Lexmark

CS92x, CX92x, C9235, XC92x5, MS911, MX91x, and XM91x5

4021-xxx, 5059-xxx, 7421-xxx, 7559-xxx

Finisher Service Manual

- **Start diagnostics**

- **Maintenance**

- **Safety and notices**

- **Trademarks**

- **Index**

Product information

Product name:
Lexmark CS92x, CX92x, C9235, XC92x5, MS911, MX91x, and XM91x5

Machine type:
5059, 7559, 4021, 7421

Model(s):
0x8, 1x0, 1x8, 3x8, 530, 5x8, 7x8, 03x, 23x, 43x, 63x

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Table of contents

Table of contents

Table of contents

Table of contents

Table of contents

Table of contents

Table of contents

Table of contents

Table of contents

Table of contents

Notices, conventions, and safety information

Conventions

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

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

CAUTION: A *caution* indicates a potentially hazardous situation that could injure you.

Different types of caution statements include:

⚠ **CAUTION—POTENTIAL INJURY:** Indicates a risk of injury.

⚠ **CAUTION—SHOCK HAZARD:** Indicates a risk of electrical shock.

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

⚠ **CAUTION—TIPPING HAZARD:** Indicates a crush hazard.

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

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

Symbols used in this machine
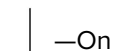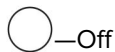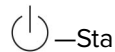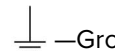
—On	▫—Class II equipment
—Off	▣—Class II equipment with functional earthing
—Standy	—Functional earthing
—Ground/earth (Protective bonding terminal)	—Electrostatic discharge (ESD) sensitivity
—Ground/earth (Protective earthing)	
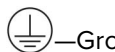
Safety information

- The safety of this product is based on testing and approvals of the original design and specific components. The manufacturer is not responsible for safety in the event of use of unauthorized replacement parts.

- The maintenance information for this product has been prepared for use by a professional service person and is not intended to be used by others.

- There may be an increased risk of electrical shock and personal injury during disassembly and servicing of this product. Professional service personnel should understand this risk and take necessary precautions.

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

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

Consignes de sécurité

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

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

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

Informació de seguretat

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

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

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

Información de seguridad

- La seguridad de este producto se basa en las pruebas y comprobaciones del diseño original y los componentes específicos. El fabricante no se hace responsable de la seguridad en caso de uso de piezas de repuesto no autorizadas.
- La información de mantenimiento de este producto se ha preparado para su uso por parte de un profesional de asistencia técnica y no está diseñada para su uso por parte de otros usuarios.

- Es posible que haya un mayor riesgo de descarga eléctrica y daños personales durante el desmontaje y el mantenimiento de este producto. El personal de asistencia profesional debe conocer este riesgo y tomar las precauciones necesarias.

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

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

Informações sobre segurança

- A segurança deste produto é baseada em testes e aprovações do design original e de componentes específicos. O fabricante não é responsável por segurança em caso de uso não autorizado de peças de substituição.

- As informações sobre manutenção deste produto foram preparadas para utilização por um técnico profissional experiente e não se destinam ao uso por outros.

- Pode haver maior risco de choque elétrico e danos pessoais durante a desmontagem e manutenção deste produto. Os técnicos profissionais experientes devem entender esses riscos e tomar as precauções necessárias.

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

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

Informazioni sulla sicurezza

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

- Le informazioni di manutenzione per questo prodotto sono state predisposte per essere utilizzate da un tecnico dell'assistenza professionale e non sono state previste per l'uso da parte di altre persone.

- È possibile che vi sia un maggior rischio di scosse elettriche e lesioni personali durante lo smontaggio e la manutenzione di questo prodotto. Il personale dell'assistenza deve comprendere questo rischio e prendere le precauzioni necessarie.

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

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

Informatie over veiligheid

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

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

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

Sikkerhedsoplysninger

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

  ⚠ **FORSIGTIG - ELEKTRISK STØD:** Når du ser dette symbol, er der risiko for elektrisk spænding i nærheden af produktet, hvor du arbejder. Tag 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.

Sicherheitshinweise

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

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

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

Turvallisuusohjeet

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

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

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

Sikkerhetsinformasjon

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

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

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

Säkerhetsinformation

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

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

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

安全情報

- 本製品の安全性は、本来の設計、特定コンポーネントの試験、承認に基づいています。承認されていない交換部品をお客様が使用した場合、メーカーは安全性に対して責任を負いません。
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⚠ **注意−傷害の恐れあり**: この製品に使用されているリチウム電池は、交換を前提としていません。リチウム電池の交換を誤ると破裂する危険性があります。リチウム電池の充電、解体、焼却はしないでください。使用済みのリチウム電池を廃棄する際は、製造元の指示およびお使いの地域の法律に従ってください。

안전 정보

- 이 제품의 안전은 기본 디자인 및 특정 구성품의 승인 및 테스팅을 기반으로 합니다. 제조업체는 권한 없는 교체 부품 사용 시 안전에 대해 책임을 지지 않습니다.
- 이 제품의 유지관리 정보는 전문 서비스 요원을 대상으로 하며 다른 사람은 사용할 수 없습니다.
- 제품 분해 및 서비스 중에는 감전 및 상해 위험이 증가할 수 있습니다. 전문 서비스 요원은 이와 같은 위험을 이해하고 필요한 예방 조치를 취해야 합니다.

⚠ **주의―감전 위험:** 이 기호가 표시된 경우 작업 중인 제품 주변에서 위험 전압 위험이 있습니다. 사용 전/후에 전원 코드를 뽑아 두시고 제품에서 작업을 수행하는 데 반드시 전원이 필요한 경우에는 주의하여 사용하십시오.

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

安全信息

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

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

Notices, conventions, and safety information

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

安全資訊

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

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

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

General caution statements

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

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

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

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

Change history

Change history

January 23, 2020
- Updated the description of the following part numbers regarding compatibility issues in the Parts catalog chapter:
  - 41X2214
  - 41X2215
  - 41X2171
- Added a note regarding compatibility issues in the SHPF—Transport section 2 and 3 assemblies in the Parts catalog chapter.

January 8, 2020
- Added information on MS911, MX91x, and XM91x5 finishers.
- Merged change history logs from MS911, MX91x, and XM91x5 finishers (July 4, 2014 - May 17, 2017).

September 17, 2019
- Added the following part numbers in the SHPF—Transport section 4 assembly in the Parts catalog chapter:
  - 41X2544
  - 41X2545

May 14, 2019
- Added the following part numbers in the Parts catalog chapter:
  - 41X2669
  - 41X2668
- Updated the description of the following part numbers in the Parts catalog chapter:
  - 40X9512
  - 40X9514

October 17, 2017

Updated the following part numbers:
- Changed PN 40X9573 to PN 41X2214.
- Changed PN 40X9586 to PN 41X2171.
- Changed PN 40X9626 to PN 41X2182.
- Changed PN 40X9628 to PN 41X2185.

September 6, 2017
- SHPF lower left cover FRU (40X9488) was removed from the SHPF—Elevator bin section 1 parts catalog assembly.

May 17, 2017 from MS911, MX91x, and XM91x5

- Part number 40X9413 (Staple cartridge holder) replaced with 41X1968
- Part number 40X9619 (SHPF pre-eject motor and eject motor encoder) replaced with 41X2002
- Part number 40X9537 (Motor (SHPF compiler eject)) replaced with 41X2001
- Part number 40X9536 (Motor (SHPF compiler pre-eject)) replaced with 41X2000
- Part number 40X954 (Trifold jam knob) replaced with 41X2030
- Part number 40X8955 (Booklet maker exit roller springs) replaced with 41X2091
- Part number 40X9452 (Trifold roller) replaced with 41X2031.

June 28, 2016

- Updated the "LES Applications" topic in the "Service menus" chapter.

August 27, 2015

- Updated the SHPF–Punch unit 2 parts catalog art and changed the following part numbers:
  - 40X9954 replaced with 41X0968
  - 40X9985 replaced with 41X0967
- Updated the Horizontal paper transport–Covers 2 parts catalog art and added the following part numbers:
  - 41X0972
  - 41X0971
  - 41X0969
  - 41X0970

August 11, 2014

- Deleted part number 40X9749

July 4, 2014

- Changed the following part numbers in the parts catalog:
  - 40X9594 to 40X9574 in assembly 25
  - 40X9575 to 40X9440 in assembly 30
  - 40X9428 to 40X8955 in assembly 38
  - 40X9480 to 40X9469 in assembly 41
  - 40X9872 to 40X9493 in assembly 41
- Added part number 40X9589 to assembly 27

General information

The Lexmark™ CS920 and CX920 Series are network-capable, multifunction laser printers that print color print jobs. The Lexmark MS911 and MX91x are network-capable, multifunction laser printers that print monochrome print jobs.

The printers support the following finishers and configurations:

Finisher	Configurations
Staple finisher **Note:** This finisher is supported only in some printer models.	Offset stacking and stapling
Staple, hole punch finisher	Offset stacking, stapling, and 2/3-hole or 2/4-hole punching
Hole punch, booklet finisher	Offset stacking, stapling, 2/3-hole or 2/4-hole punching, bifolding, and trifolding

For information on diagnosing a problem, see **"Diagnostics and troubleshooting" on page 29**. For information on removing and reinstalling parts, see **"Parts removal" on page 211**. For information on identifying parts, see**"Parts catalog" on page 534**.

Paper sizes, types, and weights supported by the finishers

The printer engine supports 60–256 g/m^2 (16–68-lb) paper weights.

Note: When a finisher is installed, the standard finisher bin becomes the default bin even for print jobs that do not require finishing.

Supported paper sizes

Paper size	Staple finisher	Staple, hole punch finisher bin 1	Staple, hole punch finisher bin 2	Booklet finisher
A6	✓[3]	✓[3]	X	X
A5	✓[3]	✓[3]	✓[2]	X
JIS B5	✓	✓	✓	X
JIS B4	✓	✓	✓	✓
Executive	✓	✓	✓	X
Letter	✓	✓	✓	✓

[1] Paper is supported only if the finisher stacks the paper but does not staple or punch holes in it.

[2] Paper is supported only if the finisher stacks or staples the paper but does not punch holes in it.

[3] Paper is supported but the finisher does not stack, staple, or punch holes in it.

[4] Paper is supported only for two-hole punch.

[5] Paper is supported only if the paper size is between 210 x 279.4 mm (8.27 x 11 in.) and 320 x 457.2 mm (12.6 x 18 in.).

Paper size	Staple finisher	Staple, hole punch finisher bin 1	Staple, hole punch finisher bin 2	Booklet finisher
A4	✓	✓	✓	✓
Legal	✓	✓[4]	✓	✓
12 x 18	✓[1]	✓[3]	✓[1]	✓
11 x 17	✓	✓	✓	✓
SRA3	✓[1]	✓[3]	✓[1]	✓
A3	✓	✓	✓	✓
Oficio	✓[1]	✓[3]	✓[3]	X
Folio	✓[1]	✓[3]	✓[3]	X
Statement	✓[1]	✓[3]	✓[3]	X
Universal	✓	✓[3]	✓[1]	✓[5]

[1] Paper is supported only if the finisher stacks the paper but does not staple or punch holes in it.

[2] Paper is supported only if the finisher stacks or staples the paper but does not punch holes in it.

[3] Paper is supported but the finisher does not stack, staple, or punch holes in it.

[4] Paper is supported only for two-hole punch.

[5] Paper is supported only if the paper size is between 210 x 279.4 mm (8.27 x 11 in.) and 320 x 457.2 mm (12.6 x 18 in.).

Supported paper types

Paper type	Staple finisher	Staple, hole punch finisher	Booklet finisher
Plain Paper	✓	✓	✓[4]
Card Stock	✓[2]	✓[2]	X
Transparency[1]	✓c	✓[2,3,5]	X
Recycled	✓	✓	✓[4]
Glossy	✓	✓	✓[4]
Heavy Glossy	✓[2]	✓[2]	X
Labels	✓[2,5]	✓[2,3,5]	X
Bond	✓	✓	✓[4]

[1] Print on transparencies by batches of only up to 20 to prevent them from sticking together.

[2] Paper is supported only if the finisher does not staple it.

[3] Paper is supported only if the finisher does not punch holes in it.

[4] Paper is supported only if the finisher staples or folds the paper

[5] Offset is not supported.

Paper type	Staple finisher	Staple, hole punch finisher	Booklet finisher
Envelope	✓[2,5]	✓[2,3,5]	X
Rough Envelope	✓[2]	✓[2,3,5]	X
Letterhead	✓	✓	✓[4]
Preprinted	✓	✓	✓[4]
Colored Paper	✓	✓	✓[4]
Light Paper	✓	✓	✓[4]
Heavy Paper	✓[2]	✓[2]	X
Rough Cotton	✓[2]	✓[2]	X
Custom Type	✓	✓	✓[4]

[1] Print on transparencies by batches of only up to 20 to prevent them from sticking together.

[2] Paper is supported only if the finisher does not staple it.

[3] Paper is supported only if the finisher does not punch holes in it.

[4] Paper is supported only if the finisher staples or folds the paper

[5] Offset is not supported.

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

- Flashlight (optional)

Diagnostics and troubleshooting

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

⚠ **CAUTION—POTENTIAL INJURY:** The device weighs 43–67 kg (95–148 lb) and requires two or more trained personnel to lift it safely. Make sure that your fingers are not under the device when you lift or set the device 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.

- 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.

Paper jams

Avoiding jams

Load paper properly

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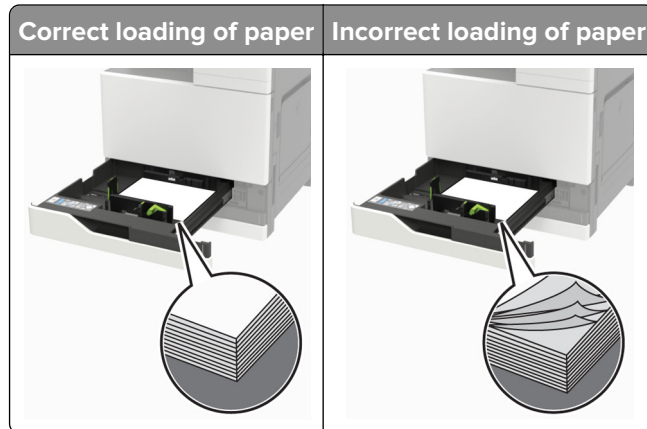
- Do not load or remove a tray while the printer is printing.
- Do not load too much paper. Make sure that the stack height is below the maximum paper fill indicator.
- Do not slide paper into the tray. Load paper as shown in the illustration.

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

Use recommended paper

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

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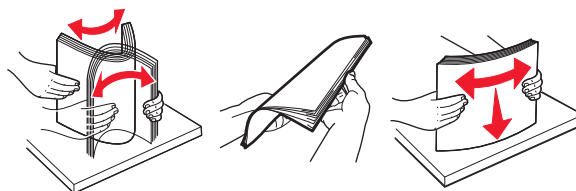
- Do not use paper that has been cut or trimmed by hand.
- Do not mix paper sizes, weights, or types in the same tray.
- Make sure that the paper size and type are set correctly on the computer or printer control panel.
- Store paper according to manufacturer recommendations.

Identifying jam locations

Note: When Jam Recovery is set to On or Auto, the printer reprints jammed pages.
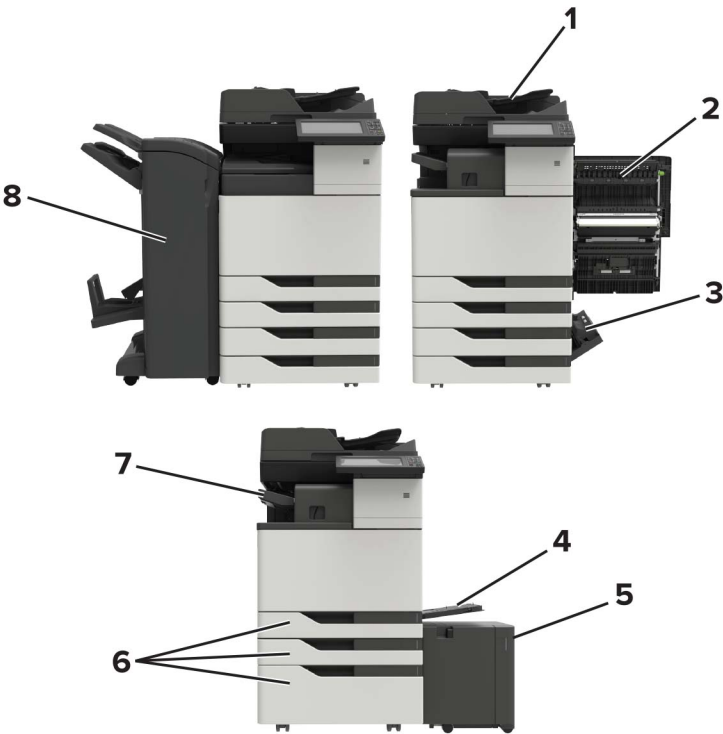
	Jam locations
1	Automatic document feeder (ADF)
2	Door C
3	Door D
4	Multipurpose feeder
5	3000-sheet tray
6	2 x 500- or 2500-sheet tray
7	Staple finisher
8	Finisher • Booklet finisher • Staple, hole punch finisher

Paper jam in the booklet finisher

1 Open door G, and then remove the jammed paper.

> **Note:** Make sure that all paper fragments are removed.
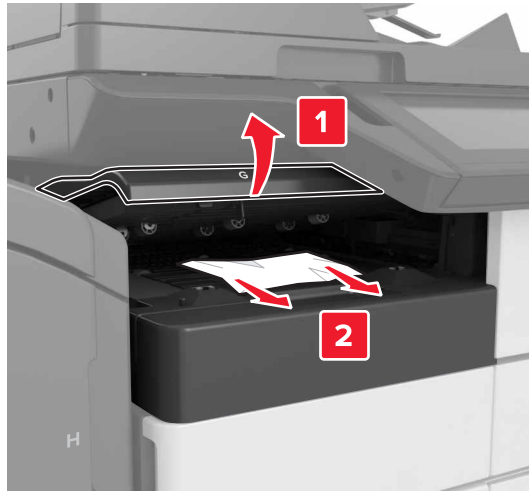
2 Open door J.
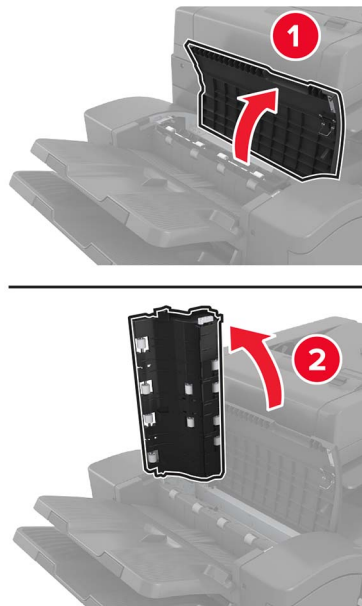
3 Open door H.
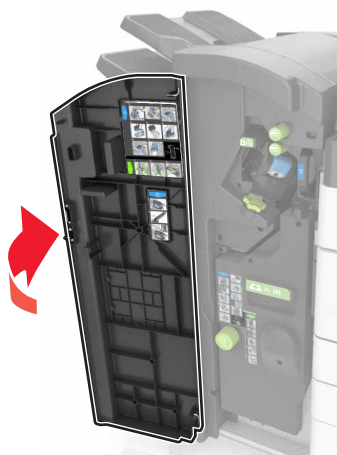
4 Remove the jammed paper from any of the following locations.

Note: Make sure that all paper fragments are removed.

- Door J
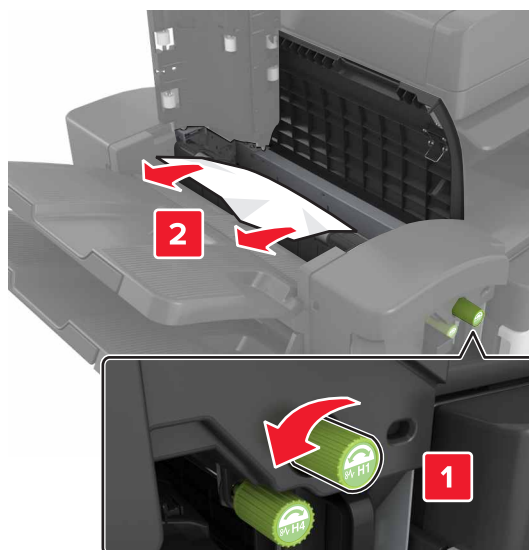
- Areas H1 and H2
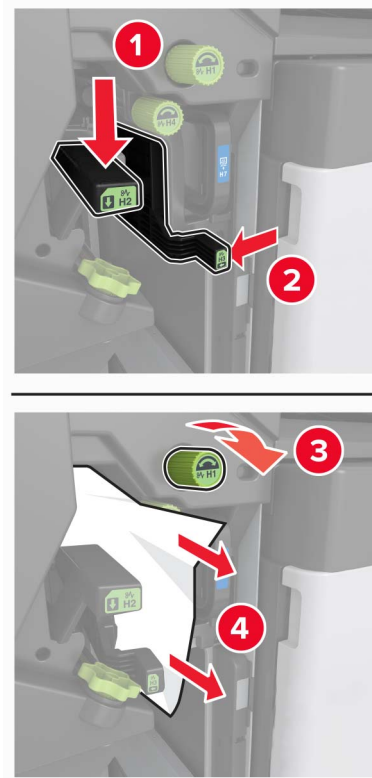
- Area H6
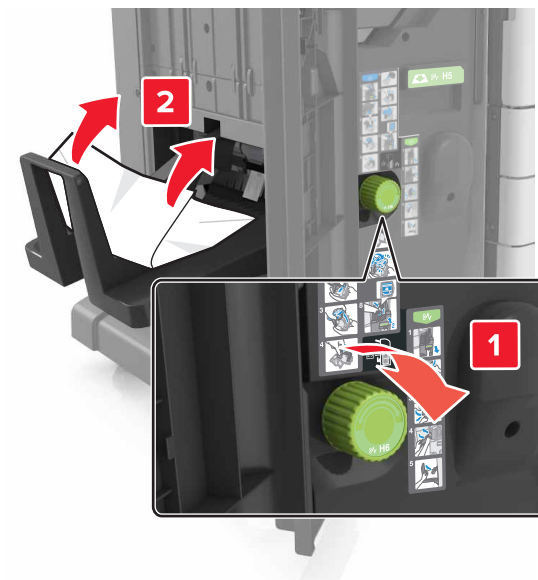
5 Pull out the booklet maker.

6 Remove the jammed paper from any of the following locations.

Note: Make sure that all paper fragments are removed.

- Area H8
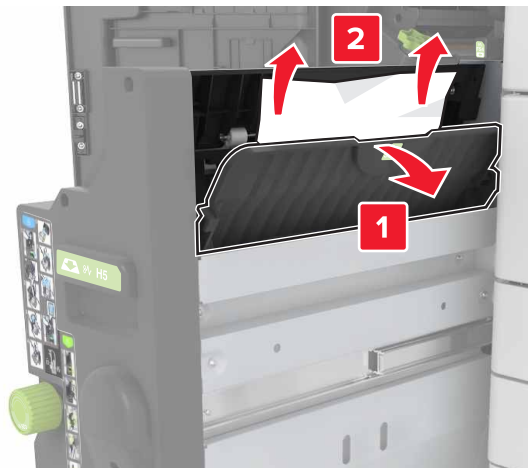
- Area H9
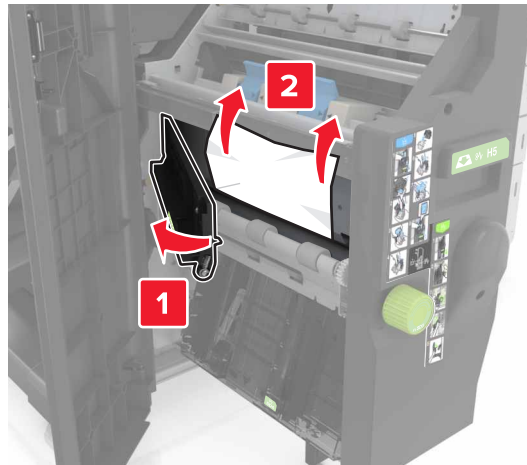
- Area H10
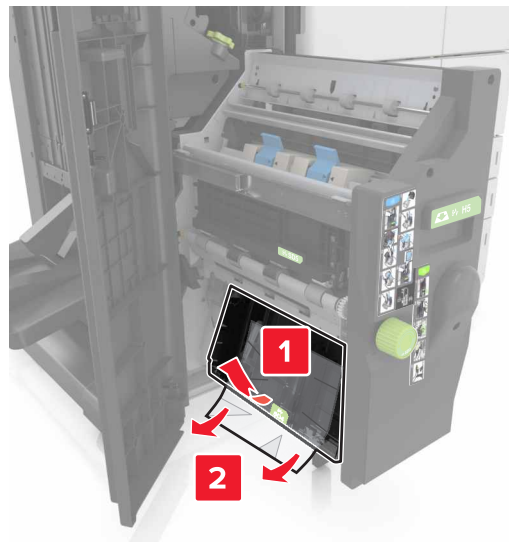
7 Push the booklet maker back into place.

8 Close doors H and J.

Paper jam in the staple finisher

1 Remove paper from the staple finisher bin.

2 Slide the staple finisher, and then remove the jammed paper.

   Note: Make sure that all paper fragments are removed.
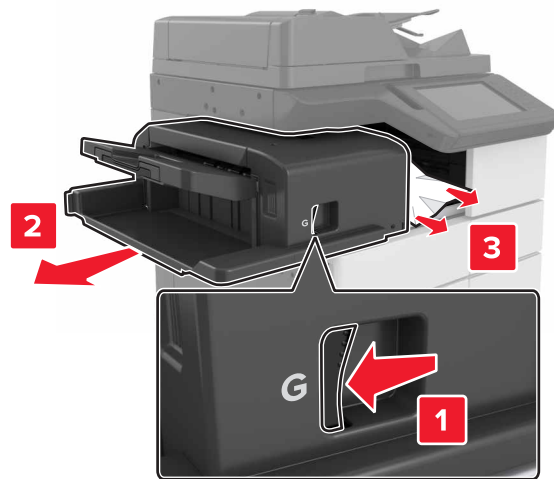
If necessary, turn the spinner wheel G1 downward to feed the jammed paper into the finisher bin, and then remove the jammed paper.
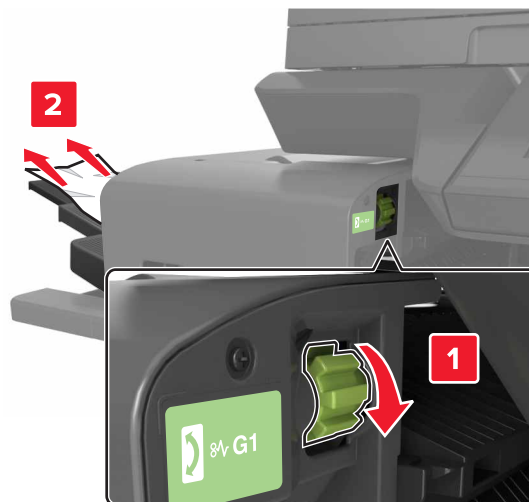
3 Slide the finisher back into place.

Staple jam in the staple finisher

1 Slide the staple finisher.
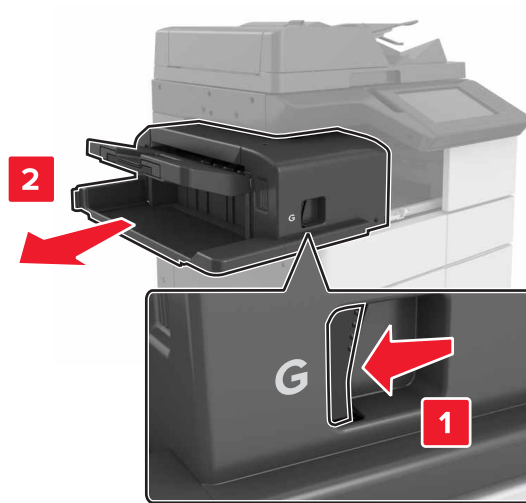
2 Remove the staple cartridge holder.
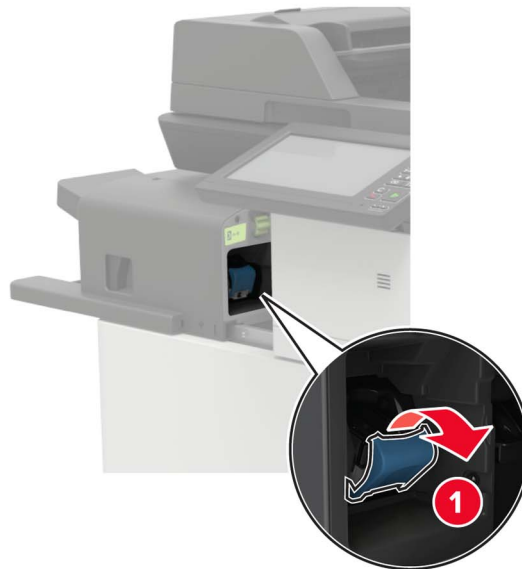
3 Remove the loose staples.
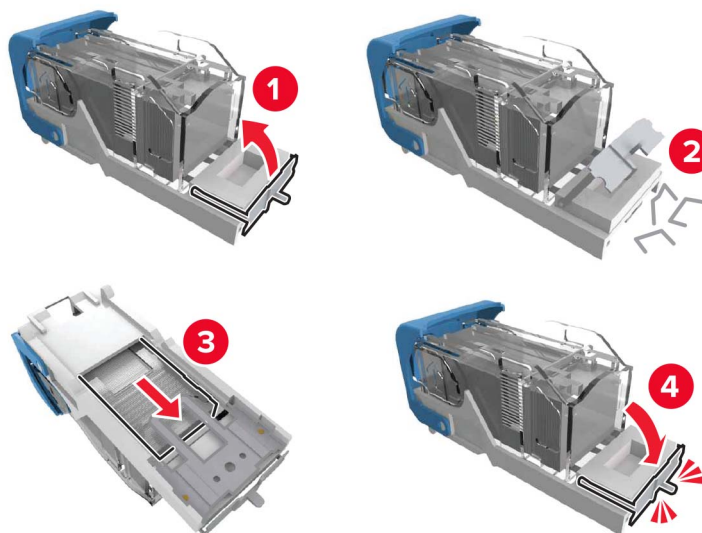
4 Insert the staple cartridge holder until it *clicks* into place.

5 Slide the finisher back into place.

Staple jam in the staple, hole punch finisher

1 Open door H.
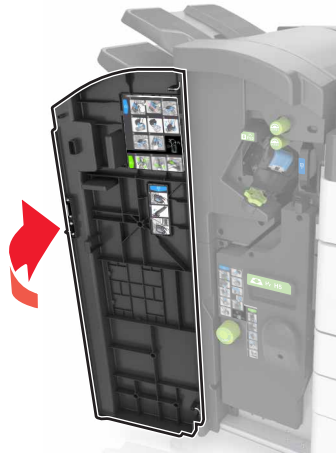
2 Remove the staple cartridge holder.

3 Remove the loose staples.
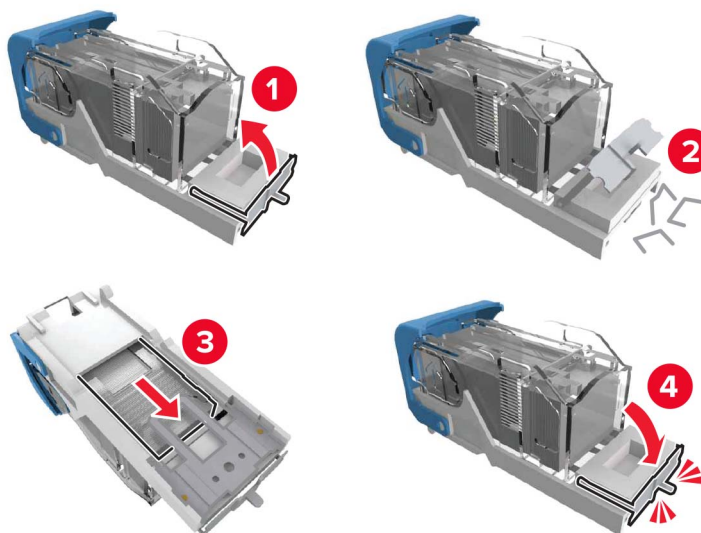
4 Insert the staple cartridge holder until it *clicks* into place.

5 Close the door.

Staple jam in the booklet finisher

1 Open door H, and then pull out the booklet maker.
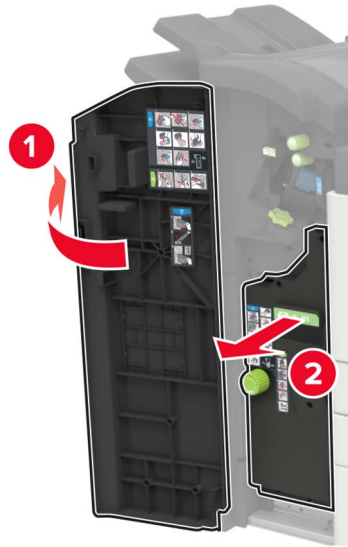
2 Remove the staple cartridge holder.
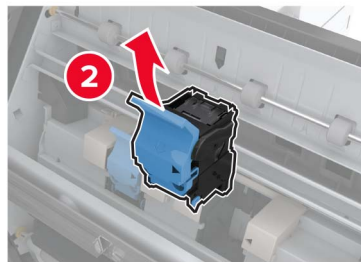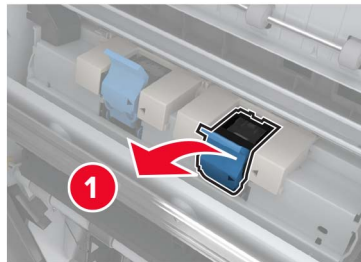
3 Remove the loose staples.
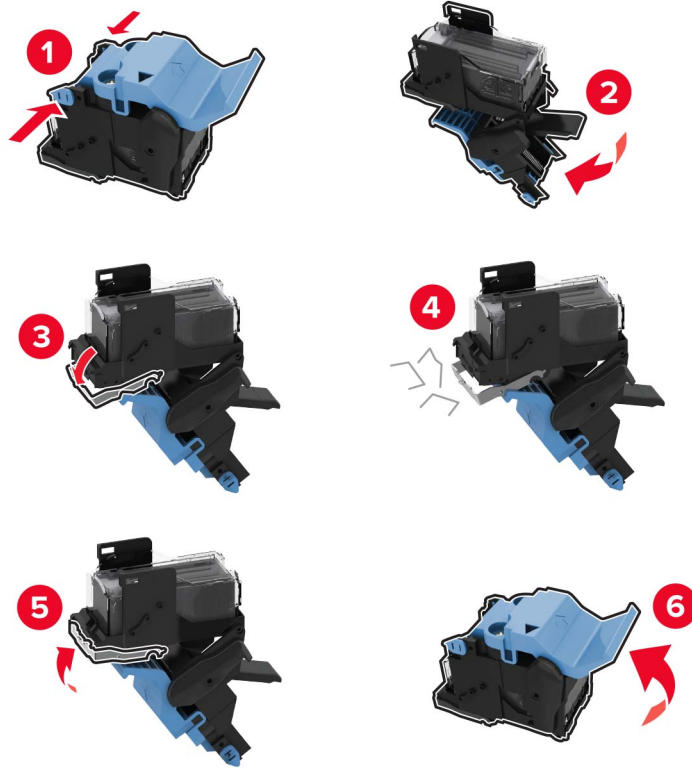
4 Insert the staple cartridge holder until it *clicks* into place.
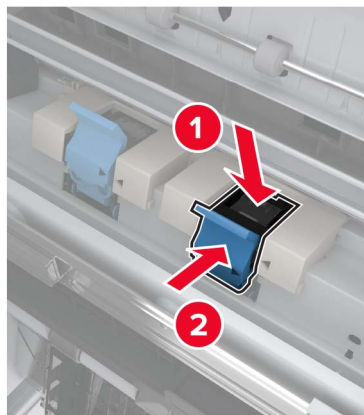
5 Push the booklet maker back into place, and then close the door.

200 paper jams

200 paper jam messages

Error code	Description	Action
200.91	The paper remains detected in the sensor (staple finisher feed) after the printer is turned on.	See **"Staple finisher static jam service check" on page 51**.
200.91	Paper remains detected at the sensor (HPT feed) after the printer is turned on.	See **"HPT static jam service check" on page 44**.
200.91	Paper remains detected at the sensor (SHPF entrance) after the printer is turned on.	See **"SHPF static jam service check" on page 46**.
200.91	Paper remains detected at the sensor (SHPF top bin exit) after the printer is turned on.	
200.91	Paper remains detected at the sensor (SHPF booklet gate) after the printer is turned on.	See **"Booklet maker static jam service check" on page 48**.
200.91	Paper remains detected at the sensor (SHPF booklet maker transport) after the printer is turned on.	
200.91	Paper remains detected at the sensor (SHPF booklet maker fold exit) after the printer is turned on.	
200.92	Paper was detected earlier than expected at the sensor (HPT feed).	See **"HPT feed jam service check" on page 53**.

HPT static jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove the HPT and SHPF from the printer. Does the problem remain?	The problem is not with the finisher. For more information, see the printer service manual.	Go to step 3.

Action	Yes	No
Step 3 Check the HPT feed sensor actuator for misalignment and damage. Is the sensor actuator properly installed and free of damage?	Go to step 4.	Go to step 4.
Step 4 Reinstall or replace the sensor actuator. See **"HPT feed sensor actuator removal" on page 319**. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (HTU paper entrance). Does the sensor status change while toggling the sensor?	Go to step 9.	Go to step 6.
Step 6 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 7.
Step 7 Reinstall or replace the sensor. See **"Sensor (HPT feed) removal" on page 318**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 9.	Go to step 9.
Step 9 Replace the cable. See **"HPT cable removal" on page 321**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.

Diagnostics and troubleshooting

Action	Yes	No
Step 11 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF static jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove the HPT and SHPF from the printer. Does the problem remain?	The problem is not with the finisher. For more information, see the printer service manual.	Go to step 3.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Paper entrance). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 4.
Step 4 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 6.	Go to step 5.
Step 5 Reinstall or replace the sensor. See **"Sensor (SHPF entrance) removal" on page 443**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 8.	Go to step 7.

Action	Yes	No
Step 7 Replace the SHPF entrance sensor cable. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Top bin exit). Does the sensor status change while toggling the sensor?	Go to step 13.	Go to step 9.
Step 9 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor and its actuator for misalignment and damage. Are the sensor and actuator properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the affected sensor or actuator. See **"Sensor (SHPF top bin exit) removal" on page 394**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 13.	Go to step 12.
Step 12 Replace the SHPF J9 cable harness. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Reseat the sensor (SHPF compiler feed) cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 17.	Go to step 14.
Step 14 Reinstall or replace the sensor. See **"Sensor (SHPF compiler feed) removal" on page 439**. Does the problem remain?	Go to step 15.	The problem is solved.

Action	Yes	No
Step 15 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 17.	Go to step 16.
Step 16 Replace the SHPF compiler feed sensor cable. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Reseat all the cables on the SHPF 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 **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Booklet maker static jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove the HPT and SHPF from the printer. Does the problem remain?	The problem is not with the finisher. For more information, see the printer service manual.	Go to step 3.
Step 3 **a** Reseat the sensor (SHPF booklet gate) cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 4.
Step 4 Reinstall or replace the sensor. See **"SHPF booklet maker upper pre-feed guide removal" on page 421**. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF booklet gate sensor cable. 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** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Entrance). Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 8.
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the sensor. See **"Sensor (booklet maker transport) removal" on page 464**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 12.	Go to step 11.
Step 11 Replace the booklet maker transport sensor cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Fold exit). Does the sensor status change while toggling the sensor?	Go to step 17.	Go to step 13.

Action	Yes	No
Step 13 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 15.	Go to step 14.
Step 14 Reinstall or replace the sensor. See **"Sensor (booklet maker fold exit) removal" on page 512**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 17.	Go to step 16.
Step 16 Replace the booklet maker fold exit sensor cable. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 19.	Go to step 18.
Step 18 Replace the cable. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher static jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the staple finisher paper path. **b** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove the staple finisher from the printer. Does the problem remain?	The problem is not with the staple finisher. For more information, see the printer service manual.	Go to step 3.
Step 3 **a** Reinstall the staple finisher to the printer. **b** Reseat the staple finisher interface cable. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then touch **Printer diagnostics & adjustments**. **b** From the Sensor tests section, touch **Start**. **c** Find, and then manually toggle the sensor (staple finisher paper feed). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 Reseat the sensor cable connector on both ends. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the sensor (staple finisher paper feed). Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then touch **Printer diagnostics & adjustments**. **b** From the Sensor tests section, touch **Start**. **c** Find, and then manually toggle the sensor (staple finisher tamper paper present). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.

Action	Yes	No
Step 8 Reseat the sensor cable connector on both ends. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor (staple finisher tamper paper present). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the staple finisher tamper paper present sensor actuator for proper installation and damage. Is the sensor actuator properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher tamper paper present sensor actuator. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the staple finisher paper feed sensor cable for proper connection and damage. Is the cable properly connected and free of damage?	Go to step 14.	Go to step 13.
Step 13 Replace the staple finisher paper feed sensor cable. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the staple finisher interface cable for proper connection and damage. Is the cable properly connected and free of damage?	Go to step 16.	Go to step 15.
Step 15 Replace the staple finisher interface cable. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Reseat all cable connectors on the staple finisher controller board. **b** Check all cable connectors for proper connection and damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

40y paper jams

400–403 paper jam messages

Error code	Description	Action
400.13	Paper did not reach the sensor (HPT feed).	See **"HPT feed jam service check" on page 53**.
400.15	Paper did not clear the sensor (HPT feed).	
403.13	The SHPF punch drive failed.	See **"Punch unit failure service check" on page 107**.

HPT feed jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** Unplug the HPT cable from the SHPF. **c** Reseat the cable, and then reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the HPT transport idler rollers for wear and damage. Are the rollers free of wear and damage?	Go to step 4.	Go to step 3.
Step 3 Replace the damaged rollers. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the HPT feed sensor actuator for misalignment and damage. Is the sensor actuator properly installed and free of damage?	Go to step 6.	Go to step 5.
Step 5 Reinstall or replace the sensor actuator. See **"HPT feed sensor actuator removal" on page 319**. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher sensor tests** **b** Find the sensor (HTU paper entrance). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 7.
Step 7 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the sensor. See **"Sensor (HPT feed) removal" on page 318**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 11.	Go to step 10.
Step 10 Replace the cable. See **"HPT cable removal" on page 321**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **Note:** Remove the top inner cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **HTU transport** **b** Touch **Start**. Does the motor run?	Go to step 16.	Go to step 12.
Step 12 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 Reinstall or replace the motor. See **"Motor (HPT transport) removal" on page 323**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 16.	Go to step 15.
Step 15 Replace the cable. See **"Motor (HPT transport) removal" on page 323**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Clear the HPT transport rollers of debris and dust. **b** Check the rollers for misalignment, wear, and damage. Are the rollers properly installed and free of wear and damage?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the rollers. See **"HPT transport rollers removal" on page 325**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the following components for misalignment, wear, and damage: • HPT transport roller belt 1 • HPT transport roller belt 2 • HPT transport roller 1 gear • HPT transport roller 2 gear • HPT transport motor belt • HPT transport motor gear Are the components properly installed and free of wear and damage?	Go to step 20.	Go to step 19.
Step 19 Reinstall or replace the affected components. See **"HPT belts and gears removal" on page 325**. Does the problem remain?	Go to step 20.	The problem is solved.

Diagnostics and troubleshooting

Action	Yes	No
Step 20 **a** Reseat the interface cable on the HPT, and then reseat the cable J6 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 23.	Go to step 22.
Step 22 Replace the cable. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Reseat all the cables on the SHPF 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 **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

420–457 paper jams

420–457 paper jam messages

Error code	Description	Action
420.13	Paper did not reach the sensor (staple finisher paper feed).	See **"Staple finisher paper feed jam service check" on page 57**.
420.13	Paper did not reach the sensor (SHPF entrance).	See **"SHPF paper feed failure service check" on page 61**.
420.15	Paper did not clear the sensor (staple finisher paper feed).	See **"Staple finisher paper feed jam service check" on page 57**.
420.15	Paper did clear not the sensor (SHPF entrance).	See **"SHPF paper feed failure service check" on page 61**.

Error code	Description	Action
451.23	Paper did not reach the sensor (SHPF top bin exit).	See **"SHPF top bin exit jam service check" on page 64**.
451.25	Paper did not clear the sensor (SHPF top bin exit).	
452.25	Paper did not reach or leave the sensor (staple finisher tamper paper present).	See **"Staple finisher exit jam service check" on page 68**.
452.25	Paper did not reach or leave the sensor (SHPF tamper paper present).	See **"SHPF ejector failure service check" on page 125**.
455.23	Paper did not reach the sensor (SHPF compiler feed).	See **"SHPF compiler feed jam service check" on page 71**.
455.25	Paper did not clear the sensor (SHPF compiler feed).	
457.23	Paper did not reach the sensor (SHPF booklet gate).	See **"SHPF booklet gate jam service check" on page 77**.
457.25	Paper did not clear the sensor (SHPF booklet gate).	

Staple finisher paper feed jam service check

Action	Yes	No
Step 1 a Remove the paper jams and fragments along the paper path. b At the back of the printer, reseat the interface cable. 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** > **Staple finisher motor tests** > **Transport** b Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (staple finisher transport) removal" on page 243**. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the staple finisher transport motor cable. 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** > **Staple finisher sensor tests** **b** Find the sensor (Paper feed). Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 8.
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the sensor. See **"Sensor (staple finisher paper feed) removal" on page 254**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher paper feed sensor cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Reseat the cables CN101 and CN111 on the staple finisher controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. **d** Check the cables for damage. Are the cables free of damage?	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 Replace the damaged cables. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Rotate the jam removal knob, and then check the following components for jams and damage: • Staple finisher transport motor belt • Staple finisher jam removal knob • Staple finisher jam removal gears • Staple finisher tamper feed roller secondary gear • Staple finisher tamper feed roller primary gear • Staple finisher transport motor gear Are the components free of jams and damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the affected components. See **"Staple finisher —Transport section 2" on page 541**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**. **b** Check the upper and lower guides for wear or damage. Are the guides free of wear and damage?	Go to step 18.	Go to step 17.
Step 17 Replace the damaged guide. See **"Staple finisher upper guide removal" on page 283** and **"Staple finisher lower guide removal" on page 287**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the idler rollers on the guides for wear and damage. Are the rollers free of wear and damage?	Go to step 20.	Go to step 19.
Step 19 Replace the damaged rollers. See **"Staple finisher—Transport section 1" on page 539**. Does the problem remain?	Go to step 20.	The problem is solved.

Action	Yes	No
Step 20 Check the following components for debris, dust, wear, and damage: • Transport roller • Compiler feed roller Are the components free of debris, dust, wear, and damage?	Go to step 22.	Go to step 21.
Step 21 Clean or replace the affected components. See **"Staple finisher transport roller removal" on page 297** and **"Staple finisher compiler feed rollers and gears removal" on page 294**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 **a** Reseat the interface cable on the staple finisher controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 24.	Go to step 23.
Step 23 Replace the cable. See **"Staple finisher interface cable removal" on page 241**. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF paper feed failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **Note:** Remove the top inner cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Feed** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (SHPF feed) removal" on page 352**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF J9 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Reseat the sensor (SHPF diverter cam) cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Reinstall or replace the sensor. See **"Sensor (SHPF diverter cam) removal" on page 389**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the diverter cam sensor encoder for misalignment and damage. Is the sensor encoder properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the sensor encoder. See **"SHPF diverter cam removal" on page 388**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the following components for misalignment, wear, and damage: • SHPF entrance roller belt • SHPF diverter feed roller gears • SHPF diverter feed roller belt • SHPF top bin transport roller belt • SHPF top bin transport roller gear Are the components properly installed and free of wear and damage?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the affected components. See **"SHPF entrance and diverter feed roller gears removal" on page 390**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Rotate the two SHPF knobs, and then check the following rollers for proper operation: • SHPF entrance roller • SHPF diverter feed roller • SHPF top bin exit roller Do the rollers properly turn?	Go to step 16.	Go to step 14.
Step 14 Check the ball bearings of the affected rollers for wear and damage. Are the ball bearings free of wear and damage?	Go to step 16.	Go to step 15.

Action	Yes	No
Step 15 Replace the ball bearings. See **"SHPF—Transport section 3" on page 583** and **"SHPF—Transport section 4" on page 587**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Clear the SHPF entrance roller, SHPF diverter feed roller, and SHPF top bin exit roller of debris and dust. **b** Check the rollers for wear and damage. Are the rollers free of wear and damage?	Go to step 18.	Go to step 17.
Step 17 Replace the damaged rollers. See the following: • **"SHPF entrance idler and roller removal" on page 444** • **"SHPF diverter feed roller removal" on page 423** • **"SHPF top bin exit roller removal" on page 431** Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Reseat the cables J4, J5, and J9 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	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 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 22.	The problem is solved.

Action	Yes	No
Step 22 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF top bin exit jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Top bin exit). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor and its actuator for misalignment and damage. Are the sensor and actuator properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the affected sensor or actuator. See **"Sensor (SHPF top bin exit) removal" on page 394**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF J9 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 **Note:** Remove the top inner cover and rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Feed** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 8.
Step 8 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the motor. See **"Motor (SHPF feed) removal" on page 352**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **Note:** Remove the top inner cover and rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Exit** **b** Touch **Start**. Does the motor run?	Go to step 13.	Go to step 11.
Step 11 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the motor. See **"Motor (SHPF transport) removal" on page 353**. Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
Step 13 Rotate the SHPF knobs, and then check the following rollers for proper operation: • SHPF diverter feed roller • SHPF top bin exit roller • SHPF top bin transport roller Do the rollers properly turn?	Go to step 16.	Go to step 14.
Step 14 Check the ball bearings of the affected rollers for wear and damage. Are the ball bearings free of wear and damage?	Go to step 16.	Go to step 15.
Step 15 Replace the ball bearings. See **"SHPF—Transport section 3" on page 583**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 a Clear the SHPF diverter feed roller, SHPF top bin exit roller, and SHPF top bin transport roller of debris and dust. b Check the rollers for wear and damage. Are the rollers free of wear and damage?	Go to step 18.	Go to step 17.
Step 17 Replace the damaged rollers. See the following: • **"SHPF diverter feed roller removal" on page 423** • **"SHPF top bin exit roller removal" on page 431** • **"SHPF top bin transport roller removal" on page 435** Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the following components for misalignment, wear, and damage: • SHPF top bin exit belt • SHPF top bin exit roller gear • SHPF diverter feed roller gears • SHPF diverter feed roller belt • SHPF top bin transport roller belt • SHPF top bin transport roller gear Are the components properly installed and free of wear and damage?	Go to step 20.	Go to step 19.

Action	Yes	No
Step 19 Reinstall or replace the affected components. See **"SHPF entrance and diverter feed roller gears removal" on page 390**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Open the top jam access door, and then check the following rollers for wear and damage: • SHPF diverter feed idler roller • SHPF top bin exit idler roller • SHPF top bin transport idler roller Are the rollers free of wear and damage?	Go to step 22.	Go to step 21.
Step 21 Replace the damaged rollers. See **"SHPF top jam access door and SHPF diverter removal" on page 391**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Check the SHPF diverter and its spring for proper installation. Are the diverter and spring properly installed?	Go to step 24.	Go to step 23.
Step 23 Reinstall the diverter. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Check the following components for wear and damage: • SHPF diverter lever • SHPF diverter cam Are the components free of wear and damage?	Go to step 26.	Go to step 25.
Step 25 Replace the damaged components. See **"SHPF top jam access door and SHPF diverter removal" on page 391** and **"SHPF diverter cam removal" on page 388**. Does the problem remain?	Go to step 26.	The problem is solved.

Diagnostics and troubleshooting

Action	Yes	No
Step 26 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 28.	Go to step 27.
Step 27 Replace the cable. Does the problem remain?	Go to step 28.	The problem is solved.
Step 28 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 29.	The problem is solved.
Step 29 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher exit jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **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** > **Staple finisher sensor tests** **b** Find the sensor (Paper eject). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Reinstall or replace the sensor. See **"Staple finisher tamper sensors removal" on page 235**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the tamper paper present actuator for misalignment and damage. Is the actuator properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the actuator. See **"Staple finisher tamper racks removal" on page 311**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple finisher motor tests** > **Transport** **b** Touch **Start**. Does the motor (staple finisher exit) run?	Go to step 12.	Go to step 10.
Step 10 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the motor. See **"Motor (staple finisher exit) removal" on page 249**. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Check the following components for misalignment, wear, and damage: • Staple finisher exit belt • Staple finisher exit gear Are the components properly installed and free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Replace the affected components. See **"Staple finisher exit roller drive belts and gears removal" on page 279**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the following components for misalignment, wear, and damage: • Staple finisher upper exit roller primary belt • Staple finisher upper exit rollers • Staple finisher upper exit roller secondary belt • Staple finisher upper exit roller secondary gear • Staple finisher upper exit roller primary gear Are the components properly installed and free of wear and damage?	Go to step 16.	Go to step 15.
Step 15 Replace the affected components. See **"Staple finisher upper exit roller belts and gear removal" on page 305** and **"Staple finisher upper exit roller removal" on page 304**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the following components for misalignment, wear, and damage: • Staple finisher lower exit roller • Staple finisher exit roller gear Are the components properly installed and free of wear and damage?	Go to step 18.	Go to step 17.
Step 17 Replace the affected components. See **"Staple finisher lower exit roller removal" on page 282** and **"Staple finisher exit roller gear removal" on page 282**. Does the problem remain?	Go to step 18.	The problem is solved.

Action	Yes	No
Step 18 **a** Reseat the interface cable on the staple finisher controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 20.	Go to step 19.
Step 19 Replace the cable. See **"Staple finisher interface cable removal" on page 241**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF compiler feed jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Receiving roller release). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.

Action	Yes	No
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor 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 (SHPF compiler feed roller release) removal" on page 386**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF J4, J5, and J10 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **Note:** Remove the top inner cover and rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Feed** **b** Touch **Start**. Does the motor run?	Go to step 12.	Go to step 8.
Step 8 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the motor. See **"Motor (SHPF feed) removal" on page 352**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 12.	Go to step 11.

Action	Yes	No
Step 11 Replace the SHPF J9 cable harness. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **Note:** Remove the top inner cover and rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Exit** **b** Touch **Start**. Does the motor run?	Go to step 15.	Go to step 13.
Step 13 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 15.	Go to step 14.
Step 14 Reinstall or replace the motor. See **"Motor (SHPF transport) removal" on page 353**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **Note:** Remove the top inner cover and rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Receiving roller release** **b** Touch **Start**. Does the motor run?	Go to step 18.	Go to step 16.
Step 16 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the motor. See **"Motor (SHPF compiler feed roller release) removal" on page 385**. Does the problem remain?	Go to step 18.	The problem is solved.

Action	Yes	No
Step 18 Rotate the two SHPF knobs, and then check the following rollers for proper operation: • SHPF diverter feed roller • SHPF compiler feed roller Do the rollers properly turn?	Go to step 21.	Go to step 19.
Step 19 Check the ball bearings of the affected rollers for wear and damage. Are the ball bearings free of wear and damage?	Go to step 21.	Go to step 20.
Step 20 Replace the ball bearings. See **"SHPF—Transport section 3" on page 583**. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 a Clear the SHPF diverter feed roller and SHPF compiler feed roller of debris and dust. b Check the rollers for wear and damage. Are the rollers free of wear and damage?	Go to step 23.	Go to step 22.
Step 22 Replace the damaged rollers. See **"SHPF diverter feed roller removal" on page 423** and **"SHPF compiler feed roller removal" on page 450**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Check the following components for misalignment, wear, and damage: • SHPF compiler feed idler roller • SHPF diverter roller gears • SHPF diverter feed roller belt • SHPF compiler feed roller belt • SHPF compiler feed roller gear Are the components properly installed and free of wear and damage?	Go to step 25.	Go to step 24.

Action	Yes	No
Step 24 Reinstall or replace the affected components. See **"SHPF compiler feed idler roller assembly removal" on page 437** and **"SHPF entrance and diverter feed roller gears removal" on page 390**. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Open the top jam access door, and then check the following components for wear and damage: • SHPF diverter feed idler roller • SHPF top bin exit idler roller • SHPF top bin transport idler roller Are the components free of wear and damage?	Go to step 27.	Go to step 26.
Step 26 Replace the damaged rollers. See **"SHPF top jam access door and SHPF diverter removal" on page 391**. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Check the SHPF diverter and its spring for proper installation. Are the diverter and spring properly installed?	Go to step 29.	Go to step 28.
Step 28 Reinstall the diverter. Does the problem remain?	Go to step 29.	The problem is solved.
Step 29 Check the following components for wear and damage: • SHPF diverter lever • SHPF diverter cam Are the components free of wear and damage?	Go to step 31.	Go to step 30.
Step 30 Replace the damaged components. See **"SHPF top jam access door and SHPF diverter removal" on page 391** and **"SHPF diverter cam removal" on page 388**. Does the problem remain?	Go to step 31.	The problem is solved.

Action	Yes	No
Step 31 Check the following components for wear and damage: • SHPF compiler feed idler rollers • SHPF compiler feed idler roller holder • SHPF compiler idler roller holder springs • SHPF Compiler feed roller release cam • SHPF Compiler feed roller release middle cam Are the components free of wear and damage?	Go to step 33.	Go to step 32.
Step 32 Replace the damaged components. See **"SHPF compiler feed idler roller assembly removal" on page 437** and **"SHPF compiler feed roller release cam removal" on page 433**. Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 35.	Go to step 32.
Step 34 Replace the cable. Does the problem remain?	Go to step 35.	The problem is solved.
Step 35 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 36.	The problem is solved.
Step 36 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF booklet gate jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the cable J5 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. **d** Check the cable for damage. Is the cable free of damage?	Go to step 4.	Go to step 3.
Step 3 Replace the J4, J5, and J10 cable harness. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Reseat the sensor (SHPF booklet gate) cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 6.	Go to step 5.
Step 5 Reinstall or replace the sensor. See **"SHPF booklet maker upper pre-feed guide removal" on page 421**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 8.	Go to step 7.
Step 7 Replace the SHPF booklet gate sensor cable. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the following doors for misalignment and damage: • HPBF booklet gate jam access door • SHPF jam access door Are the doors properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the affected doors. See **"Booklet gate jam access door removal" on page 336** and **"SHPF jam access door removal" on page 338**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **Note:** Remove the top inner cover and rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Feed** **b** Touch **Start**. Does the motor run?	Go to step 15.	Go to step 11.
Step 11 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the motor. See **"Motor (SHPF feed) removal" on page 352**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 15.	Go to step 14.
Step 14 Replace the SHPF J9 cable harness. Does the problem remain?	Go to step 15.	The problem is solved.

Action	Yes	No
Step 15 **Note:** Remove the top inner cover and rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Exit** **b** Touch **Start**. Does the motor run?	Go to step 18.	Go to step 16.
Step 16 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the motor. See **"Motor (SHPF transport) removal" on page 353**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Rotate the SHPF knobs, and then check the following rollers for proper operation: • SHPF booklet maker pre-feed roller • SHPF compiler feed roller Do the rollers properly turn?	Go to step 21.	Go to step 19.
Step 19 Check the ball bearings of the affected rollers for wear and damage. Are the ball bearings free of wear and damage?	Go to step 21.	Go to step 20.
Step 20 Replace the damaged ball bearings. See **"SHPF booklet maker pre-feed roller removal" on page 418** and **"SHPF compiler feed roller removal" on page 450**. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 **a** Clear the SHPF booklet maker pre-feed roller and SHPF compiler feed roller of debris and dust. **b** Check the rollers for wear and damage. Are the rollers free of wear and damage?	Go to step 23.	Go to step 22.

Action	Yes	No
Step 22 Replace the damaged rollers. See **"SHPF booklet maker pre-feed roller removal" on page 418** and **"SHPF compiler feed roller removal" on page 450**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Check the following components for misalignment, wear, and damage: • SHPF compiler feed roller belt • SHPF compiler feed roller gear • SHPF booklet maker pre-feed roller belt • SHPF booklet maker pre-feed roller gear Are the components properly installed and free of wear and damage?	Go to step 25.	Go to step 24.
Step 24 Reinstall or replace the affected components. See **"SHPF—Transport section 2" on page 579**. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Check the SHPF diverter and its spring for proper installation. Are the diverter and spring properly installed?	Go to step 27.	Go to step 26.
Step 26 Reinstall the diverter. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Check the following components for wear and damage: • SHPF diverter lever • SHPF diverter cam Are the components free of wear and damage?	Go to step 29.	Go to step 28.
Step 28 Replace the damaged components. See **"SHPF top jam access door and SHPF diverter removal" on page 391** and **"SHPF diverter cam removal" on page 388**. Does the problem remain?	Go to step 29.	The problem is solved.

Action	Yes	No
Step 29 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 31.	Go to step 30.
Step 30 Replace the cable. Does the problem remain?	Go to step 31.	The problem is solved.
Step 31 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 32.	The problem is solved.
Step 32 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

471–484 jams

471–484 paper jam messages

Error code	Description	Action
471.23	The SHPF diverter cam did not reach or clear the sensor (SHPF diverter cam).	See **"SHPF paper feed failure service check" on page 61**.
480.35	The booklet maker rear stapler unit failed.	See **"Booklet maker staple unit failure service check" on page 82**.
481.13	The staple finisher staple unit did not reach its home position.	See **"Staple finisher staple unit failure service check" on page 83**.
484.13	The staple finisher staple unit carriage did not reach its home position.	
484.13	The SHPF staple unit carriage did not reach its home position.	See **"SHPF staple unit failure service check" on page 86**.

Booklet maker staple unit failure service check

Action	Yes	No
Step 1 a Reseat the cable J4 on the booklet maker controller board. b If applicable, reseat the junction connectors on the cable. c Make sure that the cable does not interfere with moving parts. d Check the cable for damage. Is the cable free of damage?	Go to step 3.	Go to step 2.
Step 2 Replace the booklet maker staple unit cable. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a Reseat the interface cable on the booklet maker controller board and SHPF controller board. b Reseat the junction connector on the cable. c Check the cable for damage. Is the cable free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the booklet maker staple unit for misalignment and damage. Is the staple unit properly installed and free of damage?	Go to step 7.	Go to step 6.
Step 6 Reinstall or replace the staple unit. See **"Booklet maker staple unit removal" on page 507**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher staple unit failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **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** > **Staple finisher sensor tests** **b** Find the sensor (Staple carriage home). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor 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 staple unit home) removal" on page 253**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the staple finisher exit section cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the staple unit holder for misalignment and damage. Is the staple unit holder properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the staple unit holder. See **"Staple finisher staple unit removal" on page 256**. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Check the staple finisher aligners for misalignment and damage. **Note:** Make sure that they do not block the path of the staple unit. Are the staple finisher aligners properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the staple finisher aligner. See **"Staple finisher tamper racks removal" on page 311**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Reseat the staple unit cable, and then check the staple unit for damage. Is the staple unit free of damage?	Go to step 13.	Go to step 12.
Step 12 Replace the staple unit. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple finisher motor tests** > **Carriage** **b** Touch **Start**. Does the motor run?	Go to step 18.	Go to step 14.
Step 14 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the motor. See **"Motor (staple finisher staple unit carriage) removal" on page 259**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 18.	Go to step 17.

Action	Yes	No
Step 17 Replace the staple finisher staple unit carriage motor cable. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 a Reseat the cables on the staple unit interface board. b Reseat the cable CN120 on the staple finisher controller board. c If applicable, reseat the junction connectors on the cables. d Make sure that the cables do not interfere with moving parts. e Check the cables for damage. Are the cables free of damage?	Go to step 20.	Go to step 19.
Step 19 Replace the damaged cables. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Check the staple finisher interface board for damage. Is the board free of damage?	Go to step 22.	Go to step 21.
Step 21 Replace the board. See **"Staple finisher interface board removal" on page 258**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Check the following components for wear and damage: • Staple unit carriage gears • Staple unit rail Are the components free of damage?	Go to step 24.	Go to step 23.
Step 23 Replace the damaged components. See **"Staple finisher staple unit carriage gears removal" on page 260** and **"Staple finisher staple unit rail removal" on page 288**. Does the problem remain?	Go to step 24.	The problem is solved.

Action	Yes	No
Step 24 **a** Reseat the staple finisher FFC and interface cable on the interface board and staple finisher controller board. **b** Reseat the junction connector on the cable. **c** Check the cables for damage. Are the cables free of damage?	Go to step 26.	Go to step 25.
Step 25 Replace the damaged cables. See **"Staple finisher interface cable removal" on page 241** and **"Staple finisher FFC removal" on page 263**. Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF staple unit failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **Note:** Remove the rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Stapler carriage** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.

Action	Yes	No
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (SHPF staple unit carriage) removal" on page 367**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF staple unit interface cable. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Stapler center) or sensor (Stapler home). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the sensor. See **"SHPF paddle motor FRUs removal" on page 382**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Reseat the cable J11 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Check the following components for misalignment, wear, and damage: • SHPF staple unit carriage drive gear • SHPF staple unit carriage belt • SHPF staple unit knob • SHPF staple unit carriage rail • SHPF staple unit carriage drive belt Are the components properly installed and free of wear and damage?	Go to step 13.	Go to step 12.
Step 12 Replace the affected components. See **"SHPF staple unit drive belt and gear removal" on page 366**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 15.	Go to step 14.
Step 14 Replace the cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

49y paper jams

491–493 paper jam messages

Error code	Description	Action
491.33	Paper did not reach the sensor (Booklet maker transport).	See **"Booklet maker feed jam service check" on page 89**.
491.35	Paper did not clear the sensor (Booklet maker transport).	See **"Booklet maker transport section paper jam service check" on page 94**.
492.33	Paper did not reach the sensor (Booklet maker tamper present).	See **"Booklet maker tamper paper jam service check" on page 99**.
493.33	Paper did not reach the sensor (Booklet maker fold exit).	See **"Bifold exit jam service check" on page 101**.
493.35	Paper did not clear the sensor (Booklet maker fold exit).	

Booklet maker feed jam service check

Action	Yes	No
Step 1 a Remove the paper jams and fragments along the paper path. b Unplug the booklet maker interface cable from the SHPF. c Reseat the cable, and then reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the following doors for misalignment and damage: • HPBF booklet gate jam access door • SHPF jam access door Are the doors properly installed and free of damage?	Go to step 4.	Go to step 3.
Step 3 Replace the affected doors. See **"Booklet gate jam access door removal" on page 336** and **"SHPF jam access door removal" on page 338**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 a Reseat the sensor (SHPF booklet gate) cable, and then clear the sensor of debris and dust. b Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 8.	Go to step 5.

Action	Yes	No
Step 5 Reinstall or replace the sensor. See **"SHPF booklet maker upper pre-feed guide removal" on page 421**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 8.	Go to step 7.
Step 7 Replace the J4, J5, and J10 cable harness. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **Note:** Remove the top inner cover and rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Feed** **b** Touch **Start**. Does the motor run?	Go to step 13.	Go to step 9.
Step 9 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the motor. See **"Motor (SHPF feed) removal" on page 352**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 13.	Go to step 12.
Step 12 Replace the SHPF J9 cable harness. Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
Step 13 **Note:** Remove the top inner cover and rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Exit** **b** Touch **Start**. Does the motor run?	Go to step 16.	Go to step 14.
Step 14 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the motor. See **"Motor (SHPF transport) removal" on page 353**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the following components for misalignment, wear, and damage: • SHPF compiler feed roller belt • SHPF compiler feed roller gear • SHPF booklet maker pre-feed roller belt • SHPF booklet maker pre-feed roller gear Are the components properly installed and free of wear and damage?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the affected components. See **"SHPF— Transport section 2" on page 579**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Reseat the cables J5 and J9 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. **d** Check the cables for damage. Are the cables free of damage?	Go to step 20.	Go to step 19.

Diagnostics and troubleshooting

Action	Yes	No
Step 19 Replace the J4, J5, and J10 cable harness. 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** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Entrance). Does the sensor status change while toggling the sensor?	Go to step 25.	Go to step 21.
Step 21 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor and its actuator for misalignment and damage. Are the sensor and actuator properly installed and free of damage?	Go to step 23.	Go to step 22.
Step 22 Reinstall or replace the affected sensor or actuator. See **"Sensor (booklet maker transport) removal" on page 464**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 25.	Go to step 24.
Step 24 Replace the booklet maker transport sensor cable. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 **a** Remove the front cover. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Transport** **c** Touch **Start**. Does the motor run?	Go to step 30.	Go to step 26.

Action	Yes	No
Step 26 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 28.	Go to step 27.
Step 27 Reinstall or replace the motor. See **"Motor (booklet maker transport) removal" on page 474**. Does the problem remain?	Go to step 28.	The problem is solved.
Step 28 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 30.	Go to step 29.
Step 29 Replace the booklet maker transport section cable. Does the problem remain?	Go to step 30.	The problem is solved.
Step 30 Check the following components for misalignment, wear, and damage: • Booklet maker transport gear • Booklet maker transport belt Are the components properly installed and free of wear and damage?	Go to step 32.	Go to step 31.
Step 31 Reinstall or replace the affected components. See **"Booklet maker transport gear and belt removal" on page 477**. Does the problem remain?	Go to step 32.	The problem is solved.
Step 32 Check the following rollers for proper installation: • Booklet maker transport roller • Booklet maker transport idler rollers and their springs Are the rollers properly installed?	Go to step 34.	Go to step 33.
Step 33 Reinstall the rollers. Does the problem remain?	Go to step 34.	The problem is solved.

Action	Yes	No
Step 34 **a** Clear the booklet transport rollers and booklet transport idler rollers of debris and dust. **b** Check the rollers for wear and damage. Are the rollers free of wear and damage?	Go to step 36.	Go to step 35.
Step 35 Replace the damaged rollers. See **"Booklet maker transport roller removal" on page 478** and **"Booklet maker transport idler rollers removal" on page 463**. Does the problem remain?	Go to step 36.	The problem is solved.
Step 36 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 38.	Go to step 37.
Step 37 Replace the cable. Does the problem remain?	Go to step 38.	The problem is solved.
Step 38 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 39.	The problem is solved.
Step 39 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Booklet maker transport section paper jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** Unplug the booklet maker interface cable from the SHPF. **c** Reseat the cable, and then reset the printer. 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** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Entrance). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor 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 (booklet maker transport) removal" on page 464**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the booklet maker transport sensor cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Remove the front cover. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Transport** **c** Touch **Start**. Does the motor run?	Go to step 12.	Go to step 8.
Step 8 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 10.	Go to step 9.

Action	Yes	No
Step 9 Reinstall or replace the motor. See **"Motor (booklet maker transport) removal" on page 474**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 12.	Go to step 11.
Step 11 Replace the booklet maker transport section cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the following components for misalignment, wear, and damage: • Booklet maker transport gear • Booklet maker transport belt Are the components properly installed and free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the affected components. See **"Booklet maker transport gear and belt removal" on page 477**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the following rollers for proper installation: • Booklet maker transport roller • Booklet maker transport idler rollers and their springs Are the rollers properly installed?	Go to step 16.	Go to step 15.
Step 15 Reinstall the rollers. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Clear the booklet transport rollers and booklet transport idler rollers of debris and dust. **b** Check the rollers for wear and damage. Are the rollers free of wear and damage?	Go to step 18.	Go to step 17.

Action	Yes	No
Step 17 Replace the damaged rollers. See **"Booklet maker transport roller removal" on page 478** and **"Booklet maker transport idler rollers removal" on page 463**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the following components for misalignment, wear, and damage: • Booklet maker decurl guide • Booklet maker decurl lever Are the components properly installed and free of wear and damage?	Go to step 20.	Go to step 19.
Step 19 Reinstall or replace the affected components. See **"Booklet maker decurl guide removal" on page 481** and **"Booklet maker decurl lever removal" on page 465**. 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** > **Booklet maker motor tests** > **Paddle** b Touch **Start**. Does the motor run?	Go to step 25.	Go to step 21.
Step 21 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 23.	Go to step 22.
Step 22 Reinstall or replace the motor. See **"Motor (booklet maker paddle) removal" on page 472**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 25.	Go to step 24.

Action	Yes	No
Step 24 Replace the booklet maker J8 and J9 cable harness. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Check the booklet maker decurl gears for misalignment, wear, and damage. Are the gears properly installed and free of wear and damage?	Go to step 27.	Go to step 26.
Step 26 Reinstall or replace the gears. See **"Booklet maker decurl gears removal" on page 479**. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Booklet decurl). Does the sensor status change while toggling the sensor?	Go to step 30.	Go to step 28.
Step 28 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 30.	Go to step 29.
Step 29 Reinstall or replace the sensor. See **"Sensor (booklet maker decurl) removal" on page 480**. Does the problem remain?	Go to step 30.	The problem is solved.
Step 30 **a** Reseat the cable J5 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. **d** Check the cable for damage. Is the cable free of damage?	Go to step 32.	Go to step 31.
Step 31 Replace the booklet maker transport section cable. Does the problem remain?	Go to step 32.	The problem is solved.

Diagnostics and troubleshooting

Action	Yes	No
Step 32 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 34.	Go to step 33.
Step 33 Replace the cable. Does the problem remain?	Go to step 34.	The problem is solved.
Step 34 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 35.	The problem is solved.
Step 35 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Booklet maker tamper paper jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** Unplug the booklet maker interface cable from the SHPF. **c** Reseat the cable, and then 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** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Tamper paper present). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.

Action	Yes	No
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor 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 **"Booklet maker tamper tray removal" on page 525**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the booklet maker J7 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Reseat the cable J7 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. **d** Check the cable for damage. Is the cable free of damage?	Go to step 9.	Go to step 8.
Step 8 Replace the booklet maker J7 cable harness. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 11.	Go to step 10.
Step 10 Replace the cable. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Reseat all the cables on the booklet maker 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 **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Bifold exit jam service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** Unplug the booklet maker interface cable from the SHPF. **c** Reseat the cable, and then 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** > **Booklet maker motor tests** > **Center fold roller** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (bifold roller) removal" on page 467**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 Replace the booklet maker J10 and J11 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the following gears for wear and damage: • Bifold roller drive gear • Bifold roller idler gear 1 • Bifold roller idler gear 2 • Bifold roller gears • Lower bifold roller gear Are the rollers free of wear and damage?	Go to step 9.	Go to step 8.
Step 8 Replace the damaged rollers. See the following: • **"Bifold roller gears removal" on page 468** • **"Bifold upper roller removal" on page 502** • **"Bifold lower roller removal" on page 505** • **"Bifold roller drive gears removal" on page 520** Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Fold exit). Does the sensor status change while toggling the sensor?	Go to step 14.	Go to step 10.
Step 10 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the sensor. See **"Sensor (booklet maker fold exit) removal" on page 512**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 Replace the booklet maker fold exit sensor cable. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the trifold diverter for misalignment and damage. Is the diverter properly installed and free of damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the diverter. See **"Trifold diverter removal" on page 511**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the following components for misalignment, wear, and damage: • Bifold knife • Bifold knife sliders Are the components properly installed and free of wear and damage?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the affected component. See **"Bifold knife removal" on page 519**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Remove the right cover. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Center fold knife** **c** Touch **Start**. Does the motor run?	Go to step 21.	Go to step 19.
Step 19 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 21.	Go to step 20.

Action	Yes	No
Step 20 Reinstall or replace the motor. See **"Motor (bifold knife) removal" on page 487**. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Check the following gears for wear and damage: • Bifold knife primary drive gear • Bifold knife idler gear • Bifold knife secondary drive gears Are the components properly installed and free of wear and damage?	Go to step 23.	Go to step 22.
Step 22 Reinstall or replace the damaged gears. See **"Bifold knife primary drive gears removal" on page 513** and **"Bifold knife secondary drive gears removal" on page 518**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 **a** Clear the bifold rollers of debris and dust. **b** Check the rollers for misalignment, wear, and damage. Are the rollers properly installed and free of wear and damage?	Go to step 25.	Go to step 24.
Step 24 Reinstall or replace the affected rollers. See **"Bifold upper roller removal" on page 502** and **"Bifold lower roller removal" on page 505**. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 **a** Check if the bifold roller springs are properly engaged with their arms. **b** Check the springs for damage. Are the springs properly installed and free of damage?	Go to step 27.	Go to step 26.
Step 26 Reinstall or replace the affected springs. See **"Bifold roller springs removal" on page 476**. Does the problem remain?	Go to step 27.	The problem is solved.

Action	Yes	No
Step 27 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Center fold guide** **b** Touch **Start**. Does the motor run?	Go to step 30.	Go to step 28.
Step 28 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 30.	Go to step 29.
Step 29 Reinstall or replace the motor. See **"Motor (bifold guide) removal" on page 482**. Does the problem remain?	Go to step 30.	The problem is solved.
Step 30 Check the bifold roller timing gear for misalignment, wear, and damage. Is the gear properly installed and free of wear and damage?	Go to step 32.	Go to step 31.
Step 31 Reinstall or replace the gear. See **"Bifold upper roller removal" on page 502**. Does the problem remain?	Go to step 32.	The problem is solved.
Step 32 **a** Reseat the cables J9 and J11 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 35.	Go to step 34.

Action	Yes	No
Step 34 Replace the cable. Does the problem remain?	Go to step 35.	The problem is solved.
Step 35 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 36.	The problem is solved.
Step 36 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Hardware errors

300–324 errors

300–324 error messages

Error code	Description	Action
303.63	The SHPF punch drive failed.	See **"Punch unit failure service check" on page 107**.
321.63	The staple finisher front tamper did not reach or clear its home position.	See **"Motor (staple finisher front tamper) failure service check" on page 108**.
321.63	The SHPF front tamper did not reach or clear its home position.	See **"Motor (SHPF front tamper) failure service check" on page 113**.
322.63	The staple finisher rear tamper did not reach or clear its home position.	See **"Motor (staple finisher rear tamper) failure service check" on page 111**.
322.63	The SHPF rear tamper did not reach or clear its home position.	See **"Motor (SHPF rear tamper) failure service check" on page 116**.
324.63	The SHPF paddle drive failed.	See **"Motor (SHPF paddle) failure service check" on page 118**.

Punch unit failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Remove the SPHF rear cover. See **"SHPF rear cover removal" on page 335**. **b** Do a punch job and check if the motor (SHPF punch unit) runs. Does the motor run?	Go to step 5.	Go to step 3.
Step 3 **a** Reseat the cable J7 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. **d** Check the cable for damage. Is the cable free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the punch unit cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the following components for misalignment and damage: • Motor (SHPF punch unit) • Sensor (hole punch box full, transmit) • Sensor (hole punch box full, receive) Are the components properly installed and free of damage?	Go to step 7.	Go to step 6.
Step 6 Reinstall or replace the affected components. See **"Punch unit removal" on page 361**, **"Sensor (hole punch box full) removal" on page 362**, and **"Sensor (hole punch box full) removal" on page 362**.	Go to step 7.	The problem is solved.
Step 7 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** 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 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (staple finisher front tamper) failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the cable CN102 on the staple finisher controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple finisher motor tests** > **Tamper** **b** Touch **Start**. Does the motor run?	Go to step 8.	Go to step 4.
Step 4 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 5.

Action	Yes	No
Step 5 Reinstall or replace the motor. See **"Motor (staple finisher tamper) removal" on page 234**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 8.	Go to step 7.
Step 7 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the tamper gears for misalignment and damage. Are the gears properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the damaged gears. See **"Staple finisher tamper drive gears removal" on page 309**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple finisher sensor tests** **b** Find the sensor (Tamper home, front). Does the sensor status change while toggling the sensor?	Go to step 15.	Go to step 11.
Step 11 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the sensor. See **"Staple finisher tamper sensors removal" on page 235**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 15.	Go to step 14.

Action	Yes	No
Step 14 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Remove the compiler assembly. See **"Staple finisher tamper and aligner assembly removal" on page 307**. **b** Check the parts for misalignment, wear, and damage. Are the components properly installed and free of wear and damage?	Go to step 17.	Go to step 16.
Step 16 Replace the affected components. See **"Staple finisher— Compiler section 2" on page 547**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 **a** Reseat the interface cable on the staple finisher controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 19.	Go to step 18.
Step 18 Replace the cable. See **"Staple finisher interface cable removal" on page 241**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (staple finisher rear tamper) failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the cable CN102 on the staple finisher controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple finisher motor tests** > **Tamper** **b** Touch **Start**. Does the motor run?	Go to step 8.	Go to step 4.
Step 4 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 5.
Step 5 Reinstall or replace the motor. See **"Motor (staple finisher tamper) removal" on page 234**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 8.	Go to step 7.
Step 7 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the tamper gears for misalignment and damage. Are the gears properly installed and free of damage?	Go to step 10.	Go to step 9.

Action	Yes	No
Step 9 Replace the damaged gears. See **"Staple finisher tamper drive gears removal" on page 309**. Does the problem remain?	Go to step 10.	The problem is solved.

Step 10
  a Enter the Diagnostics menu, and then navigate to:
    Output device diagnostics > **Staple finisher sensor tests**
  b Find the sensor (Tamper home, rear).
 	
Does the sensor status change while toggling the sensor?
	Go to step 15.	Go to step 11.

Step 11
  a Reseat the sensor cable, and then clear the sensor of debris and dust.
  b Check the sensor for misalignment and damage.
 	
Is the sensor properly installed and free of damage?
	Go to step 13.	Go to step 12.

Step 12 Reinstall or replace the sensor. See **"Staple finisher tamper sensors removal" on page 235**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 15.	Go to step 14.
Step 14 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 15.	The problem is solved.

Step 15
  a Remove the compiler assembly. See **"Staple finisher tamper and aligner assembly removal" on page 307**.
  b Check the parts for misalignment, wear, and damage.
 	
Are the components properly installed and free of wear and damage?
	Go to step 17.	Go to step 16.

Step 16 Replace the affected components. See **"Staple finisher— Compiler section 2" on page 547**. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 **a** Reseat the interface cable on the staple finisher controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 19.	Go to step 18.
Step 18 Replace the cable. See **"Staple finisher interface cable removal" on page 241**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (SHPF front tamper) failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **Note:** Remove the top inner cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Tamper, front** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.

Action	Yes	No
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (SHPF front tamper) removal" on page 350**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF J4, J5, and J10 cable harness. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Tamper home, front). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the sensor. See **"Sensor (SHPF front tamper home) removal " on page 351**. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 Remove the front tamper section, and then check the following components for misalignment, wear, and damage: • SHPF tamper gear • SHPF tamper drive gear • SHPF tamper drive belt • SHPF tamper belt Are the components properly installed and free of wear and damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the affected components. See **"SHPF tamper belts and gears removal" on page 409**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Reseat the cables J4 and J5 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 15.	Go to step 14.
Step 14 Replace the cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (SHPF rear tamper) failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **Note:** Remove the top inner cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Tamper, rear** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (SHPF rear tamper) removal" on page 354**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF ejector cable. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Tamper home, rear). Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 8.

Action	Yes	No
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 12.	Go to step 9.
Step 9 Reinstall or replace the sensor. See **"Sensor (SHPF rear tamper home) removal" on page 355**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 12.	Go to step 11.
Step 11 Replace the SHPF J9 cable harness. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Remove the rear tamper section, and then check the following components for misalignment, wear, and damage: • SHPF tamper gear • SHPF tamper drive gear • SHPF tamper drive belt • SHPF tamper belt Are the components properly installed and free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the affected components. See **"SHPF tamper belts and gears removal" on page 409**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Reseat the cables J9, J12, and J13 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 15.	The problem is solved.

Action	Yes	No
Step 15 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	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 Reseat all the cables on the SHPF 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 **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (SHPF paddle) failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **Note:** Remove the top inner cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Paddle** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.

Action	Yes	No
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (SHPF paddle) removal" on page 381**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF J4, J5, and J10 cable harness. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Paddle home). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the sensor. See **"SHPF paddle motor FRUs removal" on page 382**. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 Check the following components for misalignment, wear, and damage: • SHPF paddle drive gear • SHPF paddle drive belt Are the components properly installed and free of wear and damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the affected components. See **"SHPF paddle drive gears removal" on page 381** and **"SHPF paddle motor FRUs removal" on page 382**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the SHPF paddle drive encoder for misalignment, wear, and damage. Is the encoder properly installed and free of damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the encoder. See **"SHPF paddle drive gears removal" on page 381**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Reseat the cables J4 and J5 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the following components for wear and damage: • SHPF paddle cam • SHPF compiler guide lever Are the components free of wear and damage?	Go to step 17.	Go to step 16.
Step 16 Replace the damaged components. See **"SHPF paddle cam and compiler guide lever removal" on page 360**. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 19.	Go to step 18.
Step 18 Replace the cable. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

36y errors

36y error messages

Error code	Description	Action
364.50	The staple finisher upper exit roller did not reach or clear the sensor (staple finisher upper exit roller).	See **"Staple finisher upper exit roller failure service check" on page 122**.
364.63	The SHPF compiler eject drive failed.	See **"SHPF ejector failure service check" on page 125**.
366.63	The SHPF compiler pre-eject drive failed.	See **"SHPF pre-eject failure service check" on page 129**.
367.63	The booklet maker aligner did not reach or leave its home position.	See **"Motor (SHPF aligner) failure service check" on page 131**.

Staple finisher upper exit roller failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **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** > **Staple finisher sensor tests** **b** Find the sensor (Upper exit roller). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor 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 252**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the staple finisher exit section cable. 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** > **Staple finisher motor tests** > **Exit roller lift** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 8.

Action	Yes	No
Step 8 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the motor. See **"Motor (staple finisher upper exit) removal" on page 247**. Does the problem remain?	Go to step 10.	The problem is solved.

Step 10
 	
  a Reseat the cable CN109 on the staple finisher controller board.
  b If applicable, reseat the junction connectors on the cable.
  c Make sure that the cable does not interfere with moving parts.
  d Check the 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
 	
Check the following components for misalignment, wear, and damage:
  • Staple finisher upper exit belt
  • Staple finisher upper exit gear
  • Staple finisher upper exit idler gear
  • Staple finisher upper exit actuator
 	
Are the components properly installed and free of wear and damage?
	Go to step 14.	Go to step 13.

Step 13 Replace the affected components. See **"Staple finisher upper exit actuator removal" on page 281** and **"Staple finisher exit roller drive belts and gears removal" on page 279**. Does the problem remain?	Go to step 14.	The problem is solved.

Step 14
 	
  a Remove the upper exit roller assembly. See **"Staple finisher upper exit roller assembly removal" on page 301**.
  b Check the components for misalignment, wear, and damage.
 	
Are the components properly installed and free of wear and damage?
	Go to step 16.	Go to step 15.

Diagnostics and troubleshooting

Action	Yes	No
Step 15 Reinstall or replace the affected component. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the staple finisher exit roller solenoid for misalignment and damage. Is the solenoid properly installed and free of damage?	Go to step 18.	Go to step 17.
Step 17 Replace the solenoid. See **"Staple finisher exit roller solenoid removal" on page 280**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Reseat the interface cable on the staple finisher controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 20.	Go to step 19.
Step 19 Replace the cable. See **"Staple finisher interface cable removal" on page 241**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Diagnostics and troubleshooting

SHPF ejector failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **Note:** Remove the upper left cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Compiler pre-eject** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (SHPF compiler pre-eject) removal" on page 397**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF ejector cable or SHPF ejector cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **Note:** Remove the upper left cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Compiler eject** **b** Touch **Start**. Does the motor run?	Go to step 12.	Go to step 8.

Action	Yes	No
Step 8 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the motor. See **"Motor (SHPF compiler eject) removal" on page 396**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 12.	Go to step 11.
Step 11 Replace the SHPF ejector cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Remove the upper left cover, and then check the components at the back of the cover for misalignment, wear, and damage: • SHPF elevator bin stack height sensor actuator arms • SHPF elevator bin front stack height sensor actuator • SHPF elevator bin rear stack height sensor actuator • SHPF elevator bin stack height finger holders • SHPF elevator bin stack height fingers • SHPF elevator bin stack height drive gear • SHPF elevator bin stack height sensor actuator arm gear Are the components properly installed and free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the affected components. See the following: • **"SHPF elevator bin stack height sensor actuator arms and gears removal" on page 347** • **"SHPF elevator bin stack height sensor actuator removal" on page 346** • **"SHPF elevator bin stack height drive gear removal" on page 348** Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 Check the following components for misalignment and damage: • SHPF pre-eject motor and eject motor encoders • SHPF compiler eject sensor actuators Are the components properly installed and free of damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the affected components. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Compiler home) and sensor (Compiler position). Do the sensor statuses change while toggling the sensors?	Go to step 19.	Go to step 17.
Step 17 **a** Reseat the sensor (SHPF eject clamp home) and sensor (SHPF eject clamp position) cables, and then clear the sensors of debris and dust. **b** Check the sensors for misalignment and damage. Are the sensors properly installed and free of damage?	Go to step 19.	Go to step 18.
Step 18 Reinstall or replace the affected sensors. See **"SHPF compiler eject sensors removal" on page 398**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **a** Reseat the sensor (SHPF compiler eject) and sensor (SHPF compiler pre-eject) cables, and then clear the sensors of debris and dust. **b** Check the sensors for misalignment and damage. Are the sensors properly installed and free of damage?	Go to step 21.	Go to step 20.
Step 20 Reinstall or replace the affected sensors. See **"SHPF compiler eject sensors removal" on page 398**. Does the problem remain?	Go to step 21.	The problem is solved.

Action	Yes	No
Step 21 Check the following components for misalignment, wear, and damage: • SHPF compiler pre-eject drive gear • SHPF compiler pre-eject drive belt • SHPF compiler eject gear • SHPF compiler eject belt Are the components properly installed and free of wear and damage?	Go to step 23.	Go to step 22.
Step 22 Reinstall or replace the affected components. See **"SHPF—Compiler section 1" on page 597**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Replace the SHPF ejector. See **"SHPF compiler assembly removal" on page 400**. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 **a** Reseat the cables J12 and J13 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 27.	Go to step 26.
Step 26 Replace the cable. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 28.	The problem is solved.

Action	Yes	No
Step 28 Replace the controller board. See **["SHPF controller board removal" on page 361](#)**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF pre-eject failure service check

Action	Yes	No
Step 1 **a** At the back of the printer, reseat the interface cable. **b** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **Note:** Remove the upper left cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Compiler pre-eject** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **["Motor (SHPF compiler pre-eject) removal" on page 397](#)**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF ejector cable. 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: **Output device diagnostics** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Pre-eject away). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the sensor. See **"SHPF compiler eject sensors removal" on page 398**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the SHPF pre-eject motor encoder for misalignment and damage. Is the encoder properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the encoder. See **"SHPF—Compiler section 1" on page 597**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the following components for misalignment, wear, and damage: • SHPF compiler pre-eject drive gear • SHPF compiler pre-eject drive belt Are the components properly installed and free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the affected components. See **"SHPF—Compiler section 1" on page 597**. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 **a** Reseat the cables J12 and J13 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	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 Reseat all the cables on the SHPF 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 **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (SHPF aligner) failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **Note:** Remove the top inner cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Trailing edge stopper** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (SHPF aligner) removal" on page 388**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF J4, J5, and J10 cable harness. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Aligner position). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.

Action	Yes	No
Step 9 Reinstall or replace the sensor. See **"Sensor (SHPF aligner position) removal" on page 411**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the SHPF aligner belt for misalignment, wear, and damage. Is the belt properly installed and free of wear and damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the belt. See **"SHPF—Transport section 1" on page 577**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the following components for misalignment, wear, and damage: - SHPF aligner shaft - SHPF front aligner holder - SHPF rear aligner holder Are the components properly installed and free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the affected components. See **"SHPF aligner shaft removal" on page 415**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Reseat the cables J4 and J5 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 17.	Go to step 16.

