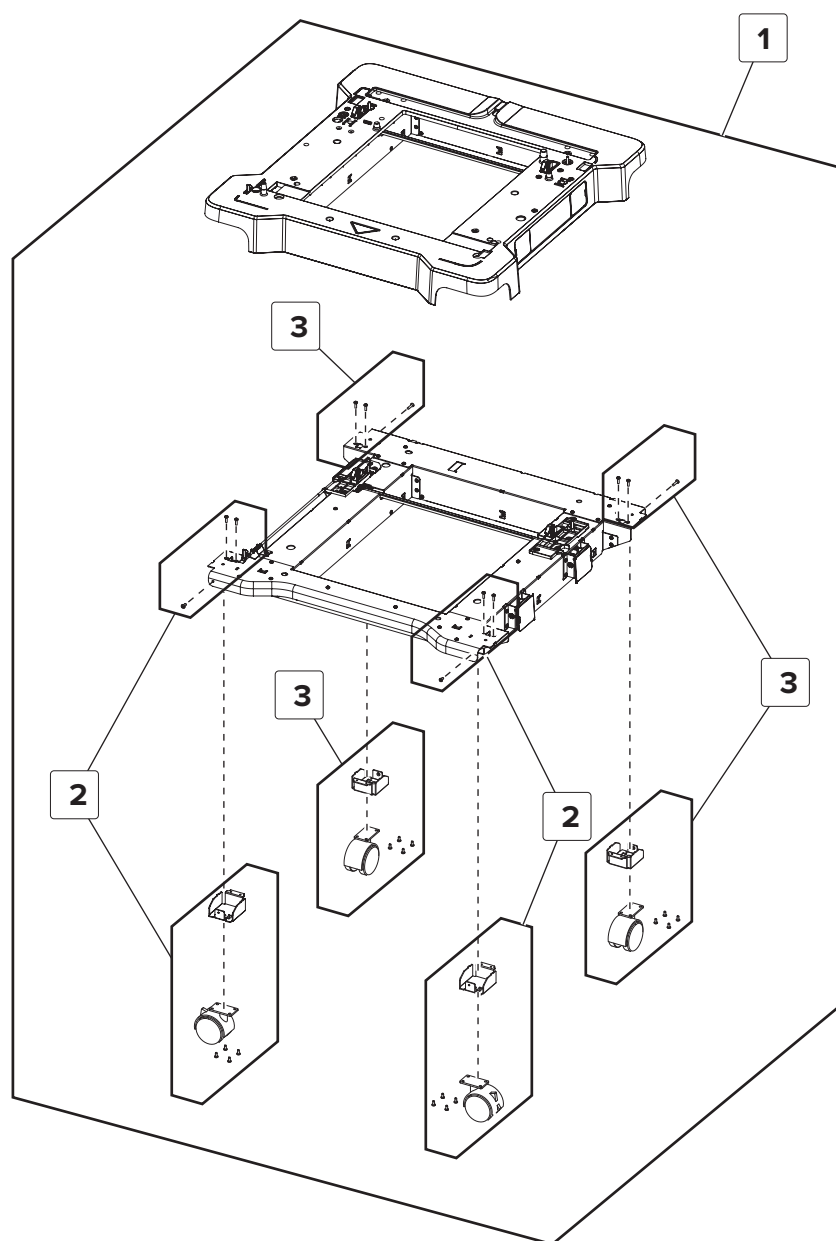
Assembly 24: Caster base

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0762	1	1	Caster base	--
2	41X0774	2	1	Caster base locking caster	**"Locking caster removal" on page 516**
3	41X0775	2	1	Caster base non-locking caster	**"Non-locking caster removal" on page 519**

Assembly 25: Cables

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	41X0890	1	1	Paper feed cables parts pack • Tray 1 sensor cable • Deskew/duplex motor cable • MPF/pass through motor cable • Redrive sensor/motor cable • Redrive extension cable • MPF cable • Paper path sensor • Duplex door beacon cable • Paper path sensor module cable	N/A
NS	41X0891	1	1	Motor cables parts pack • Waste toner motor cable • Fuser/transfer belt motor cable • Developers drive motor cable • Drums drive motor cable • Printhead fan extension cable • HVPS fan extension cable	N/A
NS	41X0892	1	1	HVPS cables parts pack • Charge roller HVPS cable • Wiper/printhead mirror motor cable • Main HVPS cable	N/A
NS	41X0893	1	1	LVPS cables parts kit • AC power cable • LVPS/controller board cable • Fuser power cable	N/A
NS	41X0894	1	1	Miscellaneous cables parts pack • Waste toner bottle present sensor cable • Door interlock switch cable • Ground cable • Flat flex ground cable • Distribution card cable	N/A

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	41X0895	1	1	Control panel cables kit • Control panel cable (SFP) • Proximity sensor cable (MFP) • LCD cable • USB cable • Speaker extension cable • Headphone cable (MFP) • Keyboard USB cable	N/A
NS	41X0896	1	1	Options interface cables parts kit • Input option cable • Output option cable (SFP) • Output option cable (MFP)	N/A
NS	41X0950	1	1	Optional tray cables parts pack • Separator motor cable • Paper feeder extension cable • Paper feeder cable	N/A

Assembly 26: Maintenance kits

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	41X0927	1	1	Maintenance kit, 300K (100 V Combo fuser and transfer module) includes: • Fuser • Transfer belt • Transfer roller • 3 pick rollers • 3 separator pads	--
NS	41X0928	1	1	Maintenance kit, 300K (115 V Combo fuser and transfer module) includes: • Fuser • Transfer belt • Transfer roller • 3 pick rollers • 3 separator pads	--
NS	41X0929	1	1	Maintenance kit, 300K (220 V Combo fuser and transfer module) includes: • Fuser • Transfer belt • Transfer roller • 3 pick rollers • 3 separator pads	--

Assembly 27: Miscellaneous

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	40X8671	1	1	Cover, Removable HDD kit	--
NS	40X9934	1	1	Hard disk drive, 320+ GB	--
NS	40X8737	1	1	Authentication device, RFID	--
NS	41X0015	1	1	Adapter, N8360 ISP + NFC/BLE DualBand	--
NS	40X9652	1	1	Adapter, Fiber Gigabit ISP	--
NS	41X0029	1	1	DDR3 RAM, 2GB, 256Mx64, 204 SODIMM	--
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	--
NS	41X1015	1	1	Font card, Korean	--
NS	41X1016	1	1	Font card, Japanese	--
NS	41X1001	1	1	Forms and Bar Code card	--
NS	41X1029	1	1	Forms and Simplified Chinese font card	--
NS	41X1005	1	1	PRESCRIBE card	--
NS	41X1003	1	1	IPDS SCS TNE card	--
NS	41X1010	1	1	User Flash Memory, 256MB	--
NS	40X9879	1	1	Authentication device, Contact	--
NS	41X0027	1	1	Smart card, Security Element	--
NS	41X0997	1	1	Authentication Device, Contact Front Solutions Module	--
NS	41X0998	1	1	Authentication Device, Contactless Front Solutions Module	--
NS	41X0035	1	1	Keypad, English keyboard kit	--
NS	41X0036	1	1	Keypad, French keyboard kit	--
NS	41X0037	1	1	Keypad, Italian keyboard kit	--
NS	41X0038	1	1	Keypad, German keyboard kit	--
NS	41X0039	1	1	Keypad, Spanish keyboard kit	--
NS	41X0045	1	1	Keypad, English keyboard	--
NS	41X0046	1	1	Keypad, French keyboard	--
NS	41X0047	1	1	Keypad, Italian keyboard	--
NS	41X0048	1	1	Keypad, German keyboard	--
NS	41X0049	1	1	Keypad, Spanish keyboard	--

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	41X0357	1	1	Surge protector, 110V	--
NS	41X0370	1	1	Surge protector, 220V	--

Assembly 28: Staple finisher option
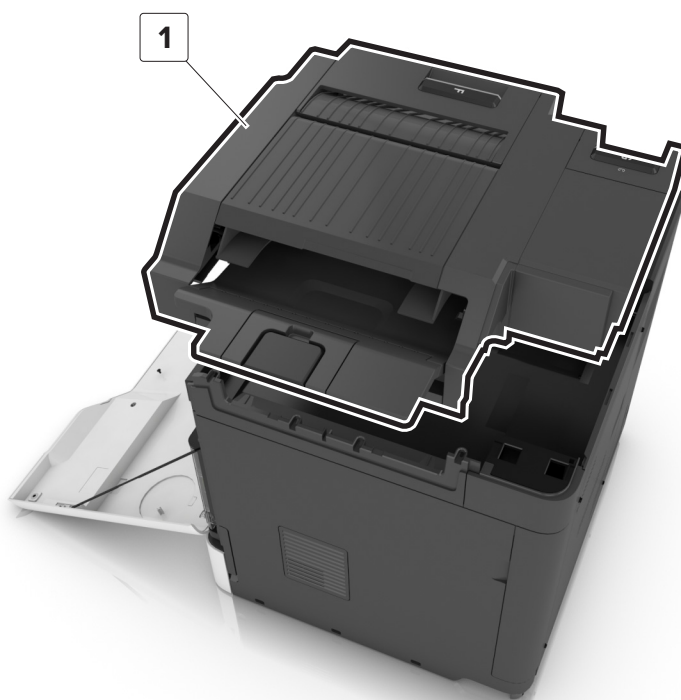
Assembly 28: Staple finisher option

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0746	1	1	Staple finisher option	--

Assembly 29: Staple finisher—Covers
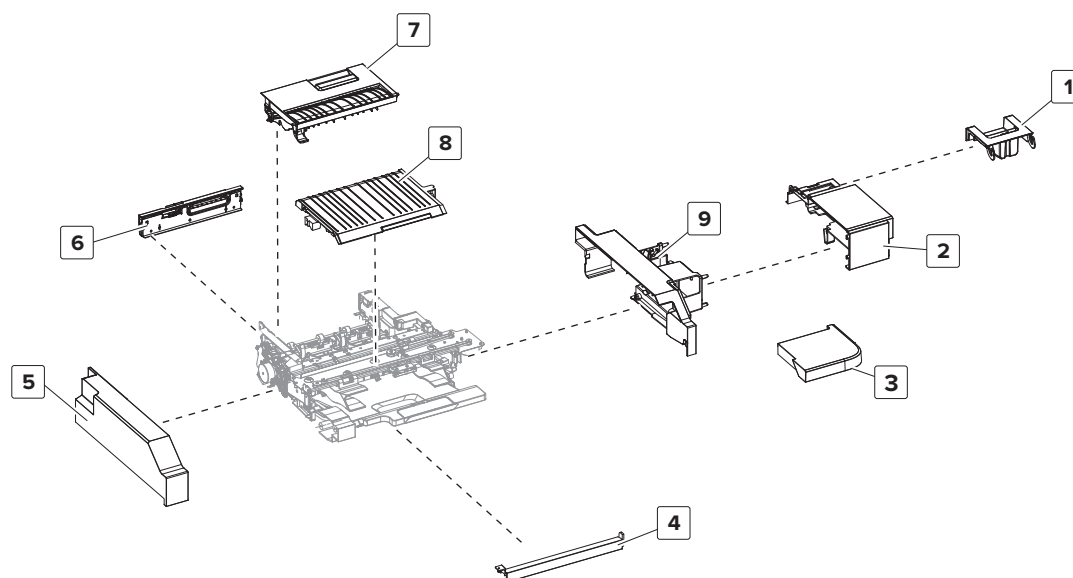
Assembly 29: Staple finisher—Covers

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0531	1	1	Staple finisher staple cartridge door	**"Staple finisher staple cartridge door removal" on page 526**
2	41X0495	1	1	Staple finisher rear cover	**"Staple finisher rear cover removal" on page 523**
3	41X0933	1	1	Staple finisher cover	--
4	41X0493	1	1	Staple finisher right cover	**"Staple finisher right cover removal" on page 522**
5	41X0494	1	1	Staple finisher front cover	**"Staple finisher front cover removal" on page 522**
6	41X0520	1	1	Staple finisher lock assembly	**"Staple finisher lock assembly removal" on page 528**
7	41X0498	1	1	Staple finisher jam door	**"Staple finisher jam access door removal" on page 527**
8	41X0507	1	1	Staple finisher top cover	**"Staple finisher tamper top cover removal" on page 561**
9	41X0497	1	1	Staple finisher inner rear cover	**"Staple finisher inner rear cover removal" on page 525**

Assembly 30: Staple finisher—Front
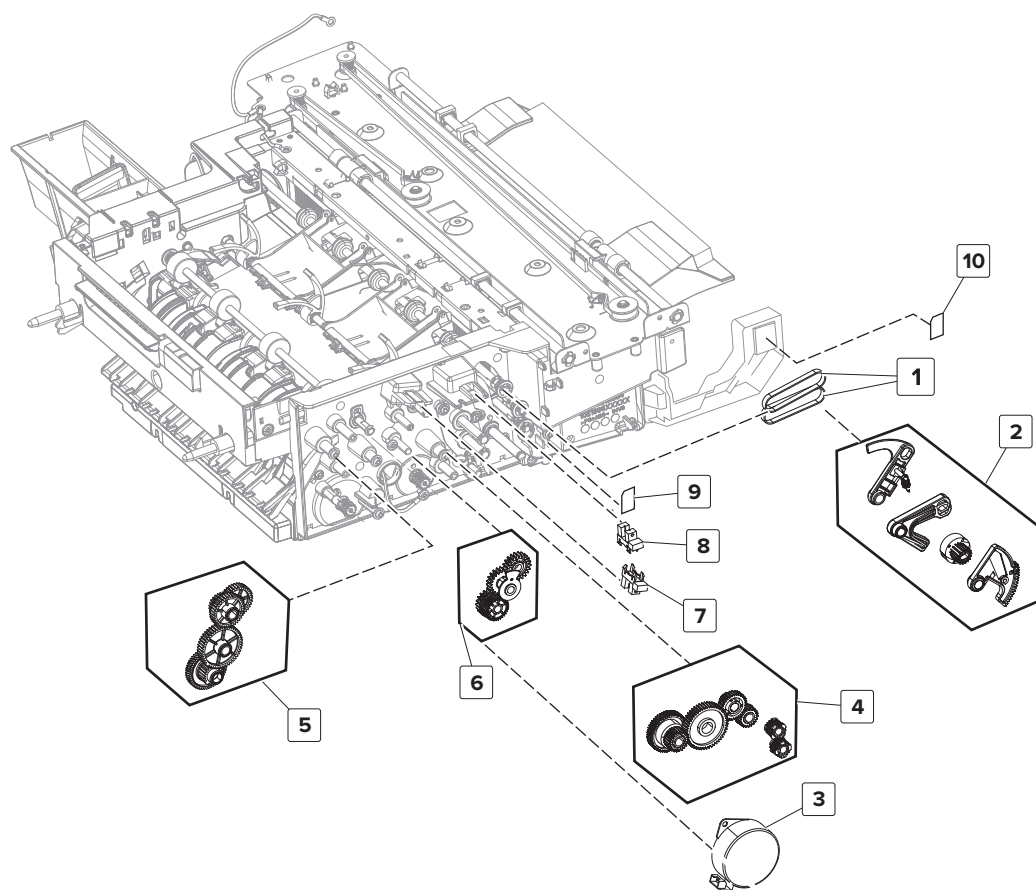
Assembly 30: Staple finisher—Front

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0521	2	1	Staple finisher exit roller belts	**"Staple finisher exit roller belts removal" on page 557**
2	41X0516	1	1	Staple finisher front upper exit roller position gears	**"Staple finisher front upper position exit roller gears removal" on page 553**
3	40X8753	1	1	Motor (staple finisher aligner paddle)	**"Motor (staple finisher aligner paddle) removal " on page 548**
4	41X0514	1	1	Staple finisher exit gears	**"Staple finisher exit gears removal" on page 555**
5	41X0512	1	1	Staple finisher transport gears	**"Staple finisher transport gears removal" on page 548**
6	41X0513	1	1	Staple finisher aligner paddle gears	**"Staple finisher aligner paddle gears removal" on page 550**
7	40X7301	1	1	Sensor (staple finisher aligner paddle)	**"Staple finisher aligner paddle gears removal" on page 550**
8	40X7301	1	1	Sensor (staple finisher upper exit roller)	**"Sensor (staple finisher upper exit roller) removal" on page 552**
9	41X0504	1	1	Sensor (staple finisher front lower bin full)	**"Sensor (staple finisher lower bin full) removal" on page 530**
10	41X0504	1	1	Sensor (staple finisher front upper bin full)	**"Sensor (staple finisher upper bin full) removal" on page 531**

Assembly 31: Staple finisher—Electrical
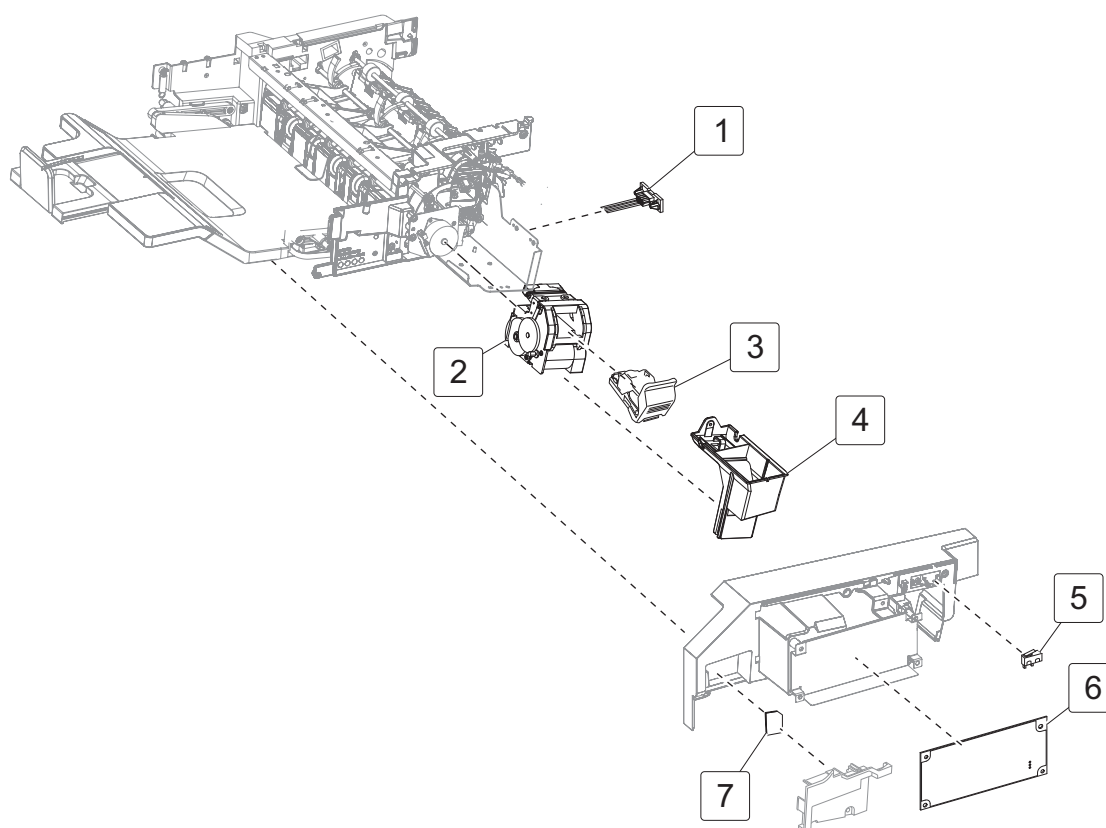
Assembly 31: Staple finisher—Electrical

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0506	1	1	Staple finisher interface cable	**"Staple finisher interface cable removal" on page 533**
2	41X0501	1	1	Staple finisher staple unit	**"Staple finisher staple unit removal" on page 540**
3	41X0530	1	1	Staple finisher staple cartridge holder	--
4	41X0500	1	1	Staple finisher staple cartridge ejector	**"Staple finisher staple unit ejector removal" on page 538**
5	41X0499	1	1	Staple finisher staple cartridge door switch	**"Staple finisher staple cartridge door switch removal" on page 529**
6	41X0496	1	1	Staple finisher controller board	**"Staple finisher controller board removal" on page 525**
7	41X0504	1	1	Sensor (staple finisher rear lower bin full)	**"Sensor (staple finisher lower bin full) removal" on page 530**
NS	41X0783	1	1	Staple finisher cable parts pack	--

Assembly 32: Staple finisher—Rear
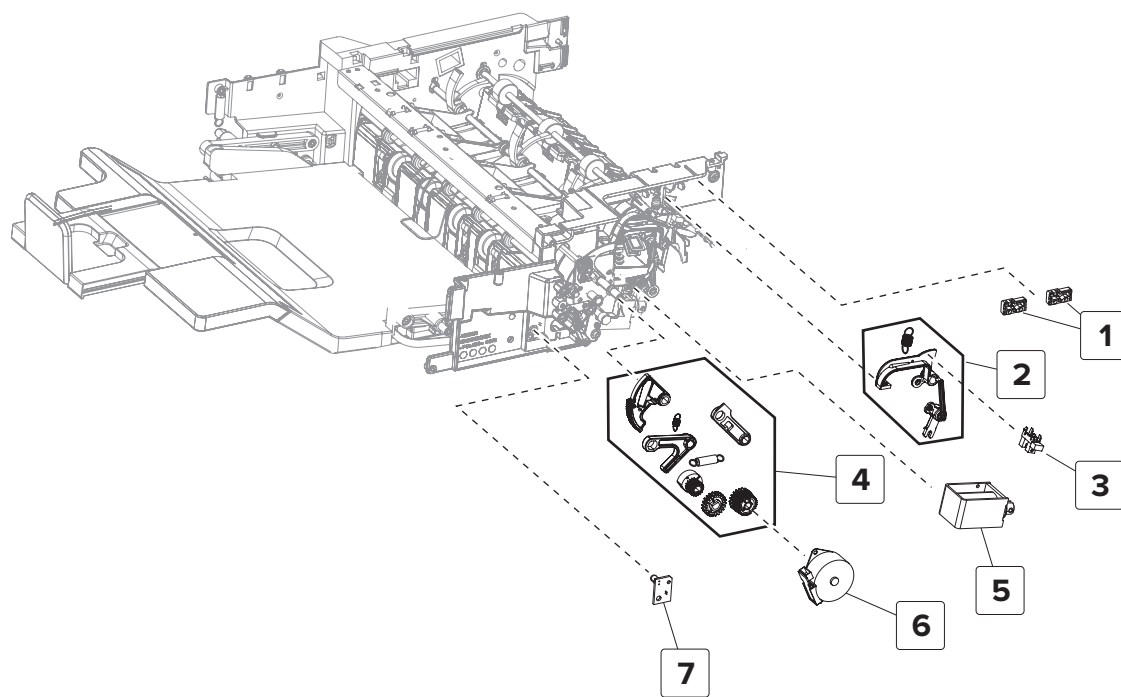
Assembly 32: Staple finisher—Rear

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0505	1	2	Staple finisher jam door switch	**"Staple finisher jam door switches removal" on page 542**
2	41X0503	1	1	Staple finisher stack clamp	**"Staple finisher stack clamp removal" on page 544**
3	40X7301	1	1	Sensor (staple finisher stack clamp)	**"Staple finisher stack clamp removal" on page 544**
4	41X0784	1	1	Staple finisher rear upper exit roller position gears	**"Staple finisher rear upper position exit roller gears removal" on page 535**
5	41X0502	1	1	Staple finisher stack clamp solenoid	**"Staple finisher stack clamp solenoid removal" on page 543**
6	40X8256	1	1	Motor (staple finisher upper exit roller)	**"Motor (staple finisher upper exit roller) removal" on page 534**
7	41X0504	1	1	Sensor (staple finisher rear upper bin full)	**"Sensor (staple finisher upper bin full) removal" on page 531**

Assembly 33: Staple finisher—Tamper
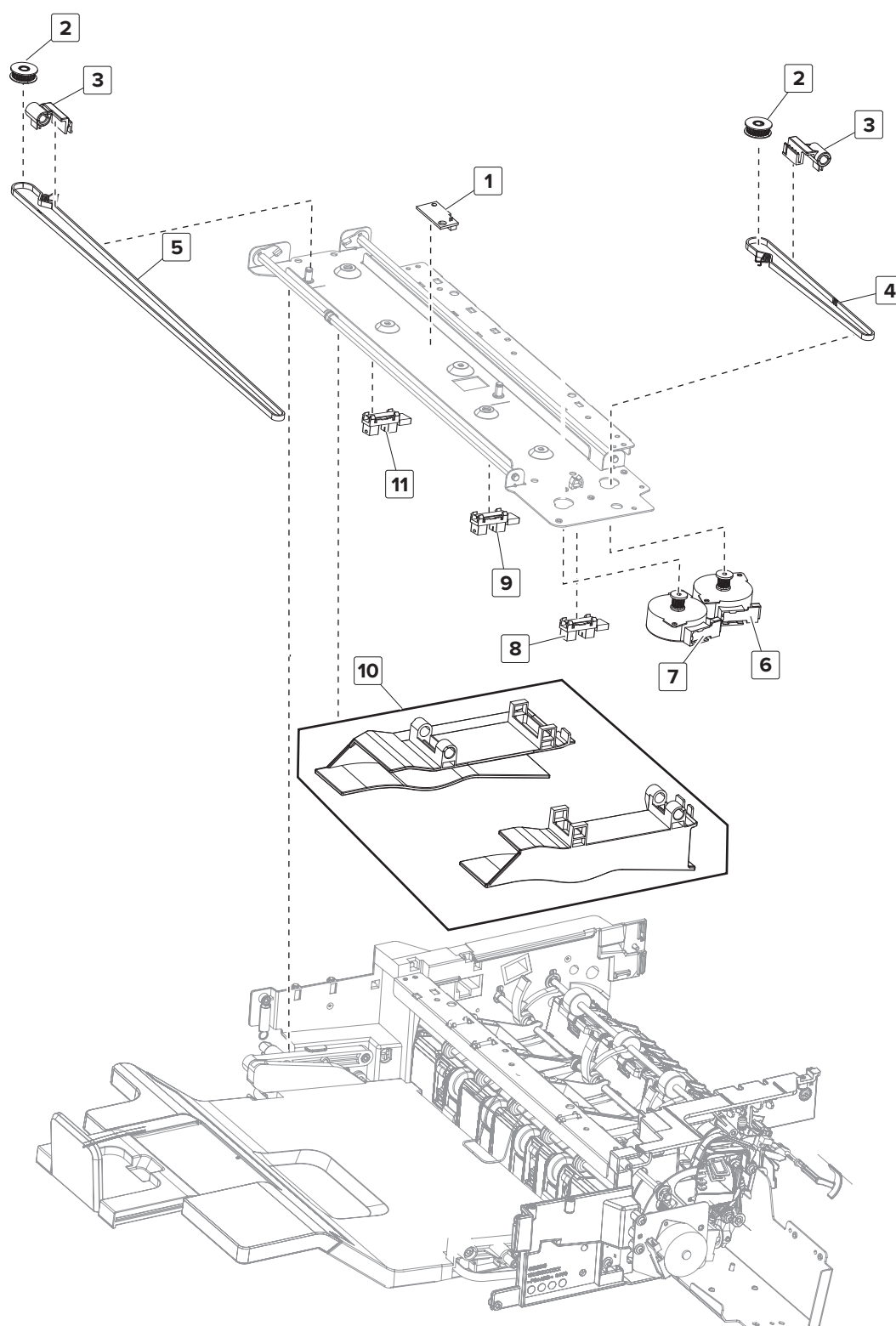
Assembly 33: Staple finisher—Tamper

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0778	1	1	Staple finisher cave light	**"Staple finisher tamper top cover removal" on page 561**
2	41X0776	1	1	Staple finisher tamper pulley gears	**"Staple finisher tamper pulley gear removal" on page 565**
3	41X0508	1	1	Staple finisher tamper belt holders	**"Staple finisher tamper removal" on page 566**
4	41X0535	1	1	Staple finisher rear tamper belt	**"Staple finisher tamper belts removal" on page 564**
5	41X0534	1	1	Staple finisher front tamper belt	**"Staple finisher tamper belts removal" on page 564**
6	40X8211	1	1	Motor (staple finisher rear tamper)	**"Motor (staple finisher tamper) removal" on page 562**
7	40X8211	1	7	Motor (staple finisher front tamper)	**"Motor (staple finisher tamper) removal" on page 562**
8	40X7301	1	1	Sensor (staple finisher rear tamper home)	**"Sensor (staple finisher tamper position) removal" on page 562**
9	40X7301	1	1	Sensor (staple finisher narrow media tamper)	**"Sensor (staple finisher tamper position) removal" on page 562**
10	41X0509	1	1	Staple finisher tampers	**"Staple finisher tamper removal" on page 566**
11	40X7301	1	1	Sensor (staple finisher front tamper home)	**"Sensor (staple finisher tamper position) removal" on page 562**

Assembly 34: Staple finisher—Transport
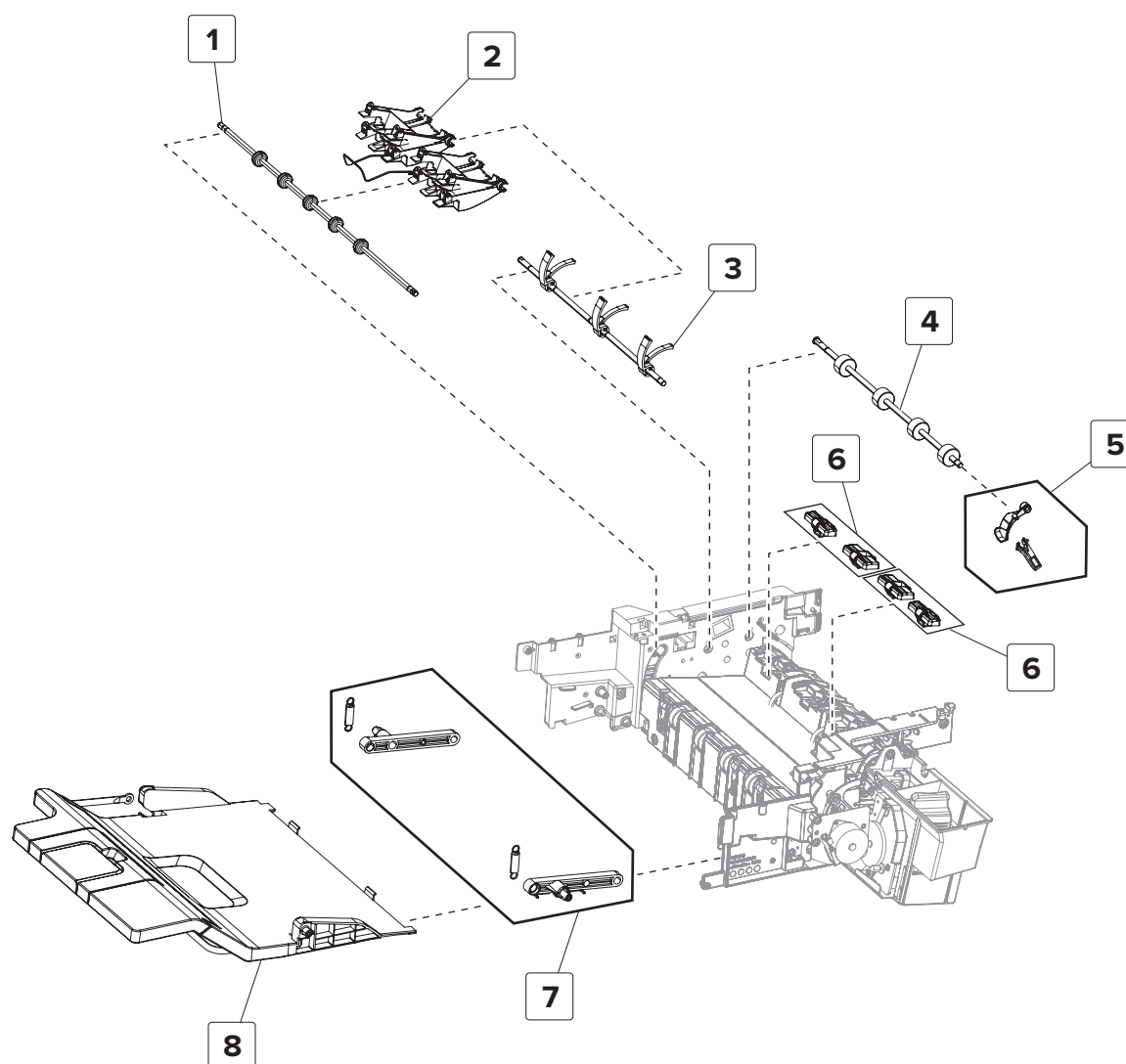
Assembly 34: Staple finisher—Transport

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0515	1	1	Staple finisher upper exit roller	**"Staple finisher upper exit roller removal" on page 578**
2	41X0519	1	1	Staple finisher upper paper guide	**"Staple finisher aligner paddle and upper paper guide removal" on page 575**
3	41X0518	1	1	Staple finisher aligner paddle	**"Staple finisher aligner paddle and upper paper guide removal" on page 575**
4	41X0517	1	1	Staple finisher compiler feed roller	**"Staple finisher compiler feed roller removal" on page 572**
5	41X0525	1	1	Staple finisher compiler paper guide	**"Staple finisher compiler paper guide removal" on page 570**
6	41X0526	2	1	Staple finisher compiler feed idler	**"Staple finisher compiler feed idler removal" on page 574**
7	41X0527	1	1	Staple finisher bin link	**"Staple finisher bin link removal" on page 568**
8	41X0528	1	1	Staple finisher bin	**"Staple finisher bin removal" on page 569**

Assembly 35: Staple finisher—Bottom
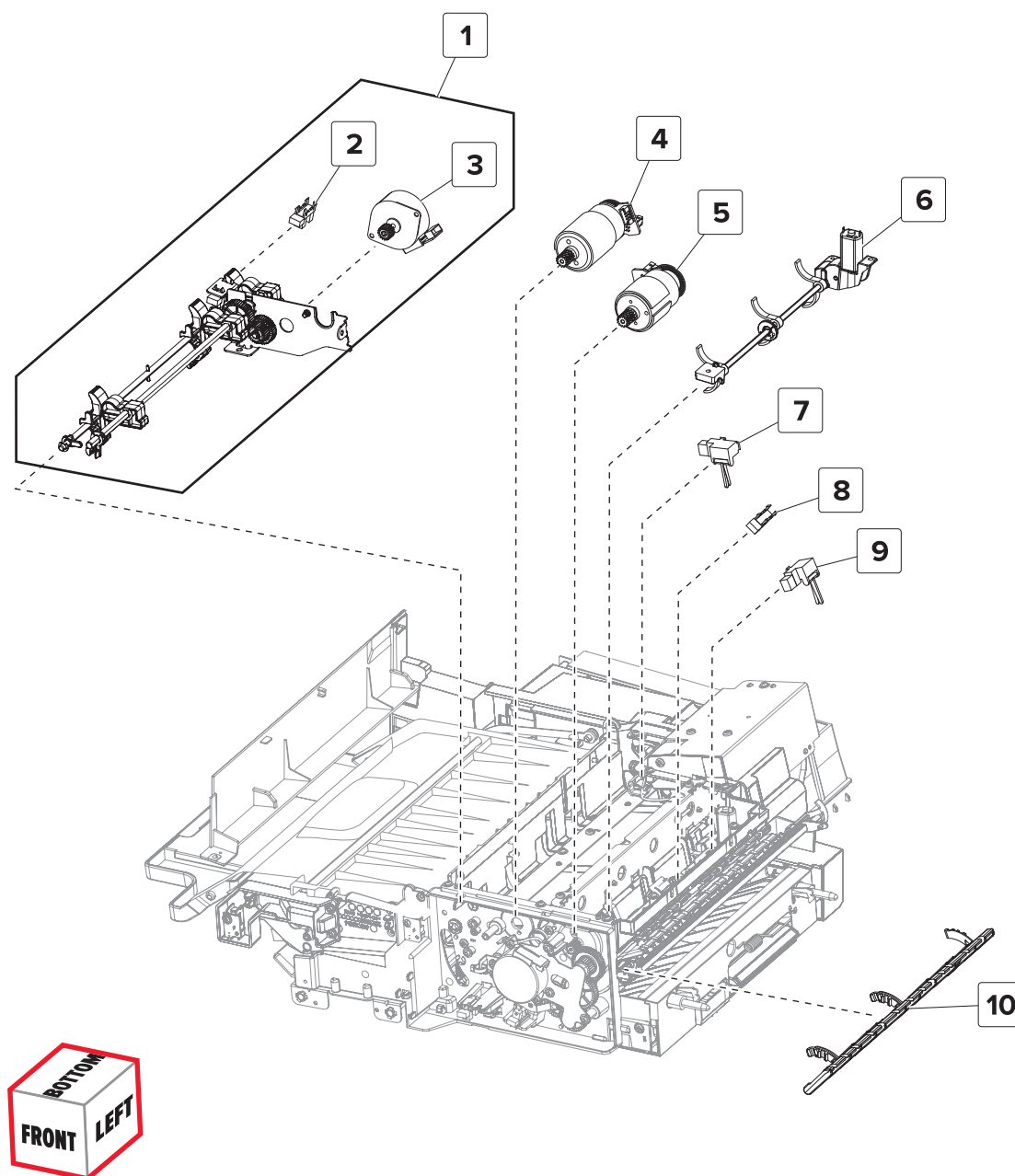
Assembly 35: Staple finisher—Bottom

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0532	1	1	Staple finisher bin clamp assembly	**"Staple finisher bin clamp assembly removal" on page 582**
2	40X7301	1	1	Sensor (staple finisher bin clamp)	**"Sensor (staple finisher bin clamp) removal" on page 590**
3	40X8256	1	1	Motor (staple finisher bin clamp)	**"Motor (staple finisher bin clamp) removal" on page 591**
4	41X0529	1	1	Motor (staple finisher exit)	**"Motor (staple finisher exit) removal" on page 596**
5	41X0529	1	1	Motor (staple finisher transport)	**"Motor (staple finisher transport) removal" on page 596**
6	41X0523	1	1	Staple finisher decurl paddle	**"Staple finisher decurl assembly removal" on page 598**
7	40X8745	1	1	Sensor (staple finisher staple unit paper present)	**"Sensor (staple finisher staple unit paper present) removal" on page 599**
8	40X7301	1	1	Sensor (staple finisher decurl)	**"Sensor (staple finisher decurl) removal" on page 600**
9	40X8745	1	1	Sensor (staple finisher transport)	**"Sensor (staple finisher transport) removal" on page 601**
10	41X0511	1	1	Staple finisher entrance paper guide	**"Staple finisher entrance paper guide removal" on page 581**
NS	41X0786	1	1	Staple finisher screw parts pack	--
NS	41X0787	1	1	Staple finisher plastic clip	--

Appendix A: Printer specifications

Power consumption

Product power consumption

The following table documents the power consumption characteristics of the product.

Note: Some modes may not apply to your product.

Mode	Description	Power consumption (Watts)
Printing	The product is generating hard-copy output from electronic inputs.	800 (one-sided); 765 (two-sided)
Copy	The product is generating hard-copy output from hard-copy original documents.	N/A
Scan	The product is scanning hard-copy documents.	N/A
Ready	The product is waiting for a print job.	80 (higher power usage); 55 (lower power usage)
Sleep Mode	The product is in a high-level energy-saving mode.	2.9
Hibernate	The product is in a low-level energy-saving mode.	0.3
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

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. If you plan to install any options, then leave enough room for them also. It is important to:

- Set up the printer near a properly grounded and easily accessible electrical outlet with correct voltage and current capability.
- Make sure that airflow in the room meets the latest revision of the ASHRAE 62 standard or the CEN Technical Committee 156 standard.
- Provide a flat, sturdy, and stable surface.
- Keep the printer:
  - Clean, dry, and free of dust.
  - Away from stray staples and paper clips.
  - Away from the direct airflow of air conditioners, heaters, or ventilators.
  - Free from direct sunlight and humidity extremes.
- Observe the recommended temperatures and avoid fluctuations:

| Ambient temperature | 10 to 32.2°C (50 to 90°F) |
| Storage temperature | -40 to 43.3°C (-40 to 110°F) |

- Allow the following recommended amount of space around the printer for proper ventilation:
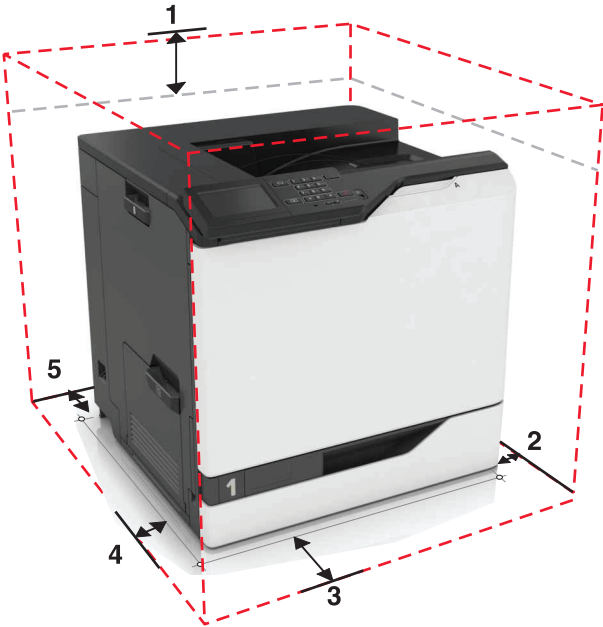
1	Top	305 mm (12.0 in.)
2	Right side	610 mm (24.0 in.)
3	Front	102 mm (4.0 in.)
4	Left side	152mm (6.0 in.)
5	Rear	381 mm (15.0 in.)

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	56 (one-sided); 57 (two-sided)
Ready	14

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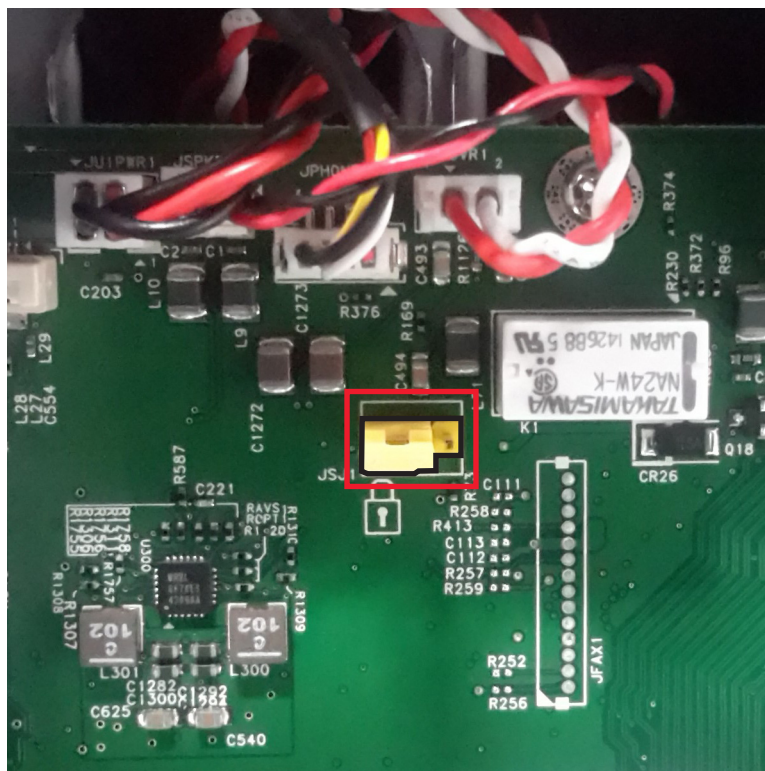
4 Move the jumper to cover the middle and exposed prongs.

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

5 Turn on the printer.

Appendix B: 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

Media handling options

Some options may not be available for all models.

1	Standard 550-sheet tray
2	Optional 550-sheet tray
3	Optional 2200-sheet tray
4	Multipurpose feeder
5	Staple finisher

Physical specifications (input options)

Item	Height	Width	Depth
550-sheet tray (installed)	120 mm (4.72 in.)	558.8 mm (22 in.)	522.4 mm (20.6 in.)
2200-sheet tray (installed)	359 mm (14.13 in.)	558.8 mm (22 in.)	522.4 mm (20.6 in.)

Input/output configurations and capacities

Input sources

Printer model	Number of standard trays	Maximum number of optional trays	Maximum number of trays
CS820de	2	4	6
CS820dte	3	4	6
CS820dtfe	3	4	6
* Maximum of four optional trays are supported at one time.			

Input capacities

Printer model	550-sheet tray	Multipurpose feeder	Total standard capacity	Maximum input capacity
CS820de	550	100	650	4500
CS820dte	1100	100	1200	4500
CS820dtfe	1100	100	1200	4500

Output capacities[*]

Printer model	Standard bin (printer top)	Standard bin with staple finisher installed	Maximum output capacity
CS820de	500	300	500
CS820dte	500	300	500
CS820dtfe	N/A	300	300
[*] Only one output option can be installed in any CS820 model.			

Input capacity by paper and source

Source	Paper	Stack height	Approximate reference capacity
550-sheet tray[b]	Plain paper[a]	59 mm (2.32 in.)	550 sheets (75 g/m^2)
	Labels	236 mm (9.29 in.)	200 labels **Note:** Capacity varies with label material and construction.
Optional 2200-sheet tray[b]	Plain paper[a]	236 mm (9.29 in.)	2200 sheets (75 g/m^2)
	Labels	236 mm (9.29 in.)	800 labels (75 g/m^2) **Note:** Capacity varies with label material and construction.
Multipurpose feeder[b]	Plain paper[a]	11 mm (.43 in.)	100 sheets (75 g/m^2)
	Envelopes	11 mm (.43 in.)	10 envelopes (75 g/m^2)
	Other	11 mm (.43 in.)	Various quantities **Note:** Capacity varies depending on weight and type of media.
[a] 20 lb xerographic paper at ambient environment.			
[b] Capacity may vary and is subject to media specifications and printer operating environment.			

Output capacity by paper and source

Source	Paper	Stack height	Approximate reference capacity
Standard bin[a,b]	Plain paper[a]	68 mm (2.68 in.)	550 sheets (75 g/m^2)
	Labels	68 mm (2.68 in.)	200 labels **Note:** Capacity varies with label material and construction.
	Envelopes	68 mm (2.68 in.)	50 envelopes (75 g/m^2)
Standard bin with staple finisher installed[a,b]	Plain paper[a]	40 mm (1.57 in.)	300 sheets (75 g/m^2
	Labels	40 mm (1.57 in.)	120 labels (75 g/m^2) **Note:** Capacity varies with label material and construction.
	Envelopes	40 mm (1.57 in.)	30 envelopes (75 g/m^2)
Staple finisher[a,b]	Plain paper[a] (stapled sheets)	40 mm (1.57 in.)	300 sheets (75 g/m^2)

[a] 20 lb xerographic paper at ambient environment.

[b] Capacity may vary and is subject to media specifications and printer operating environment.

Installing optional trays

⚠ **CAUTION—POTENTIAL INJURY:** The printer weights 61–84 kg (135–185 lb) and requires three or more trained personnel to lift it safely.

⚠ **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.

⚠ **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—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**.

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.

4 Lift the printer using the side and rear handles.
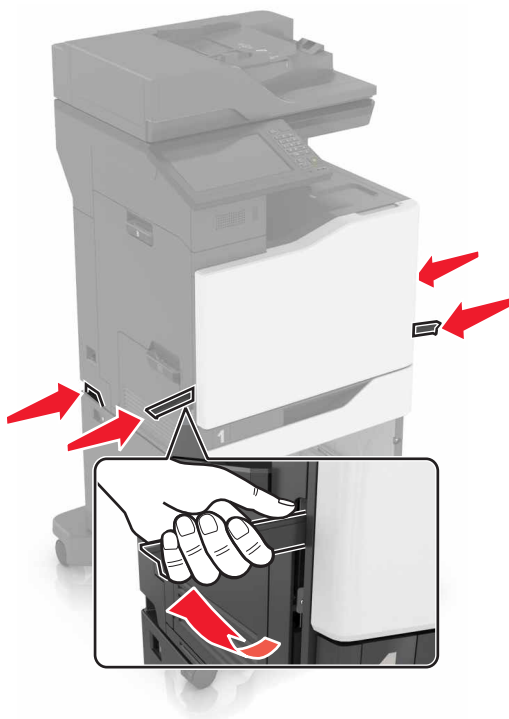
5 Align the printer with the optional tray, and then lower the printer until it *clicks* into place.
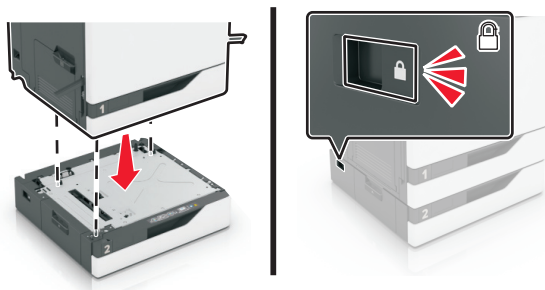
6 Connect the power cord to the electrical outlet, and then turn on the printer.

Note: 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 698**.

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 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.

Appendix C: Theory of operation

POR sequence

As the printer turns on, the engine code goes through a series of tests to verify hardware integrity. If a hardware failure is detected, then it is reported to the printer. If the POR sequence cannot be completed successfully, then the printer may post an error message. The message states that service may be needed.