Action	Yes	No
Step 16 Replace the cable. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Reseat all the cables on the SHPF 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 **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

374–383 errors

374–383 error messages

Error code	Description	Action
374.63	The staple finisher bin did not reach or leave its home position.	See **"Motor (staple finisher elevator) failure service check" on page 134**.
374.63	The SHPF elevator drive failed.	See **"SHPF elevator bin failure service check" on page 138**.
379.63	The bin lever did not reach or clear the sensor (SHPF bin lever control).	See **"SHPF elevator bin stack height failure service check" on page 142**.
383.63	The staple finisher staple unit failed to staple or it did not leave its home position.	See **"Staple finisher staple unit failure service check" on page 83**.
383.63	The SHPF staple unit drive failed.	See **"SHPF staple unit failure service check" on page 86**.

Motor (staple finisher elevator) failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the bin and paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. 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** > **Staple finisher sensor tests** **b** Find the sensor (Elevator bin home). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor 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 elevator home) removal" on page 253**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the staple finisher exit section cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Reseat the cables CN108 and CN110 on the staple finisher controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. **d** Check the cables for damage. Are the cables free of damage?	Go to step 9.	Go to step 8.
Step 8 Replace the damaged cables. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple finisher motor tests** > **Elevator** **b** Touch **Start**. Does the motor run?	Go to step 14.	Go to step 10.
Step 10 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the motor. See **"Motor (staple finisher elevator) removal" on page 246**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 14.	Go to step 13.
Step 13 Replace the staple finisher elevator section cable. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the following components for misalignment and damage: • Staple finisher elevator belts • Staple finisher elevator top rear gear • Staple finisher elevator bottom gears • Staple finisher elevator top front gear • Staple finisher idler gears • Staple finisher elevator drive gear Are the components properly installed and free of damage?	Go to step 16.	Go to step 15.
Step 15 Replace the affected components. See **"Staple finisher elevator belts removal" on page 268** and **"Staple finisher elevator drive gears removal" on page 267**. Does the problem remain?	Go to step 16.	The problem is solved.

Action	Yes	No
Step 16 Check the staple finisher bin stack height actuator and its spring for misalignment and damage. Is the actuator properly installed and free of damage?	Go to step 18.	Go to step 17.
Step 17 Replace the actuator. See **"Staple finisher bin stack height actuator removal" on page 232**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the staple finisher bin stack height solenoid for misalignment and damage. Is the solenoid properly installed and free of damage?	Go to step 20.	Go to step 19.
Step 19 Replace the solenoid. See **"Staple finisher bin stack height solenoid removal" on page 231**. 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** > **Staple finisher sensor tests** **b** Find the sensor (Elevator bin stack height) or (Elevator bin level). Does the sensor status change while toggling the sensor?	Go to step 25.	Go to step 21.
Step 21 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 22.	Go to step 22.
Step 22 Reinstall or replace the sensor. See **"Staple finisher bin stack height assembly sensors removal" on page 230**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Check the sensor cable. Does the cable have continuity?	Go to step 25.	Go to step 24.

Action	Yes	No
Step 24 Replace the staple finisher bin stack height cable. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 **a** Reseat the interface cable on the staple finisher controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 27.	Go to step 26.
Step 26 Replace the cable. See **"Staple finisher interface cable removal" on page 241**. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 28.	The problem is solved.
Step 28 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF elevator bin failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **Note:** Remove the rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Elevator** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (SHPF elevator) removal" on page 356**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF J9 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Reseat the sensor (SHPF elevator position) cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the sensor. See **"Sensor (SHPF elevator position) removal" on page 357**. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Check the following components for misalignment, wear, and damage: • SHPF elevator motor encoder • SHPF elevator motor encoder belt Are the components properly installed and free of wear and damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the affected components. See **"Motor (SHPF elevator) removal" on page 356**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the following components for misalignment, wear, and damage: • SHPF elevator belt • SHPF elevator gear • SHPF elevator bin clutch gear • SHPF elevator drive gear • SHPF elevator bin idler gear Are the components properly installed and free of wear and damage?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the affected components. See **"SHPF elevator belts removals" on page 374** and **"SHPF elevator drive assembly removal" on page 358**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the following components for misalignment, wear, and damage: • SHPF elevator belt springs • SHPF elevator bin front bracket • SHPF elevator bin rear bracket • SHPF elevator belt holders Are the components properly installed and free of wear and damage?	Go to step 15.	Go to step 14.

Action	Yes	No
Step 14 Reinstall or replace the affected components. See **"SHPF elevator belts removals" on page 374**. Does the problem remain?	Go to step 15.	The problem is solved.

Step 15
  a Rotate the elevator bin shaft and check for proper movement.
  b Check the shaft ball bearings for wear and damage.
 	
Are the shaft ball bearings properly installed and free of wear and damage?
	Go to step 17.	Go to step 16.

Step 16 Reinstall or replace the affected bearings. See **"SHPF—Elevator bin section 2" on page 593**. Does the problem remain?	Go to step 17.	The problem is solved.

Step 17
  a Reseat the cables J9 on the SHPF controller board.
  b If applicable, reseat the junction connectors on the cable.
  c Make sure that the cable does not interfere with moving parts.
 	
Does the problem remain?
	Go to step 18.	The problem is solved.

Step 18
  a Reseat the interface cable on the SHPF controller board and printer controller board.
  b Reseat the junction connector on the cable.
  c Check the cable for damage.
 	
Is the cable free of damage?
	Go to step 20.	Go to step 19.

Step 19 Replace the cable. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF elevator bin stack height failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **Note:** Remove the rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Elevator bin stack height** **b** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (SHPF elevator bin stack height) removal" on page 349**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF elevator bin stack height cable. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Main bin full). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.

Action	Yes	No
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the sensor (SHPF elevator bin stack height actuator arm control). See **"SHPF upper left cover sensors removal" on page 345**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the following components for misalignment, wear, and damage: • SHPF elevator motor encoder • SHPF elevator motor encoder belt Are the components properly installed and free of wear and damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the affected components. See **"Motor (SHPF elevator) removal" on page 356**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the following components for misalignment, wear, and damage: • SHPF elevator bin stack height sensor actuator arm • SHPF elevator bin front stack height sensor actuator • Sensor (SHPF elevator bin stack height, receive) • Sensor (SHPF elevator bin front stack height) • Sensor (SHPF elevator bin rear stack height) • Sensor (SHPF elevator bin stack height, transmit) • SHPF elevator bin rear stack height sensor actuator • SHPF elevator bin stack height finger • SHPF elevator bin stack height drive gear • SHPF elevator bin stack height sensor actuator arm gear Are the components properly installed and free of wear and damage?	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 Reinstall or replace the affected components. See the following: • **"SHPF elevator bin stack height sensor actuator arms and gears removal" on page 347** • **"SHPF elevator bin stack height sensor actuator removal" on page 346** • **"SHPF upper left cover sensors removal" on page 345** • **"SHPF elevator bin stack height sensor actuator removal" on page 346** • **"SHPF elevator bin stack height drive gear removal" on page 348** • **"SHPF elevator bin stack height sensor actuator arms and gears removal" on page 347** Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Reseat the cable J14 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	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 Reseat all the cables on the SHPF 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 **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

39y errors

39y error messages

Error code	Description	Action
390.73	The booklet maker tamper did not reach or leave its home position.	See **"Motor (booklet maker tamper) failure service check" on page 145**.
391.73	The booklet maker aligner did not reach or leave its home position.	See **"Motor (booklet maker aligner) failure service check" on page 147**.
392.73	The booklet maker bifold guide did not reach or leave its home position.	See **"Motor (bifold guide) failure service check" on page 150**.
393.73	The booklet maker paddle did not reach or leave its home position.	See **"Booklet maker paddle assembly failure service check" on page 153**.
394.73	The booklet maker trifold guide did not reach or leave its home position.	See **"Motor (trifold guide) failure service check" on page 156**.
395.73	The booklet maker bifold knife did not reach or leave its home position.	See **"Motor (bifold knife) failure service check" on page 158**.
396.73	The booklet maker staple unit failed.	See **"Booklet maker staple unit failure service check" on page 82**.
397.73	The booklet maker decurl drive failed.	See **"Booklet maker decurl assembly failure service check" on page 161**.

Motor (booklet maker tamper) failure service check

Action	Yes	No
Step 1 **a** Unplug the booklet maker interface cable from the SHPF. **b** Reseat the cable, and then reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Remove the middle frame brace. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Tamper** **c** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Reinstall or replace the motor. See **"Motor (booklet maker tamper) removal" on page 488**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the booklet maker J7 cable harness. 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** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Tamper home). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the sensor. See **"Sensor (booklet maker tamper home) removal" on page 528**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the following components for misalignment, wear, and damage: • Booklet maker front tamper • Booklet maker tamper rack • Booklet maker tamper drive gear • Booklet maker rear tamper Are the components properly installed and free of wear and damage?	Go to step 12.	Go to step 11.

Action	Yes	No
Step 11 Reinstall or replace the affected components. See **"Booklet maker tamper tray removal" on page 525**. Does the problem remain?	Go to step 12.	The problem is solved.

Step 12
  a Reseat the cable J7 on the booklet maker controller board.
  b If applicable, reseat the junction connectors on the cable.
  c Make sure that the cable does not interfere with moving parts.
 	
Does the problem remain?
	Go to step 13.	The problem is solved.

Step 13
  a Reseat the interface cable on the booklet maker controller board and SHPF controller board.
  b Reseat the junction connector on the cable.
  c Check the cable for damage.
 	
Is the cable free of damage?
	Go to step 15.	Go to step 14.

Step 14 Replace the cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (booklet maker aligner) failure service check

Action	Yes	No

Step 1
  a Unplug the booklet maker interface cable from the SHPF.
  b Reseat the cable, and then reset the printer.
 	
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** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Stopper home). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor 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 (booklet maker aligner home) removal" on page 491**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the booklet maker J10 and J11 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Remove the middle frame brace. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Stopper** **c** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 8.
Step 8 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 10.	Go to step 9.

Action	Yes	No
Step 9 Reinstall or replace the motor. See **"Motor (booklet maker aligner) removal" on page 487**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Remove the booklet maker aligner assembly, and then check the following components for misalignment, wear, and damage: • Booklet maker aligner tension pulley • Booklet maker aligner belt • Booklet maker aligner tension spring • Booklet maker aligner gear • Booklet maker aligner drive gear • Booklet maker compiler stack front guide • Booklet maker compiler stack rear guide • Booklet maker aligner carriage Are the components properly installed and free of wear and damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the affected components. See the following: • **"Booklet maker aligner gears removal" on page 497** • **"Booklet maker aligner belt removal" on page 496** • **"Booklet maker aligner jam access door removal" on page 456** • **"Booklet maker aligner solenoid removal" on page 498** Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Reseat the cable J10 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 15.	Go to step 14.

Action	Yes	No
Step 14 Replace the cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (bifold guide) failure service check

Action	Yes	No
Step 1 **a** Unplug the booklet maker interface cable from the SHPF. **b** Reseat the cable, and then reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Remove the front cover. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Center fold guide** **c** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (bifold guide) removal" on page 482**. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the booklet maker J8 and J9 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the bifold guide home sensor actuator for misalignment and damage. Is the sensor actuator properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the sensor actuator. See **"Bifold roller drive gears removal" on page 520**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Center fold guide home). Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 10.
Step 10 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the sensor. See **"Sensor (bifold guide home) removal" on page 484**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check if the colored teeth of the bifold roller timing gear and trifold knife front idler gear are aligned. **b** Check the gears for 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 affected gears. See **"Bifold guide drive gears removal" on page 522**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the following gears for misalignment, wear, and damage: • Lower bifold roller gear • Bifold guide drive gear Are the gears properly installed and free of wear and damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the affected gears. See **"Bifold lower roller removal" on page 505** and **"Bifold guide drive gears removal" on page 522**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the bifold guide for misalignment and damage. Is the guide properly installed and free of damage?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the guide. See **"Booklet maker—Fold section 2" on page 613**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 a Check if the bifold roller springs are properly engaged with their arms. b Check the springs for damage. Are the springs properly installed and free of damage?	Go to step 20.	Go to step 19.
Step 19 Reinstall or replace the affected springs. See **"Bifold roller springs removal" on page 476**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 a Clear the bifold rollers of debris and dust. b Check the rollers for misalignment, wear, and damage. Are the rollers properly installed and free of wear and damage?	Go to step 22.	Go to step 21.

Action	Yes	No
Step 21 Reinstall or replace the affected rollers. See **"Bifold upper roller removal" on page 502** and **"Bifold lower roller removal" on page 505**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 **a** Reseat the cable J9 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 25.	Go to step 24.
Step 24 Replace the cable. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Booklet maker paddle assembly failure service check

Action	Yes	No
Step 1 **a** Unplug the booklet maker interface cable from the SHPF. **b** Reseat the cable, and then reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **a** Remove the middle frame brace. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Paddle** **c** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (booklet maker paddle) removal" on page 472**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the booklet maker J8 and J9 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the booklet maker paddle encoder for misalignment, wear, and damage. Is the encoder properly installed and free of wear and damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the encoder. See **"Booklet maker paddle gears removal" on page 471**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Paddle home). Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 10.

Diagnostics and troubleshooting

Action	Yes	No
Step 10 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the sensor. See **"Sensor (booklet maker paddle home) removal" on page 473**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the following components for misalignment, wear, and damage: • Booklet maker paddle gear • Booklet maker paddle belt • Booklet maker paddle tensioner pulley Are the components properly installed and free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the affected components. See **"Booklet maker paddle gears removal" on page 471** and **"Booklet maker paddle belt removal" on page 471**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Clear the booklet maker upper and lower paddles of debris and dust. **b** Check the paddles for misalignment, wear, and damage. Are the paddles properly installed and free of wear damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the affected paddles. See **"Booklet maker lower paddle removal" on page 458** and **"Booklet maker upper paddle removal" on page 501**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Reseat the cable J9 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 19.	Go to step 18.
Step 18 Replace the cable. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (trifold guide) failure service check

Action	Yes	No
Step 1 **a** Unplug the booklet maker interface cable from the SHPF. **b** Reseat the cable, and then reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Remove the front cover. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Trifold guide** **c** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Reinstall or replace the motor. See **"Motor (trifold guide) removal" on page 485**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the booklet maker J8 and J9 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the trifold gate actuator for misalignment and damage. Is the gate actuator properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the gate actuator. See **"Trifold gate actuator removal" on page 486**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Reseat the sensor (trifold guide home) cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the sensor. See **"Sensor (trifold guide home) removal" on page 486**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the trifold diverter for misalignment and damage. Is the diverter properly installed and free of damage?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the diverter. See **"Trifold diverter removal" on page 511**. Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
Step 13 **a** Reseat the cables J8 and J9 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 16.	Go to step 15.
Step 15 Replace the cable. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (bifold knife) failure service check

Action	Yes	No
Step 1 **a** Unplug the booklet maker interface cable from the SHPF. **b** Reseat the cable, and then reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **a** Remove the front cover. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Center fold knife** **c** Touch **Start**. Does the motor run?	Go to step 7.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (bifold knife) removal" on page 487**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the booklet maker J10 and J11 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the following components for misalignment, wear, and damage: • Bifold knife • Bifold knife primary drive gear • Bifold knife idler gear • Bifold knife secondary drive gears Are the components properly installed and free of wear and damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the affected components. See the following: • **"Bifold knife removal" on page 519** • **"Bifold knife primary drive gears removal" on page 513** • **"Bifold knife secondary drive gears removal" on page 518** Does the problem remain?	Go to step 9.	The problem is solved.

Diagnostics and troubleshooting

Action	Yes	No
Step 9 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Center fold knife home). Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 10.
Step 10 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the sensor. See **"Sensor (bifold knife home) removal" on page 516**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 14.	Go to step 13.
Step 13 Replace the booklet maker J7 cable harness. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Reseat the cable J7 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	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.

Action	Yes	No
Step 17 Reseat all the cables on the booklet maker 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 **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Booklet maker decurl assembly failure service check

Action	Yes	No
Step 1 **a** Unplug the booklet maker interface cable from the SHPF. **b** Reseat the cable, and then reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the booklet maker decurl guide for misalignment and damage. Is the decurl guide properly installed and free of damage?	Go to step 4.	Go to step 3.
Step 3 Reinstall or replace the decurl guide. See **"Booklet maker decurl guide removal" on page 481**. 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** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Booklet decurl). Does the sensor status change while toggling the sensor?	Go to step 9.	Go to step 5.
Step 5 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 Reinstall or replace the sensor. See **"Sensor (booklet maker decurl) removal" on page 480**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 9.	Go to step 8.
Step 8 Replace the booklet maker transport section cable. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Remove the front cover. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Decurl** **c** Touch **Start**. Does the motor run?	Go to step 12.	Go to step 10.
Step 10 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the motor. See **"Motor (booklet maker decurl) removal" on page 475**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the decurl gears for misalignment, wear, and damage. Are the gears properly installed and free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the affected gears. See **"Booklet maker decurl gears removal" on page 479**. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 Check the decurl lever for misalignment, wear, and damage. Is the lever properly installed and free of wear and damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the affected lever. See **"Booklet maker decurl lever removal" on page 465**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Reseat the cable J5 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 19.	Go to step 18.
Step 18 Replace the cable. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Symptoms

Staple finisher symptoms

Staple finisher symptoms

Symptom	Action
A persistent `Close door G` message appears.	See **"Staple finisher locks service check" on page 164**.
A persistent `Remove paper from standard output bin` message appears.	See **"Staple finisher bin stack height assembly failure service check" on page 166**.
Paper is not stapled.	See **"Staple finisher stapling failure service check" on page 170**.

Staple finisher locks service check

Action	Yes	No
Step 1 a Make sure that the staple finisher is properly installed. b At the back of the printer, reseat the interface cable. c Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Reseat the staple finisher lock switch cable. b Check the staple finisher lock switch mechanism for misalignment and damage. Is the staple finisher lock switch properly installed and free of damage?	Go to step 4.	Go to step 3.
Step 3 Reinstall or replace the lock switch. See **"Staple finisher lock switch removal" on page 237**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 a Reseat the cable CN106 on the staple finisher controller board. b If applicable, reseat the junction connectors on the cable. c Make sure that the cable does not interfere with moving parts. d Check the cable for damage. Is the cable free of damage?	Go to step 6.	Go to step 5.

Action	Yes	No
Step 5 Replace the staple finisher lock switch cable. See **"Staple finisher lock switch removal" on page 237**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the following components for misalignment and damage: • Staple finisher rear lock • Staple finisher front lock • Staple finisher release handle Are the components properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the affected components. See **"Staple finisher locks removal" on page 237**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 a Reseat the interface cable on the staple finisher controller board. b Reseat the junction connector on the cable. c Check the cable for damage. Is the cable free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the cable. See **"Staple finisher interface cable removal" on page 241**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher bin stack height assembly failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the staple finisher bin stack actuator for misalignment and damage. Is the stack height actuator properly installed and free of damage?	Go to step 4.	Go to step 3.
Step 3 Reinstall or replace the stack height actuator. See **"Staple finisher bin stack height actuator removal" on page 232**.	Go to step 4.	The problem is solved.
Step 4 Check the staple finisher bin stack solenoid for misalignment and damage. Is the solenoid properly installed and free of damage?	Go to step 6.	Go to step 5.
Step 5 Reinstall or replace the solenoid. See **"Staple finisher bin stack height solenoid removal" on page 231**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the tamper paper present actuator for misalignment and damage. Is the actuator properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the actuator. See **"Staple finisher tamper racks removal" on page 311**. 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** > **Staple finisher sensor tests** **b** Find the sensor (Elevator bin stack height) or sensor (Elevator bin level). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 9.

Action	Yes	No
Step 9 **a** Reseat the sensor cables, and then clear the sensor of debris and dust. **b** Check the sensors for misalignment and damage. Are the sensors properly installed and free of damage?	Go to step 13.	Go to step 10.
Step 10 Reinstall or replace the affected sensors. See **"Staple finisher bin stack height assembly sensors removal" on page 230**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 13.	Go to step 12.
Step 12 Replace the staple finisher bin stack height cable. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple finisher sensor tests** **b** Find the sensor (Paper eject). Does the sensor status change while toggling the sensor?	Go to step 18.	Go to step 14.
Step 14 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the sensor. See **"Staple finisher tamper sensors removal" on page 235**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 18.	Go to step 17.

Action	Yes	No
Step 17 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Reseat the cables CN102, CN103, and CN109 on the staple finisher controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. **d** Check the cables for damage. Are the cables free of damage?	Go to step 20.	Go to step 19.
Step 19 Replace the damaged cables. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 **a** Make sure that the staple finisher bin is level. **b** Check the bin for damage. Is the bin free of damage?	Go to step 22.	Go to step 21.
Step 21 Replace the bin. See **"Staple finisher bin removal" on page 228**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple finisher motor tests** > **Transport** or **Exit roller lift** **b** Touch **Start**. Does the motor run?	Go to step 25.	Go to step 23.
Step 23 Reseat the motor cables, and then check the motors for misalignment and damage. Are the motors properly installed and free of damage?	Go to step 25.	Go to step 24.

Action	Yes	No
Step 24 Reinstall or replace the affected motors. See **"Motor (staple finisher exit) removal" on page 249** and **"Motor (staple finisher upper exit) removal" on page 247**. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Check the following components for misalignment, wear, and damage: • Staple finisher upper exit belt • Staple finisher upper exit gear • Staple finisher upper exit idler gear • Staple finisher upper exit actuator • Staple finisher exit gear • Staple finisher exit gear Are the components properly installed and free of wear and damage?	Go to step 27.	Go to step 26.
Step 26 Replace the affected components. See **"Staple finisher upper exit actuator removal" on page 281** and **"Staple finisher exit roller drive belts and gears removal" on page 279**. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Check the staple finisher exit roller solenoid for misalignment and damage. Is the solenoid properly installed and free of damage?	Go to step 29.	Go to step 28.
Step 28 Replace the solenoid. See **"Staple finisher exit roller solenoid removal" on page 280**. Does the problem remain?	Go to step 29.	The problem is solved.
Step 29 **a** Remove the upper exit roller assembly. See **"Staple finisher upper exit roller assembly removal" on page 301**. **b** Check the components for misalignment, wear, and damage. Are the components properly installed and free of wear and damage?	Go to step 31.	Go to step 30.

Diagnostics and troubleshooting

Action	Yes	No
Step 30 Reinstall or replace the affected component. Does the problem remain?	Go to step 31.	The problem is solved.
Step 31 **a** Reseat the interface cable on the staple finisher controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 33.	Go to step 32.
Step 32 Replace the cable. See **"Staple finisher interface cable removal" on page 241**. Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 34.	The problem is solved.
Step 34 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple finisher stapling failure service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **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** > **Staple finisher motor tests** > **Transport** **b** Touch **Start**. Does the motor (staple finisher aligner) run?	Go to step 7.	Go to step 3.

Action	Yes	No
Step 3 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the motor. See **"Motor (staple finisher aligner) removal" on page 250**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the staple finisher aligner section cables. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the following components for misalignment, wear, and damage: • Staple finisher aligner drive belt • Staple finisher aligner drive gear • Staple finisher aligner secondary gear • Staple finisher aligner roller gears Are the components properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Replace the affected components. See **"Staple finisher aligner belt and gears removal" on page 251** and **"Staple finisher aligner roller gears removal" on page 299**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 a Clear the staple finisher front and rear aligner rollers of debris and dust. b Check the rollers for misalignment, wear, and damage. Are the components properly installed and free of damage?	Go to step 11.	Go to step 10.

Action	Yes	No
Step 10 Reinstall or replace the components. See **"Staple finisher aligner roller removal" on page 291**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Reseat the staple unit and staple unit carriage motor cables on the staple unit interface board. **b** Reseat the cable CN120 on the staple finisher controller board. **c** If applicable, reseat the junction connectors on the cables. **d** Make sure that the cables do not interfere with moving parts. **e** Check the cables for damage. Are the cables free of damage?	Go to step 13.	Go to step 12.
Step 12 Replace the damaged cables. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the following components for misalignment, wear, and damage: • Staple finisher compiler feed roller belt • Staple finisher compiler feed roller gear Are the components properly installed and free of wear and damage?	Go to step 15.	Go to step 14.
Step 14 Reinstall or replace the affected components. See **"Staple finisher compiler feed roller shaft assembly removal" on page 292**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the following components for misalignment and damage: • Staple finisher front tamper • Staple finisher front tamper holder • Staple finisher front tamper rack • Staple finisher front and rear aligners • Staple finisher middle aligner • Staple finisher rear tamper rack • Staple finisher tamper paper present sensor actuator • Staple finisher rear tamper Are the components properly installed and free of damage?	Go to step 17.	Go to step 16.

Action	Yes	No
Step 16 Replace the affected components. See **"Staple finisher tamper racks removal" on page 311**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Reseat the staple unit cable, and then check the following components for misalignment and damage: • Staple unit holder • Staple unit Are the components properly installed and free of damage?	Go to step 19.	Go to step 18.
Step 18 Reinstall or replace the affected components. See **"Staple finisher staple unit removal" on page 256**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the following components for wear and damage: • Staple unit carriage gears • Staple unit rail Are the components free of damage?	Go to step 21.	Go to step 20.
Step 20 Replace the damaged components. See **"Staple finisher staple unit carriage gears removal" on page 260** and **"Staple finisher staple unit rail removal" on page 288**. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Check the staple finisher interface board for damage. Is the board free of damage?	Go to step 23.	Go to step 22.
Step 22 Replace the board. See **"Staple finisher interface board removal" on page 258**. Does the problem remain?	Go to step 23.	The problem is solved.

Action	Yes	No
Step 23 **a** Reseat the interface cable on the staple finisher controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 25.	Go to step 24.
Step 24 Replace the cable. See **"Staple finisher interface cable removal" on page 241**. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Reseat all the cables on the staple finisher controller board, and then reset the printer. Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Replace the controller board. See **"Staple finisher controller board removal" on page 240**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF symptoms

SHPF symptoms

Symptom	Action
A persistent `Bin 2 full` message appears.	See **"SHPF elevator bin movement service check" on page 186**.
A persistent `Close door G` message appears.	See **"HPT door service check" on page 175**.
A persistent `Close door H` message appears.	See **"SHPF front door service check" on page 176**.
A persistent `Close door J` message appears.	See **"SHPF top door service check" on page 178**.
A persistent `Punch box missing` or `Punch box full` message appears.	See **"Hole punch box service check" on page 180**.
A persistent `Remove paper from bin 1` message appears.	See **"SHPF top bin full service check" on page 182**.
The staple unit is noisy.	See **"SHPF staple unit noise service check" on page 184**.

Symptom	Action
The elevator bin moves down to the full position without paper on the bin.	See **"SHPF elevator bin movement service check" on page 186**.
The elevator bin moves up to the stack limit switch, and the motor (SHPF elevator) does not stop.	See **"SHPF elevator bin movement service check" on page 186**.

HPT door service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** Unplug the HPT cable from the SHPF. **c** Reseat the cable, and then 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (HTU door open). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor 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 (HPT door) removal" on page 319**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the cable. See **"HPT cable removal" on page 321**. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 **a** Reseat the interface cable on the HPT, and then reseat the cable J6 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the 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 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF front door service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 Check the following front door components for damage: • Hinges • Magnetic catch • Front door switch actuator Is the door free of damage?	Go to step 4.	Go to step 3.
Step 3 Replace the door. See **"SHPF front door removal" on page 332**. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Front door open). Does the sensor status change while toggling the switch?	Go to step 9.	Go to step 5.
Step 5 **a** Reseat the switch cable, and then clear the switch of debris and dust. **b** Check the switch for misalignment and damage. Is the switch properly installed and free of damage?	Go to step 7.	Go to step 6.
Step 6 Reinstall or replace the switch. See **"SHPF front door switch removal" on page 331**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the continuity of the switch cable. Does the cable have continuity?	Go to step 9.	Go to step 8.
Step 8 Replace the SHPF front door switch cable. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Reseat the cable J3 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the 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 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF top door service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the top jam access door components for misalignment, wear, and damage: • SHPF diverter feed idler rollers • SHPF top bin exit idler rollers • SHPF top bin transport idler rollers Are the components properly installed and free of wear and damage?	Go to step 4.	Go to step 3.

Action	Yes	No
Step 3 Reinstall or replace the affected components. See **"SHPF top jam access door and SHPF diverter removal" on page 391**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the following components for wear and damage: • SHPF diverter lever • SHPF diverter cam Are the components free of wear and damage?	Go to step 6.	Go to step 5.
Step 5 Replace the damaged components. See **"SHPF top jam access door and SHPF diverter removal" on page 391** and **"SHPF diverter cam removal" on page 388**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Reseat the sensor (SHPF top door) cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the sensor. See **"Sensor (SHPF top door) removal" on page 383**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 10.	Go to step 9.
Step 9 Replace the SHPF J4, J5, and J10 cable harness. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Reseat the cables J4 and J5 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 13.	Go to step 12.
Step 12 Replace the cable. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Hole punch box service check

Action	Yes	No
Step 1 **a** Reinstall the hole punch box. **b** At the back of the printer, reseat the interface cable. **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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Chad bin full). Does the sensor status change while toggling the sensor?	Go to step 9.	Go to step 3.

Action	Yes	No
Step 3 **a** Remove the punch unit. See **"Punch unit removal" on page 361**. **b** Check the sensor (hole punch box full, transmit) and sensor (hole punch box full, receive) for misalignment and damage. **c** Reseat the sensor cables, and then clear the sensors of debris and dust. Are the sensors properly installed and free of damage?	Go to step 4.	Go to step 8.
Step 4 Check the continuity of the sensor cable. Does the cable have continuity?	Go to step 6.	Go to step 5.
Step 5 Replace the punch unit cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the following components for misalignment and damage: • Hole punch box full sensor actuator • Hole punch box full sensor holder Are the components properly installed and free of damage?	Go to step 9.	Go to step 7.
Step 7 Reinstall or replace the affected components. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reinstall or replace the affected sensors. See **"Sensor (hole punch box full) removal" on page 362**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Reseat the motor and sensor connectors on the punch unit. **b** If applicable, reseat the junction connectors on the cables. **c** Check the punch unit and its motor and sensors for damage. Is the punch unit free of damage?	Go to step 11.	Go to step 10.
Step 10 Replace the punch unit. See **"Punch unit removal" on page 361**. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 **a** Reseat the cable J7 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	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 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF top bin full service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. 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** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Top bin empty, Tx/Rx). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 **a** Check the sensor (SHPF top bin full, transmit) and sensor (SHPF top bin full, receive) for misalignment and damage. **b** Reseat the sensor cables, and then clear the sensors of debris and dust. Are the sensors properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the affected sensors. See **"Sensor (SHPF top bin full) removal" on page 360**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cables. Do the cables have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF J4, J5, and J10 cable harness. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Reseat the cables J4, J5, and J9 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cables. **c** Make sure that the cables do not interfere with moving parts. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 10.	Go to step 9.

Action	Yes	No
Step 9 Replace the cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF staple unit noise service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments along the paper path. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **Note:** Make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Stapler home) and sensor (Stapler center). Do the sensor statuses change while toggling the sensors?	Go to step 7.	Go to step 3.
Step 3 **a** Check the sensor (SHPF staple unit carriage home) and sensor (SHPF staple unit carriage center) for misalignment and damage. **b** Reseat the sensor cables, and then clear the sensors of debris and dust. Are the sensors properly installed and free of damage?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Reinstall or replace the affected sensors. See **"SHPF staple unit position sensors removal" on page 365**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the continuity of the sensor cables. Do the cables have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF staple unit carriage sensor cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**. **b** Rotate the knob, and then check the staple unit carriage for proper movement. Does the carriage properly move?	Go to step 9.	Go to step 8.
Step 8 Reinstall the staple unit assembly belts, gears, and rail. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the following components for damage: • SHPF staple unit carriage drive gear • SHPF staple unit carriage belt • SHPF staple unit carriage rail • SHPF staple unit carriage drive belt Are the components free of damage?	Go to step 11.	Go to step 10.
Step 10 Replace the damaged components. See **"SHPF staple unit drive belt and gear removal" on page 366**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Reseat the cable J11 on the SHPF controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	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 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF elevator bin movement service check

Action	Yes	No
Step 1 **a** Remove paper from the bin. **b** At the back of the printer, reseat the interface cable. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the elevator bin for misalignment and damage. Is the bin properly installed and free of damage?	Go to step 4.	Go to step 3.
Step 3 Reinstall or replace the bin. See **"SHPF elevator bin removal" on page 327**. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Check the SHPF elevator bin stack limit switch and its actuator for misalignment and damage. Is the switch properly installed and free of damage?	Go to step 6.	Go to step 5.
Step 5 Reinstall or replace the switch. See **"SHPF elevator bin stack limit switch removal" on page 429** and **"SHPF elevator bin stack limit actuator removal" on page 426**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 a Reseat the cables J10 and J14 on the SHPF controller board. b If applicable, reseat the junction connectors on the cables. c Make sure that the cables do not interfere with moving parts. d Check the cables for damage. Are the cables free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the SHPF J4, J5, and J10 cable harness. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Remove the upper left cover, and then check the components at the back of the cover for misalignment, wear, and damage: • SHPF elevator bin stack height sensor actuator arms • SHPF elevator bin front stack height sensor actuator • SHPF elevator bin rear stack height sensor actuator • SHPF elevator bin stack height finger holders • SHPF elevator bin stack height fingers • SHPF elevator bin stack height drive gear • SHPF elevator bin stack height sensor actuator arm gear Are the components properly installed and free of wear and damage?	Go to step 10.	Go to step 9.

Action	Yes	No
Step 9 Reinstall or replace the affected components. See the following: • **"SHPF elevator bin stack height sensor actuator arms and gears removal" on page 347** • **"SHPF elevator bin stack height sensor actuator removal" on page 346** • **"SHPF elevator bin stack height drive gear removal" on page 348** Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Elevator bin stack height, Rx/Tx), sensor (Elevator bin stack height, front), and sensor (Elevator bin stack height, rear). Do the sensor statuses change while toggling the sensors?	Go to step 14.	Go to step 11.
Step 11 **a** Check the upper left cover sensors for misalignment and damage. **b** Reseat the sensor cables, and then clear the sensors of debris and dust. Are the sensors properly installed and free of damage?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the affected sensors. See **"SHPF upper left cover sensors removal" on page 345**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the SHPF elevator bin stack height cable. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **Note:** Remove the rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Elevator bin stack height** **b** Touch **Start**. Does the motor run?	Go to step 19.	Go to step 15.

Action	Yes	No
Step 15 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 17.	Go to step 16.
Step 16 Reinstall or replace the motor. See **"Motor (SHPF elevator bin stack height) removal" on page 349**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 19.	Go to step 18.
Step 18 Replace the SHPF elevator bin stack height cable. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher sensor tests** **b** Find the sensor (Main bin full). Does the sensor status change while toggling the sensor?	Go to step 24.	Go to step 20.
Step 20 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 22.	Go to step 21.
Step 21 Reinstall or replace the sensor (SHPF elevator bin full). See **"Sensor (SHPF elevator bin full) removal" on page 339**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Check the sensor cable for continuity. Does the cable have continuity?	Go to step 24.	Go to step 23.

Action	Yes	No
Step 23 Replace the SHPF elevator bin full sensor cable. See **"Sensor (SHPF elevator bin full) removal" on page 339**. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 **Note:** Remove the rear cover, and then make sure that the SHPF front door switch is bypassed. **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Staple hole punch finisher motor tests** > **Elevator** **b** Touch **Start**. Does the motor run?	Go to step 29.	Go to step 25.
Step 25 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 27.	Go to step 26.
Step 26 Reinstall or replace the motor. See **"Motor (SHPF elevator) removal" on page 356**. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 29.	Go to step 28.
Step 28 Replace the SHPF J9 cable harness. Does the problem remain?	Go to step 29.	The problem is solved.
Step 29 **a** Reseat the sensor (SHPF elevator position) cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 31.	Go to step 30.
Step 30 Reinstall or replace the sensor. See **"Sensor (SHPF elevator position) removal" on page 357**. Does the problem remain?	Go to step 31.	The problem is solved.

Action	Yes	No
Step 31 Check the following components for misalignment and damage: • SHPF elevator drive gear • SHPF elevator bin idler gear • SHPF elevator motor encoder • SHPF elevator motor encoder belt Are the components properly installed and free of damage?	Go to step 33.	Go to step 32.
Step 32 Reinstall or replace the affected components. See **"SHPF elevator drive assembly removal" on page 358**. Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 Check the following components for misalignment and damage: • SHPF elevator belts • SHPF elevator gears • SHPF elevator belt springs • SHPF elevator bin front bracket • SHPF elevator bin rear bracket • SHPF elevator belt holders Are the components properly installed and free of damage?	Go to step 35.	Go to step 34.
Step 34 Reinstall or replace the affected components. See **"SHPF elevator belts removals" on page 374**. Does the problem remain?	Go to step 35.	The problem is solved.
Step 35 **a** Reseat the interface cable on the SHPF controller board and printer controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 37.	Go to step 36.
Step 36 Replace the cable. Does the problem remain?	Go to step 37.	The problem is solved.

Action	Yes	No
Step 37 Reseat all the cables on the SHPF controller board, and then reset the printer. Does the problem remain?	Go to step 38.	The problem is solved.
Step 38 Replace the controller board. See **"SHPF controller board removal" on page 361**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Booklet maker symptoms

Booklet maker symptoms

Symptom	Action
A persistent `Open door H and remove paper from beneath area H10` message appears.	See **"Booklet maker tamper paper jam service check" on page 99**.
A persistent `Remove paper from bin 3` message appears.	See **"HPBF bin service check" on page 192**.
The bifold edge is not centered.	See **"Bifold edge alignment service check" on page 194**.

HPBF bin service check

Action	Yes	No
Step 1 **a** Remove the paper jams and fragments under the booklet maker aligner jam access cover. **b** Unplug the booklet maker interface cable from the SHPF. **c** Reseat the cable, and then 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** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Bin empty). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.

Action	Yes	No
Step 3 **a** Reseat the sensor (HPBF bin empty, transmit) and sensor (HPBF bin empty, receive) cables, and then clear the sensors of debris and dust. **b** Check the sensors for misalignment and damage. Are the sensors properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the affected sensors. See **"HPBF lower left cover sensors removals" on page 343**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the sensor cable for continuity. Does the cable have continuity?	Go to step 7.	Go to step 6.
Step 6 Replace the HPBF bin empty sensor cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the HPBF bin for misalignment and damage. Is the bin properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the bin. See **"HPBF lower left cover sensors removals" on page 343**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Reseat the cable J14 on the booklet maker controller board. **b** If applicable, reseat the junction connectors on the cable. **c** Make sure that the cable does not interfere with moving parts. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Reseat the interface cable on the booklet maker controller board and SHPF controller board. **b** Reseat the junction connector on the cable. **c** Check the cable for damage. Is the cable free of damage?	Go to step 12.	Go to step 11.

Action	Yes	No
Step 11 Replace the cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reseat all the cables on the booklet maker controller board, and then reset the printer. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the controller board. See **"Booklet maker controller board removal" on page 458**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Bifold edge alignment service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Stopper home). Does the sensor status change while toggling the sensor?	Go to step 6.	Go to step 2.
Step 2 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 4.	Go to step 3.
Step 3 Reinstall or replace the sensor. See **"Sensor (booklet maker aligner home) removal" on page 491**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the sensor cable for continuity. Does the cable have continuity?	Go to step 6.	Go to step 5.

Action	Yes	No
Step 5 Replace the booklet maker J10 and J11 cable harness. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Remove the front cover. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Stopper** **c** Touch **Start**. Does the motor run?	Go to step 9.	Go to step 7.
Step 7 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the motor. See **"Motor (bifold knife) removal" on page 487**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Remove the booklet maker aligner assembly, and then check the following components for misalignment, wear, and damage: • Booklet maker aligner tensioner pulley • Booklet maker aligner belt • Booklet maker aligner tensioner spring • Booklet maker aligner gears • Booklet maker aligner drive gear Booklet maker aligner solenoid • Booklet maker aligner carriage Are the components properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the affected components. See the following: • **"Booklet maker aligner gears removal" on page 497** • **"Booklet maker aligner belt removal" on page 496** • **"Booklet maker aligner solenoid removal" on page 498** Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 **a** Remove the middle frame brace. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Tamper** **c** Touch **Start**. Does the motor run?	Go to step 16.	Go to step 12.
Step 12 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the motor. See **"Motor (booklet maker tamper) removal" on page 488**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the continuity of the motor cable. Does the cable have continuity?	Go to step 16.	Go to step 15.
Step 15 Replace the booklet maker J7 cable harness. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Tamper home). Does the sensor status change while toggling the sensor?	Go to step 19.	Go to step 17.
Step 17 **a** Reseat the sensor cable, and then clear the sensor of debris and dust. **b** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 19.	Go to step 18.

Action	Yes	No
Step 18 Reinstall or replace the sensor. See **"Sensor (booklet maker tamper home) removal" on page 528**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the following components for misalignment, wear, and damage: • Booklet maker front tamper • Booklet maker tamper rack • Booklet maker tamper drive gear • Booklet maker rear tamper Are the components properly installed and free of wear and damage?	Go to step 21.	Go to step 20.
Step 20 Reinstall or replace the affected components. See **"Booklet maker tamper tray removal" on page 525**. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 **a** Check if the bifold roller springs are properly engaged with their arms. **b** Check the springs for damage. Are the springs properly installed and free of damage?	Go to step 23.	Go to step 22.
Step 22 Reinstall or replace the affected springs. See **"Bifold roller springs removal" on page 476**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 **a** Clear the bifold rollers of debris and dust. **b** Check the rollers for misalignment, wear, and damage. Are the rollers properly installed and free of wear and damage?	Go to step 25.	Go to step 24.
Step 24 Reinstall or replace the affected rollers. See **"Bifold upper roller removal" on page 502** and **"Bifold lower roller removal" on page 505**. Does the problem remain?	Go to step 25.	The problem is solved.

Action	Yes	No
Step 25 **a** Remove the front cover. **b** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Booklet maker motor tests** > **Center fold knife** **c** Touch **Start**. Does the motor run?	Go to step 28.	Go to step 26.
Step 26 Reseat the motor cable, and then check the motor for misalignment and damage. Is the motor properly installed and free of damage?	Go to step 28.	Go to step 27.
Step 27 Reinstall or replace the motor. See **"Motor (bifold knife) removal" on page 487**. Does the problem remain?	Go to step 28.	The problem is solved.
Step 28 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Hole punch booklet finisher sensor tests** **b** Find the sensor (Center fold knife home). Does the sensor status change while toggling the sensor?	Go to step 31.	Go to step 29.
Step 29 **a** Remove the bifold knife and tamper assembly. **b** Reseat the sensor cable, and then clear the sensor of debris and dust. **c** Check the sensor for misalignment and damage. Is the sensor properly installed and free of damage?	Go to step 31.	Go to step 30.
Step 30 Reinstall or replace the sensor. See **"Sensor (bifold knife home) removal" on page 516**. Does the problem remain?	Go to step 31.	The problem is solved.

Diagnostics and troubleshooting

Action	Yes	No
Step 31 Check the following components for misalignment, wear, and damage: • Bifold knife • Bifold knife primary drive gear • Bifold knife idler gear • Bifold knife secondary drive gears Are the components properly installed and free of wear and damage?	Go to step 33.	Go to step 32.
Step 32 Reinstall or replace the affected components. See the following: • **"Bifold knife removal" on page 519** • **"Bifold knife primary drive gears removal" on page 513** • **"Bifold knife secondary drive gears removal" on page 518** Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 Check the bifold guide for misalignment and damage. Is the guide properly installed and free of damage?	Contact the next level of support.	Go to step 34.
Step 34 Reinstall or replace the guide. See **"Booklet maker—Fold section 2" on page 613**. 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 status and messages. • Set up and operate the printer.
2	Home button	Go to the home screen.
3	Sleep button	Enable Sleep mode or Hibernate mode. The following actions wake the printer from Sleep mode: • Touching the control panel home screen • Opening the scanner cover The following actions wake the printer from Hibernate mode: • Pressing the Sleep button until the printer wakes • Performing a power-on reset using the main power switch
4	Keypad	Enter numbers, letters, or symbols.
5	Start button	Start a job, depending on which mode is selected.
6	Clear all / Reset button	Reset the default settings of a function, such as copying, faxing, or scanning.
7	Stop or Cancel button	Stop all printer activity.
8	Indicator light	Check the status of the printer.

Understanding the colors of the Sleep button and indicator lights

The colors of the Sleep button and indicator lights on the printer control panel signify a certain printer status or condition.

Indicator light	Printer status
Off	The printer is off or in Hibernate mode.
Blinking green	The printer is warming up, processing data, or printing.
Solid green	The printer is on, but idle.
Blinking red	The printer requires user intervention.

Sleep button light	Printer status
Off	The printer is off, idle or in Ready state.
Solid amber	The printer is in Sleep mode.
Blinking amber	The printer is entering or waking from Hibernate mode.
Blinking amber for 0.1 second, then goes completely off for 1.9 seconds in a slow, pulsing pattern	The printer is in Hibernate mode.

Understanding the home screen

When the printer is turned on, the display shows a basic screen, referred to as the home screen. Touch the home screen buttons and icons to initiate an action such as copying, faxing, or scanning; to open the menu screen; or to respond to messages.

Note: Your home screen may vary depending on your home screen customization settings, administrative setup, and active embedded solutions.
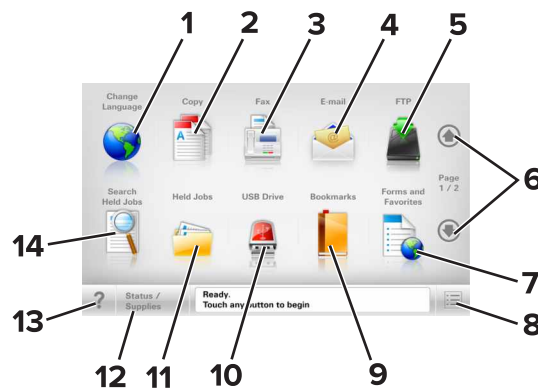
Touch		To
1	Change Language	Launch the Change Language pop-up window that lets you change the primary language of the printer.
2	Copy	Access the Copy menus and make copies.
3	Fax	Access the Fax menus and send fax.
4	E-mail	Access the E-mail menus and send e-mails.
5	FTP	Access the File Transfer Protocol (FTP) menus and scan documents directly to an FTP server.
6	Arrows	Scroll up or down.

Touch		To
7	Forms and Favorites	Quickly find and print frequently used online forms.
8	Menu icon	Access the printer menus. **Note:** The menus are available only when the printer is in Ready state.
9	Bookmarks	Create, organize, and save a set of bookmarks (URL) into a tree view of folders and file links. **Note:** The tree view supports only bookmarks created from this function, and not from any other application.
10	USB Drive	View, select, print, scan, or e-mail photos and documents from a flash drive. **Note:** This icon appears only when you return to the home screen while a memory card or flash drive is connected to the printer.
11	Held Jobs	Display all current held jobs.
12	Status/Supplies	• Show a warning or error message whenever the printer requires intervention to continue processing. • Access the messages screen for more information on the message, and how to clear it.
13	Tips	Open a context-sensitive Help dialog.
14	Search Held Jobs	Search for one or more of the following items: • User name for held or confidential print jobs • Job names for held jobs, excluding confidential print jobs • Profile names • Bookmark container or print job names • USB container or print job names for supported file types

Features

Feature	Description
Menu trail line Example: <u>Menus</u> > <u>Settings</u> > <u>Copy Settings</u> > Number of Copies	A menu trail line is located at the top of each menu screen. This feature shows the path taken to arrive at the current menu. Touch any of the underlined words to return to that menu. Number of Copies is not underlined because it is the current screen. If you touch an underlined word on the "Number of Copies" screen before the number of copies is set and saved, then the selection is not saved, and it does not become the default setting.
Attendance message alert	If an attendance message affects a function, then this icon appears and the red indicator light blinks.
Warning	If an error condition occurs, then this icon appears.

Service menus

203

Feature	Description
Status message bar	• Show the current printer status such as **Ready** or **Busy**. • Show printer conditions such as **Toner Low** or **Cartridge Low**. • Show intervention messages so the printer can continue processing.
Printer IP address Example: **123.123.123.123**	The IP address of your network printer is located at the upper left corner of the home screen and appears as four sets of numbers separated by periods. You can use the IP address when accessing the Embedded Web Server so you can view and remotely configure printer settings even when you are not physically near the printer.

Using the touch-screen buttons

Note: Your home screen, icons, and buttons may vary, depending on your home screen customization settings, administrative setup, and active embedded solutions.
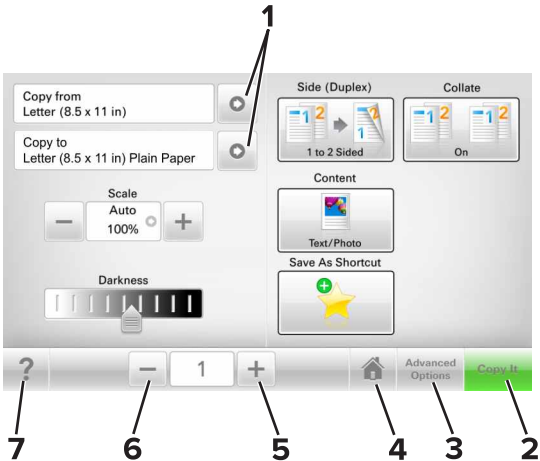
	Touch	To
1	Arrows	View a list of options.
2	Copy It	Print a copy.
3	Advanced Options	Select a copy option.
4	Home	Go to the home screen.
5	Increase	Select a higher value.
6	Decrease	Select a lower value.
7	Tips	Open a context-sensitive Help dialog.

Service menus

Other touch-screen buttons

Touch	To
Accept	Save a setting.
Cancel	• Cancel an action or a selection. • Exit a screen and return to the previous screen without saving changes.
Reset	Reset values on the screen.

Menus list

Paper Menu	**Reports**	**Network/Ports**	**Security**
Default Source	Menu Settings Page	Active NIC	Edit Security Setups
Paper Size/Type	Device Statistics	Standard Network[1]	Miscellaneous Security Settings
Configure MP	Stapler Test	Standard USB	Confidential Print
Substitute Size	Network Setup Page	Parallel [x]	Erase Temporary Data Files
Paper Texture	Network [x] Setup Page	Serial [x]	Security Audit Log
Paper Loading	Shortcut List	SMTP Setup	Set Date and Time
Custom Types	Fax Job Log		
Custom Names	Fax Call Log		
Custom Scan Sizes	Copy Shortcuts		
Custom Bin Names	E-mail Shortcuts		
Universal Setup	Fax Shortcuts		
Bin Setup	FTP Shortcuts		
	Profiles List		
	Print Fonts		
	Print Directory		
	Print Demo		
	Asset Report		
	Event Log Summary		

[1] Depending on the printer setup, this menu appears as Standard Network or Network [x].

[2] This menu appears only when one or more DLEs are installed.

Paper Menu	**Reports**	**Network/Ports**	**Security**
Settings	**Help**	**Manage Shortcuts**	**Option Card Menu**[2]
General Settings	Print All Guides	Fax Shortcuts	A list of installed DLEs (Download Emulators) appears.
Copy Settings	Copy Guide	E-mail Shortcuts	
Fax Settings	E-mail Guide	FTP Shortcuts	
E-mail Settings	Fax Guide	Copy Shortcuts	
FTP Settings	FTP Guide	Profile Shortcuts	
Flash Drive Menu	Print Defects Guide		
Print Settings	Information Guide		
	Supplies Guide		

[1] Depending on the printer setup, this menu appears as Standard Network or Network [x].

[2] This menu appears only when one or more DLEs are installed.

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

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.

Print log (extended)

This setting lists an extended version of the various printer events.

1 Enter the Diagnostics menu, and then navigate to:

Event log > **Print log (extended)**

2 Touch **Start**.

Note: The events that appear in the report vary depending on the operational history of the printer.

Display log

This setting shows the panel text that appears when the event occurs.

Enter the Diagnostics menu, and then navigate to:

Event log > **Display log**

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 Test Pages**

Input tray quick print

This setting lets you print a single or continuous Quick Test page in either duplex or simplex mode.

1 Enter the Diagnostics menu, and then touch **Input tray quick print**.

2 Select where you want to print the pages from.

3 Select whether to print a single or continuous test page, and then touch **Start**.

Output bin quick feed

This setting lets you send a test page to the output bins.

1 Enter the Diagnostics menu, and then touch **Output bin quick feed**.

2 Select the output bin for the test page.

Note: When Standard bin is selected, select either single or continuous test page.

Output device diagnostics

Sensor tests

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

2 Select the output device of the sensor that you want to test.

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 touch **Output device diagnostics**.

2 Select the output device of the motor that you want to test.

3 Select 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.

Entering the Configuration mode

1 Turn off the printer.

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

Release the buttons when the splash screen appears.

Configuration menu

Reports

Menu Settings Page

This page lists the default value of each menu setting.

Enter the Configuration mode, and then navigate to:

Configuration Menu > **Reports** > **Menu Settings Page**

Event Log

This report tracks the occurrence of various critical events in the printer.

Enter the Configuration mode, and then navigate to:

Configuration Menu > **Reports** > **Event Log**

Event Log Summary

This report shows a summary of Event Log.

Enter the Configuration mode, and then navigate to:

Configuration Menu > **Reports** > **Event Log Summary**

HealthCheck Statistics

This report provides information on the printer status.

Enter the Configuration mode, and then navigate to:

Configuration Menu > **Reports** > **HealthCheck Statistics**

Device Operations

Quiet Mode

This setting reduces the printer noise when in printing mode.

1 Enter the Configuration mode, and then navigate to:

Configuration Menu > **Device Operations** > **Quiet Mode**

2 Select a setting.

Panel Menus

This setting enables the printer to show the control panel menus.

1 Enter the Configuration mode, and then navigate to:

Configuration Menu > **Device Operations** > **Panel Menus**

2 Select a setting.

Safe Mode

This setting enables the printer to continue offering as much functionality as possible, despite known issues.

1 Enter the Configuration mode, and then navigate to:

Configuration Menu > **Device Operations** > **Safe Mode**

2 Select a setting.

Exit Maintenance Menu

This setting exits the Configuration mode and restarts the printer.

Parts removal

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 device weighs 43–67 kg (95–148 lb) and requires two or more trained personnel to lift it safely. Make sure that your fingers are not under the device when you lift or set the device 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.

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.

Understanding the marked or colored screws

Some parts are secured by screws that are specially marked or colored.

- **Blue or green**—These screws may loosen due to vibrations and loads during use or transport.
- **Red**—These screws secure parts that are difficult to install, adjust, or align. Do not remove or loosen the parts with red screws unless the parts are defective.

    Note: In some cases, the part is secured by multiple screws but only one screw is marked in red. This part should not also be removed or loosened unnecessarily.

Ribbon cable connectors

Zero Insertion Force (ZIF) connectors

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

To avoid damaging the connectors and their cables, observe the following:
- Do not insert the cables where the contacts are facing the locking actuator.
- Do not insert the cables diagonally into the ZIF socket.
- Avoid using a fingernail or sharp object to open the locking actuator.
- Avoid pressing against the cables when opening the locking actuator.

These are the types of the ZIF connectors that are used in this printer:
- Horizontal top contact connector
- Horizontal bottom contact connector
- Vertical mount contact connector
- Horizontal sliding connector

Horizontal top contact connector

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

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

Removing the cable

1 Unlock the actuator.

2 Remove the cable.

Inserting the cable

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

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

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

2 Rotate the locking actuator to the locked position.

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

Parts removal

213

Horizontal bottom contact connector

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

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

Removing the cable

1 Unlock the actuator.
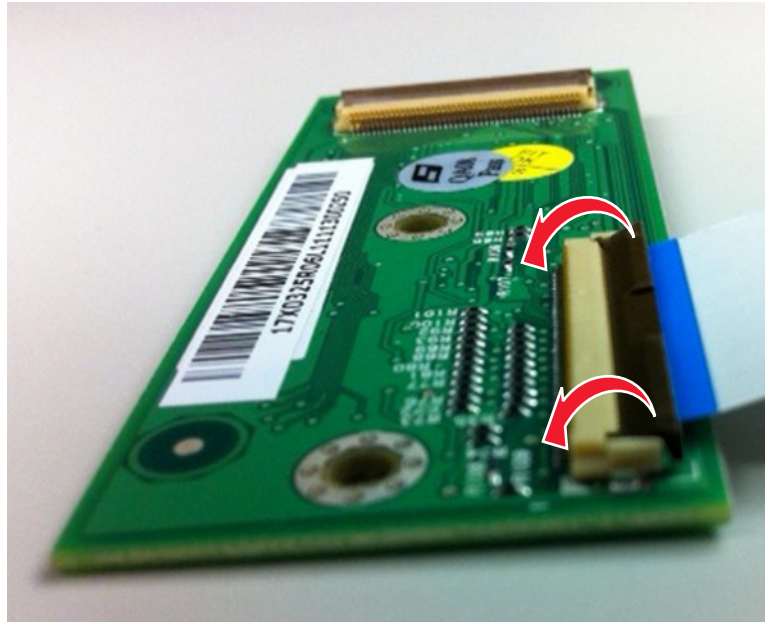
2 Remove the cable.

Inserting the cable

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

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

Note: Make sure that the cable is installed squarely into the connector to avoid intermittent failures.
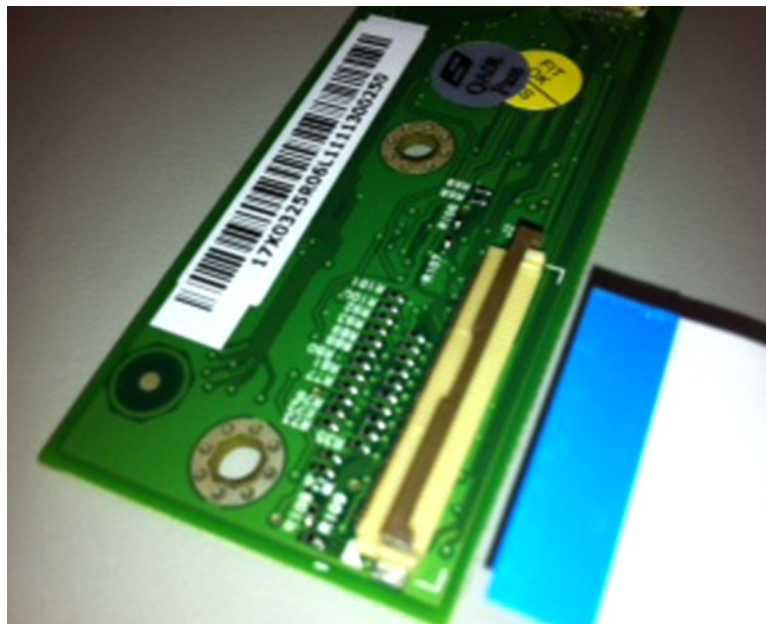
3 Rotate the locking actuator to the locked position.

Vertical mount contact connector

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

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

Removing the cable

1 Rotate the locking actuator from the center of the actuator to the unlocked position.
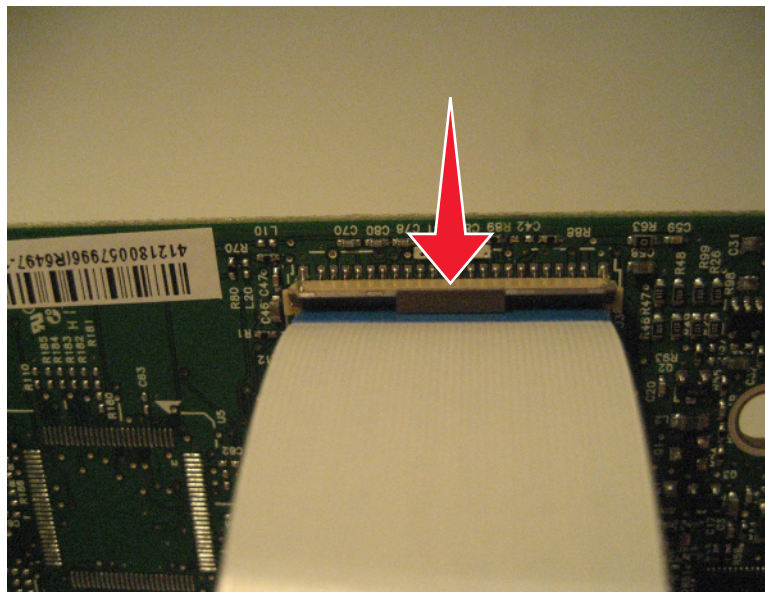
2 Remove the cable.

Inserting the cable

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

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

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

3 Rotate the locking actuator to the locked position.

Notes:

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

Parts removal

217
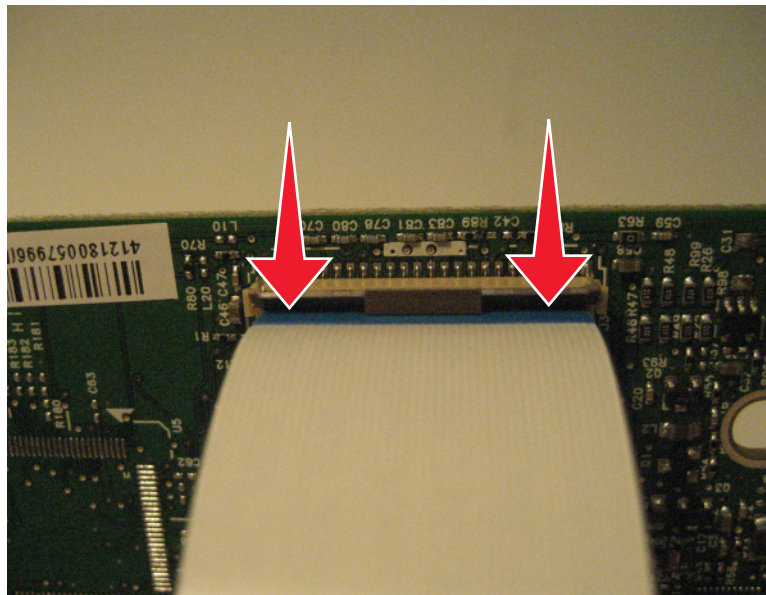
Horizontal sliding contact connector

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

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

Removing the cable

1 Slide the tabs away from the connector.
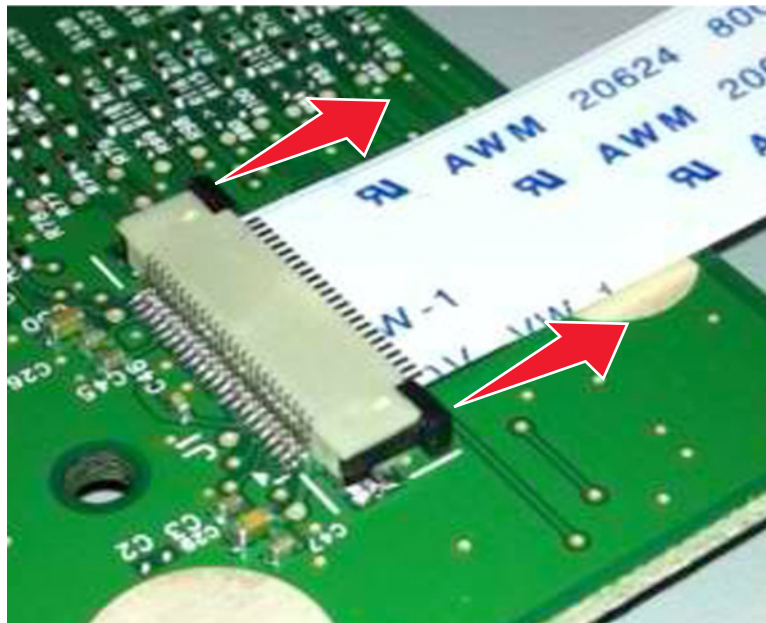
2 Remove the cable.

Inserting the cable

1 Make sure that the locking actuator is in the open position. If you are opening the connector, then pull back the end tabs using equal force to avoid breaking the connector.
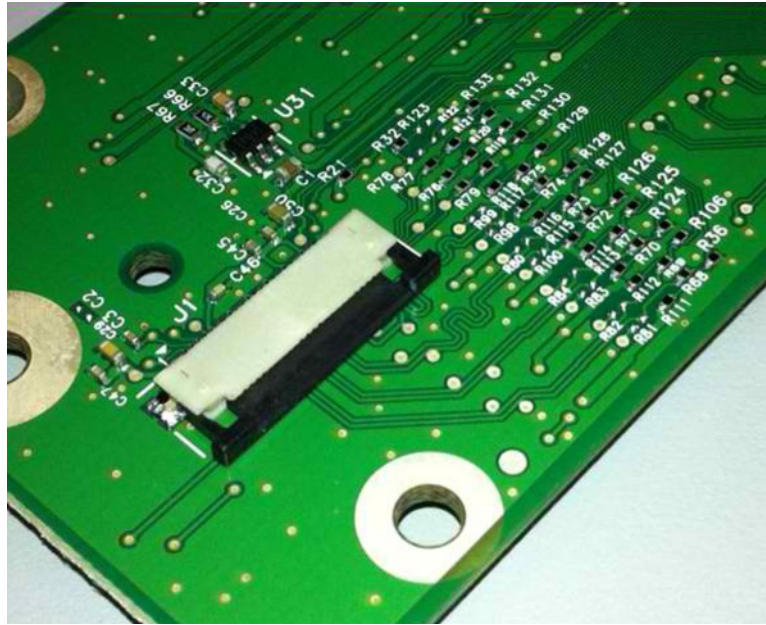
2 Insert the cable on top of the actuator with the contacts facing away from the locking actuator.

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

Notes:

- Do not move the cable while locking the actuator.
- If the cable moves, open the actuator, reposition the cable, and then close the actuator.
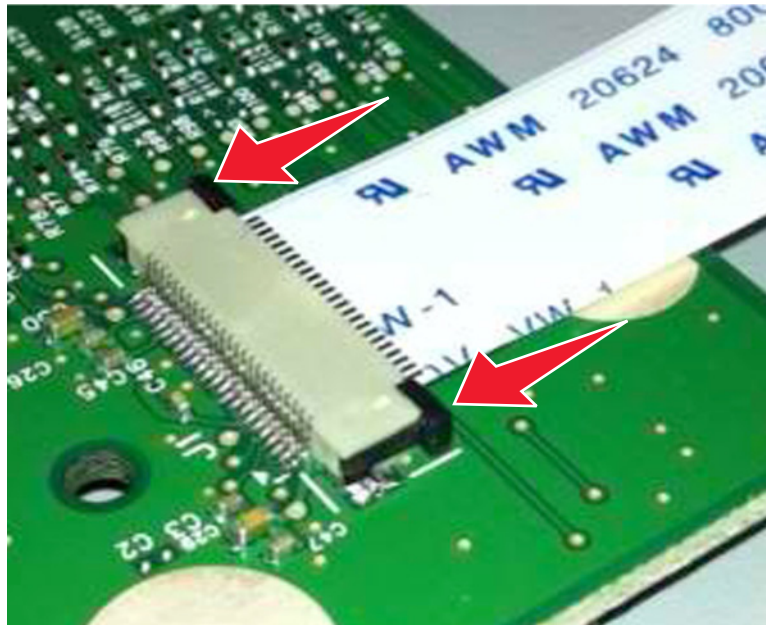
Low insertion force (LIF) connector

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

Inserting the cable

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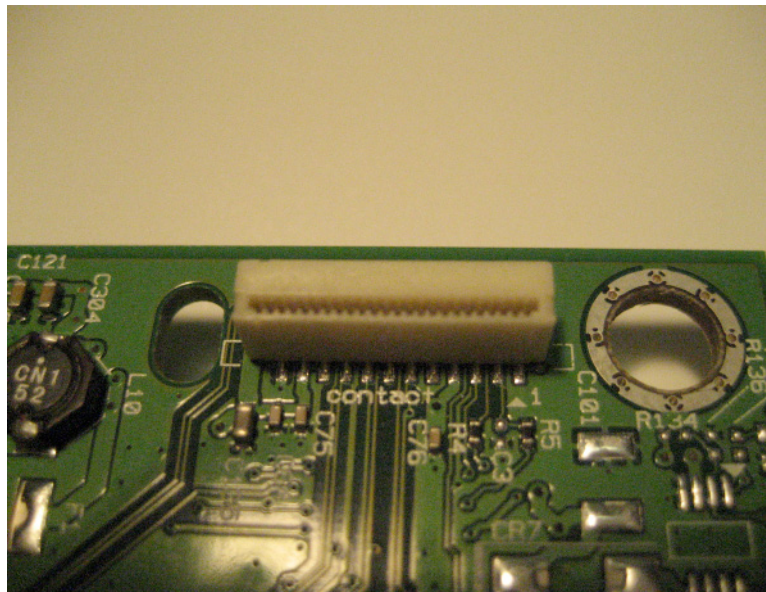
2 Insert the cable.

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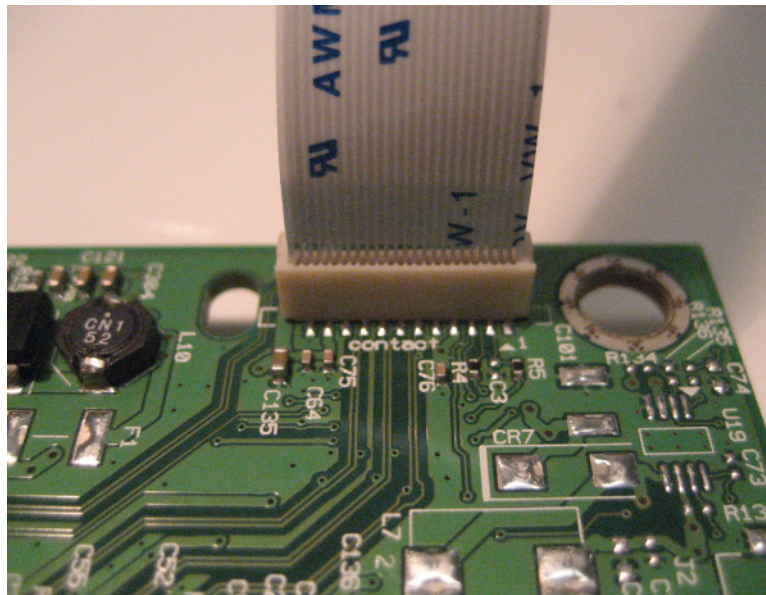
Adjustments

Punch holes deviation adjustment

Perform this procedure when the deviation between the holes is more than 2 mm.

1 Perform a punch job.

2 Fold the paper, and then measure the deviation between the holes. If the deviation is more than 2 mm, then proceed with the rest of the steps.
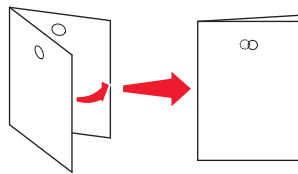
3 Open the SHPF top cover, and then loosen the two screws (A).
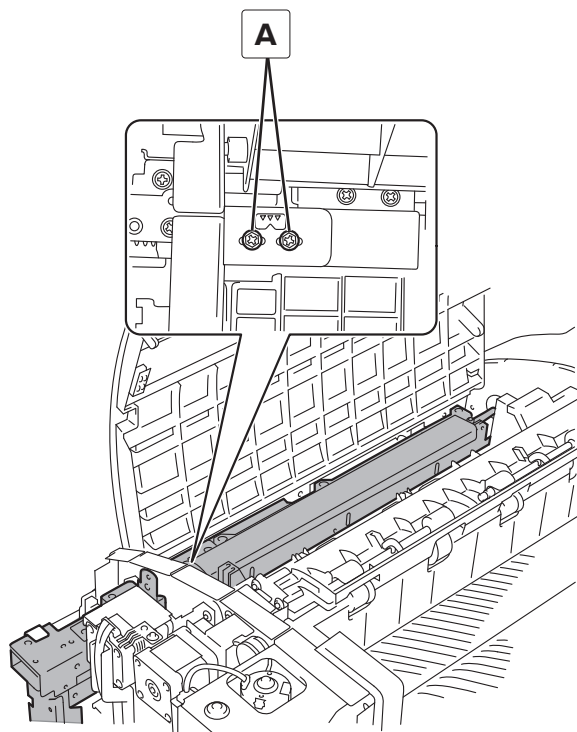
4 Using the marks (B) on the frame, move the punch unit to adjust its position.

Parts removal
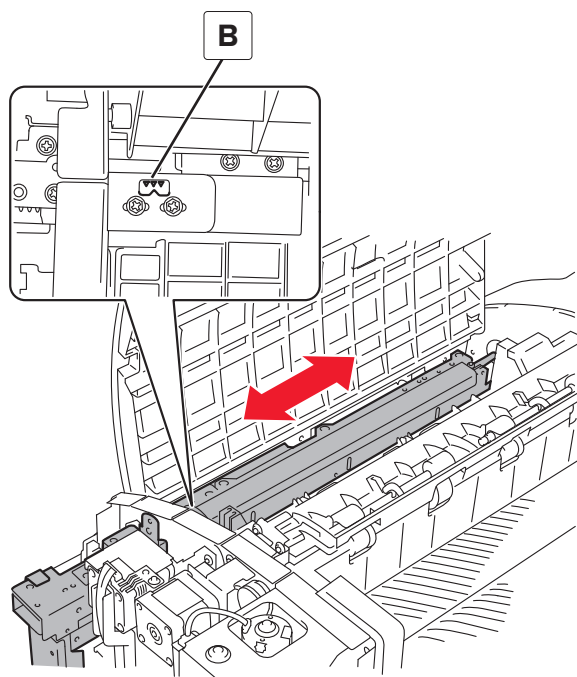
Bifold skew adjustment

Perform this procedure when:

- Reinstalling the booklet maker aligner assembly.
- The fold skew exceeds the tolerance of +/- 1 mm.

1 Perform a bifold print job.

2 Unfold the paper with the ridge facing up.

Exit direction
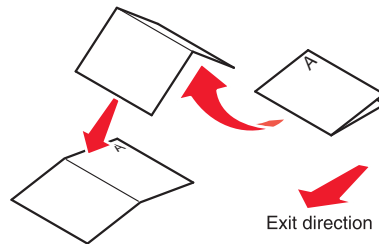
3 Confirm the skew (A) by measuring the length of edges A1 and A2. If A1–A2 exceeds +/- 1 mm, then proceed with the rest of the steps.
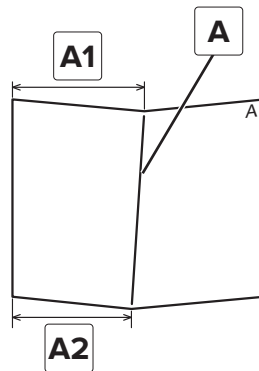
4 Pull out the booklet maker from the finisher, and then loosen the two screws (B).

Parts removal

223
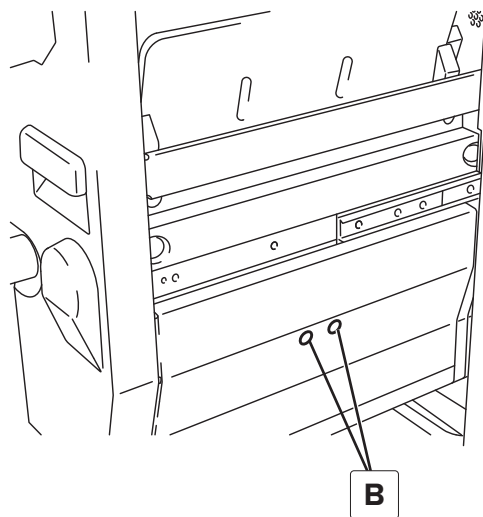
5 Lift the aligner jam access door, and then loosen the two screws (C).
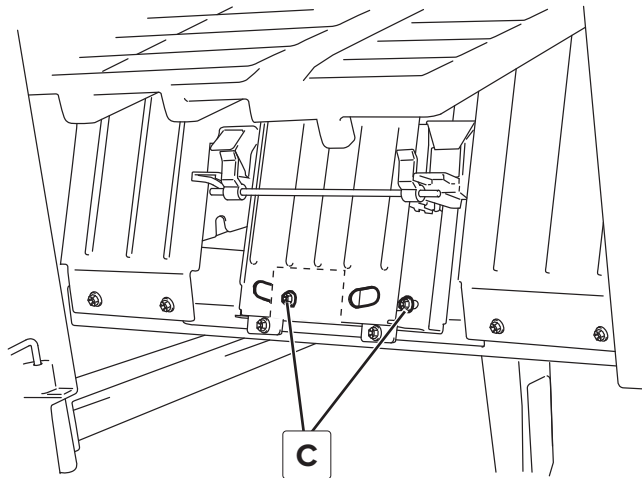
6 Rotate the aligner assembly depending on the direction of the skew.

- Rotate the aligner assembly to the rear.
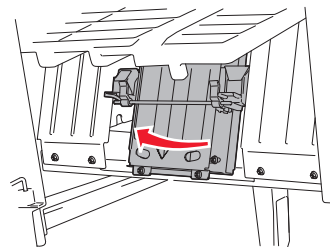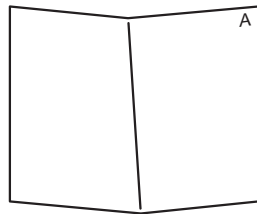
- Rotate the aligner assembly to the front.
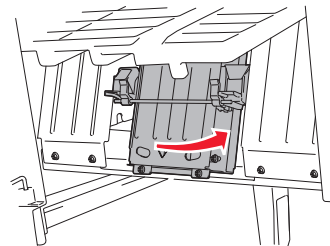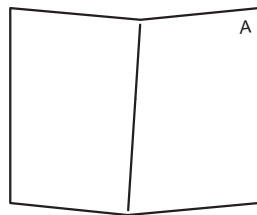
Removal procedures

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, imaging units, 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.

Parts removal

- 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.

Staple finisher removals

Staple finisher front cover removal
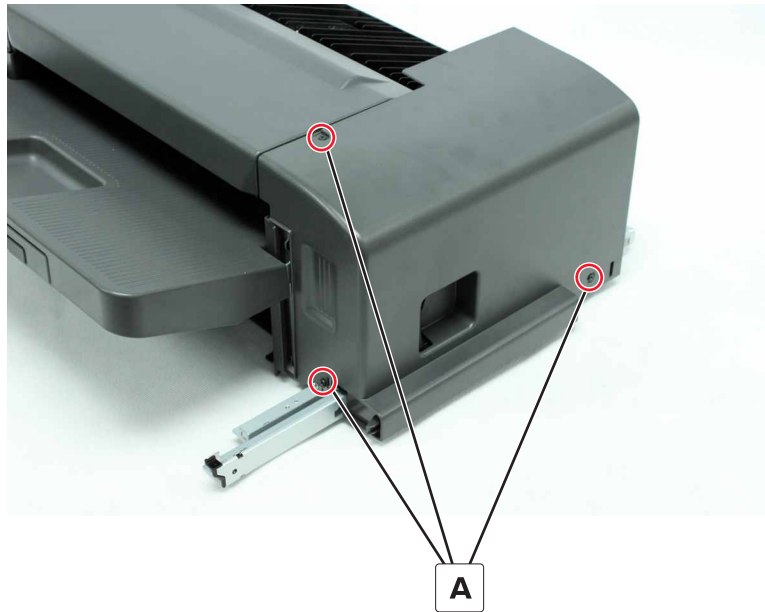
1 Remove the three screws (A).

2 Remove the screw (B), and then remove the cover.
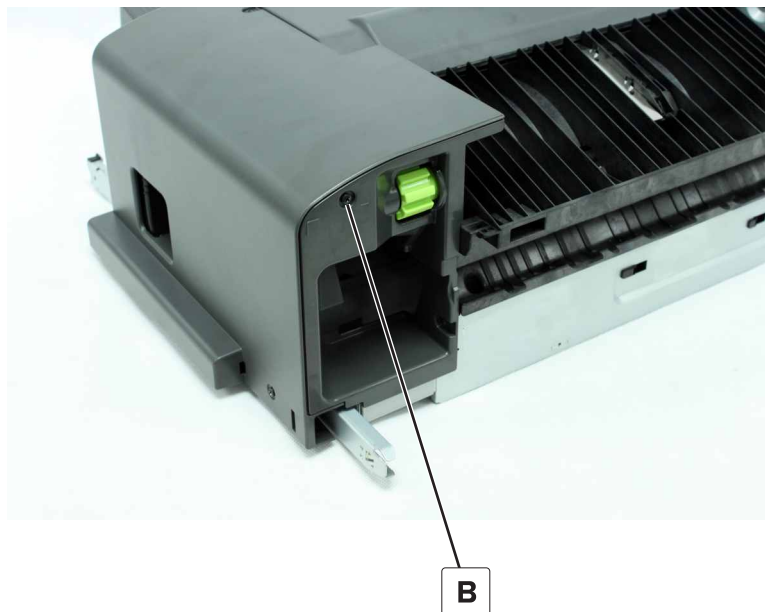
Staple finisher right cover removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the screw (A), and then remove the cover.
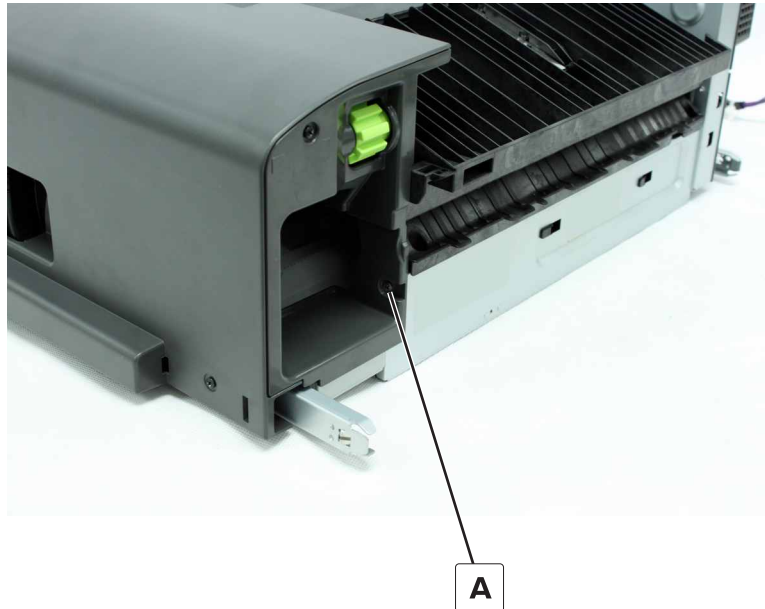
Staple finisher rear cover removal

1 Remove the three screws (A).

2 Remove the cover.

Installation note: Position the metal tab (B) over the cover.
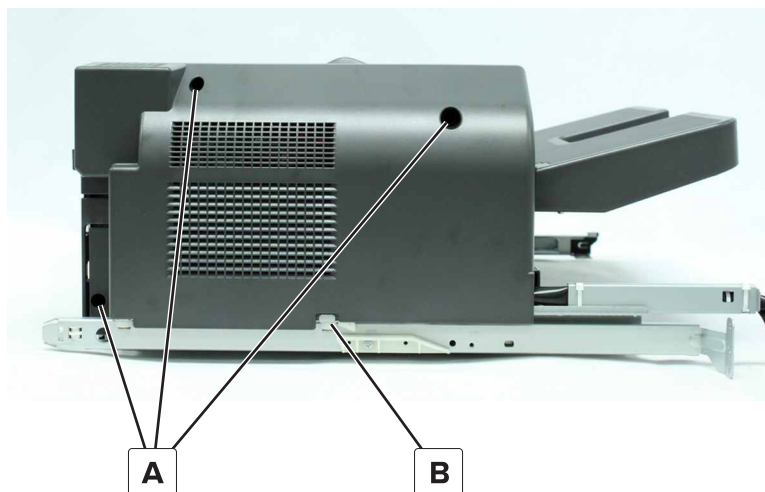
Staple finisher top cover removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the screw (A).
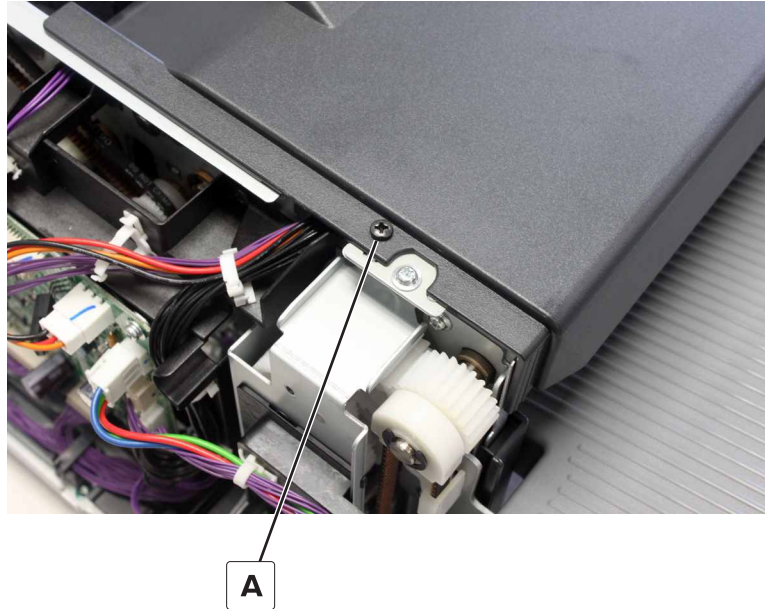
4 Slide, and then remove the cover.
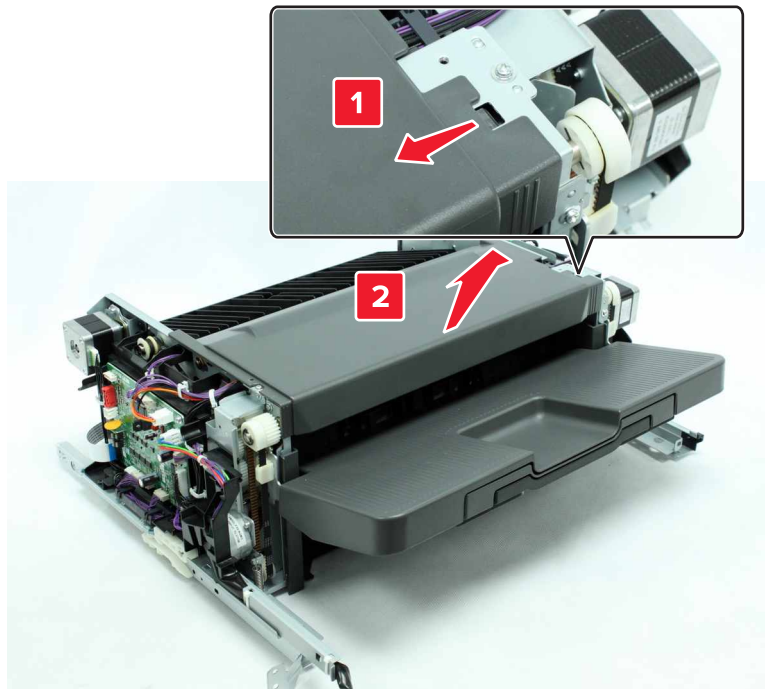
Staple finisher exit guide removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the guide.
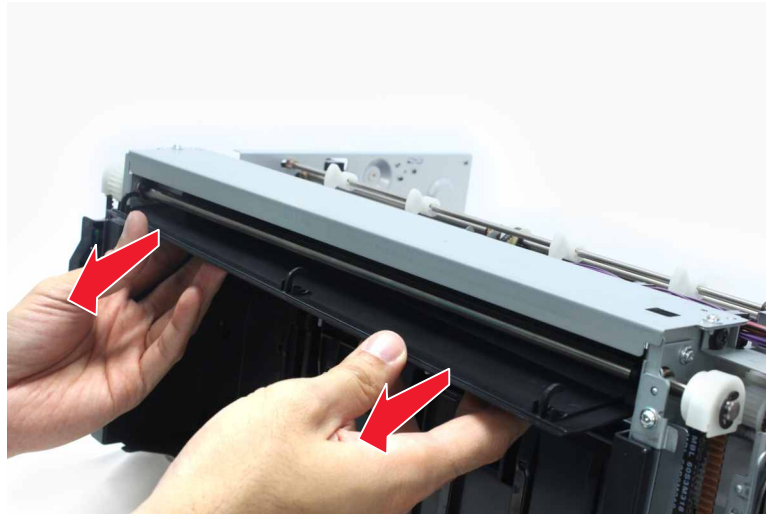
Installation note: Position the static brushes outside the guide.

Staple finisher bin removal

1 Remove the seven screws (A).
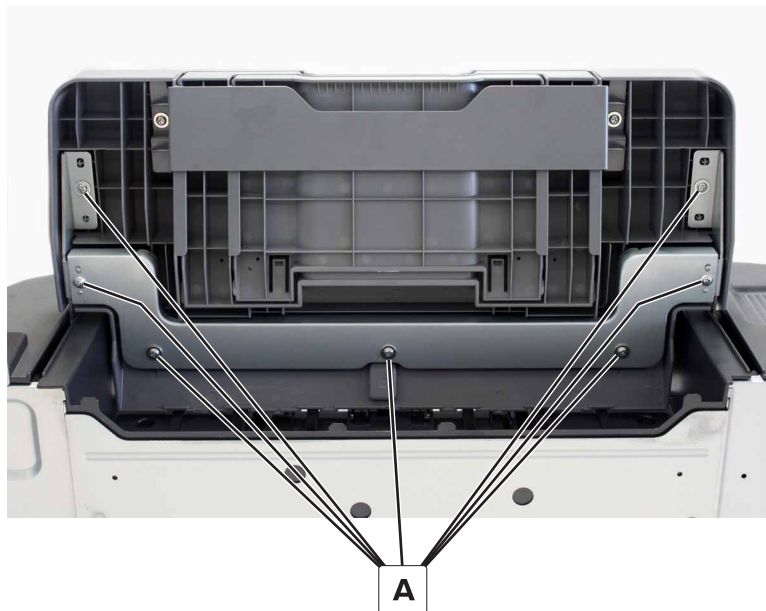
2 Remove the bin.

Staple finisher left inner cover removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the two screws (A), and then remove the cover.
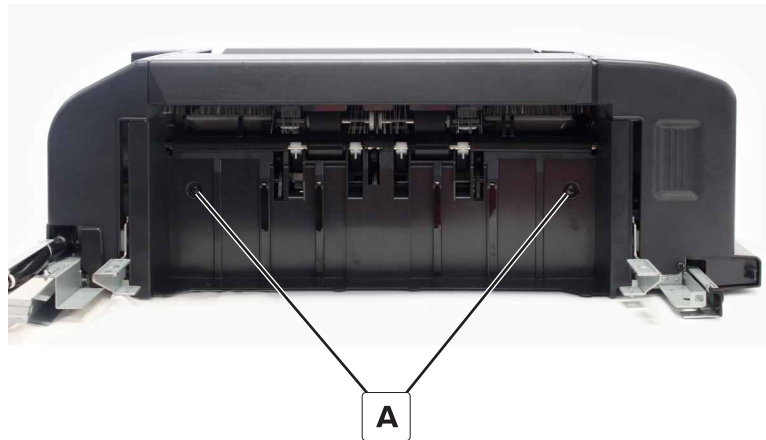
Staple finisher lower exit roller paddles removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the four paddles (A).
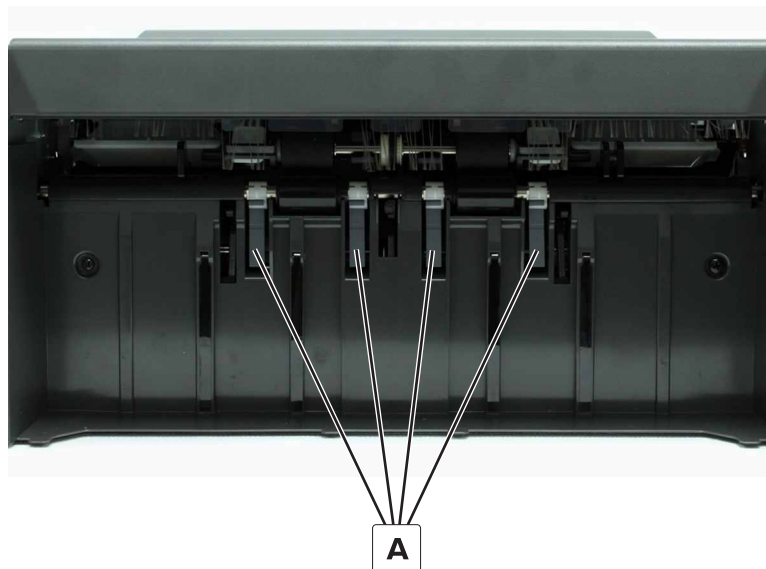
Staple finisher bin stack height assembly removal

Note: This part is not a FRU. Perform these steps to access the FRUs attached to this part.