Print cycle operation

Print engine layout
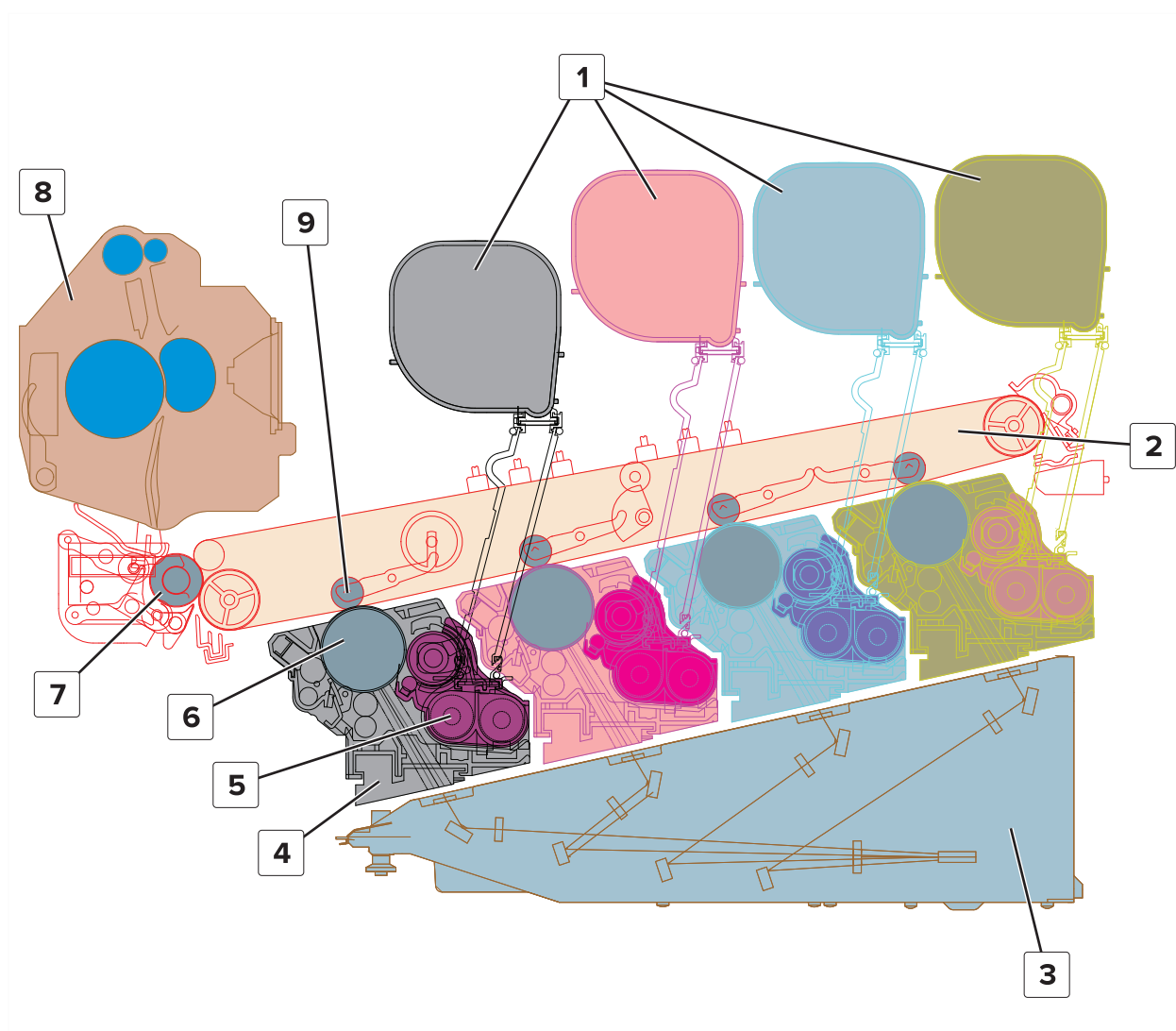
1	Toner cartridges (K, M, C, Y)
2	Transfer belt

Appendix C: Theory of operation

3	Printhead
4	Imaging unit
5	Developer unit
6	Photoconductor unit
7	Second transfer roller
8	Fuser
9	First transfer roller

Print cycle

Flowchart
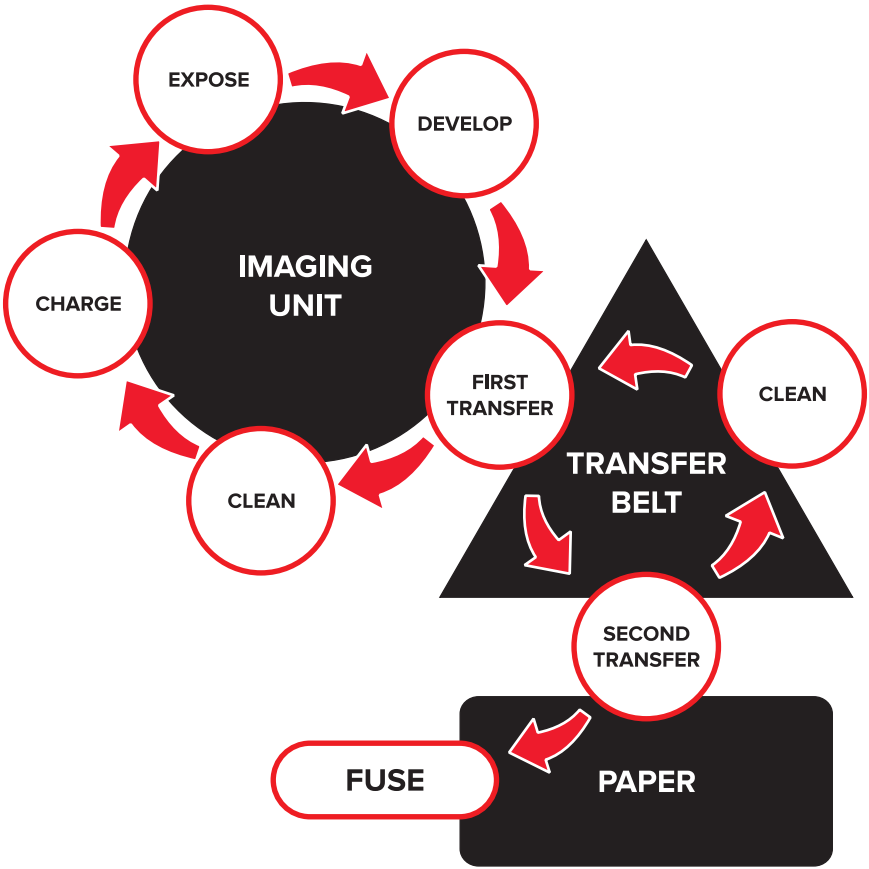
Charge
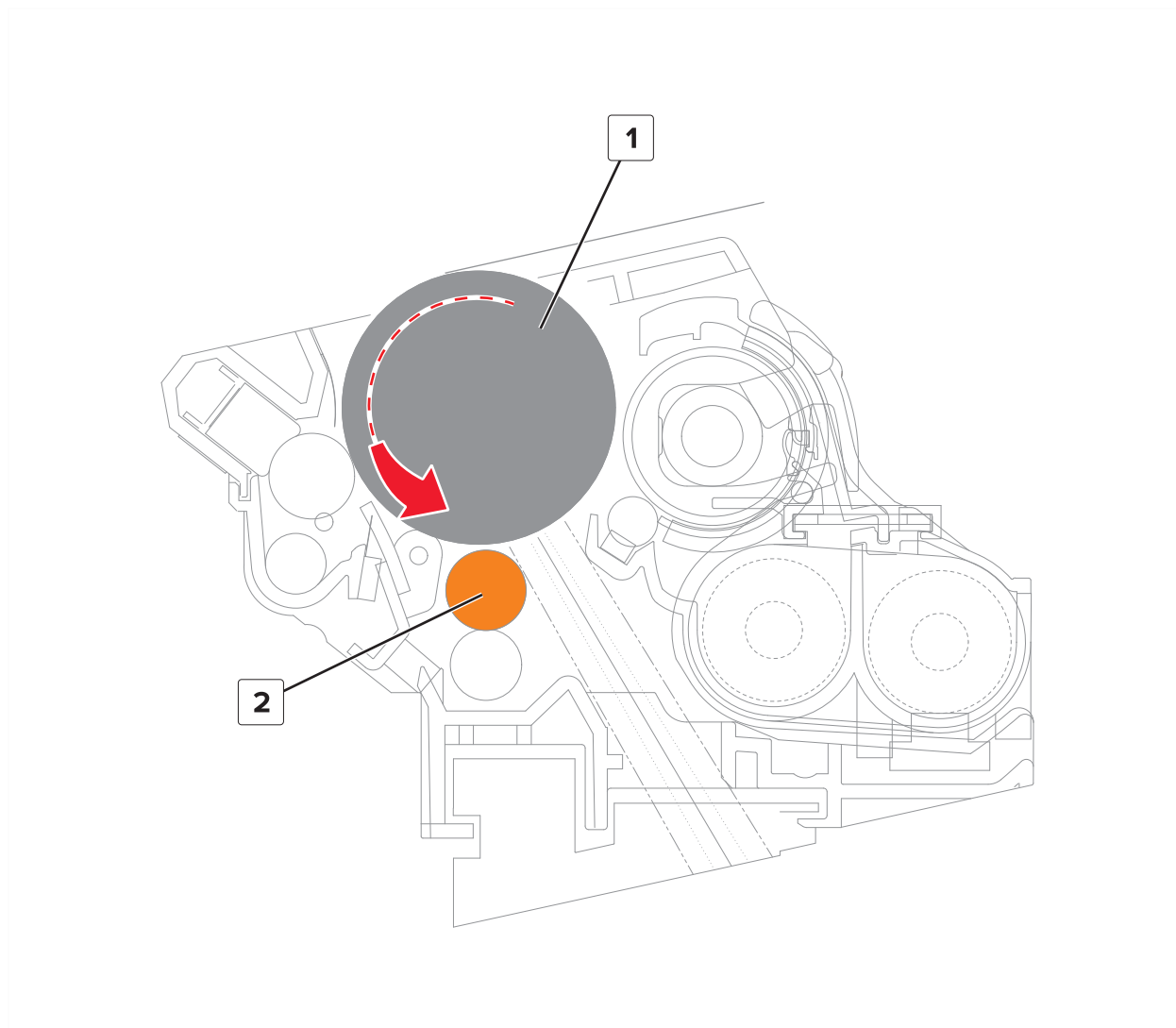
1	Photoconductor drum
2	Charge roller

A uniform negative electrical charge is applied by the charge roller to the surface of the photoconductor drum. The photoconductive properties of the surface material allow it to hold the charge as long as it is not exposed to light.

Expose
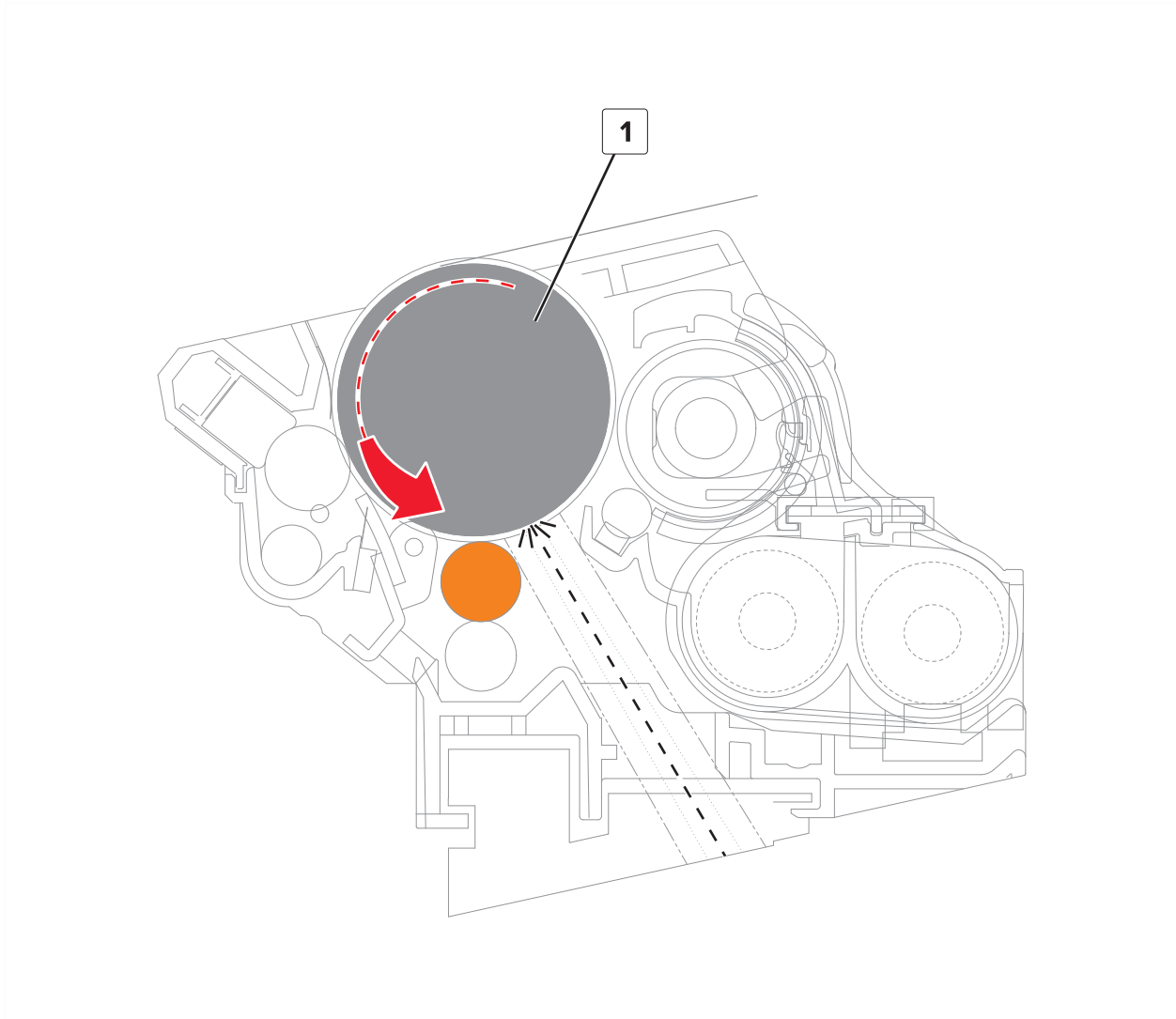
1	Photoconductor drum

The printhead emits the light that contacts the surface of the photoconductor drum. The light turns on or off coinciding with the digital latent image. The light causes areas of the photoconductor drum surface to lose charge, resulting in a relative opposite polarity.

Develop
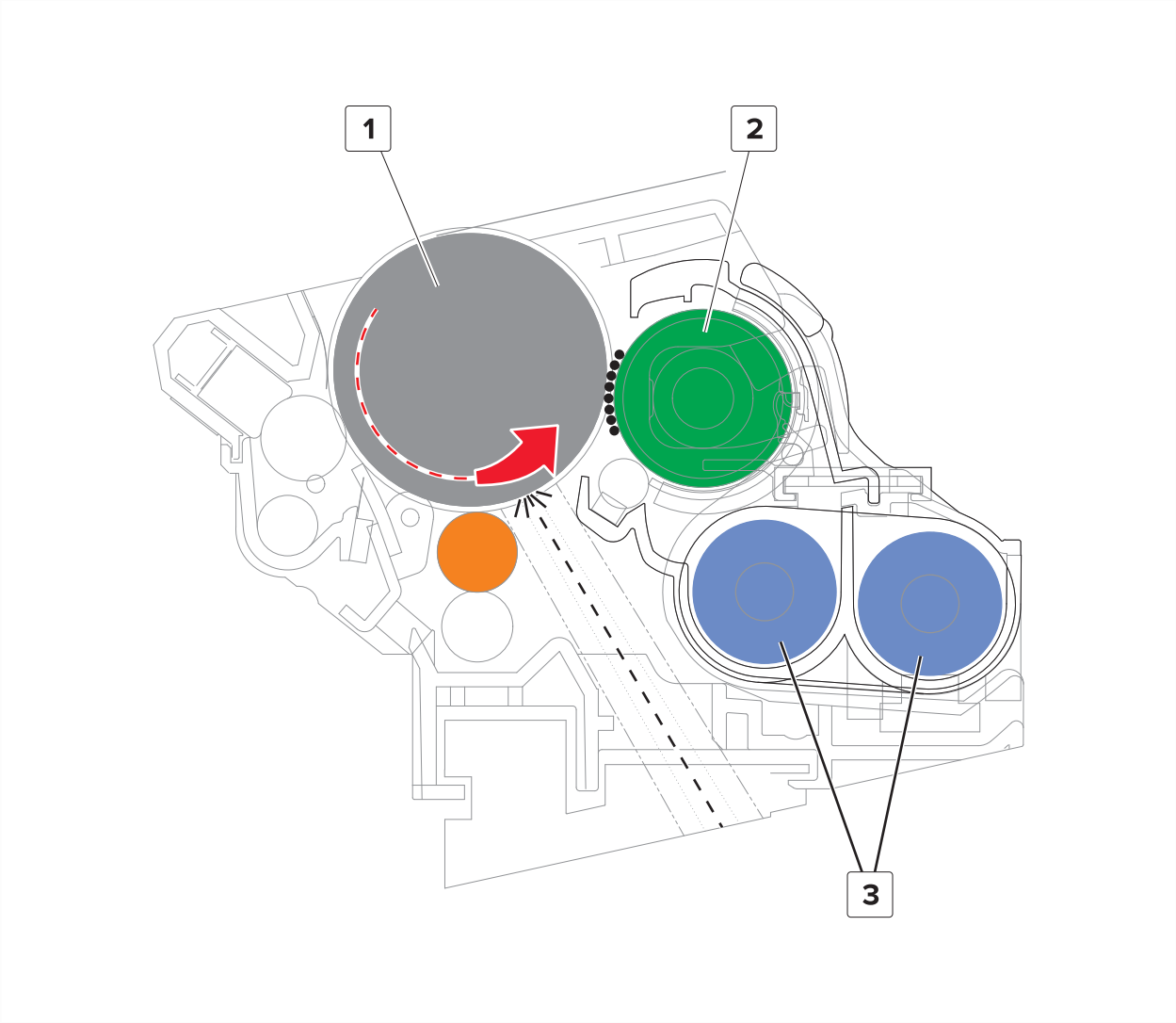
1	Photoconductor drum
2	Developer roller
3	Augers

The developer unit applies the toner from the toner cartridge to the photoconductor drum. The difference in charge causes the toner particles to attract to the photoconductor drum areas which are exposed to light.

First transfer
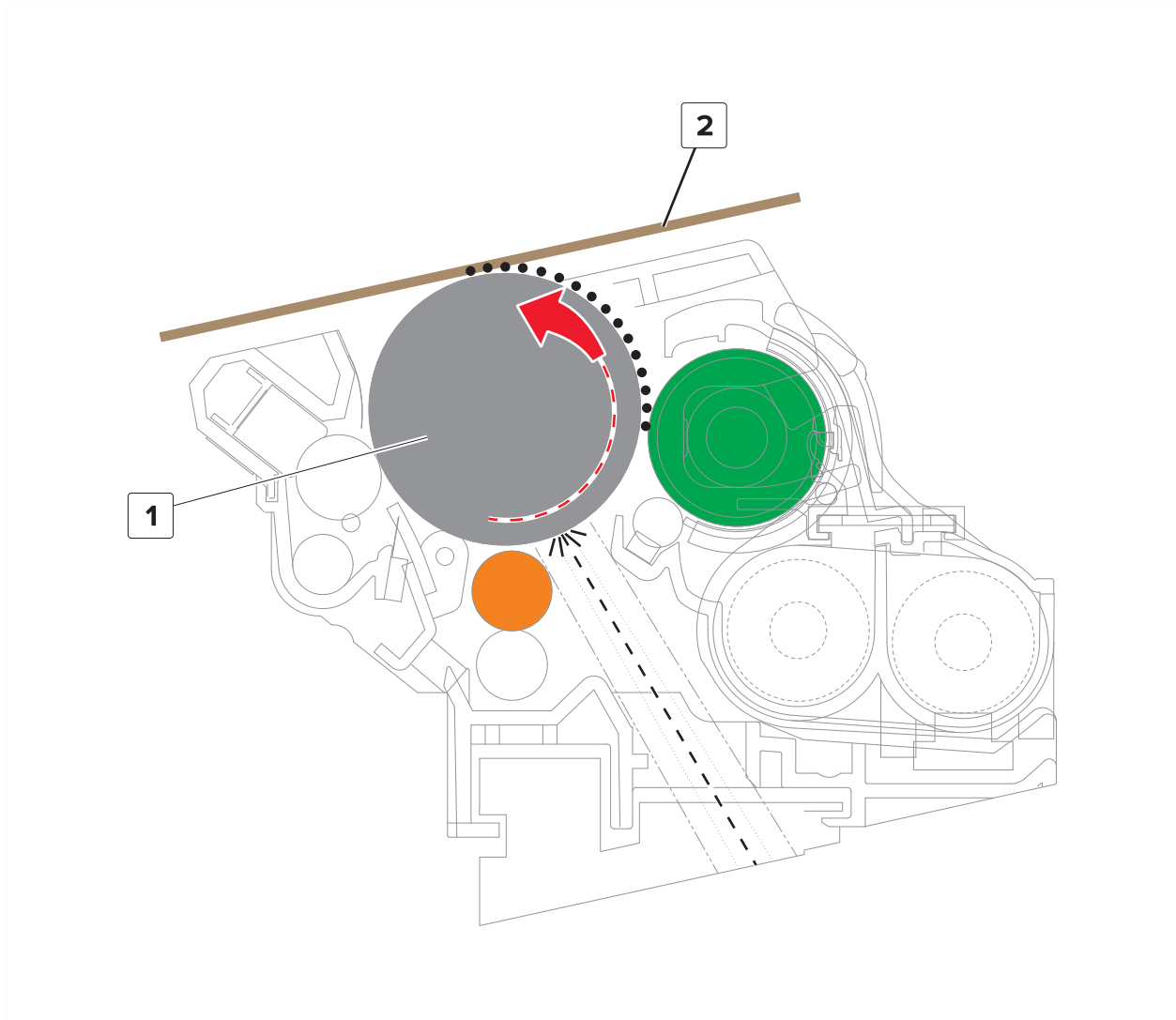
1	Photoconductor drum
2	Transfer belt

The developed image transfers from the photoconductor drum to the transfer belt. Due to relative opposite polarities, the transfer belt pressed against the photoconductor drum attracts the toner onto its surface.

Clean (photoconductor)
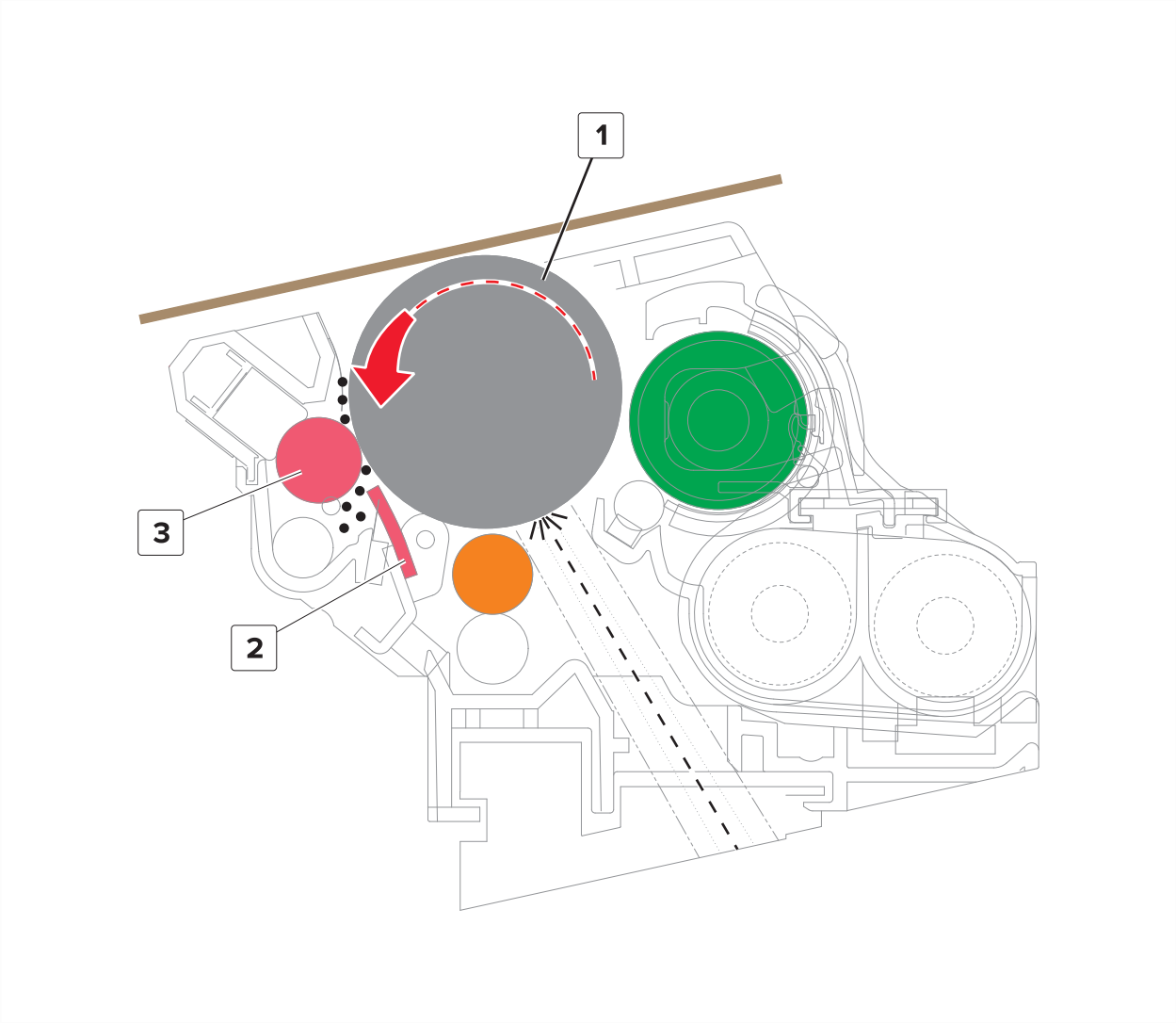
1	Photoconductor drum
2	Cleaning blade
3	Brush roller

The brush roller and the cleaning blade remove the toner residue from the photoconductor drum. The cycle (charge, expose, develop, first transfer, clean) repeats until the whole image is transferred to the transfer belt.

Second transfer
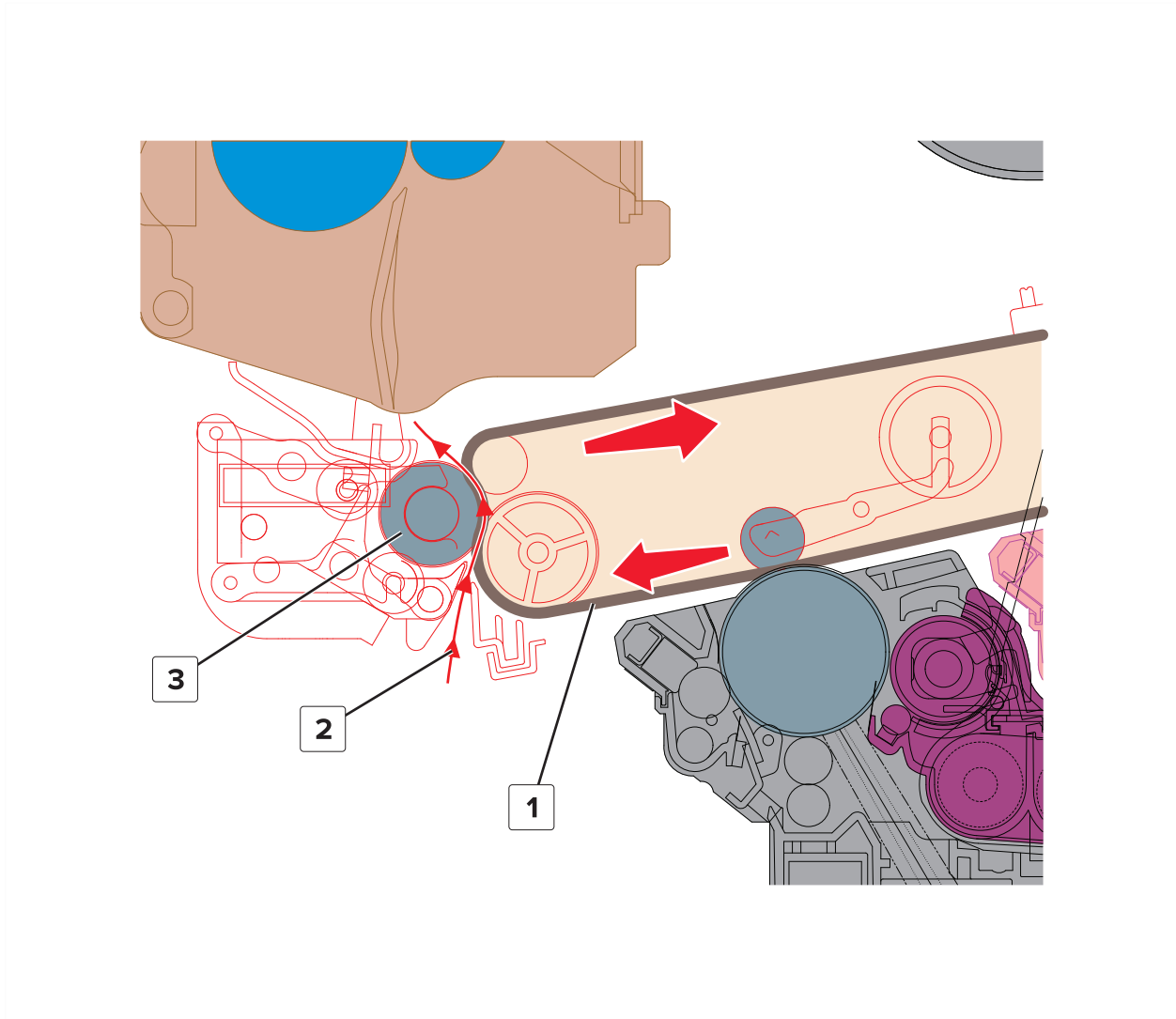
1	Transfer belt
2	Paper
3	Second transfer roller

The whole image from the transfer belt is transferred again, this time onto the paper. The paper, which is pressed between the transfer belt and transfer roller, attracts the toner to its surface.

Clean (transfer belt)
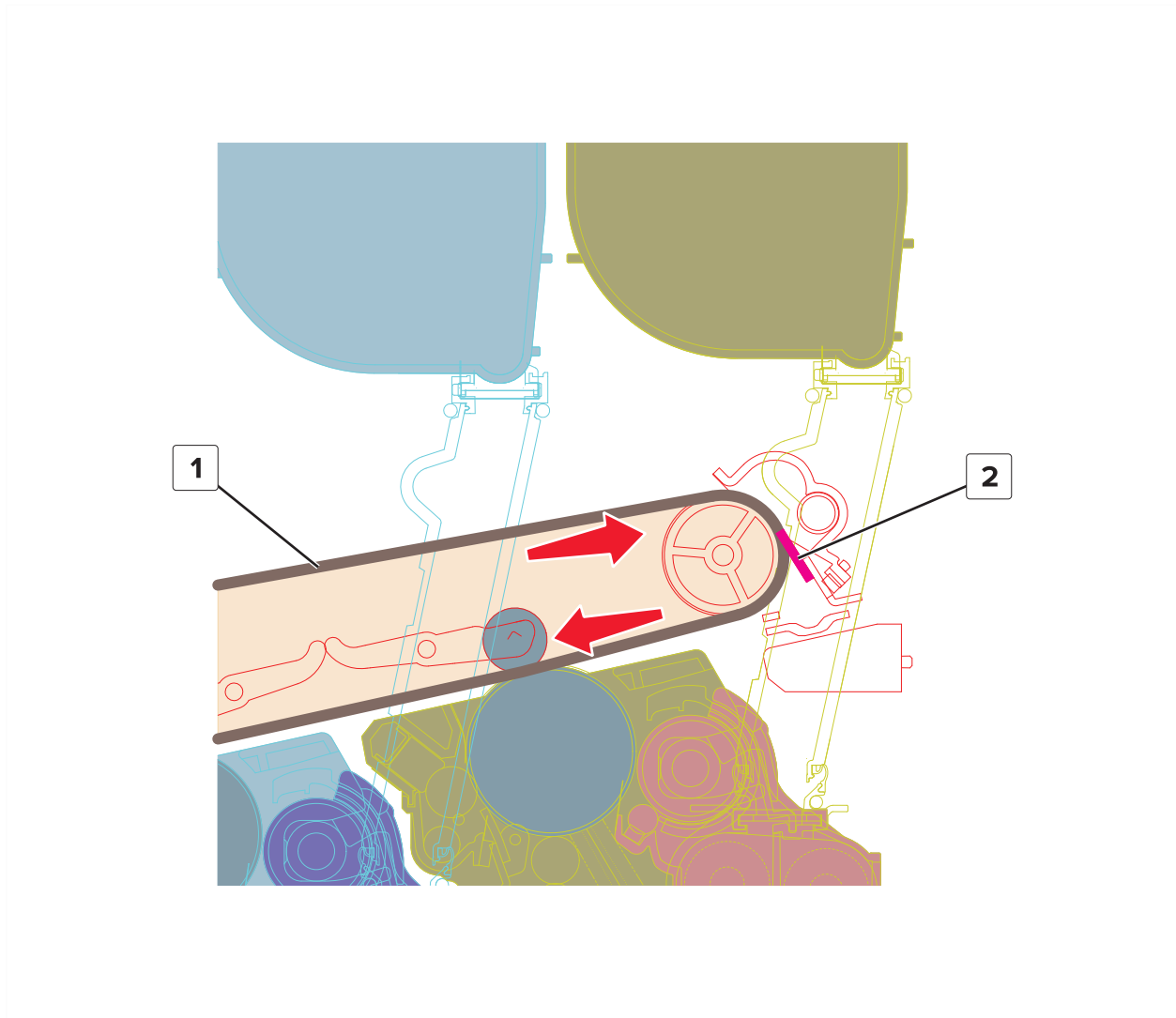
1	Transfer belt
2	Cleaning blade

Some residual toner remains applied to the surface of the transfer belt. To prevent contamination on the next image, a cleaning blade scrapes off the toner from the transfer belt surface. Waste toner from the transfer belt and photoconductor drum is transported to the waste toner bottle. The cycle (first transfer, second transfer, clean) repeats for the succeeding print jobs.

Fuse
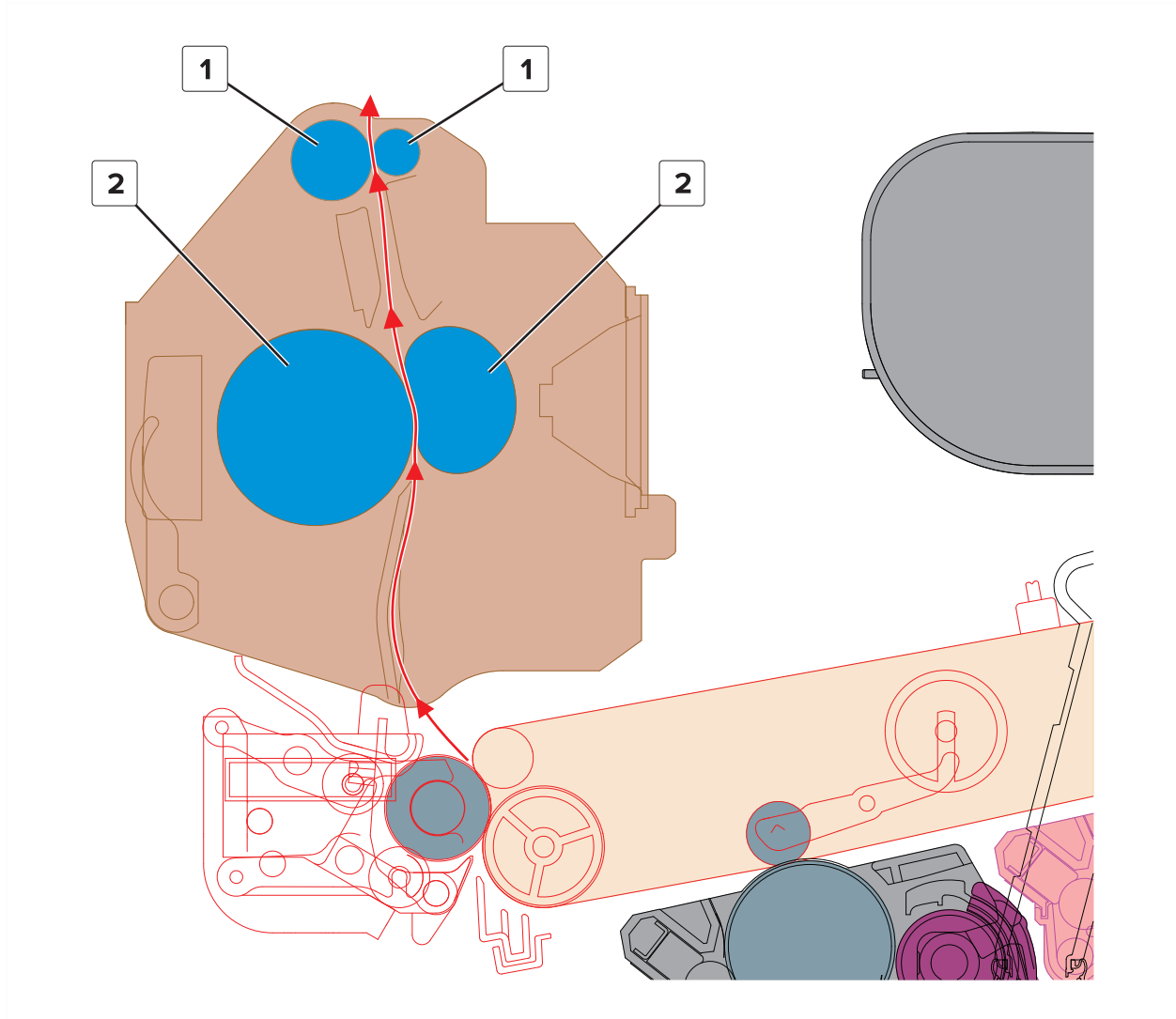
1	Decurler rollers
2	Fuser rollers

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

Fresh toner delivery drive
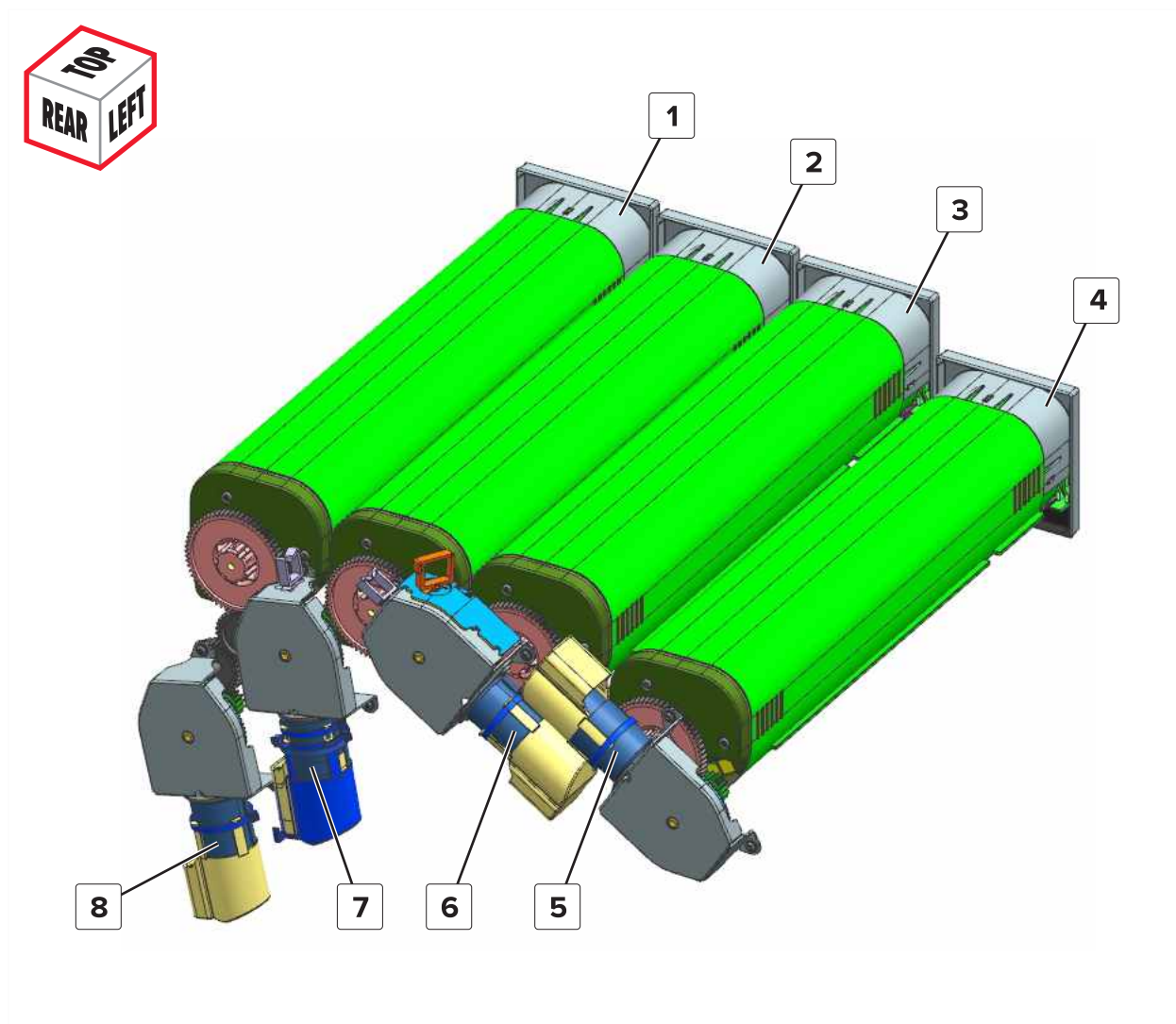
1	Toner cartridge (Y)
2	Toner cartridge (C)
3	Toner cartridge (M)
4	Toner cartridge (K)
5	Motor (K toner add)
6	Motor (M toner add)
7	Motor (C toner add)
8	Motor (Y toner add)

Toner cartridges supply fresh toner to the developer units. Inside the cartridges, the toner is agitated by paddles so that it is properly delivered to the developer unit.

A motor drives the paddle in each toner cartridge.

Developer drive
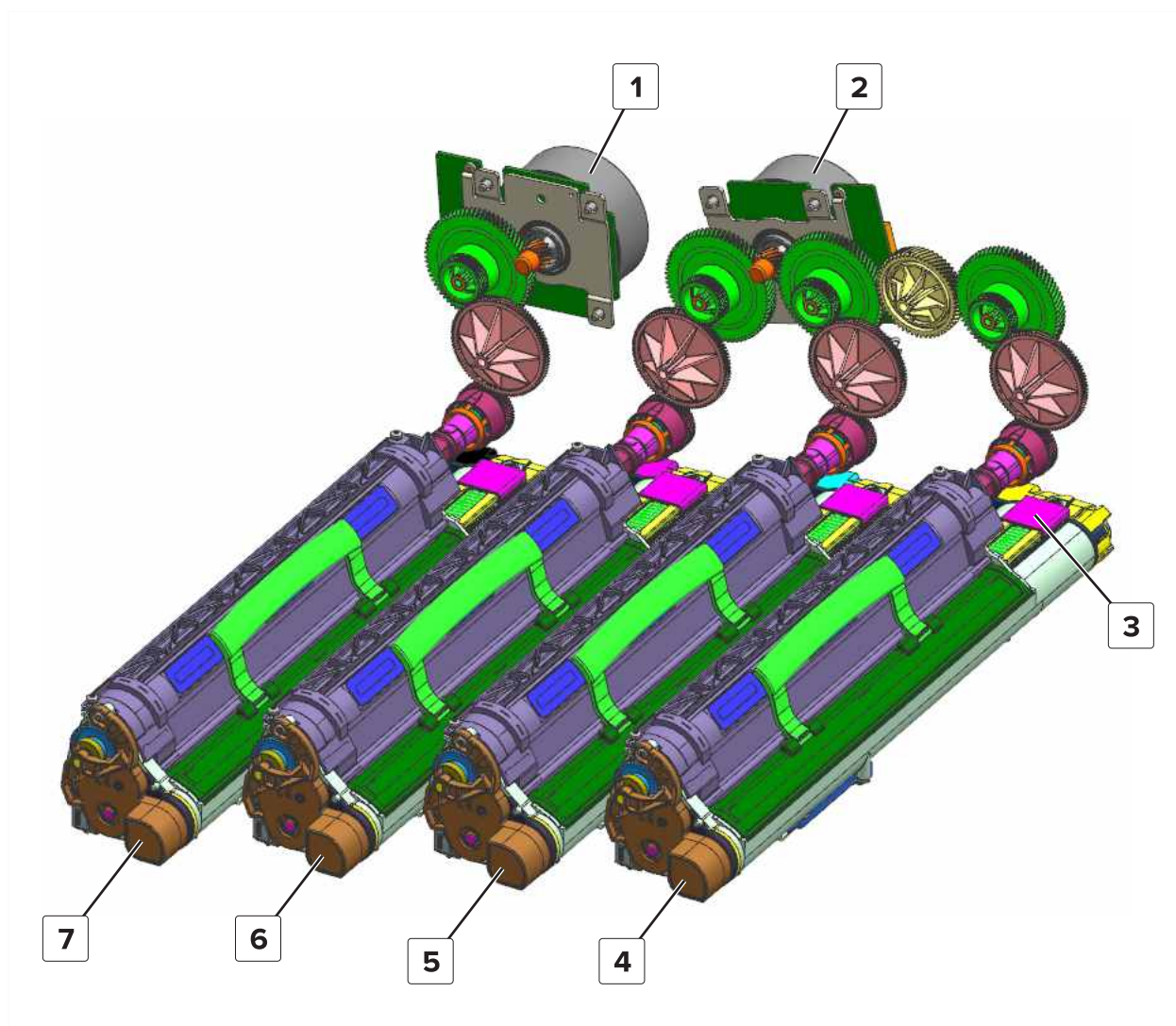
1	Motor (K developer)
2	Motor (CMY developers)
3	Shutter
4	Developer unit (Y)
5	Developer unit (C)
6	Developer unit (M)
7	Developer unit (K)

A shutter for each developer unit receives toner from the toner cartridge. Inside the developer unit, the toner is circulated by rotating augers so that it is evenly distributed. The developer roller also rotates to apply the toner particles to the photoconductor drum.

The C, M, and Y developer rollers and augers are driven by a motor. The K developer roller and augers are driven by a separate motor.

Photoconductor drive
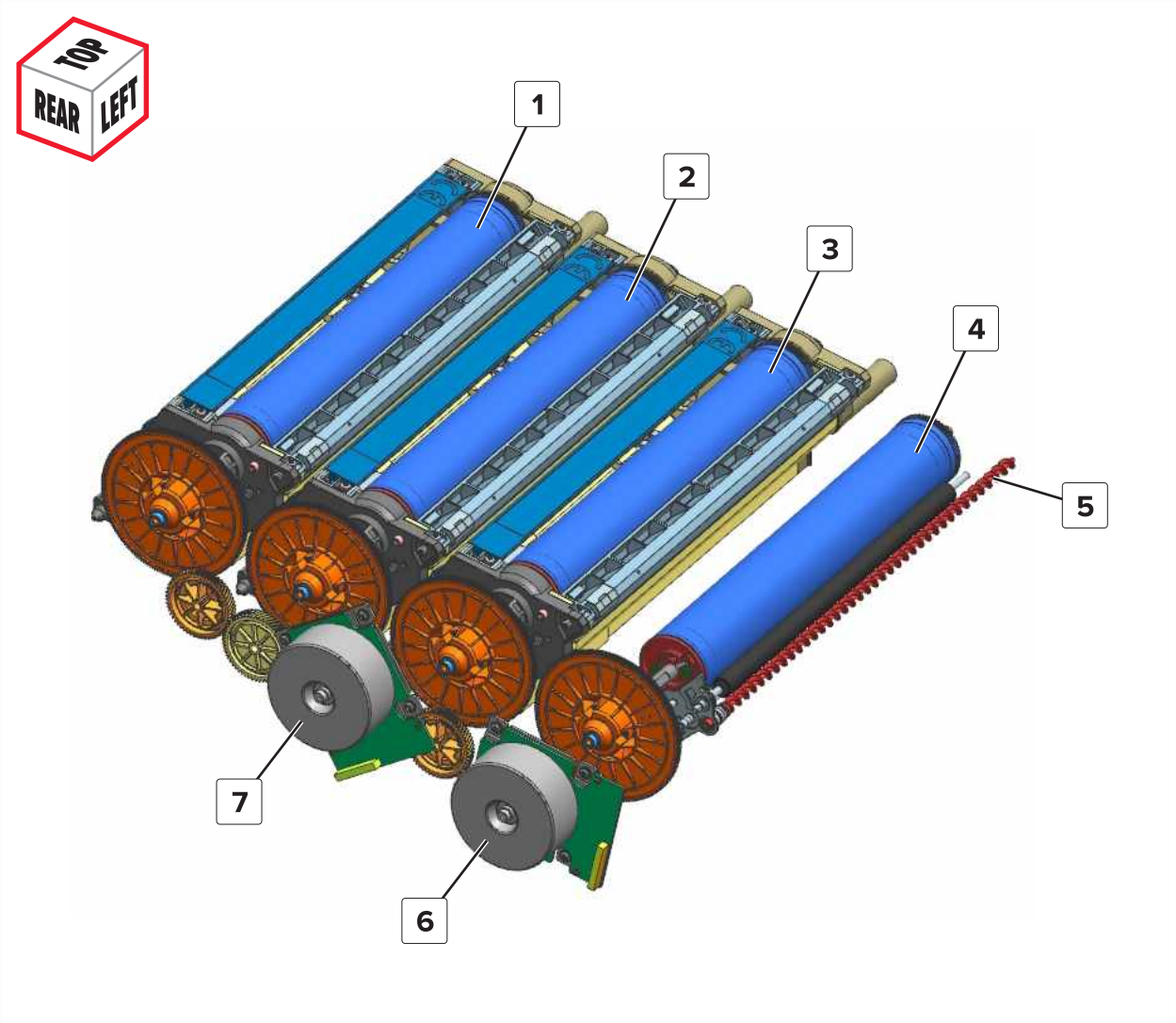
1	Photoconductor drum (Y)
2	Photoconductor drum (C)
3	Photoconductor drum (M)
4	Photoconductor drum (K)
5	Auger
6	Motor (K photoconductor)
7	Motor (CMY photoconductors)

The photoconductor drum rotates during the print cycle (charge, expose, develop, first transfer, clean). An auger for each photoconductor drum transfers the residual toner to the waste toner bottle.

The C, M, and Y photoconductor drums and augers are driven by a motor. The K photoconductor drum and auger are driven by a separate motor.

Black only retract (BOR) drive
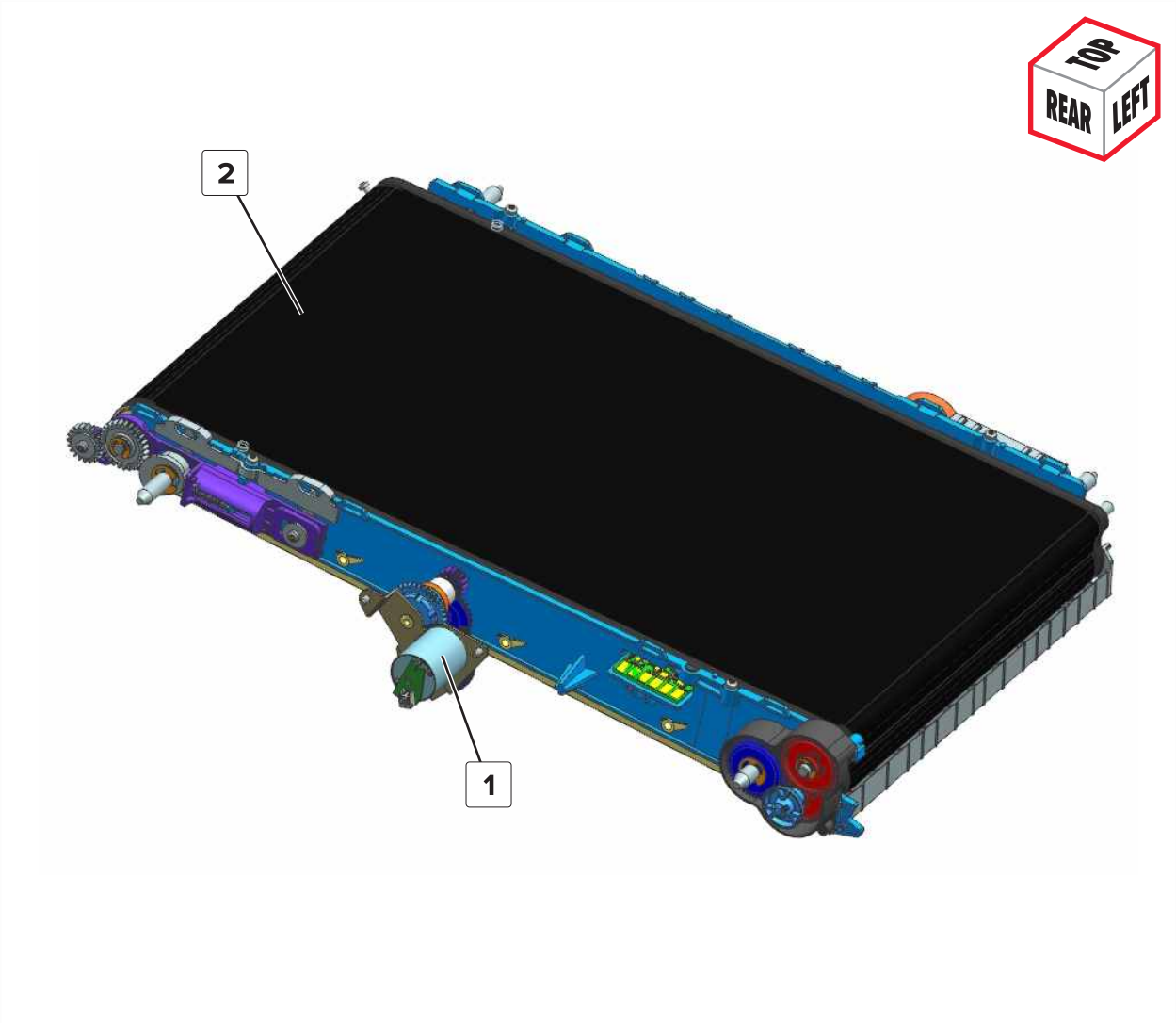
1	Motor (black only retract)
2	Transfer belt

For black and white print jobs, only the K photoconductor drum needs to be engaged with the transfer belt. For colorless printing, the C, M, and Y first transfer rollers inside the transfer belt retract to move away from the C, M, and Y photoconductor drums. As a result, image transfer only occurs on the K photoconductor drum.