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

3 Remove the two screws (A).
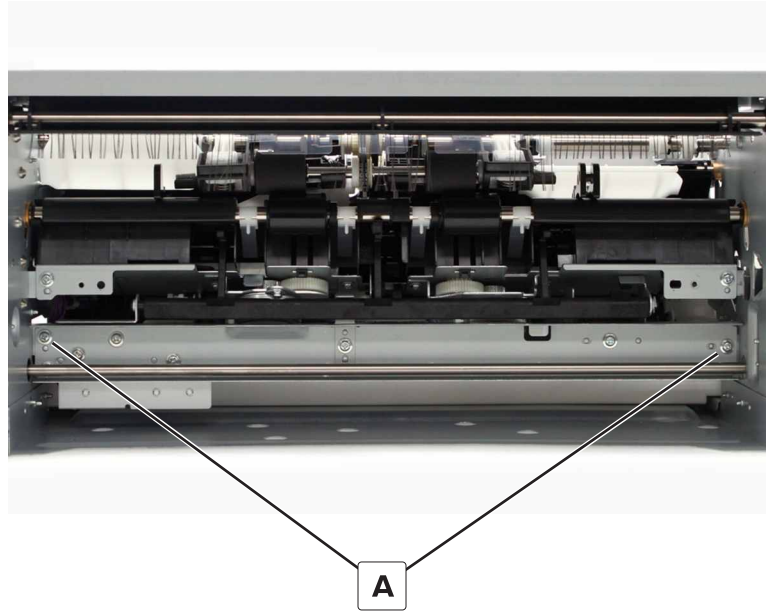
4 Swing out, and then set aside the assembly.

Staple finisher bin stack height assembly sensors removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

3 Remove the bin stack height assembly. See **"Staple finisher bin stack height assembly removal" on page 229**.

4 Disconnect the cable, and then remove the sensor.
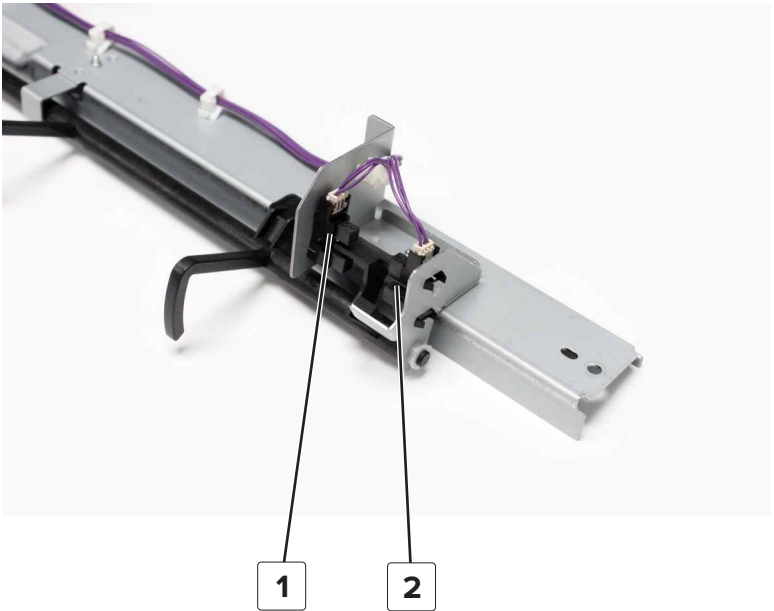
#	Part
1	Sensor (staple finisher bin level)
2	Sensor (staple finisher bin stack height)

Staple finisher bin stack height solenoid removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

3 Remove the bin stack height assembly. See **"Staple finisher bin stack height assembly removal" on page 229**.

4 Disconnect the cable (A).

A

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

B
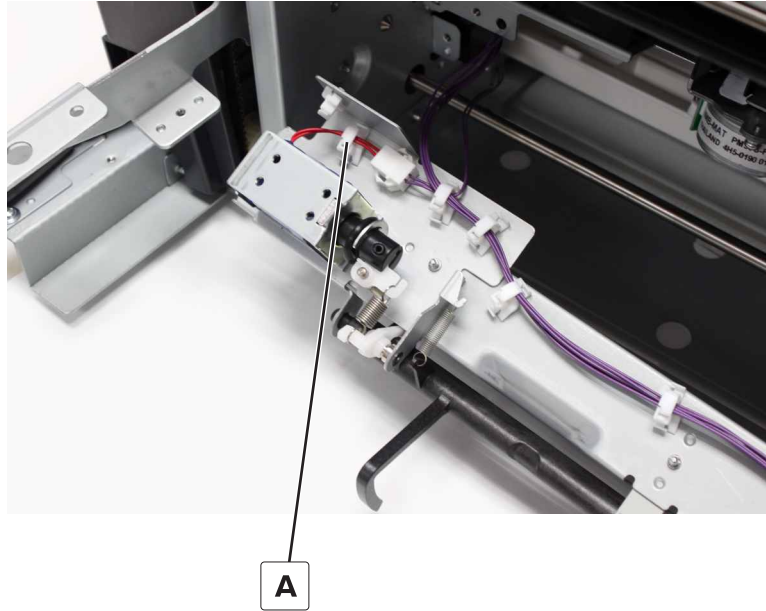
Staple finisher bin stack height actuator removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

3 Remove the bin stack height assembly. See **"Staple finisher bin stack height assembly removal" on page 229**.

4 Remove the bin stack height solenoid. See **"Staple finisher bin stack height solenoid removal" on page 231**.

5 Remove the clip (A).
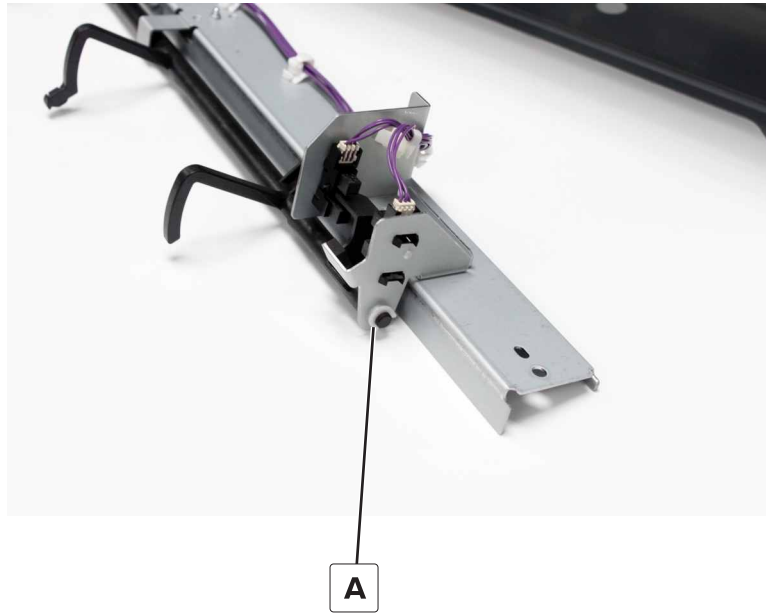
6 Remove the spring (B) and the solenoid link (C).
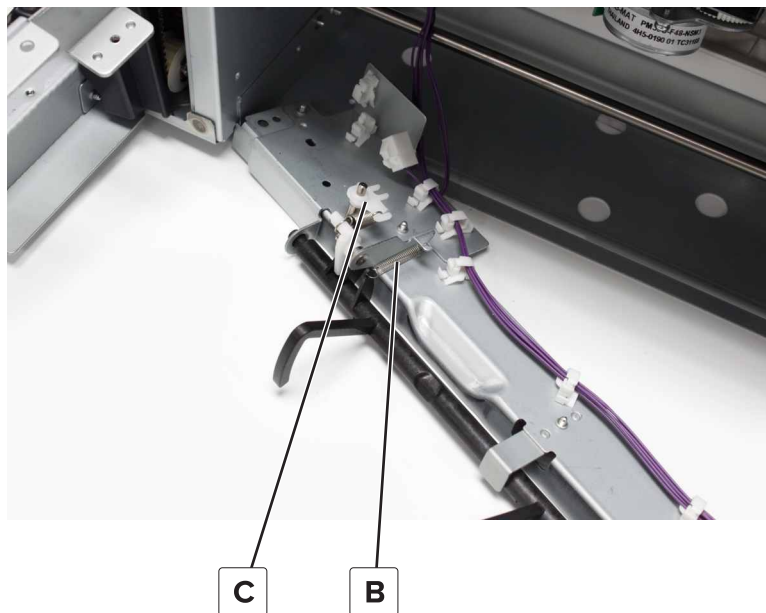
7 Remove the two screws (D).
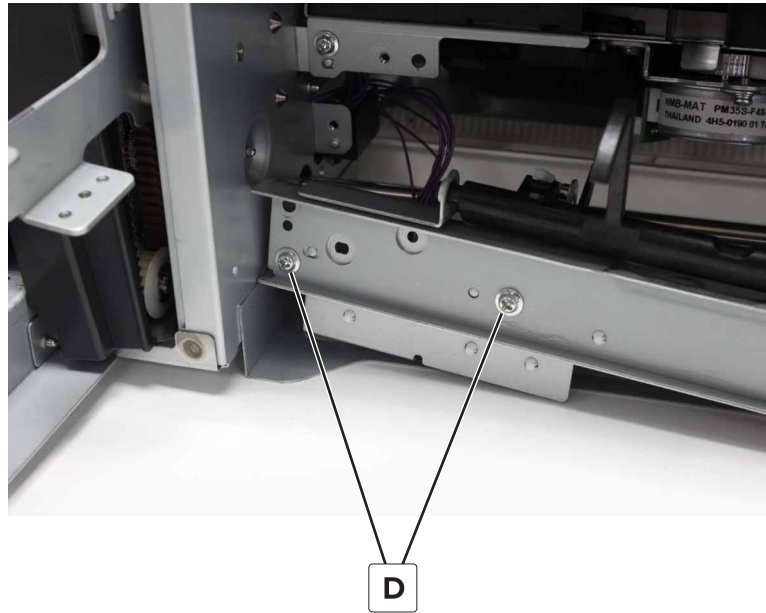
8 Remove the bracket to release the link from the actuator, and then remove the actuator.

Motor (staple finisher tamper) removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

3 From the motor, disconnect the cable, and then remove the two screws.

> **Note:** Access the screws through the holes on the bottom frame.
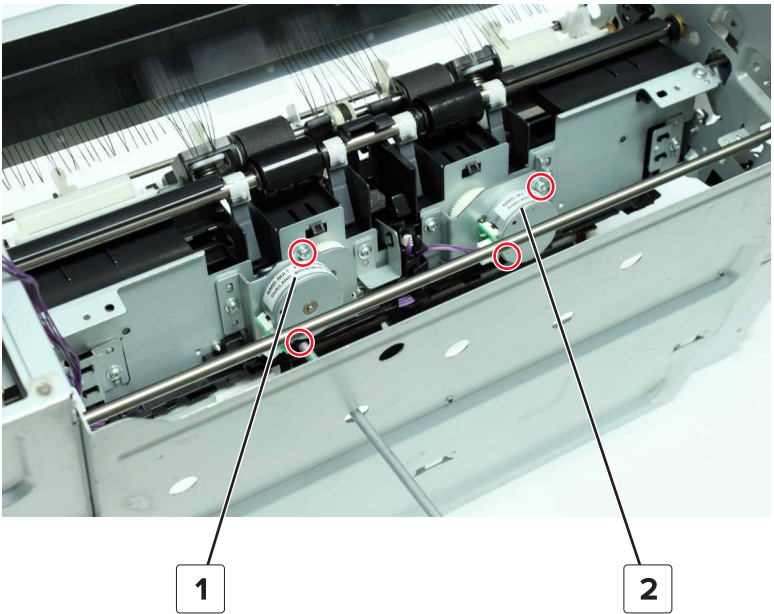
#	Part
1	Motor (staple finisher rear tamper)
2	Motor (staple finisher front tamper)

4 Remove the motor.

Staple finisher tamper sensors removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

3 From the sensor, remove the screw, and then remove the sensor bracket.

Note: Access the screws through the holes on the bottom frame.
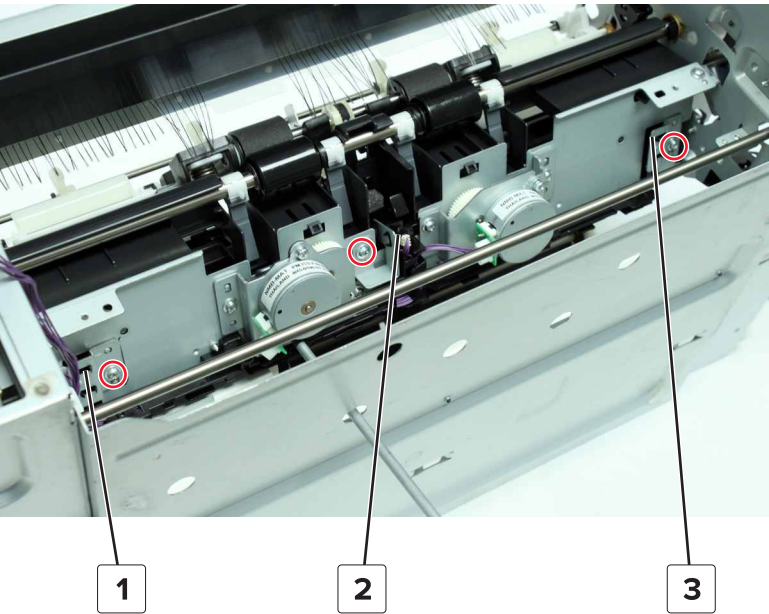
#	Part
1	Sensor (staple finisher rear tamper home)
2	Sensor (staple finisher tamper paper present)
3	Sensor (staple finisher front tamper home)

4 Disconnect the cable from the sensor, and then remove the sensor from the bracket.

Staple finisher transport jam removal gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the three clips (A), and then remove the knob and three gears.

Parts removal
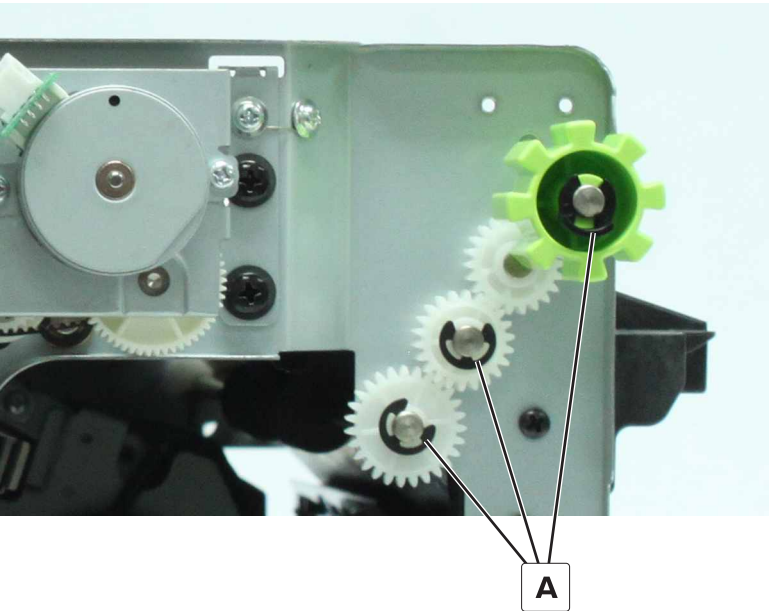
Staple finisher lock switch removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the clip (A), and then remove the handle.

A
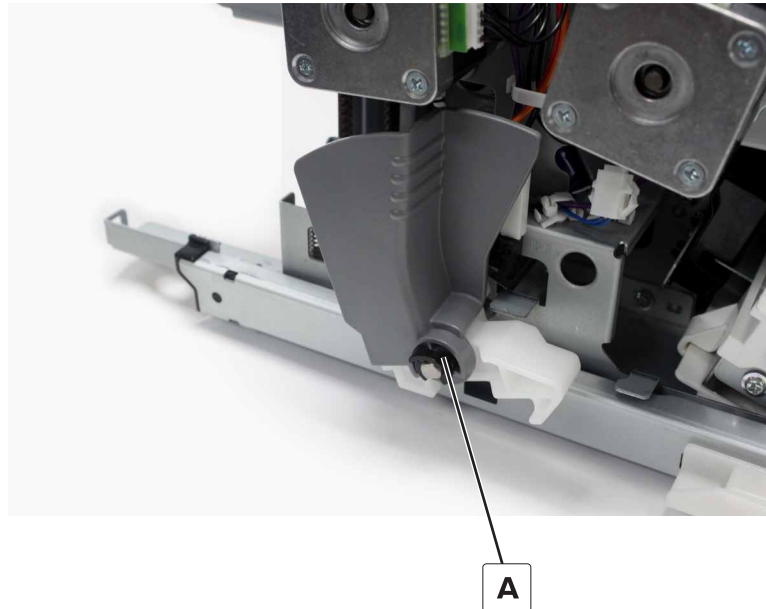
3 Disconnect the cable (B).

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

C   B
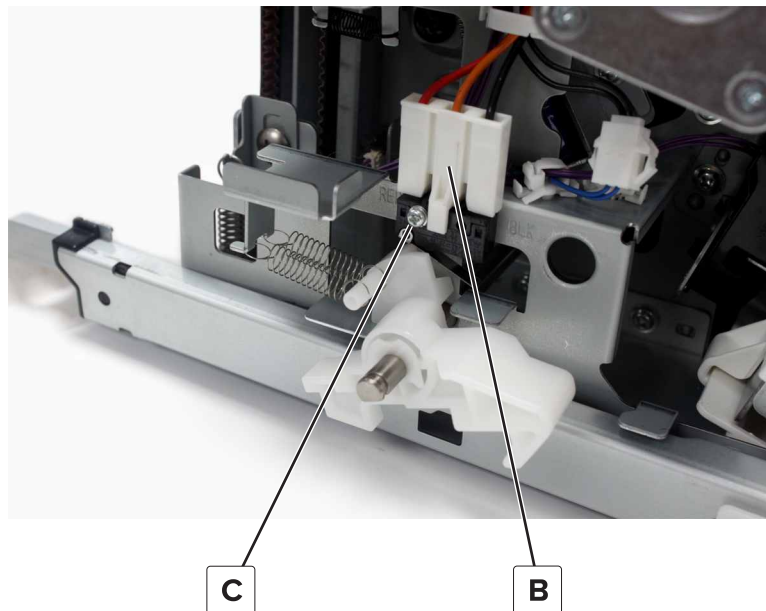
Staple finisher locks removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

Parts removal

237

3 Pry the latch (A), and then remove the rear lock.

A

4 Remove the clip (B), and then remove the handle.

B
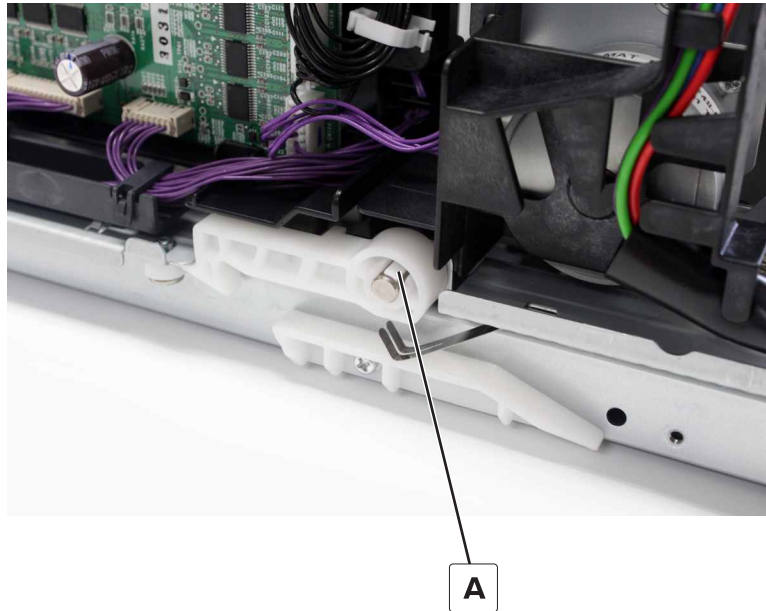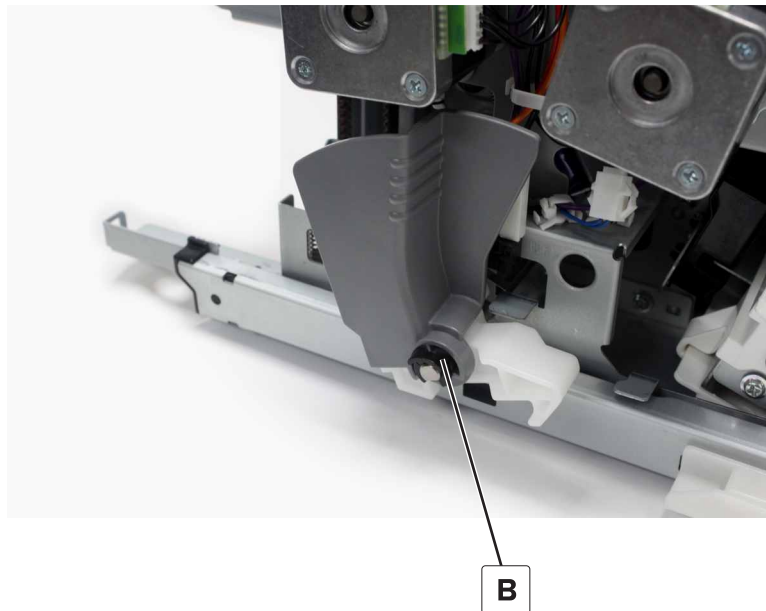
5 Remove the two springs (C).

6 Remove the clip (D), and then remove the front lock.
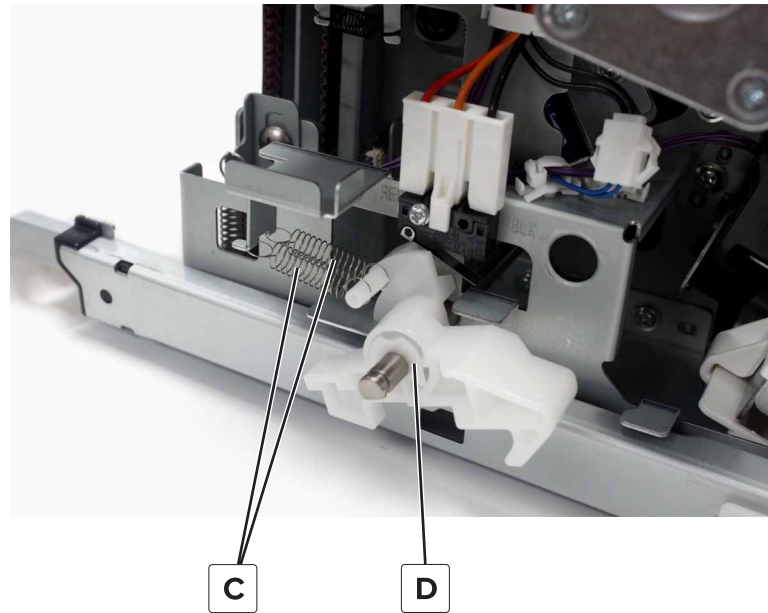
Staple finisher guide rails removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the rear lock. See **"Staple finisher locks removal" on page 237**.

4 Remove the two screws (A), remove the two wheels, and then remove the rear guide rail.
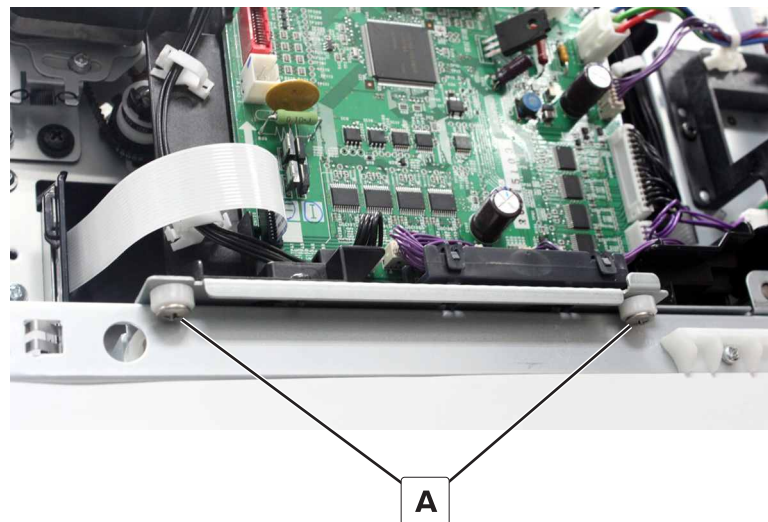
5 Remove the screw (B), and then remove the front guide rail.
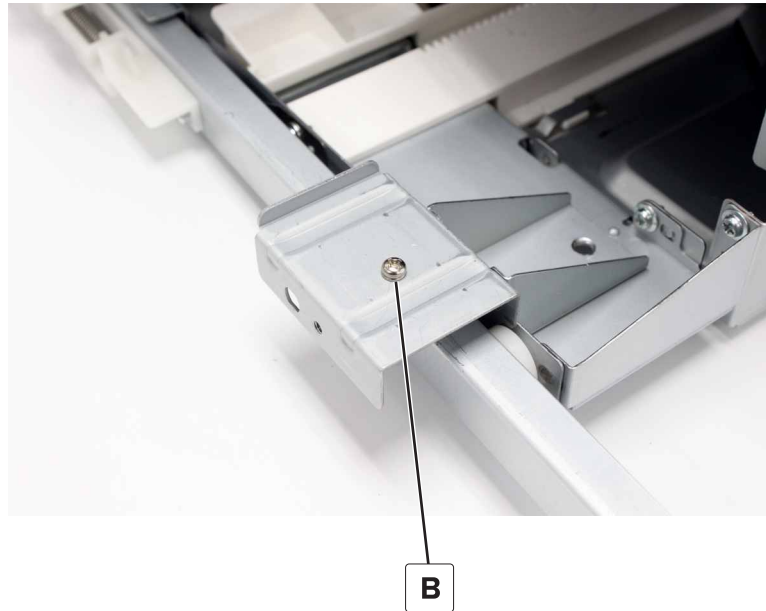
B

Staple finisher controller board removal

1 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

2 Disconnect all the cables from the board, and then remove the screw (A).

A
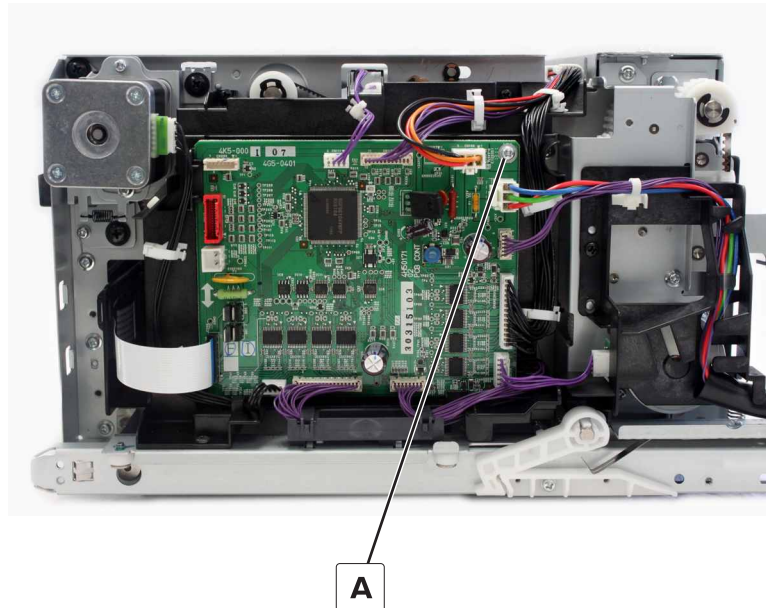
3 Remove the board.

Staple finisher controller board holder removal

1 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

2 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

3 Remove all the cable holders from the controller board holder.

4 Remove the three screws (A), and then remove the controller board holder.
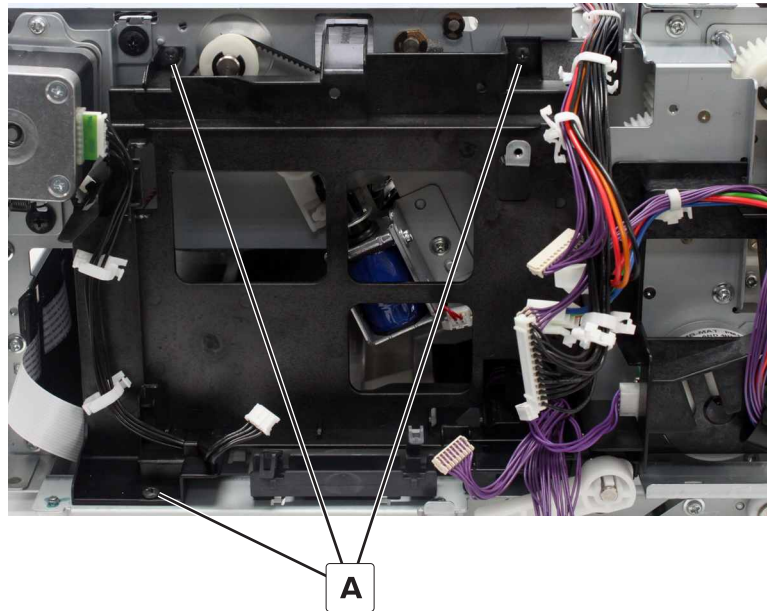
Staple finisher interface cable removal

1 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

2 Disconnect the two cables (A).

Parts removal
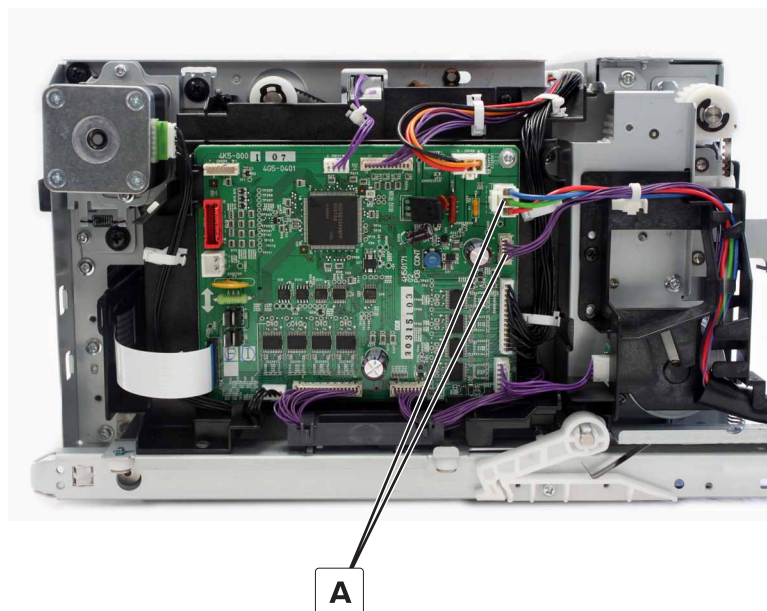
3 Remove the screw (B), and then remove the cable bracket.
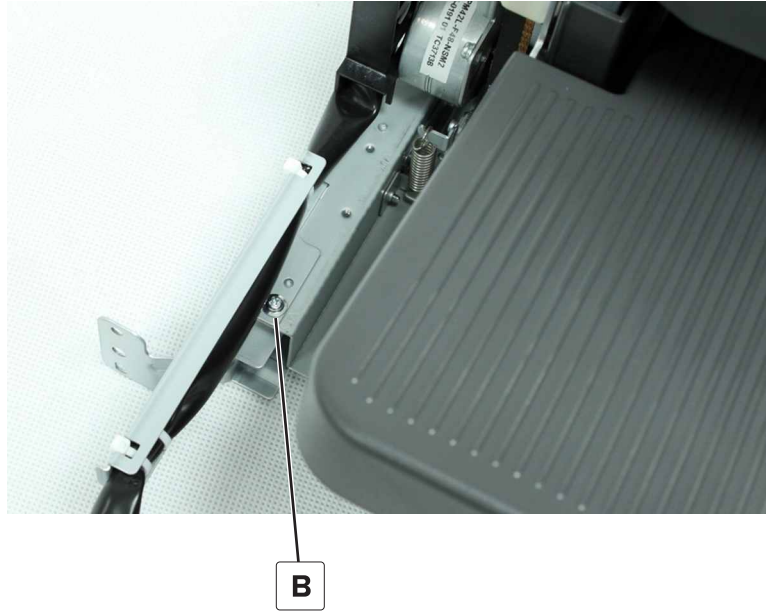
4 Cut the two zip ties (C), and then remove the cable.
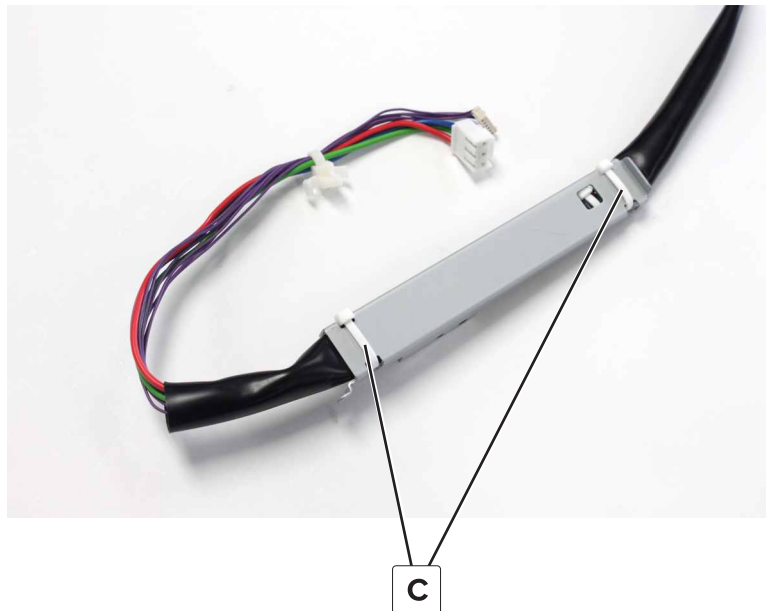
Installation notes:

a Plug the two cables into the controller board, and then pass them through the cable guide.

b Mount the cable bracket on the finisher, and then secure the cable with two zip ties (A).
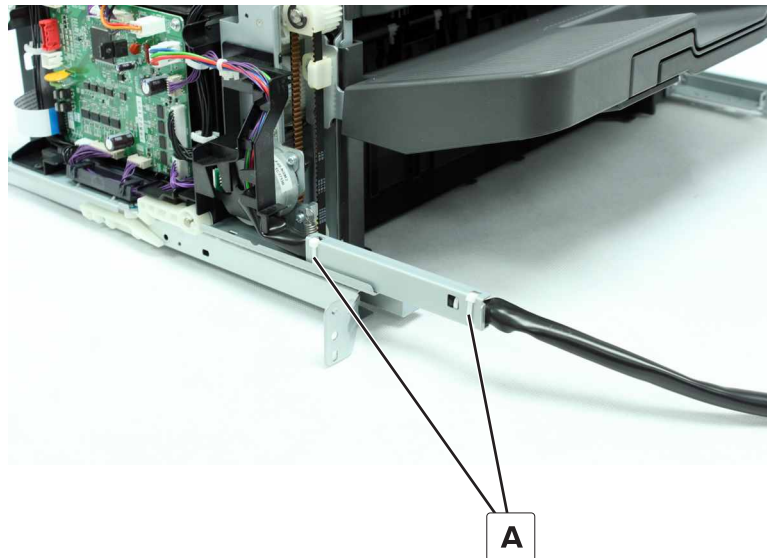
c Install the screw (B).
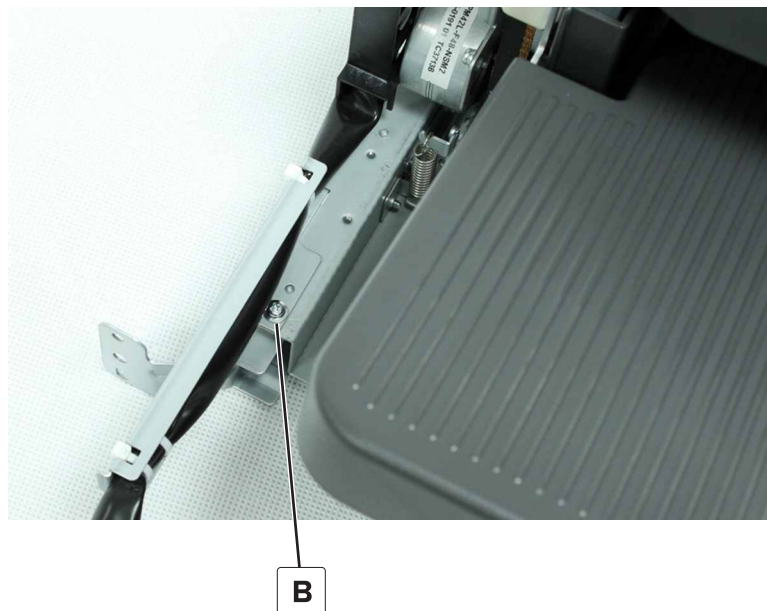
Motor (staple finisher transport) removal

1 Remove the rear cover. See .

2 Disconnect the cable (A).

3 Remove the four screws (B), and then remove the bracket.
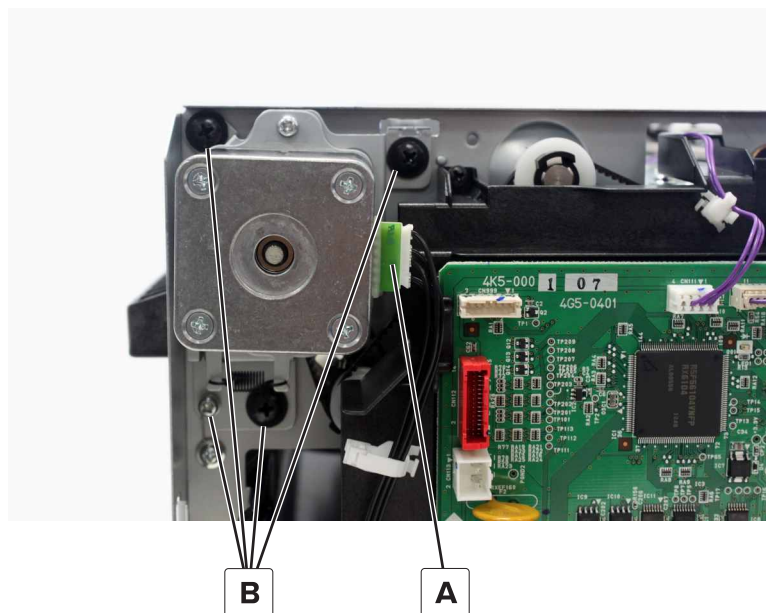
4 Remove the two screws (C), and then remove the motor.
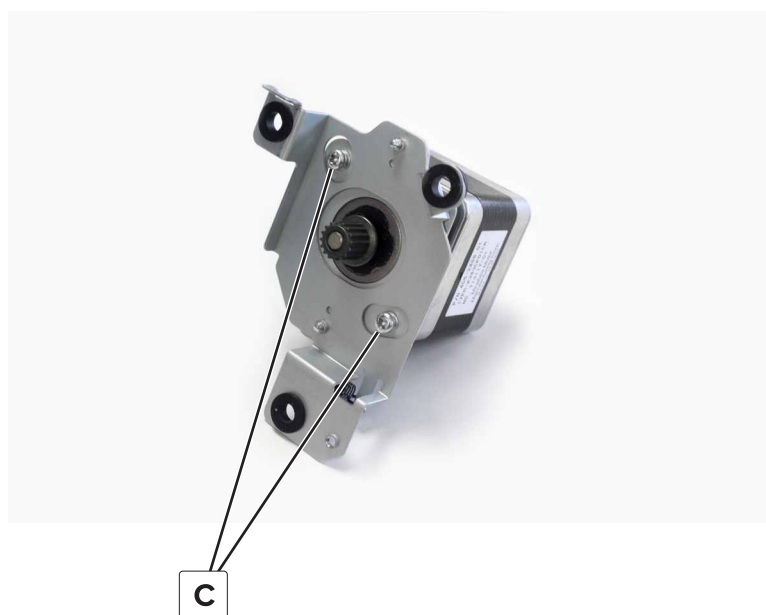
Installation notes:

a Install the motor on the bracket. Do not tighten the two screws (A).

A
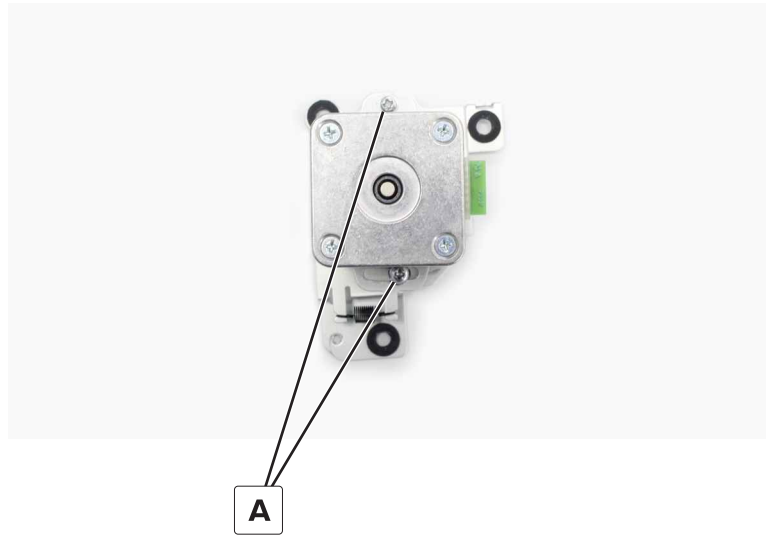
b Install the bracket on the frame, and then tighten the four screws (B).

> **Note:** Position the ground wire on top of the bracket.

B

Parts removal

245
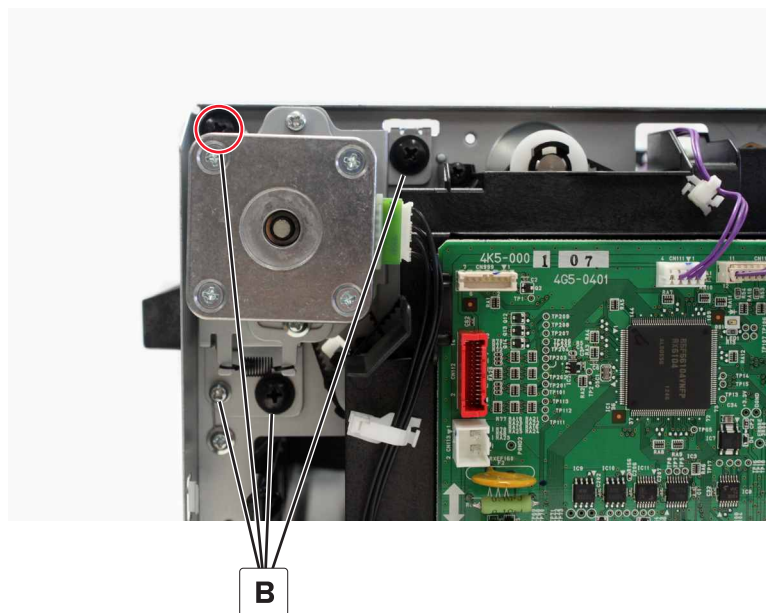
c Tighten the top screw (C), and then tighten the bottom screw (D).
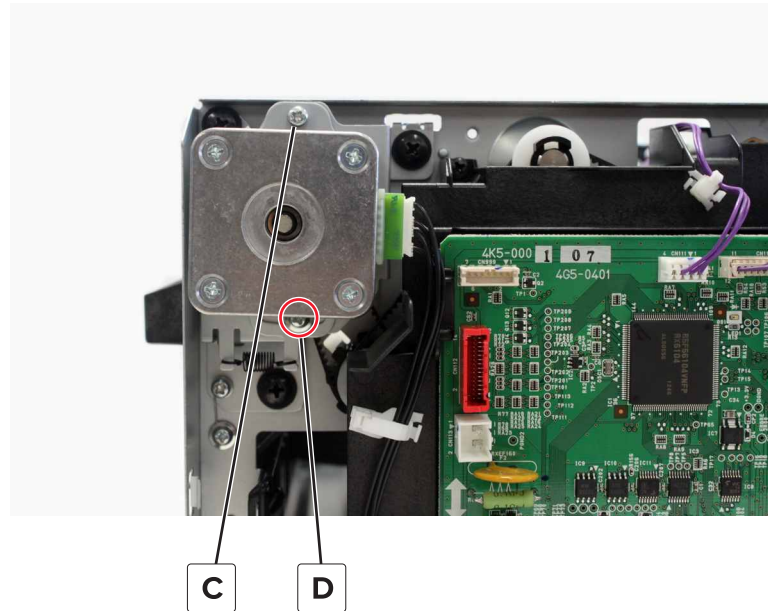
Motor (staple finisher elevator) removal

1 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

2 Disconnect the three cables (A).

3 Remove the two screws (B), and then remove the cable holder.

Parts removal
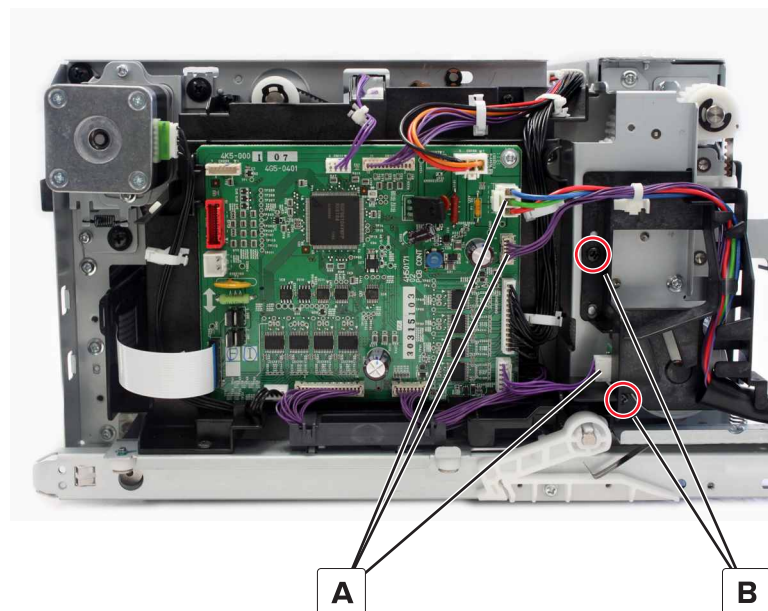
4 Remove the two screws (C), and then remove the motor.
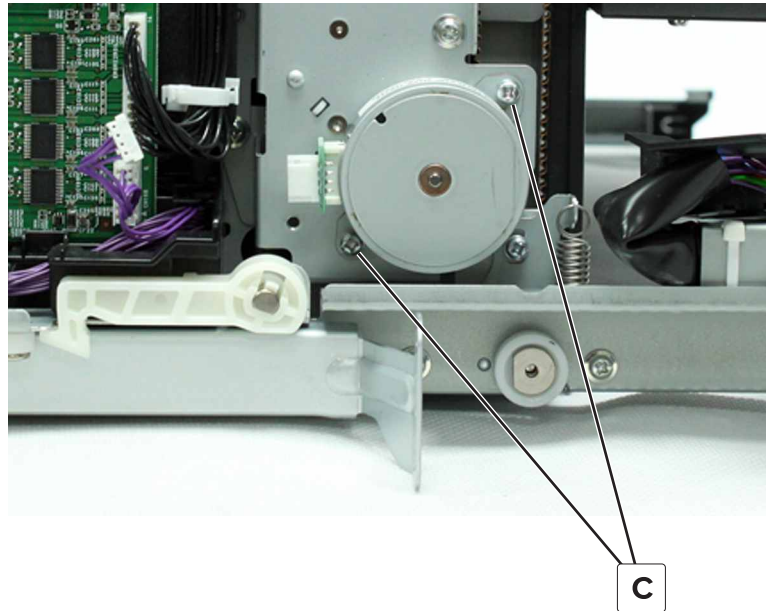
Motor (staple finisher upper exit) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the spring (A), and then disconnect the cable (B).
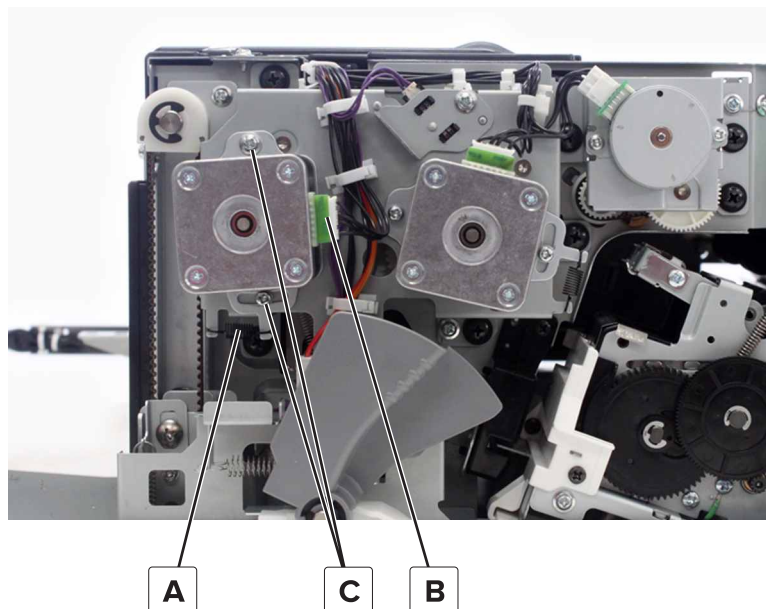
3 Remove the two screws (C), and then remove the motor.

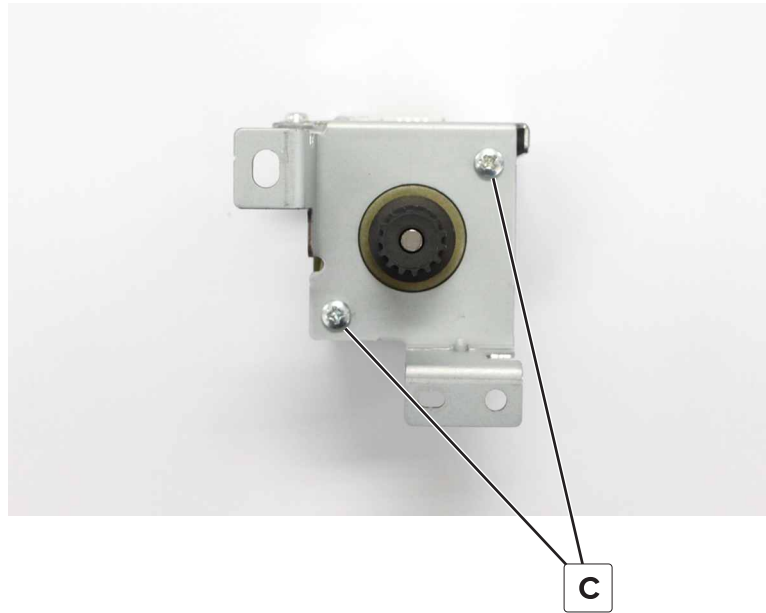**4** Remove the two screws (D), and then remove the motor.

D

Installation notes:

a Install the motor on the plate.

b Install the motor on the frame, and then install the two screws (A). Do not tighten the screws.

A
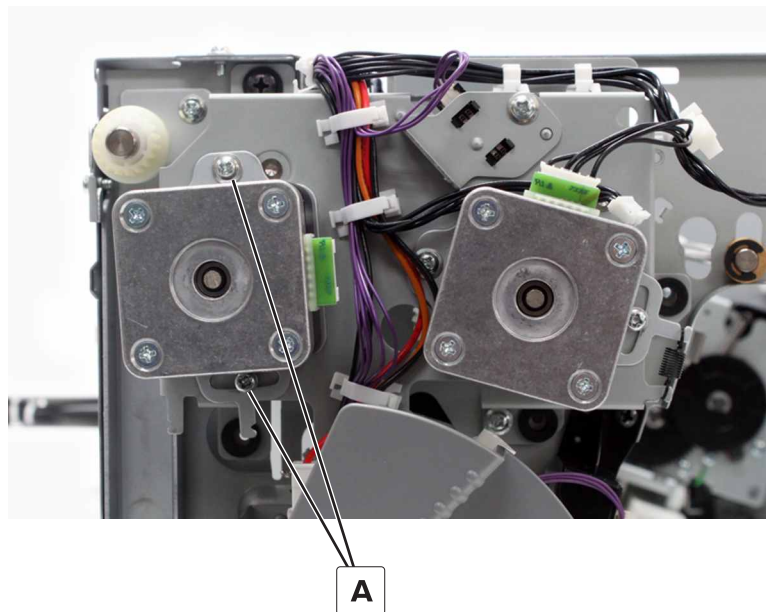
c Install the spring (B).

d Tighten the screw (C) near the spring, and then tighten the top screw (D).
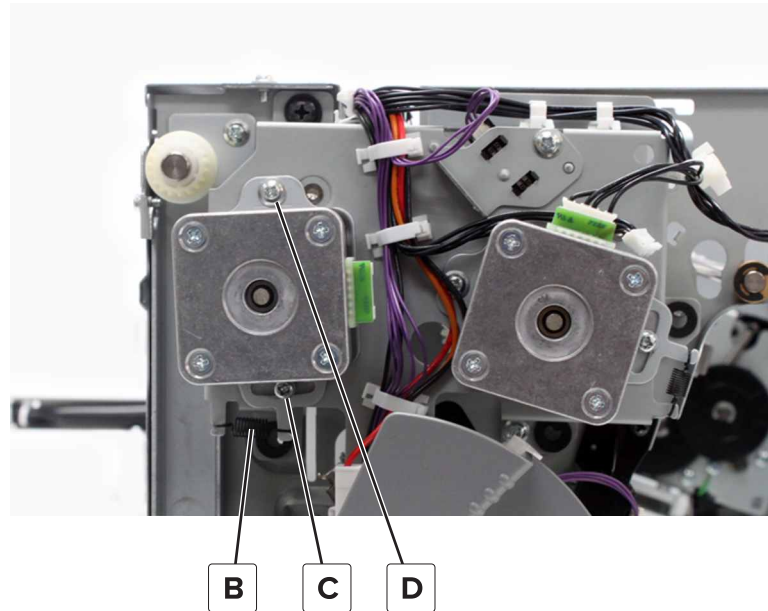
e Connect the motor cable.

Motor (staple finisher exit) removal

1 Remove the front cover. See .

2 Remove the spring (A), and disconnect the cable (B).

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

Parts removal
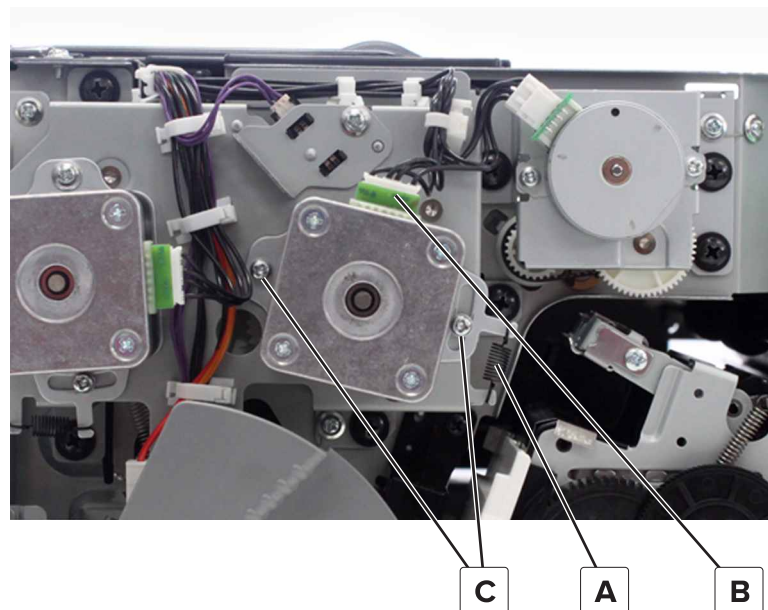
4 Remove the two screws (D), and then remove the motor.

Installation note: See the installation note in **"Motor (staple finisher upper exit) removal" on page 247**.

Motor (staple finisher aligner) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Disconnect the cable (A).

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

Parts removal
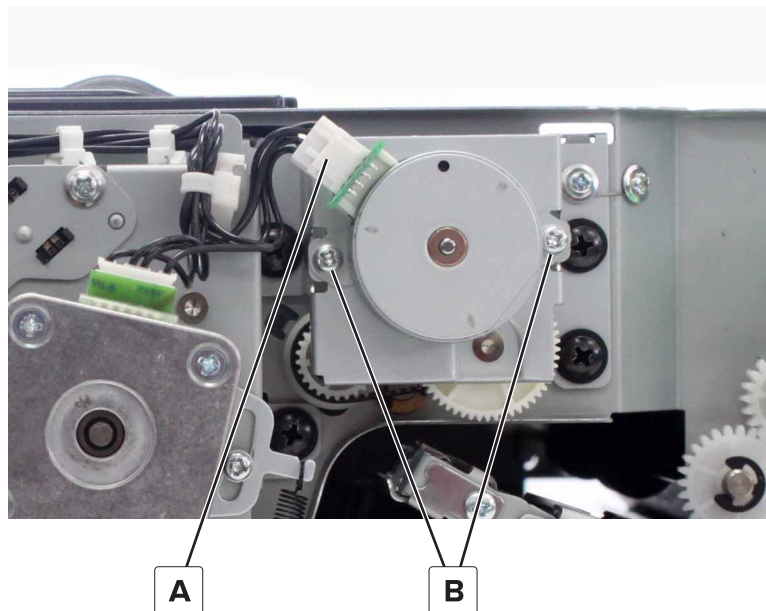
Staple finisher aligner belt and gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Disconnect the cable (A).

3 Remove the four screws (B), and then remove the motor bracket.
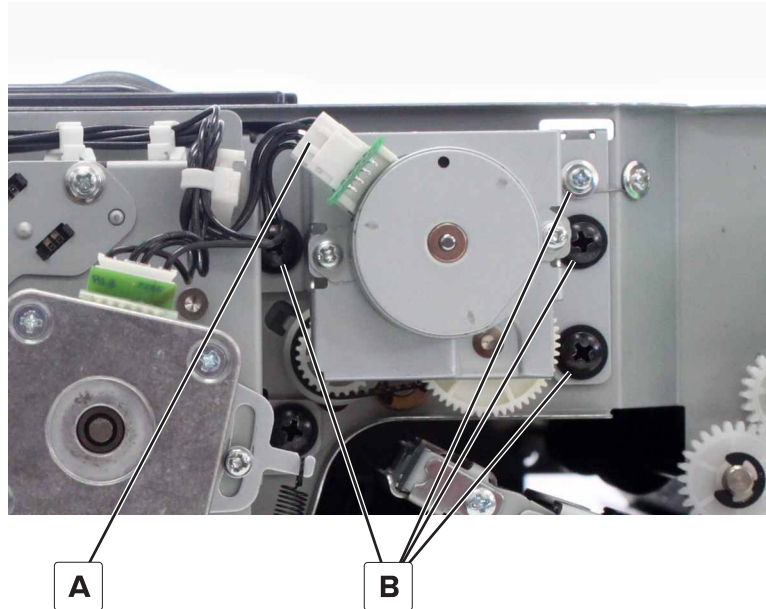
4 Remove the belt (C).

5 Remove the clip (D), and then remove the gear.
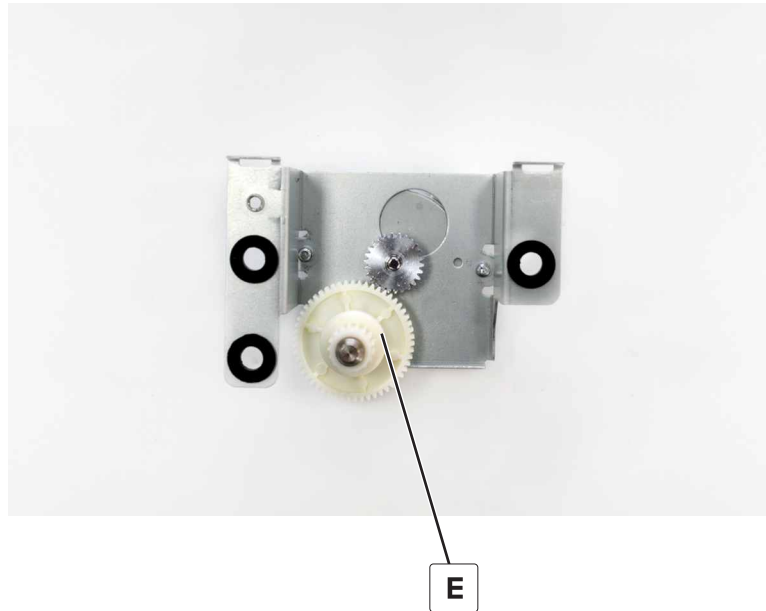
Parts removal

6 Remove the gear (E).

## Sensor (staple finisher upper exit roller) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Disconnect the cable (A).

3 Remove the screw (B), and then remove the sensor bracket.
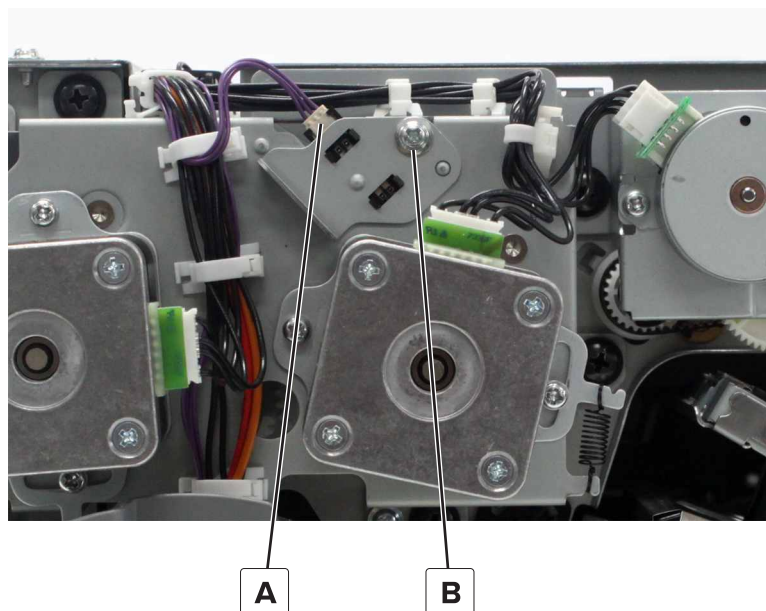
4 Remove the sensor from the bracket.

Sensor (staple finisher elevator home) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Disconnect the cable (A).

3 Remove the screw (B), and then remove the sensor bracket.
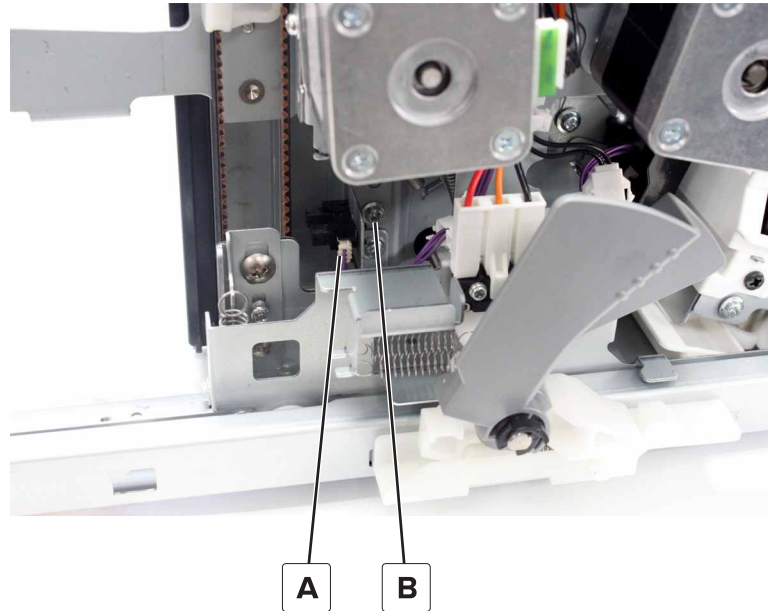
4 Remove the sensor from the bracket.

Sensor (staple finisher staple unit home) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

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

Parts removal

3 Disconnect the cable (B), and then remove the sensor.

B
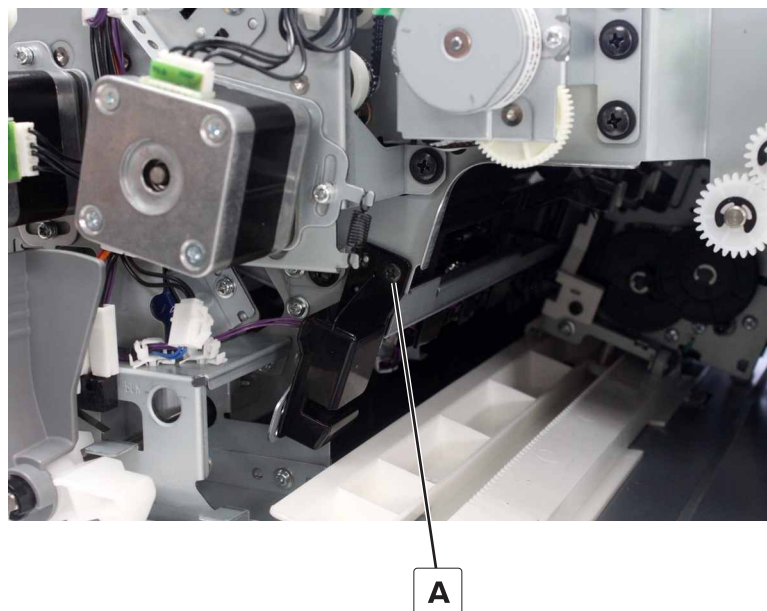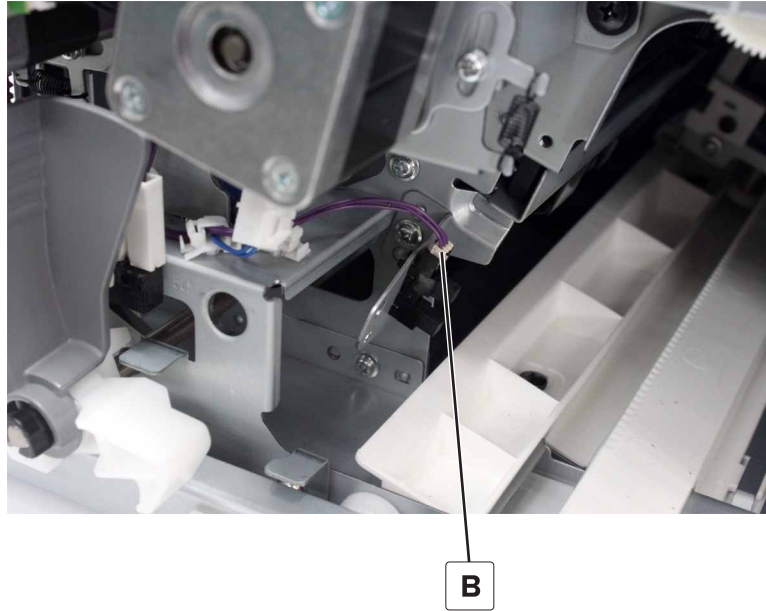
Sensor (staple finisher paper feed) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the two screws (A), and then dislodge the bracket.

5 Remove the screw (B), and then remove the ground (C).
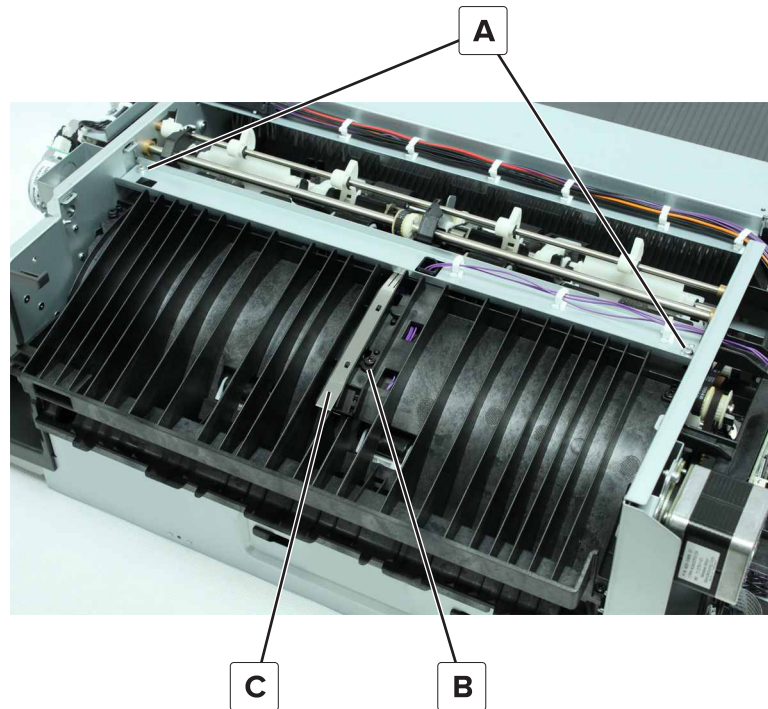
6 Flip the sensor holder, and then remove the sensor.

7 Disconnect the cable (D), and then remove the sensor.
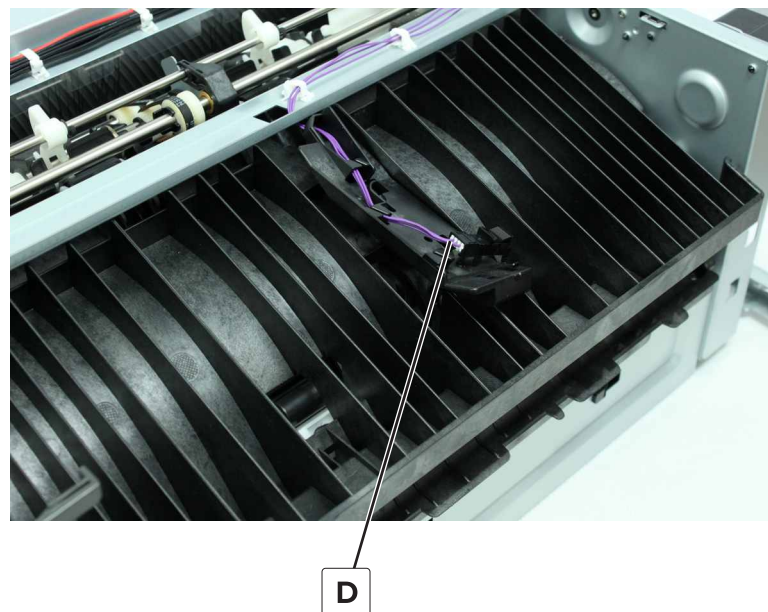
Staple finisher staple unit removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the two screws (A), and then remove the holder.
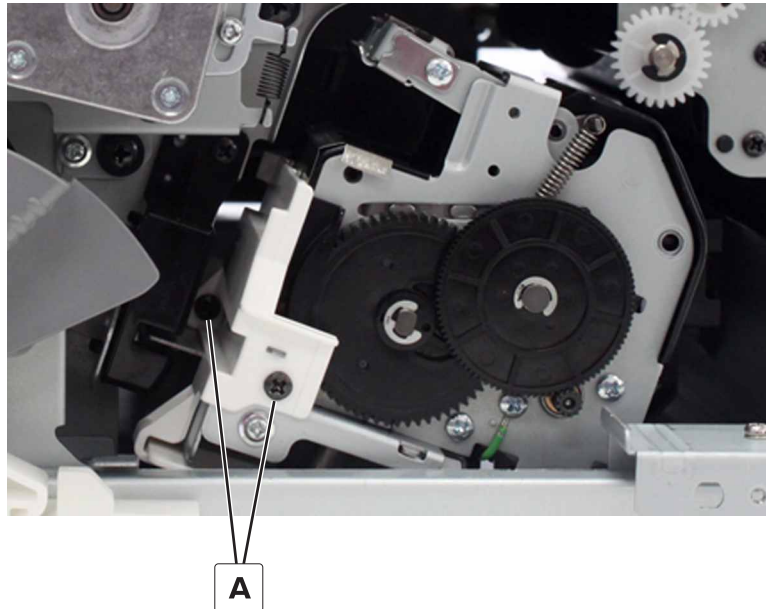
3 Disconnect the two cables (B).

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

Parts removal
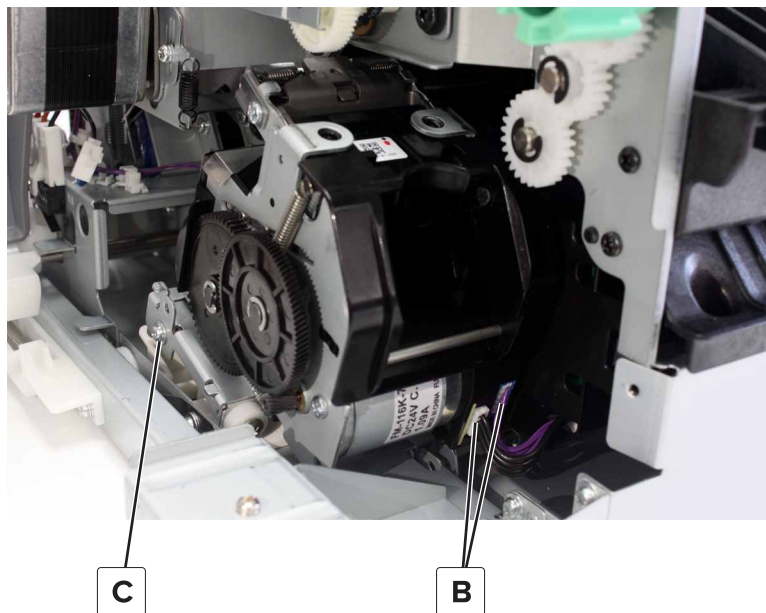
5 Remove the two screws (D), and then remove the plate.
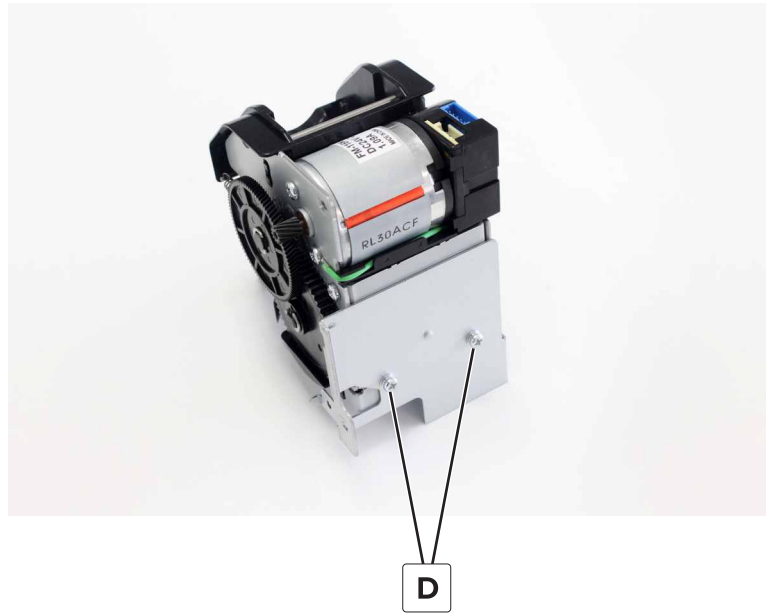
Staple finisher staple unit carriage assembly removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the staple unit. See **"Staple finisher staple unit removal" on page 256**.

3 Unlatch, and then remove the interface board cover (A).

Parts removal
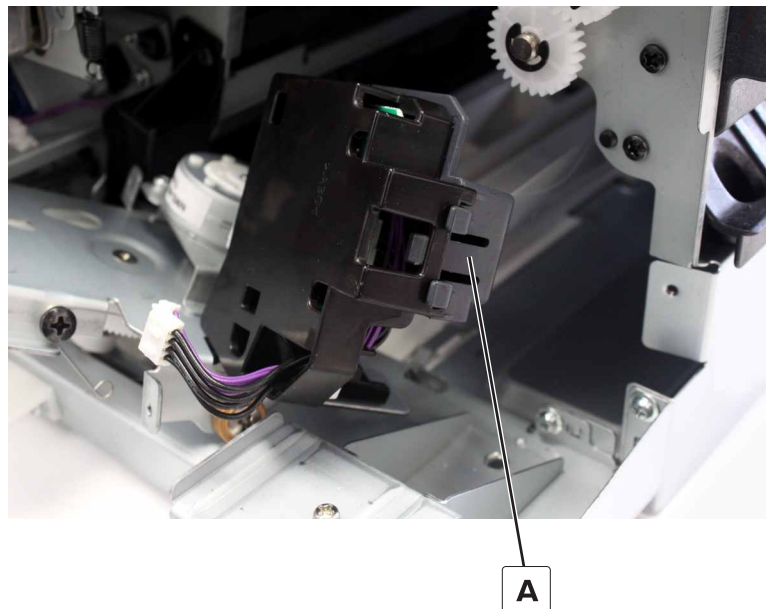
4 Disconnect the cable (B), and then remove the assembly.
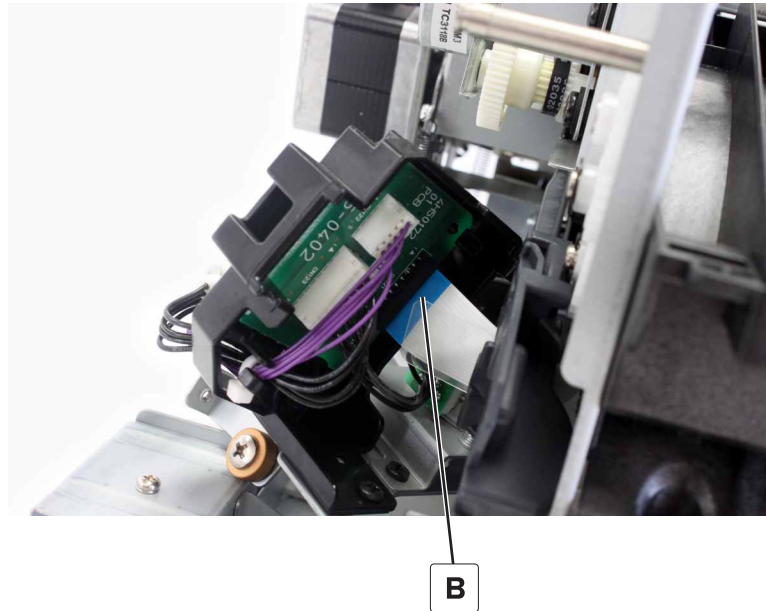
Staple finisher interface board removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the staple unit. See **"Staple finisher staple unit removal" on page 256**.

3 Remove the staple unit carriage assembly. See **"Staple finisher staple unit carriage assembly removal" on page 257**.

4 Disconnect all cables from the board.

5 Release the two latches (A), and then remove the board.

Parts removal

Motor (staple finisher staple unit carriage) removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the staple unit. See **"Staple finisher staple unit removal" on page 256**.

3 Remove the staple unit carriage assembly. See **"Staple finisher staple unit carriage assembly removal" on page 257**.

4 Disconnect the cable (A).

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

Staple finisher staple unit carriage removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the staple unit. See **"Staple finisher staple unit removal" on page 256**.

3 Remove the staple unit carriage assembly. See **"Staple finisher staple unit carriage assembly removal" on page 257**.

4 Disconnect the cable (A).

Parts removal

5 Remove the three screws (B), and then remove the card holder and motor.
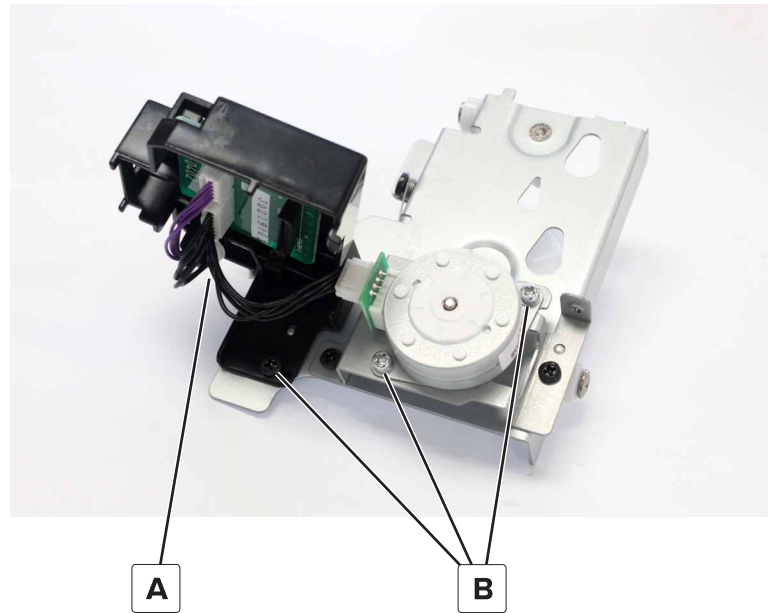
6 The carriage remains.

Staple finisher staple unit carriage gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the staple unit. See **"Staple finisher staple unit removal" on page 256**.

3 Remove the staple unit carriage assembly. See **"Staple finisher staple unit carriage assembly removal" on page 257**.

4 Remove the clip (A), and then remove the wheel and gear.

A
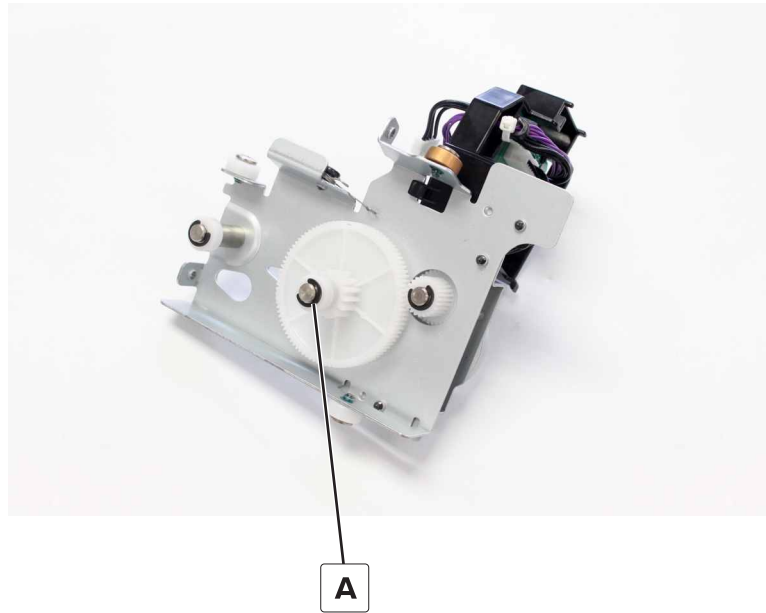
5 Disconnect the cable (B).

6 Remove the two screws (C), and then remove the motor bracket.

B   **C**

7 Remove the clip (D), and then remove the gear.

D
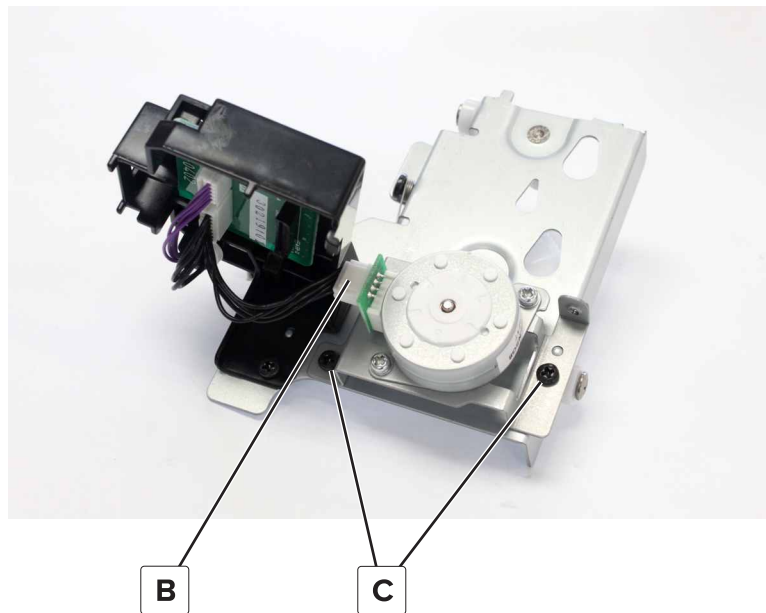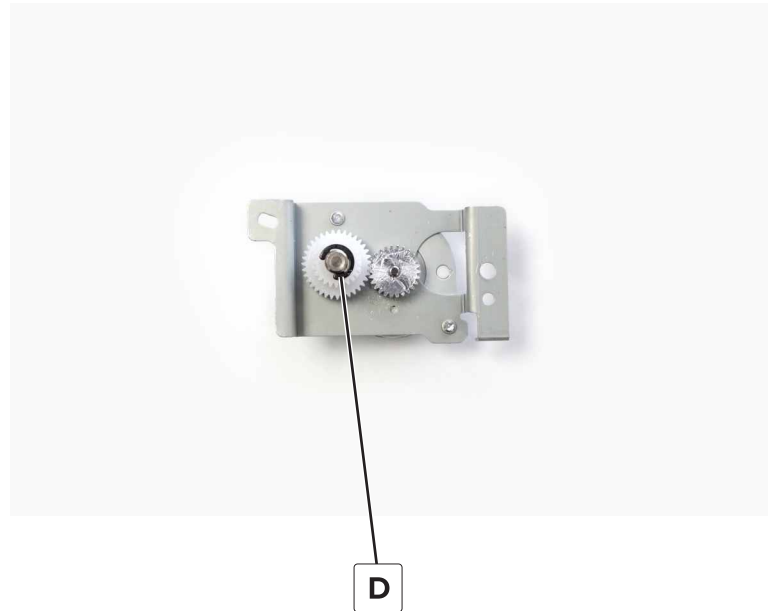
Staple finisher staple unit carriage wheel removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the staple unit. See **"Staple finisher staple unit removal" on page 256**.

3 Remove the staple unit carriage assembly. See **"Staple finisher staple unit carriage assembly removal" on page 257**.

4 Remove the four screws (A) and the two clips (B).

B   A
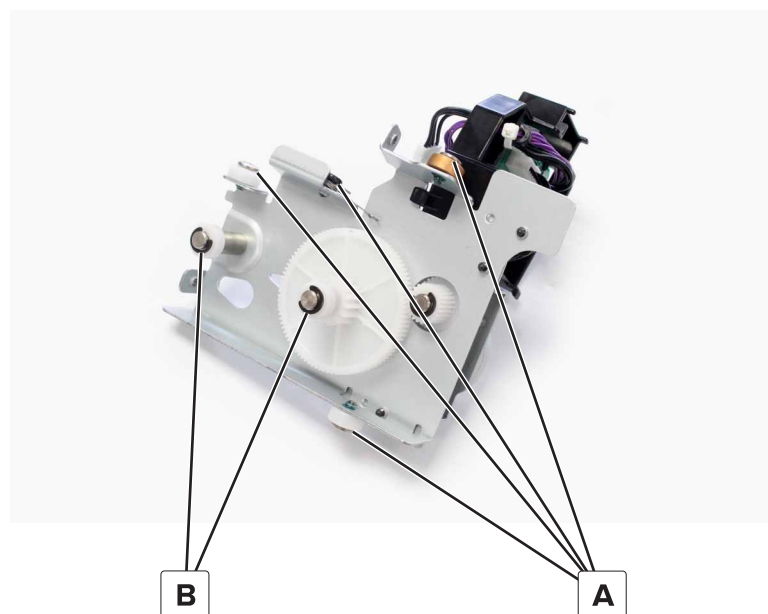
5 Remove the five wheels and spring.

Staple finisher FFC removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the staple unit. See **"Staple finisher staple unit removal" on page 256**.

4 Disconnect the cable (A) from the staple unit carriage and from the controller board.
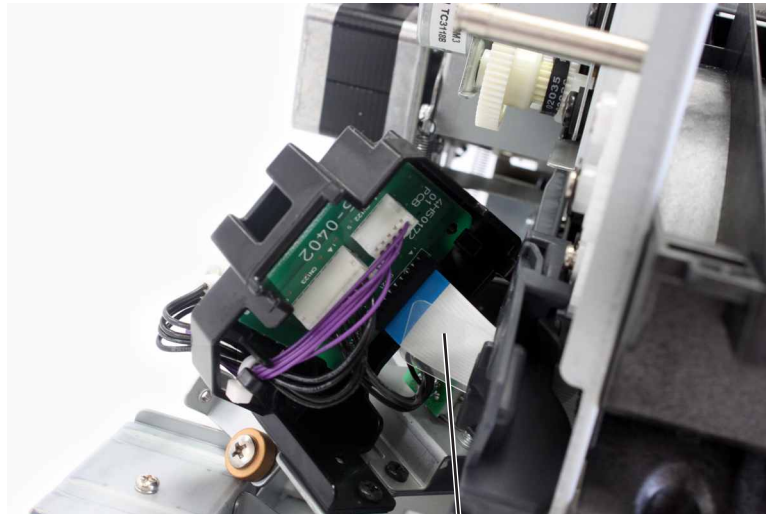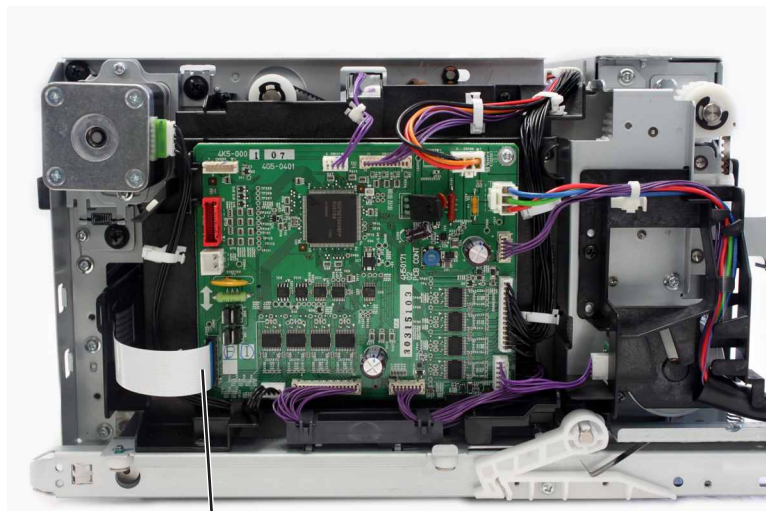
5 Press the latch, and then remove the cable holder.
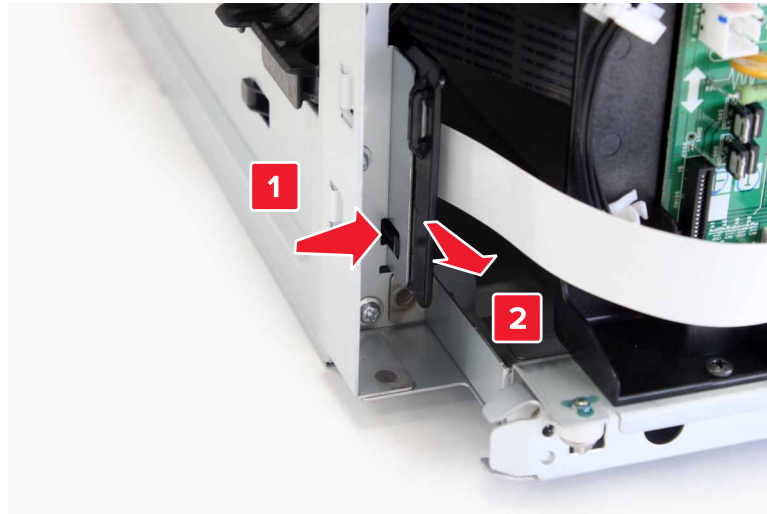
6 Remove the cable from the holder.