The motor (black only retract) controls the positions of the first transfer rollers.

Waste toner delivery drive
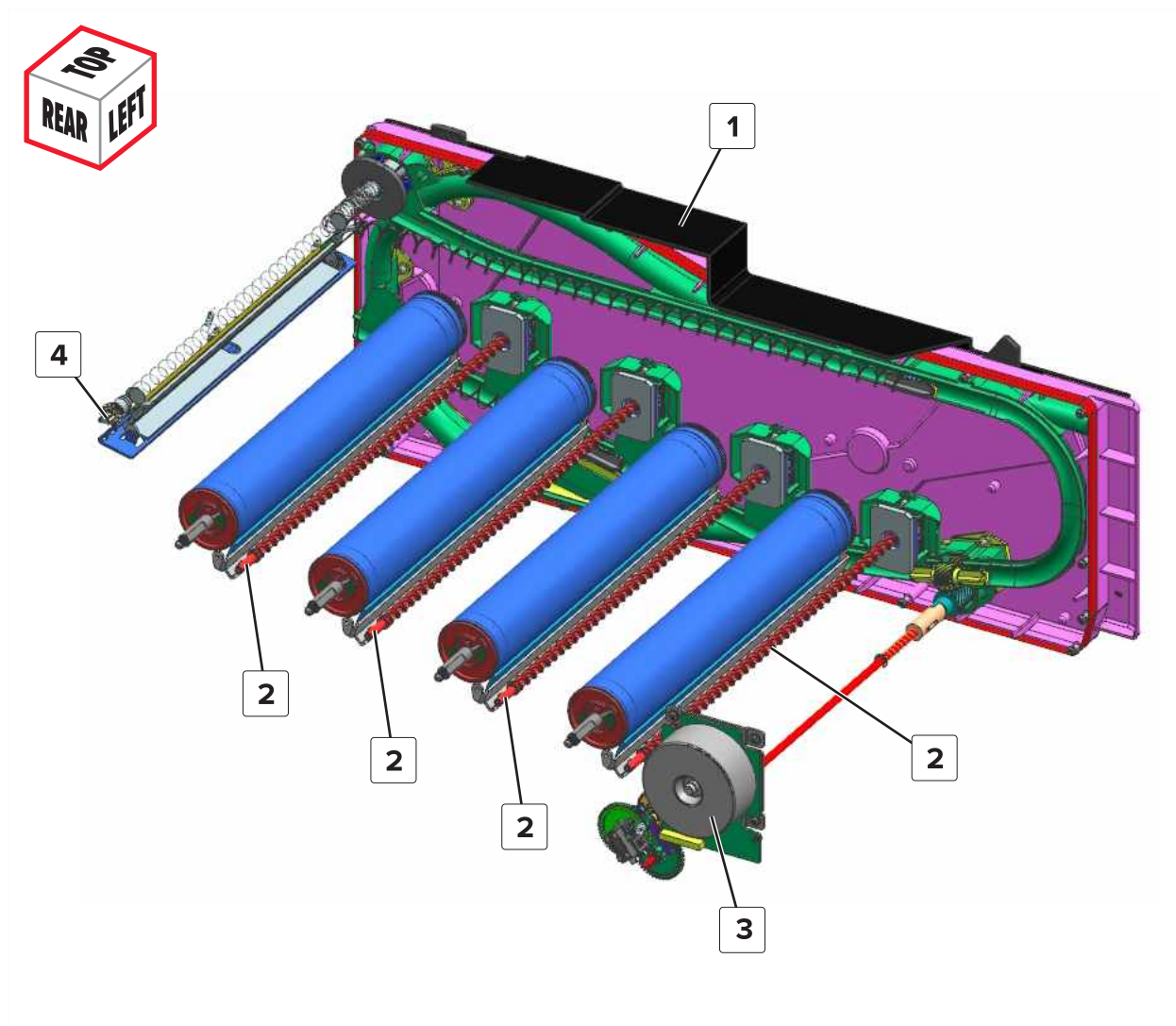
1	Waste toner bottle
2	Photoconductor cleaners
3	Motor (transfer belt)
4	Transfer belt cleaner

Toner residue from the photoconductor drums and transfer belt are removed by cleaners, and then transferred to the waste toner bottle.

Inside the waste toner bottle, augers uniformly collect the toner to maximize the container capacity.

The motor (transfer belt) drives the augers inside the waste toner bottle.

Printhead lens cleaner drive
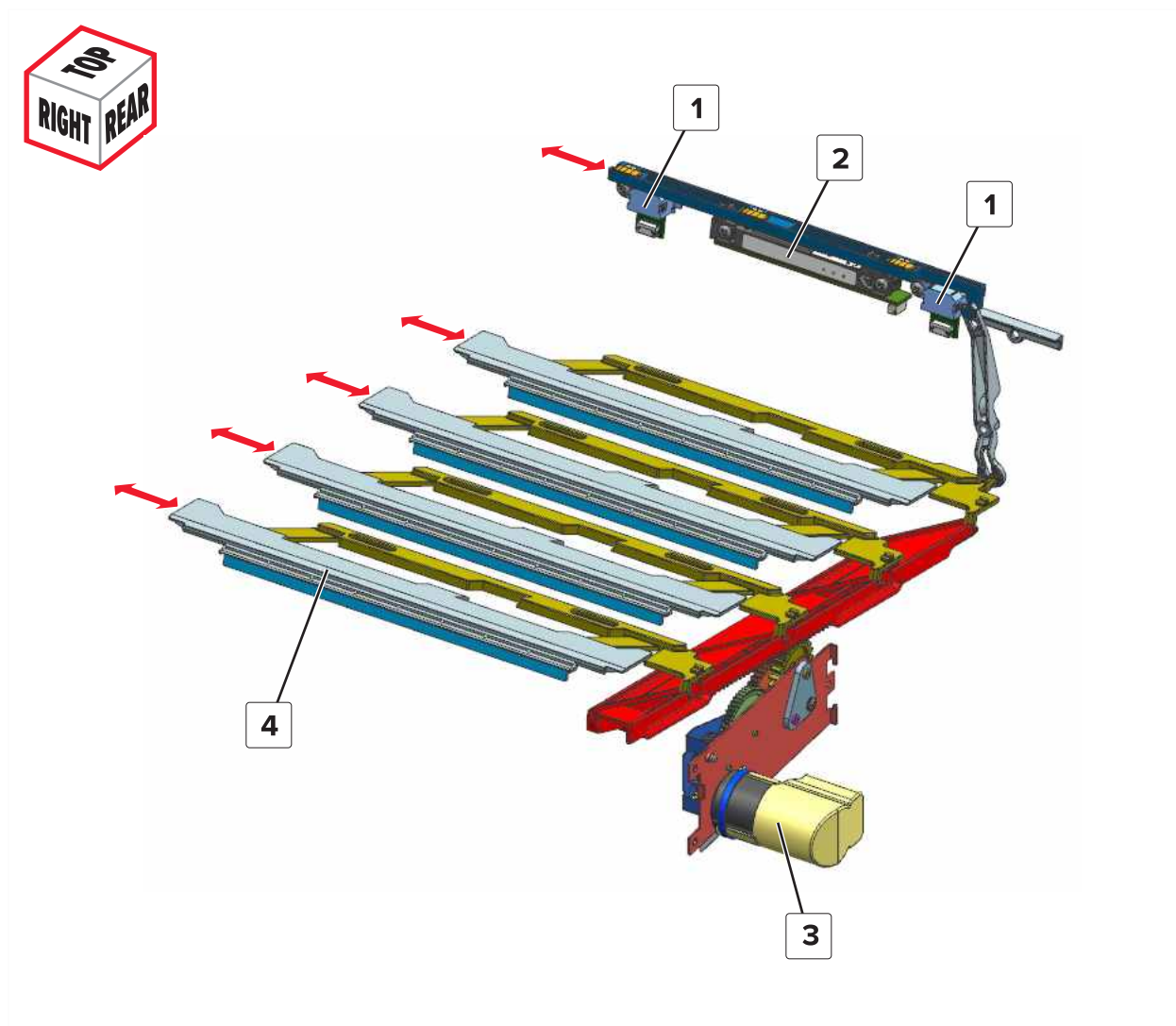
1	Sensors (auto alignment)
2	Sensor (TPS)
3	Motor (printhead wiper)
4	Printhead wiper brush

The printhead lenses are cleaned by wiper brushes so that they are free from contamination. At the same time, the sensor (TPS) and the sensors (auto alignment) are also cleaned.

Note: TPS stands for *toner patch sensing*. The sensor (TPS) detects the toner density of individual toners on the belt. The sensor (auto alignment) checks if the different colors are aligned with each other.

The motor (printhead wiper) drives the wipers and TPS mechanism.

Printer operation

Printer sections
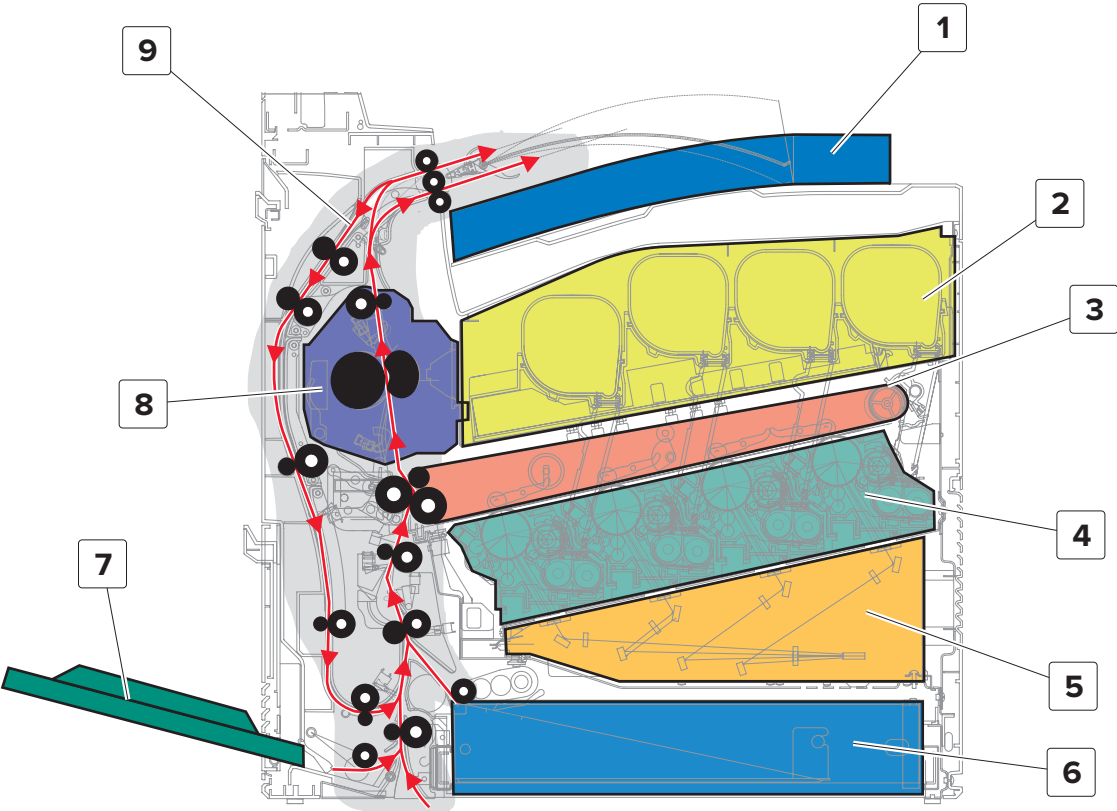
1	Bin
2	Toner supply
3	Transfer belt
4	Imaging assembly
5	Printhead
6	Tray 1
7	MPF
8	Fuser
9	Paper path

Printer paper path

Standard print job
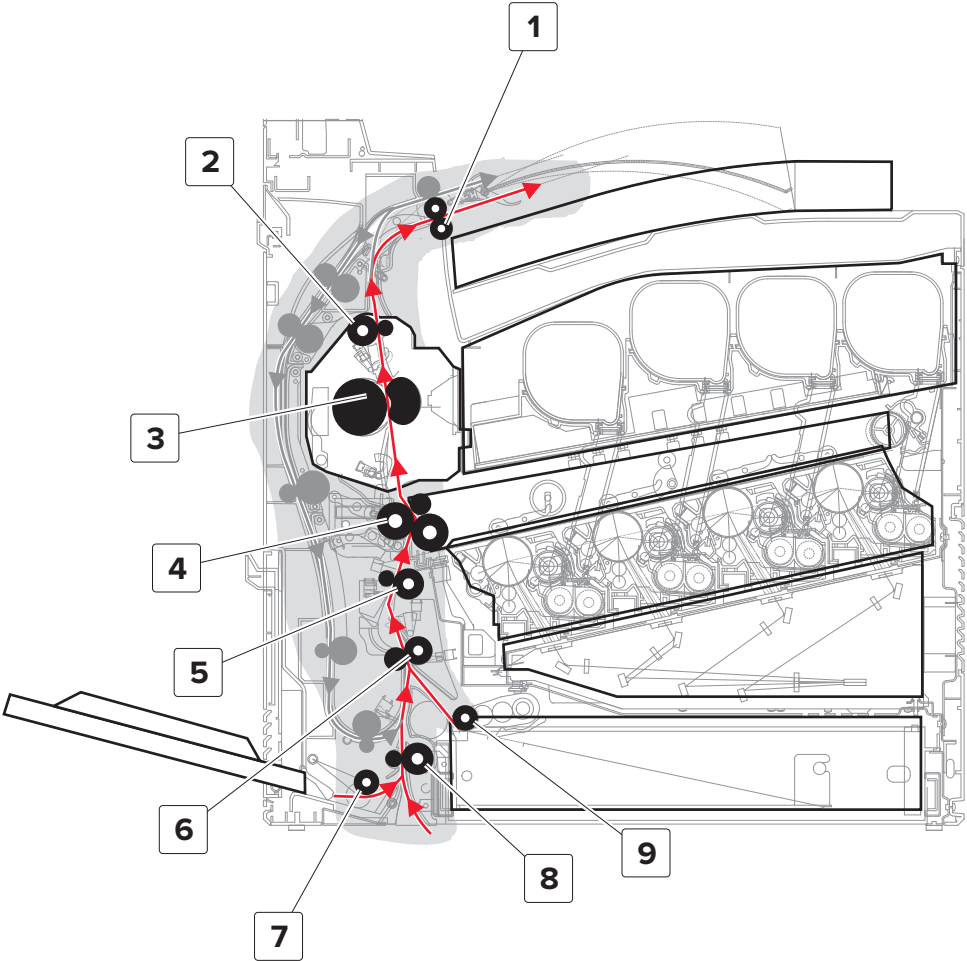
1	Media exit roller
2	Fuser decurler roller
3	Fuser heat belt
4	2nd transfer roller
5	Deskew roller
6	Isolation roller
7	MPF pick roller
8	MPF/pass-through roller
9	Tray 1 pick roller

Paper from tray 1 is picked and fed by the tray pick roller to the isolation roller. For MPF print jobs, the paper is picked and fed by the pick roller to the MPF/pass-through roller before it goes to the isolation roller.

The isolation roller transports the paper to the deskew roller where skew correction is performed.

At the 2nd transfer roller, the developed image from the transfer belt is transferred to the paper to create the printed image.

As the paper passes the fuser heat belt, heat and pressure are applied to permanently bond the toner to the paper.

At the fuser, a decurler roller counteracts the curl to flatten the paper.

Once printing is done, the paper is ejected out of the printer by the exit rollers.

Duplex print job

1	Duplex exit roller
2	Duplex path rollers
3	Isolation roller
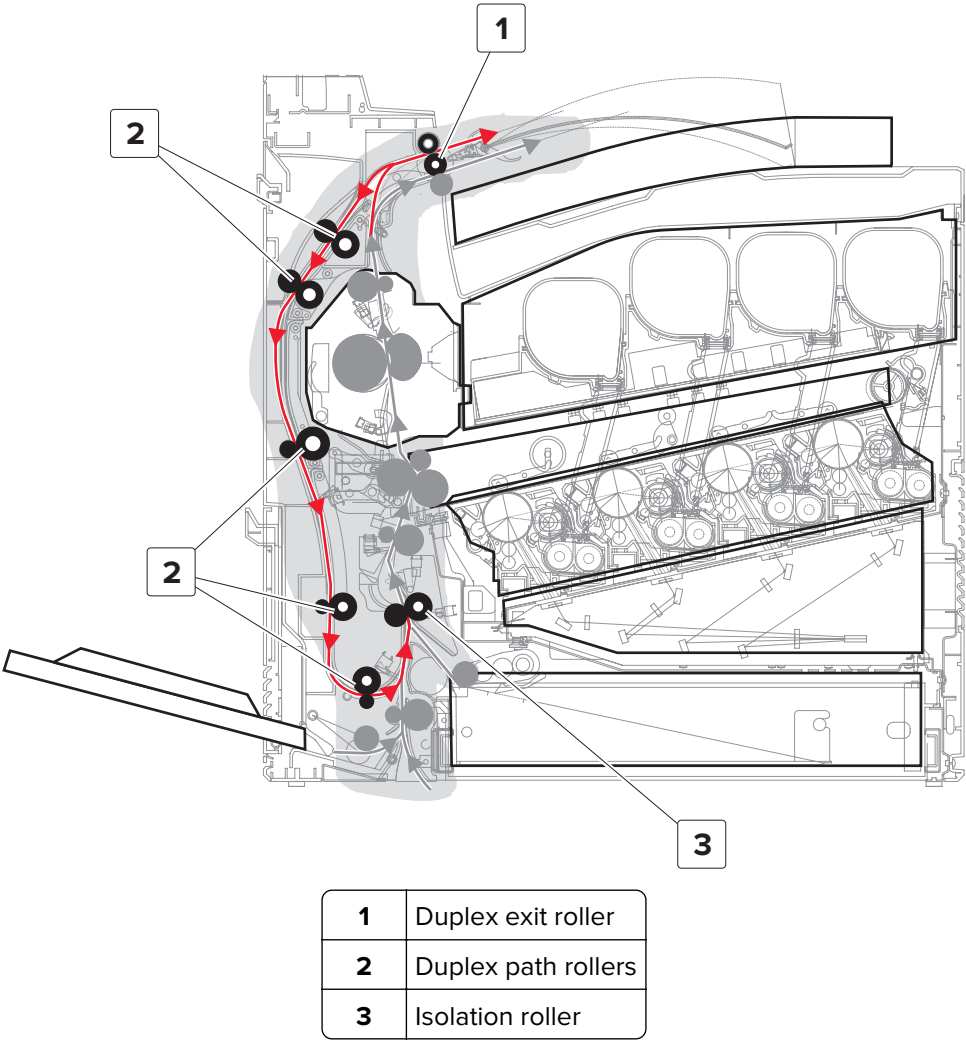
After the first side is printed, the paper is diverted to the top of the duplex exit roller. The duplex path opens, and then the paper reverses direction to get its opposite page printed.

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

Printer paper path sensors

Standard print job
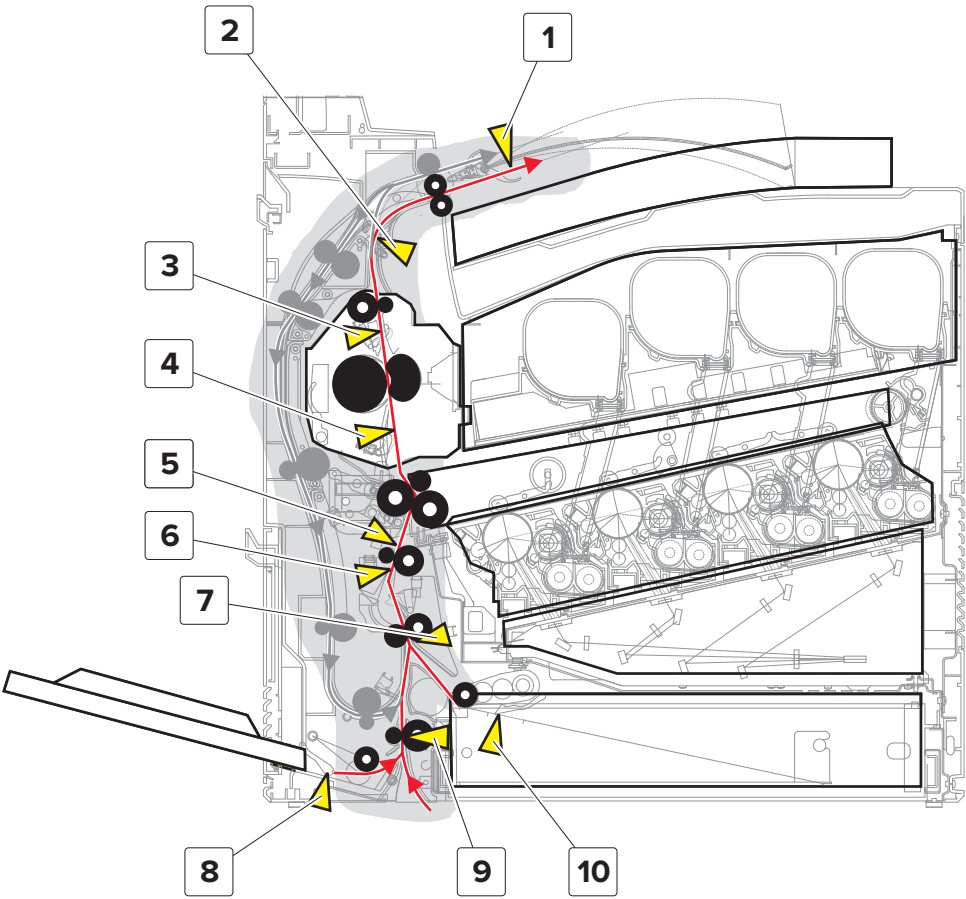
#	Sensor	Function
1	Sensor (output bin)	Detects if the bin is full.
2	Sensor (redrive buckle)	Detects buckled paper at the redrive area. If the sensor is triggered and the paper is long (>14 in.), then the exit rollers rotate slower to relax the tension.
3	Sensor (fuser exit)	Detects the paper exiting the fuser.
4	Sensor (fuser buckle)	Detects buckled paper at the fuser area. Once the sensor is triggered, the fuser rollers rotate faster to reduce the buckle.
5	Sensor (deskew roller exit)	Detects the paper exiting the deskew roller.
6	Sensor (deskew roller entry)	Detects the paper entering the deskew roller.
7	Sensor (input)	Detects the paper passing the isolation roller.
8	Sensor (MPF media present)	Detects if paper is in the MPF tray.
9	Sensor (MPF/pass-through)	Detects paper fed from the MPF and optional trays.
10	Sensor (tray 1 media out)	Detects if the tray is empty.

Duplex print job

1	Sensor (duplex path 1)
2	Sensor (duplex path 2)
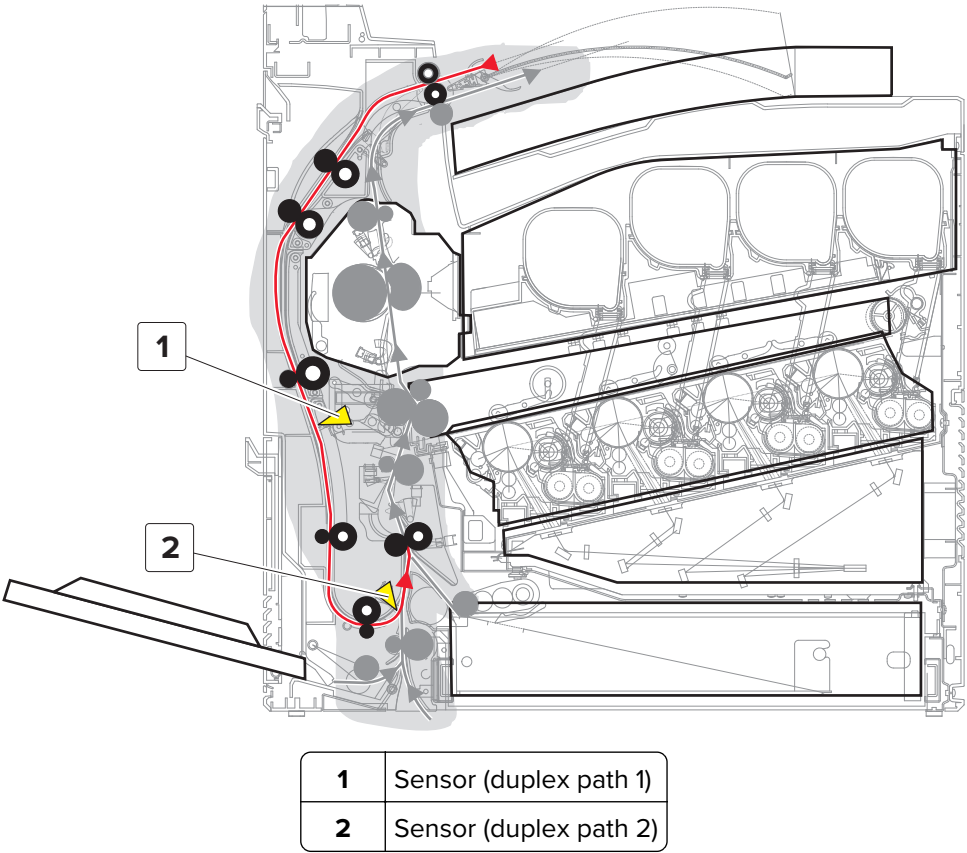
Two sensors detect the paper traveling along the duplex path.

MPF pick drive
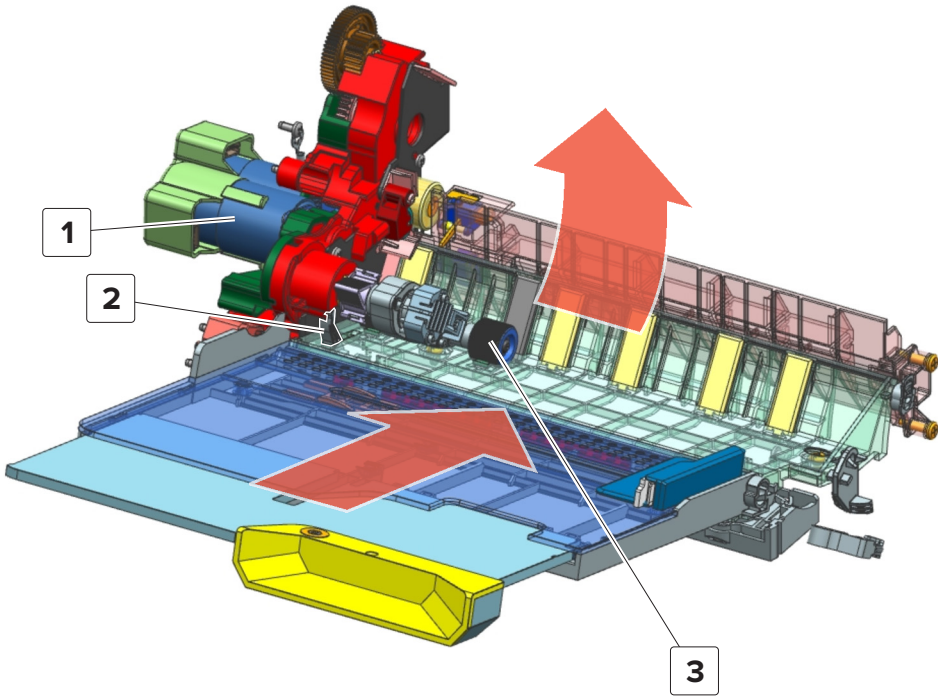
1	Motor (MPF pick)
2	MPF media present sensor actuator
3	Pick roller

The MPF pick roller feeds the paper into the printer.

The motor (MPF pick) controls the pick roller. The sensor (MPF media present) detects if the MPF tray is empty.

Tray 1 lift and pick drive
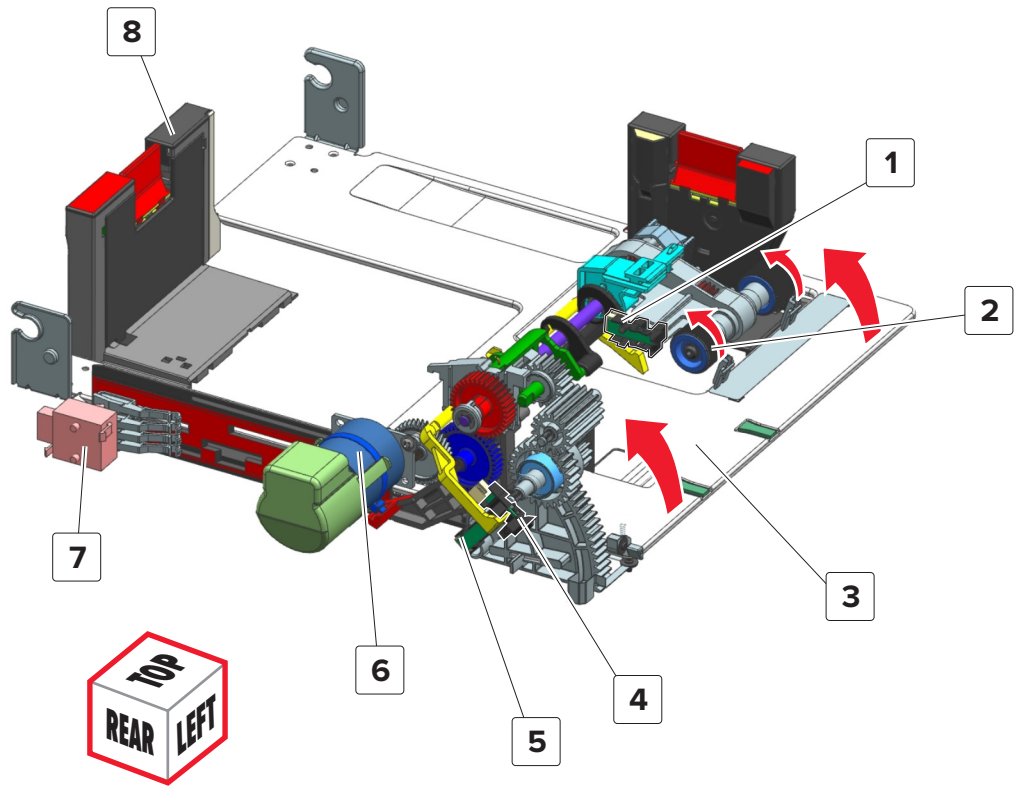
1	Sensor (pick roller index)
2	Pick roller
3	Lift plate
4	Sensor (media out)
5	Sensor (media low)
6	Motor (pick)
7	Sensor (media size)
8	Paper guide

In preparation for feeding, the lift plate raises to push the paper against the pick roller. The lift plate stops pushing at the point where the pick roller is at the proper height for picking.

After the pick roller is in position, it feeds the topmost paper to the isolation roller. Separator pads opposite the pick roller ensure that only one sheet is fed at a time.

The motor (pick) drives the lift plate and pick roller. The sensor (media out) detects if the tray is empty.

MPF/pass-through and isolation drive
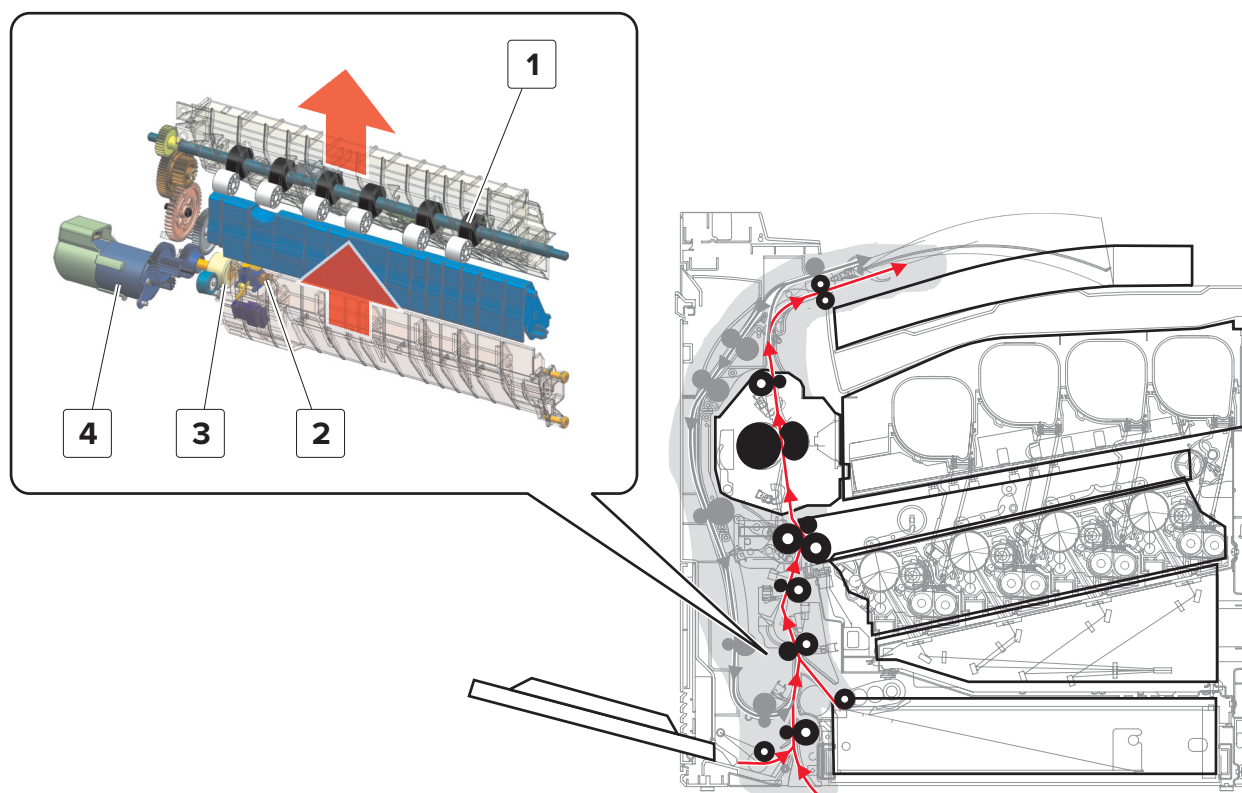
1	Isolation roller
2	Sensor (MPF/pass-through)
3	MPF/pass-through roller
4	Motor (isolation)

Paper coming from tray 1 and duplex print jobs are received by the isolation roller.

Paper coming from MPF and optional tray print jobs enter the MPF/pass-through roller before going to the isolation roller.

The isolation roller pushes the paper to the deskew roller.

The motor (isolation) drives the MPF/pass-through and isolation rollers.

Registration drive
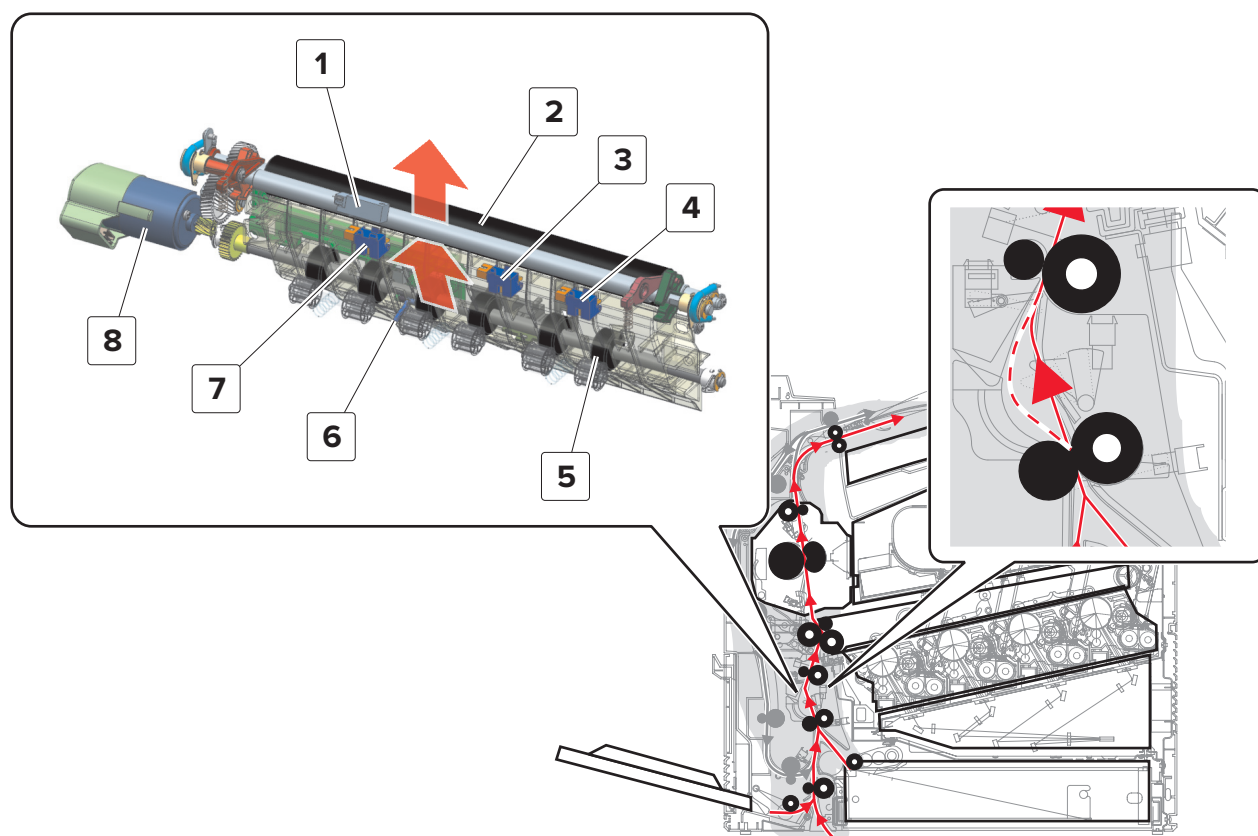
1	Sensor (deskew roller exit)
2	Deskew roller
3	Sensor (narrow media)
4	Sensor (near narrow media)
5	Isolation roller
6	Input sensor actuator
7	Sensor (deskew roller entry)
8	Motor (deskew)

During registration, the paper stops at the deskew roller to undergo skew correction. The isolation roller pushes the paper against the counterrotating deskew roller. As the paper buckles, its leading edge aligns with the deskew roller. After the skew is corrected, the deskew roller reverses to its normal rotation to continue moving the paper to the transfer belt.

The motor (deskew) drives the deskew rollers.

Transfer belt drive

1	Motor (transfer belt)
2	2nd transfer roller
3	Transfer belt
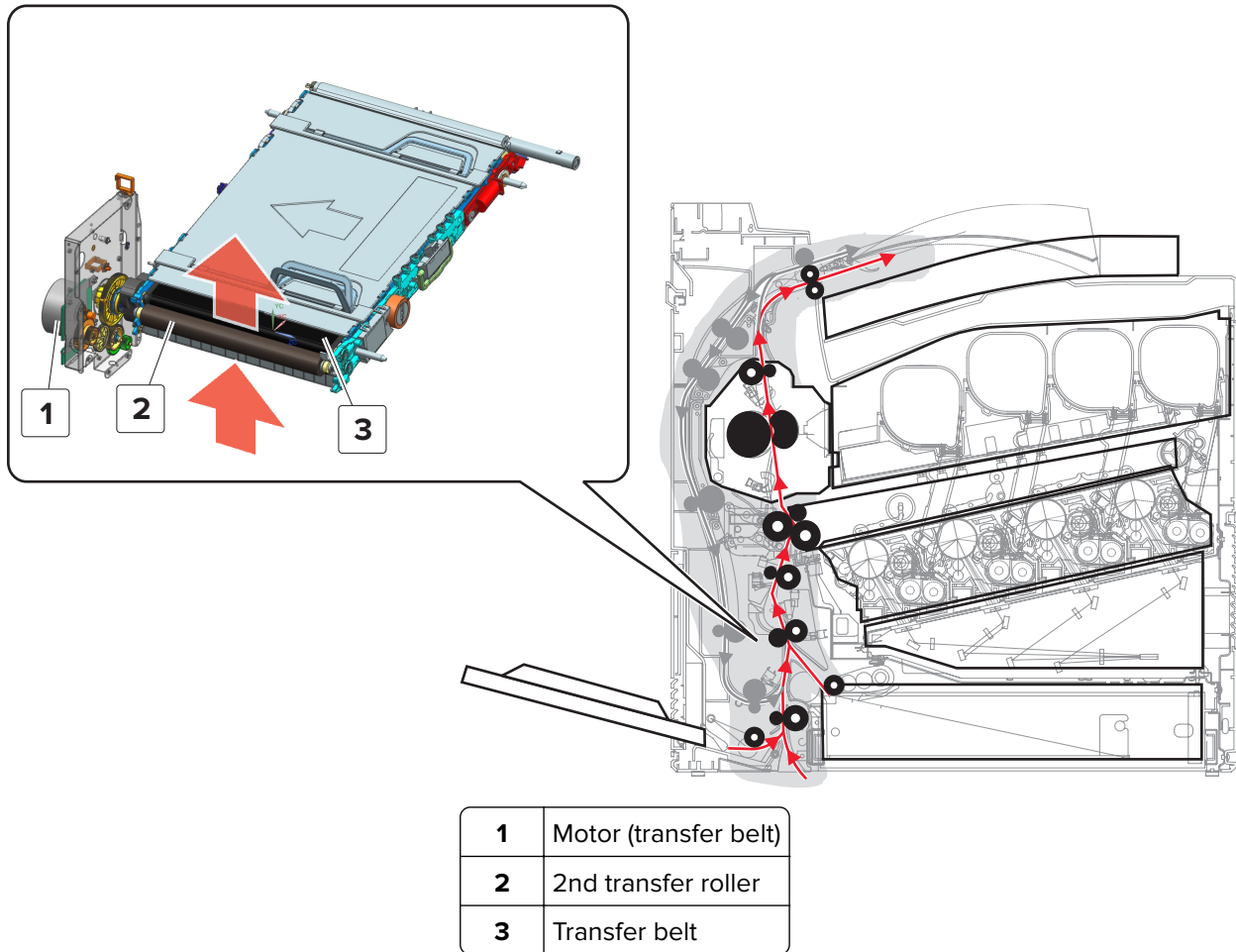
During second transfer, the developed image from the transfer belt is transferred to the paper to create the printed image. Paper from the deskew roller passes the 2nd transfer roller, and then moves towards the fuser.

The motor (transfer belt) drives the transfer belt.

Fuser drive

1	Motor (fuser)
2	Fuser decurler roller
3	Fuser heat belt
4	Fuser backup roller
5	Heat pipe
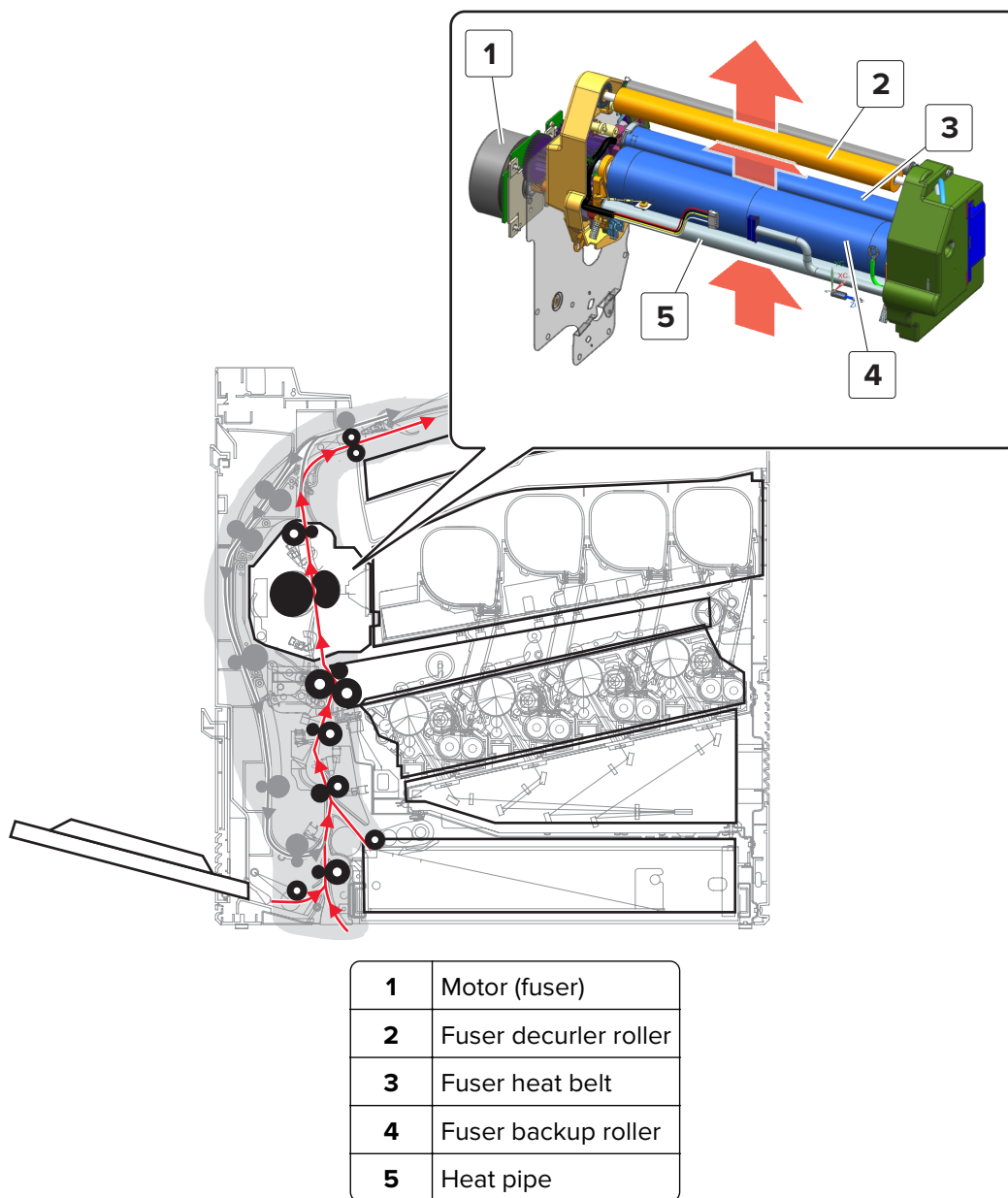
As the paper passes between the fuser heat belt and backup roller, heat and pressure are applied to permanently bond the toner to the paper.

As the paper exits the fuser, the decurler roller counteracts the curl to flatten the paper.

The motor (fuser) drives the fuser rollers.

Exit and redrive drive
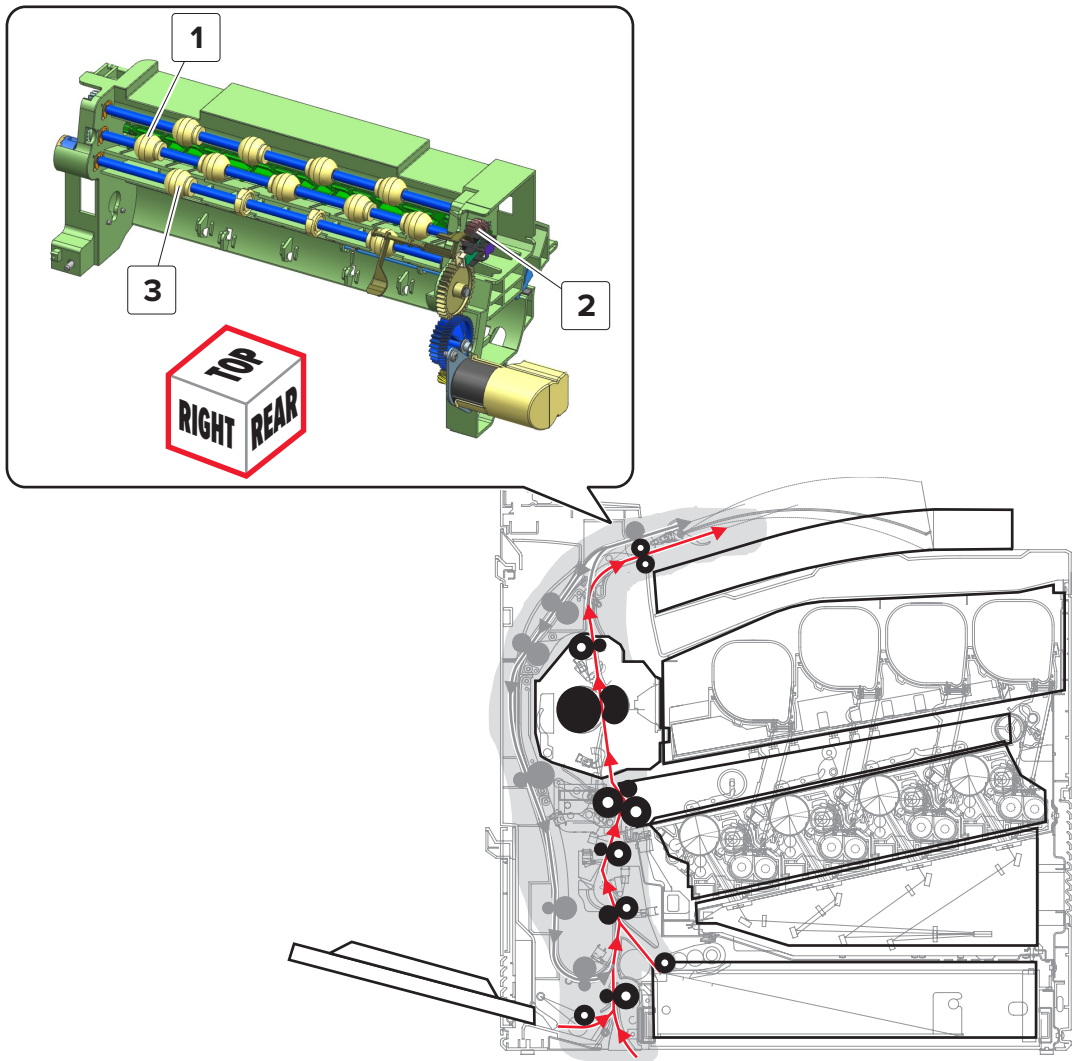
1	Duplex exit roller
2	Sensor (bin full)
3	Media exit roller

For standard print jobs, the paper exits on top of the media exit roller.

For duplex print jobs, the paper is diverted on top of the duplex exit roller before feeding it for printing on its opposite side.