Installation notes:

a Place the cable on a flat surface, with the contacts facing down.

b Place the plastic film over the cable, and then position the tab under the cable. Align the edge of the film with the blue end.

c Bend the cable along the dashed line.

d Install the bent end on the cable holder. Thread the two clips through the film.

e Thread the cable and the film through the rest of the clips.

Staple finisher stack lever actuator removal

1 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

2 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

3 Disconnect the two springs (A).

4 Unlatch and then remove the actuator (B).
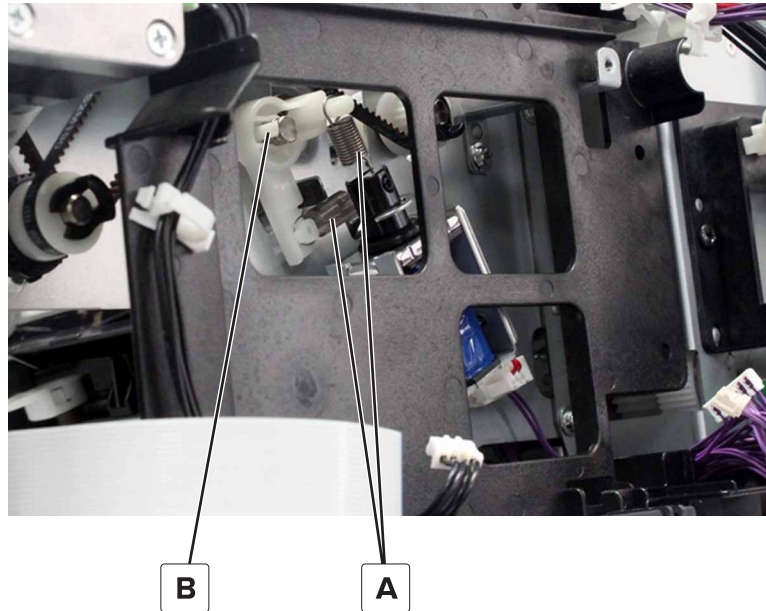
Staple finisher stack clamp solenoid removal

1 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

2 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

3 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

4 Disconnect the cable (A) and spring (B).

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

6 Remove the screw (D), and then remove the solenoid.

Parts removal

266
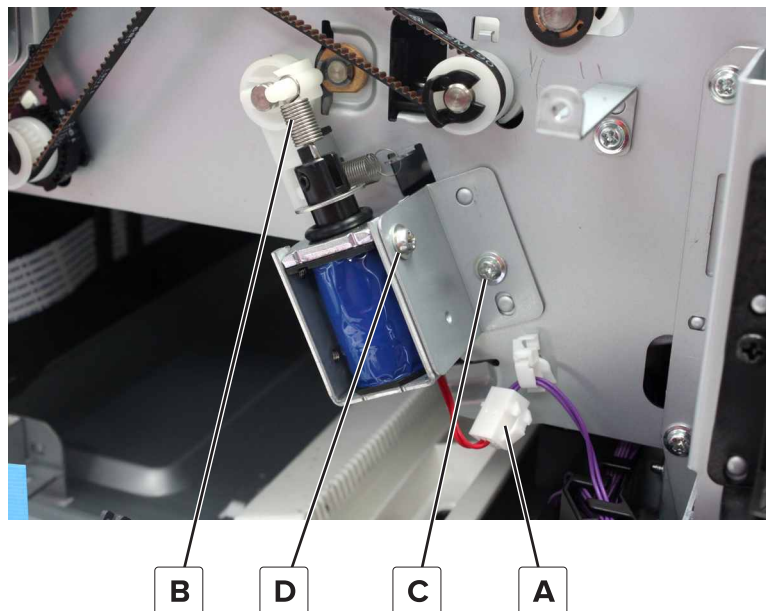
Staple finisher elevator springs removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the bin. See **"Staple finisher bin removal" on page 228**.

4 Remove the two springs (A).
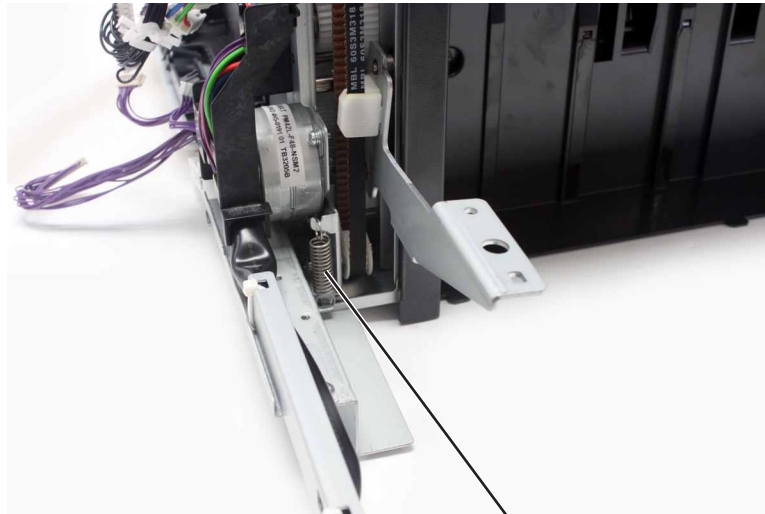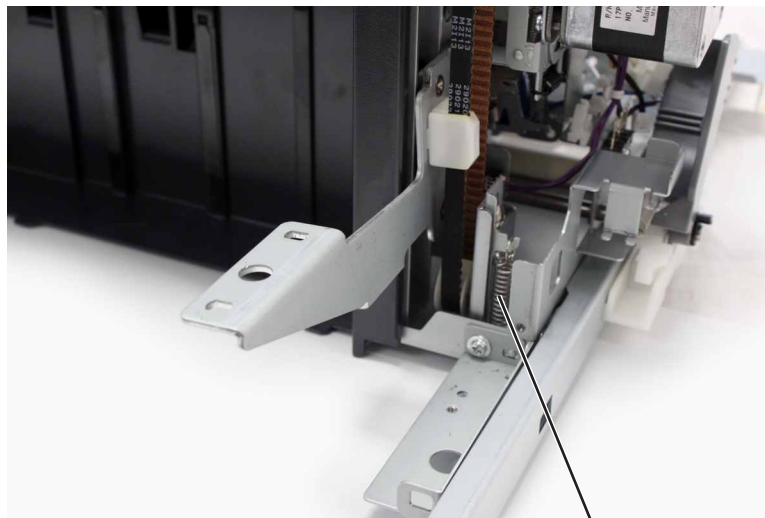
Staple finisher elevator drive gears removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the rear guide rail. See **"Staple finisher guide rails removal" on page 239**.

4 Remove the motor (staple finisher elevator). See **"Motor (staple finisher elevator) removal" on page 246**.

5 Remove the six screws (A), and then remove the bracket.
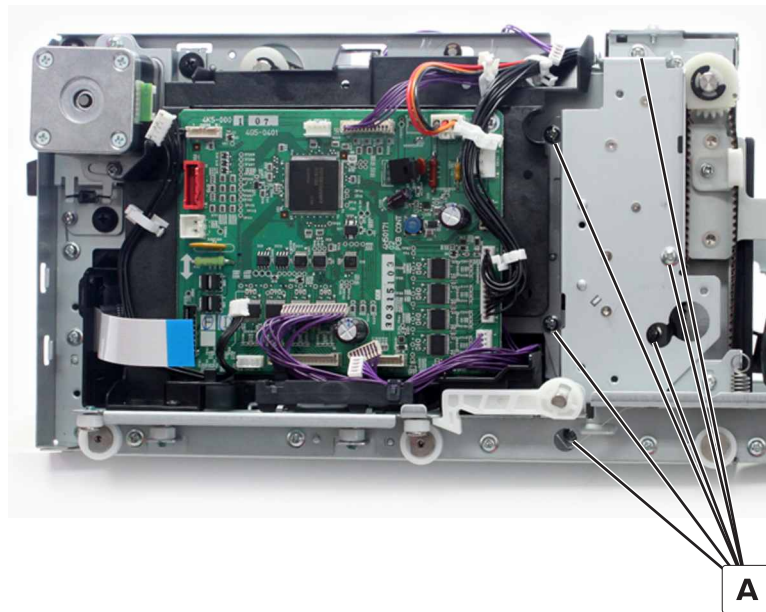
6 Remove the four clips (B), and then remove all the gears from the bracket.
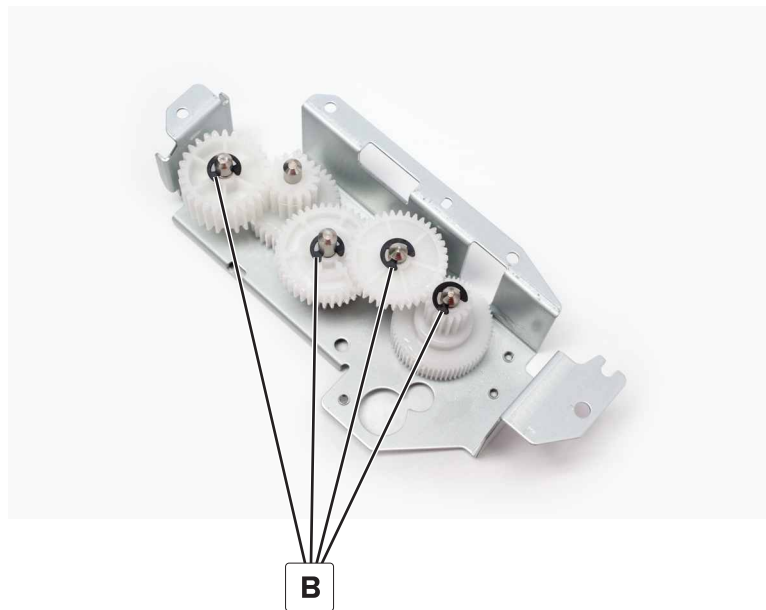
Staple finisher elevator belts removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

Parts removal

4 Remove the rear guide rail. See **"Staple finisher guide rails removal" on page 239**.

5 Remove the motor (staple finisher elevator). See **"Motor (staple finisher elevator) removal" on page 246**.

6 Remove the elevator drive gears bracket. See **"Staple finisher elevator drive gears removal" on page 267**.

7 Remove the clip (A), remove the rear belt cover, and then remove the belt.

A
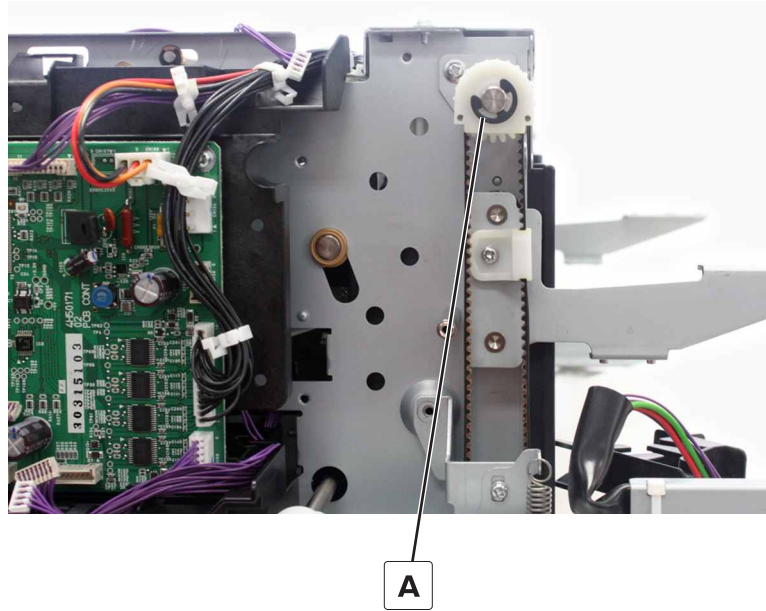
8 Remove the screw (B), and then remove the belt from the bracket.

B

Parts removal
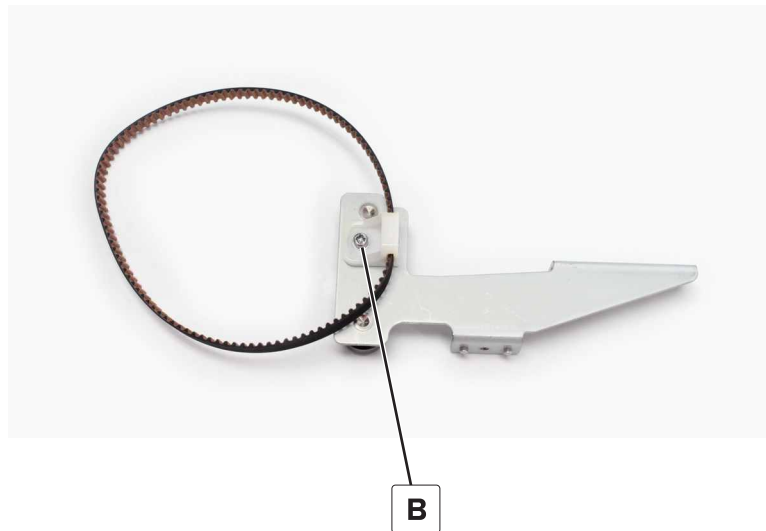
9 Remove the clip (C), remove the front belt cover, and then remove the belt.

C
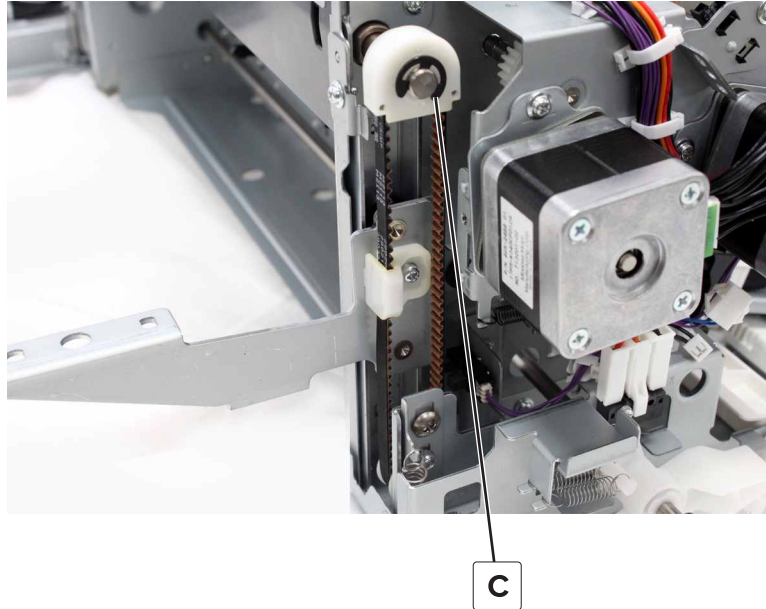
10 Remove the screw (D), and then remove the belt from the bracket.

D

Installation note: To ensure that the front and rear brackets are level, place them at their lowest position before installing the belts on the gears.

Staple finisher elevator gears removal

1 Remove the bin. See **"Staple finisher bin removal" on page 228**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

4 Remove the elevator drive gears. See **"Staple finisher elevator drive gears removal" on page 267**.

5 Remove the elevator belts. See **"Staple finisher elevator belts removal" on page 268**.

6 Remove the gear (A).

7 Remove the screw (B), and then remove the gear bracket.
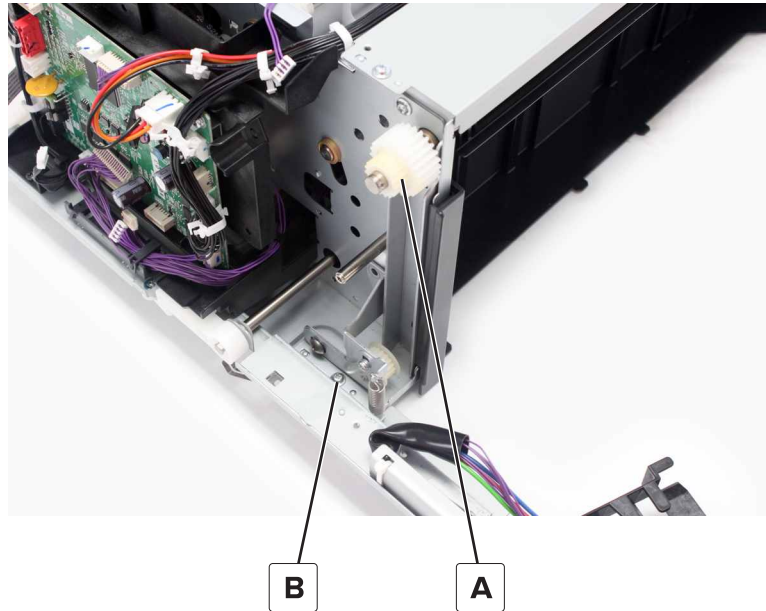
8 Remove the two screws (C), and then remove the gear bracket.
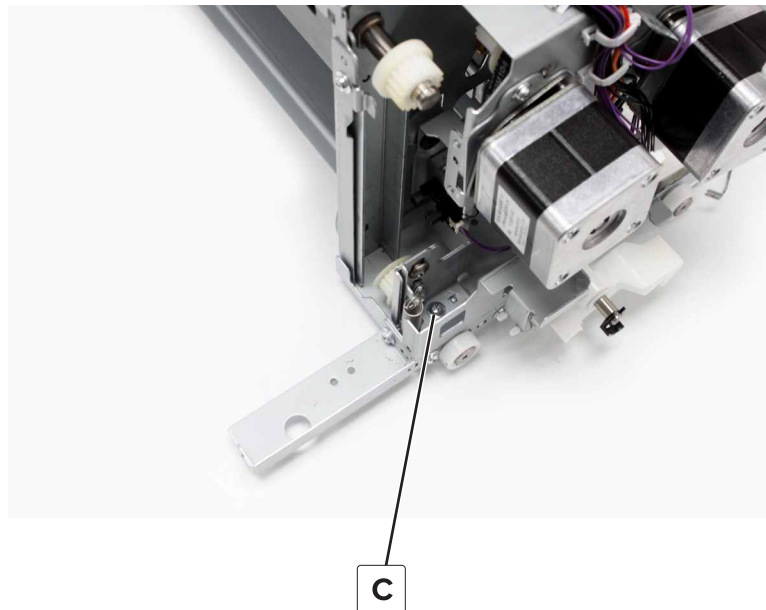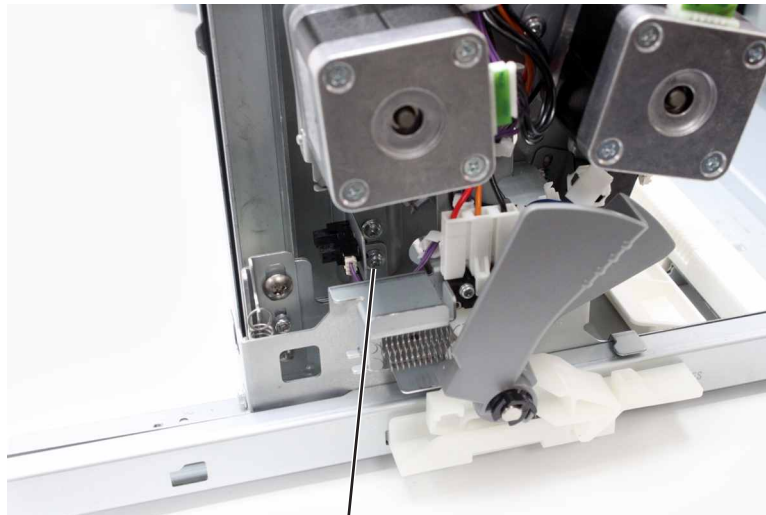
C

9 Remove the clip (D), and then remove the gear. Also remove the gear from the other bracket.

D

Exit motor bracket removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the clip (A), and then remove the handle.
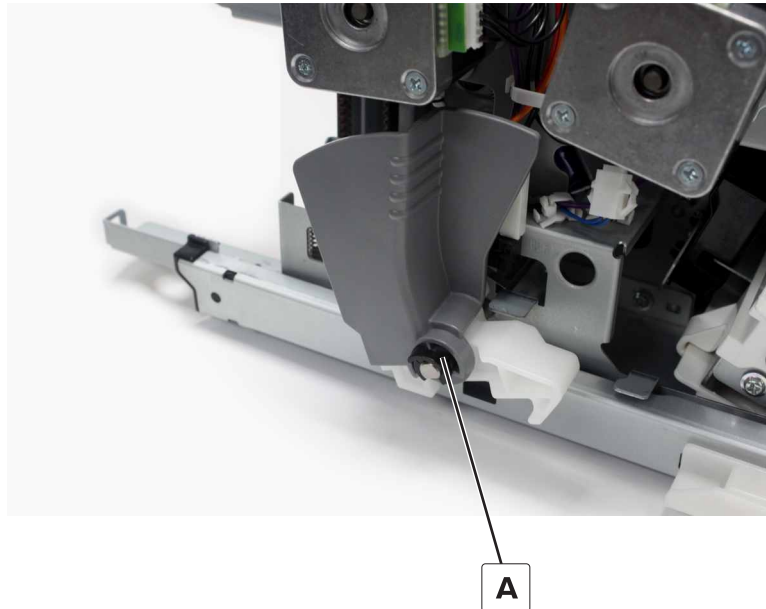
3 Disconnect the six cables (B).

Parts removal
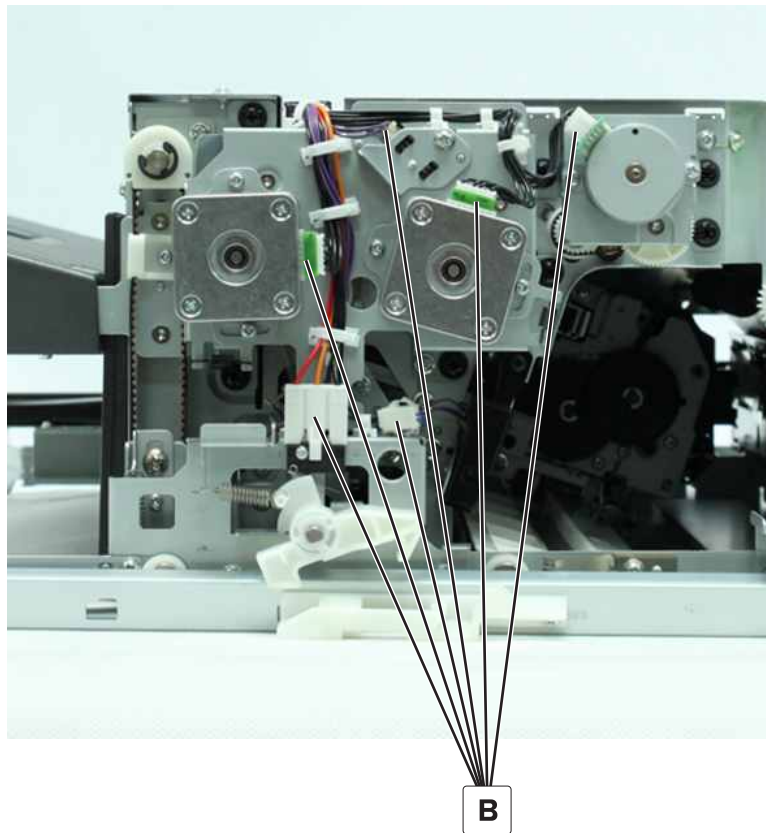
4 Remove the six screws (C).
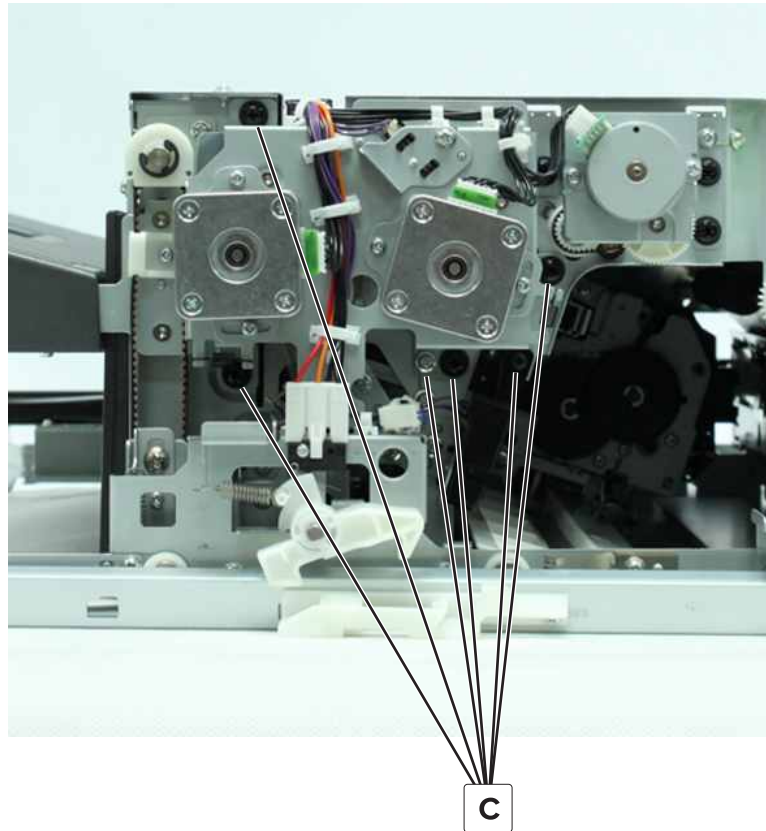
5 Remove the staple unit carriage home sensor cover, and then disconnect the two cables (D).
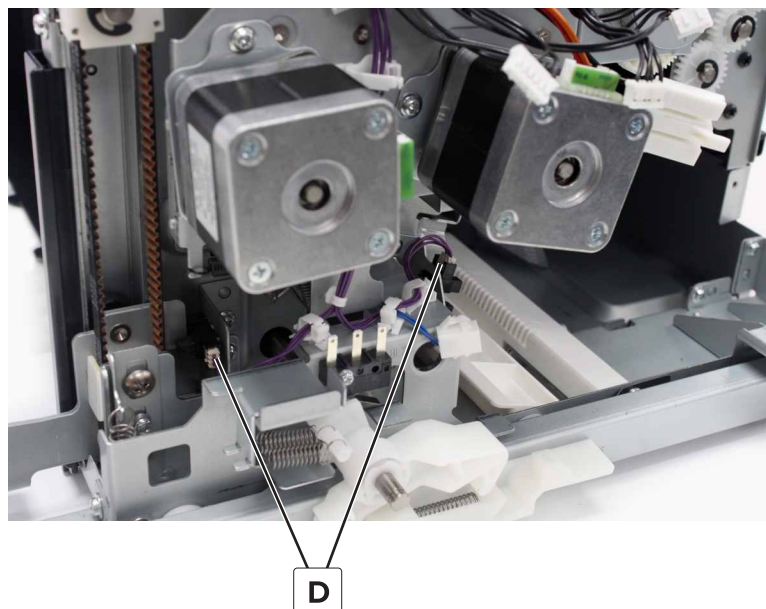
6 Remove all the cables from the bracket, and then remove the bracket.

Staple finisher exit guide lift cam removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the two clips (A), and then remove the bushings.

A
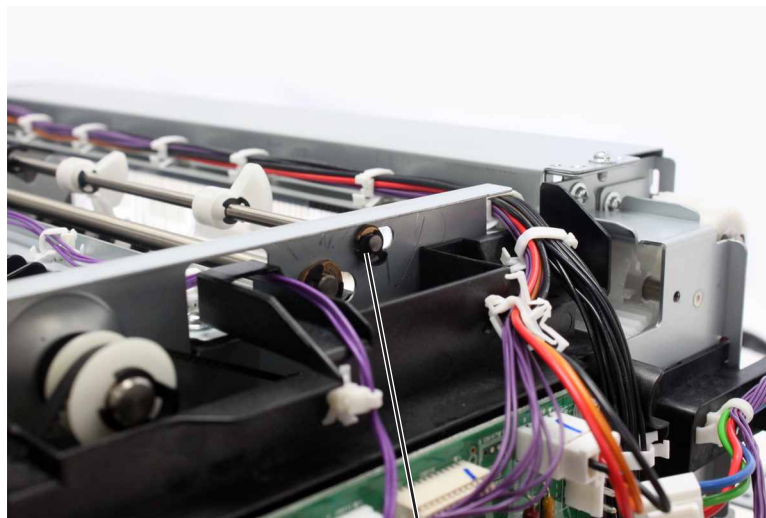
A

5 Remove the shaft.

Installation notes:
- Place the upper exit roller assembly in the lowermost position.
- Align the pointer on the gear with the notch on the frame.

Staple finisher upper exit roller drive gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

6 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

7 Remove the clip (A), and then remove the washer and gear.

A
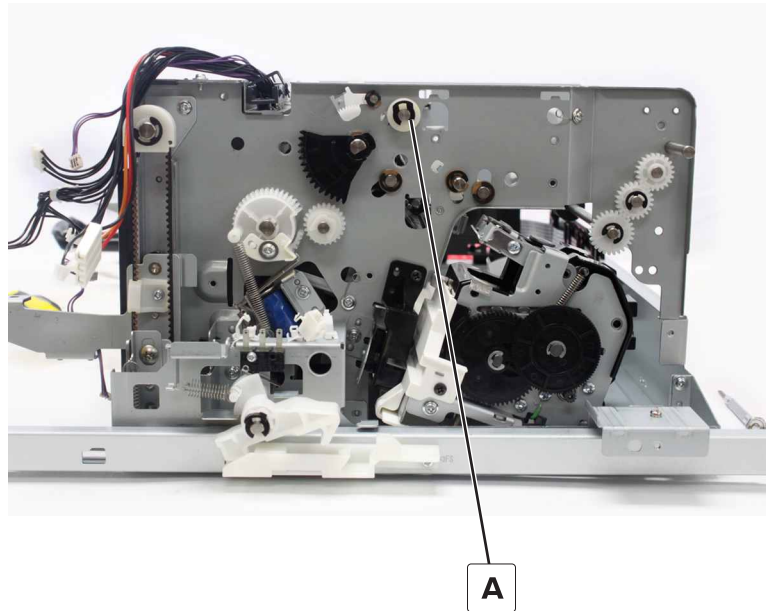
8 Remove the pin (B), and then remove the clip and bushing.

B

Parts removal
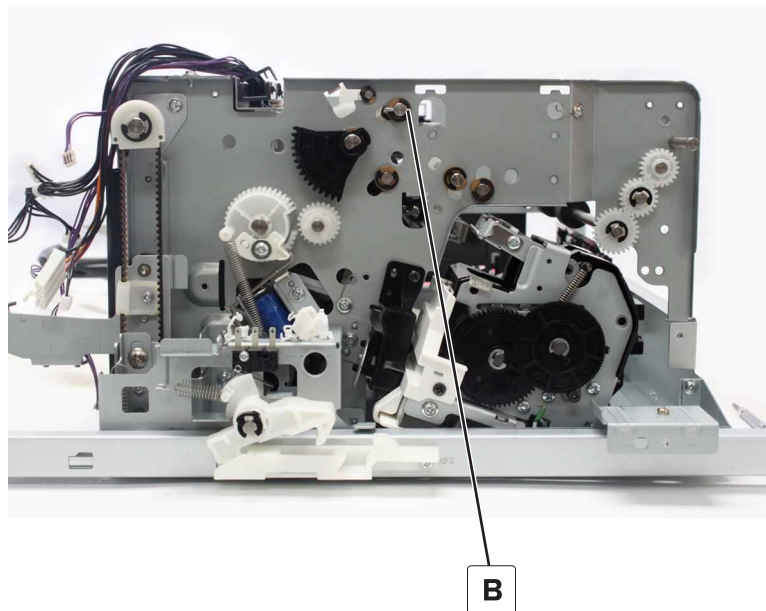
9 Remove the clip (C), and then remove the bushing.
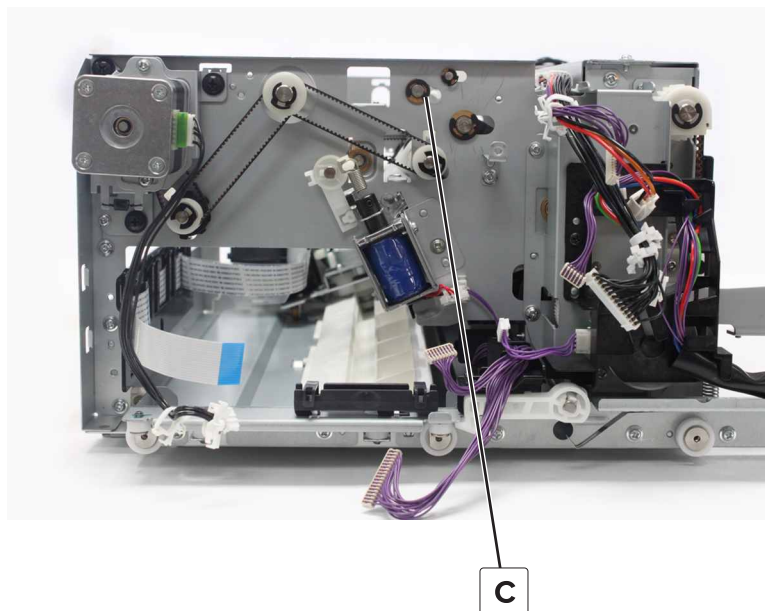
10 Remove the shaft.

11 Remove the two clips (D), and then remove the gear and bushing.
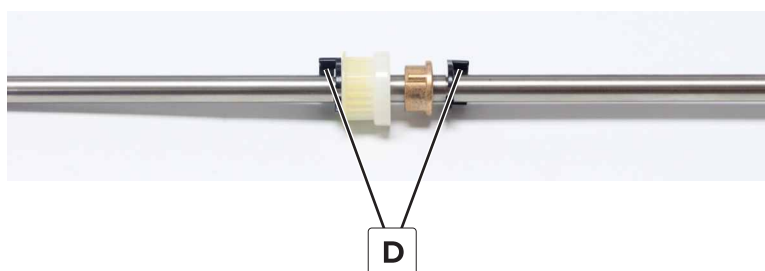
12 Remove the plate (E).
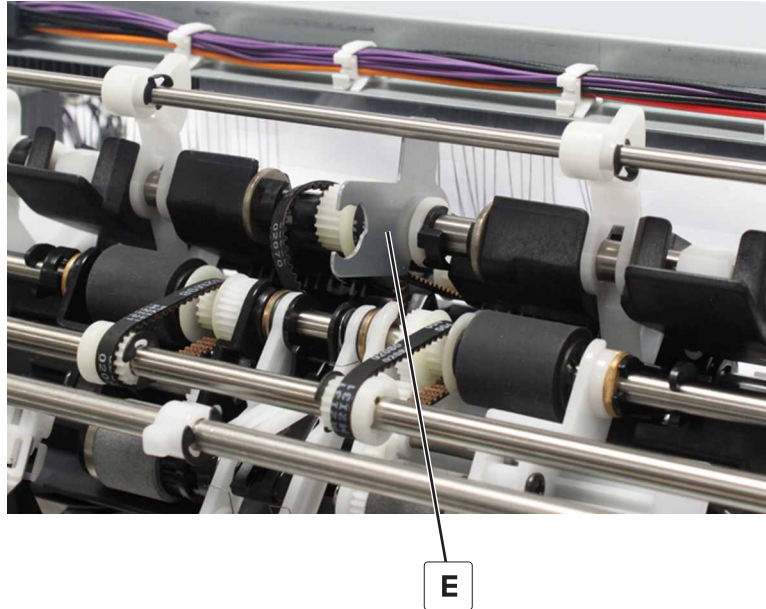
E

Staple finisher exit roller drive belts and gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

3 Remove the two belts (A).

A
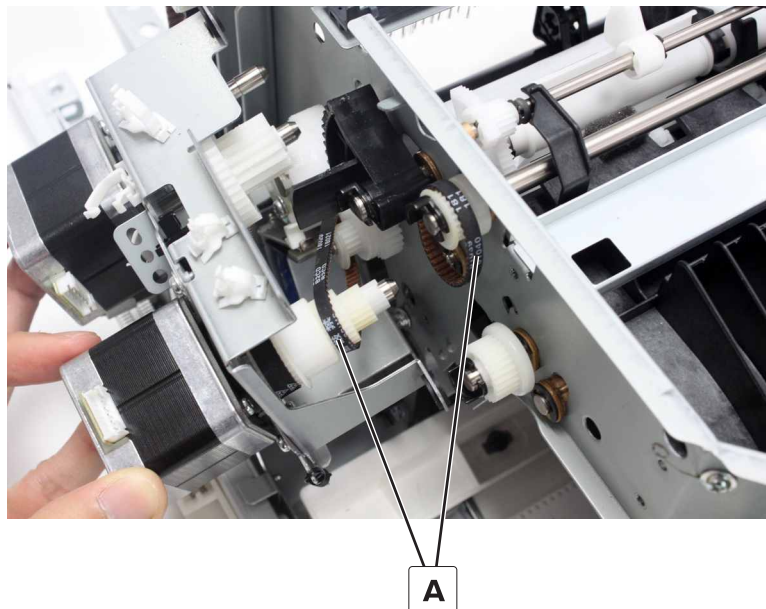
4 Remove the three gears (B), and two belts (C).
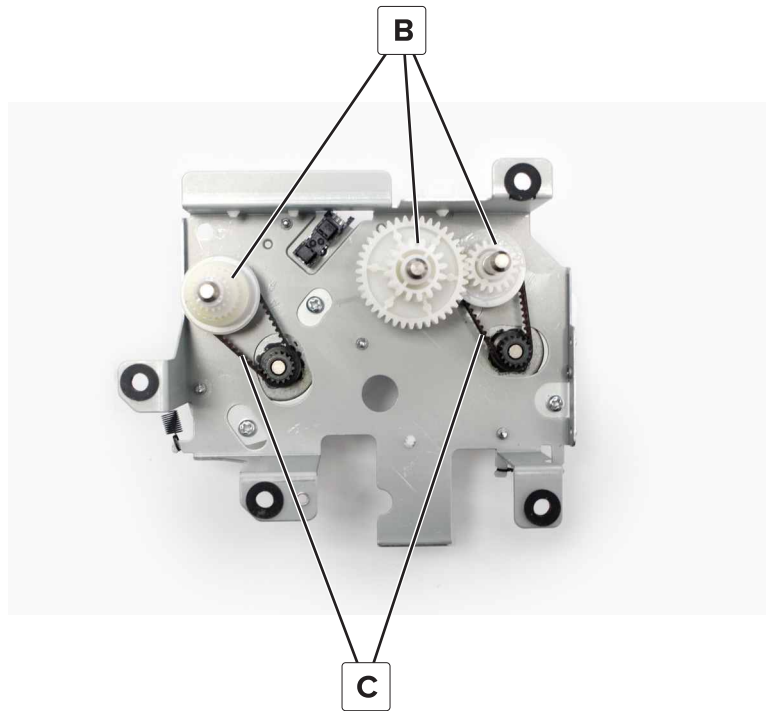
5 Remove the two clips (D), and then remove the gears.
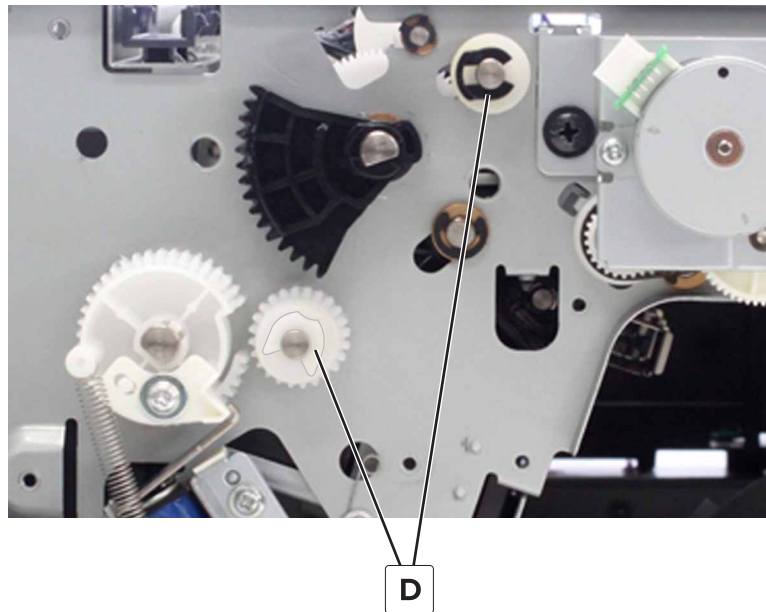
Staple finisher exit roller solenoid removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

3 Disconnect the spring (A).

4 Remove the screw (B), and then remove the solenoid.
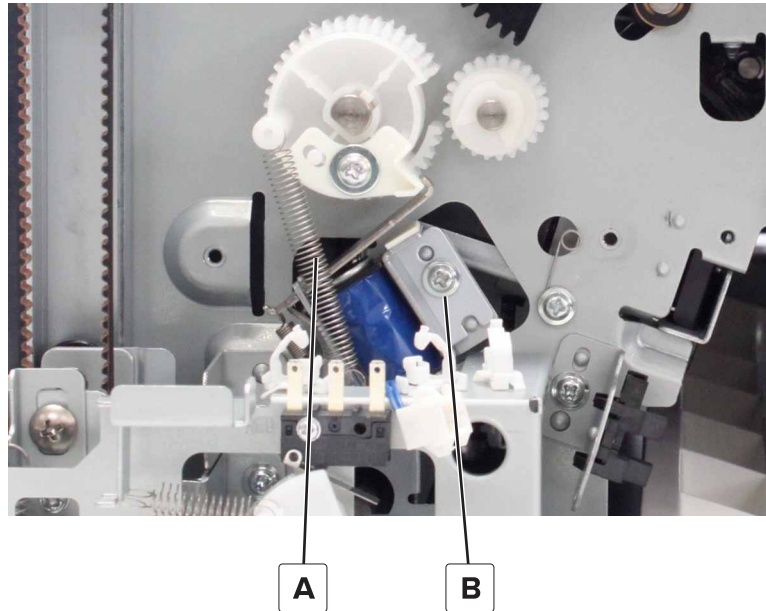
Staple finisher upper exit actuator removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

3 Remove the clip (A), and then remove the actuator.
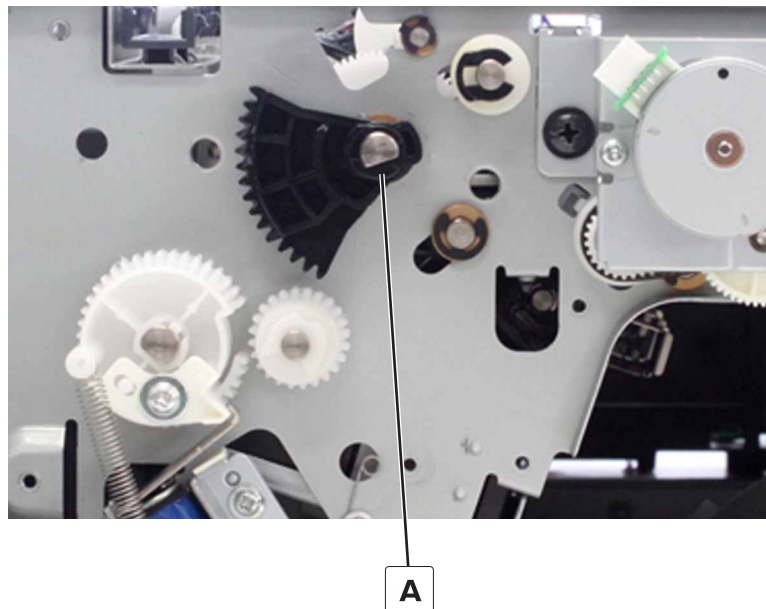
Staple finisher exit roller gear removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

3 Disconnect the spring (A).

4 Unlatch and then remove the gear (B).
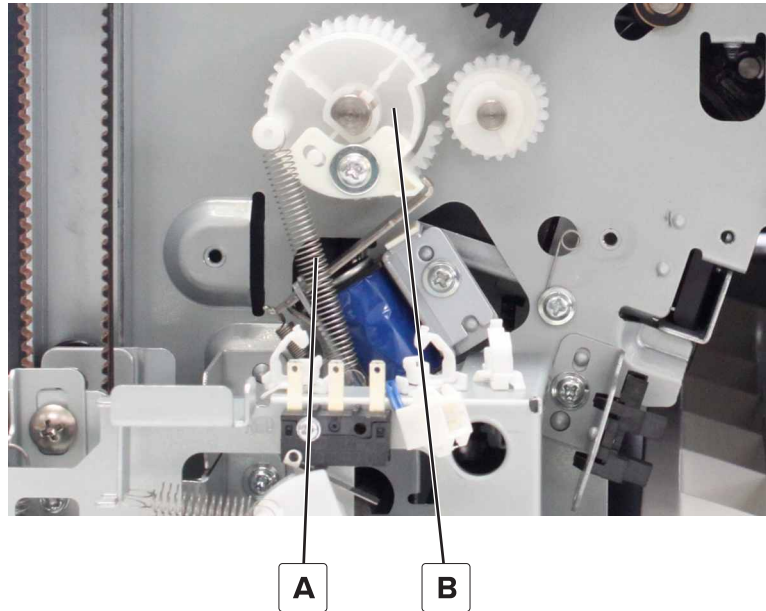
Staple finisher lower exit roller removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the bin. See **"Staple finisher bin removal" on page 228**.

3 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

4 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

5 Remove the exit roller gear. See **"Staple finisher exit roller gear removal" on page 282**.

6 Remove the two clips (A), and then release the bushings.
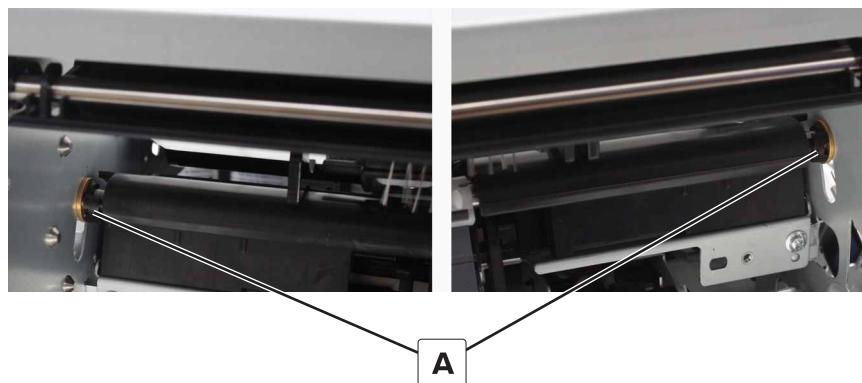
Parts removal

7 Lower the actuator, and then remove the roller.

8 Remove the lower exit roller paddles. See **“Staple finisher lower exit roller paddles removal” on page 229**.

Staple finisher upper guide removal

1 Remove the front cover. See **“Staple finisher front cover removal” on page 225**.

2 Remove the rear cover. See **“Staple finisher rear cover removal” on page 226**.

3 Remove the top cover. See **“Staple finisher top cover removal” on page 227**.

4 Disconnect, and then remove the cable (A) from the holders.

Parts removal
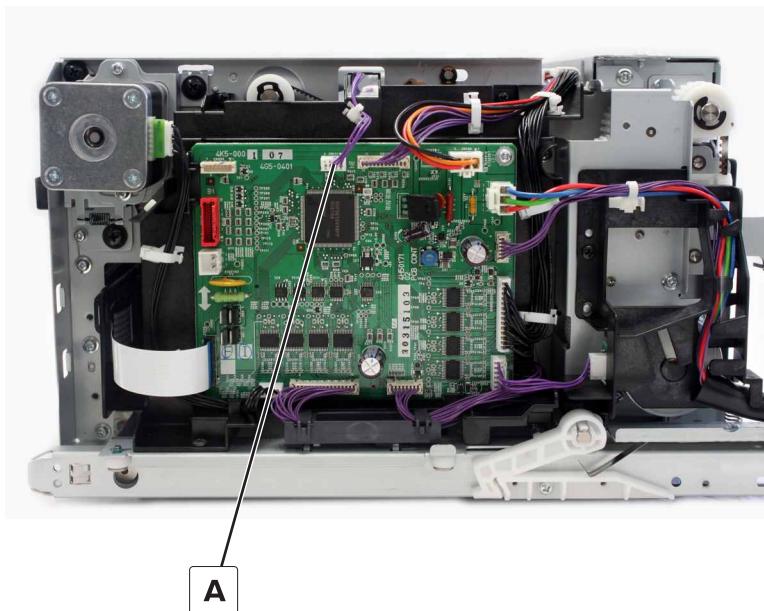
5 Remove the six screws (B).
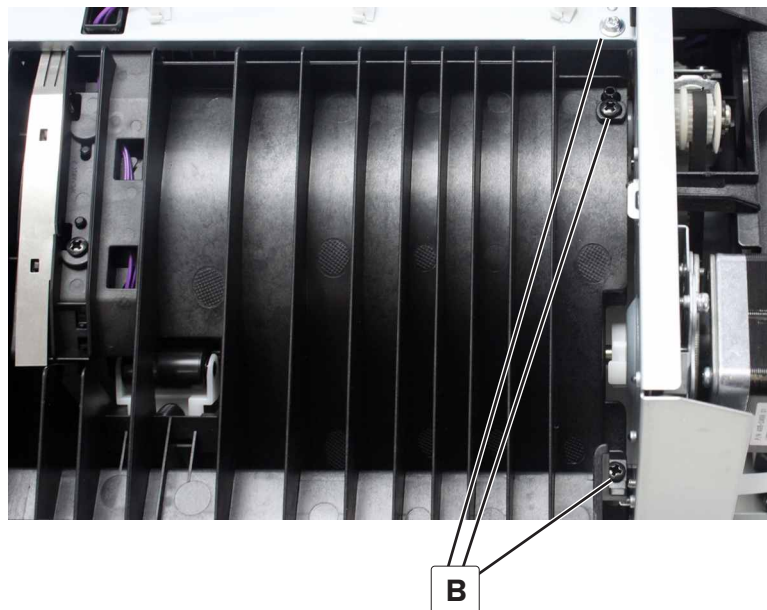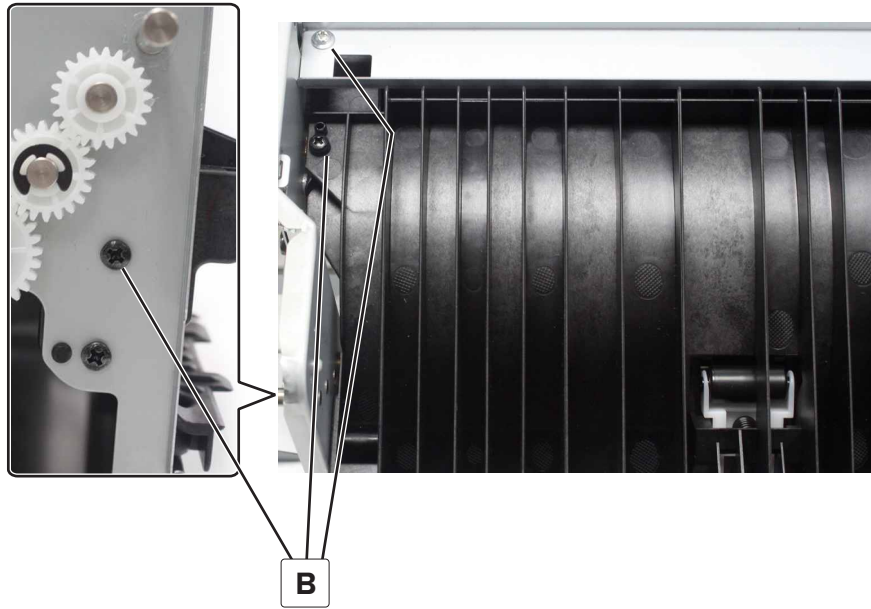
6 Remove the clip (C), and then slide the bushing.

7 Remove the guide from the finisher.

8 Remove the screw (D), and then remove the sensor holder.
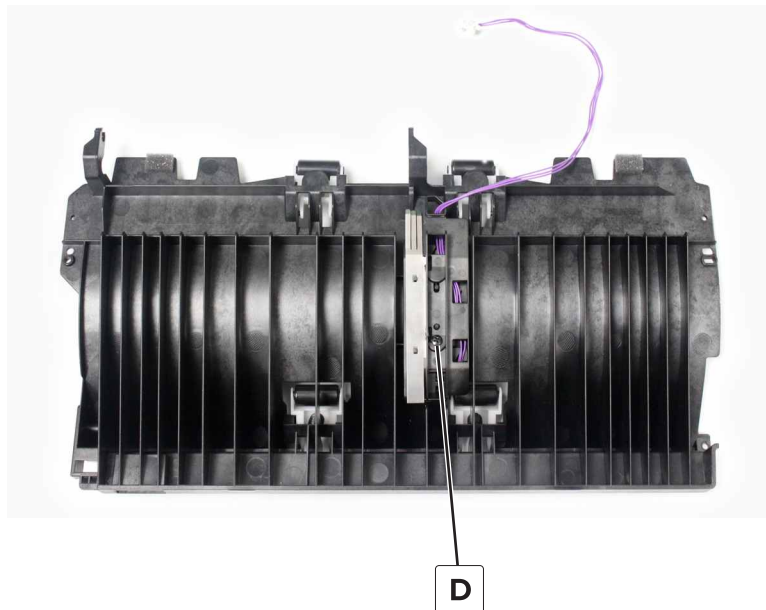
9 Pry, and then remove the four rollers (E).
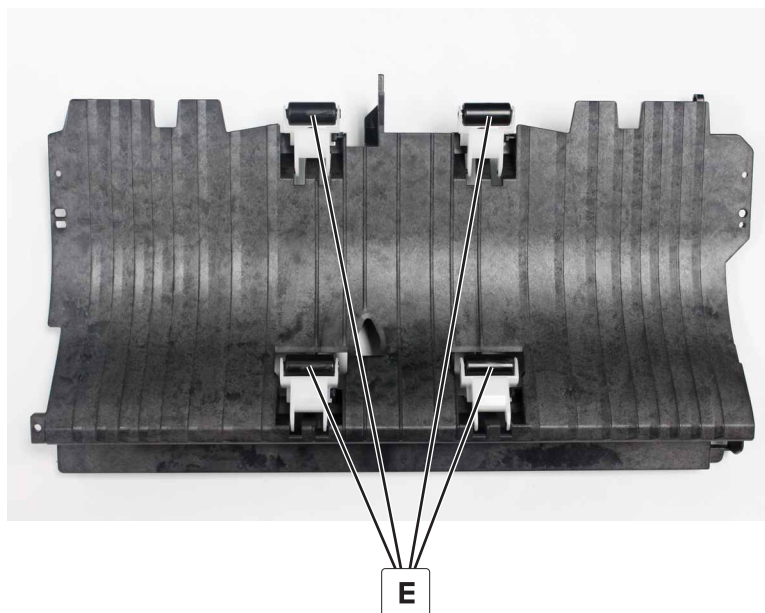
Installation note: The springs are color-coded according to their location.
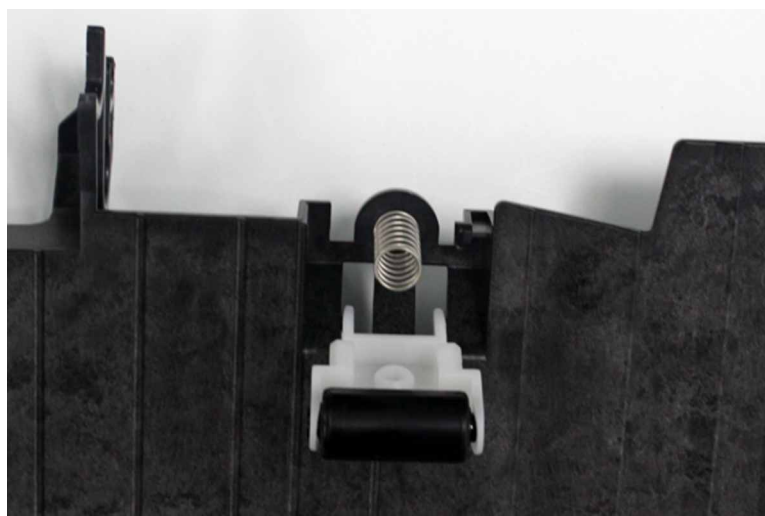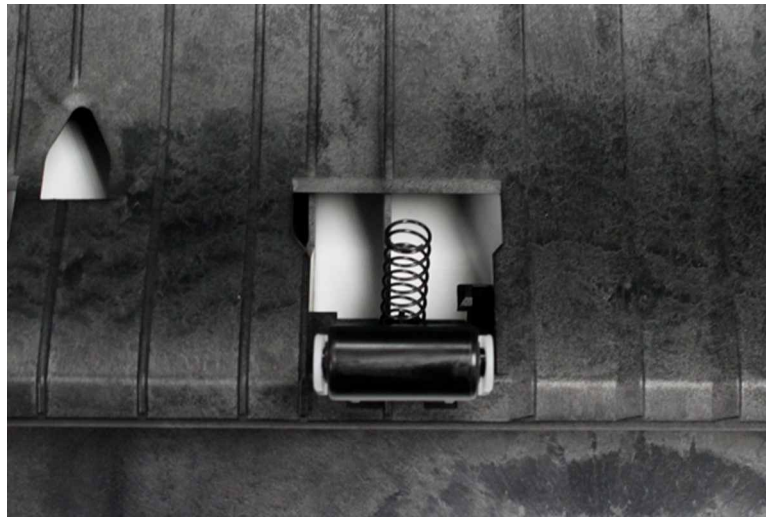
Staple finisher lower guide removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

5 Remove the five screws (A), and then remove the guide.
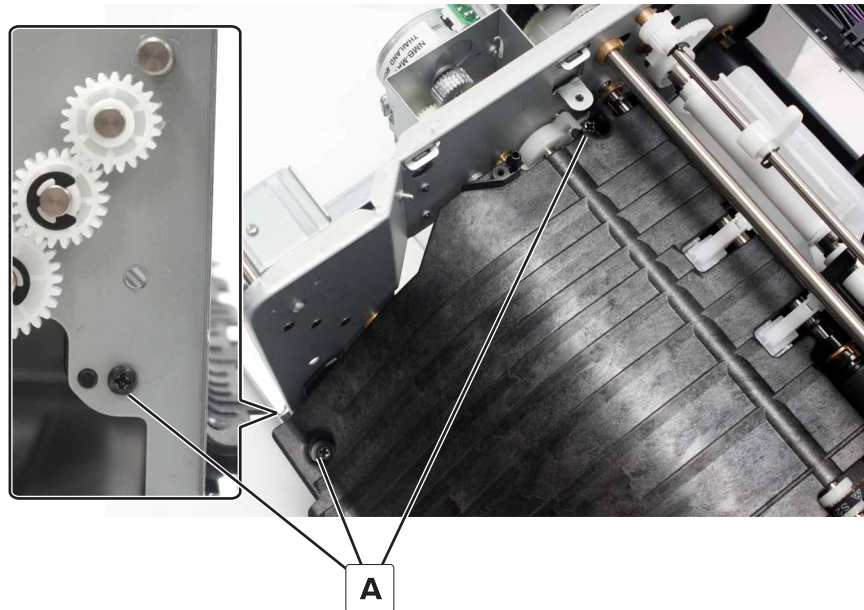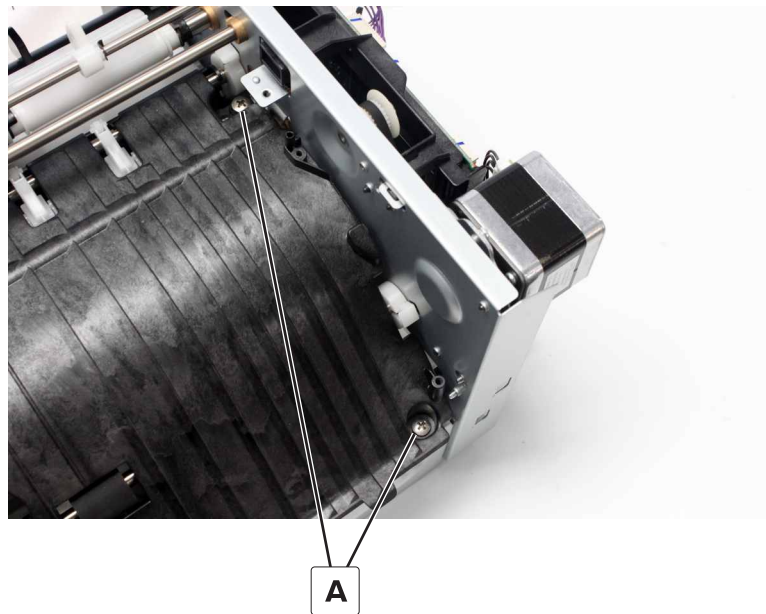
6 Remove the five screws (B), and then remove the idler rollers.
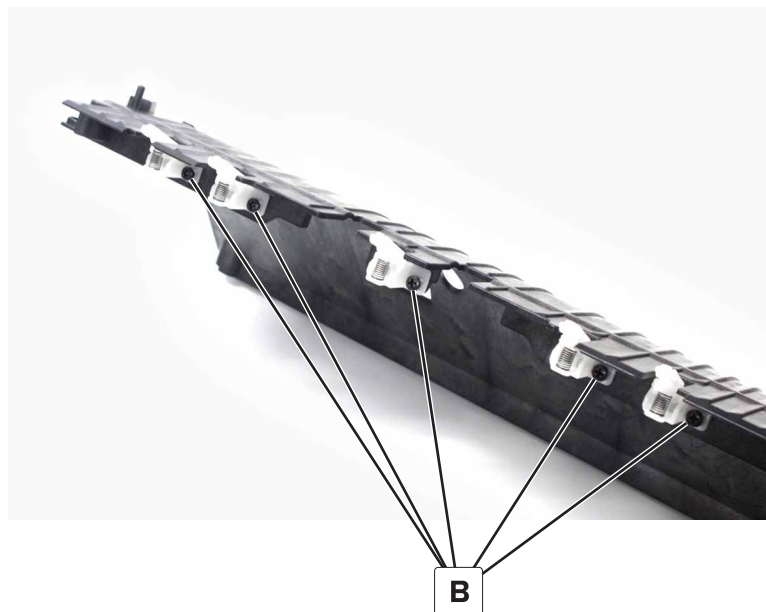
Staple finisher staple unit rail removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the staple unit. See **"Staple finisher staple unit removal" on page 256**.

5 Remove the staple unit carriage assembly. See **"Staple finisher staple unit carriage assembly removal" on page 257**.

6 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

7 Remove the lower guide. See **"Staple finisher lower guide removal" on page 287**.

8 Remove the three screws (A), and then remove the rail.
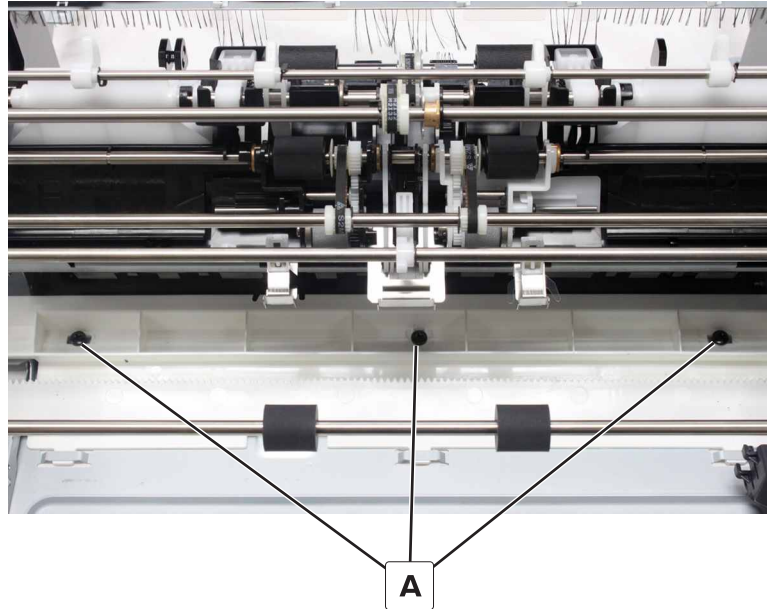
Staple finisher compiler feed roller guide removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

5 Remove the lower guide. See **"Staple finisher lower guide removal" on page 287**.

6 Release the four latches (A), and then remove the guides.

A

A
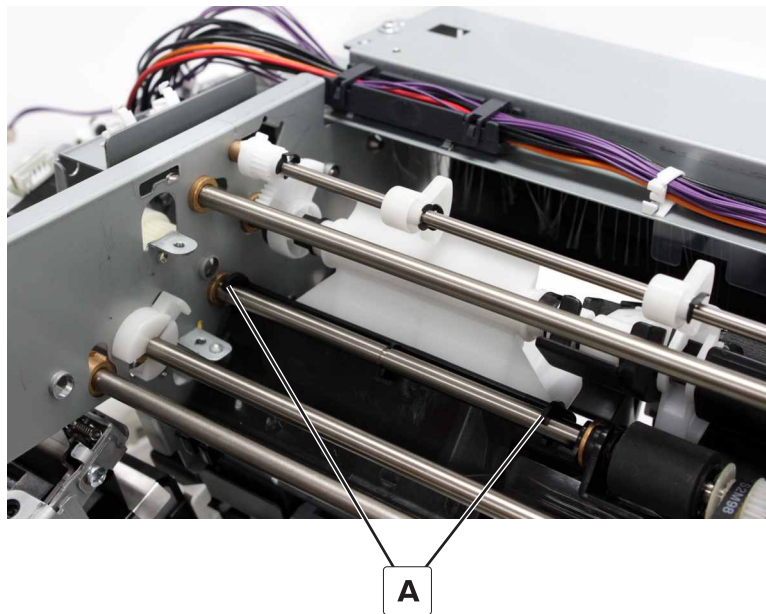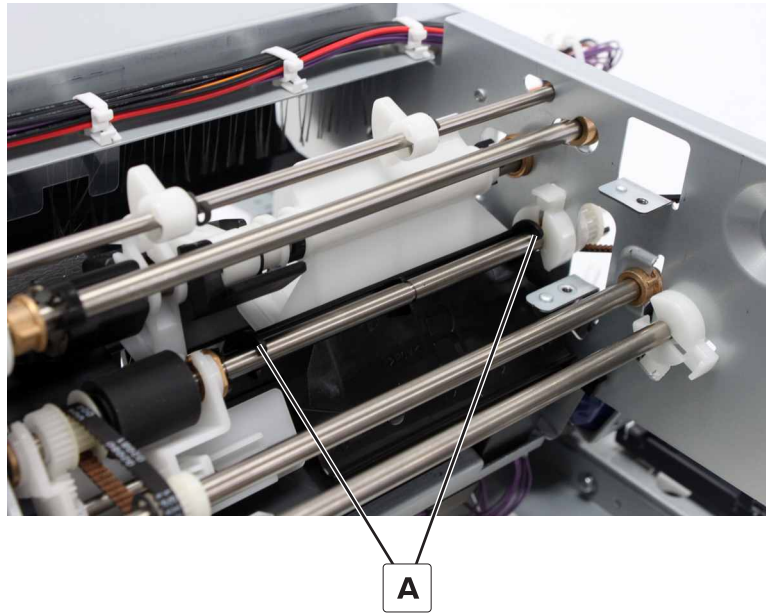
Installation note: Position the guides under the flaps (A).
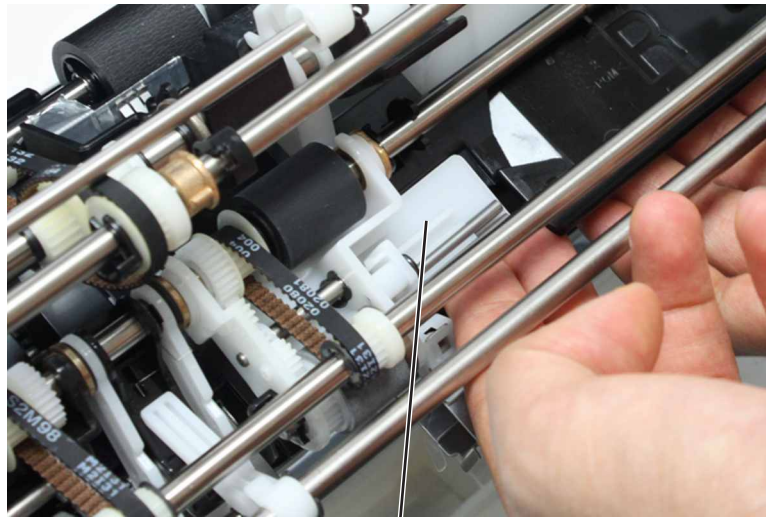
Staple finisher aligner roller removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

5 Remove the lower guide. See **"Staple finisher lower guide removal" on page 287**.

6 Remove tamper feed roller guide. See **"Staple finisher compiler feed roller guide removal" on page 289**.

7 Remove the two clips (A), and then slide the bushings.

Parts removal

8 Slide, and then swing out to remove the roller.
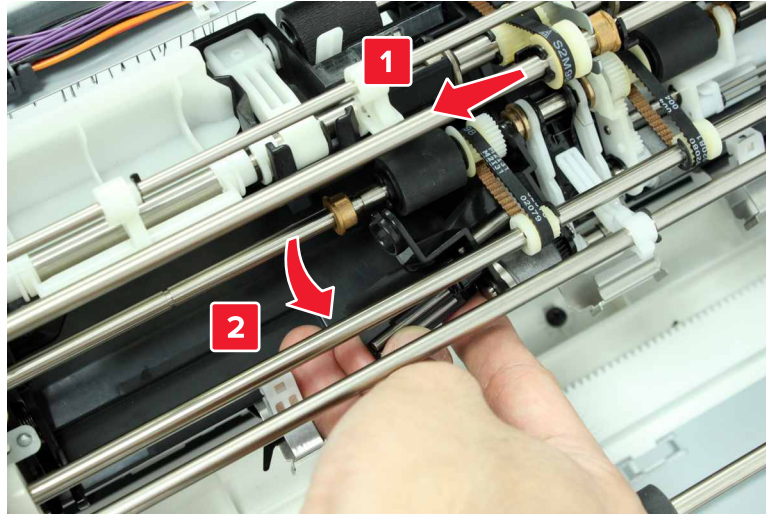
9 Remove the other roller.

Staple finisher compiler feed roller shaft assembly removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

6 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

7 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

8 Remove the lower guide. See **"Staple finisher lower guide removal" on page 287**.

9 Remove the compiler feed roller guide. See **"Staple finisher compiler feed roller guide removal" on page 289**.

10 Remove the clip (A), and then remove the washer and gear.

A

11 Remove the clip (B), and then remove the bushing.

B

Parts removal

12 Remove the clip (C), and then remove the bushing.

C

13 Remove the clip (D), and then remove the assembly.

D

Staple finisher compiler feed rollers and gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

6 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

7 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

8 Remove the lower guide. See **"Staple finisher lower guide removal" on page 287**.

9 Remove compiler feed roller guide. See **"Staple finisher compiler feed roller guide removal" on page 289**.

10 Remove compiler feed roller shaft assembly. See **"Staple finisher compiler feed roller shaft assembly removal" on page 292**.

11 Remove the two clips (A), and then slide the bushings.
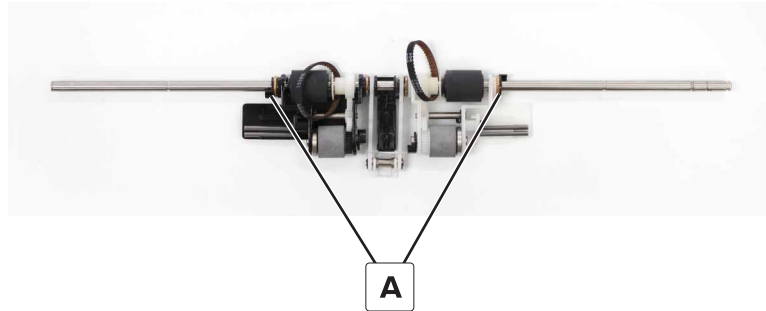
12 Remove the roller (B). Also remove the other roller.
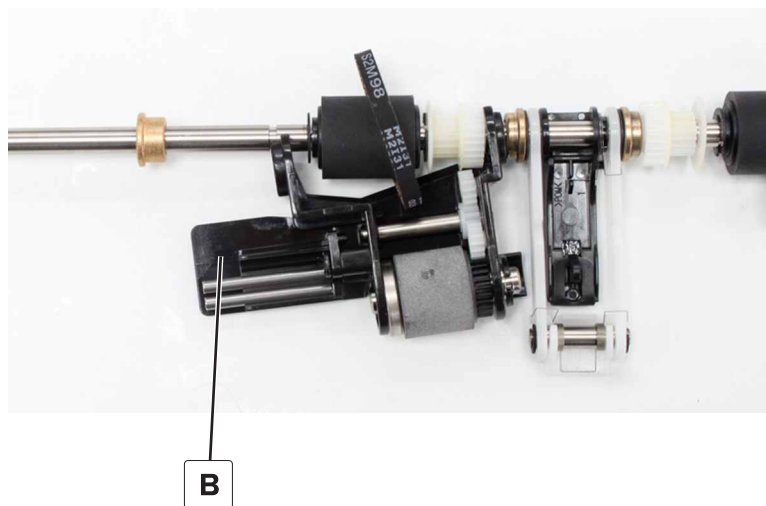
13 Remove the two compiler feed roller belts (C).

Parts removal
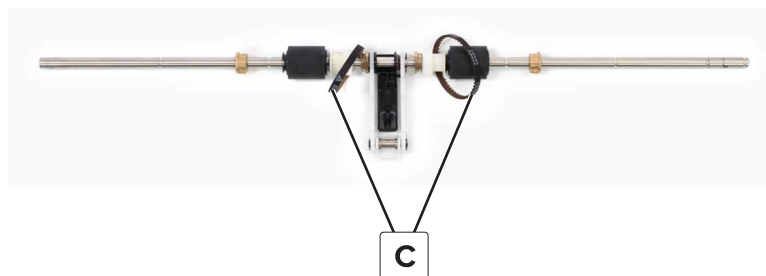
14 Remove the two compiler feed rollers (D) and the two gears (E).

Staple finisher stack lever removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the motor (staple finisher aligner). See **"Motor (staple finisher aligner) removal" on page 250**.

6 Remove the aligner gears. See **"Staple finisher aligner belt and gears removal" on page 251**.

7 Remove the stack lever actuator. See **"Staple finisher stack lever actuator removal" on page 265**.

8 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

9 Remove the lower guide. See **"Staple finisher lower guide removal" on page 287**.

10 Remove the clip (A).

11 Dislodge the shaft from the frame.

12 Remove the clip (B), and then slide the lever.

B
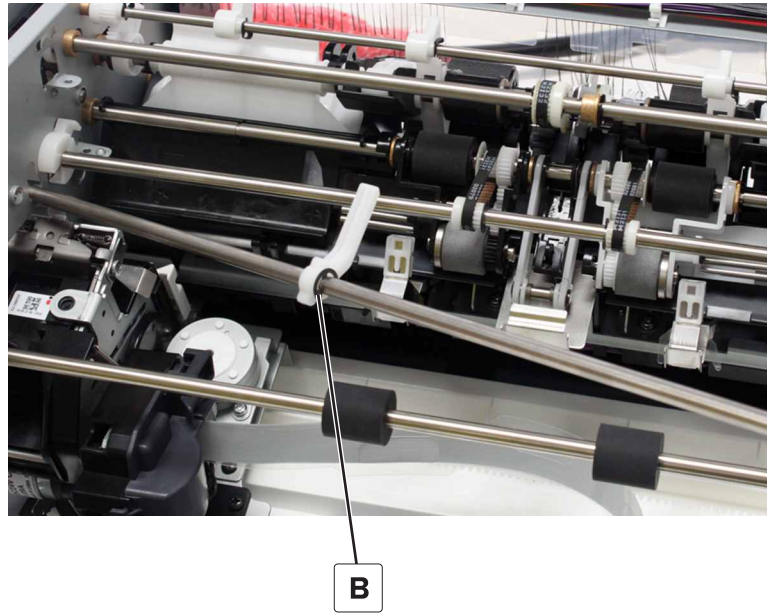
13 Remove the lever, and then remove the pin.

Staple finisher transport roller removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the motor (staple finisher transport). See **"Motor (staple finisher transport) removal" on page 243**.

5 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

6 Remove the lower guide. See **"Staple finisher lower guide removal" on page 287**.

7 Remove the two clips (A), and then remove the gears and bushings.

8 Remove the clip (B), and then remove the shaft.

B

Staple finisher aligner roller gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the motor (staple finisher aligner). See **"Motor (staple finisher aligner) removal" on page 250**.

6 Remove the aligner gears. See **"Staple finisher aligner belt and gears removal" on page 251**.

7 Remove the stack lever actuator. See **"Staple finisher stack lever actuator removal" on page 265**.

8 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

9 Remove the lower guide. See **"Staple finisher lower guide removal" on page 287**.

10 Remove the clip (A).

11 Remove the clip (B).
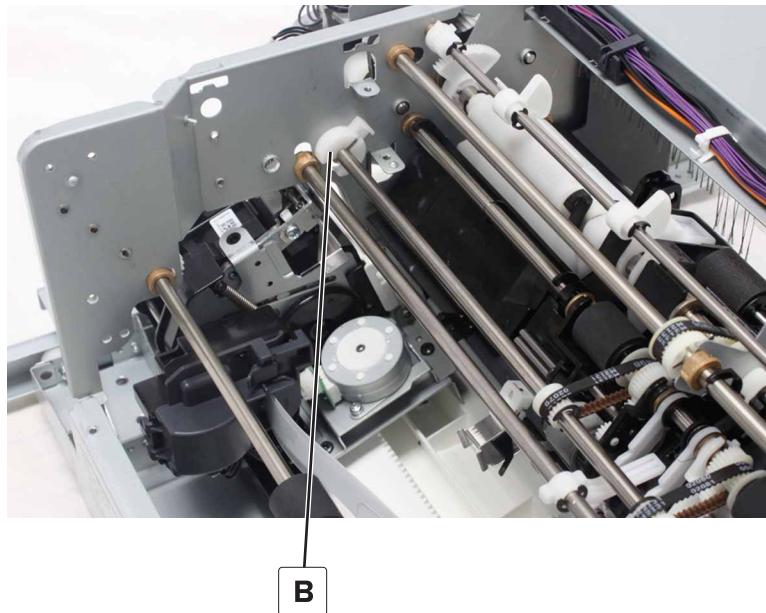
12 Dislodge the shaft from the frame.

13 Rotate the shaft until the pins behind the gears are horizontal.

14 Remove the two clips (C), and then remove the gears.

Staple finisher upper exit roller assembly removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

6 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

7 Remove the exit guide lift cam. See **"Staple finisher exit guide lift cam removal" on page 275**.

8 Remove the upper exit roller drive gear shaft. See **"Staple finisher upper exit roller drive gears removal" on page 276**.

9 Remove the upper exit actuator. See **"Staple finisher upper exit actuator removal" on page 281**.

10 Remove the two clips (A), and then remove the bushings.
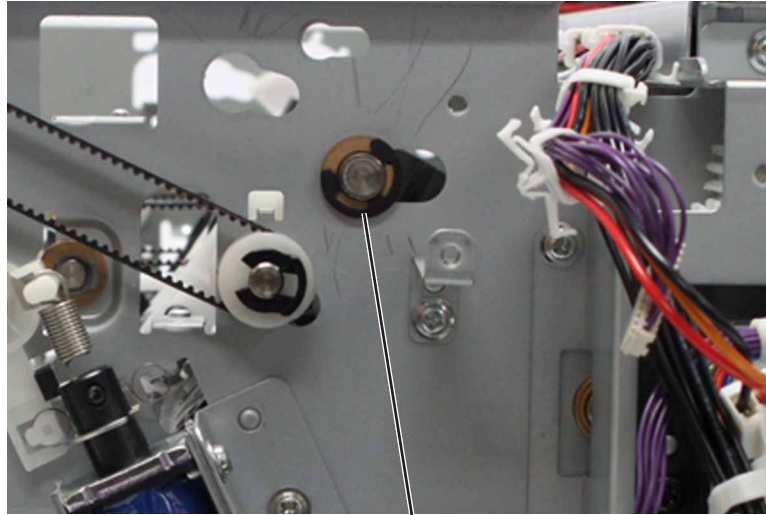
A
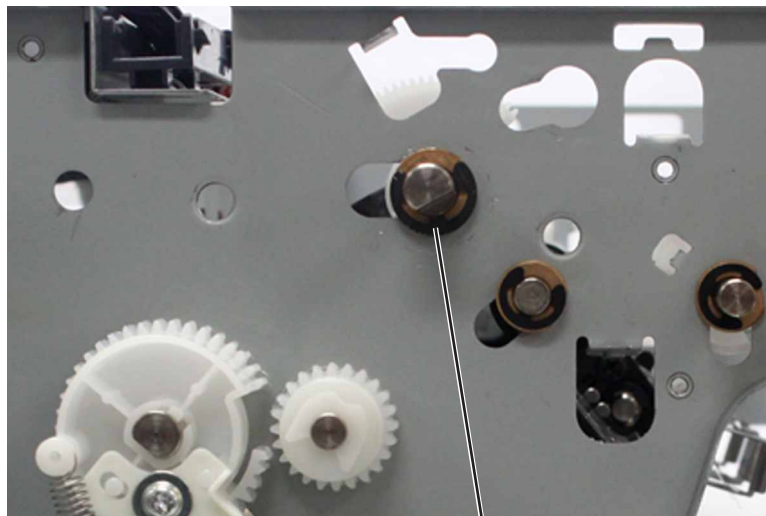
A

11 Remove the assembly.

Staple finisher eject guide removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

6 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

7 Remove the exit guide lift cam. See **"Staple finisher exit guide lift cam removal" on page 275**.

8 Remove the upper exit roller drive gear shaft. See **"Staple finisher upper exit roller drive gears removal" on page 276**.

9 Remove the upper exit actuator. See **"Staple finisher upper exit actuator removal" on page 281**.

10 Remove the upper exit roller assembly. See **"Staple finisher upper exit roller assembly removal" on page 301**.

11 Remove the four guides (A).

Staple finisher eject cam removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

6 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

7 Remove the exit guide lift cam. See **"Staple finisher exit guide lift cam removal" on page 275**.

8 Remove the upper exit roller drive gear shaft. See **"Staple finisher upper exit roller drive gears removal" on page 276**.

9 Remove the upper exit actuator. See **"Staple finisher upper exit actuator removal" on page 281**.

10 Remove the upper exit roller assembly. See **"Staple finisher upper exit roller assembly removal" on page 301**.

11 Remove the clip (A), and then remove the cam.

Staple finisher upper exit roller removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

6 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

7 Remove the exit guide lift cam. See **"Staple finisher exit guide lift cam removal" on page 275**.

8 Remove the upper exit roller drive gear shaft. See **"Staple finisher upper exit roller drive gears removal" on page 276**.

9 Remove the upper exit actuator. See **"Staple finisher upper exit actuator removal" on page 281**.

10 Remove the upper exit roller assembly. See **"Staple finisher upper exit roller assembly removal" on page 301**.

11 Remove the guide (A), and then remove the clip (B).

A **B**
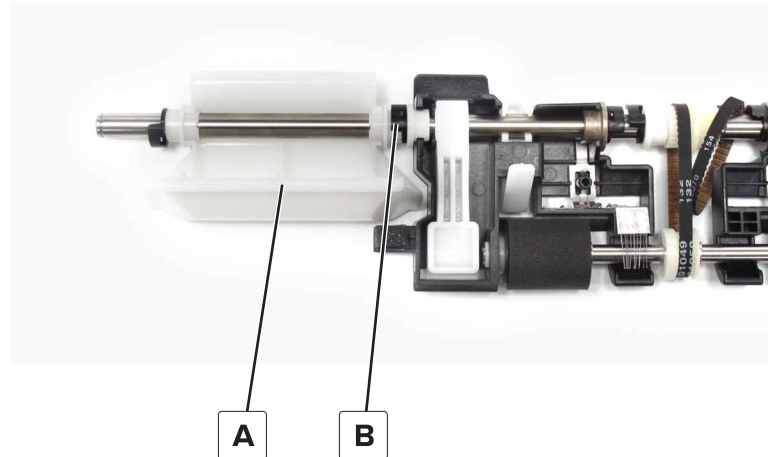
12 Move the guide to release the bushing, and then remove the roller (C).

C

Staple finisher upper exit roller belts and gear removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

5 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

6 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

7 Remove the exit guide lift cam. See **"Staple finisher exit guide lift cam removal" on page 275**.

8 Remove the upper exit roller drive gear shaft. See **"Staple finisher upper exit roller drive gears removal" on page 276**.

9 Remove the upper exit actuator. See **"Staple finisher upper exit actuator removal" on page 281**.

10 Remove the upper exit roller assembly. See **"Staple finisher upper exit roller assembly removal" on page 301**.

11 Remove the upper exit roller. See **"Staple finisher upper exit roller removal" on page 304**.

12 Remove all the clips and bushings from the left side of the shaft.

13 Separate the shaft.
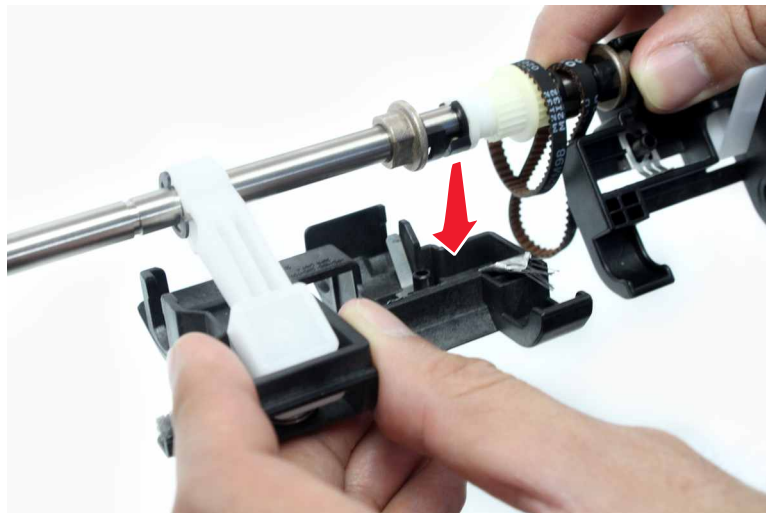
Note: Take note of the original position of the ground and the two concentric springs.

14 Remove the three clips (A), and then remove the lever (B).

15 Remove the bushings, and then remove the gear (C) and two belts (D).

| A | B | C | D |

Staple finisher tamper and aligner assembly removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the bin. See **"Staple finisher bin removal" on page 228**.

5 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

6 Remove the bin stack height assembly. See **"Staple finisher bin stack height assembly removal" on page 229**.

7 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

8 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

9 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

10 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

11 Remove the exit guide lift cam. See **"Staple finisher exit guide lift cam removal" on page 275**.

12 Remove the upper exit roller drive gear shaft. See **"Staple finisher upper exit roller drive gears removal" on page 276**.

13 Remove the upper exit actuator. See **"Staple finisher upper exit actuator removal" on page 281**.

14 Remove the upper exit roller assembly. See **"Staple finisher upper exit roller assembly removal" on page 301**.

15 Remove the two screws (A).

16 Remove the cables (B) from the holder.
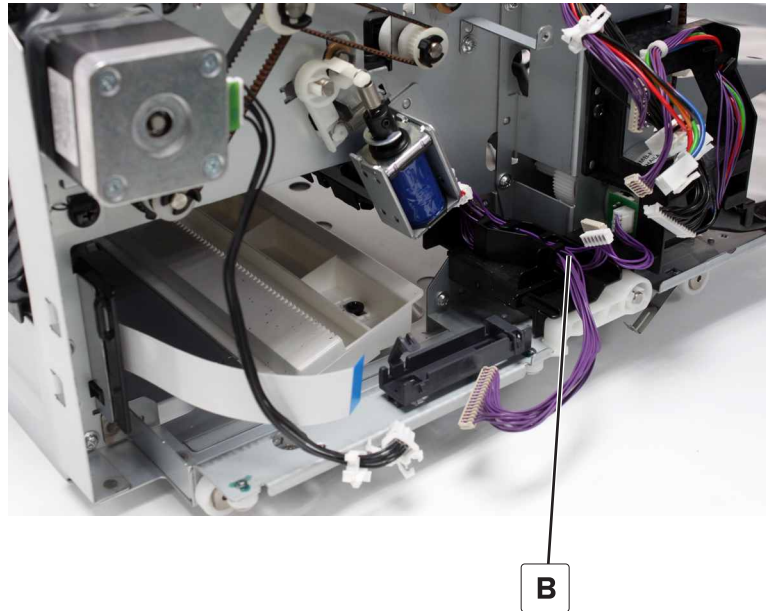
17 From the top, remove the aligner.

Staple finisher tamper drive gears removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the bin. See **"Staple finisher bin removal" on page 228**.

5 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

6 Remove the bin stack height assembly. See **"Staple finisher bin stack height assembly removal" on page 229**.

7 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

8 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

9 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

10 Remove the upper guide assembly. See **"Staple finisher upper guide removal" on page 283**.

11 Remove the exit guide lift cam. See **"Staple finisher exit guide lift cam removal" on page 275**.

12 Remove the upper exit roller drive gear shaft. See **"Staple finisher upper exit roller drive gears removal" on page 276**.

13 Remove the upper exit actuator. See **"Staple finisher upper exit actuator removal" on page 281**.

14 Remove the upper exit roller assembly. See **"Staple finisher upper exit roller assembly removal" on page 301**.

15 Remove the tamper and aligner assembly. See **"Staple finisher tamper and aligner assembly removal" on page 307**.

16 Remove the four screws (A), and then remove the motor brackets.
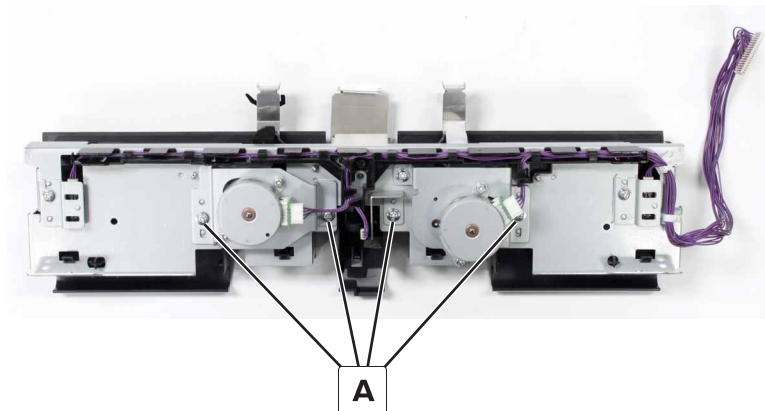
17 Remove the two gears (B).

Parts removal

B

Staple finisher tamper racks removal

1 Remove the front cover. See **"Staple finisher front cover removal" on page 225**.

2 Remove the rear cover. See **"Staple finisher rear cover removal" on page 226**.

3 Remove the top cover. See **"Staple finisher top cover removal" on page 227**.

4 Remove the bin. See **"Staple finisher bin removal" on page 228**.

5 Remove the left inner cover. See **"Staple finisher left inner cover removal" on page 229**.

6 Remove the bin stack height assembly. See **"Staple finisher bin stack height assembly removal" on page 229**.

7 Remove the controller board. See **"Staple finisher controller board removal" on page 240**.

8 Remove the controller board holder. See **"Staple finisher controller board holder removal" on page 241**.

9 Remove the exit motor bracket. See **"Exit motor bracket removal" on page 273**.

10 Remove the upper guide. See **"Staple finisher upper guide removal" on page 283**.

11 Remove the exit guide lift cam. See **"Staple finisher exit guide lift cam removal" on page 275**.

12 Remove the upper exit roller drive gear shaft. See **"Staple finisher upper exit roller drive gears removal" on page 276**.

13 Remove the upper exit actuator. See **"Staple finisher upper exit actuator removal" on page 281**.

14 Remove the upper exit roller assembly. See **"Staple finisher upper exit roller assembly removal" on page 301**.

15 Remove the tamper and aligner assembly. See **"Staple finisher tamper and aligner assembly removal" on page 307**.

16 Pry both sides to remove the tamper. Repeat this step to remove the other tamper.
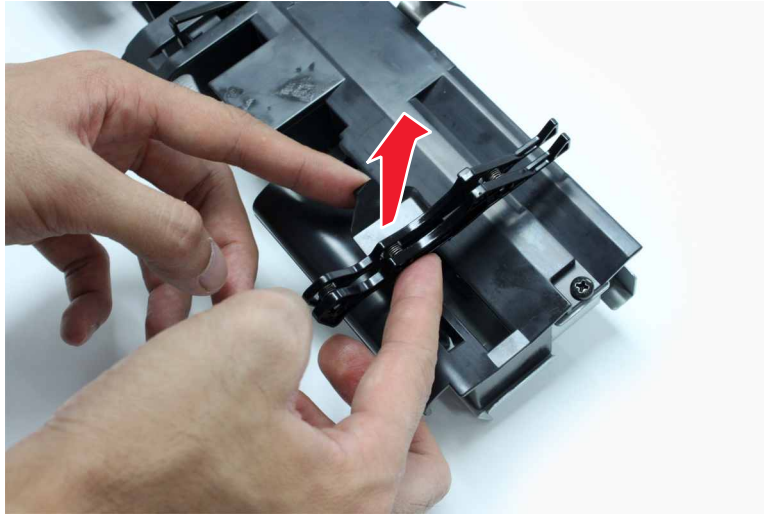
17 Remove the two screws (A).
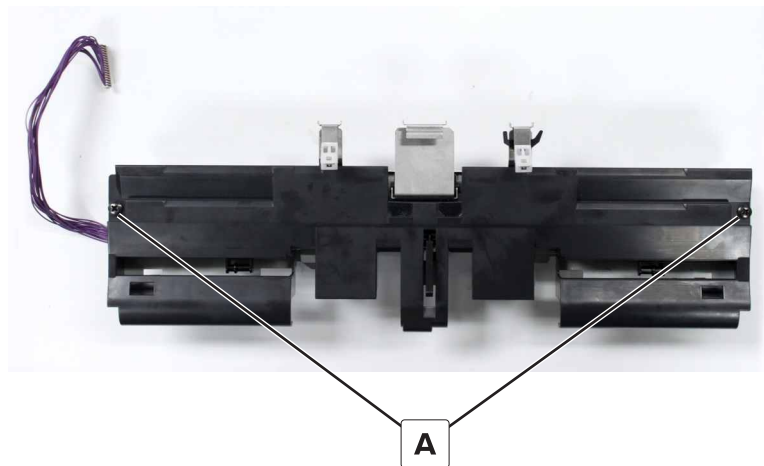
18 Release the four latches (B), and then remove the tamper tray.
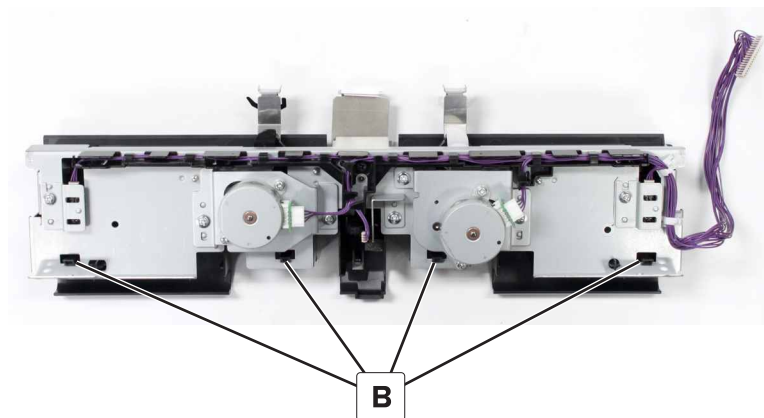
Parts removal

19 From under the tray, remove the tamper paper present sensor actuator (C).

C
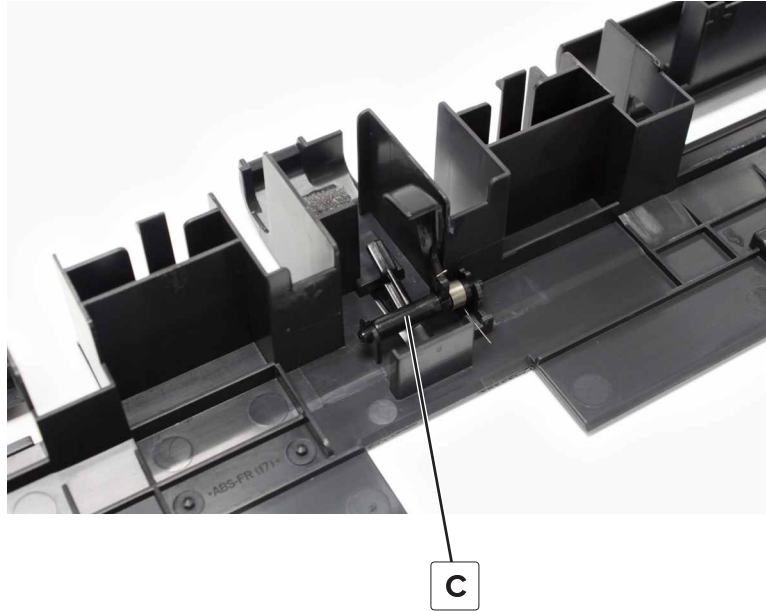
20 Remove the two screws (D), and then remove the front and rear aligners.

Note: The rear aligner has a clear plastic film, while the front aligner has a black plastic film.

21 Swing, and then remove the middle aligner.

D

Parts removal
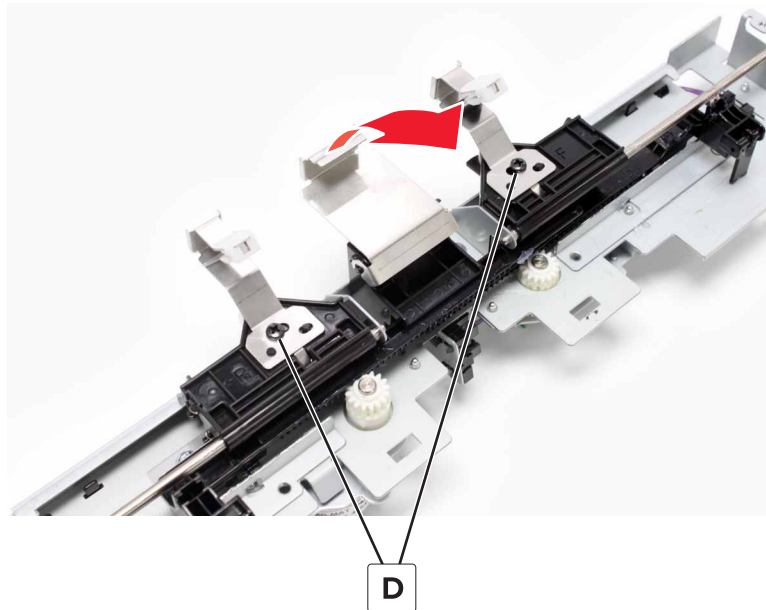
22 Remove the two ground plates (E) from under the front and rear aligners.
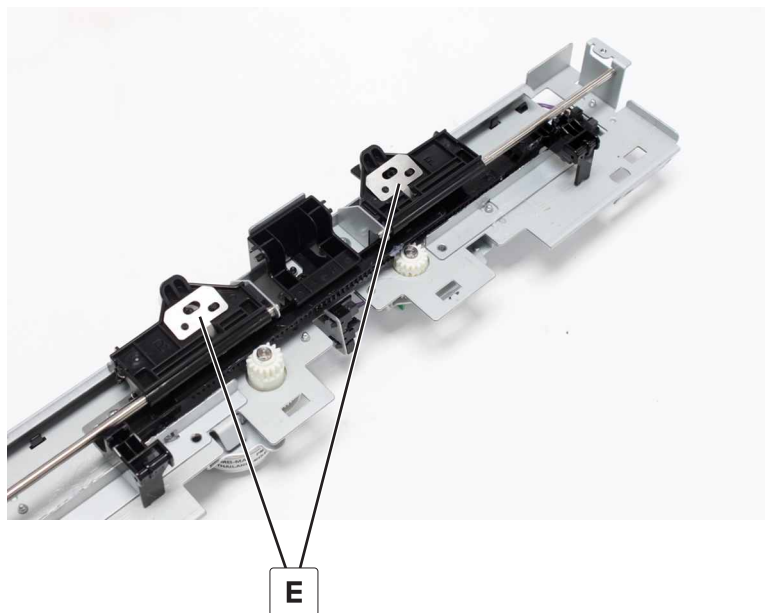
23 Slide the carriage, remove the screw (F), and then remove the bracket.

Parts removal
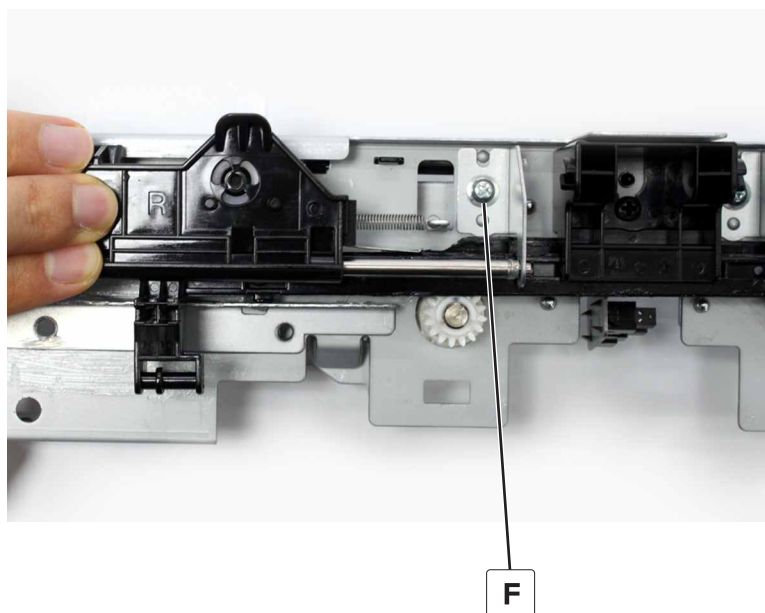
24 Disconnect the spring (G) from the assembly, and then remove the carriage. Repeat the previous step and this step to remove the other carriage.

G
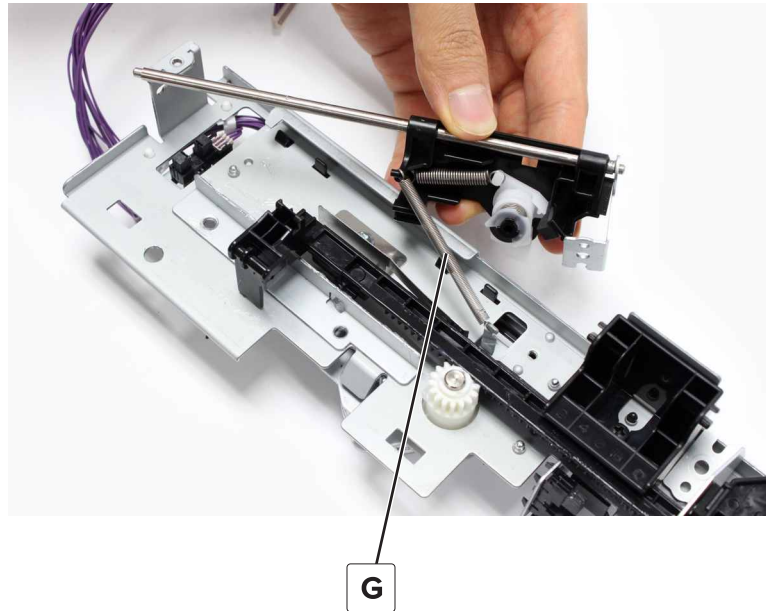
25 Move the tamper racks to the outermost position.

26 Remove the screw (H), remove the bracket, and then remove the two racks (J).

H

J
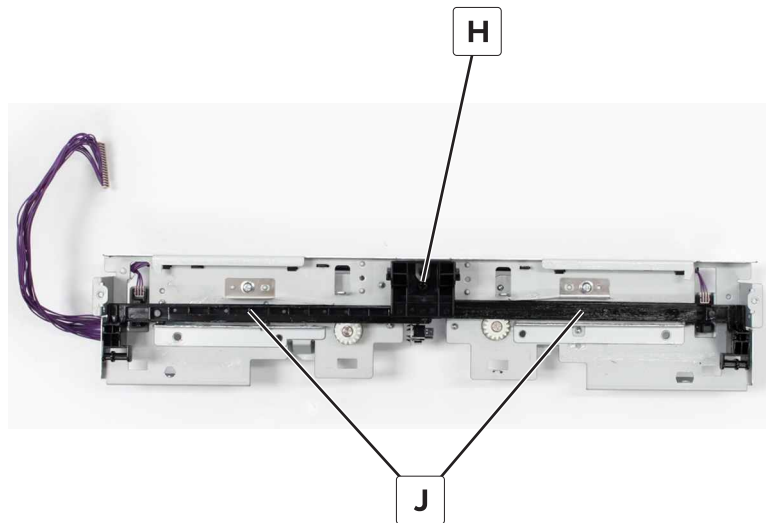
Installation notes:

a Install the front rack at the outermost position.

b Install the rear rack at the outermost position.

Horizontal paper transport removals

HPT door locks removal

1 Remove the four screws (A).

2 Remove the locks.

HPT inner paper guide removal

1 Remove the three screws (A).
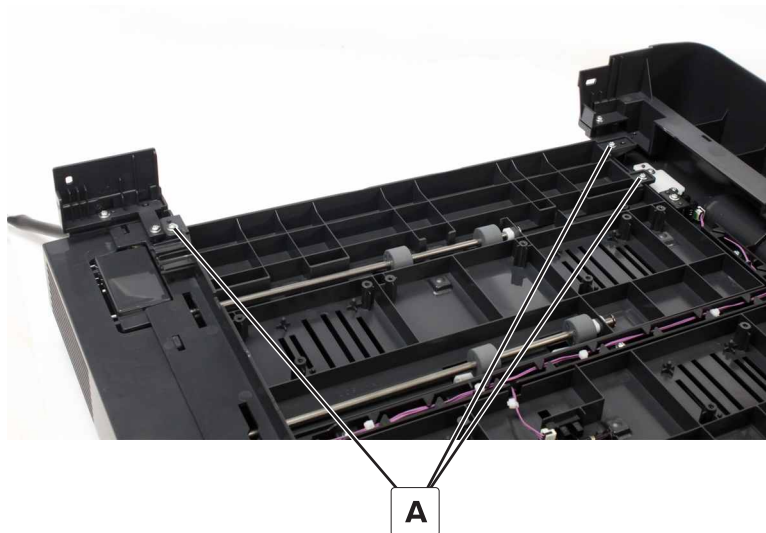
2 Remove the guide.

HPT holding bracket removal

1 Remove the two screws (A).
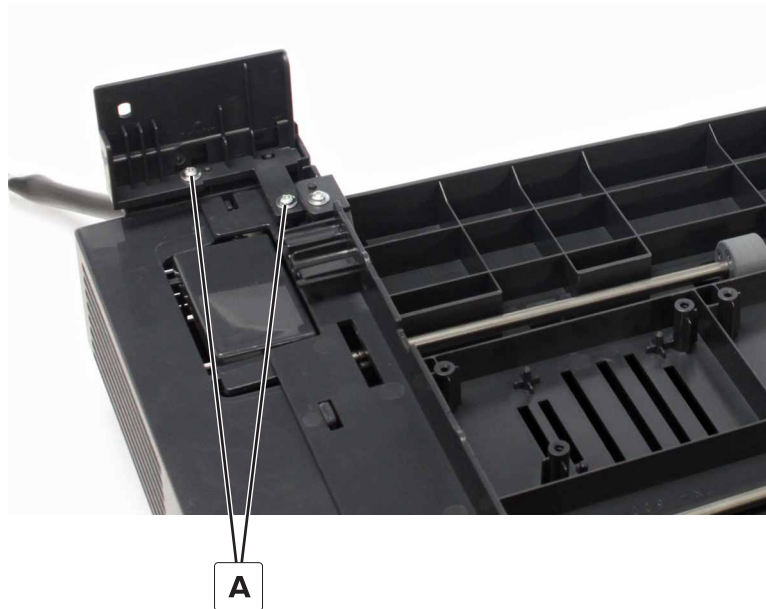
2 Remove the bracket.

Sensor (HPT feed) removal

1 Disconnect the cable (A).

2 Remove the adhesive (B), and then remove the sensor.
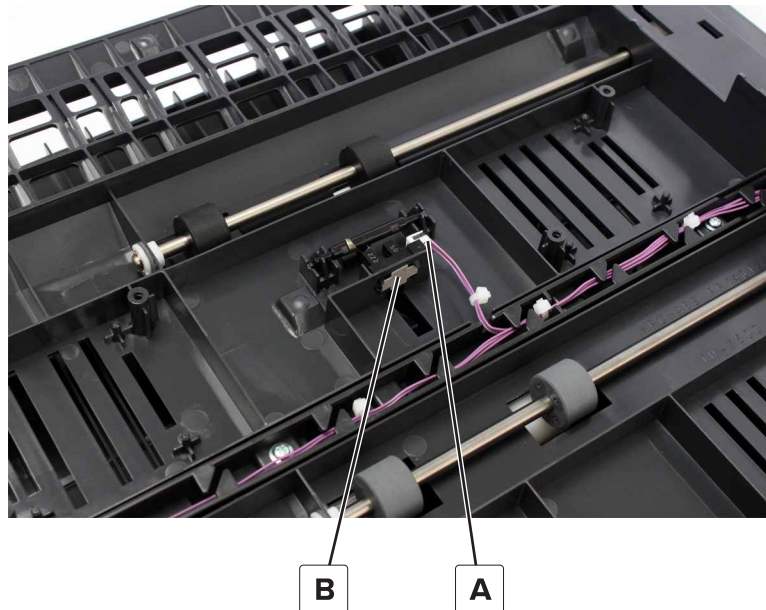
HPT feed sensor actuator removal

1 Pry the actuator (A).
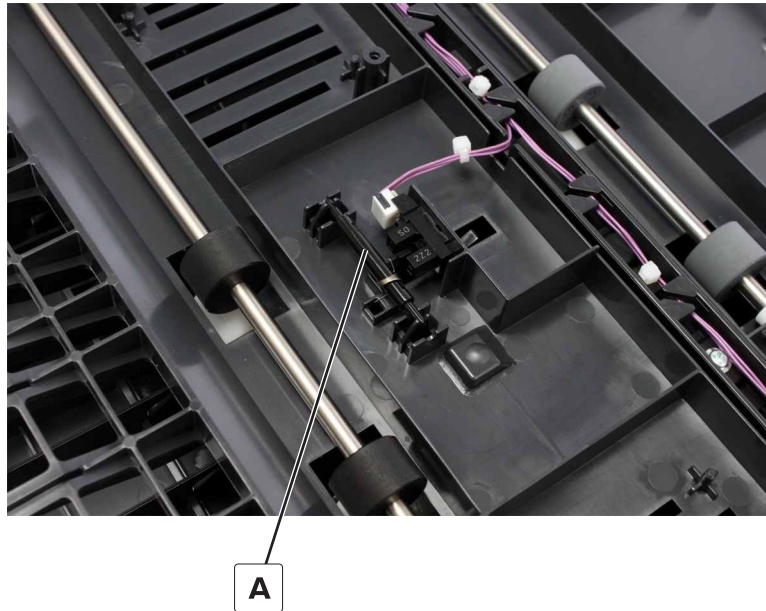
2 Remove the actuator.

Sensor (HPT door) removal

1 Disconnect the cable (A).

2 Remove the screw (B), and then remove the sensor.
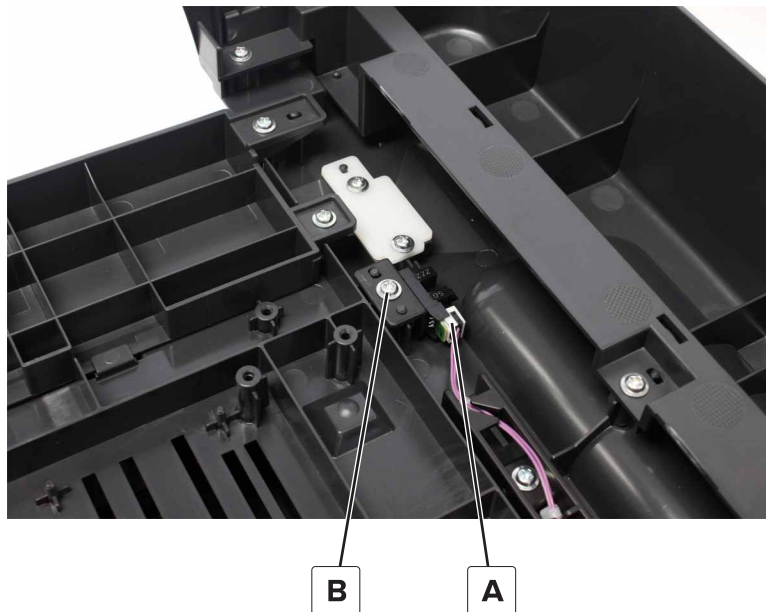
HPT right top cover removal

1 Remove the two screws (A).
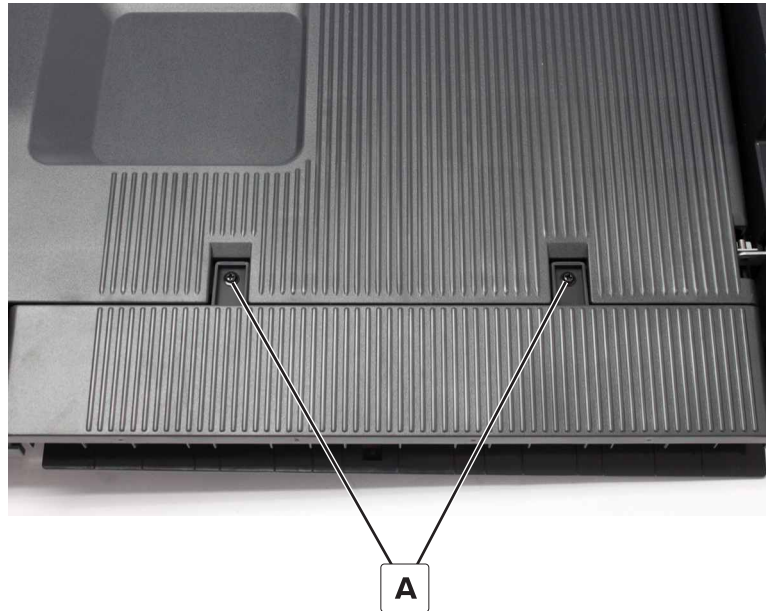
2 Remove the cover.

HPT door removal

1 Remove the right top cover. See **"HPT right top cover removal" on page 320**.

2 Remove the two screws (A), and then remove the hinge.
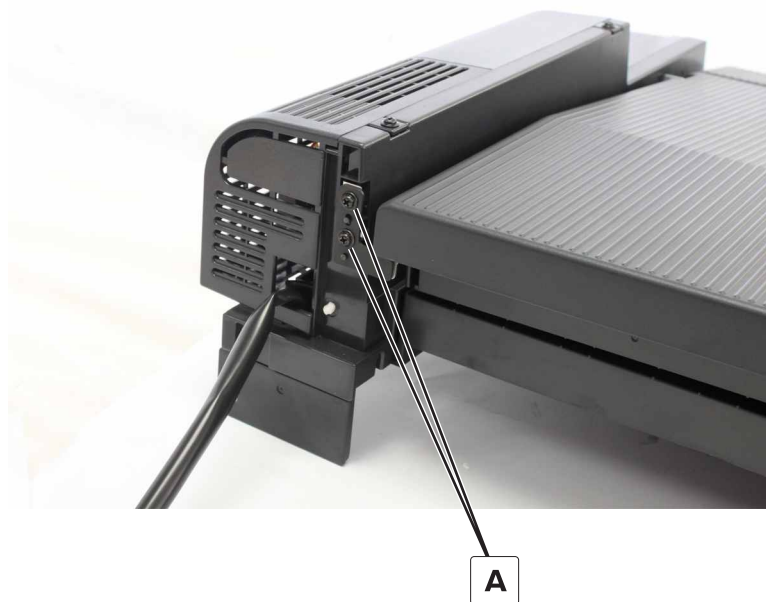
3 Remove the cover.

HPT rear cover removal

1 Remove the metal screw (A).

2 Remove the two plastic screws (B), and then remove the cover.
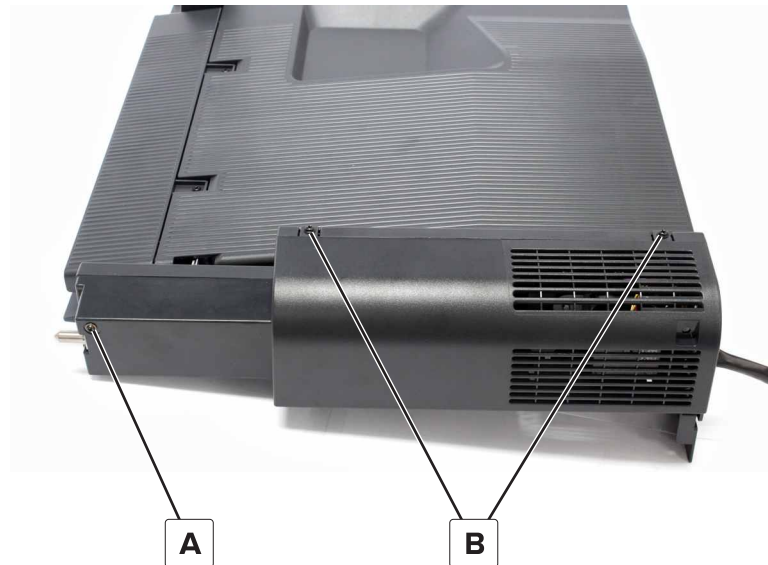
HPT cable removal

1 Remove the rear cover. See **"HPT rear cover removal" on page 321**.

2 Disconnect the cable from both ends (A), and then remove the cable.
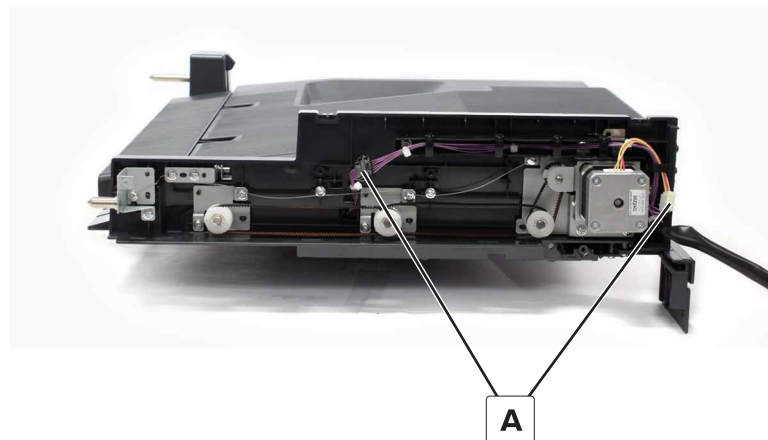
3 Disconnect the cable from the two sensors (B), and then remove the cable.

B
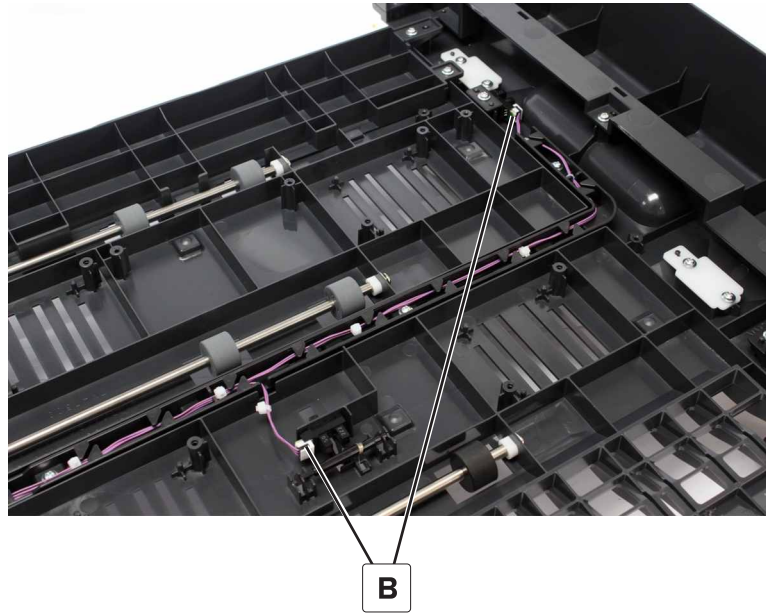
HPT door hinges removal

1 Remove the two screws (A).

A
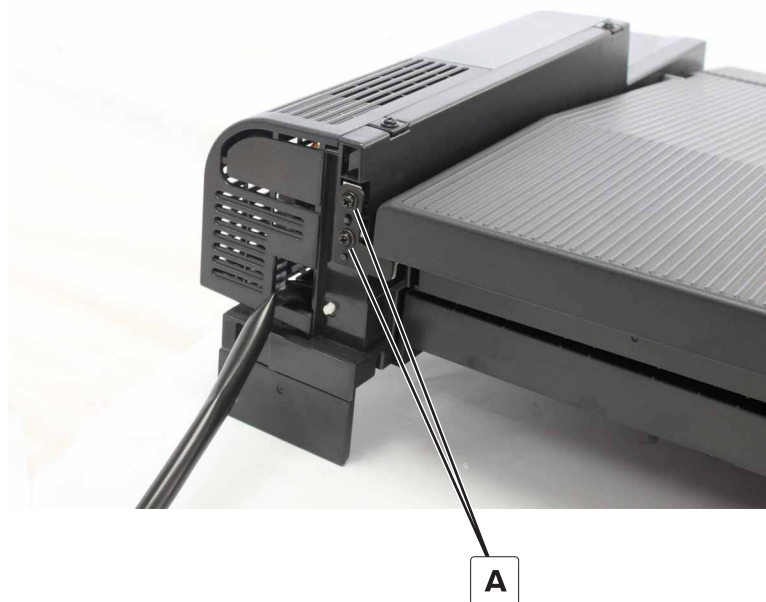
2 Remove the hinge, and then remove the door.

3 Remove the rear cover. See **"HPT rear cover removal" on page 321**.

4 Remove the two screws (B), and then remove the hinge.
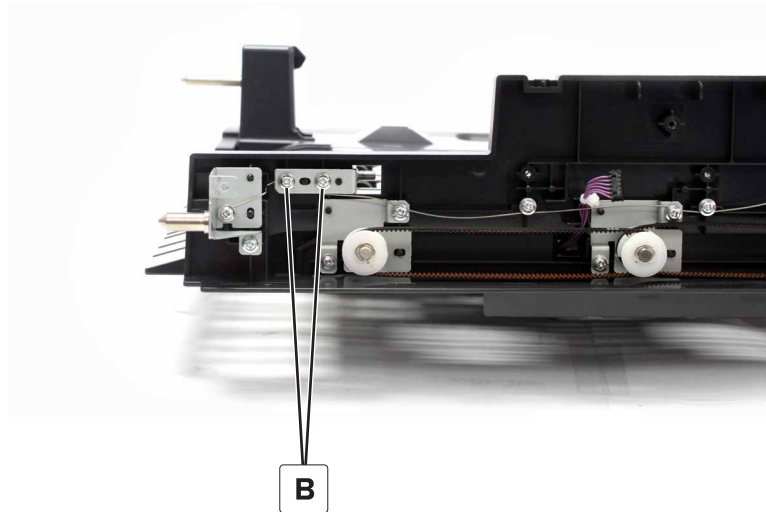
5 From under the door, remove the two screws (C), and then remove the two hinges.
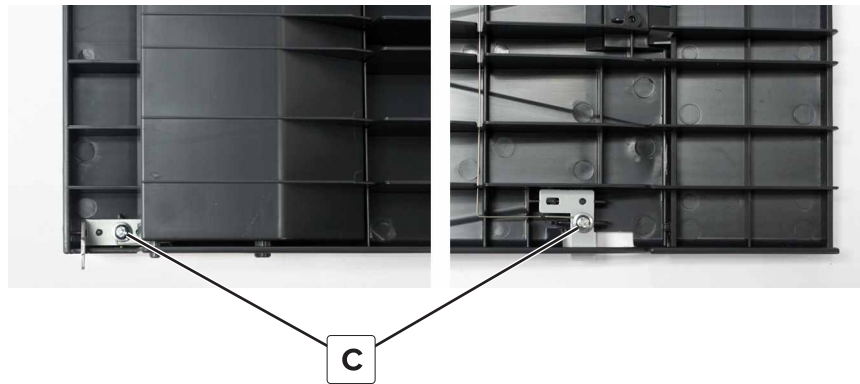
Motor (HPT transport) removal

1 Remove the rear cover. See **"HPT rear cover removal" on page 321**.

2 Disconnect the cable from both ends (A).

3 Remove the two screws (B), and then set aside the cable guide.
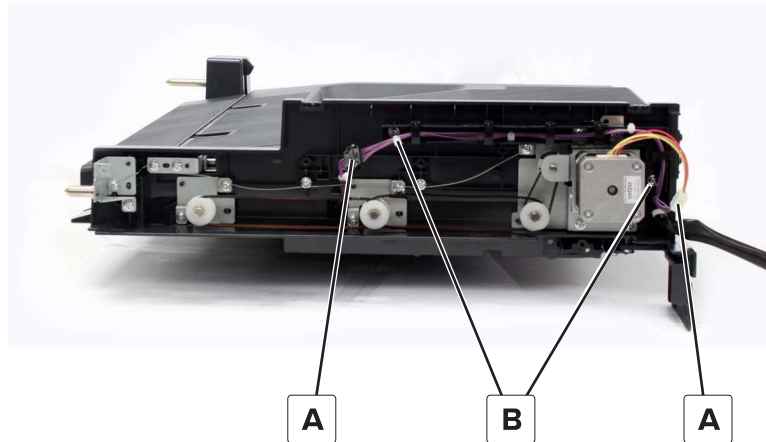
4 Remove the four screws (C), and then remove the motor bracket.
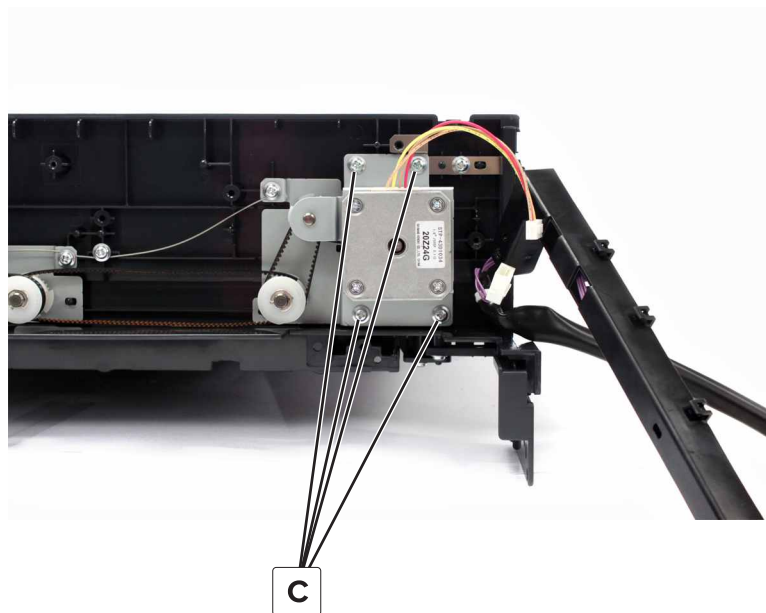
5 Remove the two screws (D), and then remove the motor.
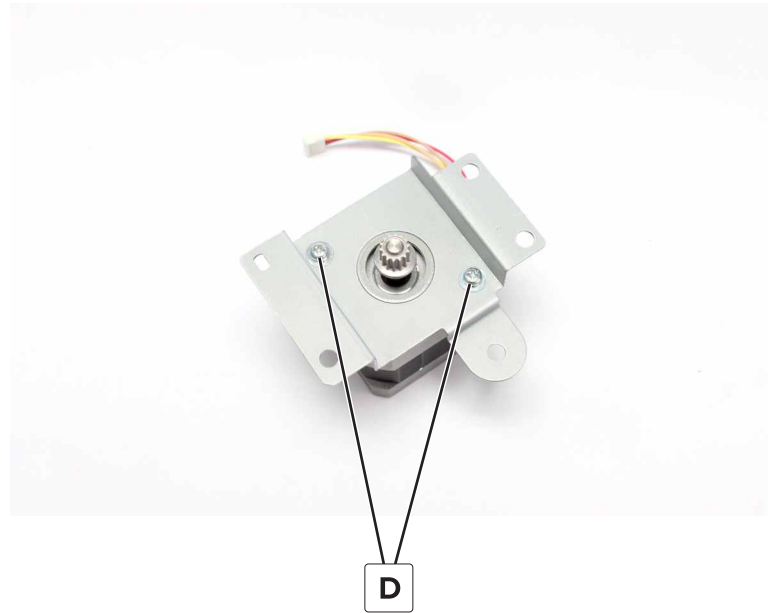
HPT belts and gears removal

1 Remove the rear cover. See **"HPT rear cover removal" on page 321**.

2 Remove the motor (HPT transport). See **"Motor (HPT transport) removal" on page 323**.

3 Remove the four clips (A), and then remove the four washers.
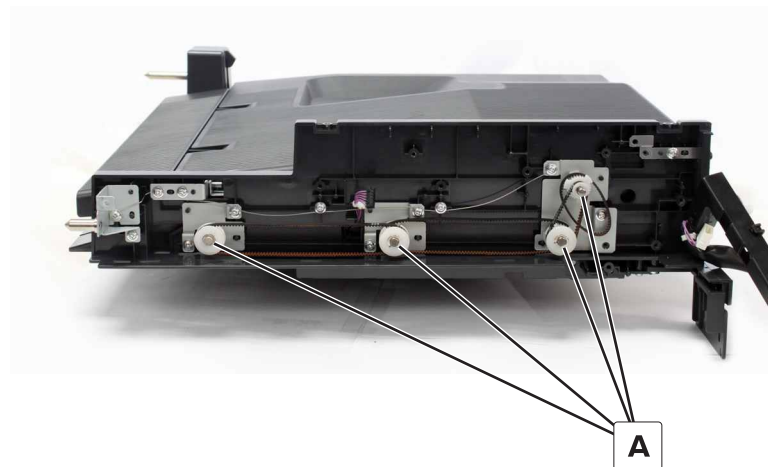
4 Remove the four gears and belts.

HPT transport rollers removal

1 Remove the rear cover. See **"HPT rear cover removal" on page 321**.

2 Remove the motor (HPT transport). See **"Motor (HPT transport) removal" on page 323**.

3 Remove the HPT belts and gears. See **"HPT belts and gears removal" on page 325**.

Parts removal

4 Remove the three clips (A).

5 Remove the six screws (B), and then remove the plates.
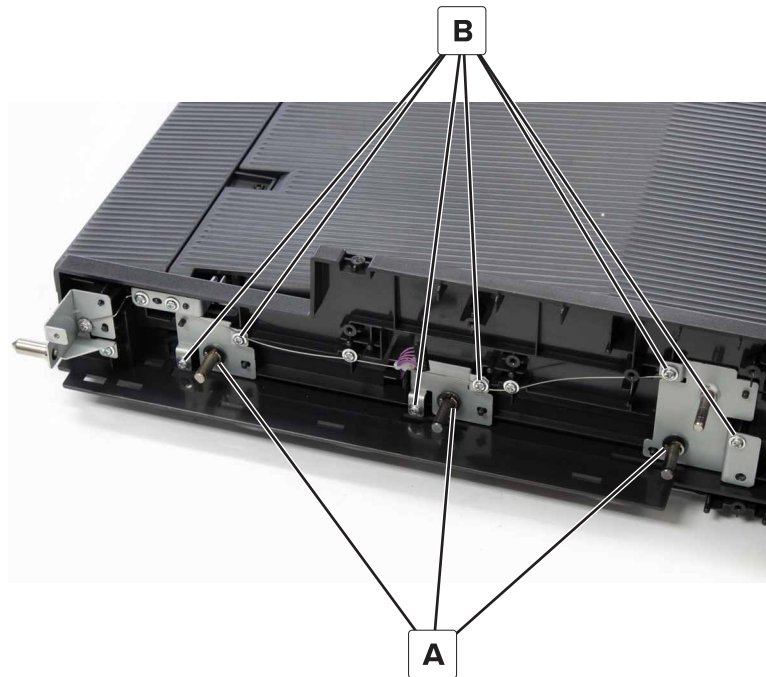
Installation note: Position the ground wire over the plates before installing the screws.

6 Remove the three clips (C), and then remove the bushings.
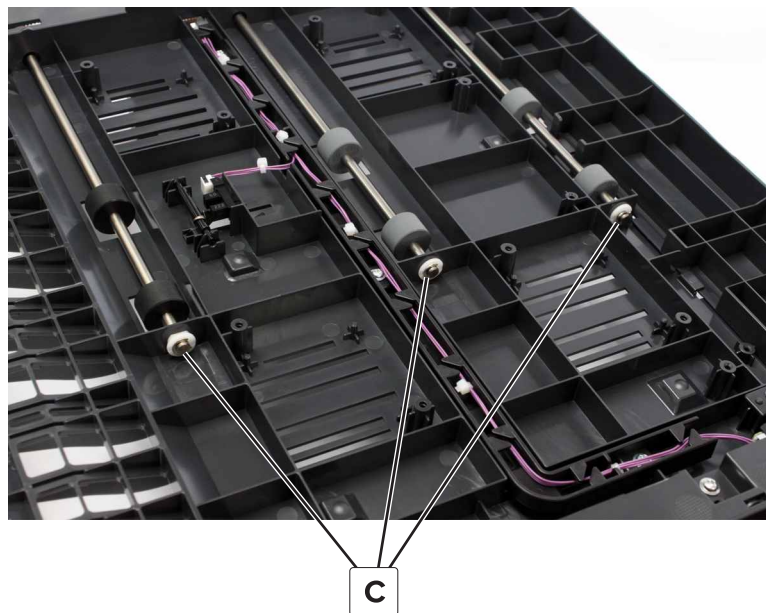
7 Remove the rollers.

Staple, hole punch finisher removals

SHPF top bin extender removal

1 Lift the extender.

2 Remove the extender.

SHPF elevator bin removal

Note: Perform steps 1 to 3 to lower the position of the bin. The bin cannot be removed when it is at the highest position.

1 Turn on the printer.

2 Lift and hold the tamper to activate the elevator bin stack limit switch, open door J, and then close the door.

   Note: The bin moves down after closing door J.

3 When the bin reaches the middle, turn off the printer to stop the bin.

4 Remove the two screws (A).
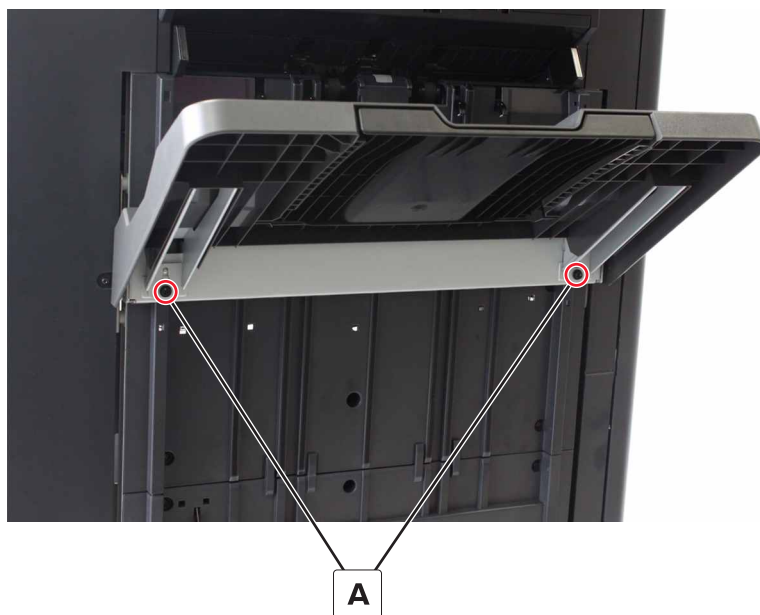
5 Remove the bin.

SHPF paddles removal

1 Pull the three paddles (A).
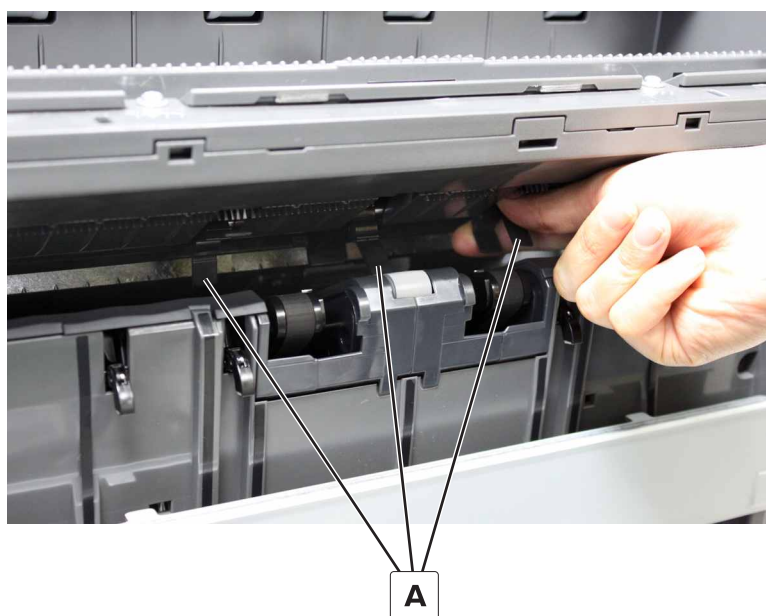
2 Remove the paddles.

SHPF elevator bin bracket removal

Note: This part is not a FRU.

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the four screws (A), and then remove the bracket.
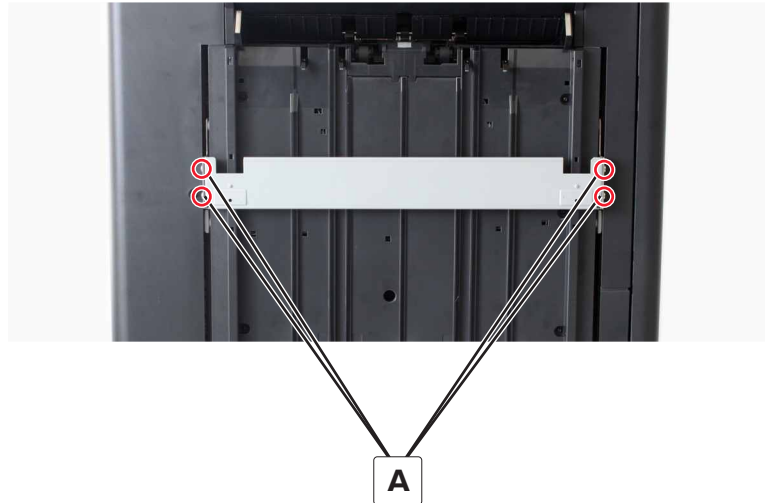
HPBF bin bail removal

1 Unlatch, and then remove the lock.
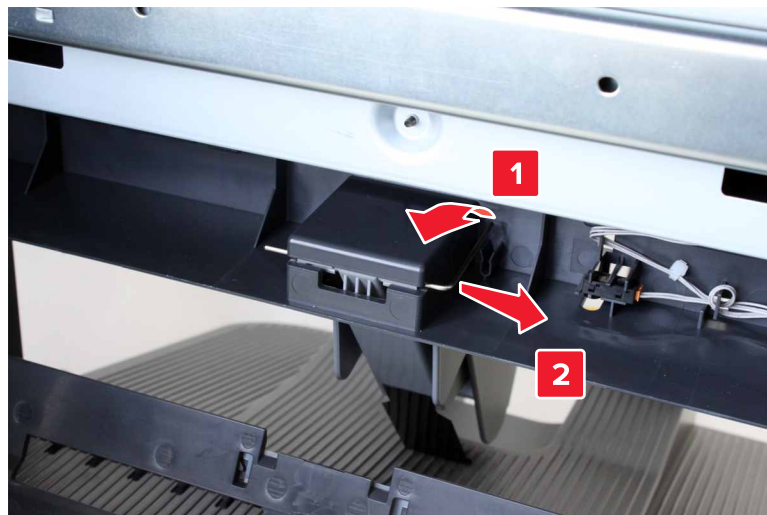
2 Remove the bail.

SHPF lower cover removal

1 Remove the two screws (A).
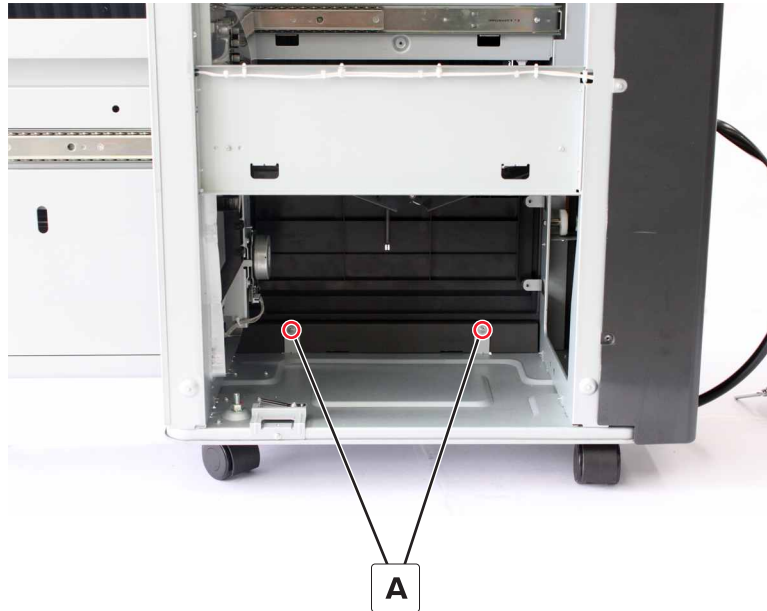
2 Remove the cover.

SHPF caster wheel removal

1 Remove the lower cover. See **"SHPF lower cover removal" on page 330**.

2 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

3 Remove the nut, and then remove the wheel.
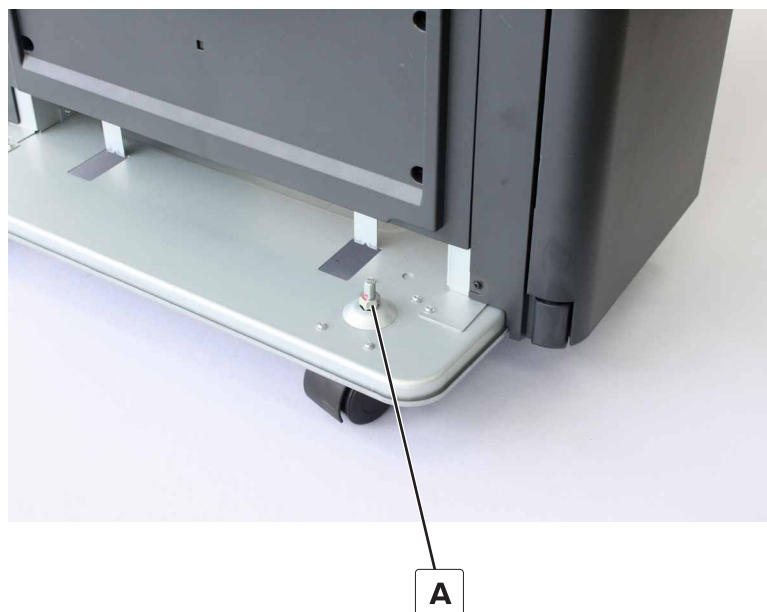
SHPF front door switch removal

1 Open the front door.

2 Remove the two screws (A), and then remove the cover.
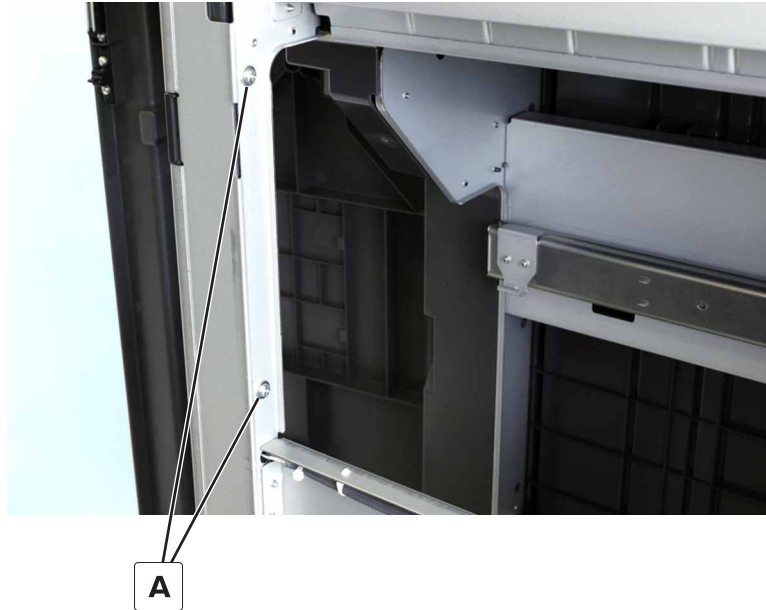
3 Disconnect the two cables (B), and then remove the switch from the cover.

SHPF front door removal

1 Unlatch and then remove the two locks.
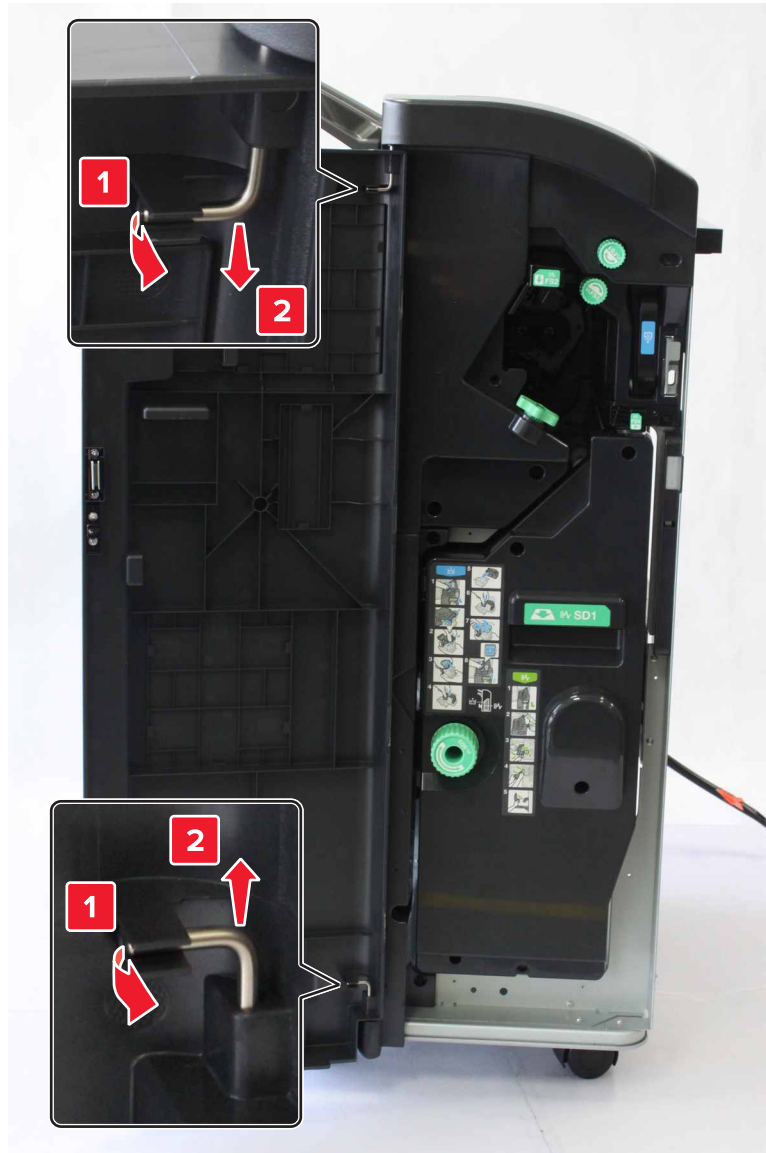
2 Remove the door.

SHPF top inner cover removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the five screws (A).

3 Unlatch and then remove the knob (B).
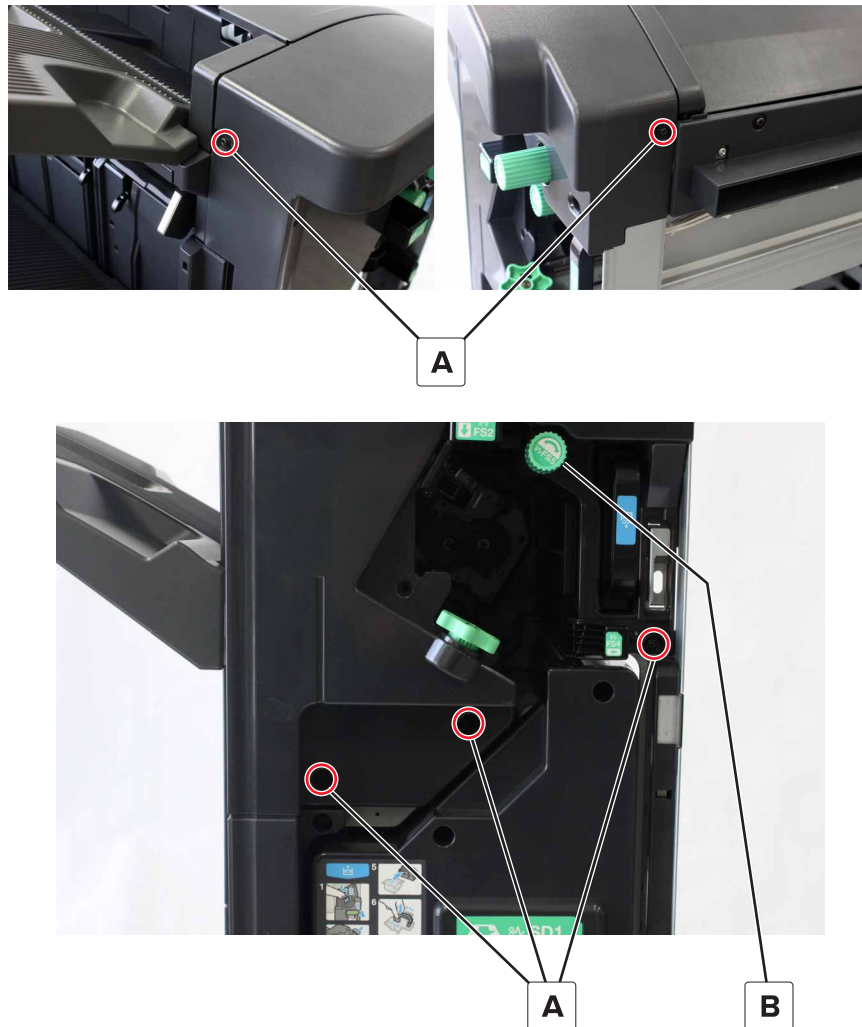
4 Remove the cover.

SHPF diverter feed roller knob removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Unlatch and then remove the knob (A).
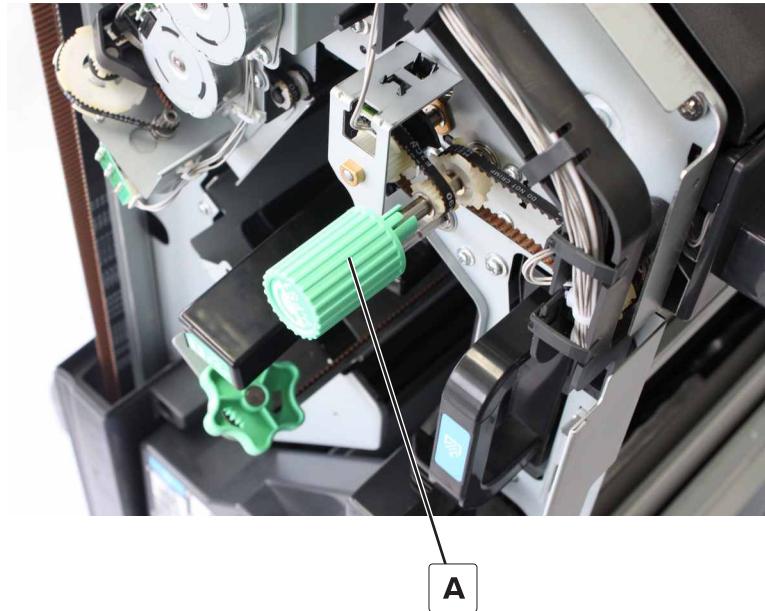
SHPF post cover removal

1 Remove the lower cover. See **"SHPF lower cover removal" on page 330**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the four screws, and then remove the cover.
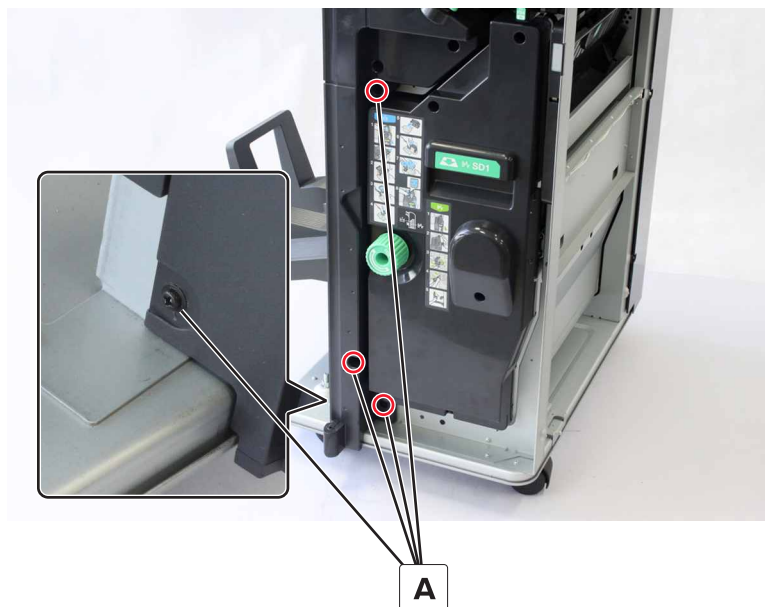
SHPF rear cover removal

1 Remove the eight screws.
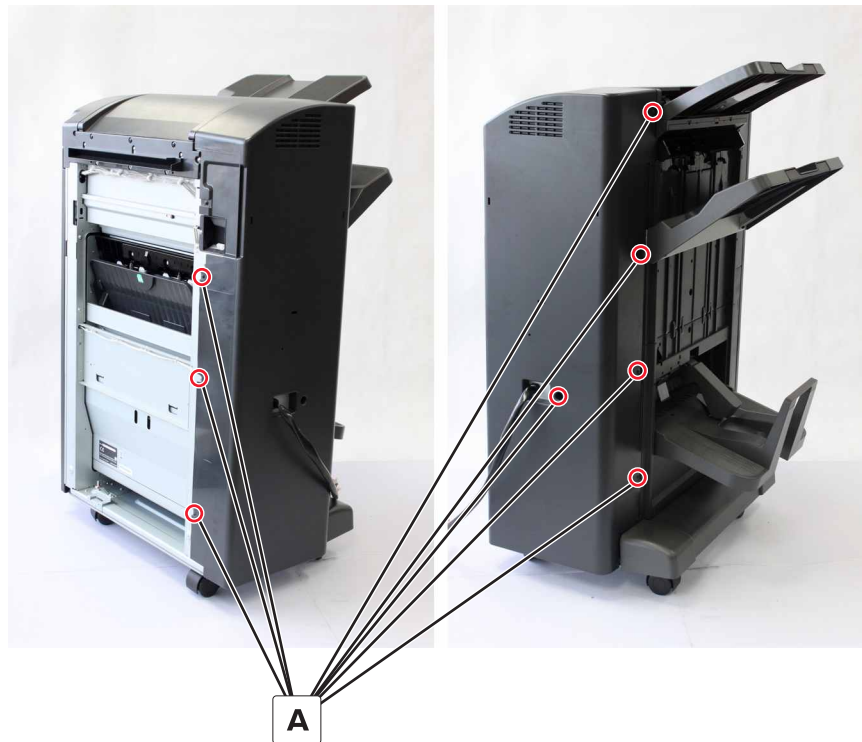
2 Remove the cover.

SHPF top door removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the screw (A), and then remove the door.

A
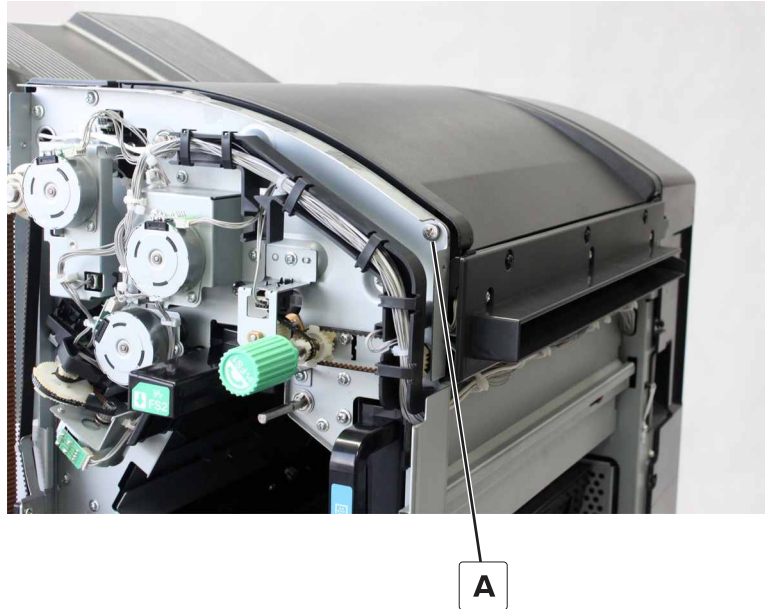
Booklet gate jam access door removal

1 Open the front door.

2 Turn the staple carriage knob to move the carriage to the rear.

3 Release the jam access door from the magnetic catch.

4 From the bottom right, remove the clip (A) from the door tab.

A
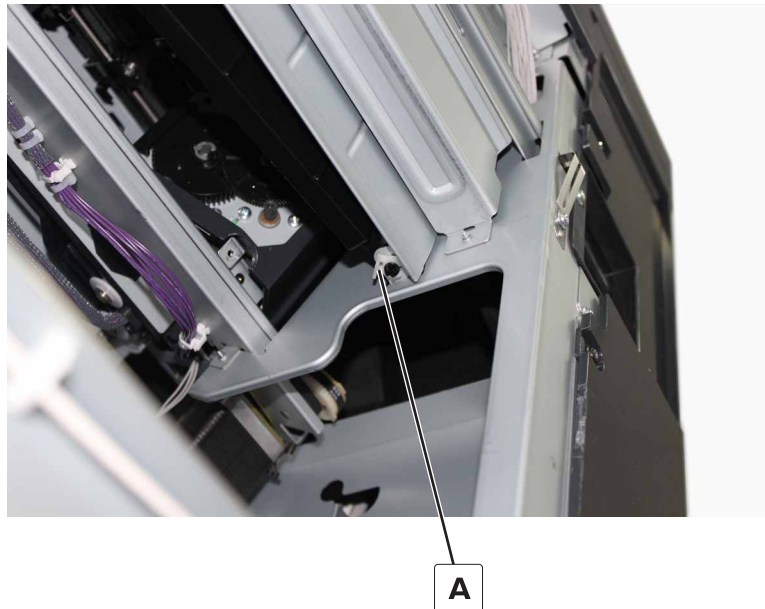
5 Remove the door.

Installation notes:

a Install the bottom door tab on the bottom frame hole.

b Push the top part of the jam access door to the frame. Align the top door tab with the top frame hole.

c Close the door. Align the pin on the door with the hole on the frame.

d Reach in from the right side, and then pull down the door. The door tabs should set into the holes.

e Install the clip.

SHPF jam access door removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Remove the two screws (A).
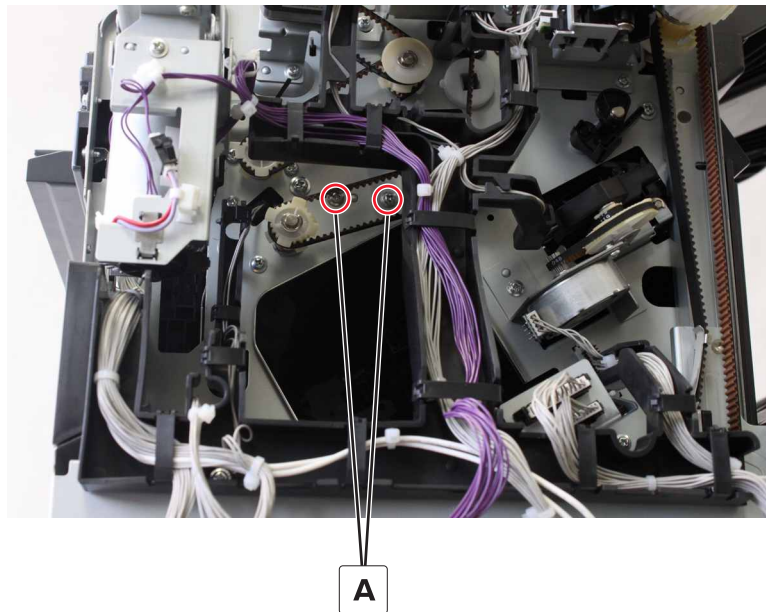
3 Open the front door.

4 Release the jam access door from the magnetic catch, and then remove the door.

Sensor (SHPF elevator bin full) removal

1 From behind the lower left cover, select the FRU.
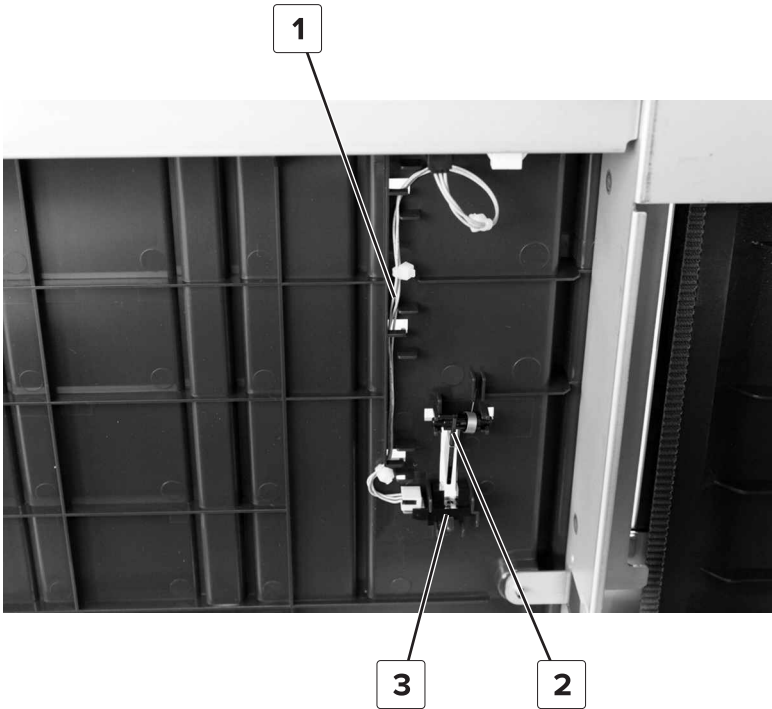
#	Part
1	SHPF elevator bin full sensor cable
2	SHPF elevator bin full sensor actuator
3	Sensor (SHPF elevator bin full)

2 Remove the FRU.

Lower left cover removals

HPBF lower left cover removal

1 Pry one side, and then remove the HPBF bin.
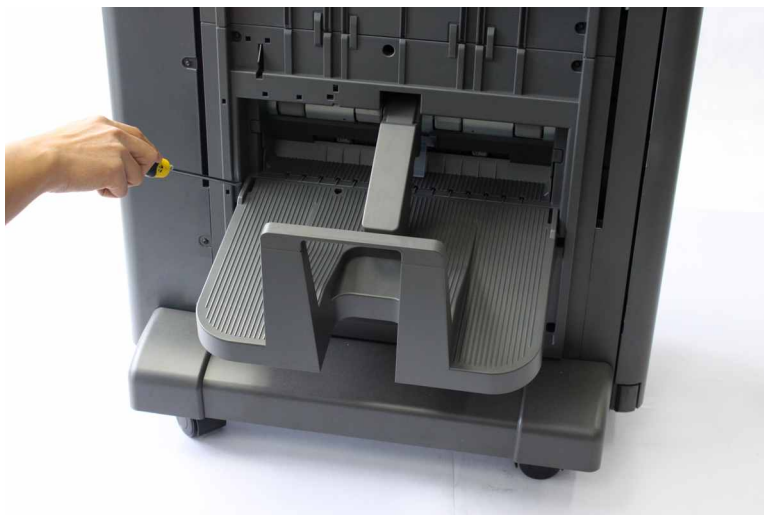
2 Remove the seven screws (A).
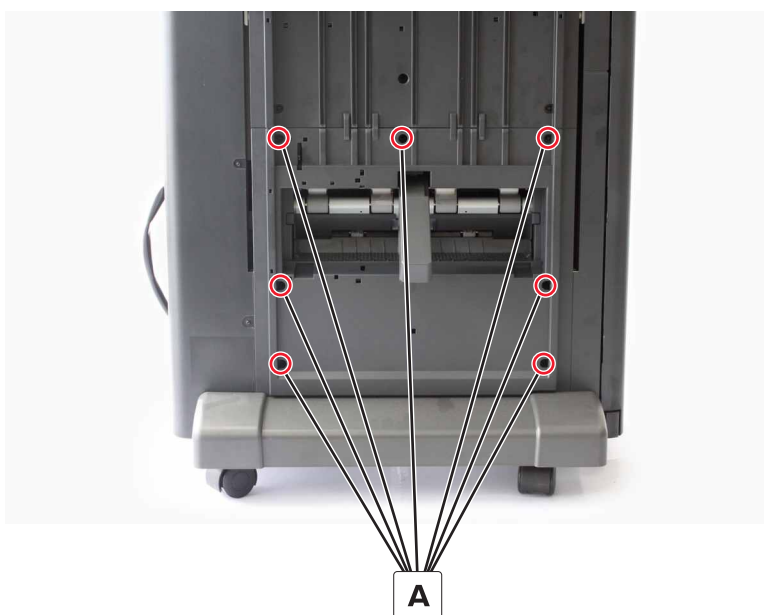
3 Swing out the cover.

4 Disconnect the two cables (B), and then remove the cover.

B
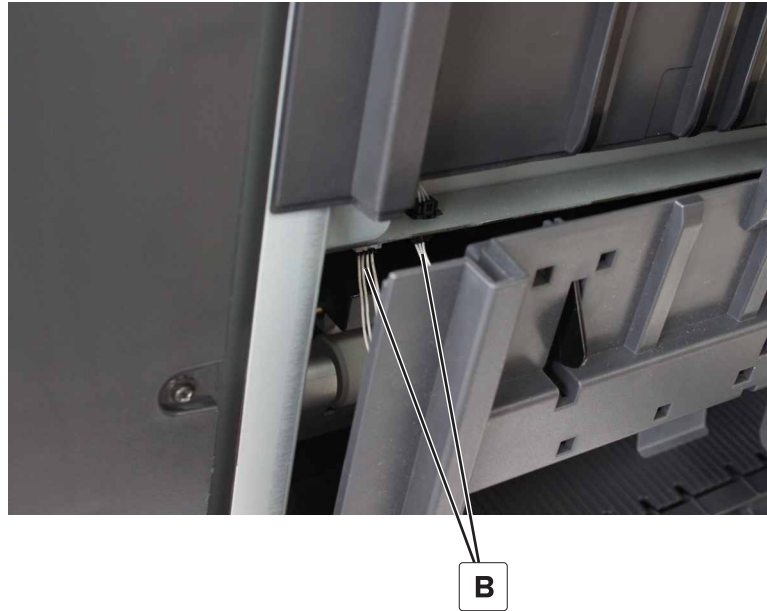
5 Remove the HPBF bin bail. See **"HPBF bin bail removal" on page 329**.

SHPF lower left cover removal

1 From behind the lower left cover, disconnect the cable (A).

A
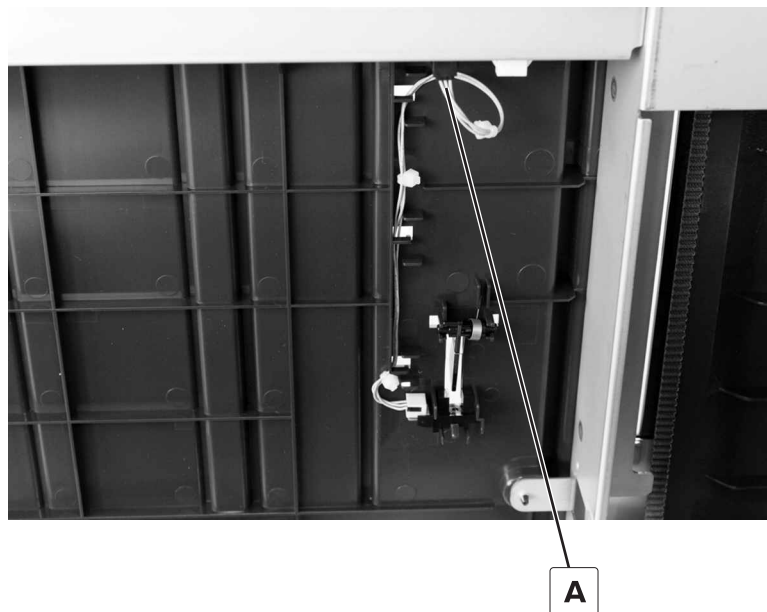
2 Remove the seven screws (B), and then remove the cover.

Parts removal

342
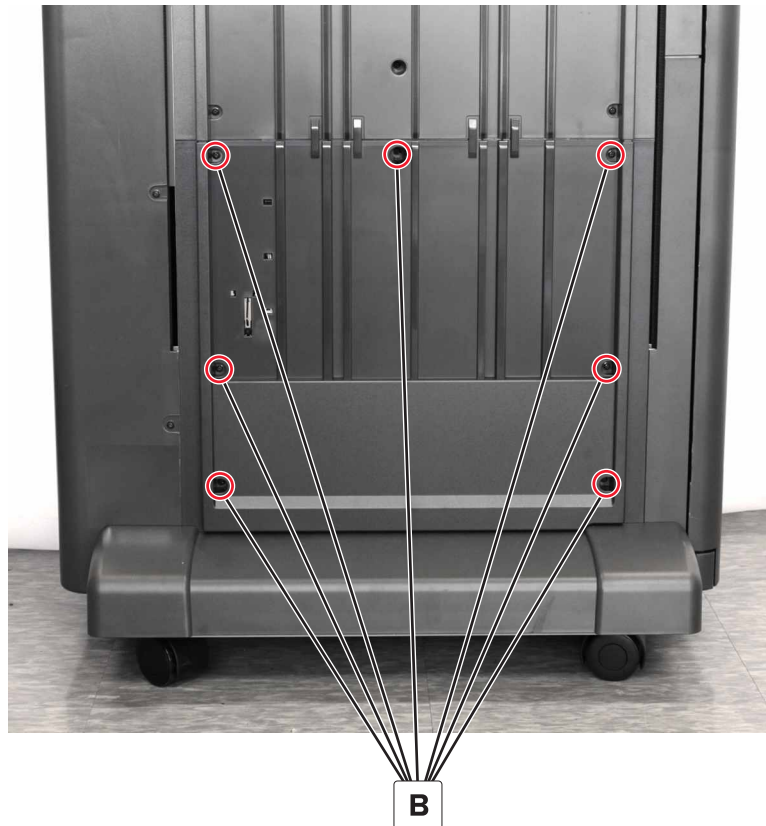
HPBF lower left cover sensors removals

1 Remove the HPBF lower left cover. See **"Lower left cover removals" on page 340**.

2 Remove the FRU.
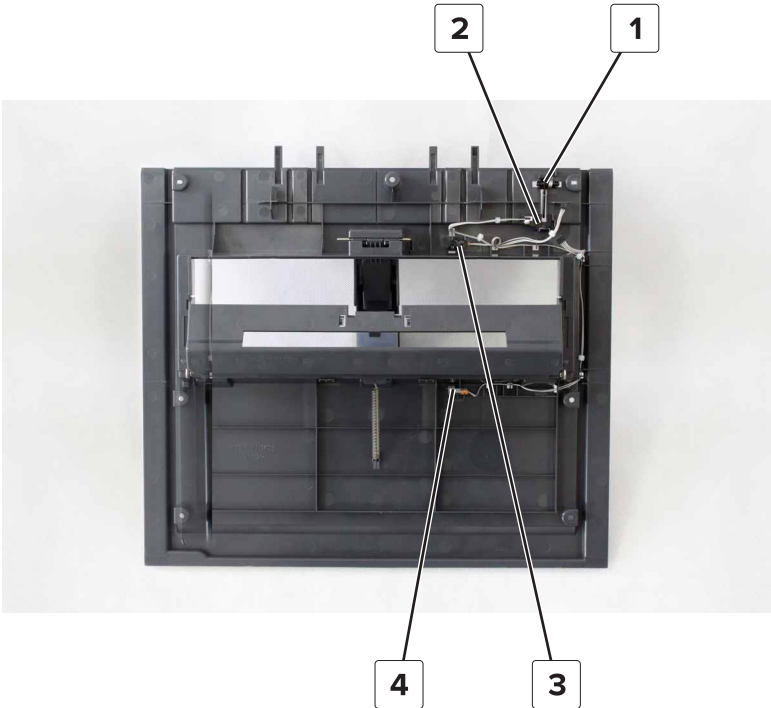
#	Part
1	HPBF elevator bin full sensor actuator
2	Sensor (HPBF elevator bin full)
3	Sensor (HPBF bin empty, receive)
4	Sensor (HPBF bin empty, transmit)

HPBF exit roller cover removal

1 Remove the HPBF lower left cover. See **"Lower left cover removals" on page 340**.

2 Disconnect the spring (A).

3 Remove the two screws (B), and then remove the cover.
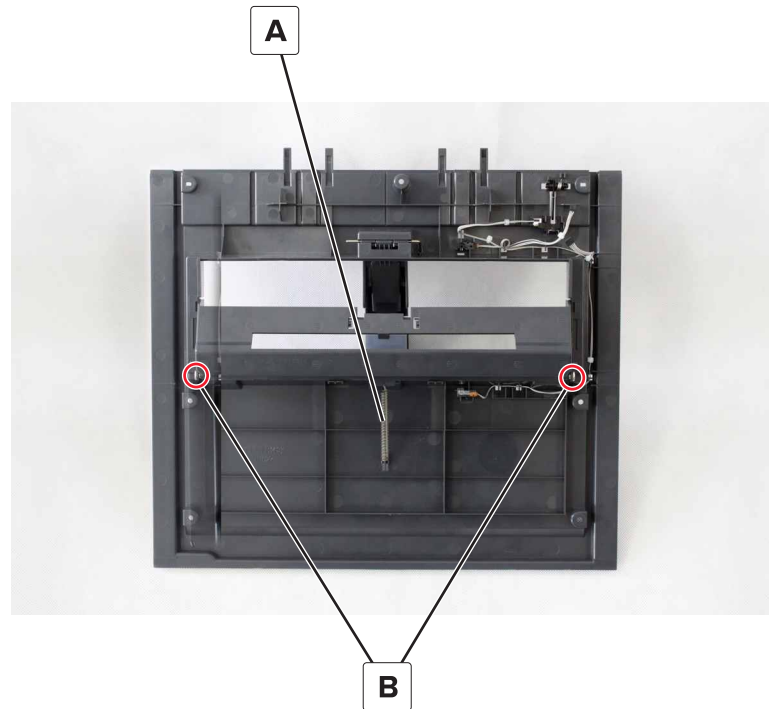
SHPF upper left cover removal

1 Remove the elevator bin. See .

2 Remove the elevator bin bracket. See .

3 Remove the HBPF lower left cover or the SHPF lower left cover. See .

4 Remove the seven screws (A).
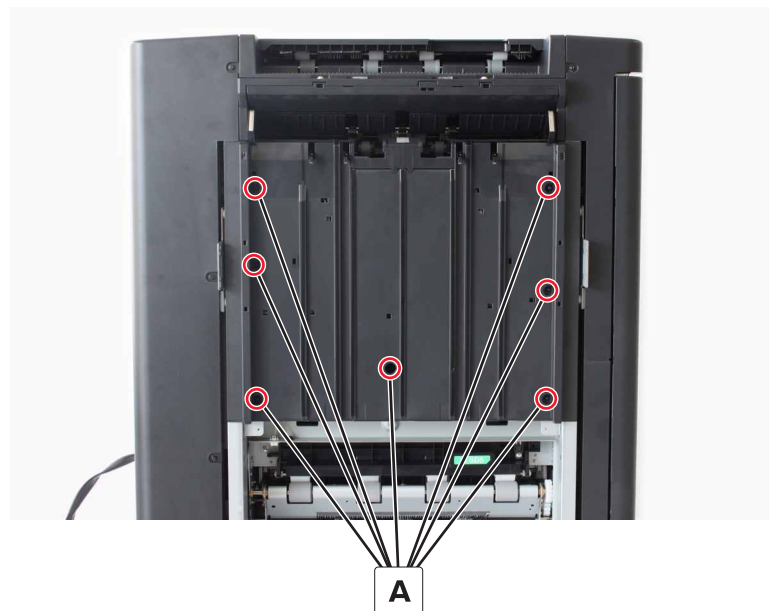
Parts removal

5 Swing out the cover.

6 Disconnect the two cables (B), and then remove the cover.
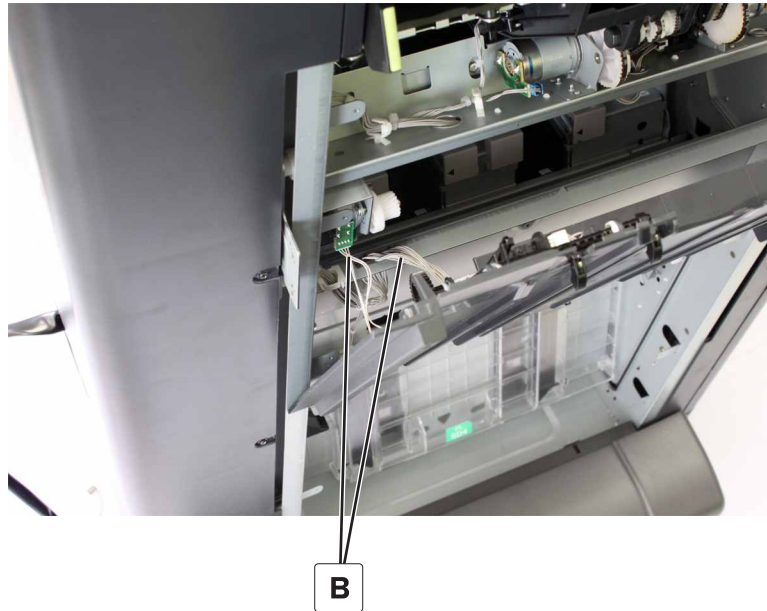
SHPF upper left cover sensors removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the appropriate sensor.
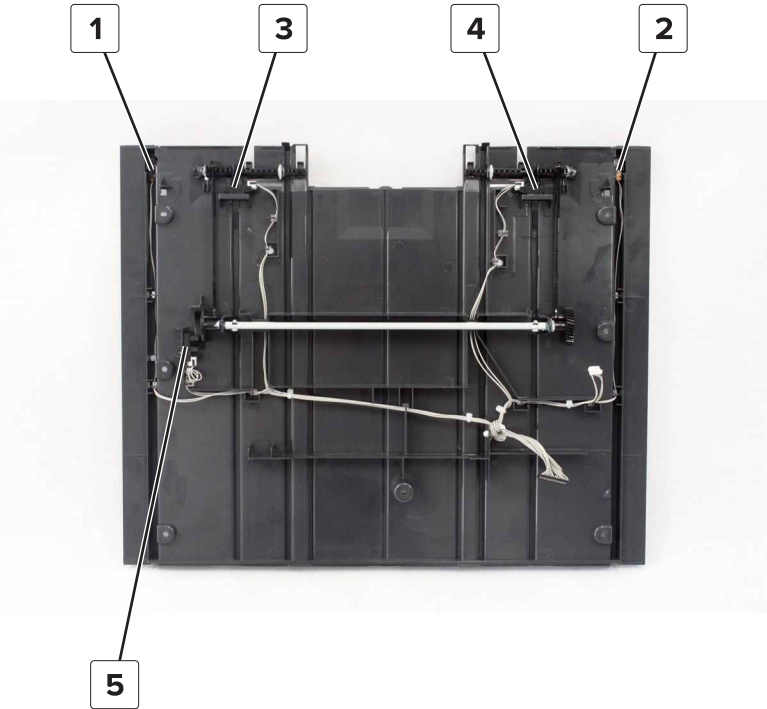
#	Part
1	Sensor (SHPF elevator bin stack height, receive)
2	Sensor (SHPF elevator bin stack height, transmit)
3	Sensor (SHPF elevator bin front stack height)
4	Sensor (SHPF elevator bin rear stack height)
5	Sensor (SHPF bin lever control)

SHPF elevator bin stack height sensor actuator removal

Note: Shown is the removal of the front actuator. The same instructions apply when removing the rear actuator.

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the sensor (SHPF elevator bin front stack height) or sensor (SHPF elevator bin rear stack height). See **"SHPF upper left cover sensors removal" on page 345**.