The motor (redrive) controls the exit rollers.

Diverter drive

Standard print job

1	Duplex exit roller
2	Media exit roller
3	Motor (duplex diverter)
4	Duplex diverter
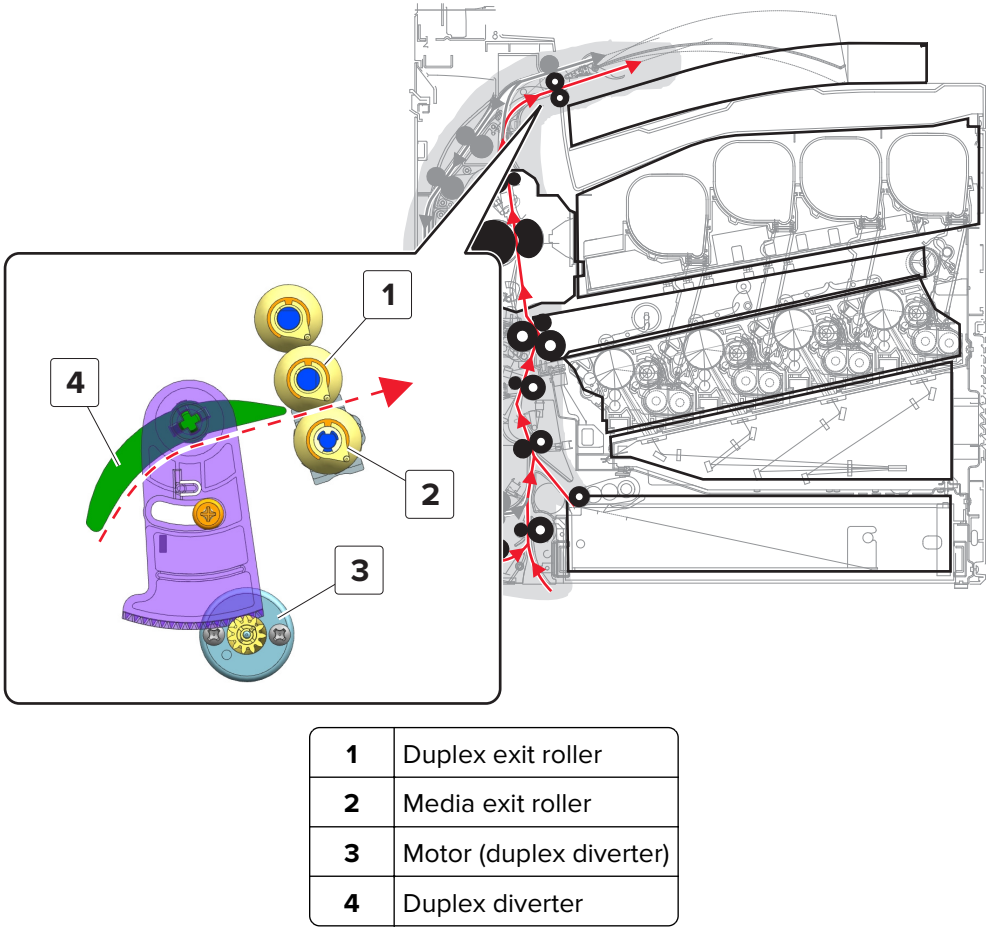
The paper passes under the diverter, and then exits between the duplex exit roller and media exit roller.

Duplex print job
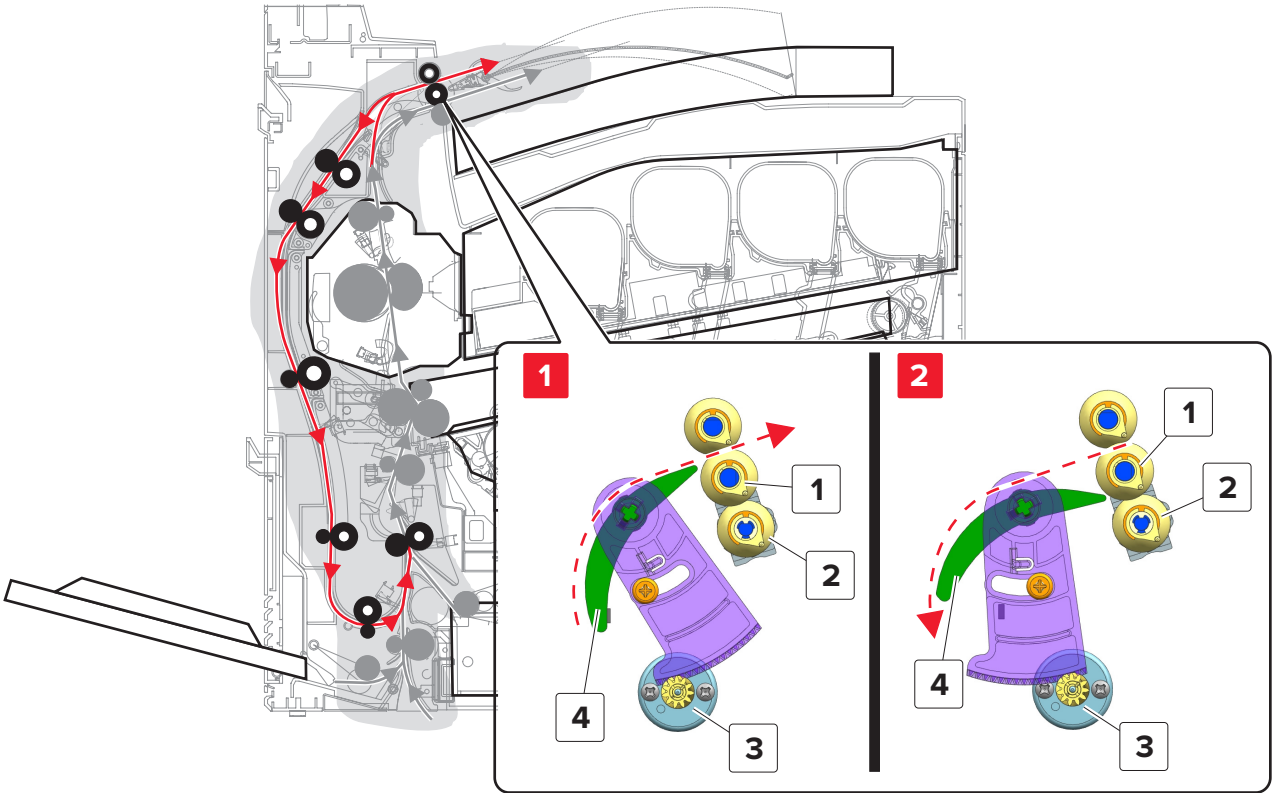
1	Duplex exit roller
2	Media exit roller
3	Motor (duplex diverter)
4	Duplex diverter

Redrive sequence:

1 The diverter switches to push the paper to the top of the duplex exit roller.

2 The diverter switches again to close the standard paper path. The duplex exit roller reverses to feed the paper to the duplex paper path.

The motor (duplex diverter) controls the diverter.

Duplex path drive

1	Upper duplex path rollers
2	Motor (duplex)
3	Lower duplex path rollers
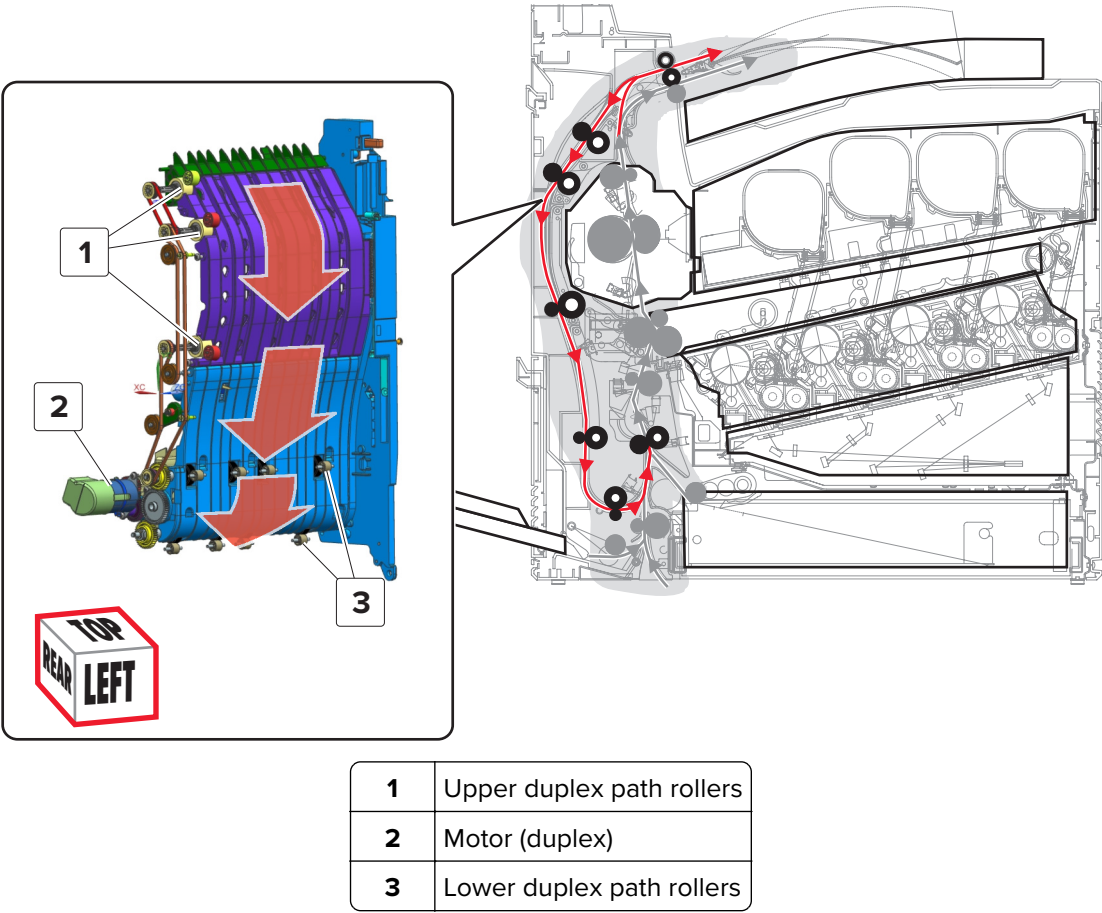
Paper fed from the duplex exit roller travels along the duplex path rollers and reenters the isolation roller.

The motor (duplex) drives the rollers.

2200-sheet tray operation

Paper presence and size detection
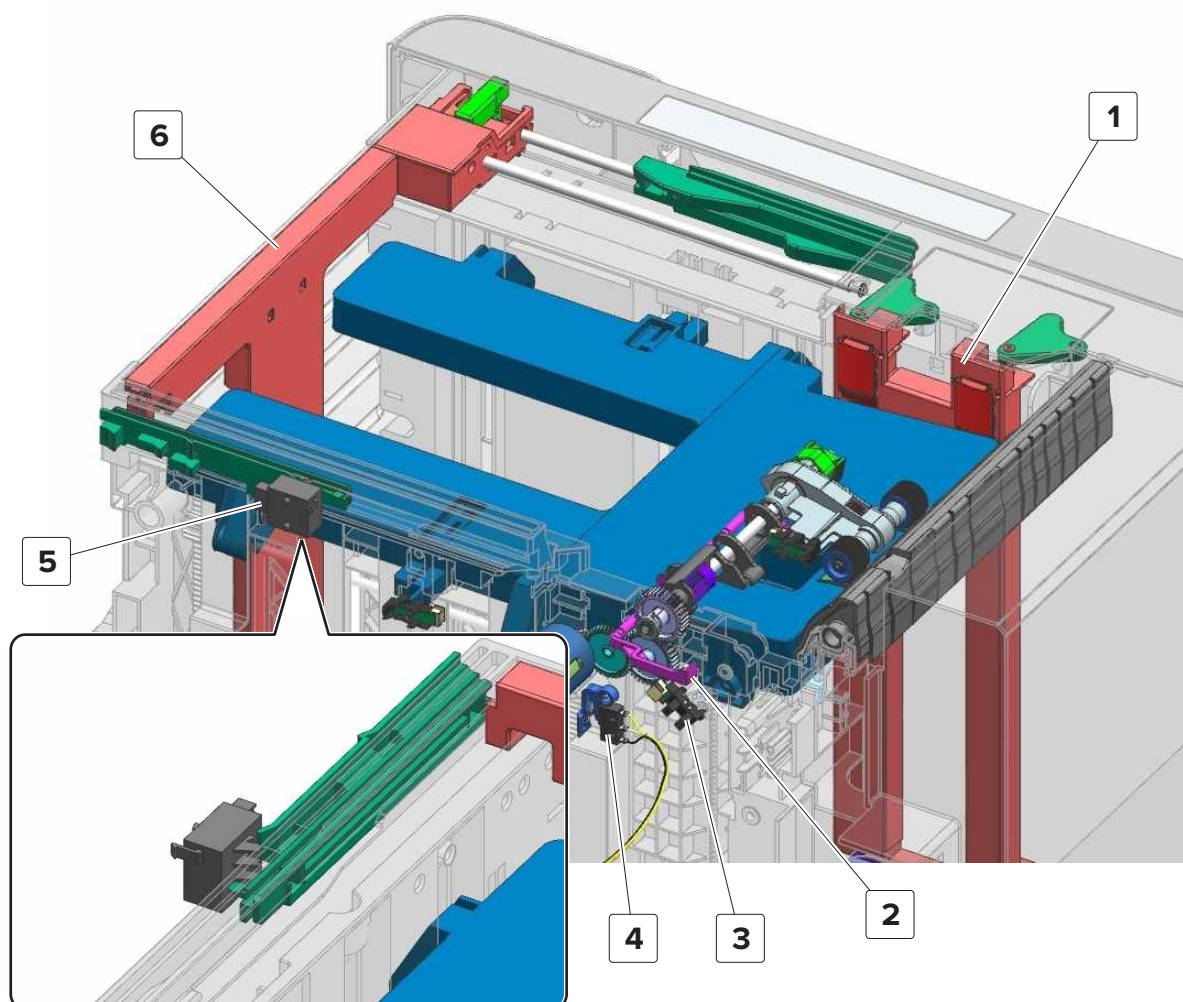
1	2200-sheet tray media width guide
2	2200-sheet tray media out actuator
3	Sensor (2200-sheet tray media out)
4	2200-sheet tray wake up switch
5	Sensor (2200-sheet tray media size)
6	2200-sheet tray media length guide

When the tray insert is pulled, the switch (2200-sheet tray wake up) wakes the printer from Hibernate/Sleep mode.

Triggered by the media out actuator, the sensor (2200-sheet tray media out) then detects that there is no paper in the tray. The positions of the guides determine the dimensions of the paper. The sensor (2200-sheet tray media size) detects the position of the guides.

Paper lift and feed
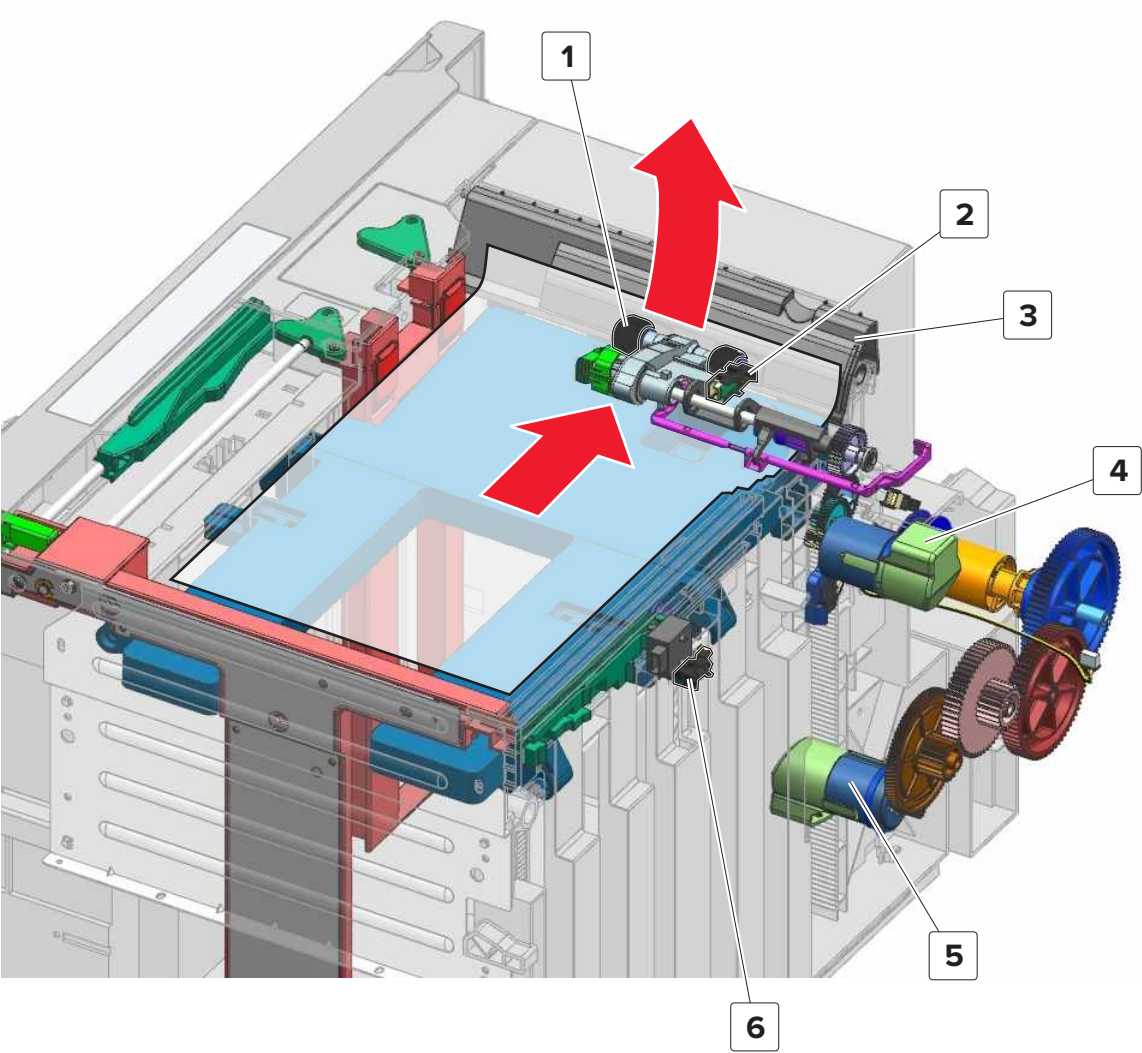
1	2200-sheet tray pick roller
2	Sensor (2200-sheet tray pick roller index)
3	2200-sheet tray separator pad
4	Motor (2200-sheet tray pick)
5	Motor (2200-sheet tray lift)
6	Sensor (2200-sheet tray media low)

During the feed, the elevator plate raises the paper until the paper comes into contact with the pick roller. The sensor (2200-sheet tray pick roller index) detects if the pick roller is sufficiently engaged with the paper. The motor (2200-sheet tray lift) controls the movement of the elevator plate. As the amount of paper lessens, the elevator plate also continues to move up. When the tray is almost empty, the actuator triggers the sensor (2200-sheet tray media low).

After the pick roller is in position, it feeds the topmost paper to the transport rollers on the upper tray. Separator pads opposite the pick roller ensure that only one sheet is fed a time. The motor (2200-sheet tray pick) drives the pick roller.

Staple finisher operation

Staple finisher sections
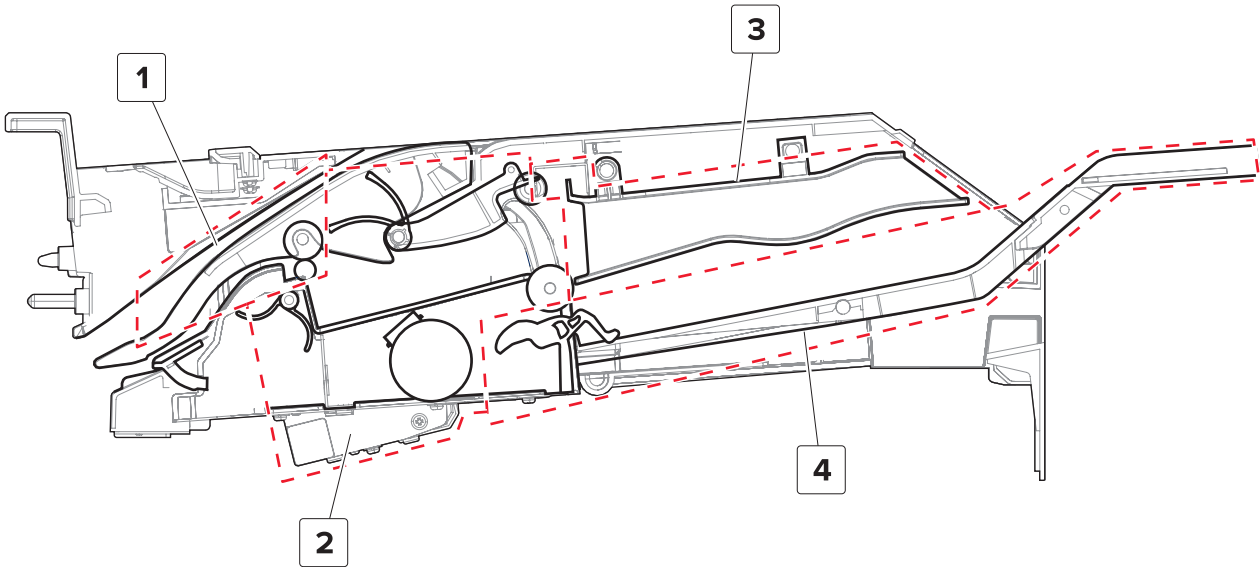
1	Feed section
2	Compiler section
3	Tamper section
4	Bin section

Paper path
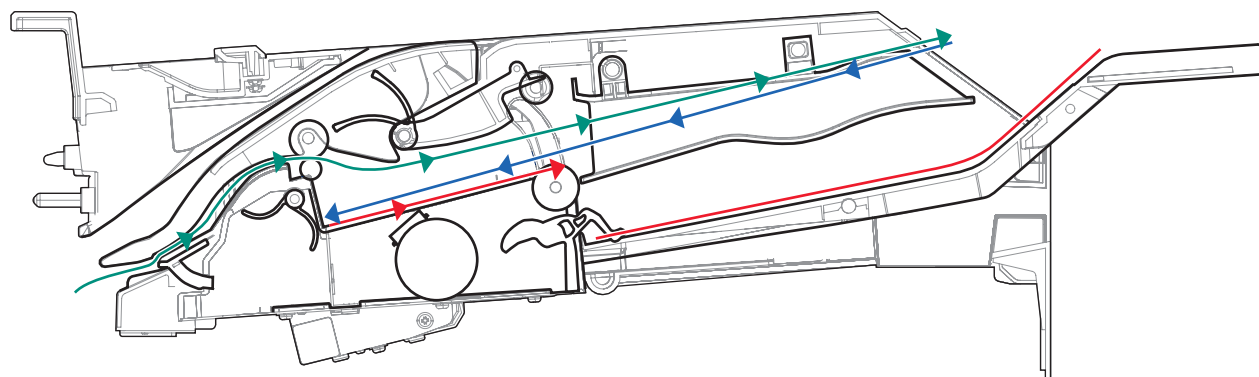
The staple finisher is installed on the printer standard bin and receives paper from the printer exit roller.

Staple or offset jobs are fed to the compiler section for the required finishing, and then to the bin. Print jobs that do not require finishing are directly fed to the bin.

Staple finisher feed section
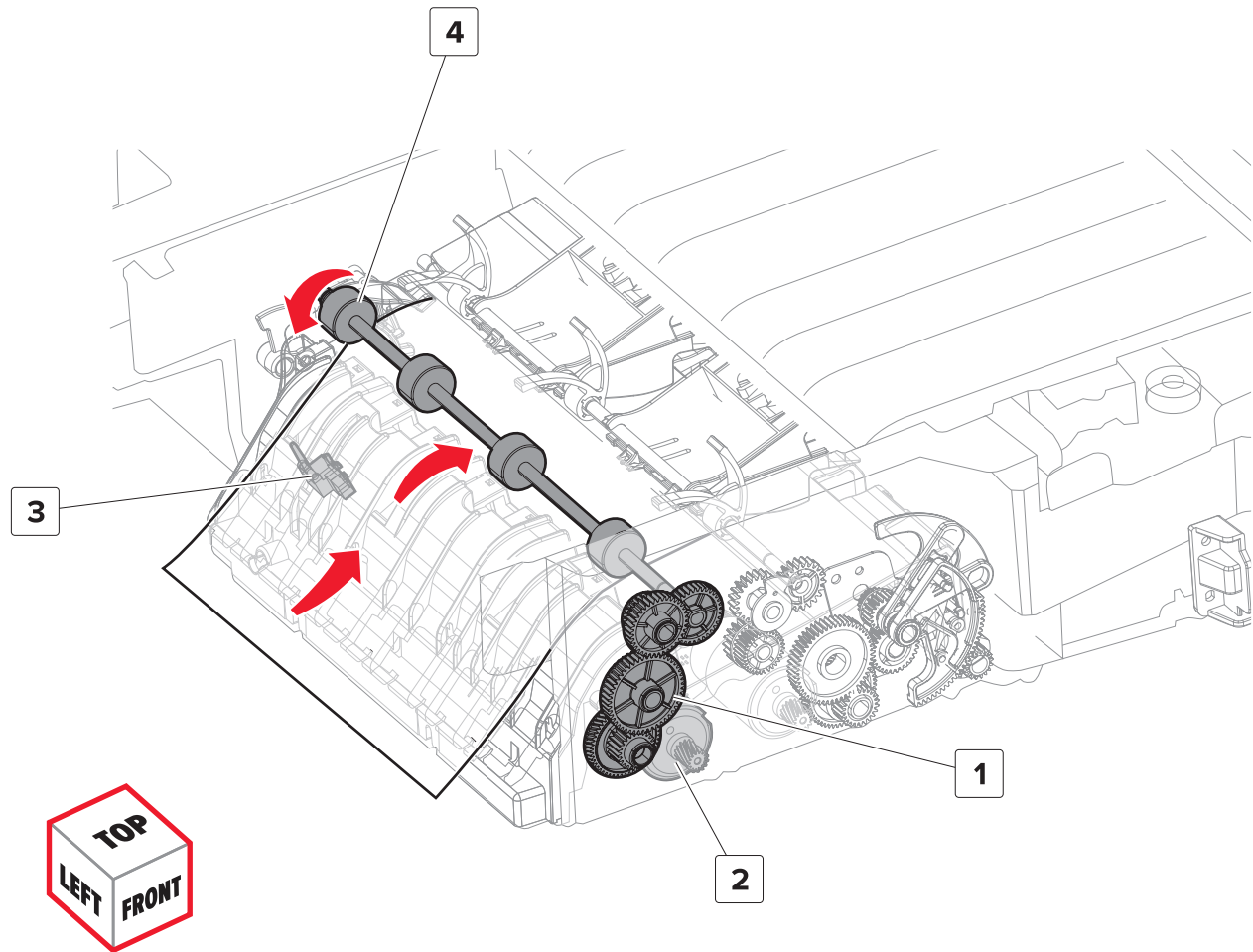
1	Transport gears
2	Motor (staple finisher transport)
3	Sensor (staple finisher transport)
4	Transport roller

The feed section receives the paper from the printer, and the sensor (staple finisher transport) detects the paper entering the finisher. The motor (staple finisher transport) drives the transport roller to feed the paper to the compiler section.