6 Remove the finger (A).

7 Release the spring (B) from the holder.

8 Remove the clip (C), and then slide the bushing.

9 Disconnect the link (D).
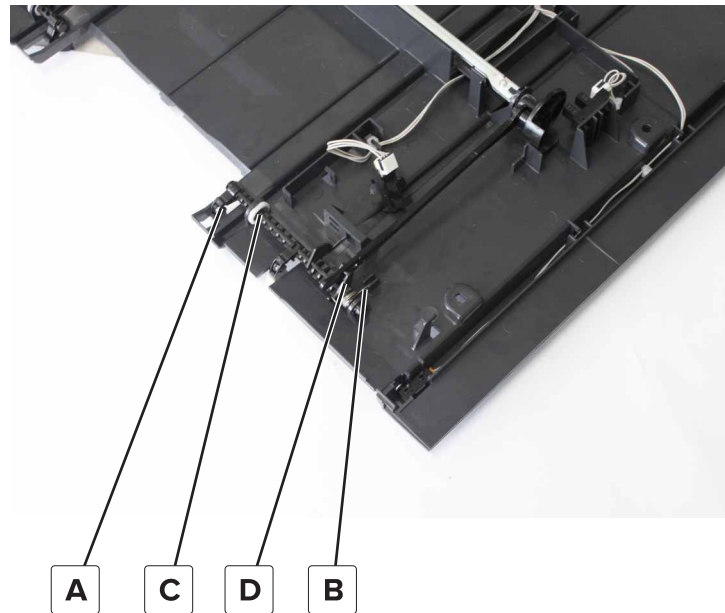
10 Rotate, and then remove the lever.
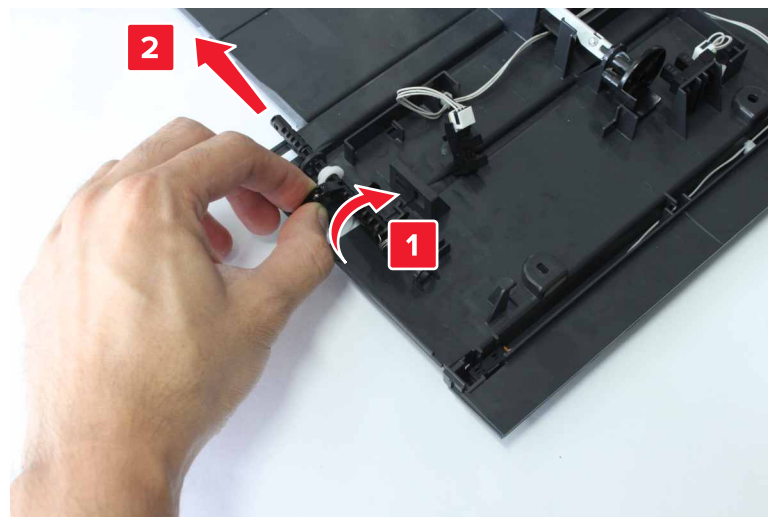
SHPF elevator bin stack height sensor actuator arms and gears removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the two screws (A), and then remove the shaft.
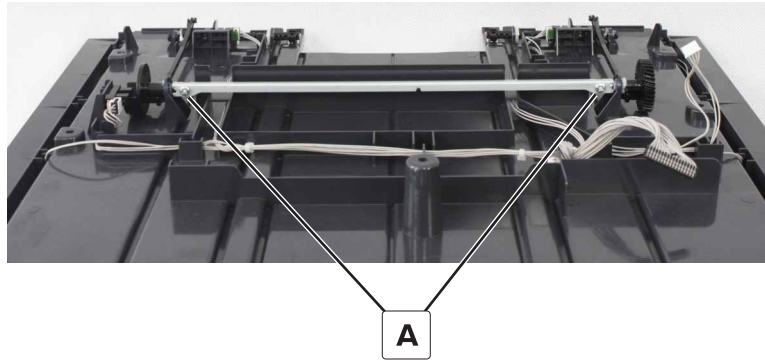
6 Disconnect the two links (B), and then remove the actuator arms and gears.
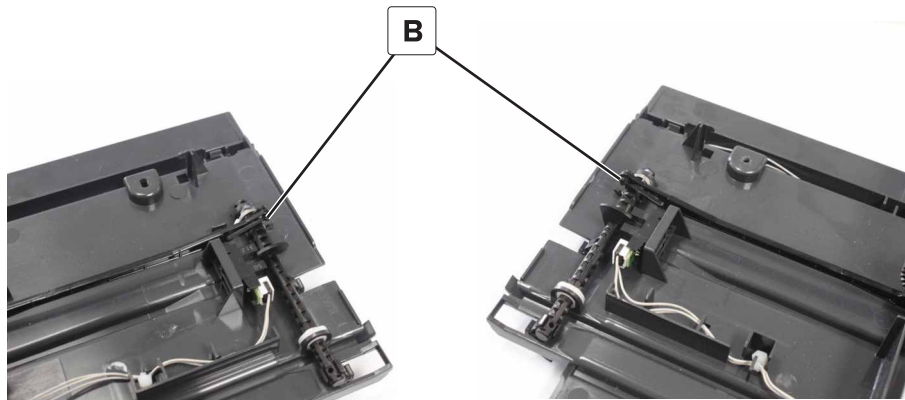
SHPF elevator bin stack height drive gear removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the clip (A), and then remove the gear.

A
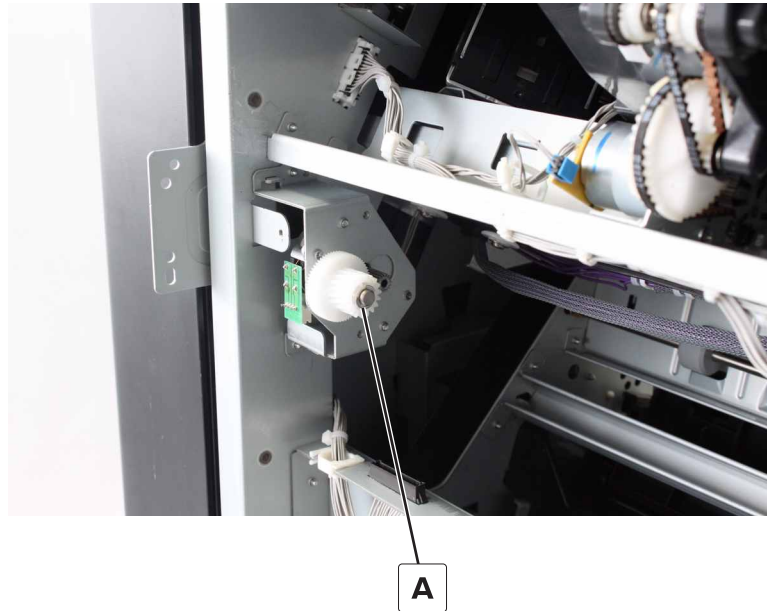
Motor (SHPF elevator bin stack height) removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

6 Remove the two screws (A), and then remove the motor bracket.

A

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

B
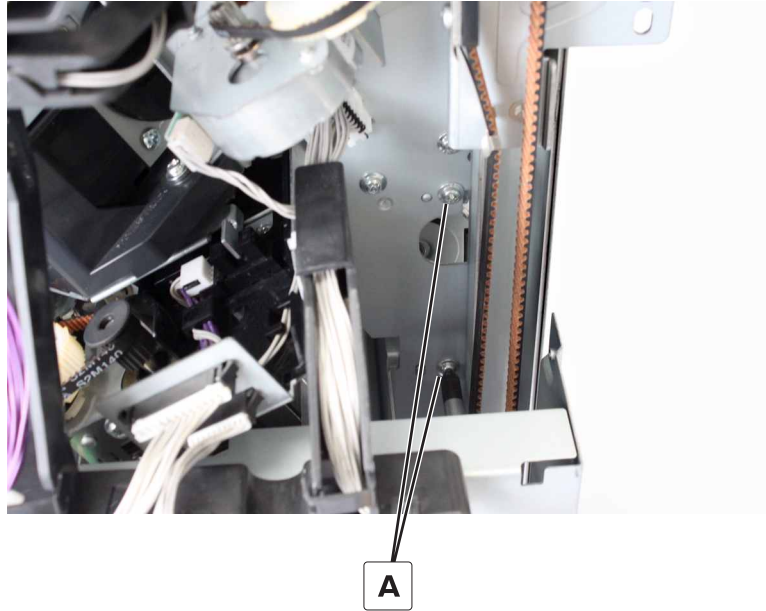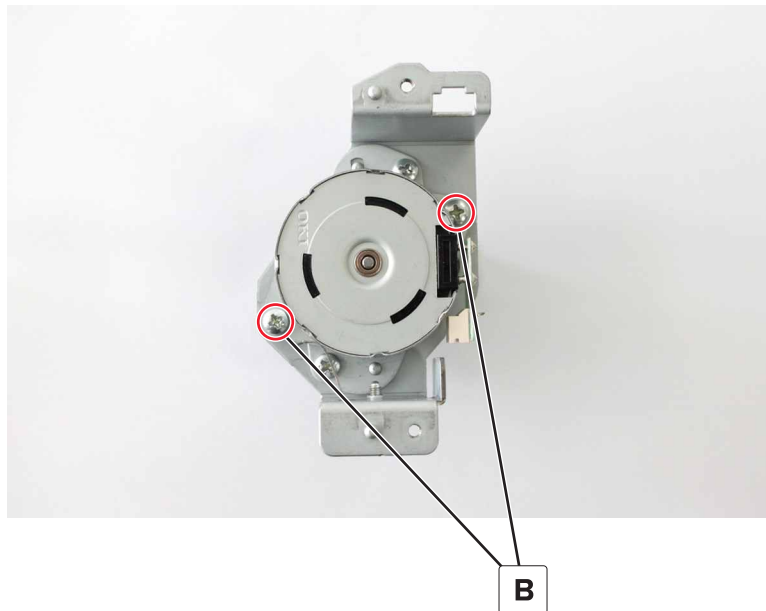
Motor (SHPF front tamper) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Disconnect the cable (A).

Parts removal

4 Remove the two screws (B), and then remove the motor bracket.
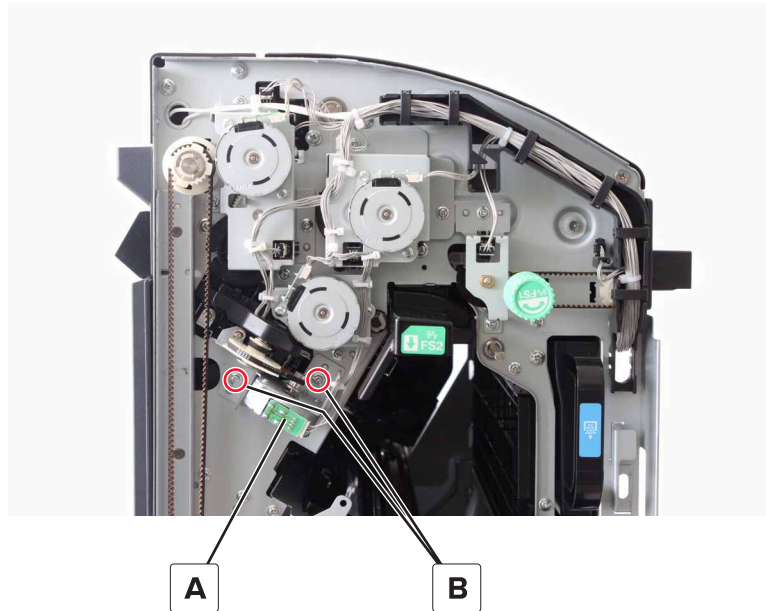
5 Remove the two screws (C), and then remove the motor.

Sensor (SHPF front tamper home) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Release the latch (A), and then remove the sensor.

A
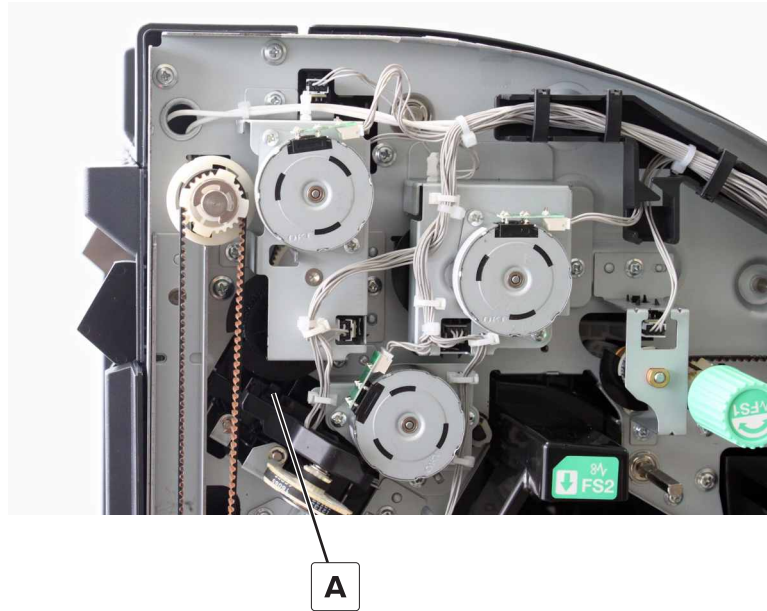
4 Disconnect the cable from the sensor.

Motor (SHPF feed) removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Disconnect the cable (A).

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

A   **B**

Parts removal

352
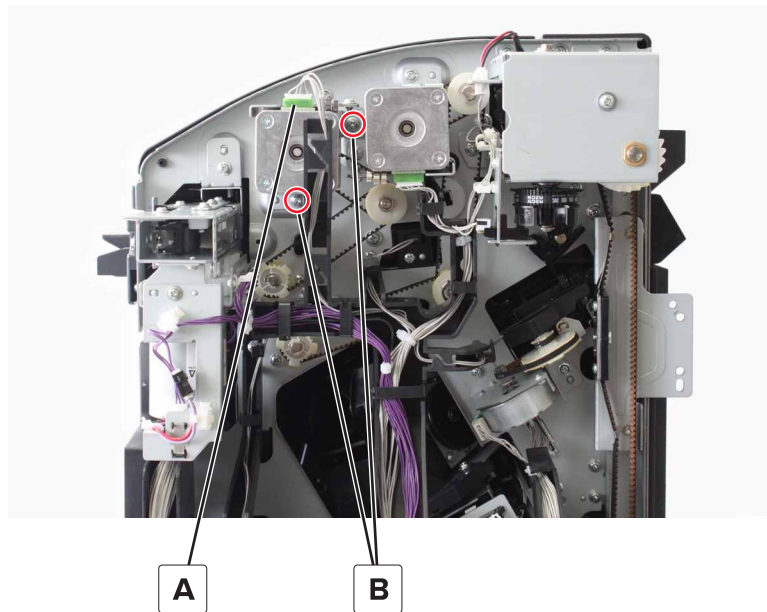
4 Remove the two screws (C), and then remove the motor.

Motor (SHPF transport) removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Disconnect the cable (A).

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

Parts removal
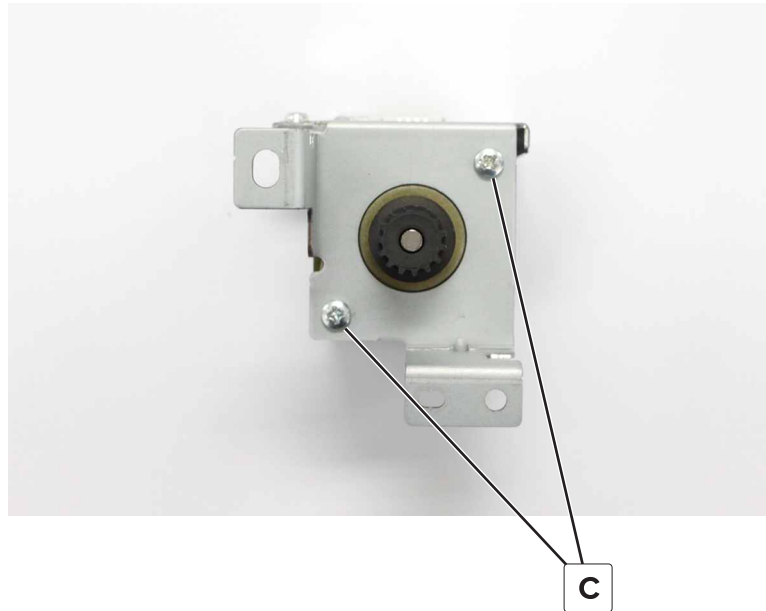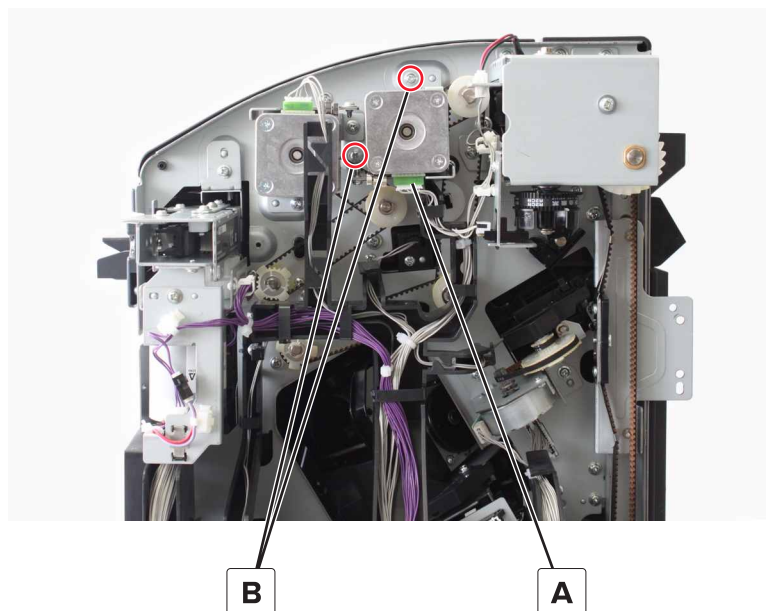
4 Remove the two screws (C), and then remove the motor.

Motor (SHPF rear tamper) removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Disconnect the cable (A).

3 Remove the two screws (B), and then remove the motor bracket.
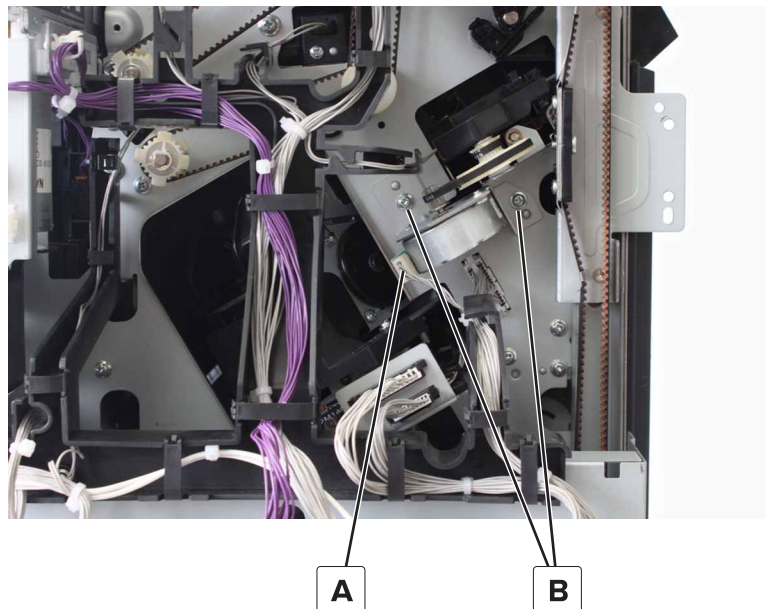
4 Remove the two screws (C), and then remove the motor.
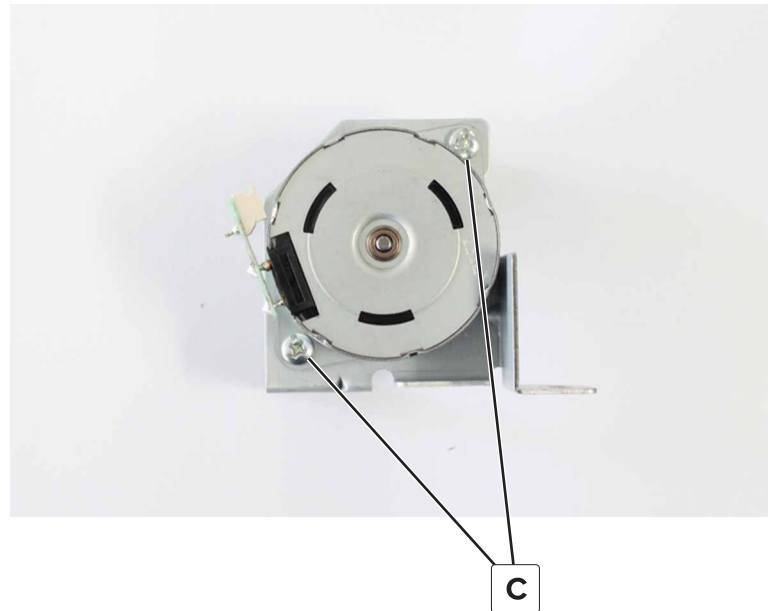
Sensor (SHPF rear tamper home) removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Release the latch (A), and then remove the sensor.
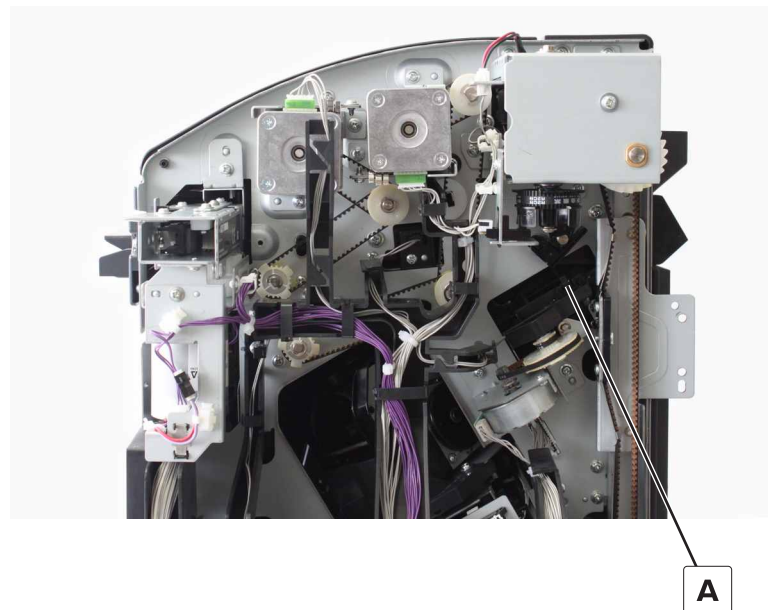
3 Disconnect the cable from the sensor.

Motor (SHPF elevator) removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Disconnect the two cables (A).
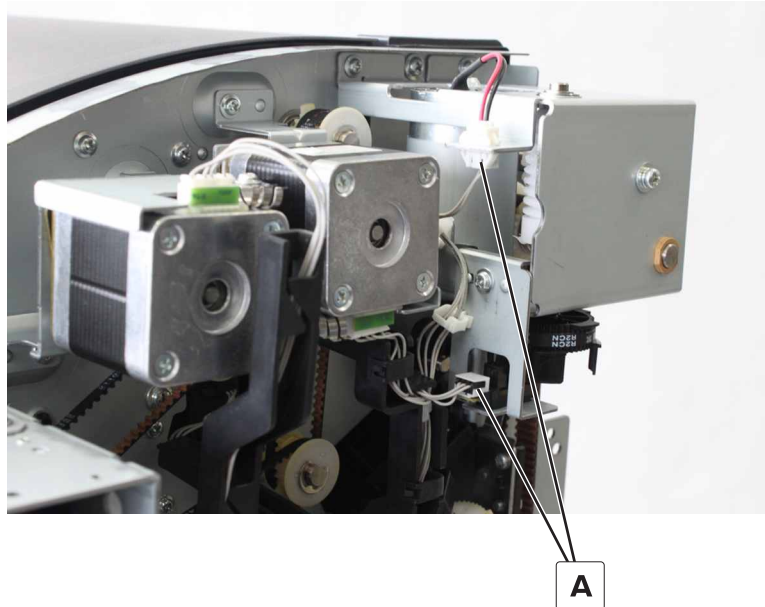
3 Remove the four screws (B), and then remove the motor bracket.
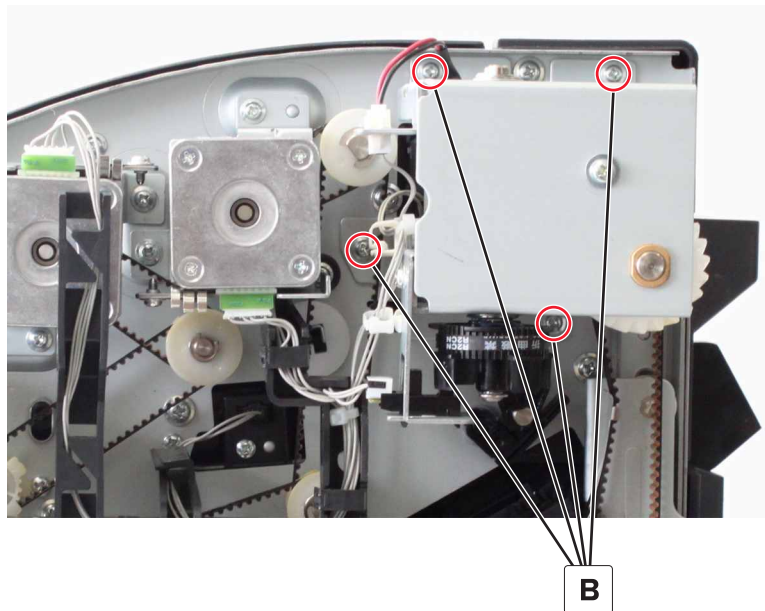
4 Disconnect the cable (C).
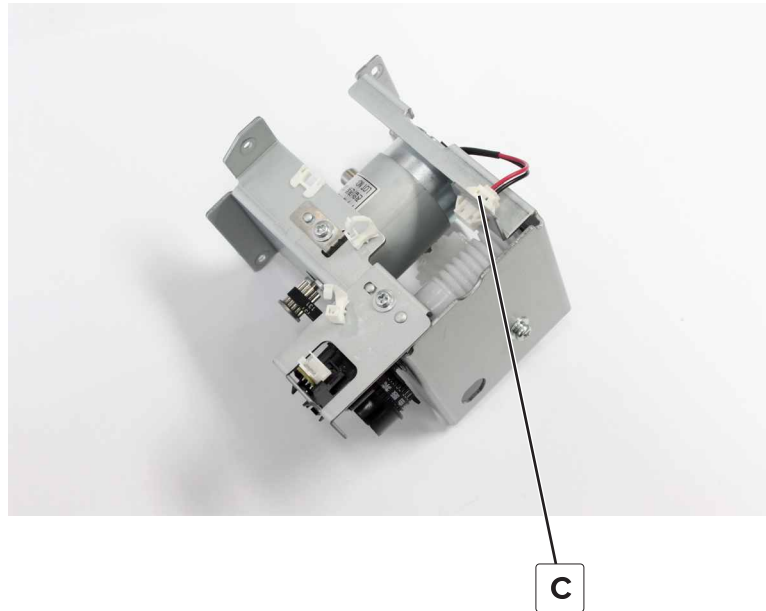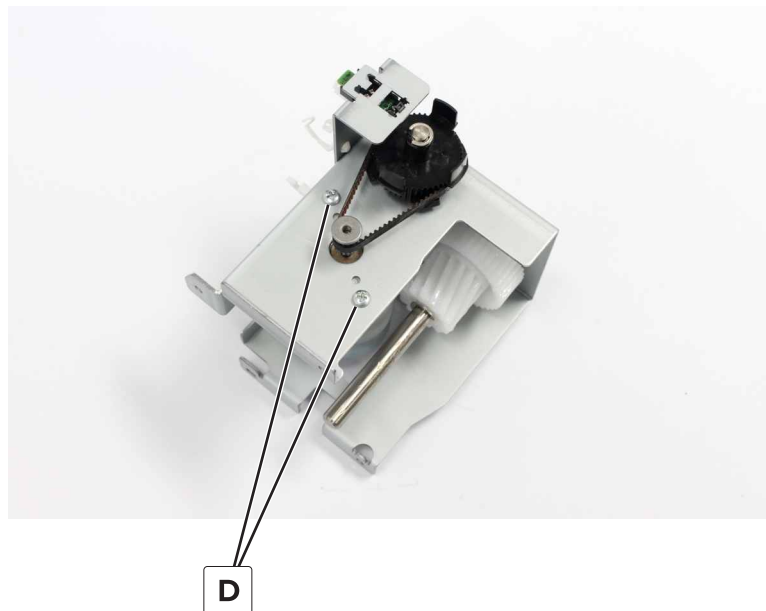
C

5 Remove the two screws (D), and then remove the motor.

D

Sensor (SHPF elevator position) removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

3 Remove the screw (A), and then remove the sensor bracket.

A
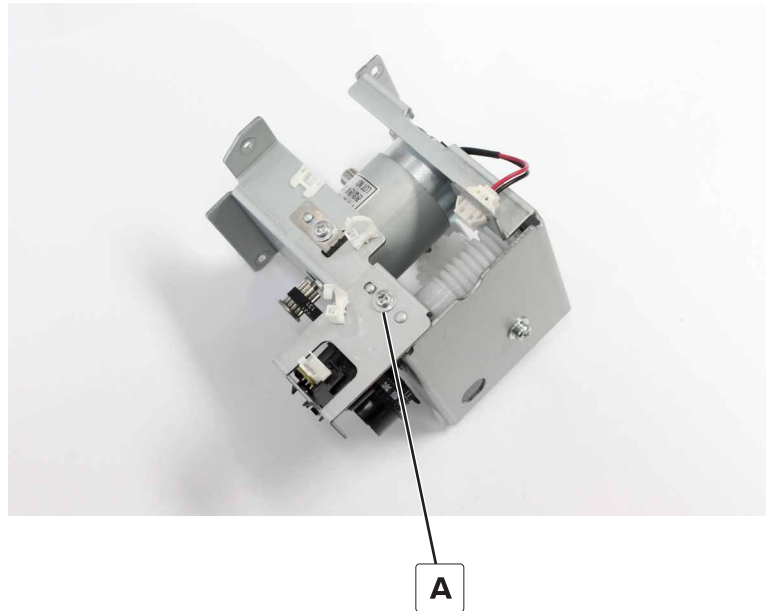
4 Remove the sensor from the bracket.

SHPF elevator drive assembly removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Remove the motor (SHPF elevator). See **"Motor (SHPF elevator) removal" on page 356**.

3 Remove the sensor (SHPF elevator position). See **"Sensor (SHPF elevator position) removal" on page 357**.

4 Remove the clip (A), gear (B), ratchet (C), and spring (D).
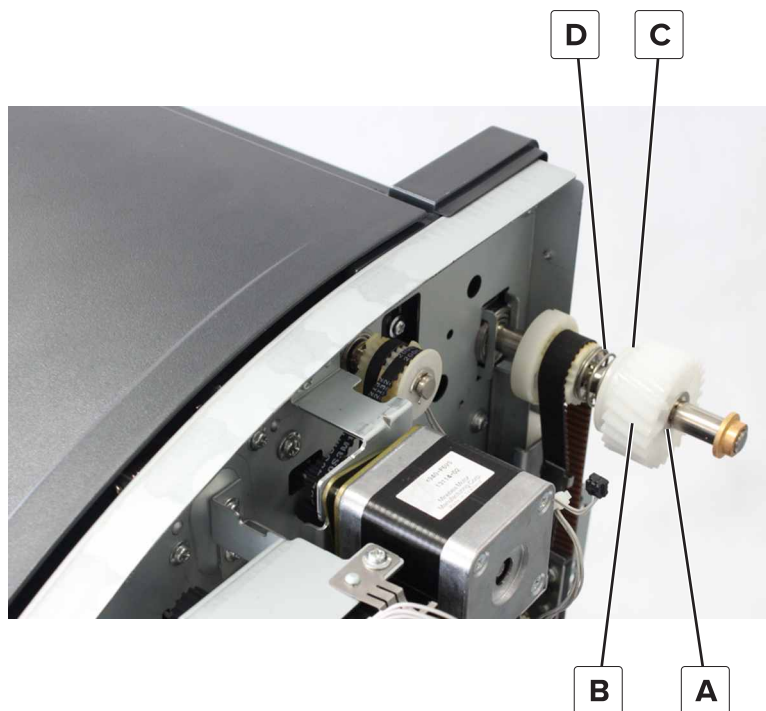
Installation notes:

a Install the spring, and then install the pin.

b Install the gears with the teeth (A) facing each other.

Parts removal

359
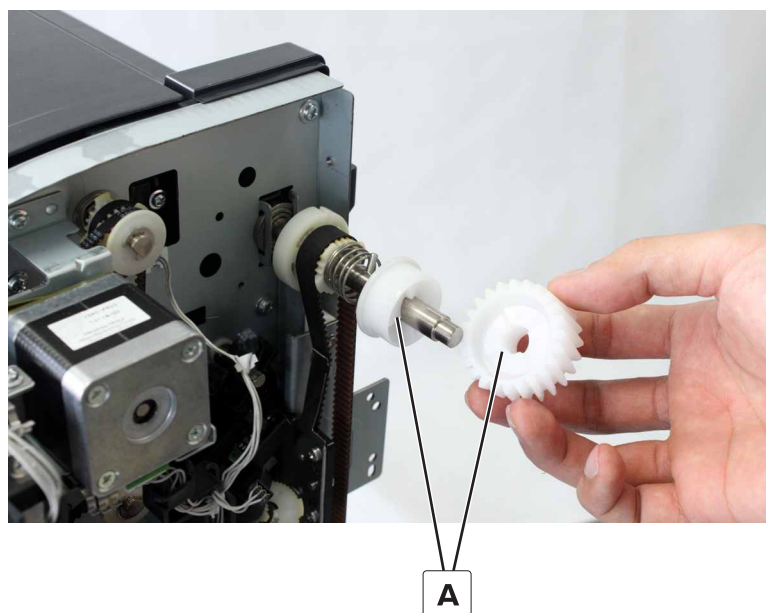
Sensor (SHPF top bin full) removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

3 Remove the screw (A).

A
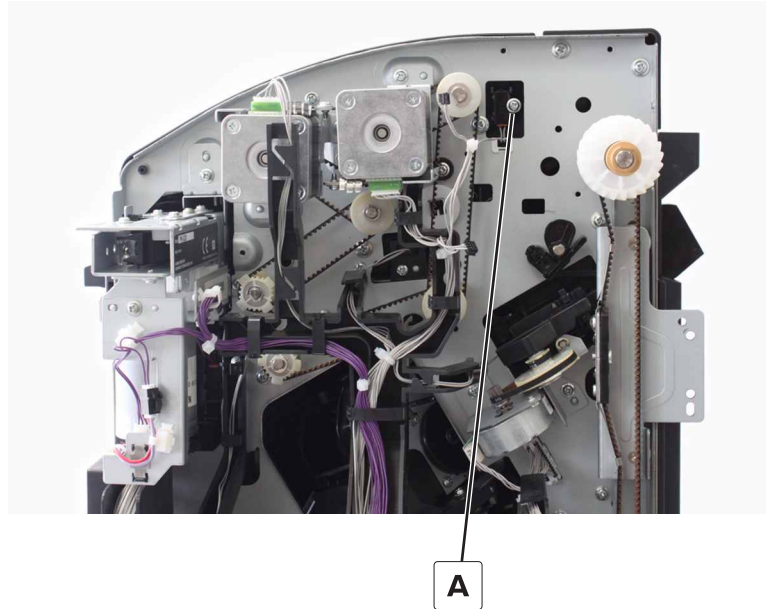
4 Remove the sensor, and then disconnect the cable.

SHPF paddle cam and compiler guide lever removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Remove the FRU.

2   **1**
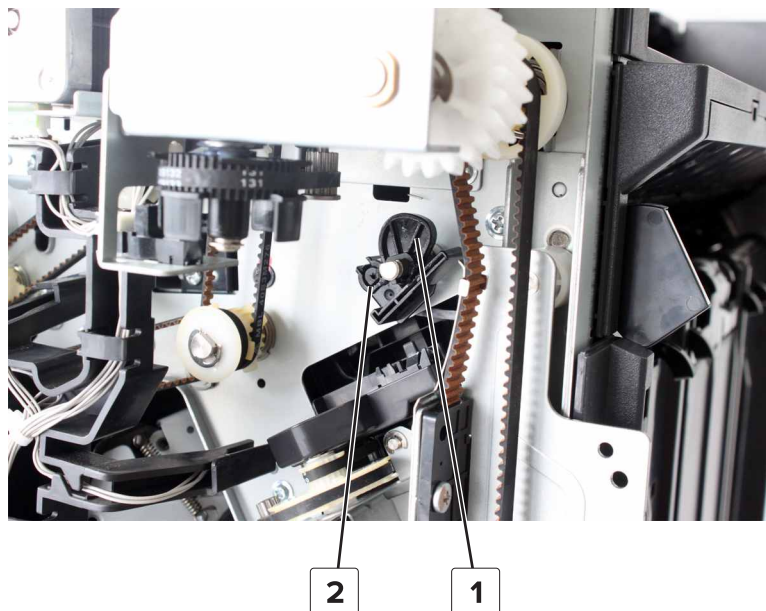
Parts removal

#	Part
1	SHPF paddle cam
2	SHPF compiler guide lever

SHPF controller board removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Disconnect all the cables from the board.

3 Remove the four screws (A), and then remove the board.
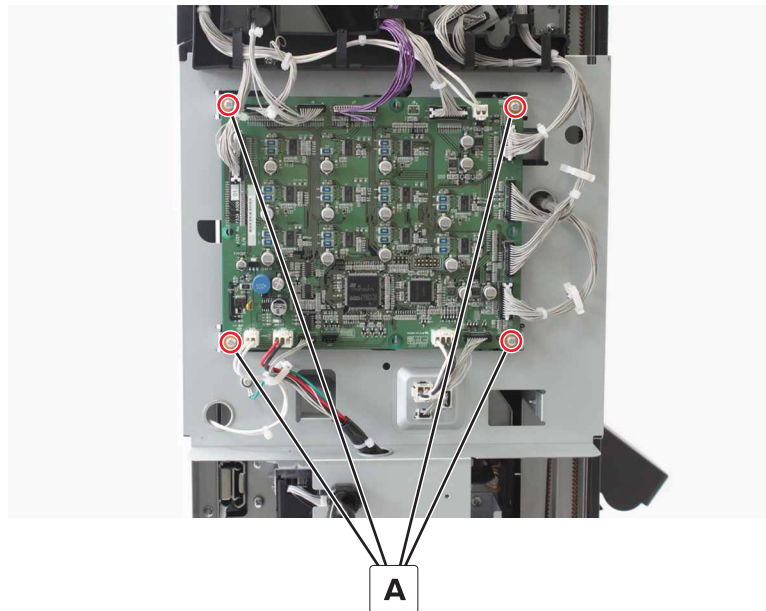
Punch unit removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Disconnect the cable (A) from the controller board.

Parts removal

3 Remove the screw (B), and then pull out the punch unit.
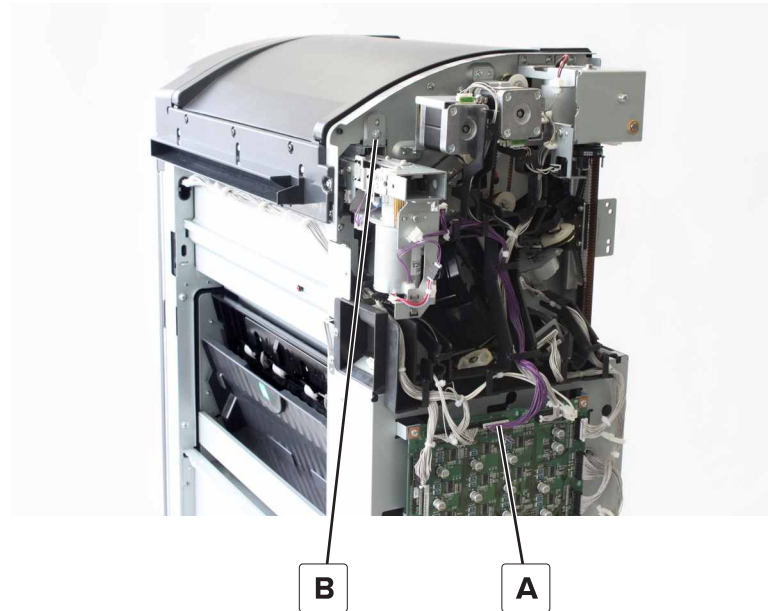
Sensor (hole punch box full) removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Remove the punch unit. See **"Punch unit removal" on page 361**.

3 Disconnect the cable (A), and then remove the sensor.
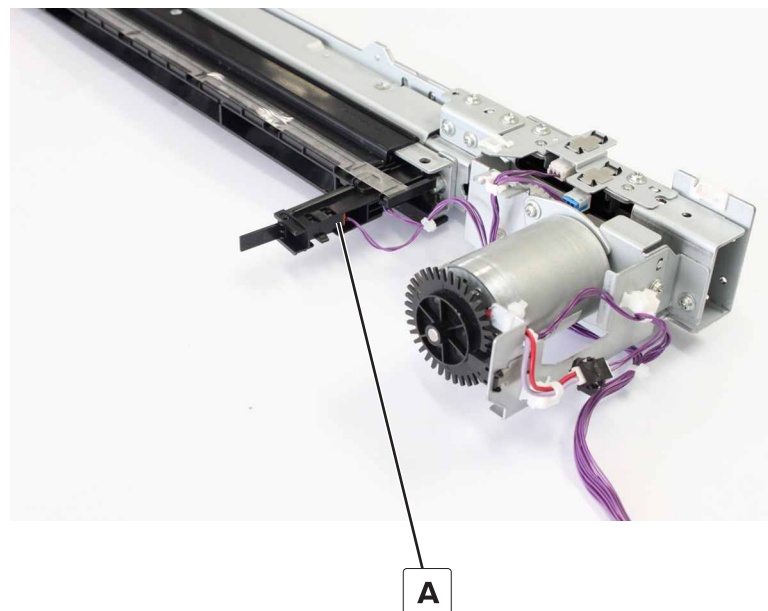
4 Remove the screw (B), remove the plastic sheet, and then remove the sensor.
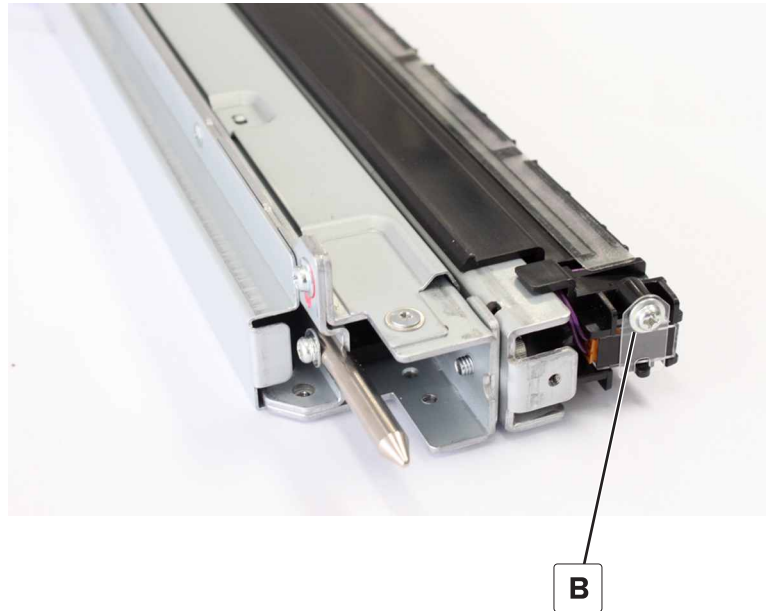
5 Disconnect the sensor from the cable.

SHPF staple unit assembly removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the two screws (A).

Parts removal
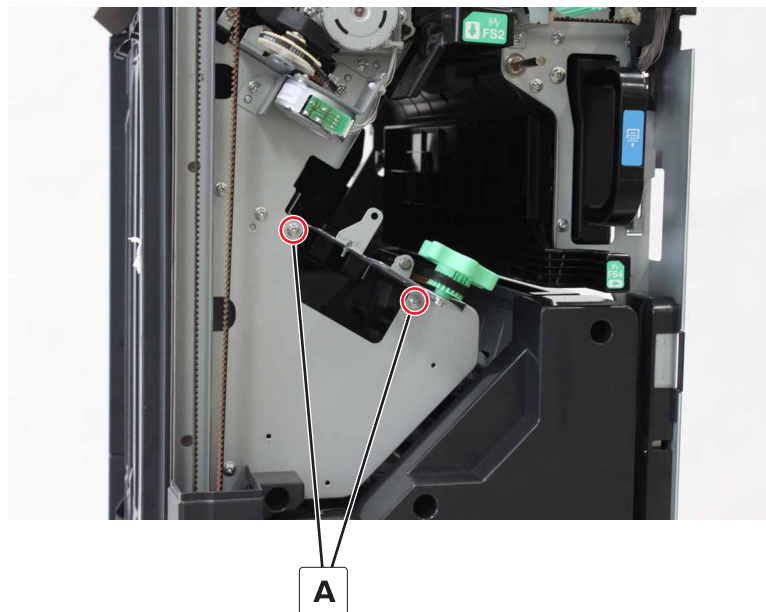
4 Disconnect the two cables (B), and then remove the two screws (C).
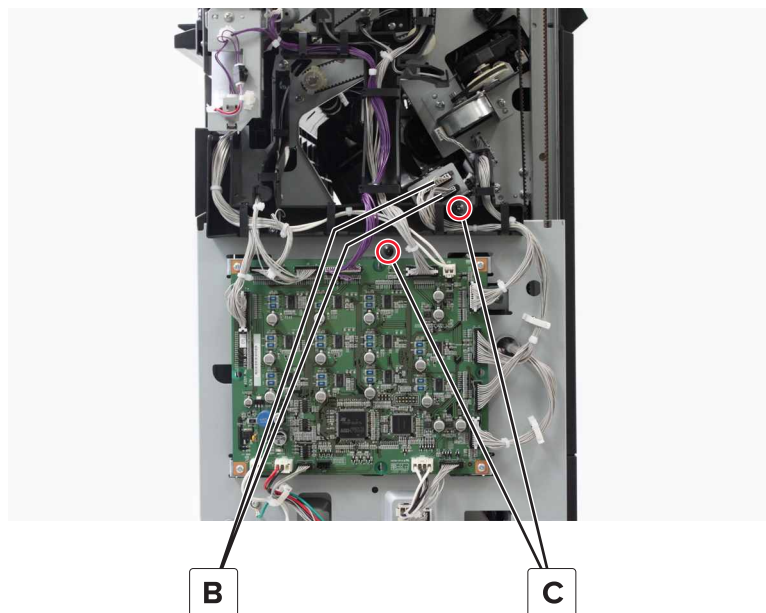
5 Turn the knob (D) to move the staple unit under the front aligner.
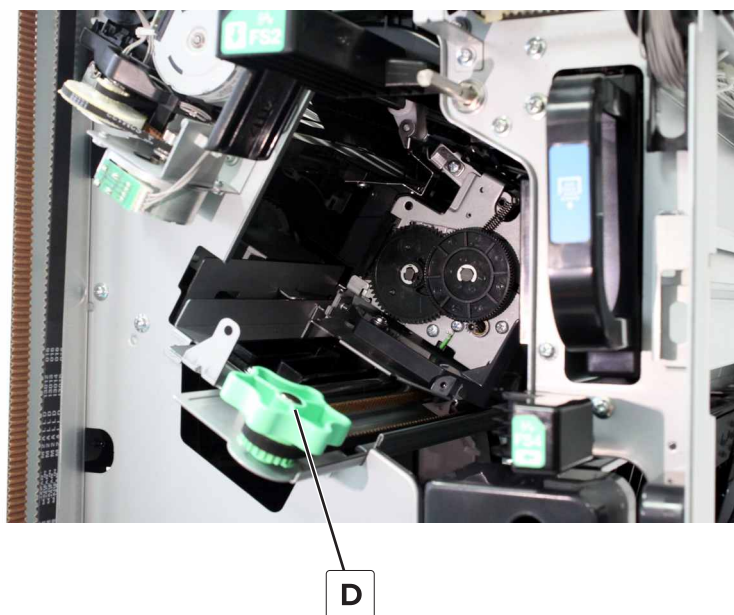
6 Push the assembly to the left, and then partially pull it out.
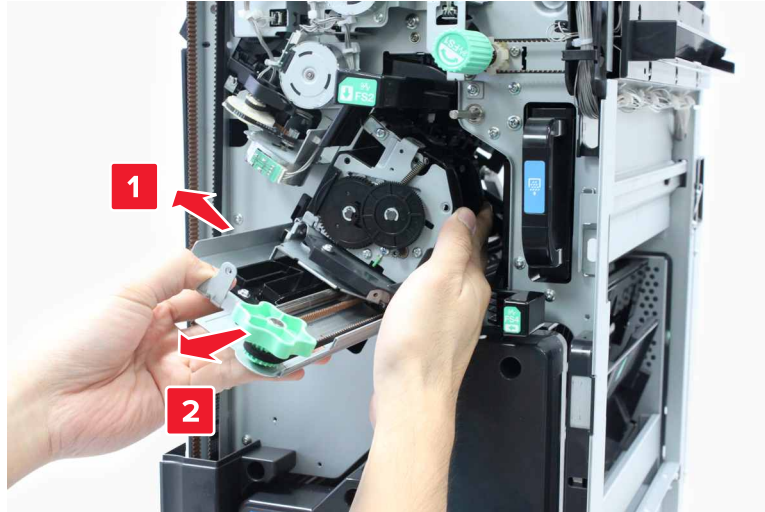
7 Lift the assembly until the cables on the bottom clear the finisher frame, and then remove the assembly.
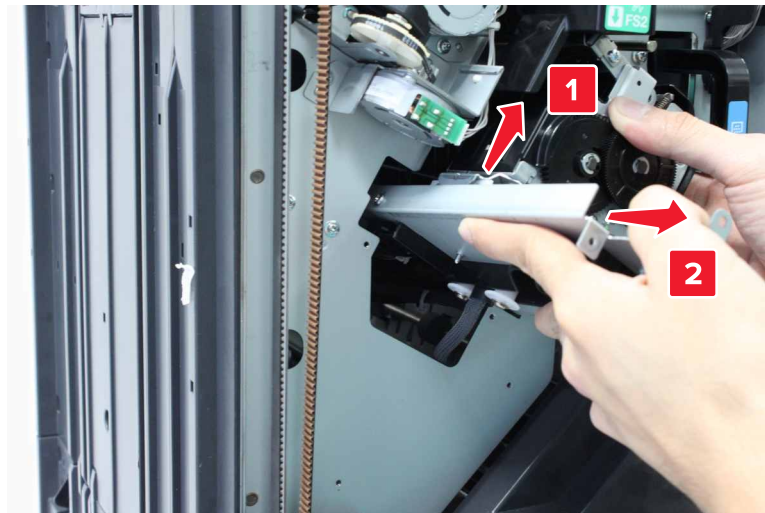
SHPF staple unit position sensors removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

4 Remove the appropriate sensor.
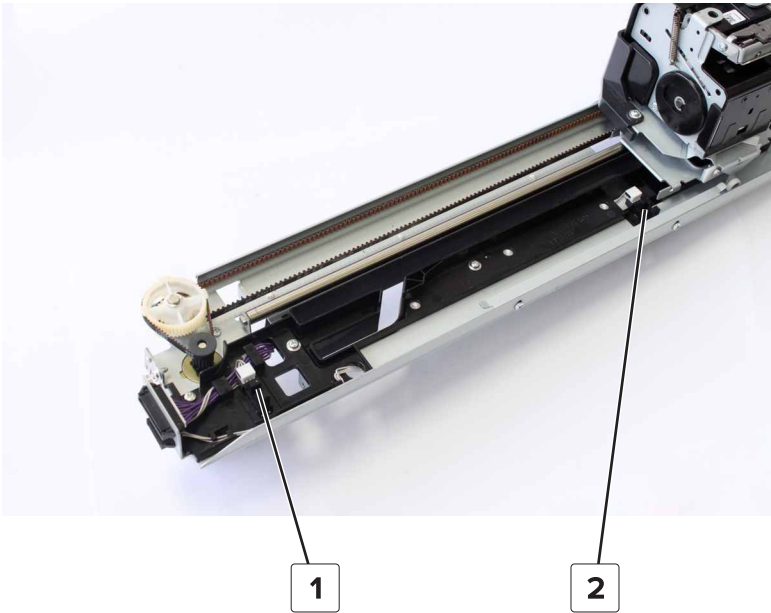
#	Part
1	Sensor (SHPF staple unit carriage home)
2	Sensor (SHPF staple unit carriage center)

SHPF staple unit drive belt and gear removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

4 Remove the clip (A).

A
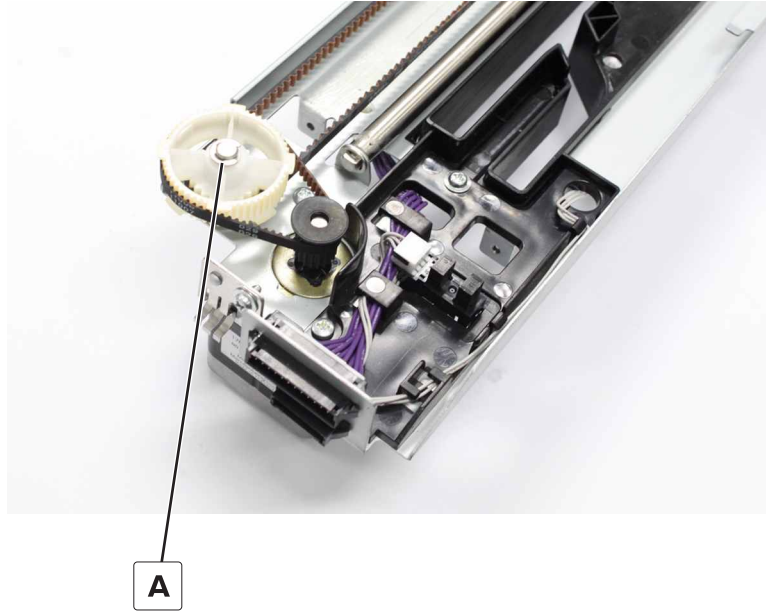
5 Remove the gear and belt.

6 Remove the screw (B), and then remove the knob.
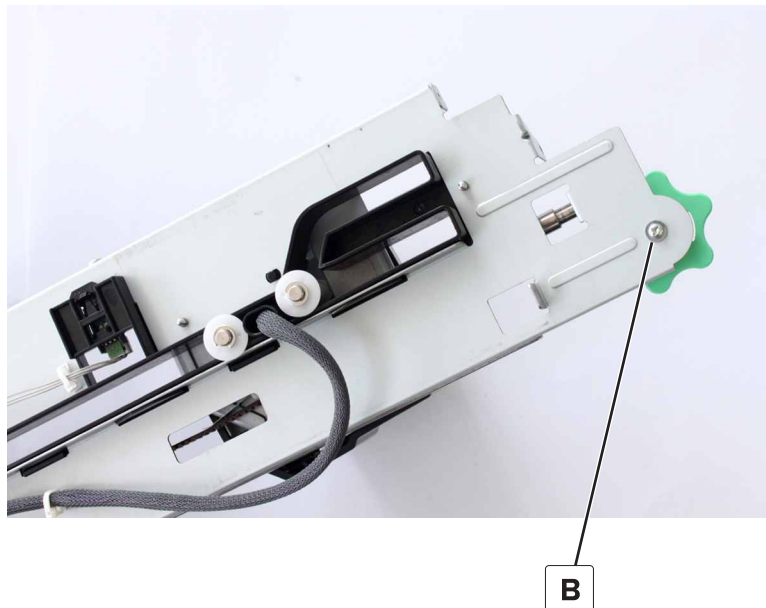
B

Motor (SHPF staple unit carriage) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

4 Disconnect the cable (A).

A
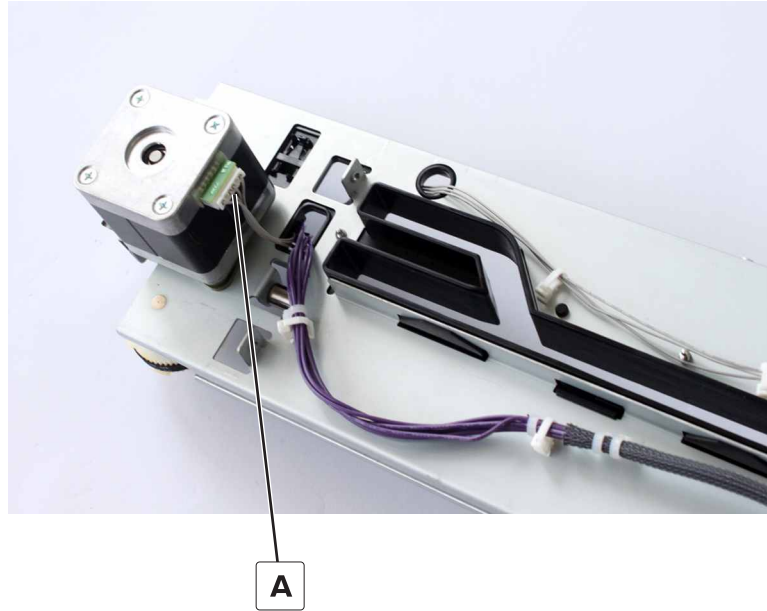
5 From under the motor, remove the two screws (B), and then remove the motor.
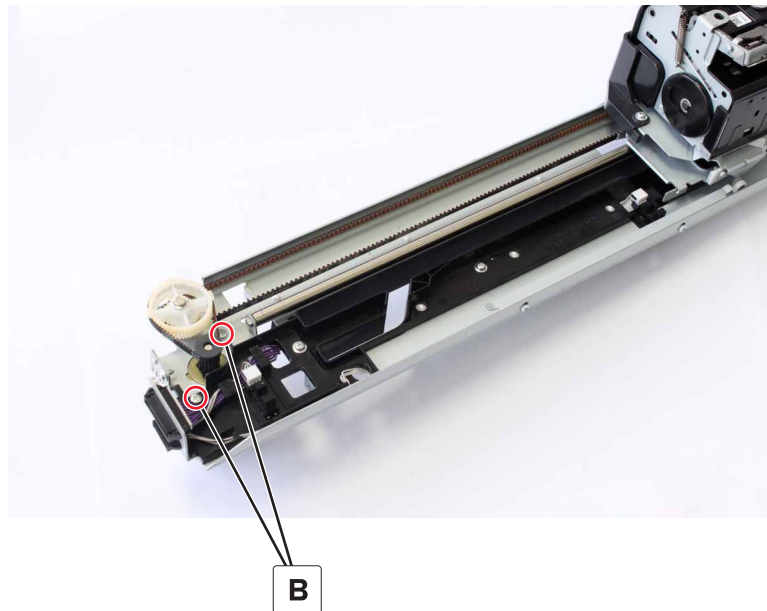
B

SHPF staple unit removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

4 From under the assembly, remove the two clips (A), and then remove the two bushings.
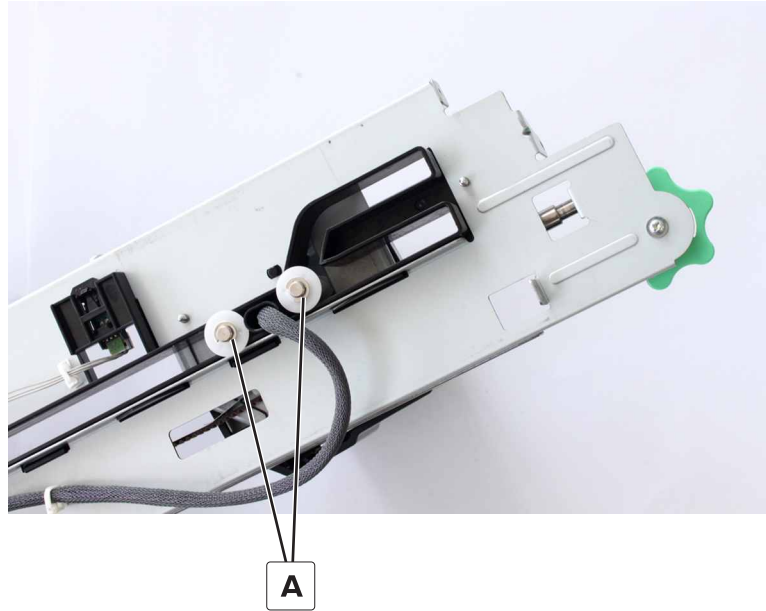
5 From the top, remove the two screws (B), and then remove the cover.
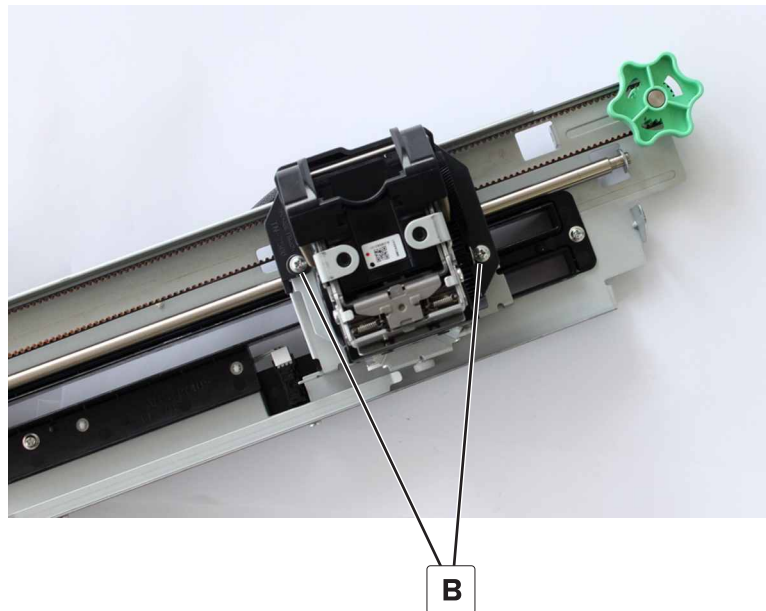
6 Disconnect the two cables (C), and then remove the carriage.

C
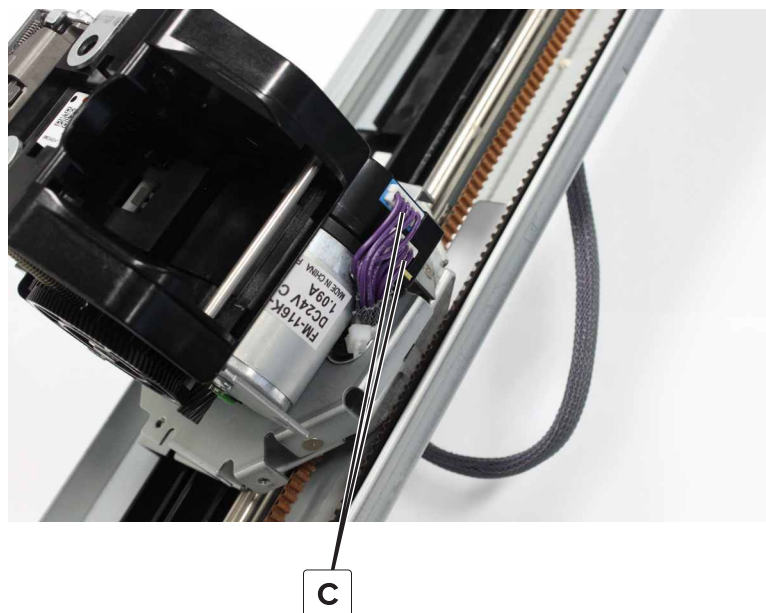
7 Remove the two screws (D).

D
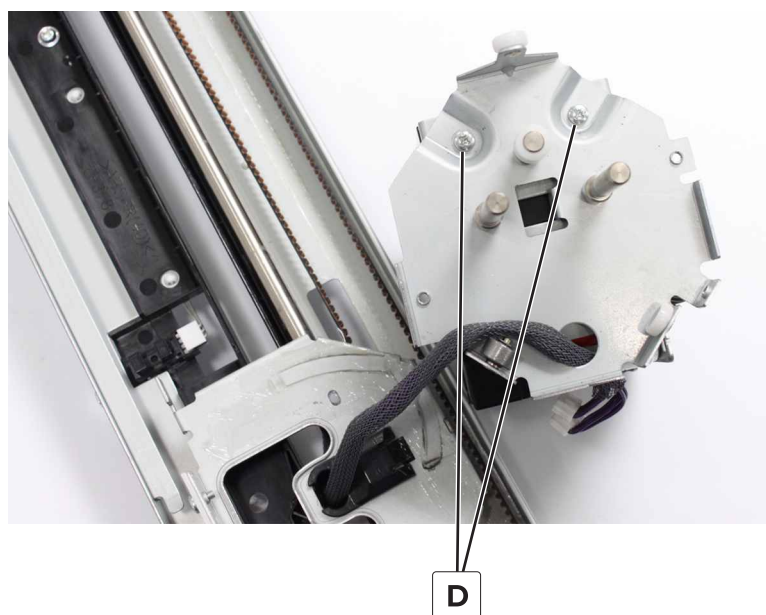
8 Rotate, and then remove the staple unit.

Parts removal

SHPF staple unit carriage removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

4 Remove the staple unit. See **"SHPF staple unit removal" on page 368**.

5 Remove the screw (A), and then remove the knob.
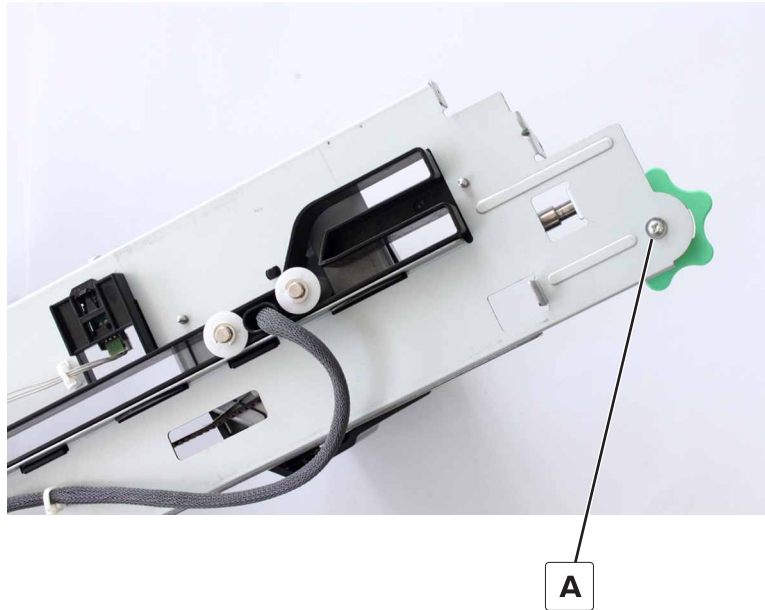
6 Remove the clip (B), and then remove the shaft.
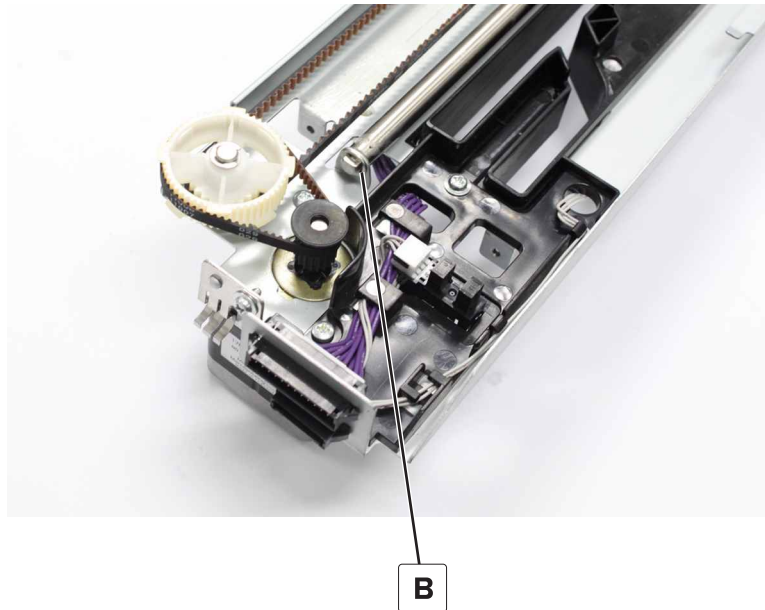
7 Unlatch and then remove the cable holder (C).

C
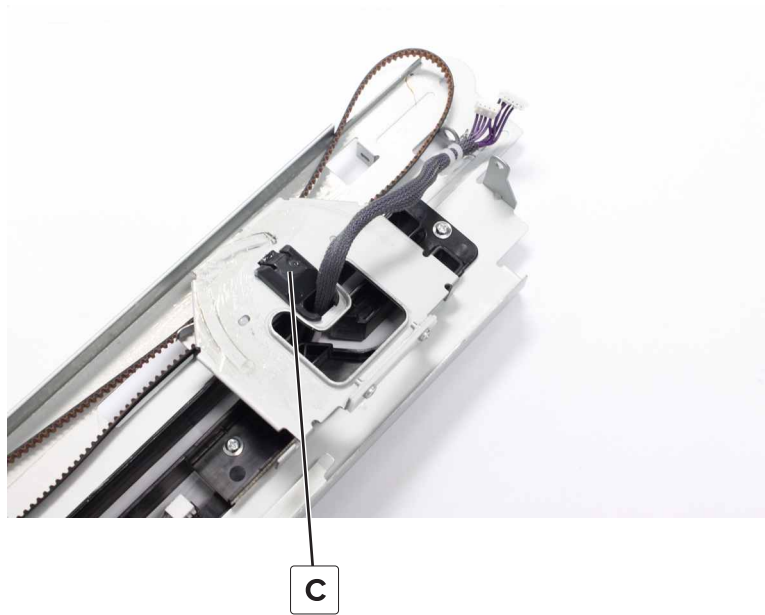
8 Flip the carriage, and then remove the belt from the holder (D).

D
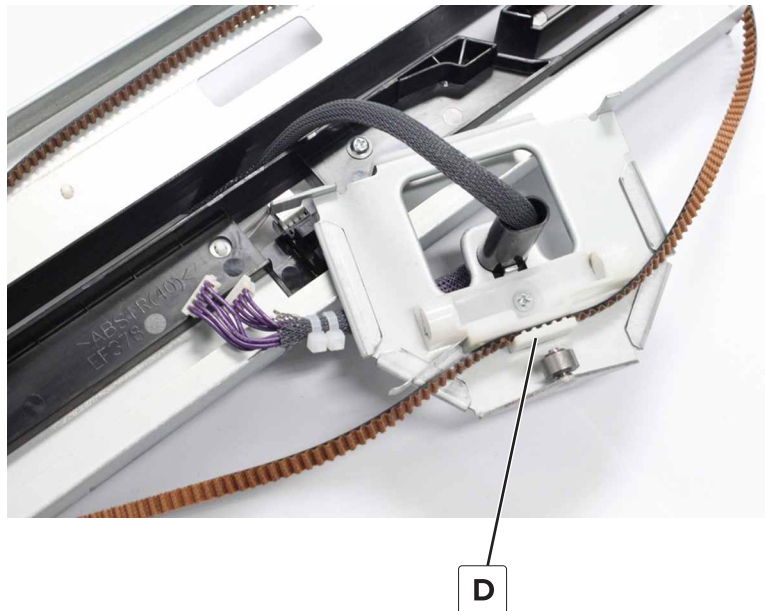
9 Remove the carriage.

SHPF elevator bottom rear gear removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

5 Remove the screw (A), and then remove the bracket.

A
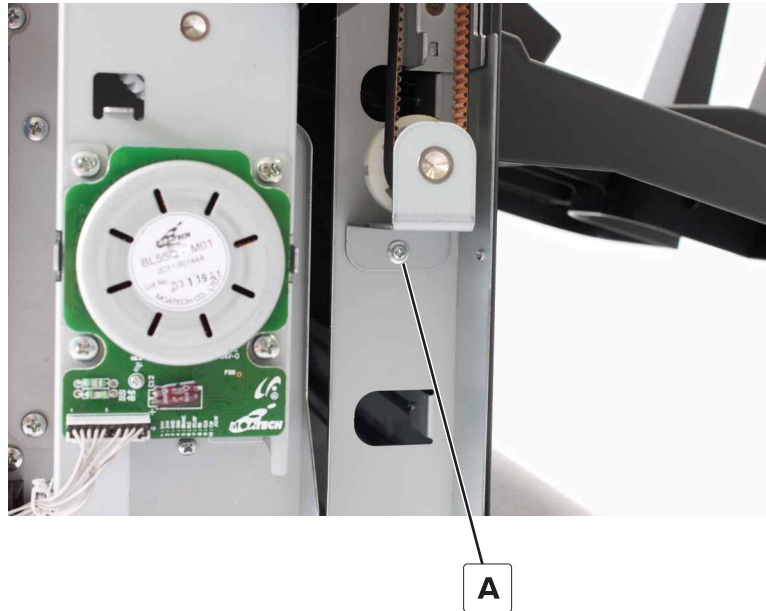
6 Remove the gear from the bracket.

SHPF elevator bottom front gear removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the front door. See **"SHPF front door removal" on page 332**.

4 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

5 Remove the post cover. See **"SHPF post cover removal" on page 334**.

6 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

7 Remove the screw (A), and then remove the bracket.
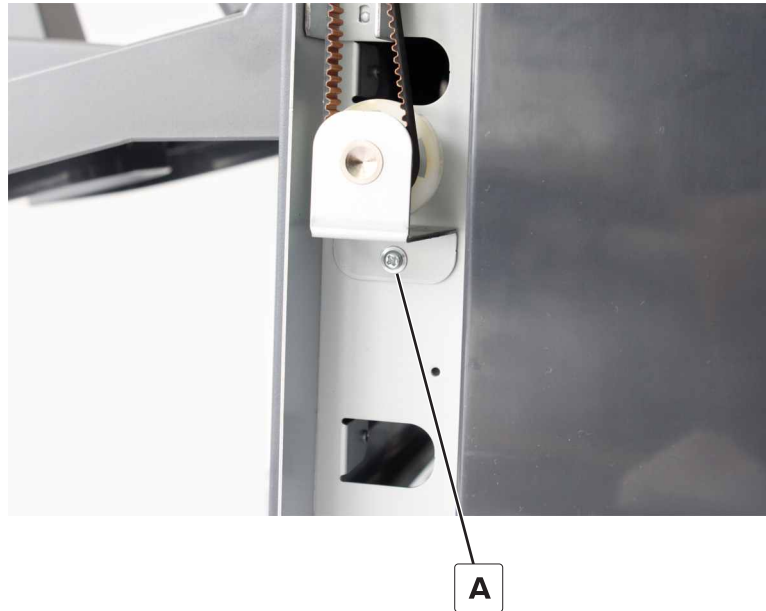
8 Remove the gear from the bracket.

SHPF elevator belts removals

Elevator rear belt removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

5 Remove the elevator drive assembly. See **"SHPF elevator drive assembly removal" on page 358**.

6 Remove the elevator bottom rear gear. See **"SHPF elevator bottom rear gear removal" on page 372**.

7 Remove the belt.

8 Remove the screw (A), and then remove the belt from the holder.

A
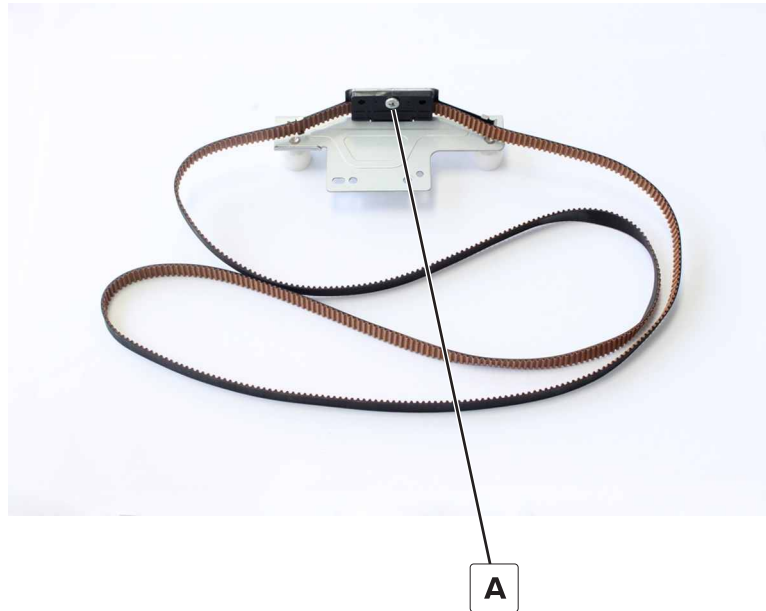
Elevator front belt removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the lower cover. See **"SHPF lower cover removal" on page 330**.

4 Remove the front door. See **"SHPF front door removal" on page 332**.

5 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

6 Remove the post cover. See **"SHPF post cover removal" on page 334**.

7 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

8 Remove the elevator bottom front gear. See **"SHPF elevator bottom front gear removal" on page 373**.

9 Remove the belt.

10 Remove the screw (A), and then remove the belt from the holder.

A
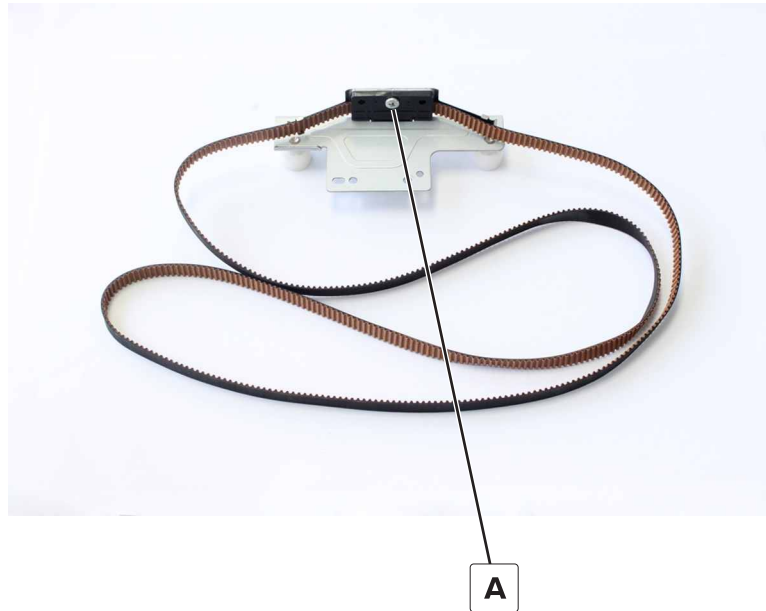
Installation notes:

a Make sure that the motor (SHPF elevator) is not yet installed.

b Install the belts on the elevator bottom gears.

c Set both elevator plates on the stoppers (A).

d Mount the bottom elevator gear brackets (B) on the finisher frame. Do not tighten the bracket screws.

B   **A**
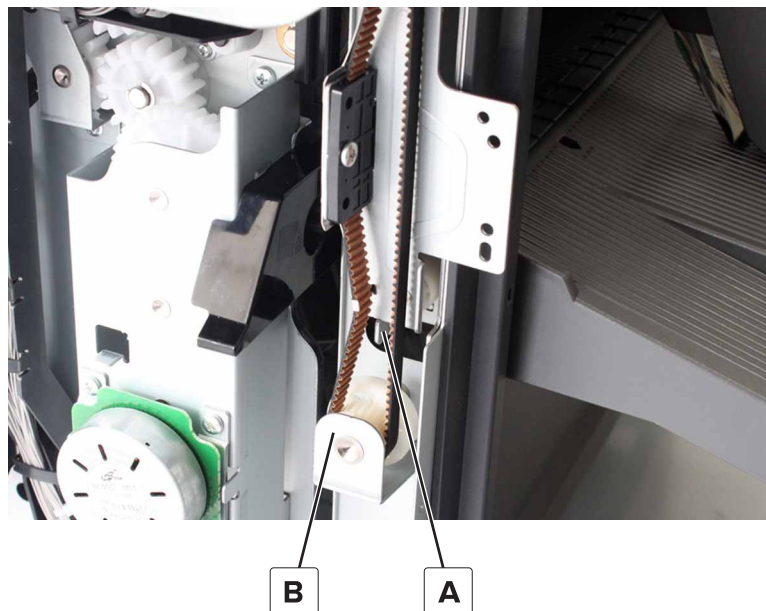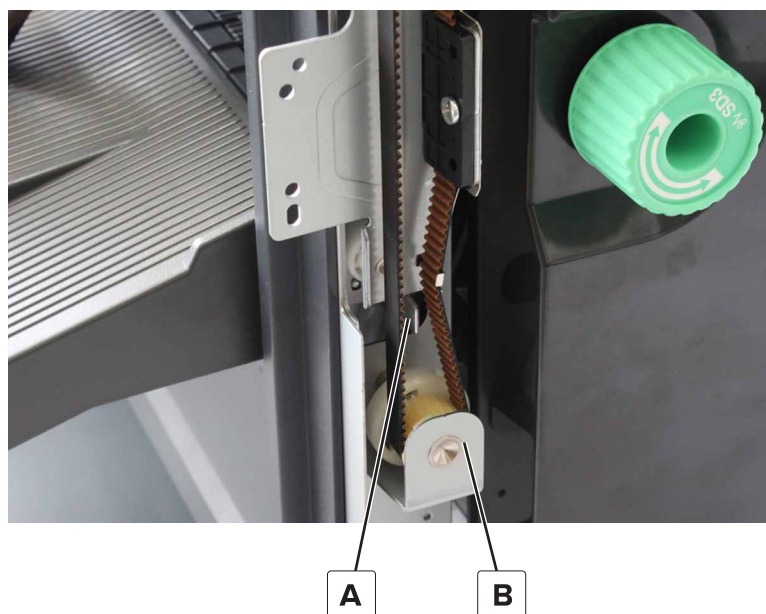
e Install the belts (C) on the elevator top gears.
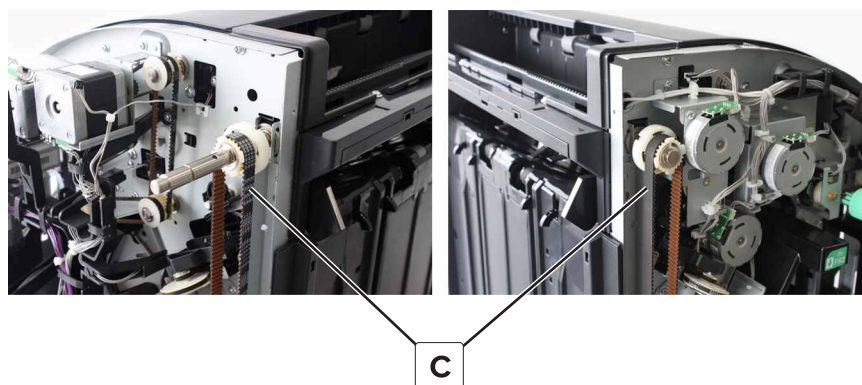
f Verify if both elevator plates are aligned.

g Tighten the two screws (D) on the brackets, and then install the motor (SHPF elevator).
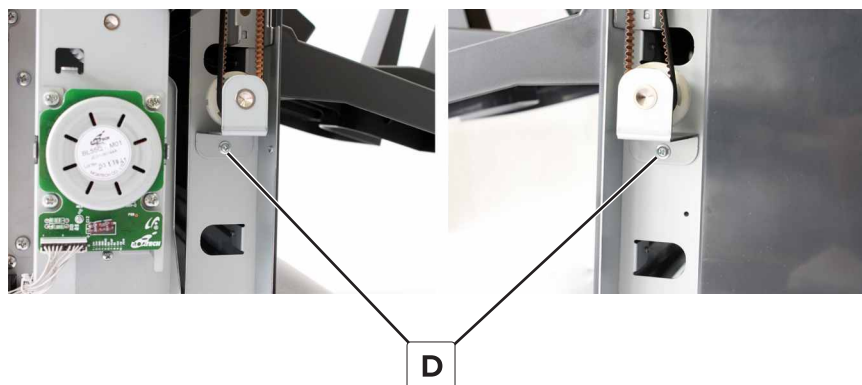
SHPF elevator top rear gear removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

3 Remove the elevator drive assembly. See **"SHPF elevator drive assembly removal" on page 358**.

4 Remove the elevator bottom rear gear. See **"SHPF elevator bottom rear gear removal" on page 372**.

5 Remove the clip (A), and then remove the gear.
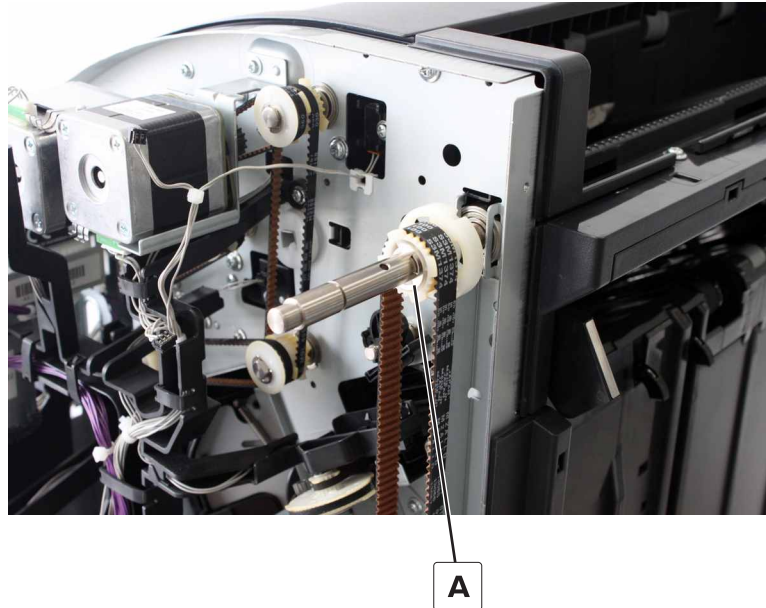
SHPF elevator top front gear removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the lower cover. See **"SHPF lower cover removal" on page 330**.

4 Remove the post cover. See **"SHPF post cover removal" on page 334**.

5 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

6 Remove the elevator bottom front gear. See **"SHPF elevator bottom front gear removal" on page 373**.

7 Remove the clip (A).

A

8 Loosen the three screws (B).

B

Parts removal
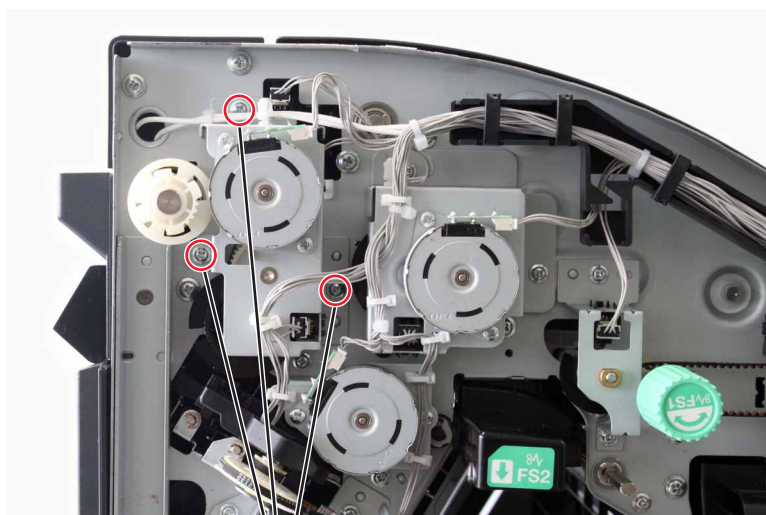
9 Dislodge the motor bracket from the finisher, and then remove the gear.
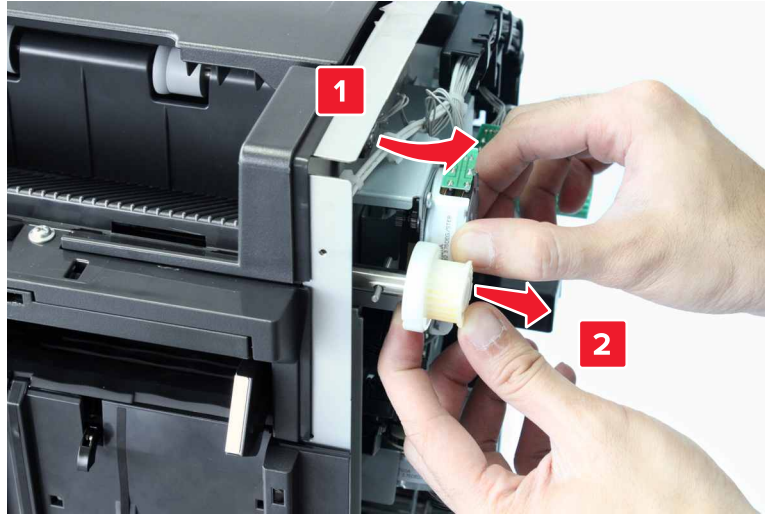
10 Remove the pin from the shaft.

SHPF paddle motor bracket removal

Note: This part is not a FRU.

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Disconnect the two cables (A).

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

Parts removal
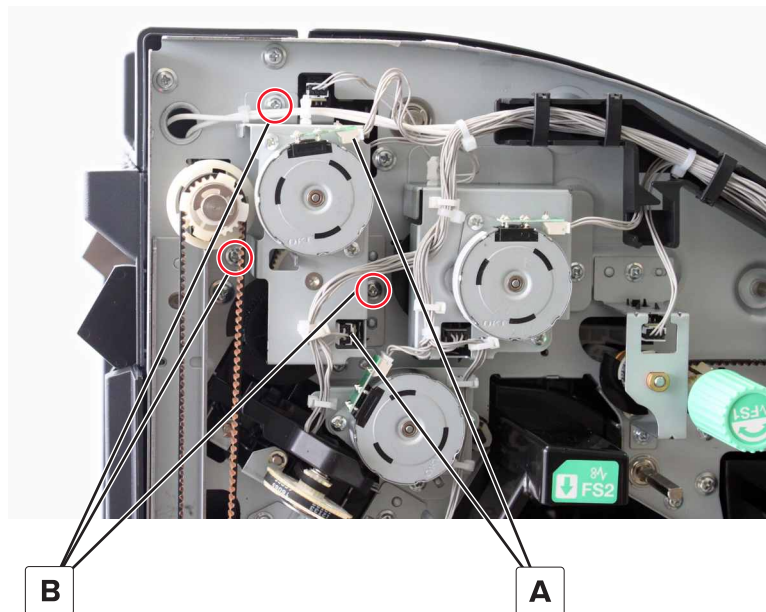
Motor (SHPF paddle) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

4 Remove the two screws (A), and then remove the motor.
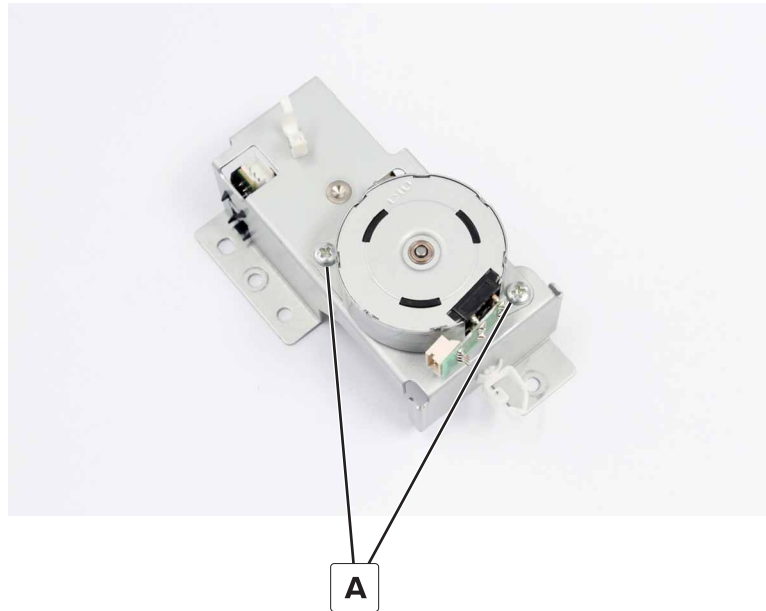
SHPF paddle drive gears removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

4 Remove the encoder (A).

A

5 Remove the clip (B), and then remove the gear.

B
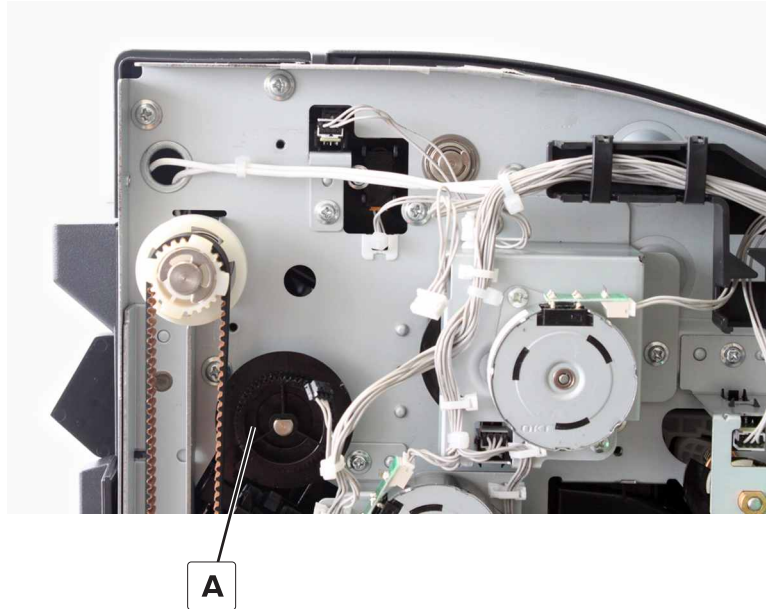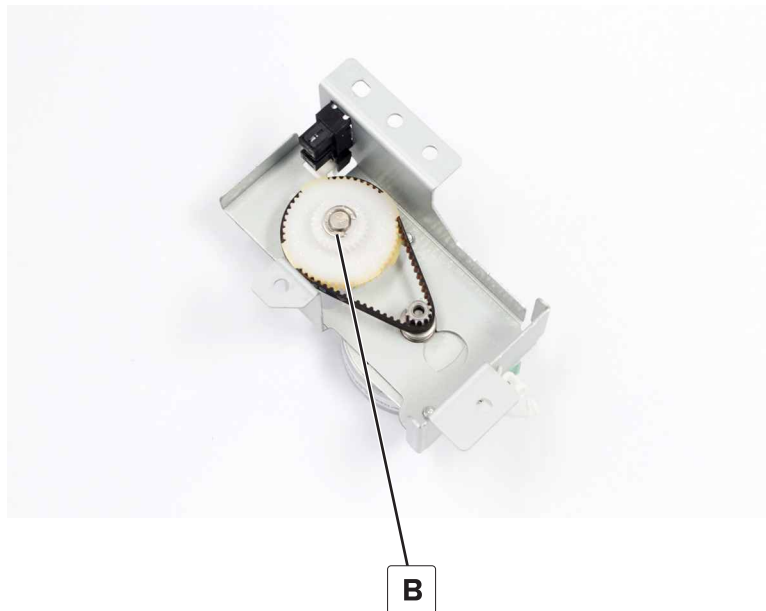
SHPF paddle motor FRUs removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

4 Remove the appropriate FRU.

#	Part
1	Sensor (SHPF paddle home)
2	SHPF paddle drive gear
3	SHPF paddle drive belt

Sensor (SHPF top door) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

4 Disconnect the cable (A).

5 Remove the screw (B), and then remove the sensor bracket.
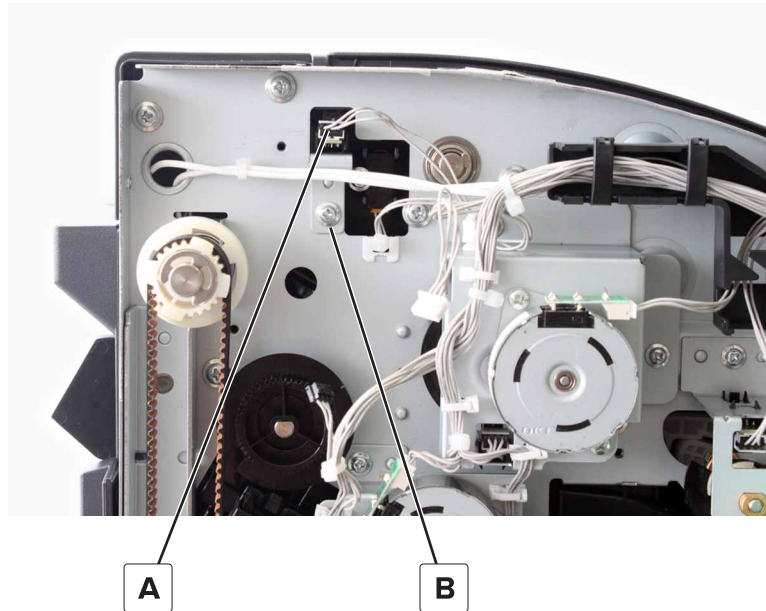
6 Disconnect the cable, and then remove the sensor from the bracket.

Sensor (SHPF top bin full, receive) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

5 Remove the screw (A).
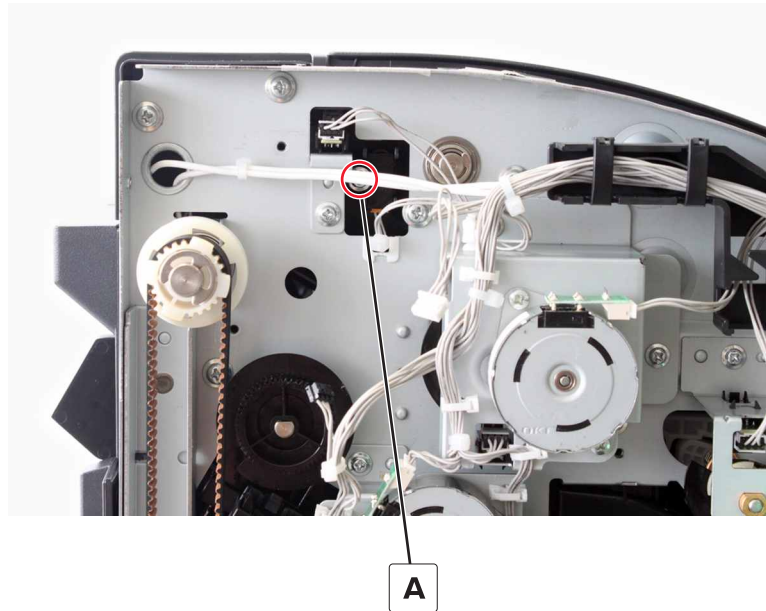
6 Remove the sensor, and then disconnect the cable.

Motor (SHPF compiler feed roller release) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Disconnect the cable (A).

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

Parts removal
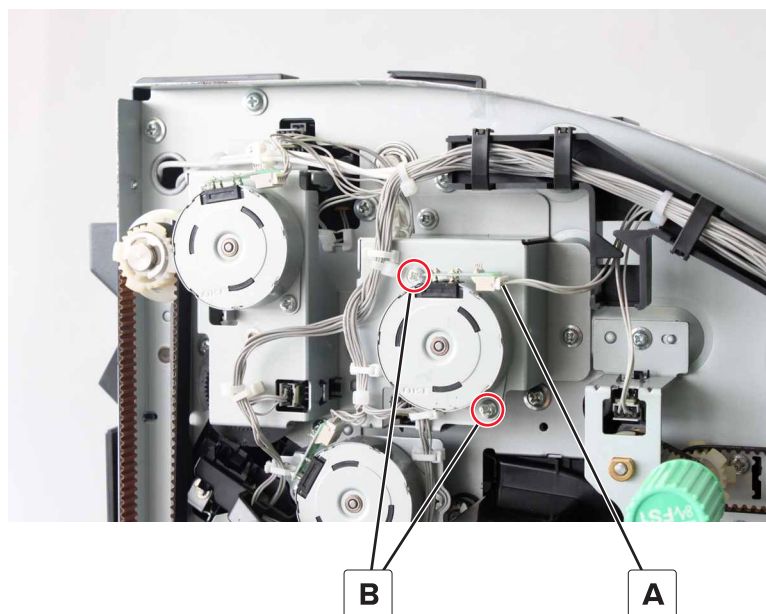
SHPF compiler feed roller release motor bracket removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Disconnect the two cables (A).

4 Remove the two screws (B), and then remove the motor bracket.
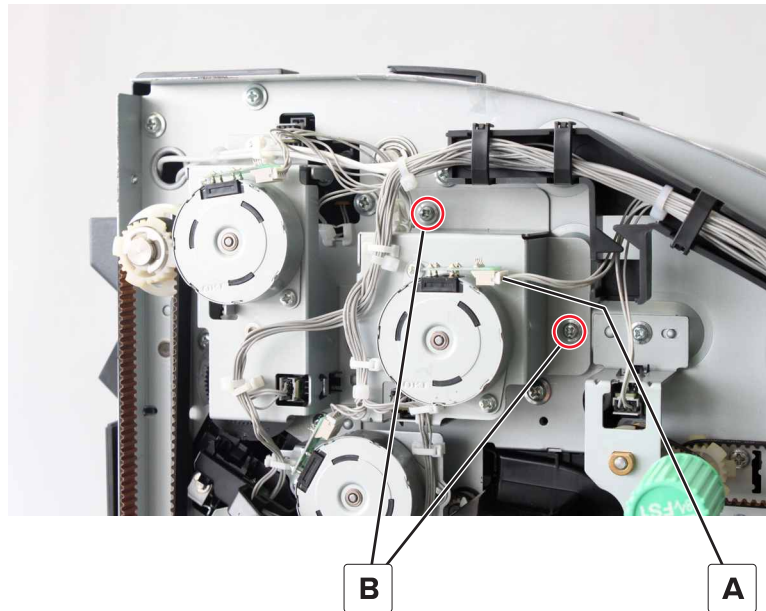
Sensor (SHPF compiler feed roller release) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the compiler feed roller release motor bracket. See **"SHPF compiler feed roller release motor bracket removal" on page 386**.

4 Remove the sensor (A).

A
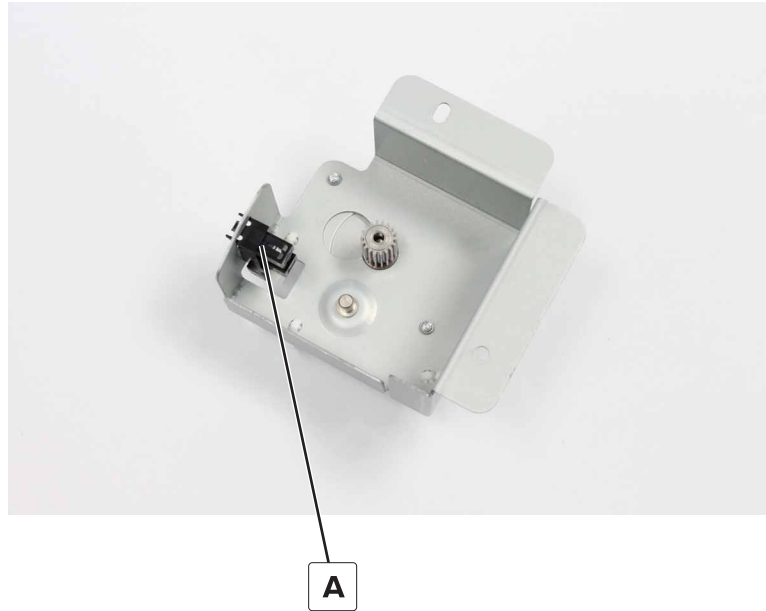
SHPF compiler feed roller release encoder removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the compiler feed roller release motor bracket. See **"SHPF compiler feed roller release motor bracket removal" on page 386**.

4 Remove the encoder (A).

A
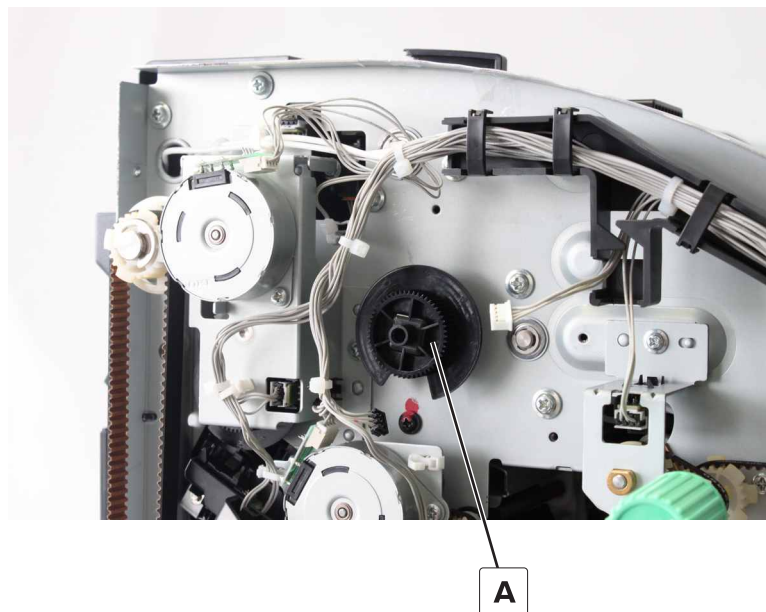
Motor (SHPF aligner) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Disconnect the cable (A).

4 Remove the two screws (B), and then remove the motor bracket.
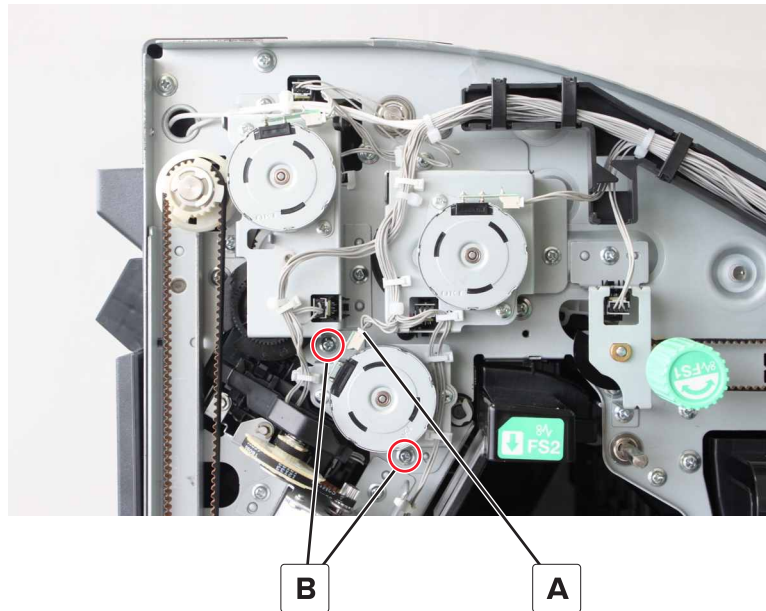
5 Remove the motor from the bracket.

SHPF diverter cam removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the diverter feed roller knob. See **"SHPF diverter feed roller knob removal" on page 333**.

4 Open the top door and top jam access door.

5 Disconnect the cable (A).

6 Remove the two screws (B), and then remove the bracket.

A   **B**
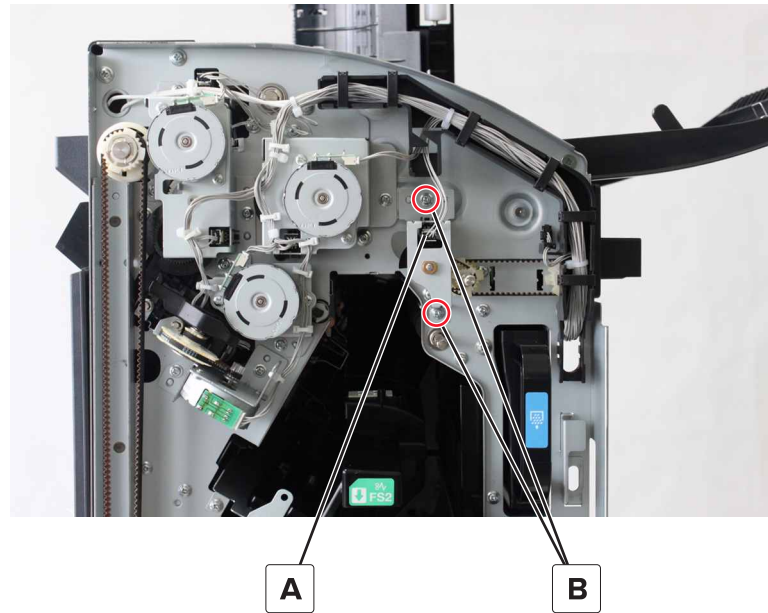
7 Remove the cam assembly (C).
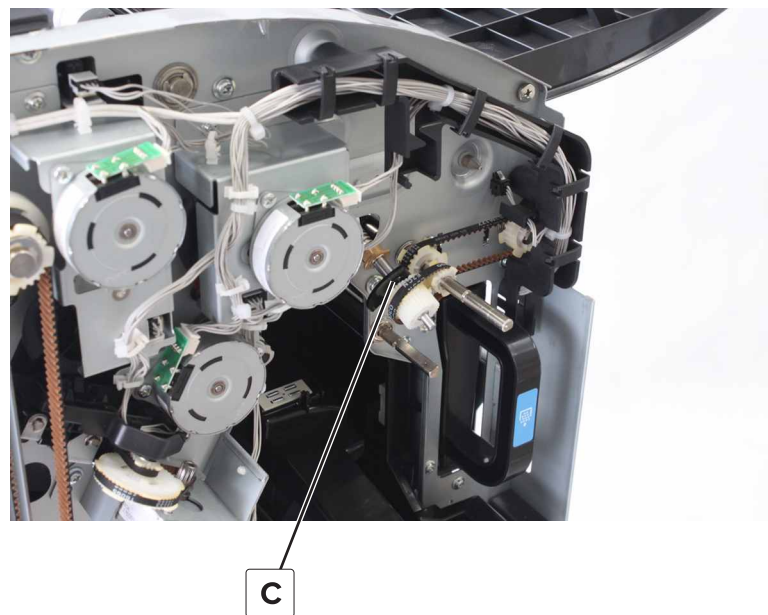
C

Sensor (SHPF diverter cam) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the diverter feed roller knob. See **"SHPF diverter feed roller knob removal" on page 333**.

4 Disconnect the cable (A).

5 Remove the two screws (B), and then remove the bracket.
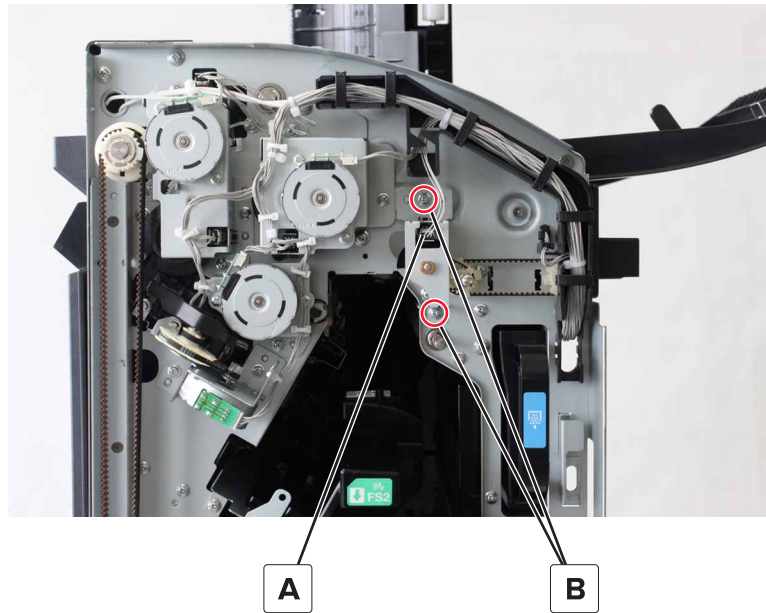
6 Remove the sensor from the bracket.

SHPF entrance and diverter feed roller gears removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the diverter feed roller knob. See **"SHPF diverter feed roller knob removal" on page 333**.

4 Remove the diverter cam. See **"SHPF diverter cam removal" on page 388**.

5 Disconnect the cable (A).

Parts removal

6 Remove the two screws (B), and then set aside the cable holder.
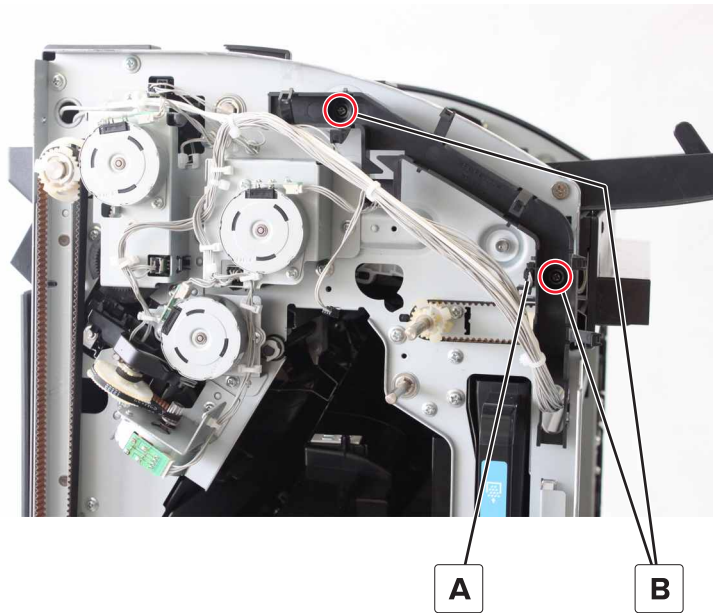
7 Remove the three clips (C), and then remove the gears.

8 Remove the belt (D).
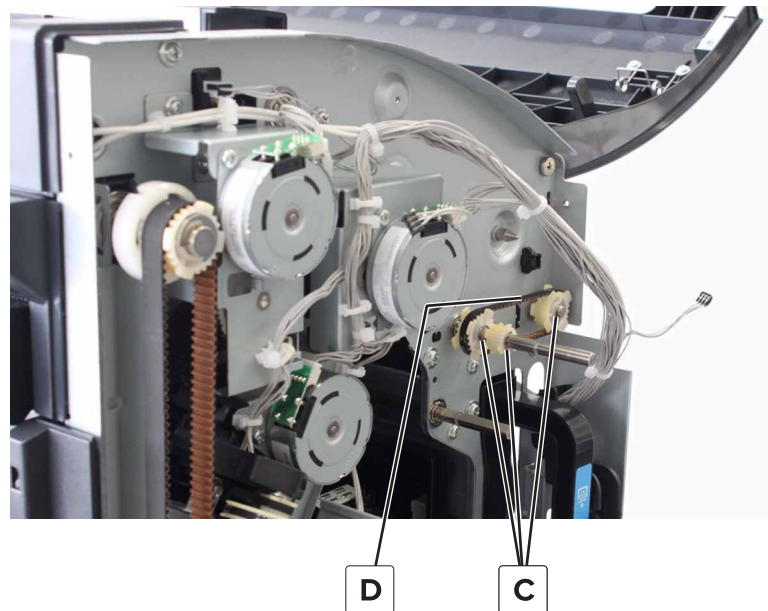
SHPF top jam access door and SHPF diverter removal

1 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

2 Remove the transport motor bracket. See **"Motor (SHPF transport) removal" on page 353**.

3 Open the top door.

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

A

5 Remove the screw (B), and then remove the spring.

B
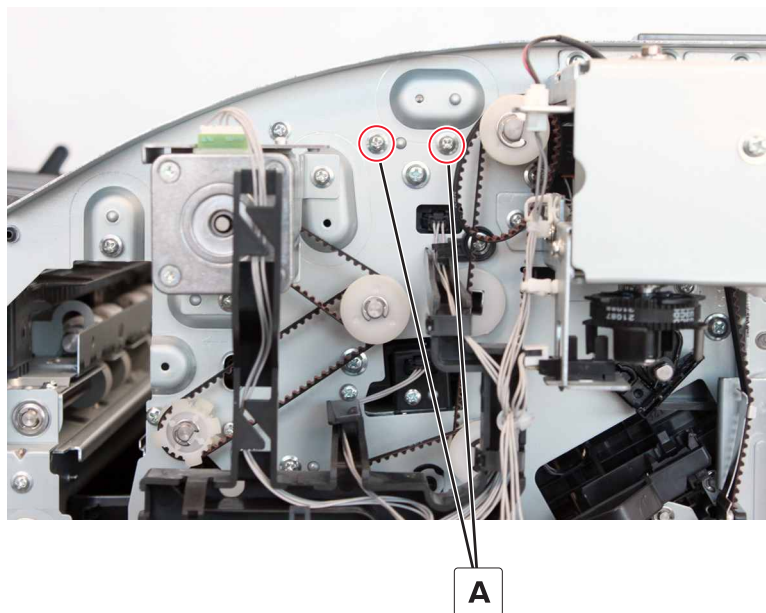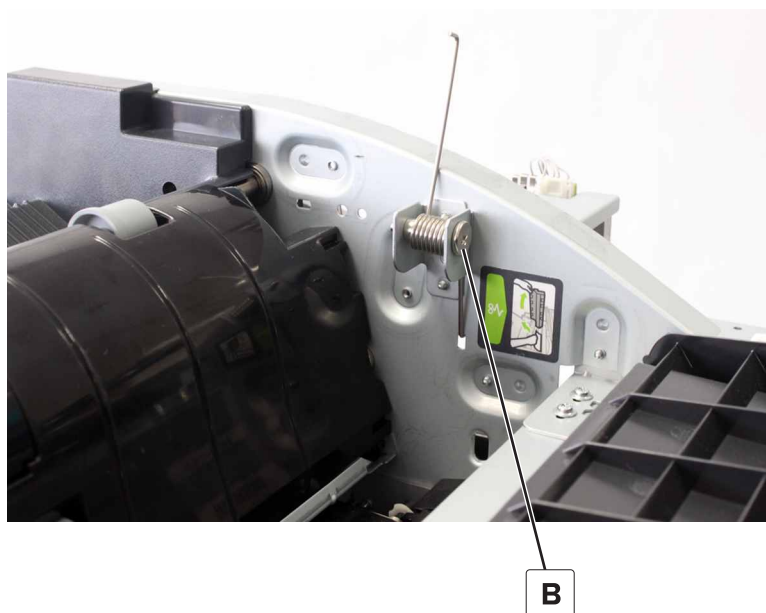
6 From the door, remove the screw (C), and then remove the spring.
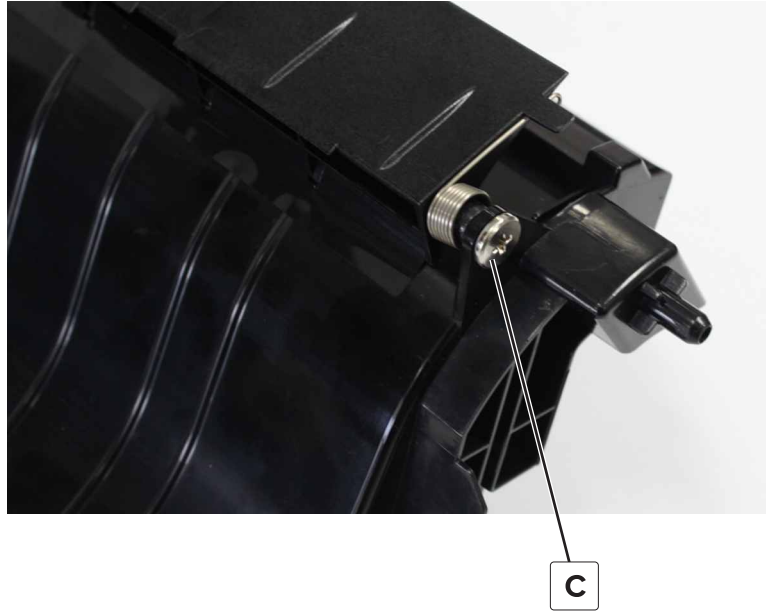
7 Remove the lever (D), and then remove the diverter.
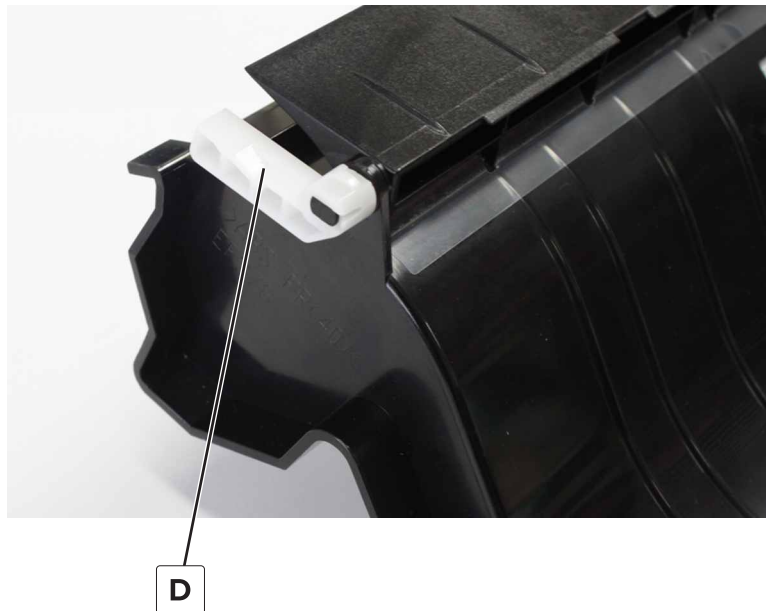
Installation note: Position the spring in the slot before installing the hinge on the finisher frame.

Sensor (SHPF top bin exit) removal

1 Open the top door and top jam access door.

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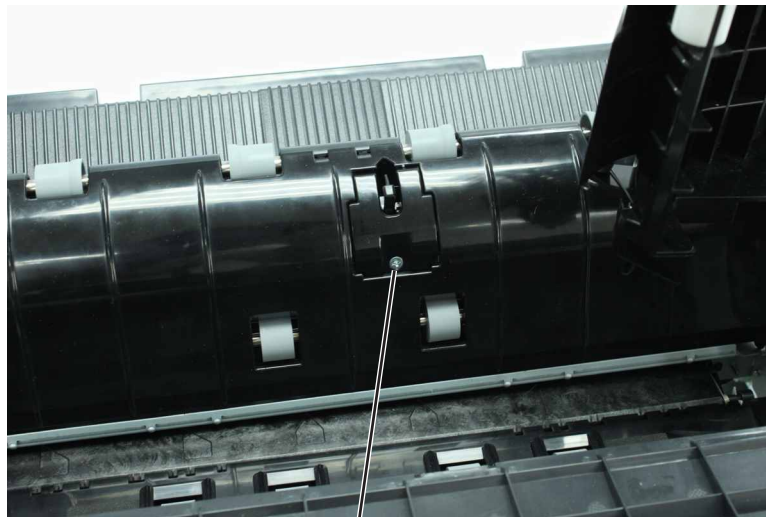
A

3 Pry the sensor, and then disconnect the cable.

SHPF top bin exit paper guide removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the sensor (SHPF top bin exit). See **"Sensor (SHPF top bin exit) removal" on page 394**.

5 Remove the compiler feed roller release motor bracket. See **"SHPF compiler feed roller release motor bracket removal" on page 386**.

6 Remove the transport motor bracket. See **"Motor (SHPF transport) removal" on page 353**.

7 Disconnect the cable (A), and then remove the two screws (B).
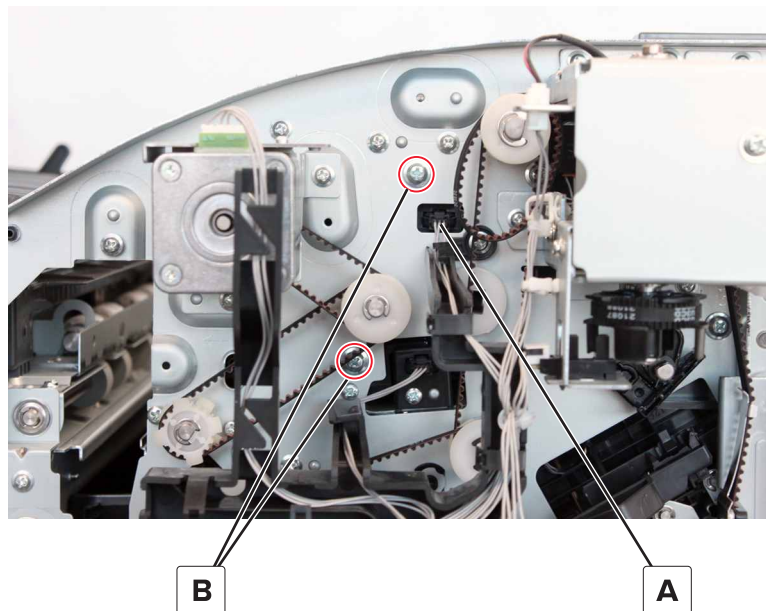
Parts removal

8 Remove the three screws (C), and then remove the guide.

C
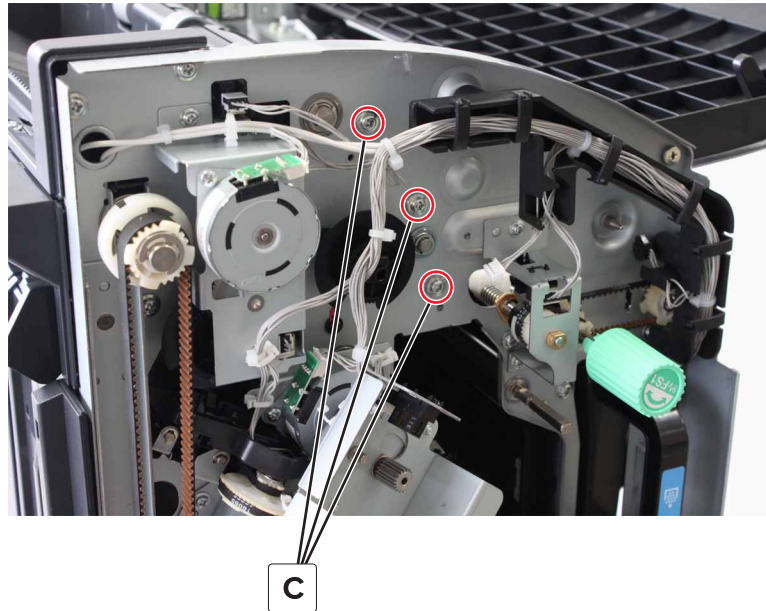
Installation note: Position the edge of the guide over the bin.

Motor (SHPF compiler eject) removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Disconnect the cable (A).

A

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

B

Motor (SHPF compiler pre-eject) removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Disconnect the cable (A).

A

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

B

SHPF compiler eject sensors removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the motor (SHPF compiler eject) or motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler eject) removal" on page 396** or **"Motor (SHPF compiler pre-eject) removal" on page 397**.

6 Remove the sensor.
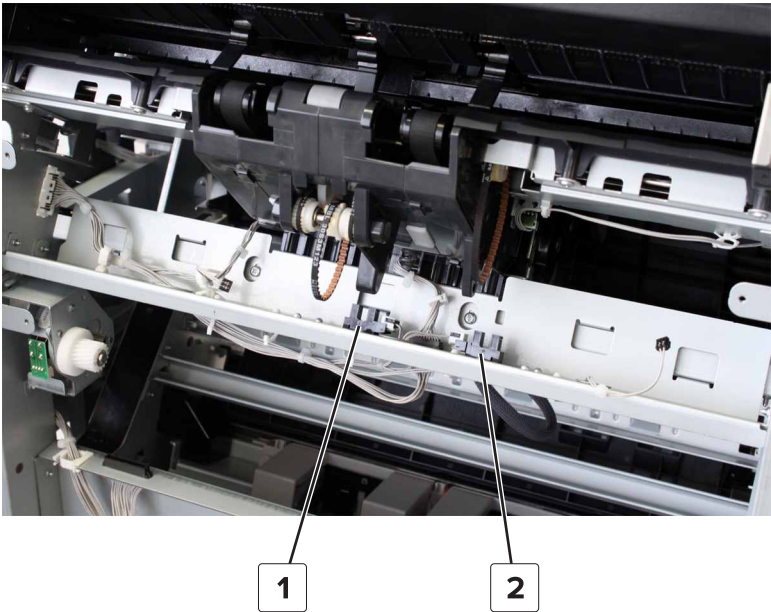
#	Part
1	Sensor (SHPF compiler pre-eject)
2	Sensor (SHPF compiler eject)

Sensor (SHPF eject clamp position) removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the actuator (A).

6 Release the latch (B), and then remove the sensor.
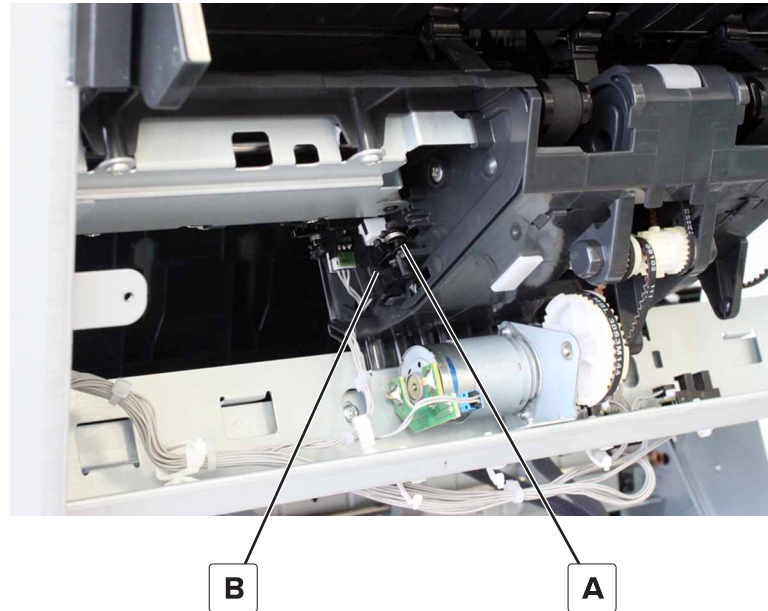
7 Disconnect the cable from the sensor.

SHPF compiler assembly removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the HBPF lower left cover or the SHPF lower left cover. See **"Lower left cover removals" on page 340**.

3 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

4 Remove the front door. See **"SHPF front door removal" on page 332**.

5 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

6 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

7 Remove the motor (SHPF compiler eject). See **"Motor (SHPF compiler eject) removal" on page 396**.

8 Remove the motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler pre-eject) removal" on page 397**.

9 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

10 Disconnect the four cables (A).

A

A
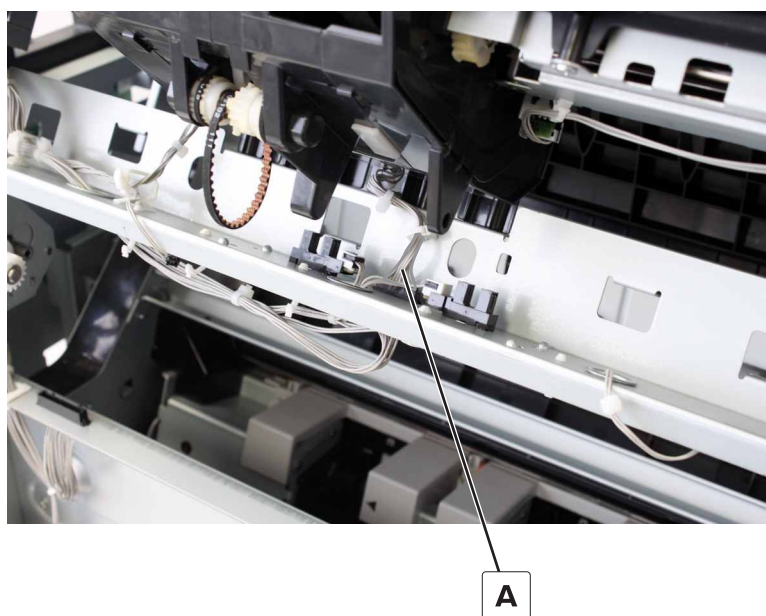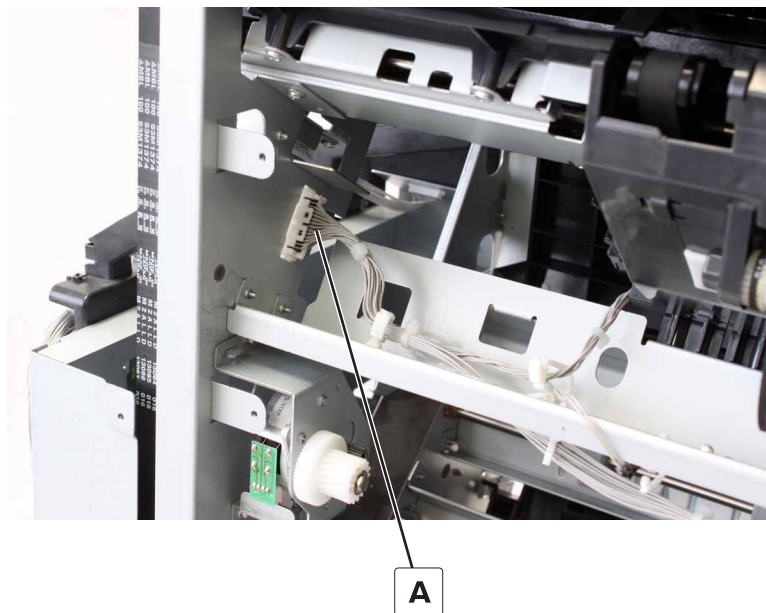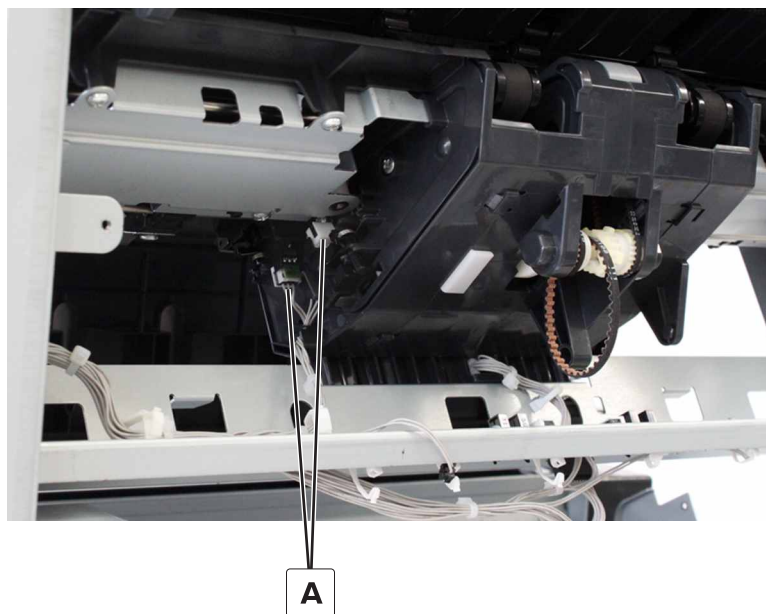
11 Remove the two screws (B).
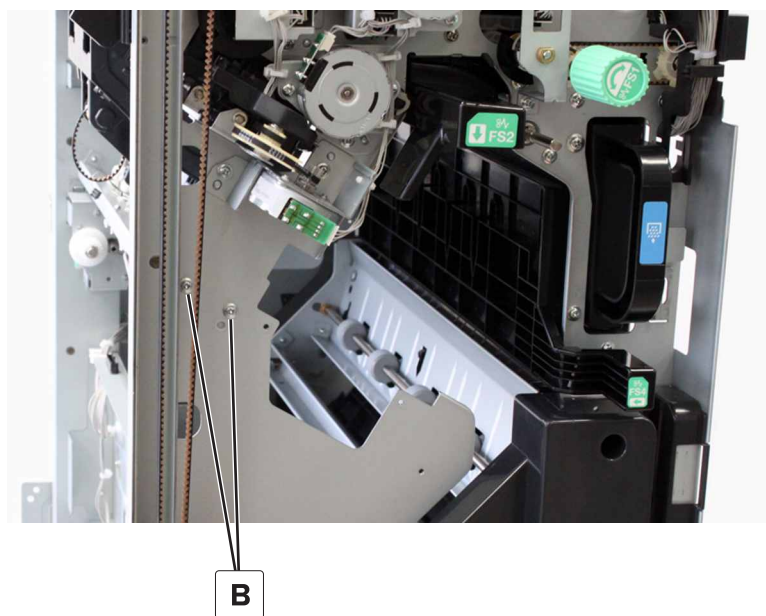
12 Remove the two screws (C).
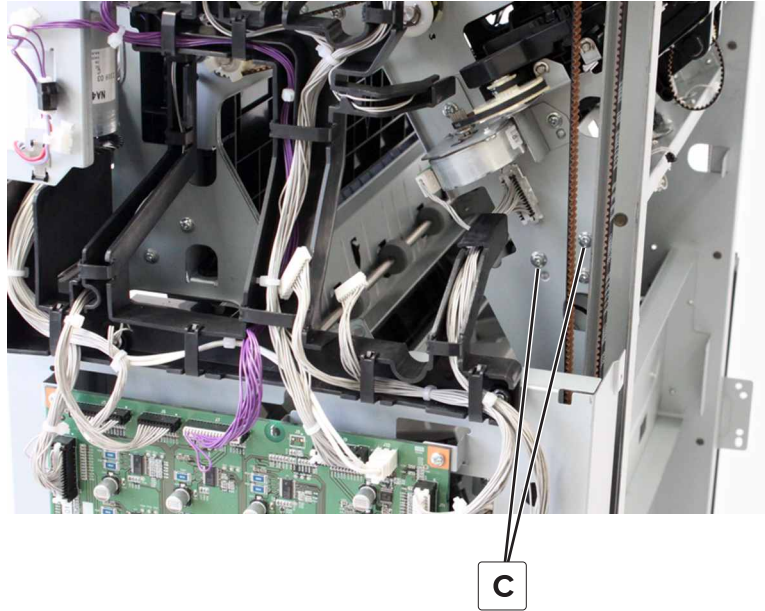
13 From under the compiler assembly, remove the four screws (D).
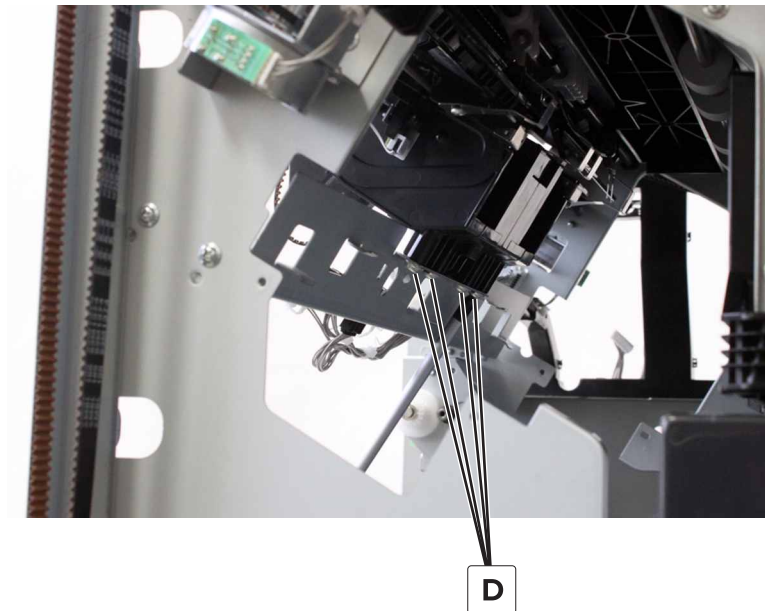
14 Remove the bracket.
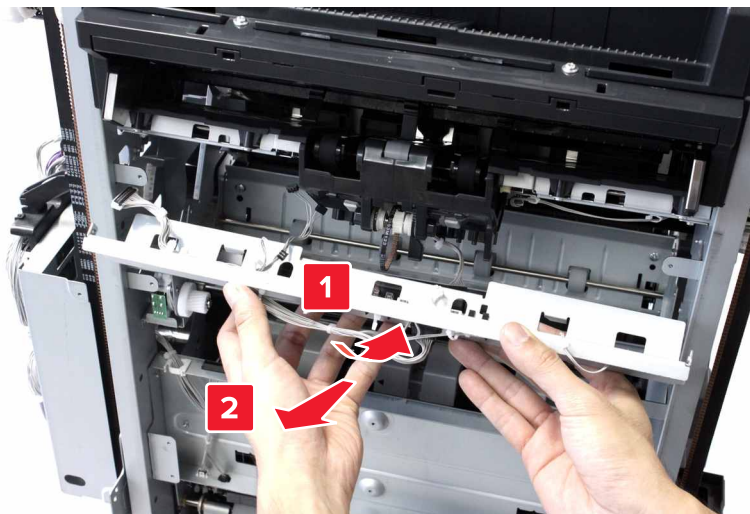
15 Release the latch (E), and then remove the sensor.

16 Disconnect the cable (F).

17 Release the belt (G) from the motor.

E   G   F
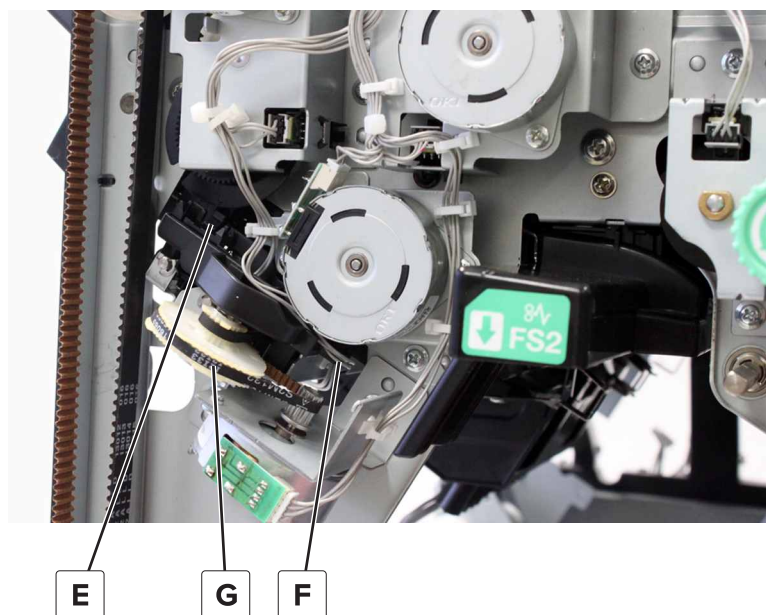
18 Remove the two screws (H), and then set aside the motor bracket.
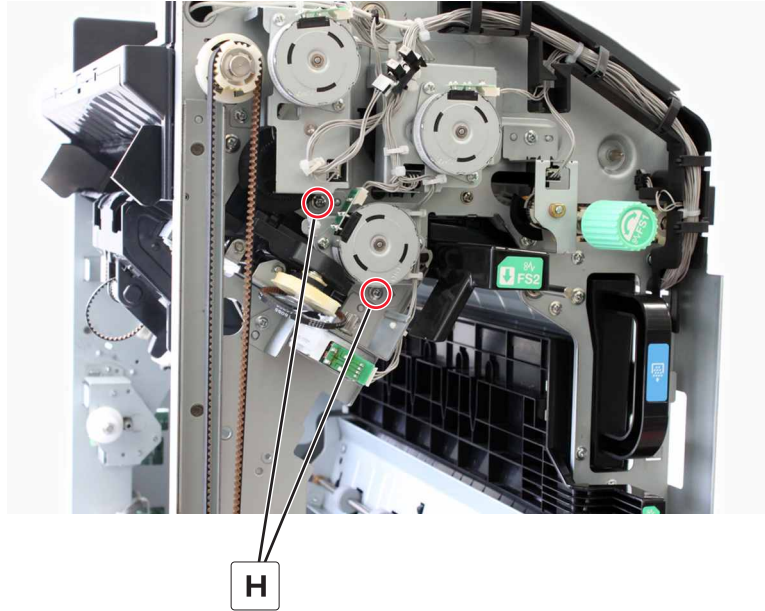
19 Release the latch (J), and then remove the sensor.

20 Release the belt (K) from the motor.
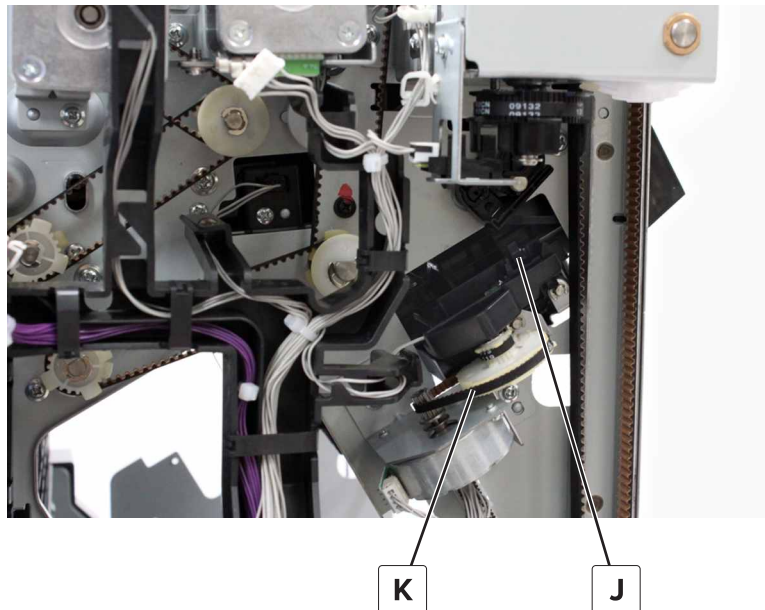
21 Remove the two screws (L).
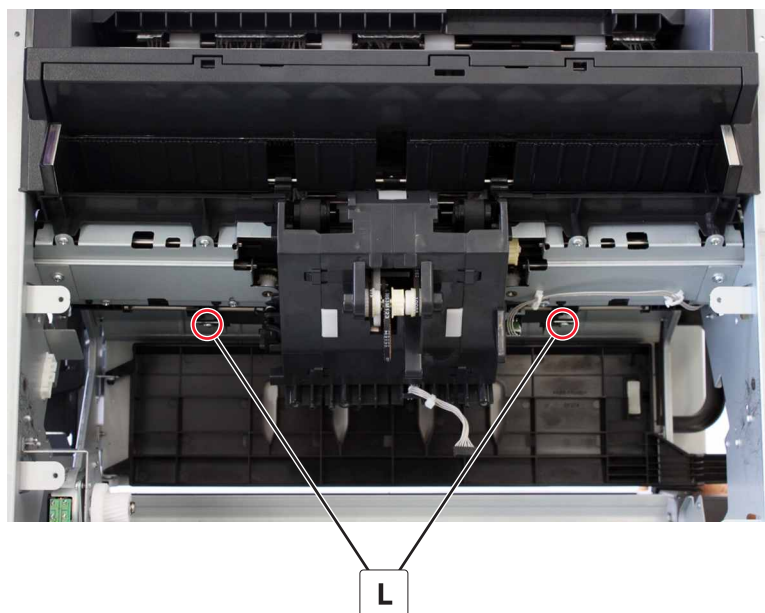
22 Remove the two screws (M).

Note: Hold the middle when removing the screws to prevent the assembly from sagging.
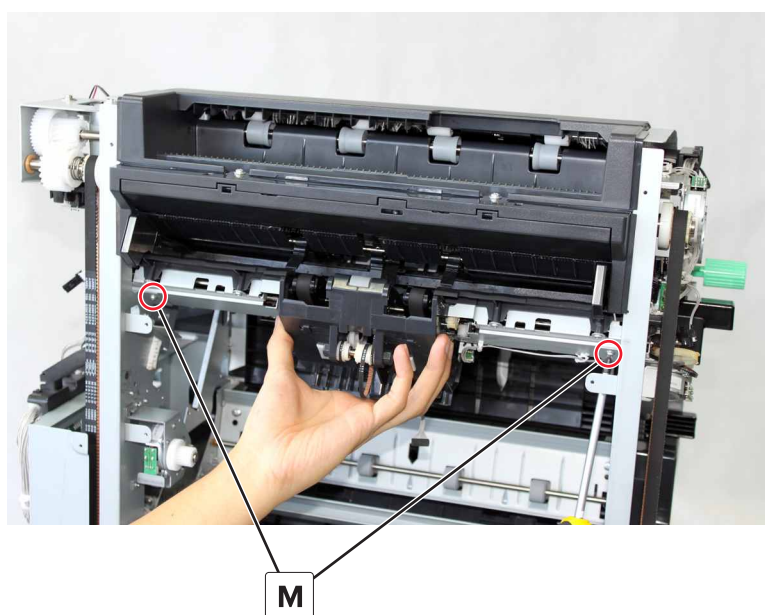
23 Release the outer latches, and then release the inner latches.
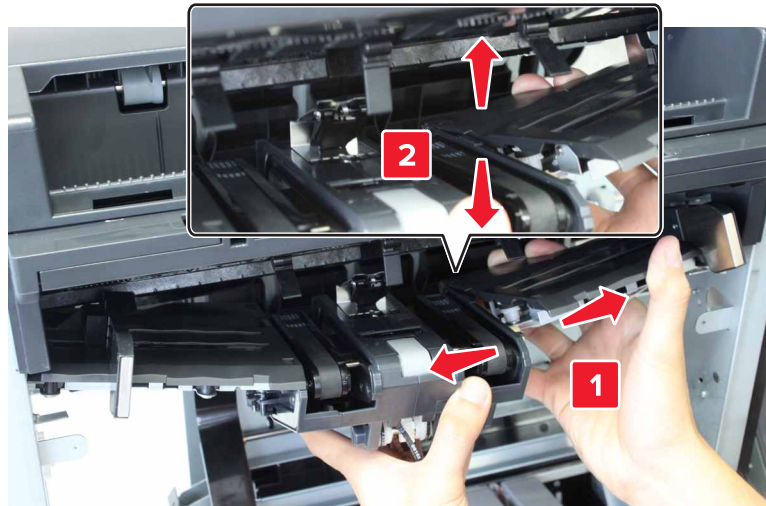
24 Remove the assembly.

SHPF tampers removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the front door. See **"SHPF front door removal" on page 332**.

6 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

7 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

8 Remove the motor (SHPF compiler eject). See **"Motor (SHPF compiler eject) removal" on page 396**.

9 Remove the motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler pre-eject) removal" on page 397**.

10 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

11 Remove the compiler assembly. See **"SHPF compiler assembly removal" on page 400**.

12 Remove the screw, and then remove the front tamper.

13 Remove the screw, and then remove the rear tamper.
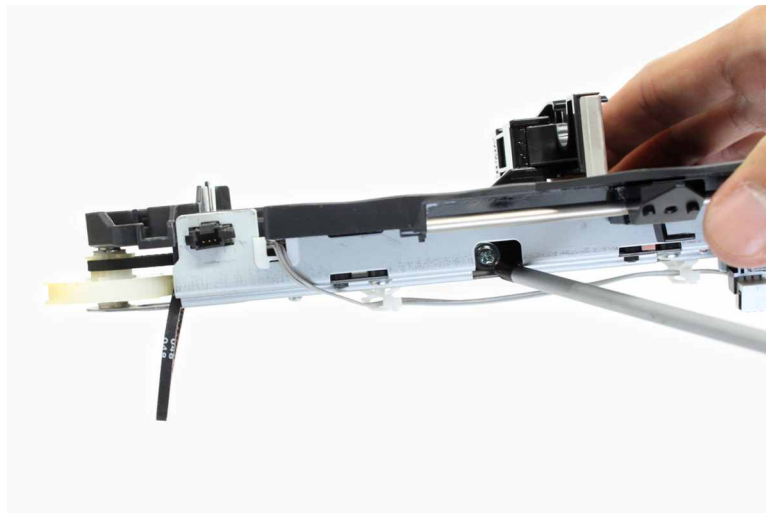
SHPF tamper trays removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the front door. See **"SHPF front door removal" on page 332**.

6 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

7 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

8 Remove the motor (SHPF compiler eject). See **"Motor (SHPF compiler eject) removal" on page 396**.

9 Remove the motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler pre-eject) removal" on page 397**.

10 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

11 Remove the compiler assembly. See **"SHPF compiler assembly removal" on page 400**.

12 Remove the eight screws (A), and then remove the trays.

SHPF tamper belts and gears removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the front door. See **"SHPF front door removal" on page 332**.

6 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

7 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

8 Remove the motor (SHPF compiler eject). See **"Motor (SHPF compiler eject) removal" on page 396**.

9 Remove the motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler pre-eject) removal" on page 397**.

10 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

11 Remove the compiler assembly. See **"SHPF compiler assembly removal" on page 400**.

12 Remove the tamper trays. See **"SHPF tamper trays removal" on page 408**.

13 Remove the four clips (A), and then remove the gears.

Parts removal
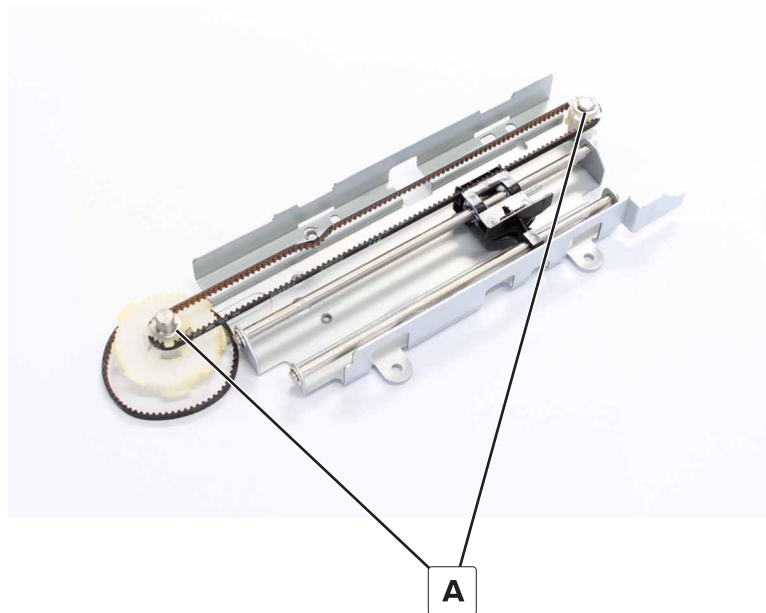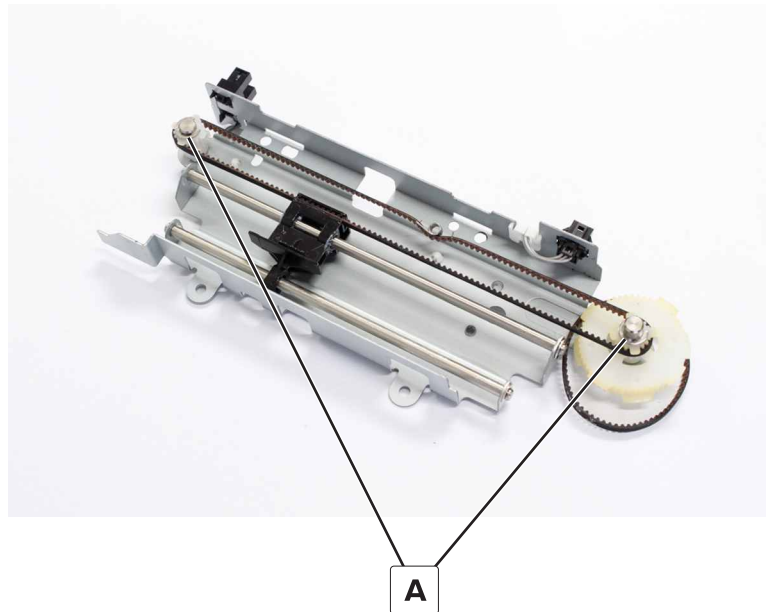
14 Remove the four belts.

Sensor (SHPF aligner position) removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the front door. See **"SHPF front door removal" on page 332**.

6 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

7 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

8 Remove the motor (SHPF compiler eject). See **"Motor (SHPF compiler eject) removal" on page 396**.

9 Remove the motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler pre-eject) removal" on page 397**.

10 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

11 Remove the compiler assembly. See **"SHPF compiler assembly removal" on page 400**.

12 Remove the front tamper tray. See **"SHPF tamper trays removal" on page 408**.

13 Remove the sensor (A).

A

SHPF middle aligner removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the front door. See **"SHPF front door removal" on page 332**.

6 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

7 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

8 Remove the motor (SHPF compiler eject). See **"Motor (SHPF compiler eject) removal" on page 396**.

9 Remove the motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler pre-eject) removal" on page 397**.

10 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

11 Remove the compiler assembly. See **"SHPF compiler assembly removal" on page 400**.

12 Remove the screw (A), and then remove the aligner.

Sensor (SHPF eject clamp home) removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the front door. See **"SHPF front door removal" on page 332**.

6 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

7 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

8 Remove the motor (SHPF compiler eject). See **"Motor (SHPF compiler eject) removal" on page 396**.

9 Remove the motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler pre-eject) removal" on page 397**.

10 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

11 Remove the compiler assembly. See **"SHPF compiler assembly removal" on page 400**.

12 Release the latch (A), and then remove the sensor.

13 Remove the actuator (B).

SHPF compiler eject gear removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the front door. See **"SHPF front door removal" on page 332**.

6 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

7 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

8 Remove the motor (SHPF compiler eject). See **"Motor (SHPF compiler eject) removal" on page 396**.

9 Remove the motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler pre-eject) removal" on page 397**.

10 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

11 Remove the compiler assembly. See **"SHPF compiler assembly removal" on page 400**.

12 Remove the clip (A), and then remove the gear.

A

SHPF aligner shaft removal

1 Remove the elevator bin. See **"SHPF elevator bin removal" on page 327**.

2 Remove the elevator bin bracket. See **"SHPF elevator bin bracket removal" on page 329**.

3 Remove the lower left cover. See **"Lower left cover removals" on page 340**.

4 Remove the upper left cover. See **"SHPF upper left cover removal" on page 344**.

5 Remove the front door. See **"SHPF front door removal" on page 332**.

6 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

7 Remove the aligner motor bracket. See **"Motor (SHPF aligner) removal" on page 388**.

8 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

9 Remove the motor (SHPF compiler eject). See **"Motor (SHPF compiler eject) removal" on page 396**.

10 Remove the motor (SHPF compiler pre-eject). See **"Motor (SHPF compiler pre-eject) removal" on page 397**.

11 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

12 Remove the compiler assembly. See **"SHPF compiler assembly removal" on page 400**.

13 Remove the clip (A), and then remove the gear.
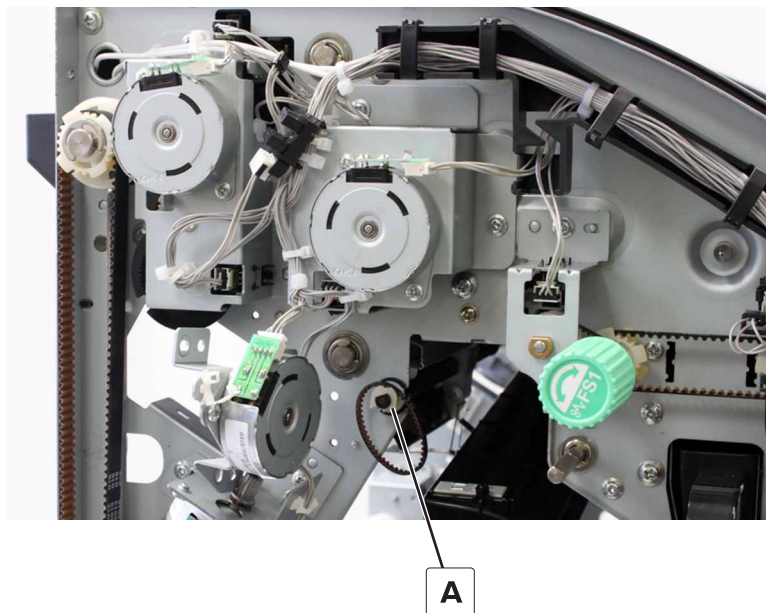
14 Remove the clip (B), and then remove the bushing.
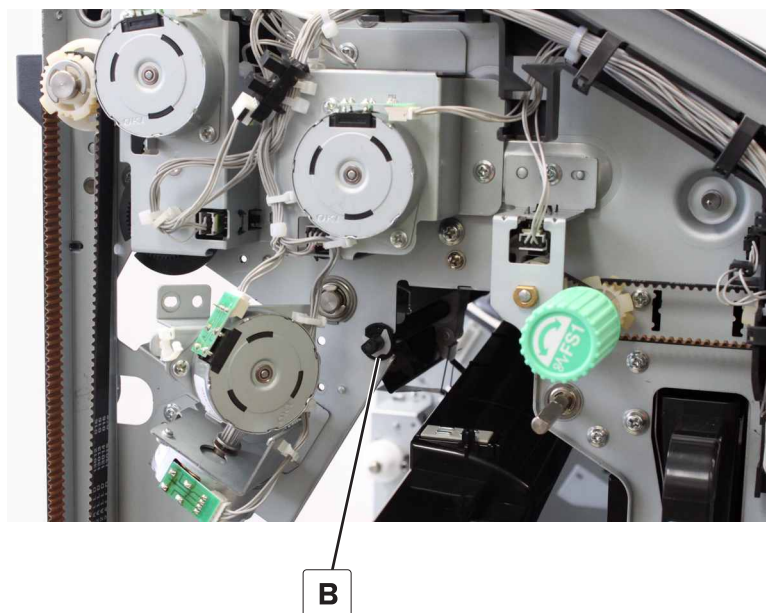
15 Remove the clip (C), and then remove the gear.

C
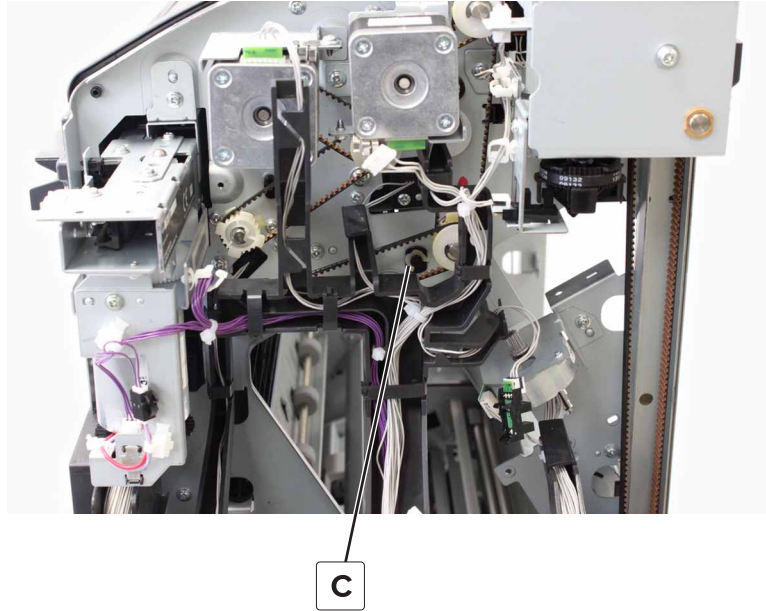
16 Release the shaft from the holder (D), and then remove the shaft.

D
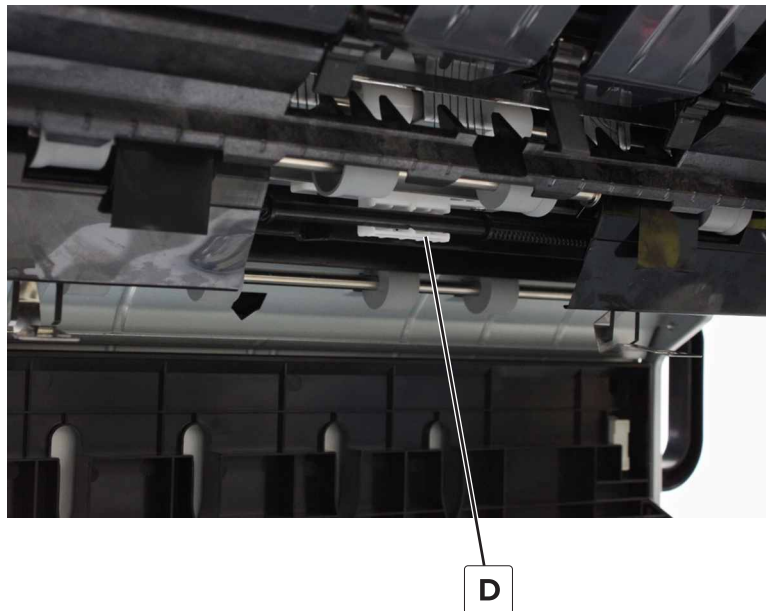
Installation notes:

a Position both aligners at the middle.

b Install the shaft, with the metal portion of the aligners hanging down.

SHPF booklet maker pre-feed roller removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the clip (A), and then remove the ball bearing.
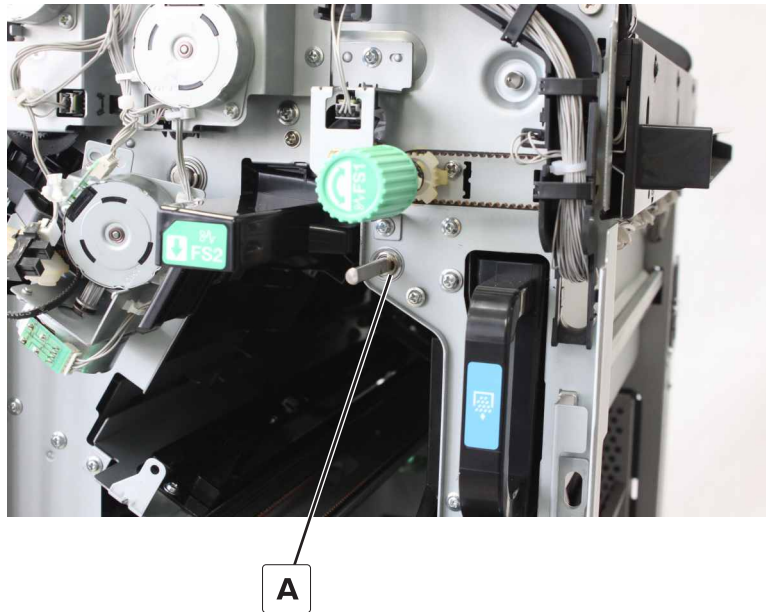
5 Remove the clip (B), and then remove the gear.
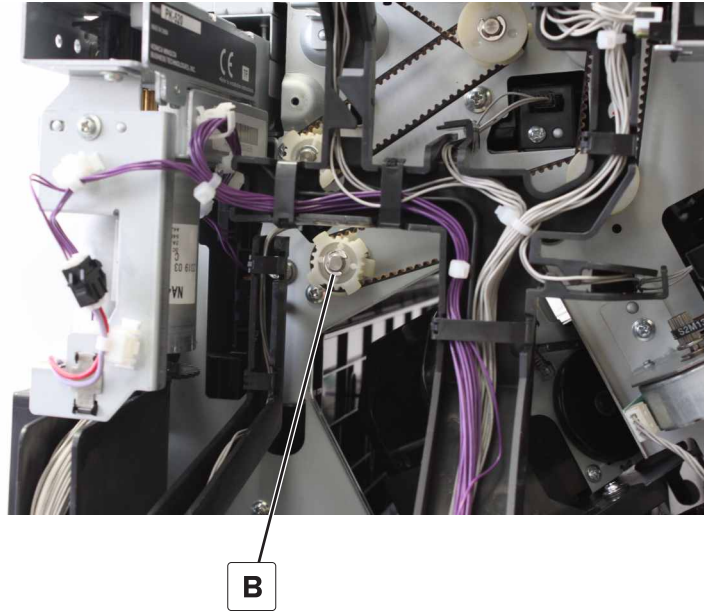
6 Remove the clip (C), and then remove the ball bearing.
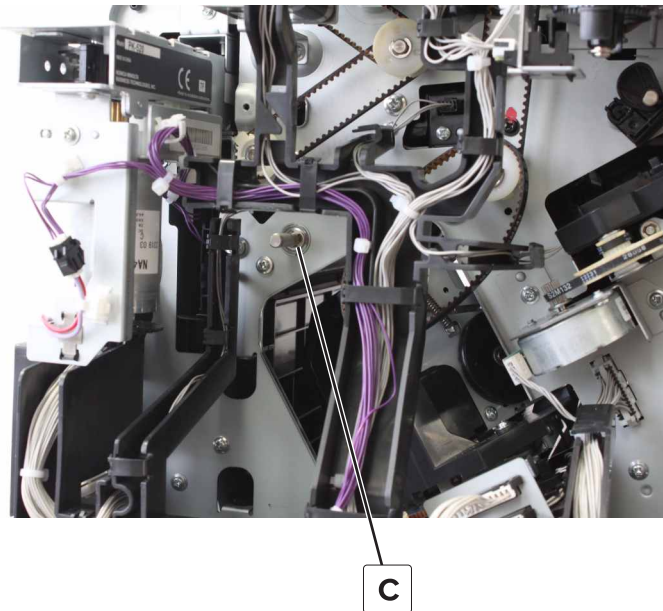
7 Remove the roller.

SHPF booklet maker lower pre-feed guide removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the booklet maker pre-feed roller. See **"SHPF booklet maker pre-feed roller removal" on page 418**.
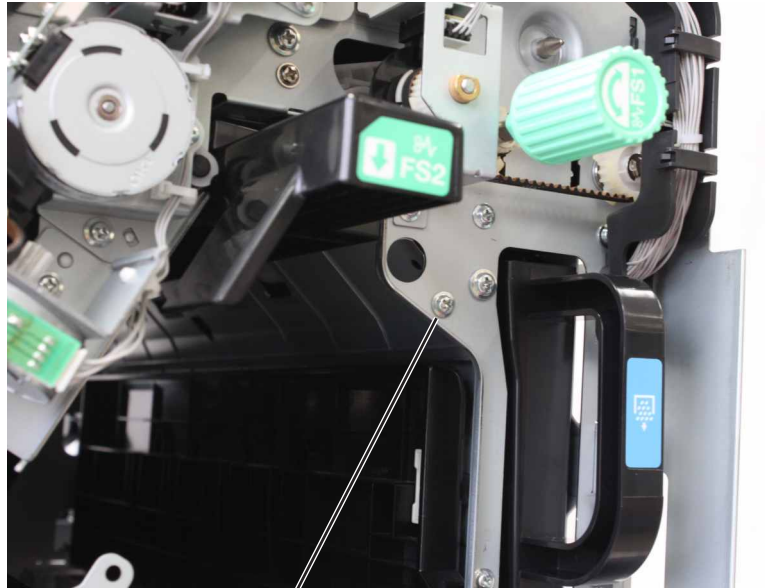
5 Remove the screw (A).

6 Remove the screw (B), and then remove the guide.
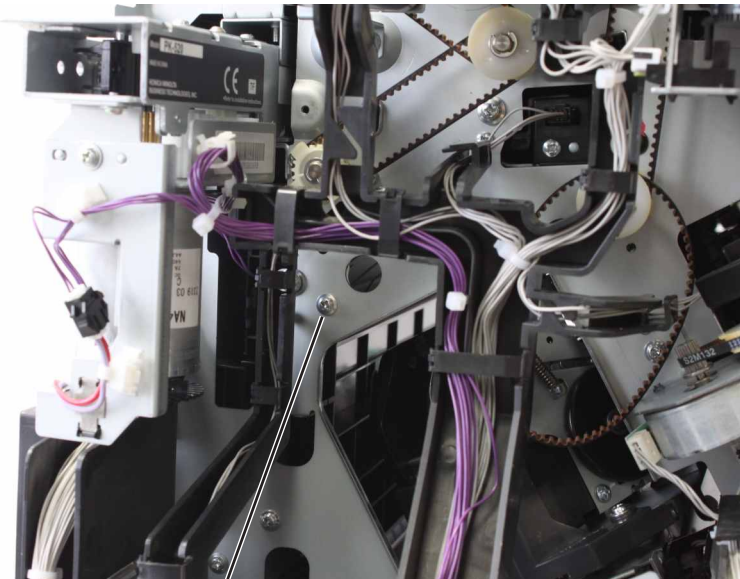
Parts removal

SHPF booklet maker upper pre-feed guide removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the SHPF jam access door. See **"SHPF jam access door removal" on page 338**.

5 Remove the booklet maker pre-feed roller. See **"SHPF booklet maker pre-feed roller removal" on page 418**.

6 Remove the booklet maker lower pre-feed guide. See **"SHPF booklet maker lower pre-feed guide removal" on page 419**.

7 Remove the two screws (A), and then set aside the bracket.

8 Remove the two screws (B).
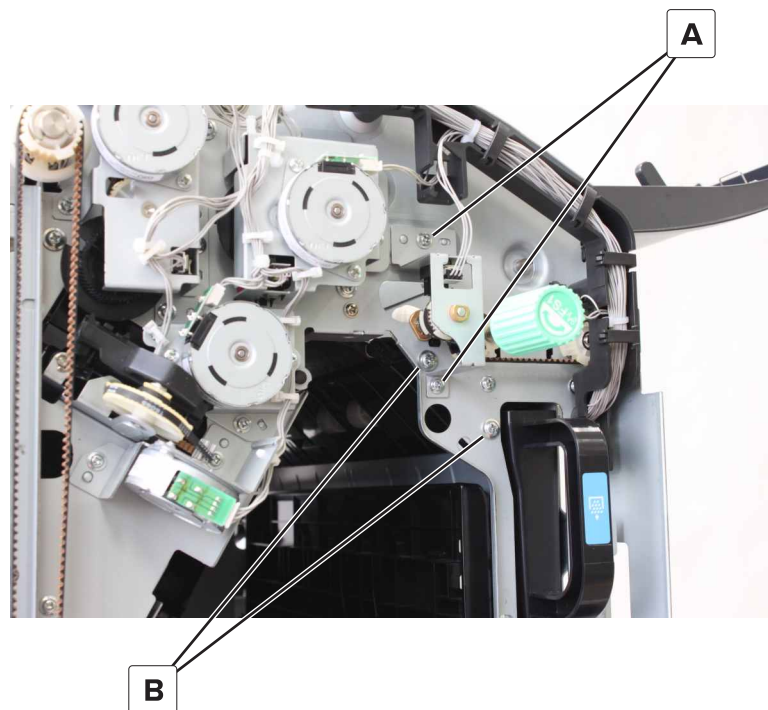
9 Disconnect the cable (C), and then remove the two screws (D).
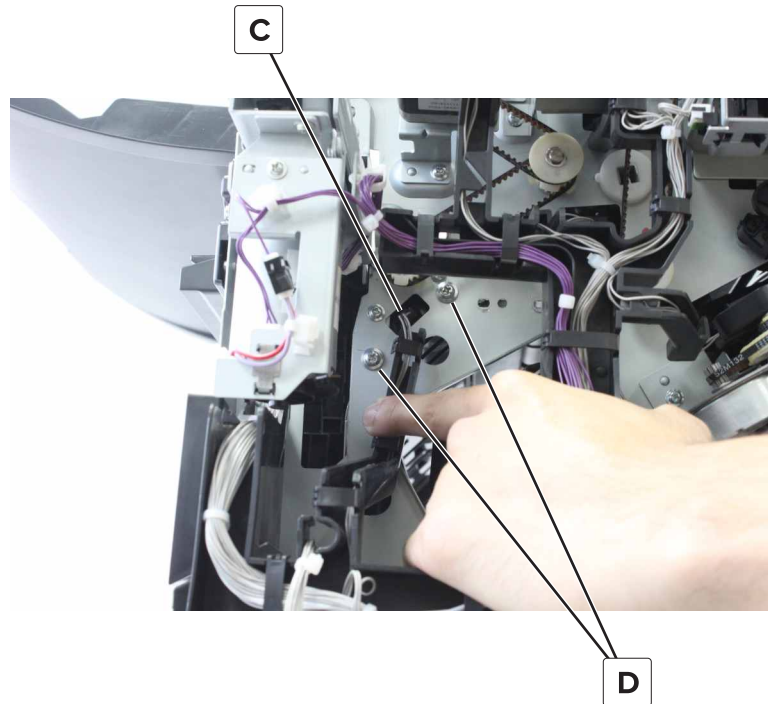
10 Remove the assembly.

11 Disconnect the cable (E), and then remove the sensor (SHPF booklet gate).
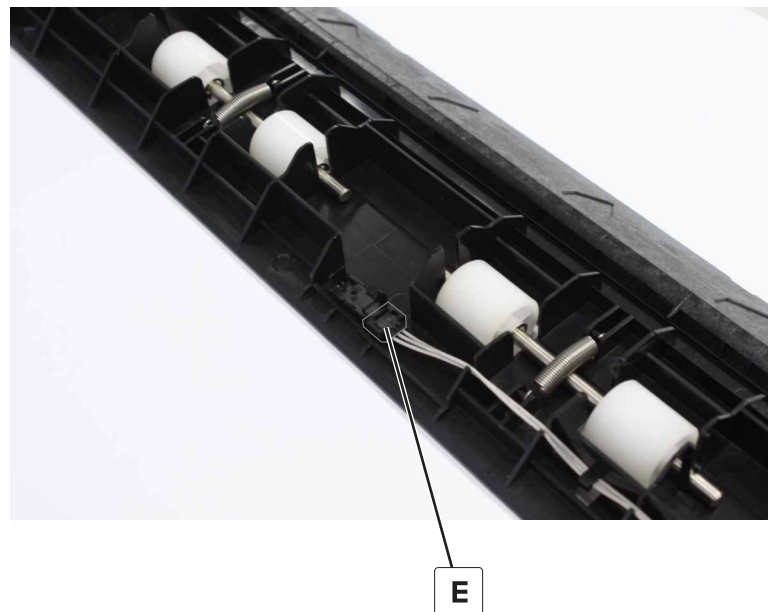
SHPF diverter feed guide removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the punch unit. See **"Punch unit removal" on page 361**.

5 Open the top door and top jam access door.

6 Remove the screw (A).
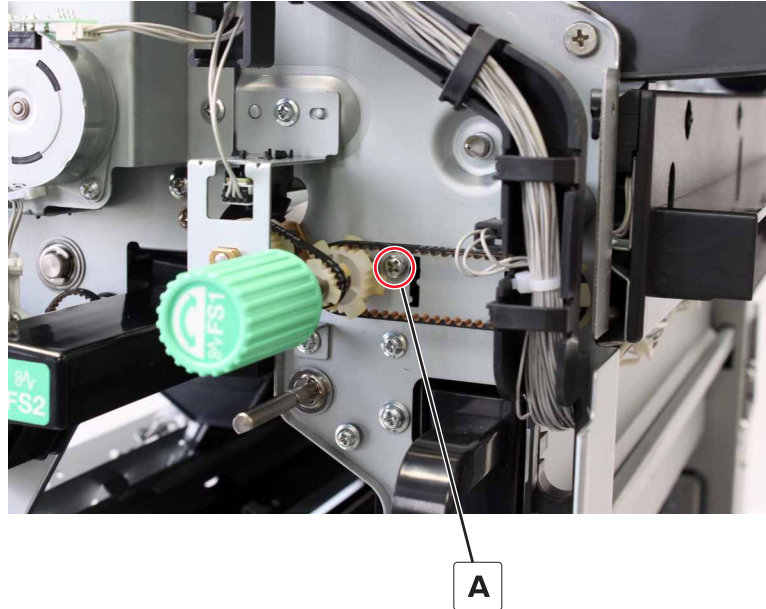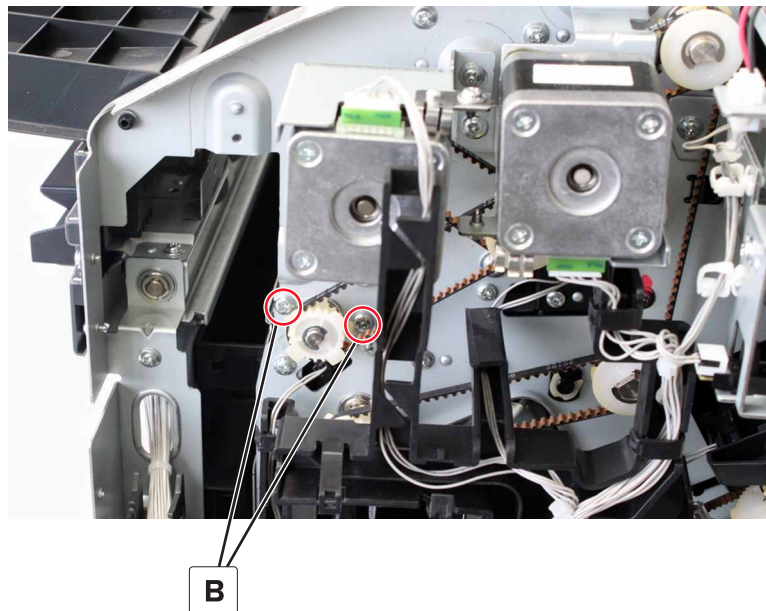
A

7 Remove the two screws (B), and then remove the guide.

B

SHPF diverter feed roller removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the punch unit. See **"Punch unit removal" on page 361**.

5 Remove the diverter feed roller knob. See **"SHPF diverter feed roller knob removal" on page 333**.

6 Remove the diverter feed guide. See **"SHPF diverter feed guide removal" on page 422**.

7 Remove the two screws (A), and then set aside the bracket.

8 Remove the clip (B), and then remove the gear.
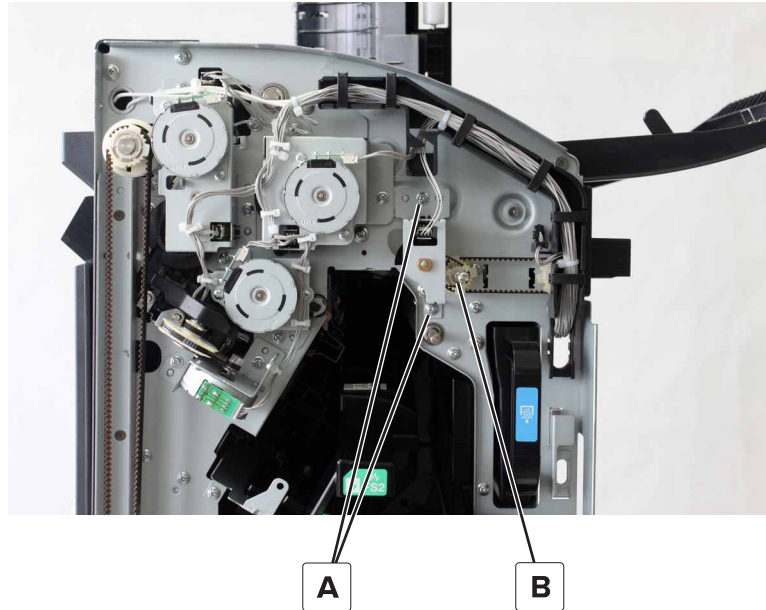
9 Remove the two clips (C), and then remove the gear.
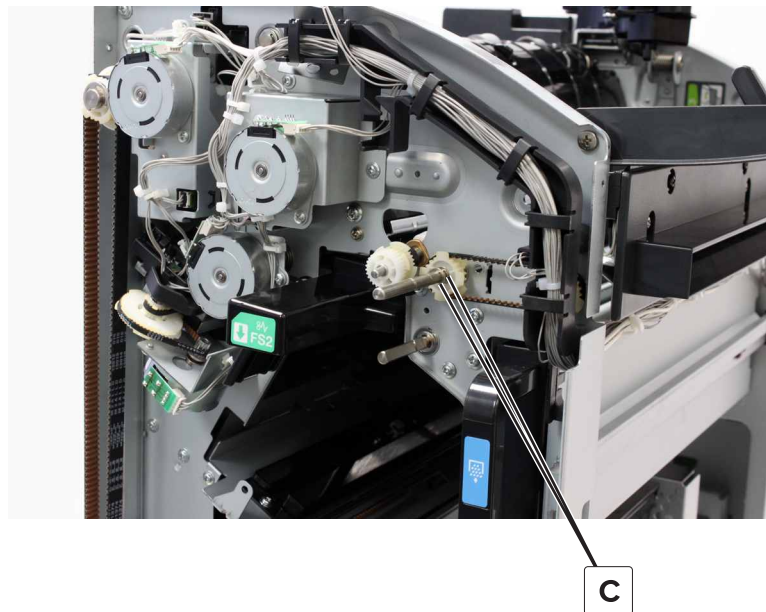
10 Remove the clip (D), and then remove the ball bearing.

D
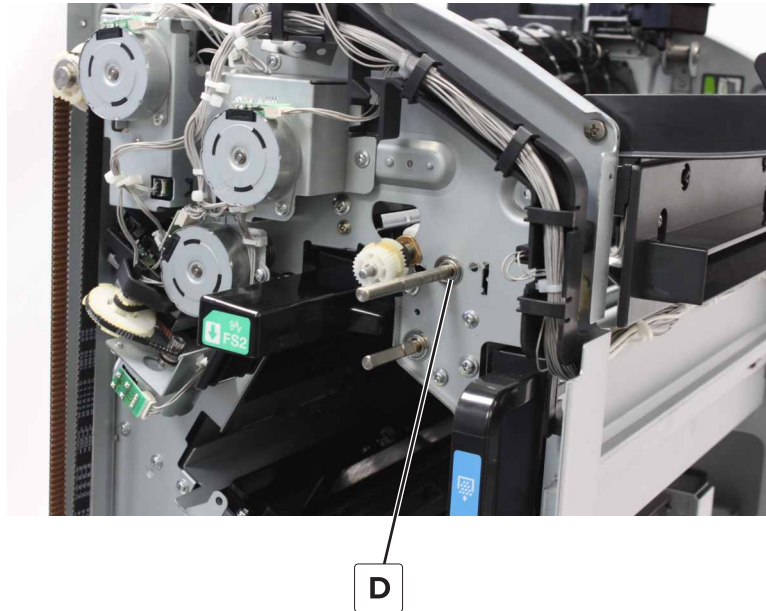
11 Remove the clip (E), and then remove the gear.