Compiler section feed and paper alignment
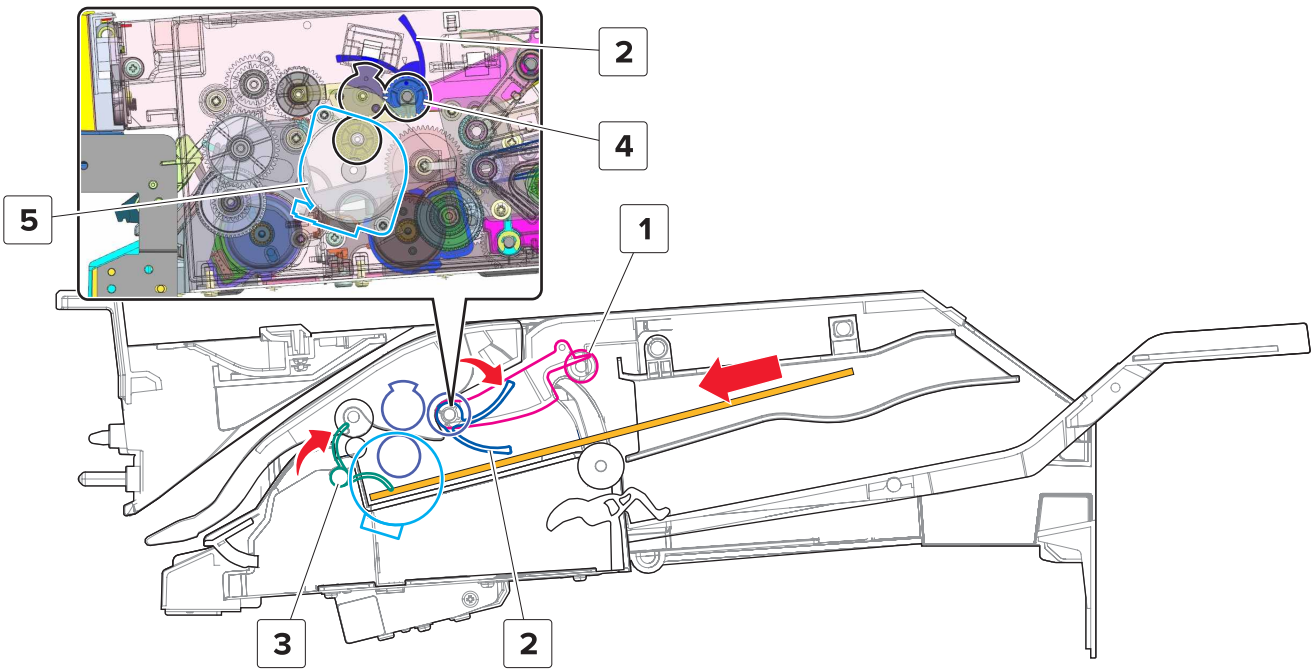
1	Upper exit roller
2	Aligner paddles
3	Decurl paddles
4	Aligner paddle gears
5	Motor (staple finisher aligner paddle)

As the paper enters the compiler section, the motor (staple finisher aligner paddle) drives the aligner paddles. These paddles push the paper to the compiler wall, aligning the short edge. The decurl paddles rotate to push the paper on the compiler tray.
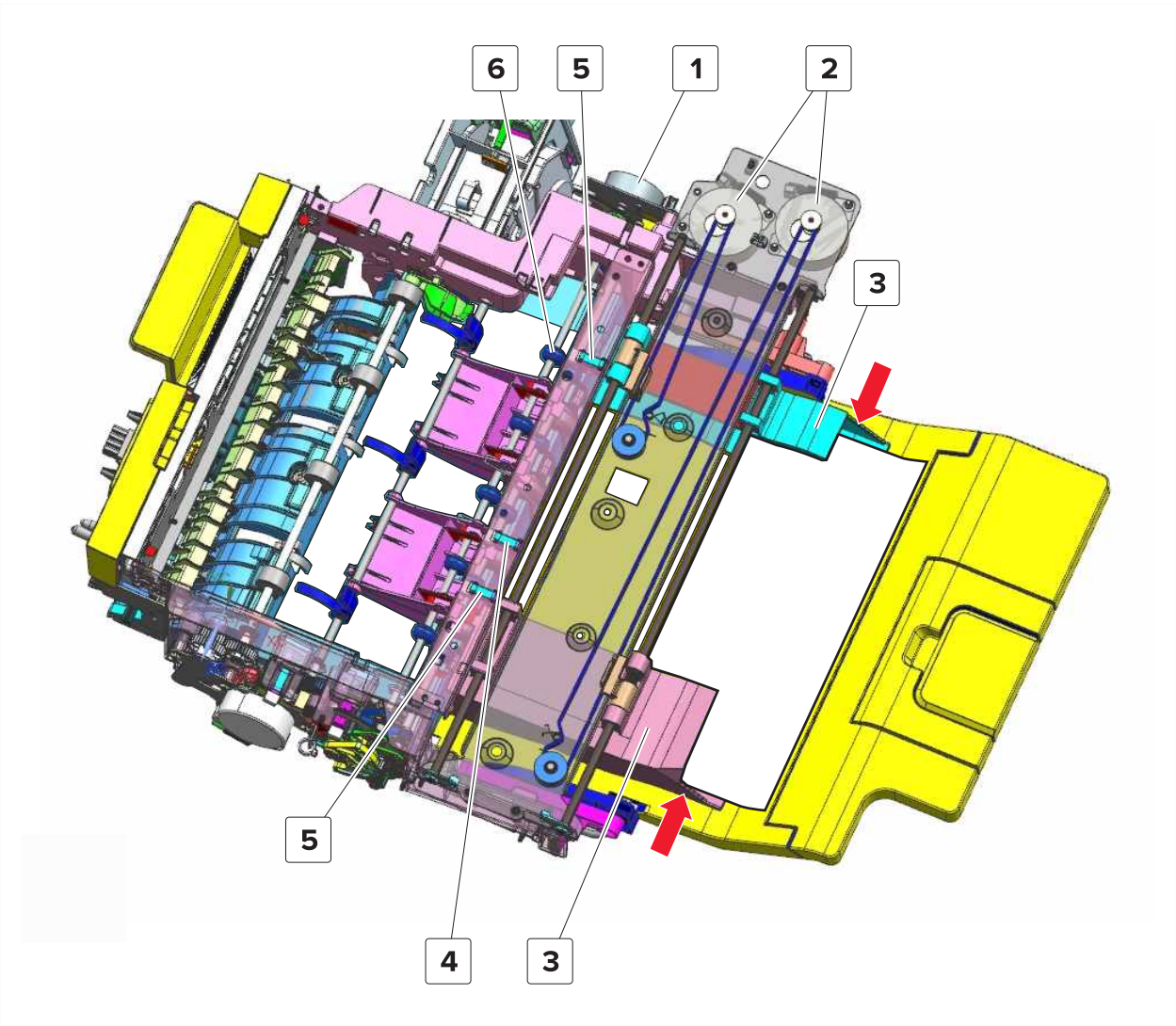
1	Motor (staple finisher upper exit roller)
2	Tamper motors
3	Tampers
4	Sensor (narrow media tamper)
5	Tamper home sensors
6	Upper exit roller

After the long edges are aligned, the motor (staple finisher upper exit roller) raises the upper exit roller to clear the paper path. The transport roller continues to move the paper until the leading portion enters the tamper section and the trailing edge falls into the compiler. The tampers move to align the long edges.

Subsequent sheets are fed and aligned in the same manner.

Offset and stapling operation
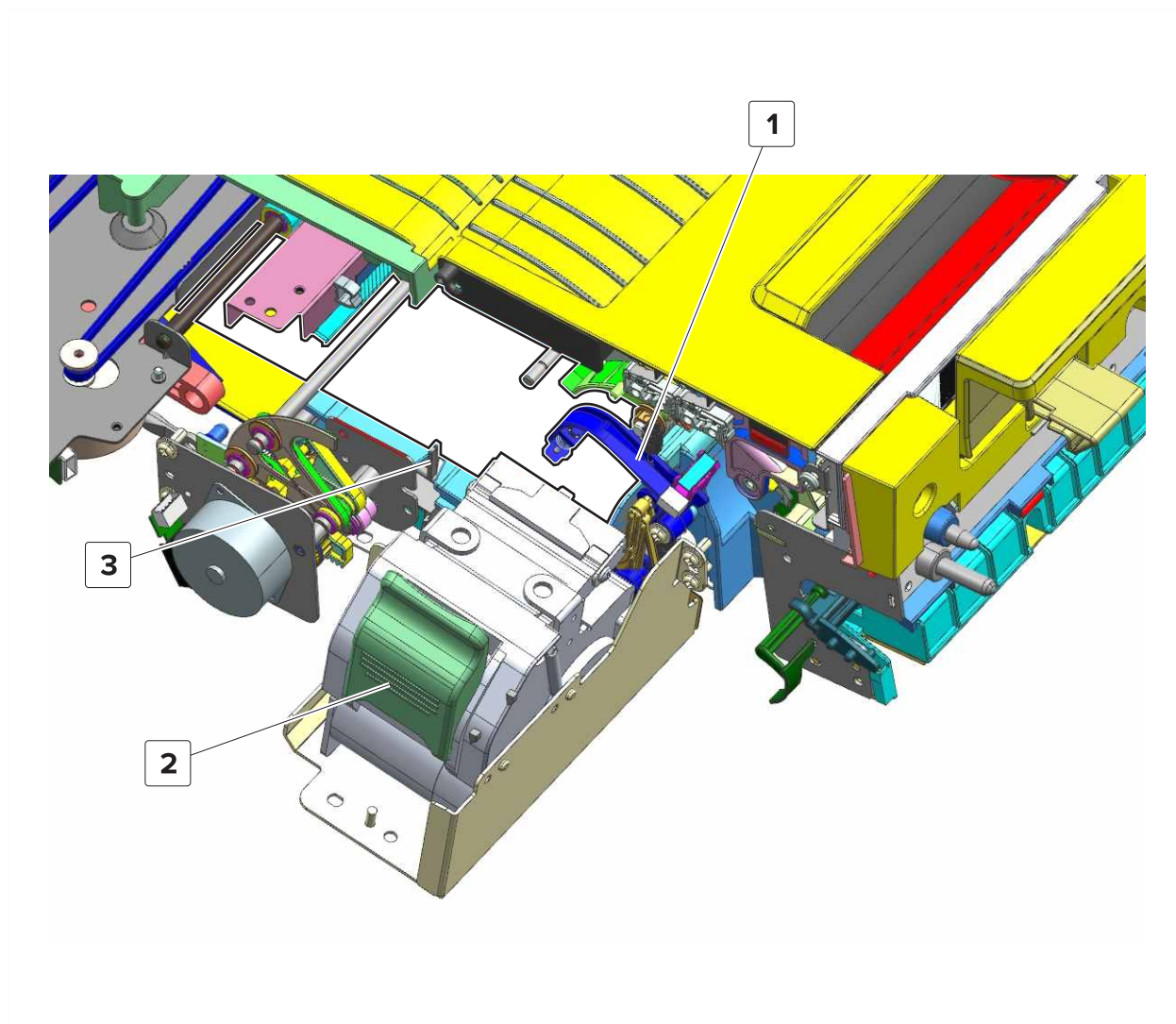
1	Stack clamp
2	Staple unit
3	Sensor (staple finisher staple unit paper present)

If the print job requires stapling, then the tampers push the paper stack to the rear of the finisher. The stack is detected by the sensor (staple finisher staple unit paper present). The stack clamp moves down to hold the stack in place, and then the stack is stapled. For offset jobs, the stack is pushed to the front or rear.

Compiler section exit
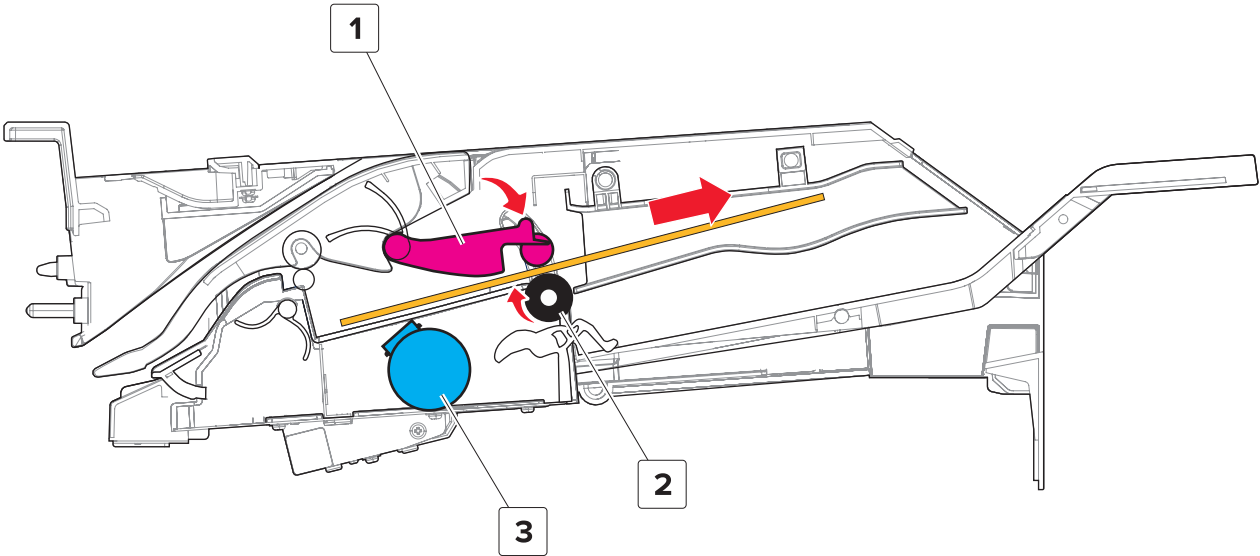
1	Upper exit roller
2	Lower exit roller
3	Motor (staple finisher exit)

After stapling or offset, the motor (staple finisher upper exit roller) lowers the upper exit roller causing the roller to come into contact with the stack. The motor (staple finisher exit) drives the upper and lower exit rollers to feed the stack to the bin.

Bin section
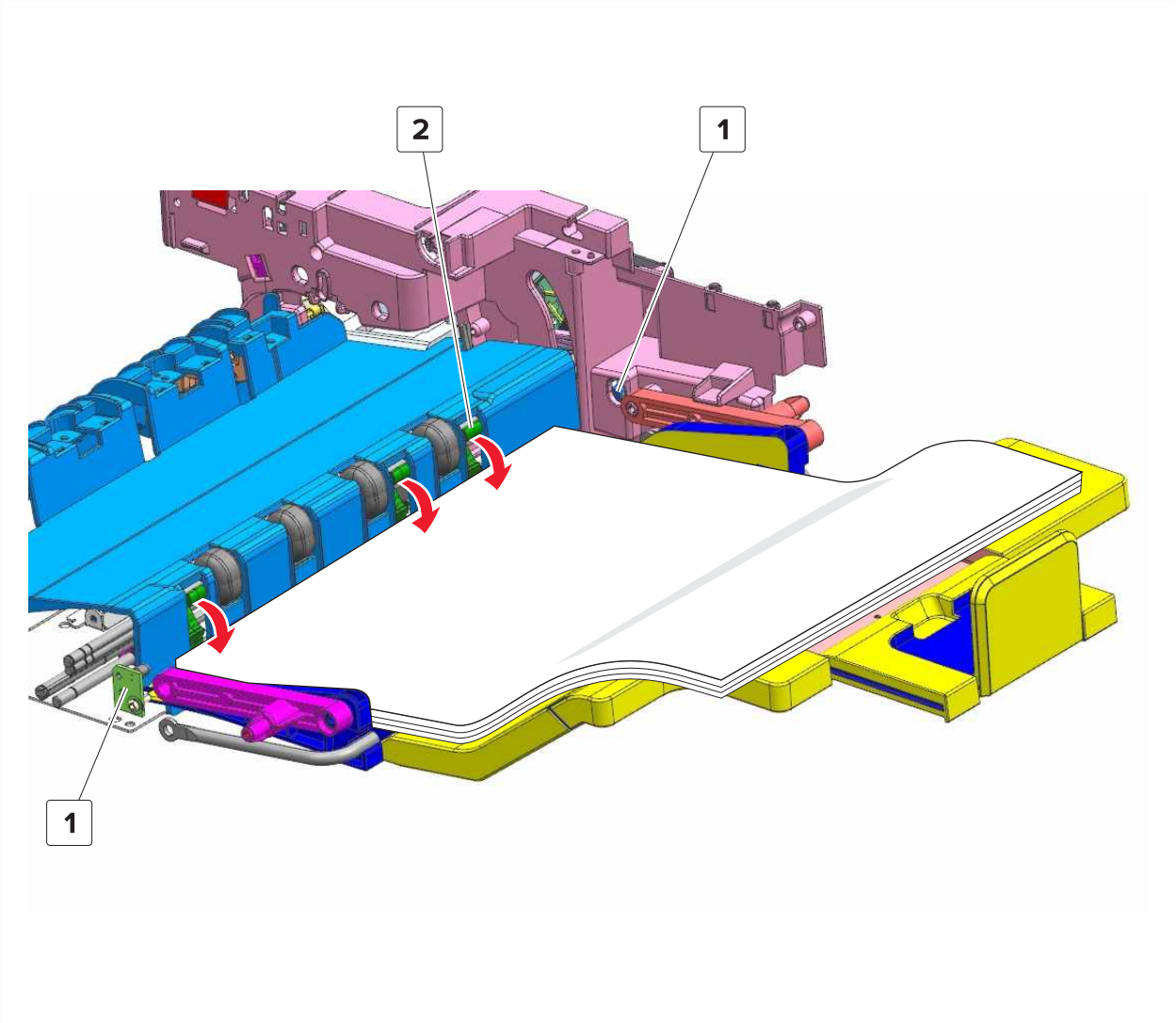
1	Sensor (staple finisher bin full)
2	Bin arms

After the paper is placed on the bin, the bin arms lower to set the stack on the bin. The bin is held by springs, and it lowers due to the weight of the accumulating paper. The sensor (staple finisher bin full) detects if the bin is full.

Appendix D: 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
HVPS	High voltage power supply
K	Black
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
TPS	Toner patch sensing
UPR	Used parts return
V ac	Volts alternating current
V dc	Volts direct current
VTB	Vacuum transport belt
Y	Yellow

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CAUTION—SHOCK HAZARD: This type of caution indicates a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you start working, or use caution if the product must receive power 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 lit hium batteries according to the manufacturer's instructions and local regulations.

CS820
C6160

WIRING DIAGRAM
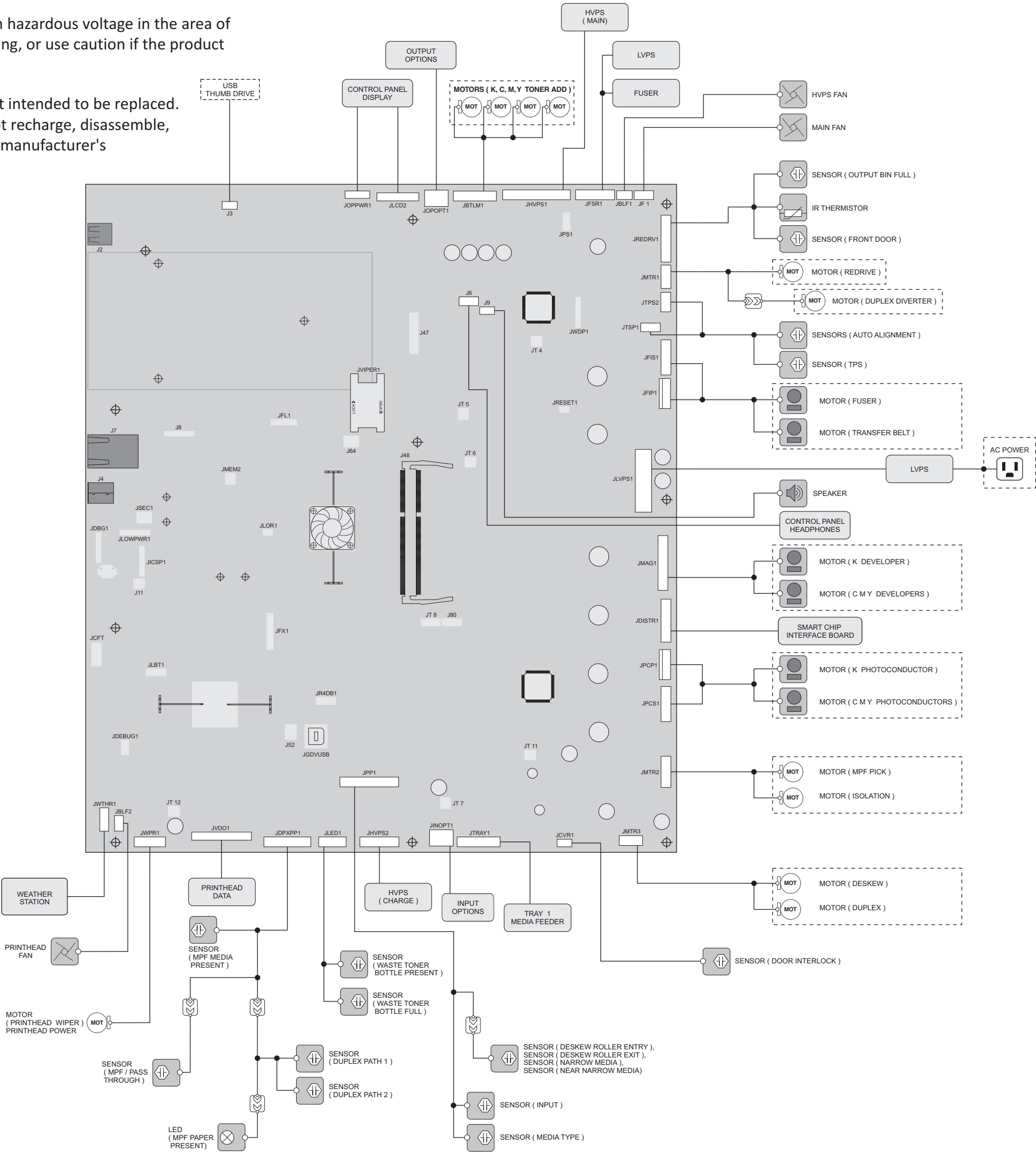
550-SHEET TRAY
2200-SHEET TRAY

WIRING DIAGRAM

INTERFACE CABLE TO PRINTER

WAKE-UP SWITCH

PASS-THRU SENSOR

J8   J1   J5

J12

550-SHEET TRAY

J3   J13   J9   J10   J11

MEDIA SIZE SENSOR

MEDIA LOW SENSOR

PICK ROLLER INDEX SENSOR
MEDIA OUT SENSOR
PICK MOTOR

MOT   PASS-THRU MOTOR

JAM DOOR SENSOR

MOT   PICK MOTOR

PICK ROLLER INDEX SENSOR

MEDIA OUT SENSOR

MEDIA LOW SENSOR

MEDIA SIZE SENSOR

INTERFACE CABLE TO PRINTER

WAKE-UP SWITCH

MOT   ELEVATOR MOTOR

J8   J1   J5

J12

2200-SHEET TRAY

J3   J13   J11

MEDIA SIZE SENSOR

MEDIA LOW SENSOR

PICK ROLLER INDEX SENSOR
MEDIA OUT SENSOR
PICK MOTOR

MOT   PICK MOTOR

PICK ROLLER INDEX SENSOR

MEDIA OUT SENSOR

MEDIA LOW SENSOR

MEDIA SIZE SENSOR

STAPLE FINISHER

WIRING DIAGRAM

Stapler throat Sensor

Lower Binfull TX Sensor

Upper Binfull TX Sensor

Exit Roller Position Sensor

Tray Holder Motor

Upper Binfull RX Sensor

Upper Exit Position Motor

Lower Binfull RX Sensor

Tray Holder Sensor

Rear Tamper Sensor

Paddle Sensor

Narrow Media Sensor

Paddle Motor

Front Tamper Sensor

Rear Tamper Motor

Front Tamper Motor

Cave light

Staple finisher

Power

(3 pins)   (2 pins)

Jam Door Switch 2

Paddle Motor

Jam Door Switch1

To LED PCBA

Clamp Sensor

Staple Door Switch

To Staple Unit

Paper clamp Solenoid

Exit Motor

Decurl Sensor

Transport Motor

Pass thru Sensor