E

Parts removal
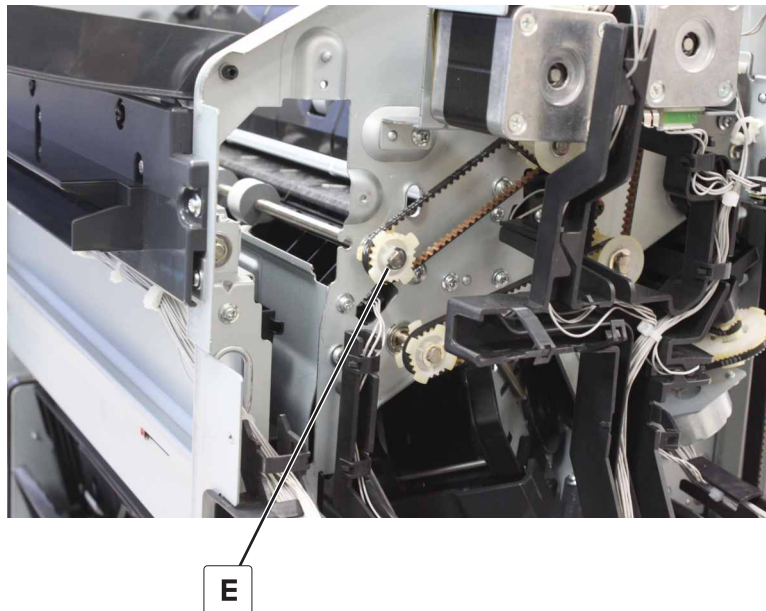
12 Remove the clip (F), and then remove the ball bearing.
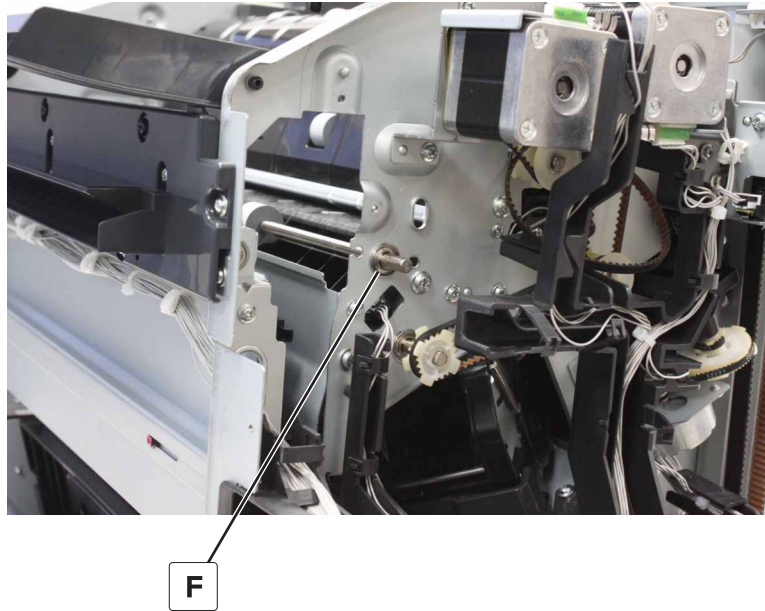
13 Remove the roller.

SHPF elevator bin stack limit actuator removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

5 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

6 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

7 Remove the four screws (A).

8 Remove the two screws (B), and then set aside the two sensors.
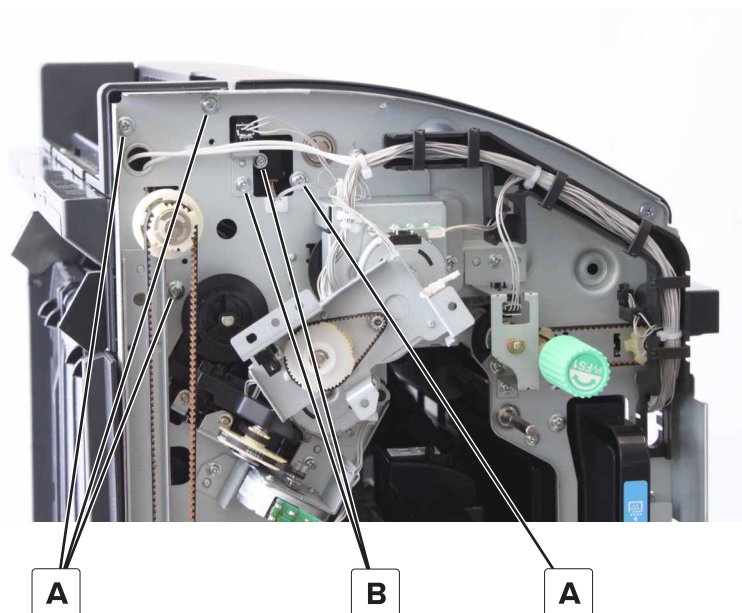
9 Remove the two screws (C).
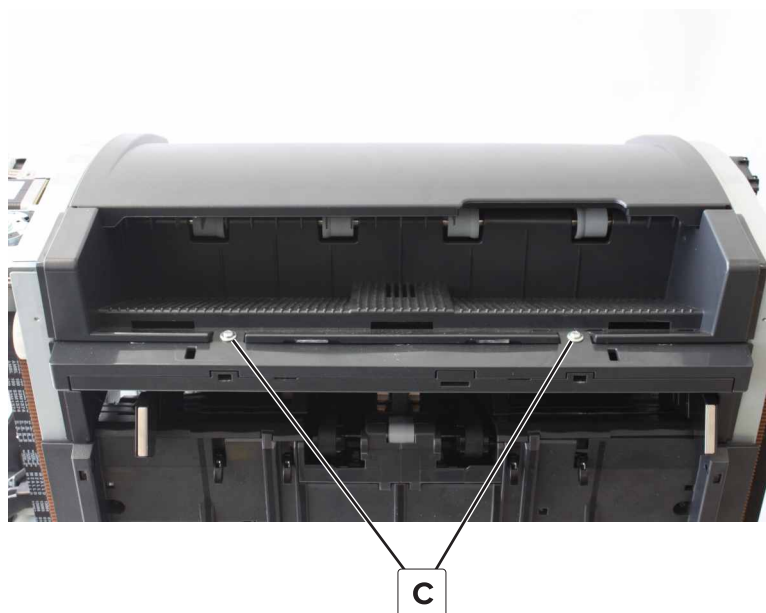
10 Remove the four screws (D).

11 Remove the screw (E), and then set aside the sensor.
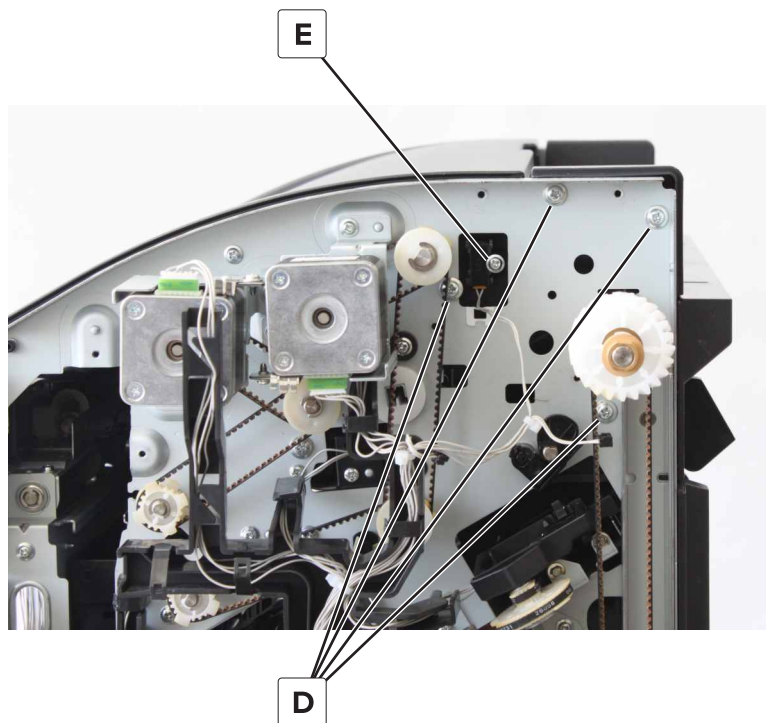
12 Pull the guide.
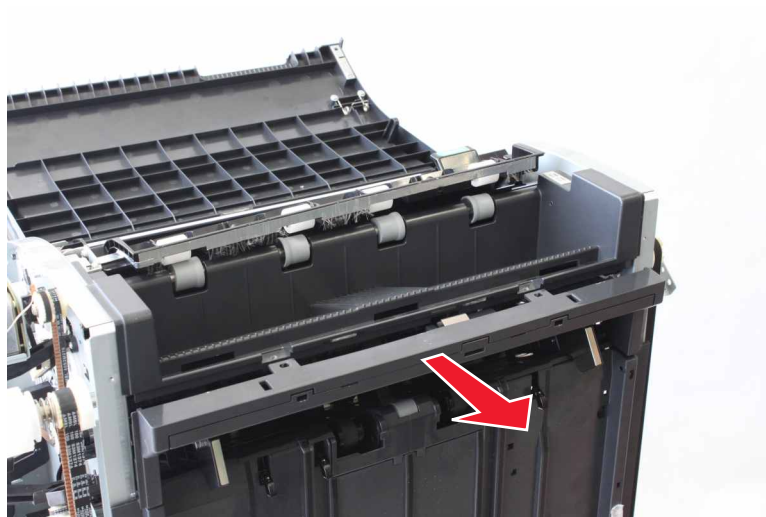
13 Pry, and then remove the cover.

14 Disconnect the two cables (F), and then remove the guide.

F
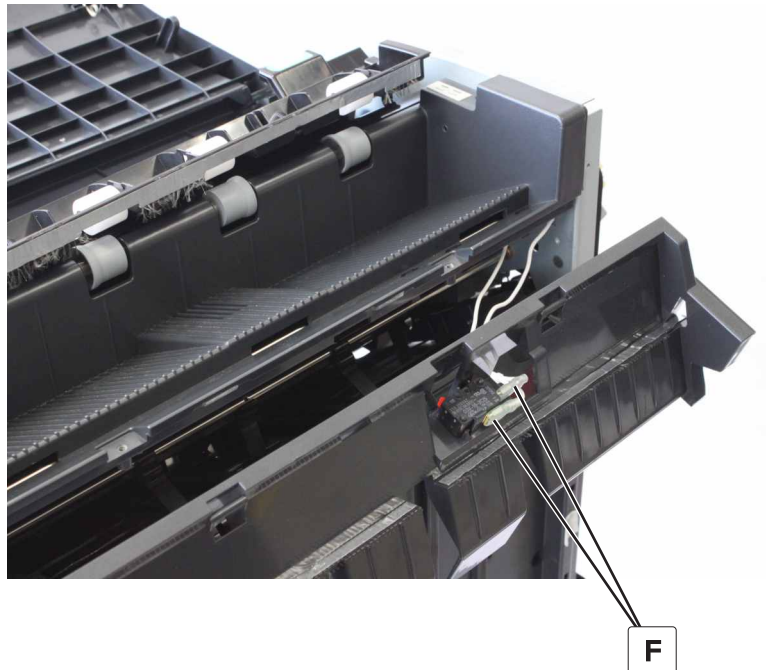
SHPF elevator bin stack limit switch removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

5 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

6 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

7 Remove the elevator bin stack limit actuator. See **"SHPF elevator bin stack limit actuator removal" on page 426**.

8 Release the latch (A), and then remove the sensor.
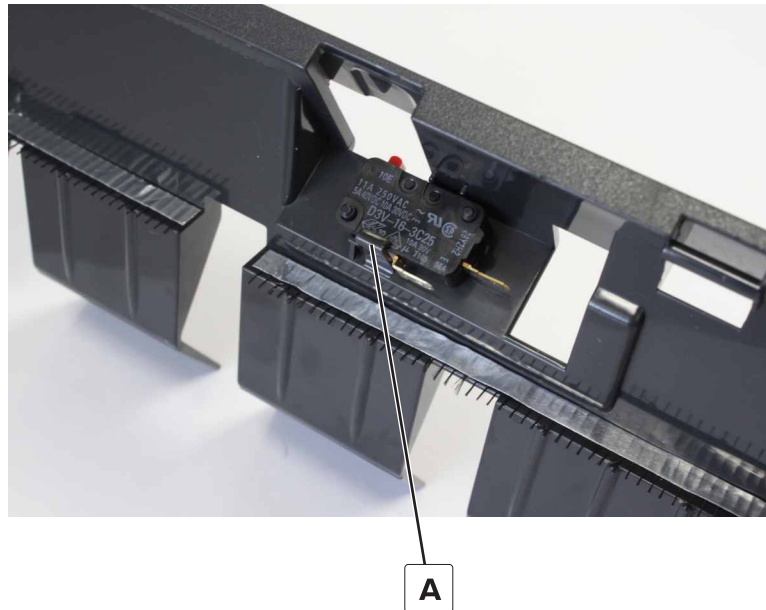
SHPF top bin removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

5 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

6 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

7 Set aside the elevator bin stack limit actuator. See **"SHPF elevator bin stack limit actuator removal" on page 426**.

8 Remove the bin.

SHPF top bin exit roller removal

1 Remove the bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

5 Remove the sensor (SHPF top bin exit). See **"Sensor (SHPF top bin exit) removal" on page 394**.

6 Remove the top bin exit paper guide. See **"Motor (SHPF elevator) removal" on page 356**.

7 Remove the transport motor bracket. See **"Motor (SHPF transport) removal" on page 353**.

8 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

9 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

10 Set aside the elevator bin stack limit actuator. See **"SHPF elevator bin stack limit actuator removal" on page 426**.

11 Remove the top bin. See **"SHPF top bin removal" on page 430**.

12 Remove the clip (A), and then remove the ball bearing.
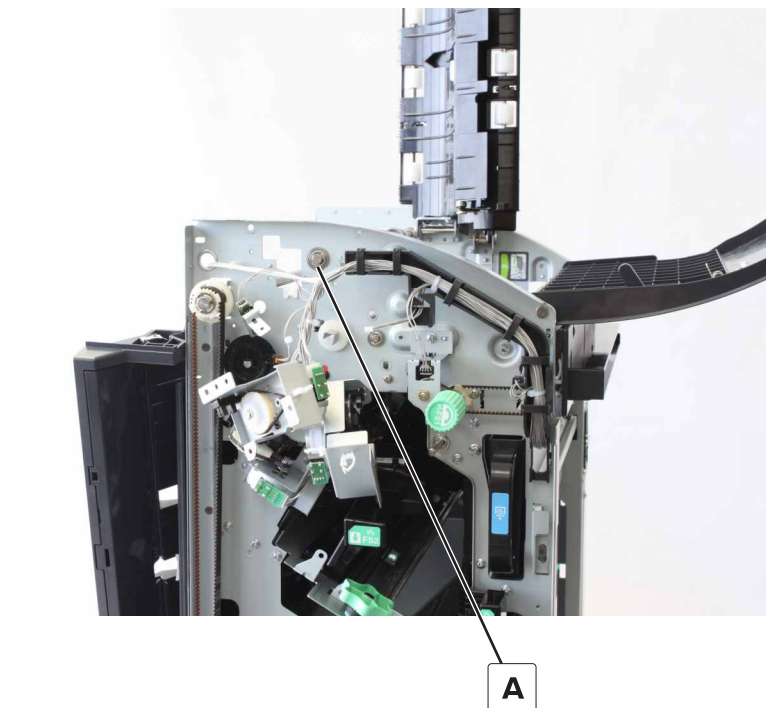
13 Remove the clip (B), and then remove the washer and gear.

**14** Remove the clip (C), and then remove the ball bearing.

15 Remove the roller.

SHPF compiler feed roller release cam removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

5 Remove the sensor (SHPF top bin exit). See **"Sensor (SHPF top bin exit) removal" on page 394**.

6 Remove the top bin exit paper guide. See **"SHPF top bin exit paper guide removal" on page 395**.

7 Remove the transport motor bracket. See **"Motor (SHPF transport) removal" on page 353**.

8 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

9 Remove the two screws (A).

A

10 Remove the bushing (B).

B
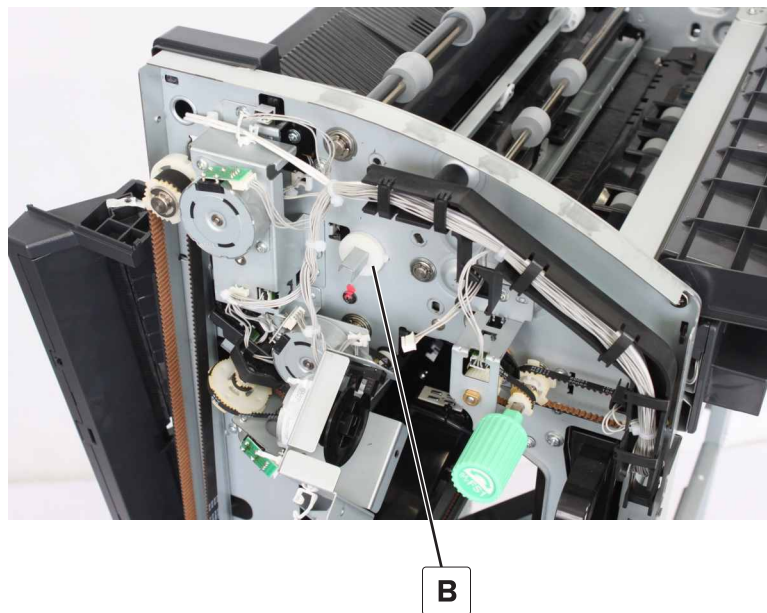
11 Remove the clip (C), and then remove the washer, gear, and belt.

12 Remove the bushing (D), and then remove the cam.

SHPF top bin transport roller removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

5 Remove the sensor (SHPF top bin exit). See **"Sensor (SHPF top bin exit) removal" on page 394**.

6 Remove the top bin exit paper guide. See **"SHPF top bin exit paper guide removal" on page 395**.

7 Remove the transport motor bracket. See **"Motor (SHPF transport) removal" on page 353**.

8 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

9 Remove the clip (A), and then remove the ball bearing.
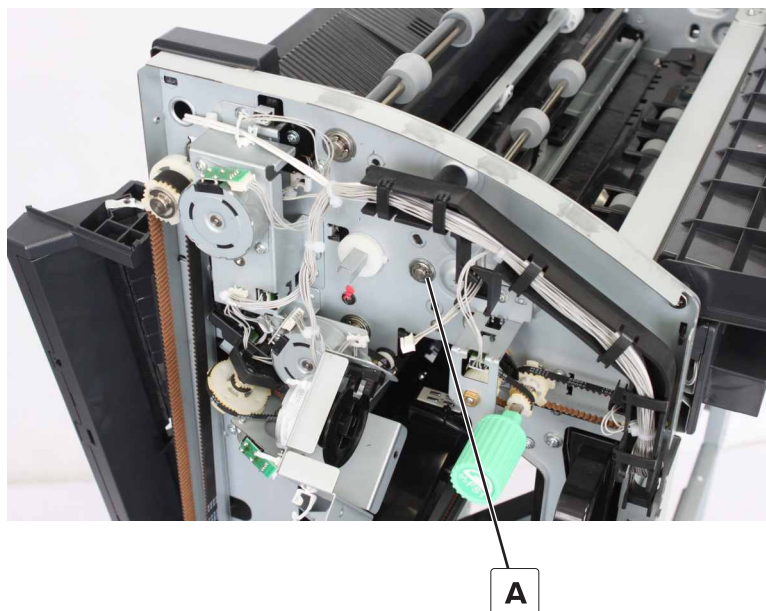
10 Remove the clip (B), and then remove the washer, gear, and belt.
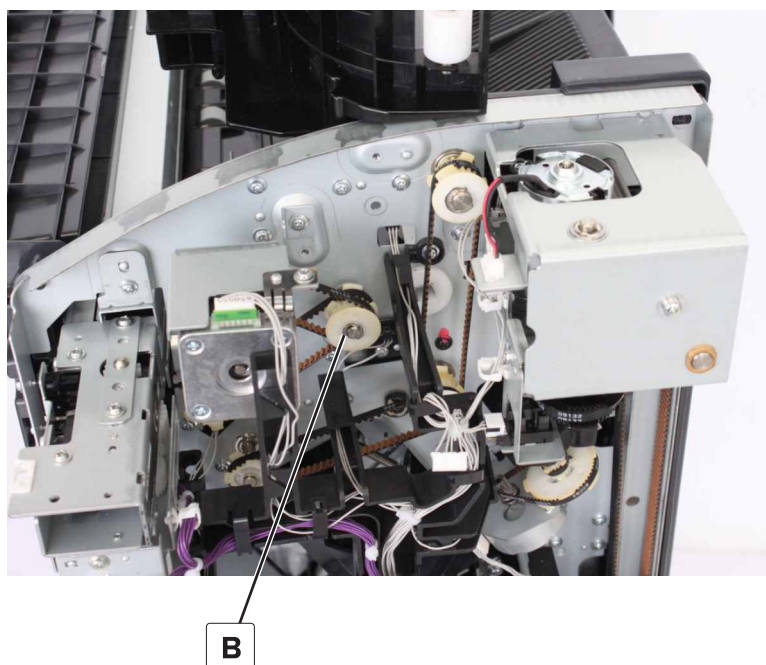
11 Remove the two clips (C), and then remove the ball bearing.

12 Remove the roller.

SHPF compiler feed idler roller assembly removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

5 Remove the sensor (SHPF top bin exit). See **"Sensor (SHPF top bin exit) removal" on page 394**.

6 Remove the top bin exit paper guide. See **"SHPF top bin exit paper guide removal" on page 395**.

7 Remove the transport motor bracket. See **"Motor (SHPF transport) removal" on page 353**.

8 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

9 Remove the exit roller cam. See **"SHPF compiler feed roller release cam removal" on page 433**.

10 Remove the top bin transport roller. See **"SHPF top bin transport roller removal" on page 435**.

11 Remove the two springs (A).
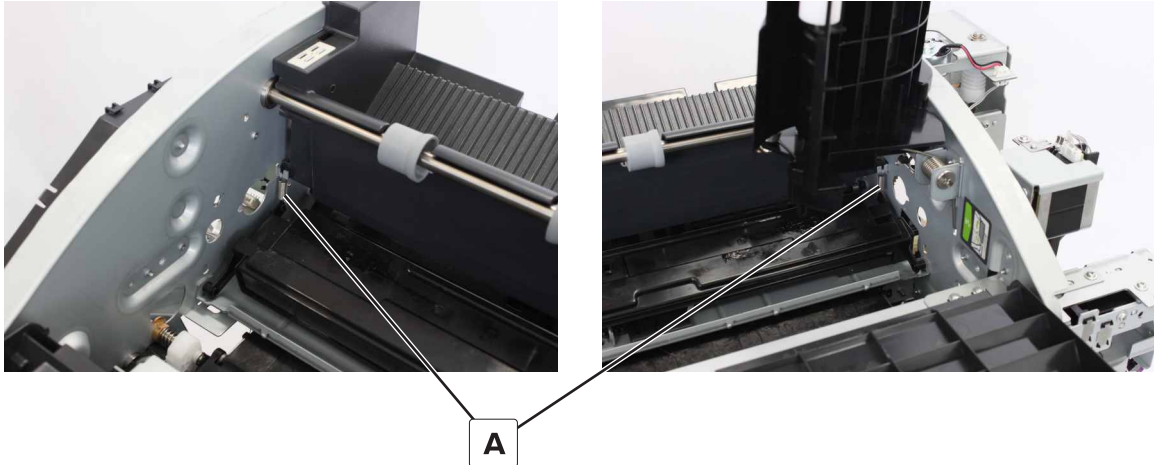
12 Remove the screw (B).
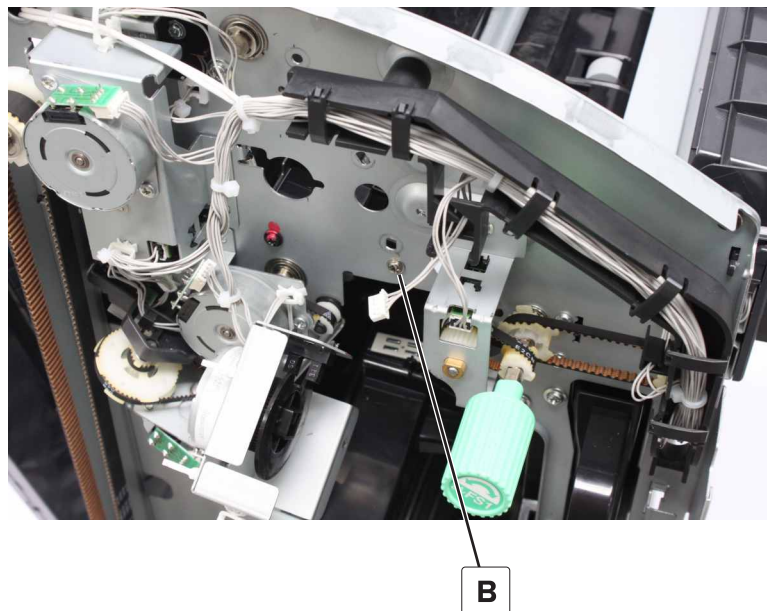
13 Remove the screw (C).
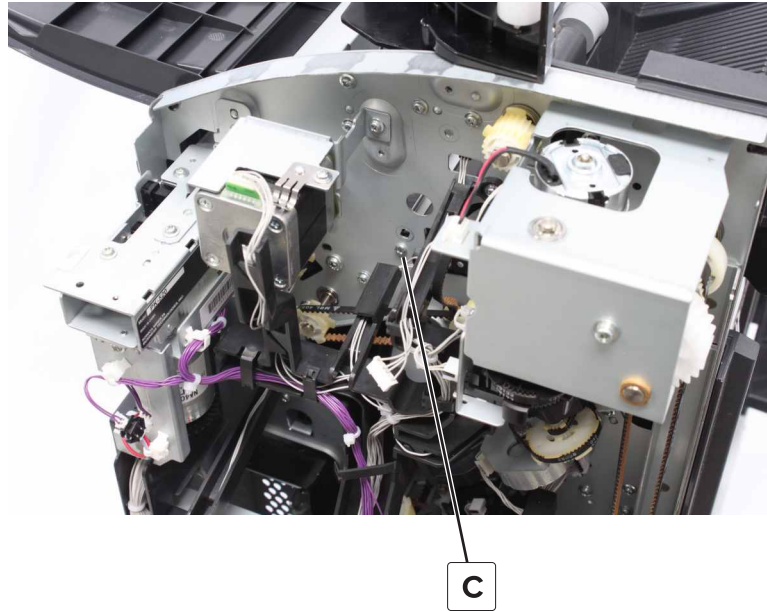
14 Pry the hinge, and then remove the assembly.

Sensor (SHPF compiler feed) removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

5 Remove the sensor (SHPF top bin exit). See **"Sensor (SHPF top bin exit) removal" on page 394**.

6 Remove the top bin exit paper guide. See **"SHPF top bin exit paper guide removal" on page 395**.

7 Remove the transport motor bracket. See **"Motor (SHPF transport) removal" on page 353**.

8 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

9 Remove the exit roller cam. See **"SHPF compiler feed roller release cam removal" on page 433**.

10 Remove the top bin transport roller. See **"SHPF top bin transport roller removal" on page 435**.

11 Remove the compiler feed idler roller assembly. See **"SHPF compiler feed idler roller assembly removal" on page 437**.

12 Disconnect the cable (A), and then remove the screw (B).
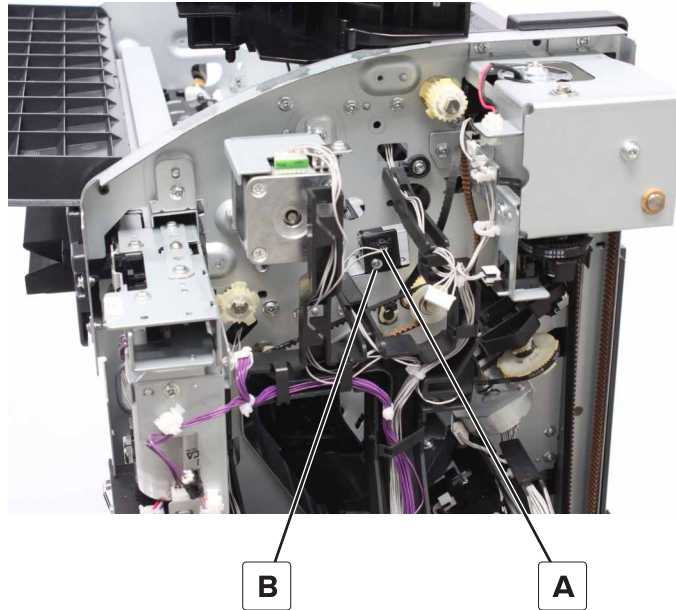
13 Remove the sensor holder.

14 Disconnect the cable (C), and then remove the sensor.
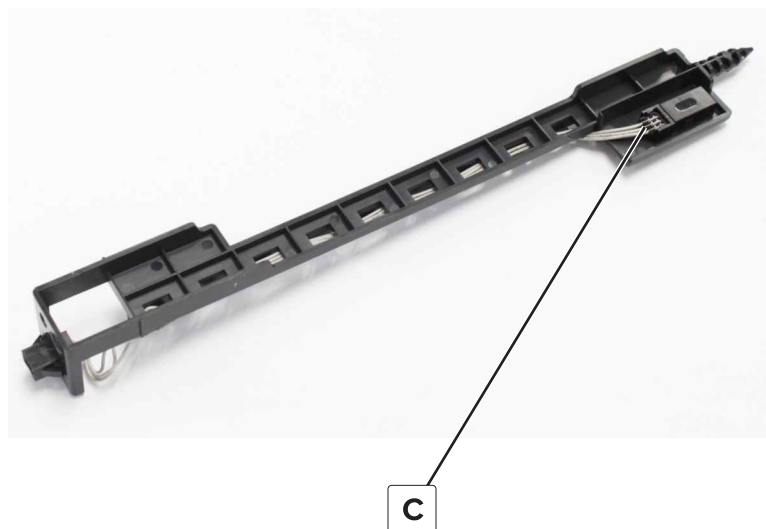
Parts removal

SHPF compiler guide removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

5 Remove the paddle drive gear. See **"SHPF paddle drive gears removal" on page 381**.

6 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

7 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

8 Remove the paddle cam and compiler guide lever. See **"SHPF paddle cam and compiler guide lever removal" on page 360**.

9 Remove the top bin. See **"SHPF top bin removal" on page 430**.

10 Disconnect the spring (A) from the frame.

A
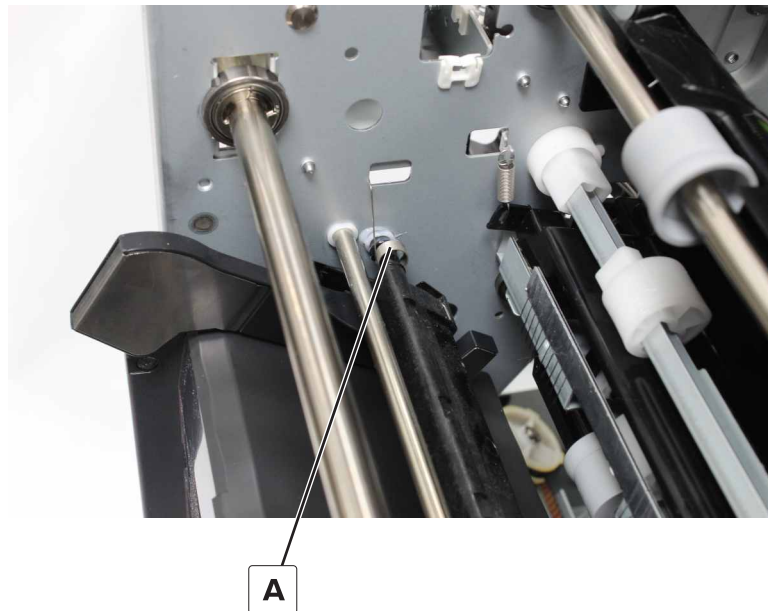
11 Remove the clip (B), and then remove the bushing.
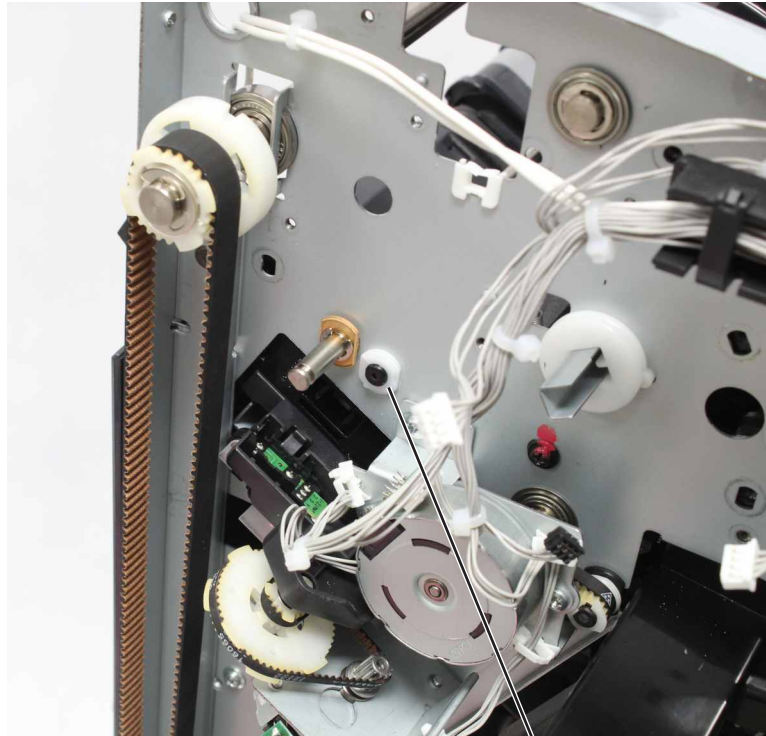
B

12 Remove the bushing (C).
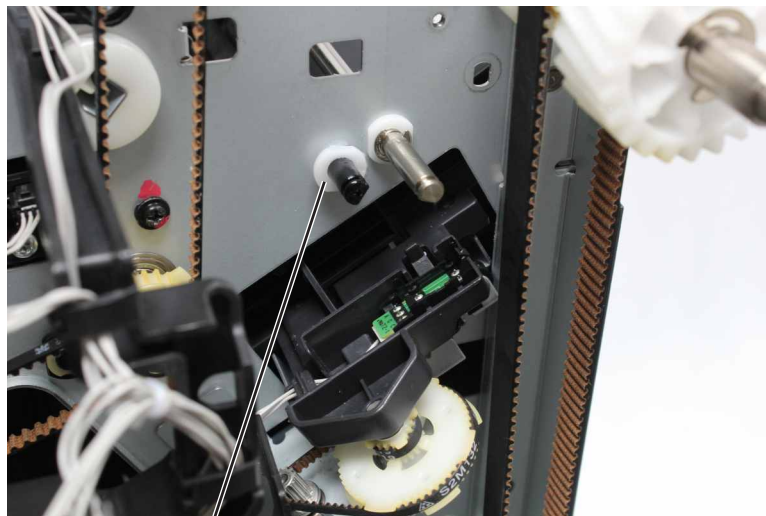
C

13 Remove the guide.

SHPF entrance guide removal

1 Remove the seven screws (A).
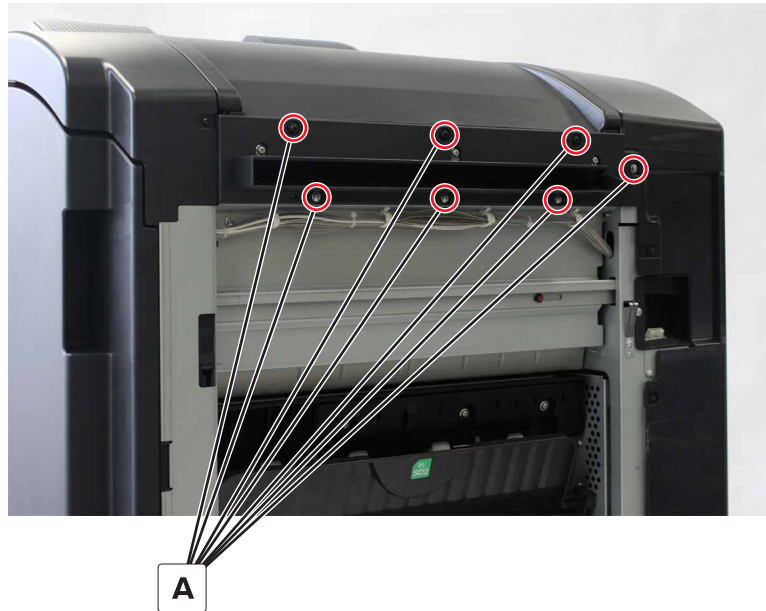
2 Remove the guide.

Sensor (SHPF entrance) removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the top door. See **"SHPF top door removal" on page 335**.

4 Remove the entrance guide. See **"SHPF entrance guide removal" on page 443**.

5 Remove the three screws (A), and then remove the sensor holder.
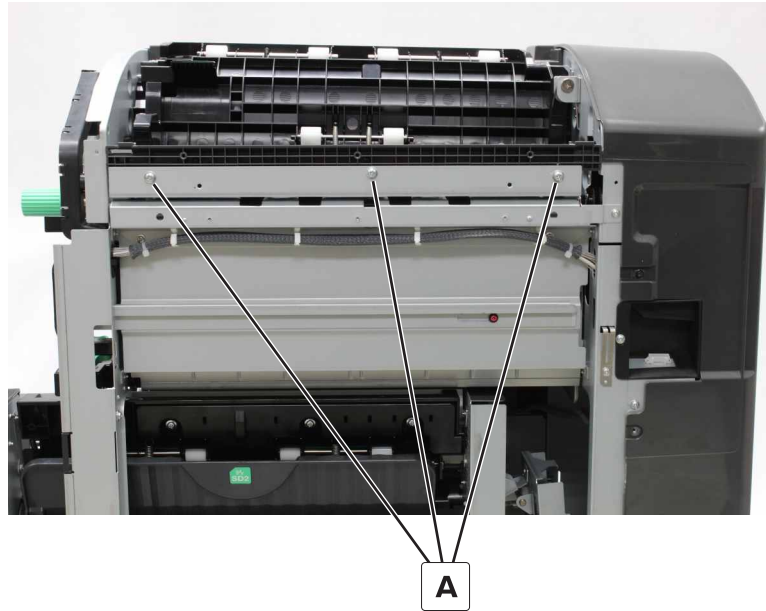
6 Disconnect the cable (B), and then remove the sensor.
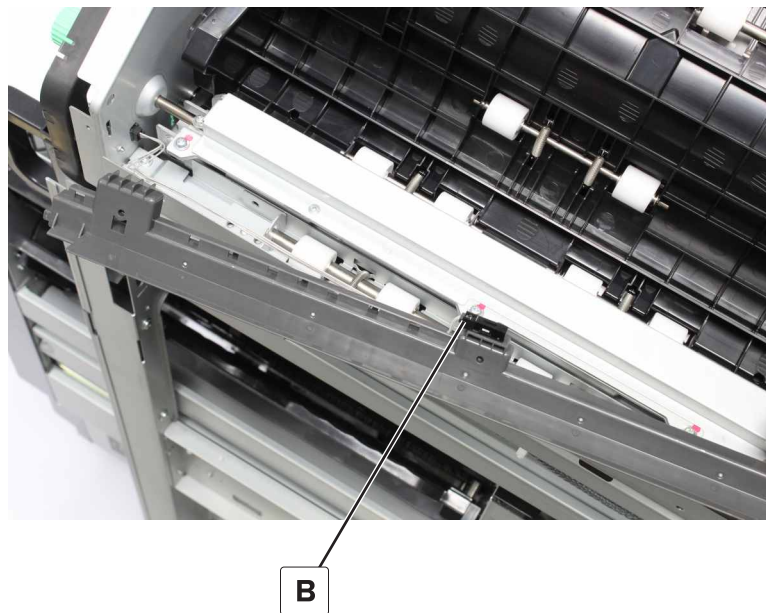
SHPF entrance idler and roller removal

1 Remove the front door. See **"SHPF front door removal" on page 332**.

2 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

3 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

4 Remove the top door. See **"SHPF top door removal" on page 335**.

5 Remove the punch unit. See **"Punch unit removal" on page 361**.

6 Remove the entrance guide. See **"SHPF entrance guide removal" on page 443**.

7 Remove the entrance sensor holder. See **"Sensor (SHPF entrance) removal" on page 443**.

8 Disconnect the cable (A).

9 Remove the two screws (B), and then set aside the cable holder.

10 Remove the clip (C), and then remove the ball bearing.

Parts removal
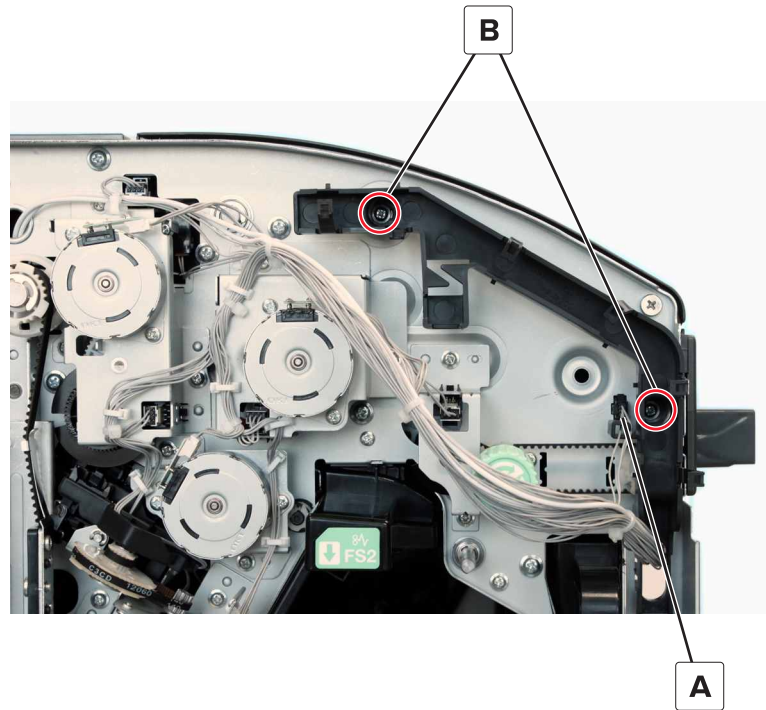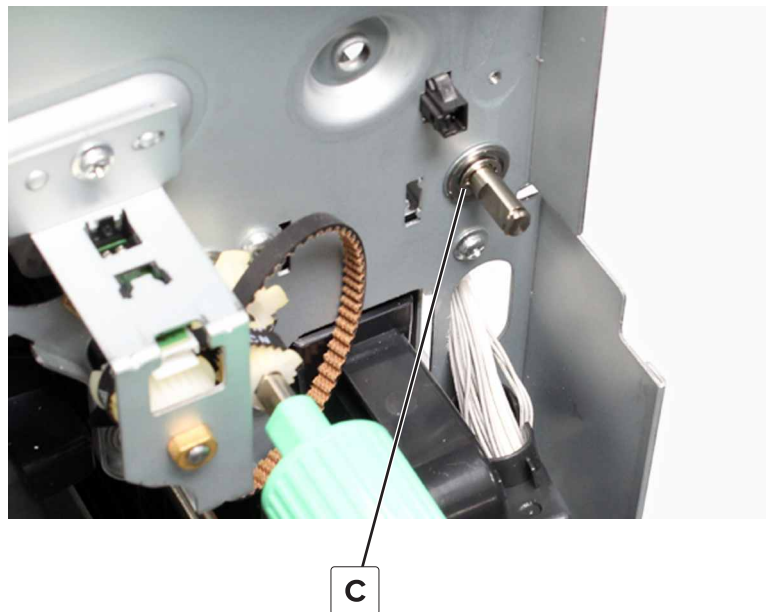
11 Remove the three screws (D).

D
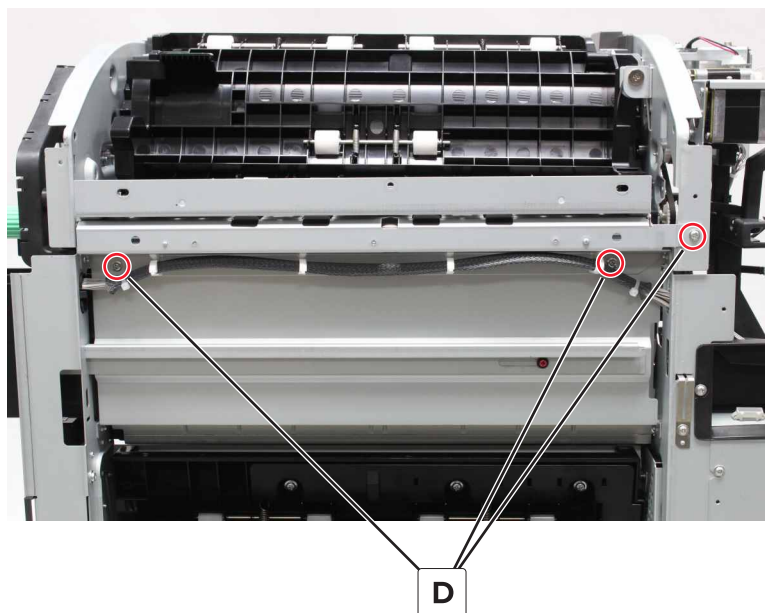
12 Remove the two screws (E), and then remove the idler bracket.

E
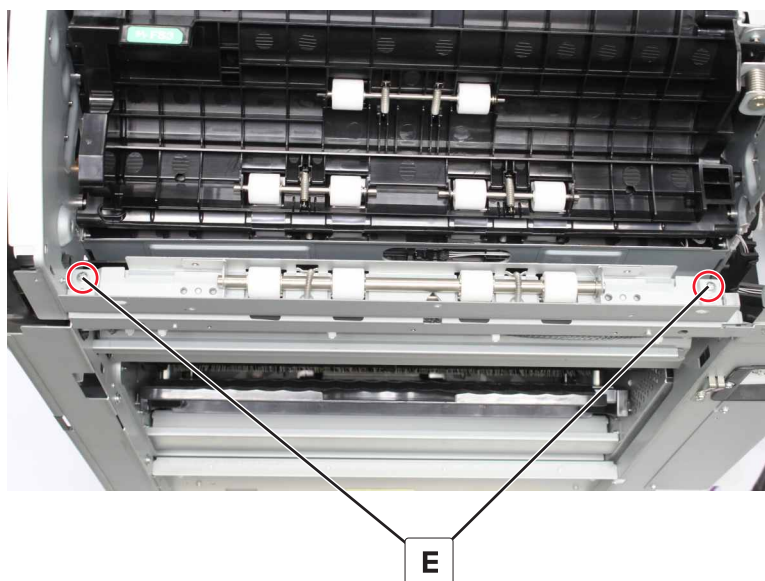
13 Remove the clip (F) and then remove the ball bearing.

F
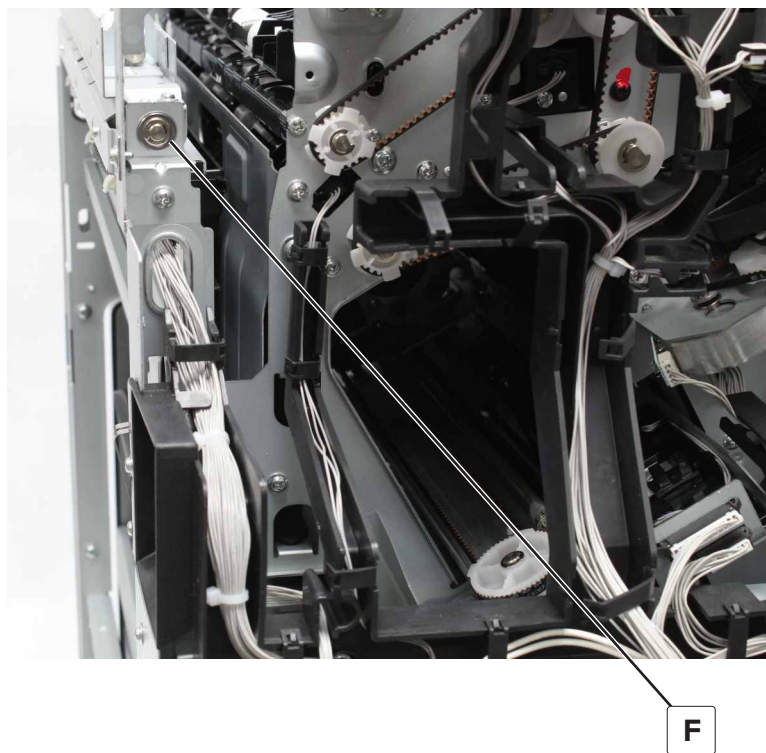
14 Remove the roller (G)

G
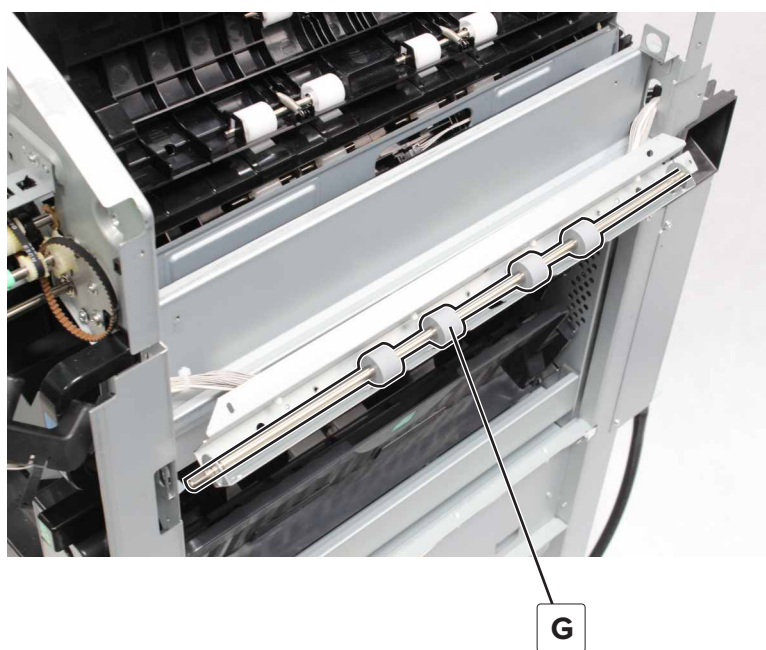
15 Remove the two springs (H), and then remove the idler.
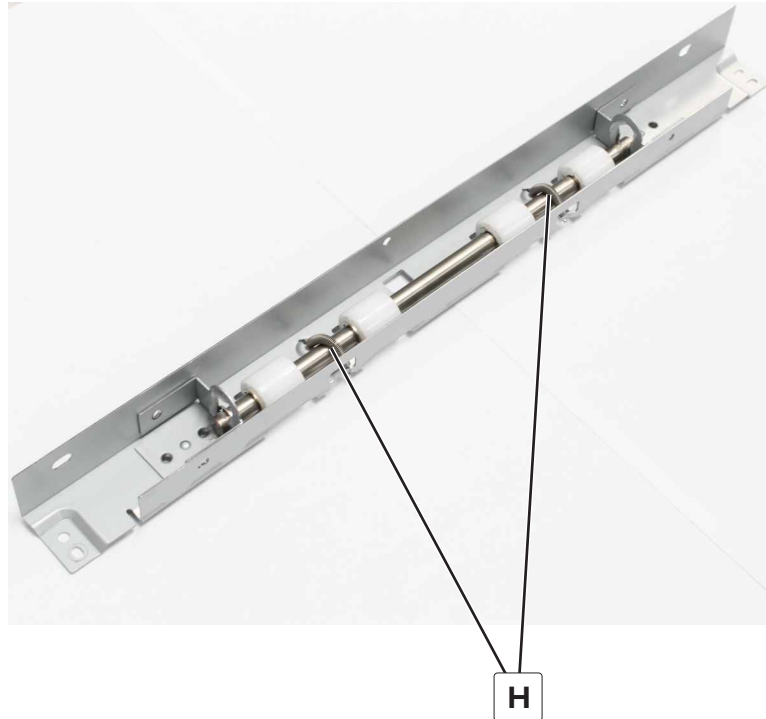
SHPF compiler bails removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

5 Remove the trailing edge stopper motor. See **"Motor (SHPF aligner) removal" on page 388**.

6 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

7 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

8 Remove the elevator bin stack limit actuator. See **"SHPF elevator bin stack limit actuator removal" on page 426**.

9 Remove the top bin. See **"SHPF top bin removal" on page 430**.

10 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

11 Remove the two screws (A) from the aligners.
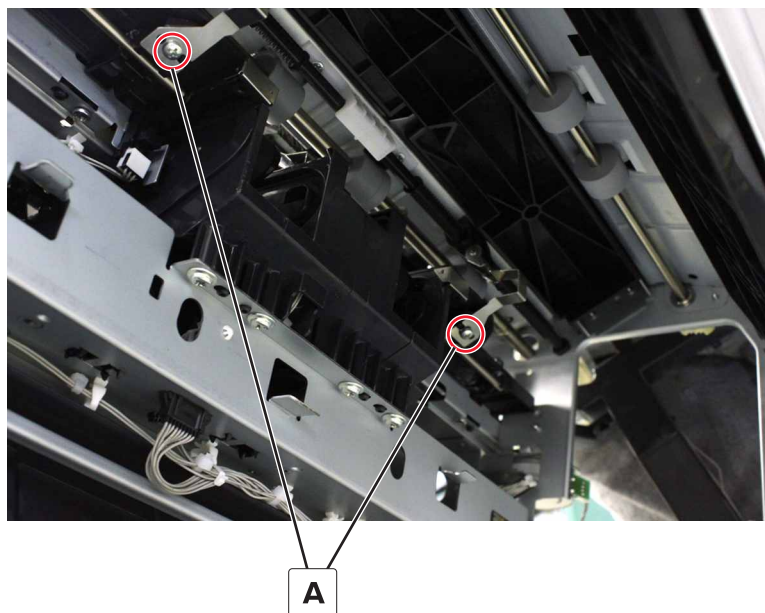
12 Remove the two guides.

Installation note: Position the tabs of both bails over the metal frame.

SHPF compiler feed roller removal

1 Remove the top bin extender. See **"SHPF top bin extender removal" on page 327**.

2 Remove the front door. See **"SHPF front door removal" on page 332**.

3 Remove the top inner cover. See **"SHPF top inner cover removal" on page 332**.

4 Remove the paddle motor bracket. See **"SHPF paddle motor bracket removal" on page 380**.

5 Remove the aligner motor bracket. See **"Motor (SHPF aligner) removal" on page 388**.

6 Remove the rear cover. See **"SHPF rear cover removal" on page 335**.

7 Remove the elevator motor bracket. See **"Motor (SHPF elevator) removal" on page 356**.

8 Remove the elevator bin stack limit actuator. See **"SHPF elevator bin stack limit actuator removal" on page 426**.

9 Remove the top bin. See **"SHPF top bin removal" on page 430**.

10 Remove the staple unit assembly. See **"SHPF staple unit assembly removal" on page 363**.

11 Remove the compiler bails. See **"SHPF compiler bails removal" on page 448**.

12 Remove the clip (A), and then remove the ball bearing.
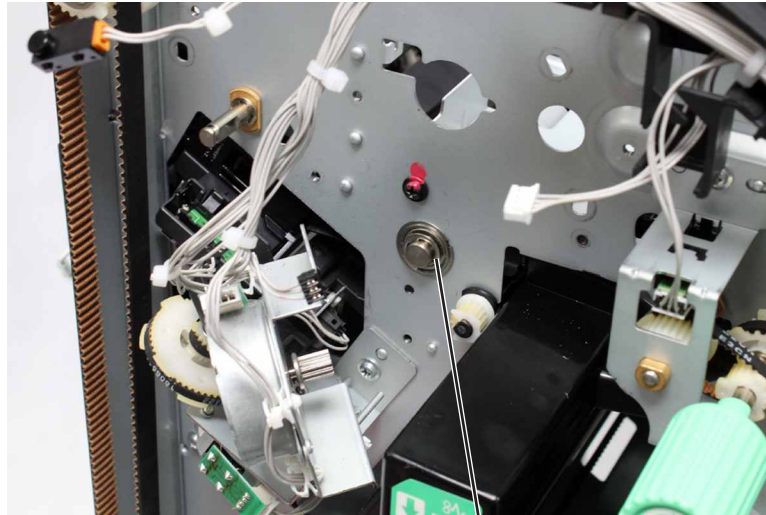
13 Remove the clip (B), and then remove the washer, belt, and gear.

14 Remove the clip (C), and then remove the ball bearing.
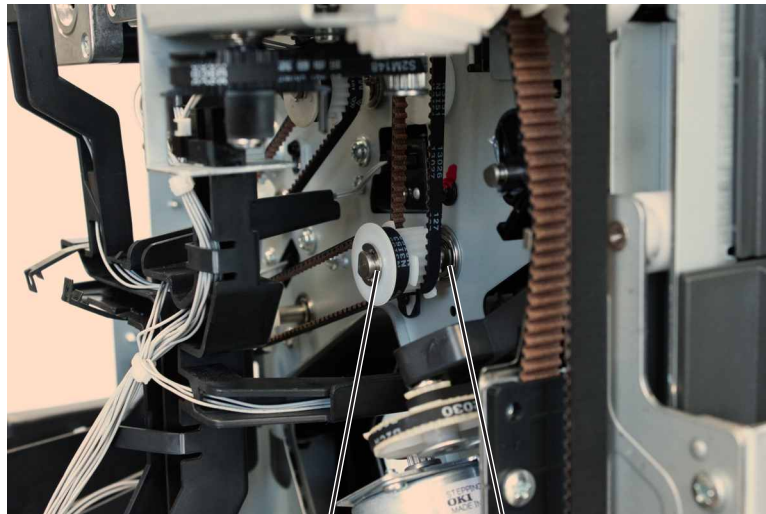
15 Remove the roller.

Booklet maker removals

Trifold jam knob removal

1 Remove the screw (A).

2 Remove the knob.

Booklet maker exit roller springs removal

1 Disconnect the two springs (A) from the frame.
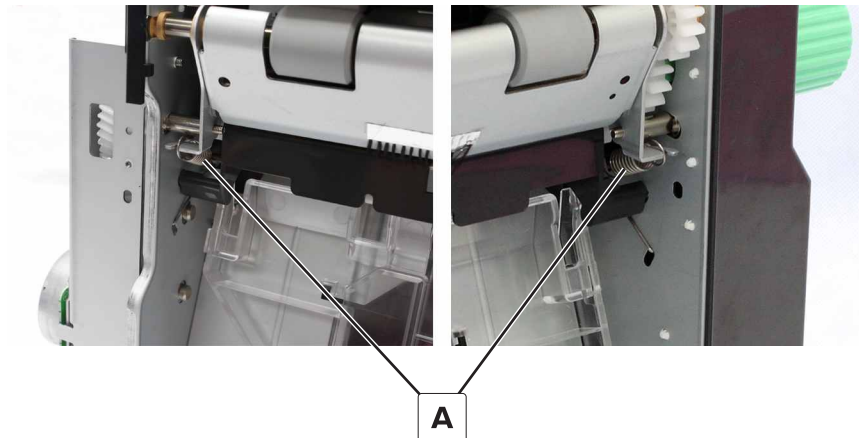
2 Remove the springs.

Booklet maker front cover removal

1 Remove the screw (A), and then remove the knob.

2 Remove the four screws (B), and then remove the cover.
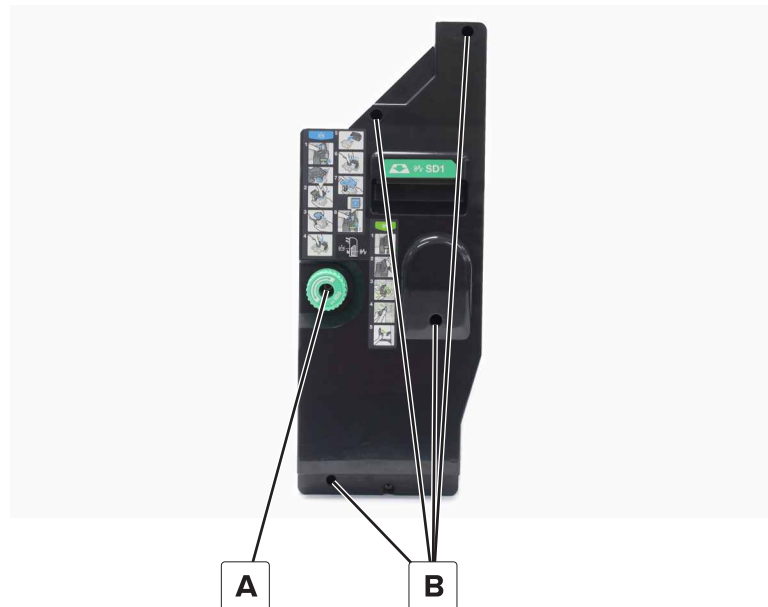
Booklet maker right cover removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the three screws (A).

Parts removal

3 Remove the three screws (B), and then remove the cover.

B
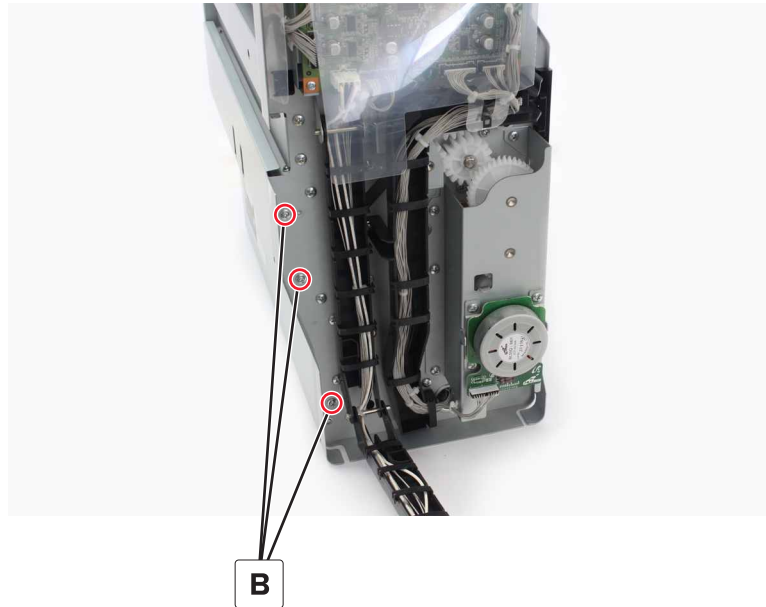
Booklet maker support removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the clip (A), and then remove the shaft.

A
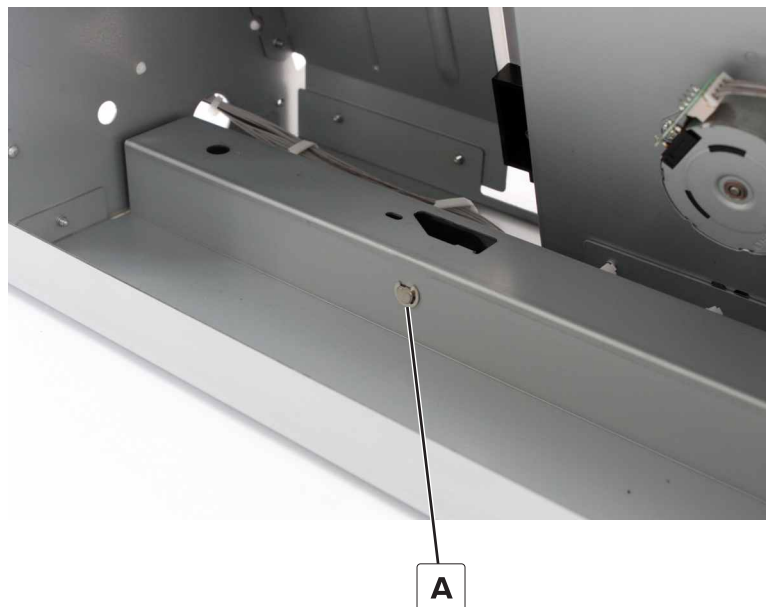
Parts removal

4 Remove the support (B).
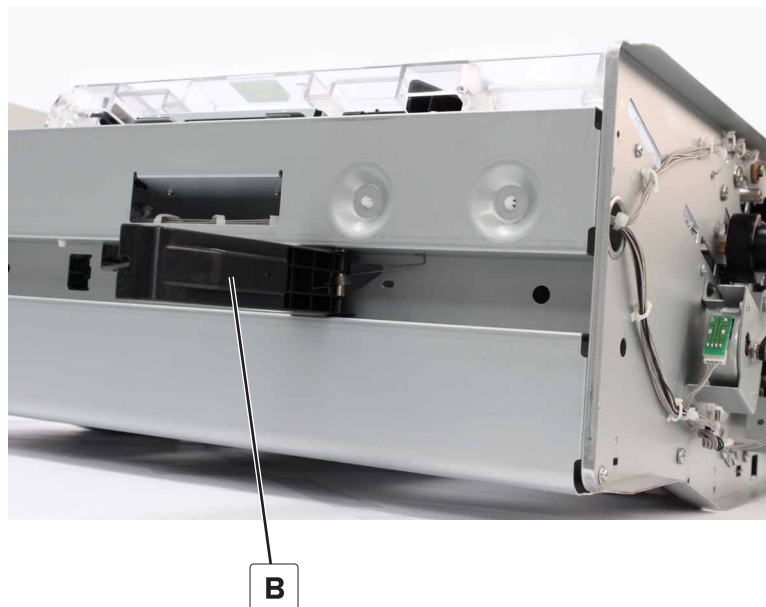
Bifold exit jam access door removal

1 Remove the two screws (A), and then remove the door.
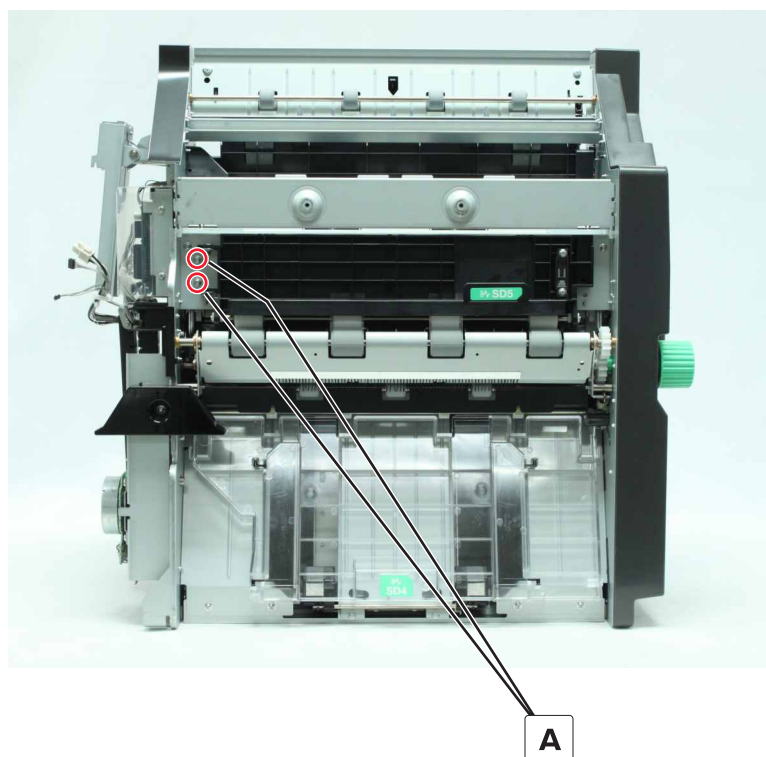
2 Remove the screw (B), and then remove the hinge.
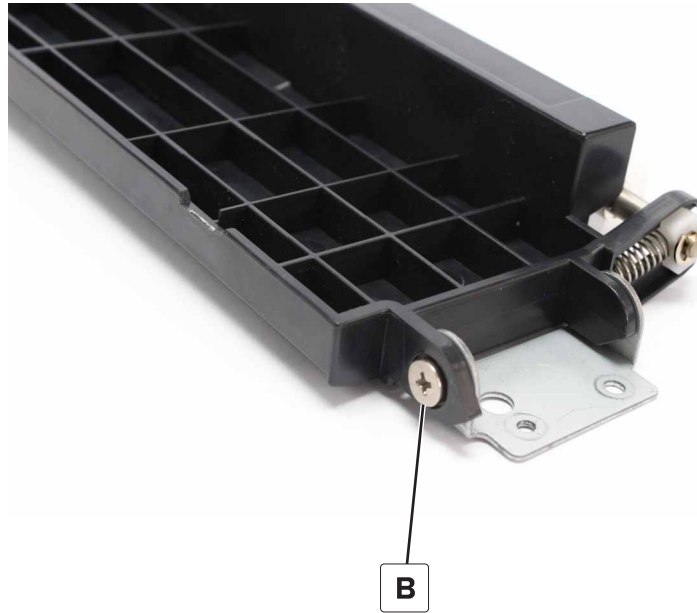
Booklet maker aligner jam access door removal

1 Remove the screw (A), and then remove the cover.
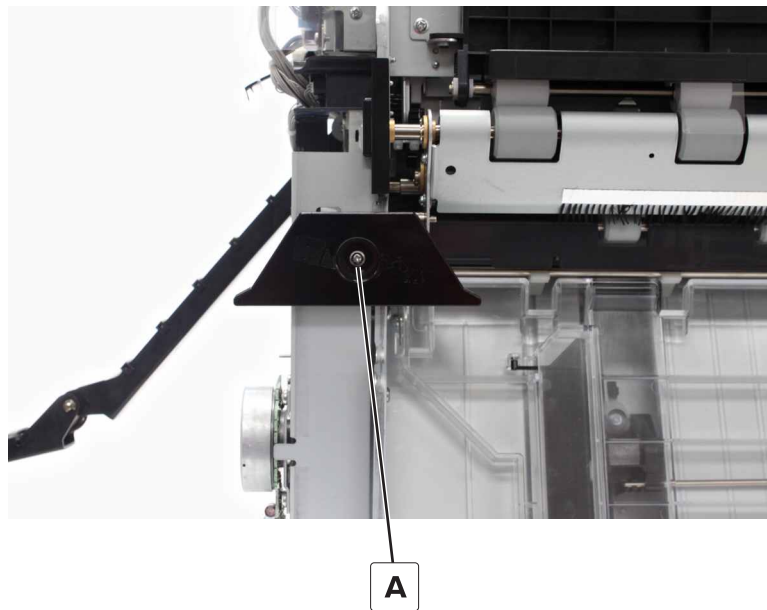
2 Release the two springs (B) from the frame.

B
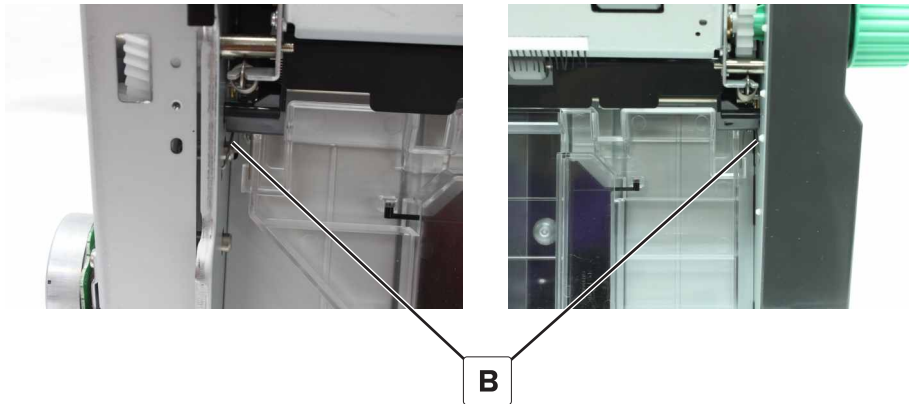
3 Pry the rear hinge, and then remove the door.

Installation note: Take note of the spring assignments.
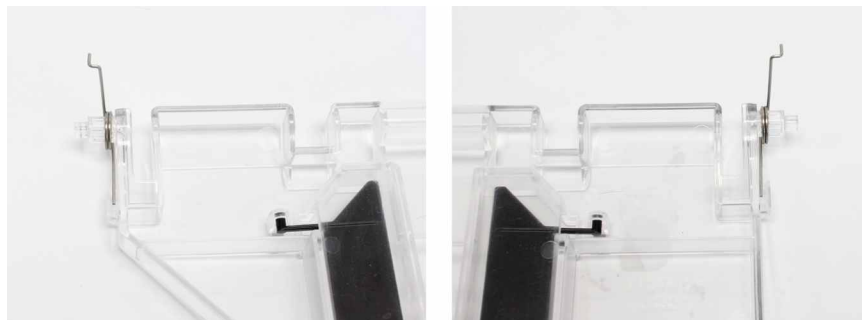
Booklet maker lower paddle removal

1 Remove the aligner jam access door. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the four paddles (A).
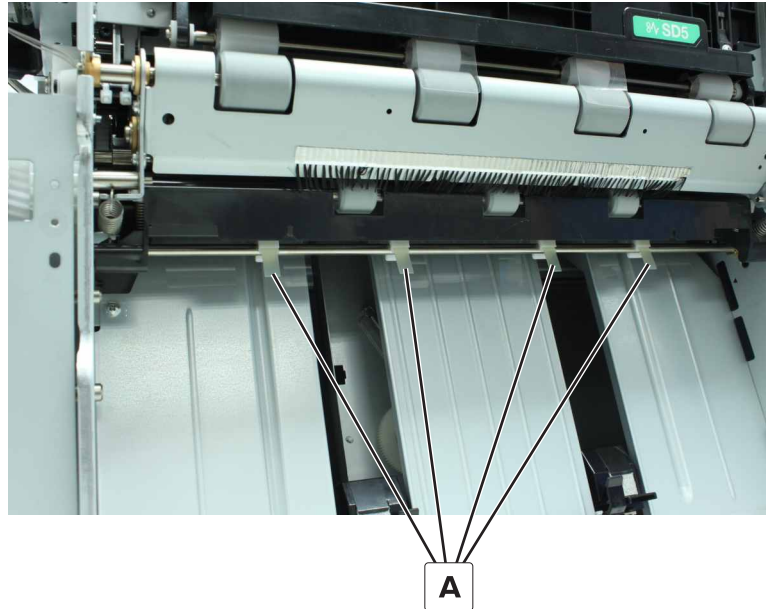
Booklet maker controller board removal

1 Disconnect all the cables from the board.

2 Remove the four screws (A), and then remove the board.
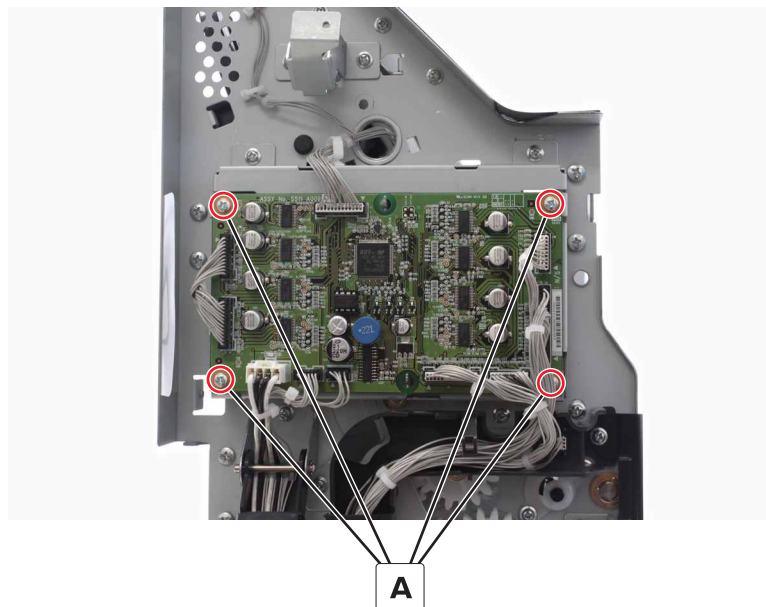
Booklet maker controller board holder removal

1 Remove the four screws.
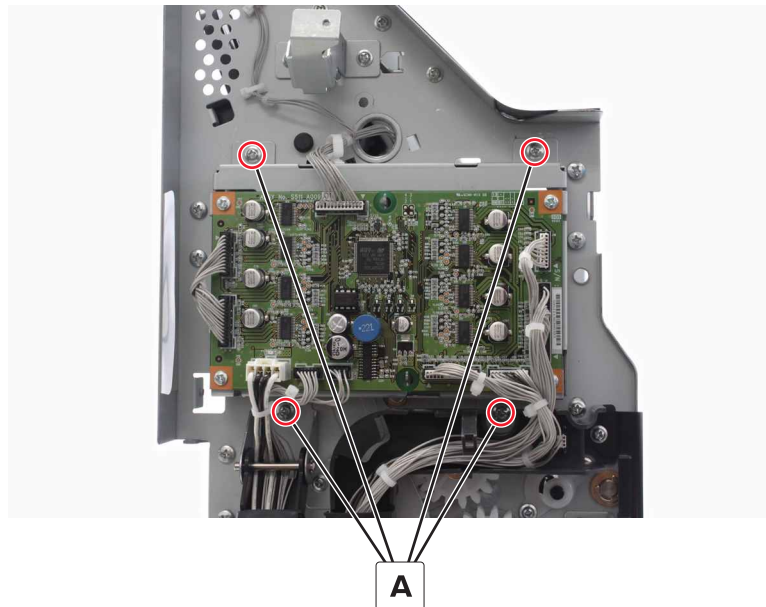
2 Remove the holder.

Top frame brace removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the two screws (A).

Parts removal
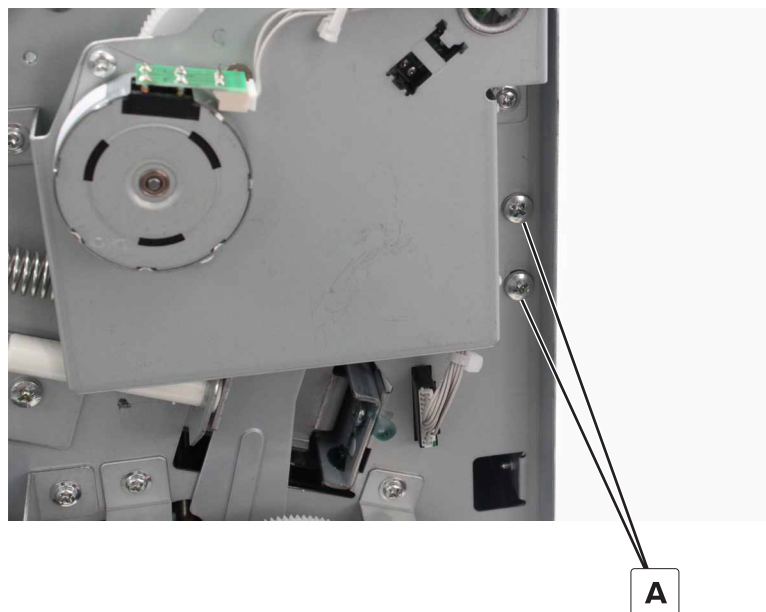
4 Remove the two screws (B).
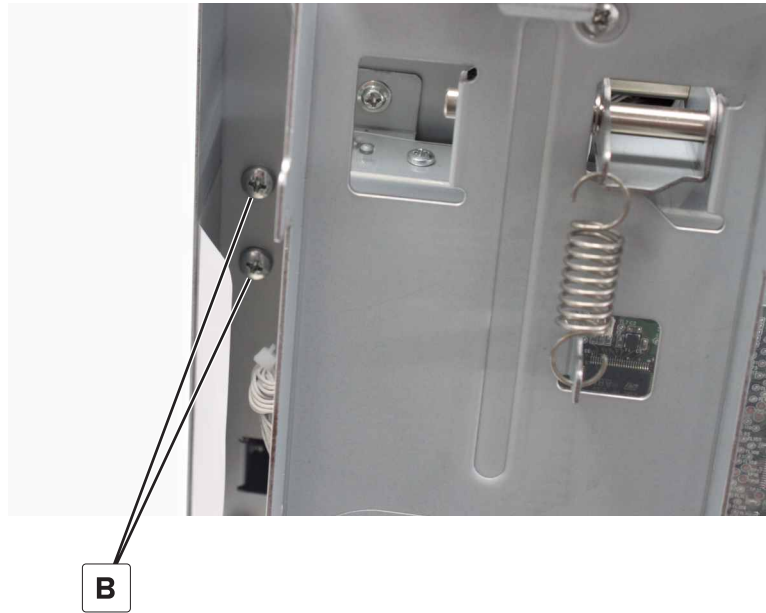
5 Remove the four screws (C), and then remove the brace.
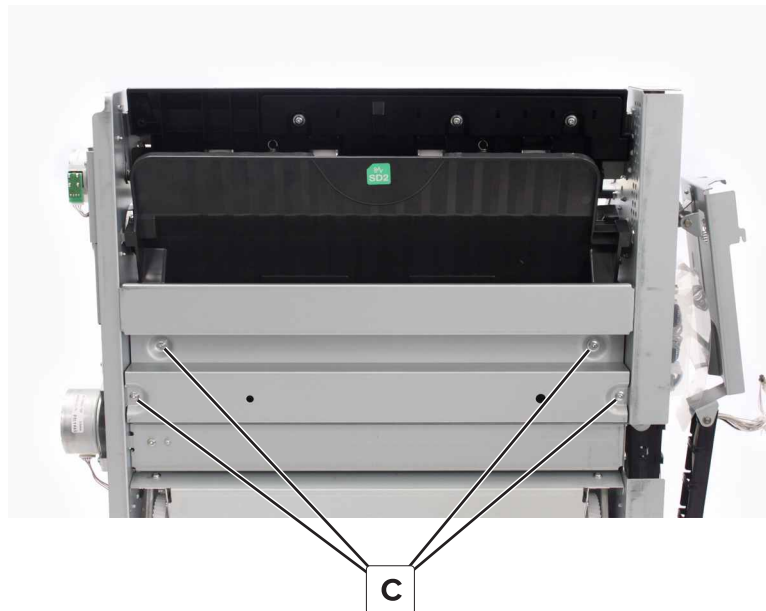
Middle frame brace removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the two screws (A).
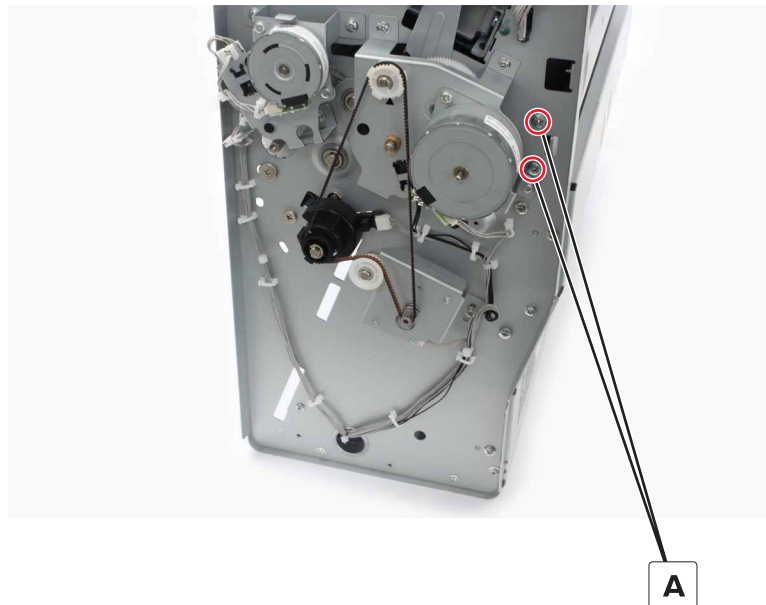
3 Remove the two screws (B), and then remove the brace.
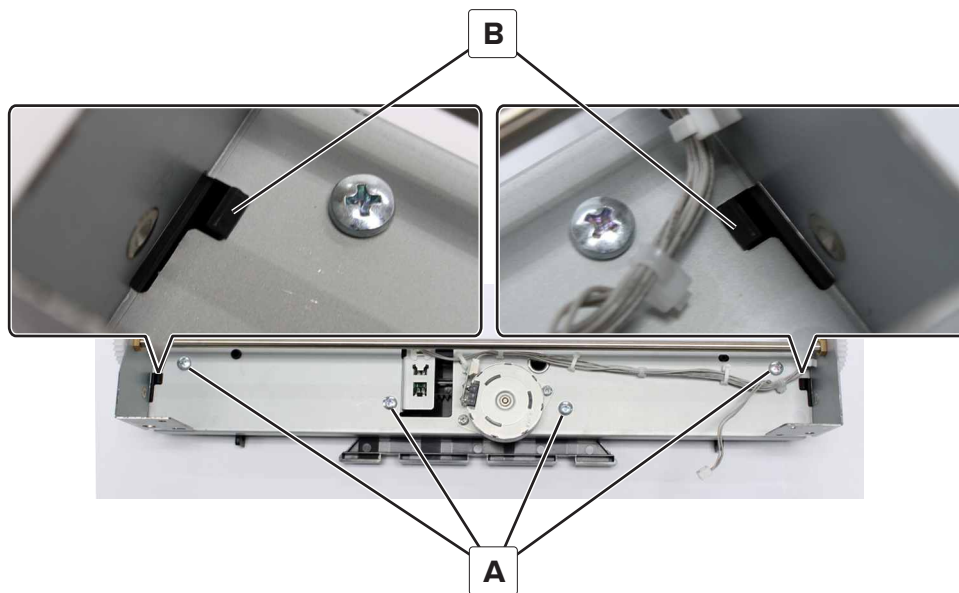
Booklet maker jam access door removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Disconnect the two springs (A) from the frame.
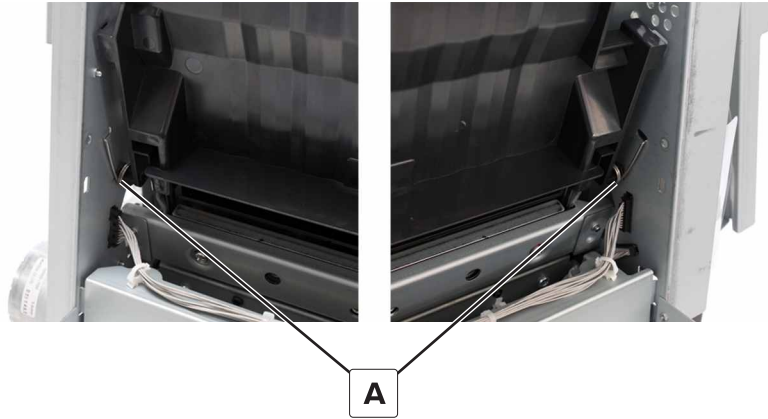
5 Pry the front hinge, and then remove the jam access door.

Installation note: Position the tab (A) behind the door, and then check for proper movement of the door.
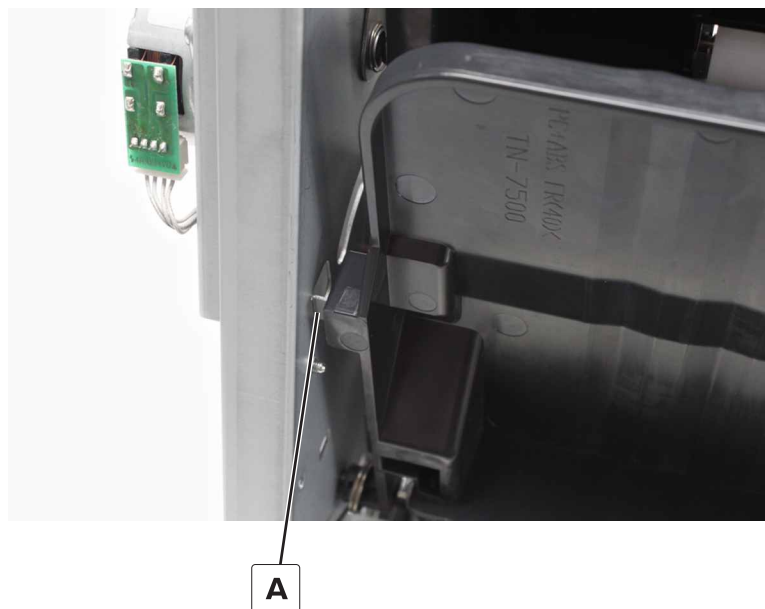
Booklet maker transport paper guide assembly removal

Note: This part is not a FRU.

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the two screws (A).

3 Loosen the screw (B).

A   B
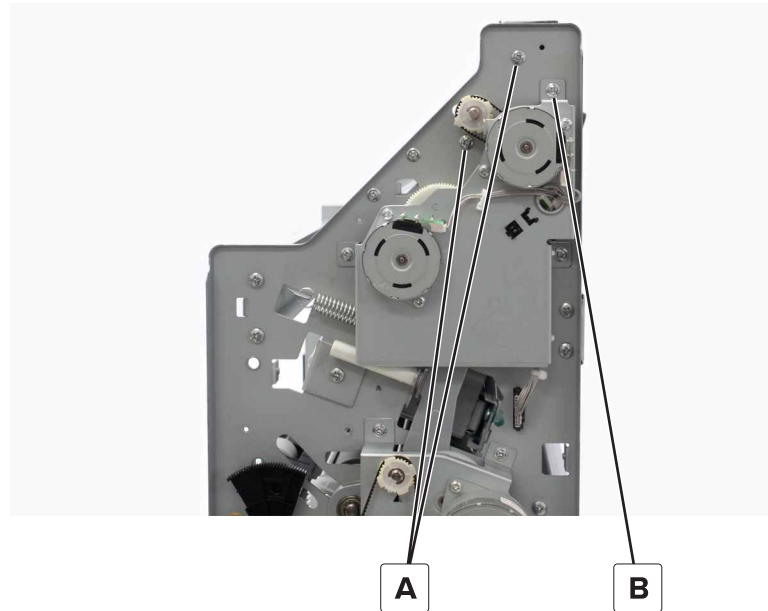
4 Disconnect the cable (C).

5 Remove the two screws (D), and then remove the assembly.

C   D
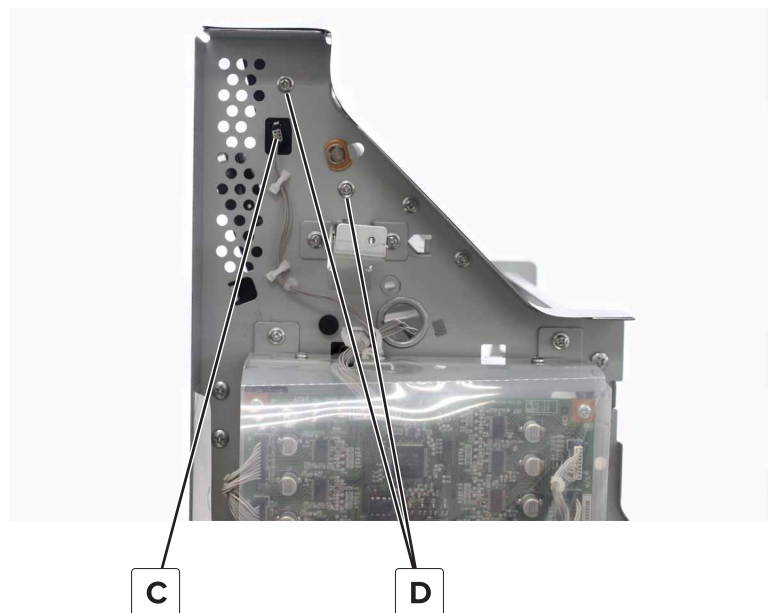
Booklet maker transport idler rollers removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the transport paper guide assembly. See **"Booklet maker transport paper guide assembly removal" on page 462**.

3 Remove the two springs (A), and then remove the rollers.
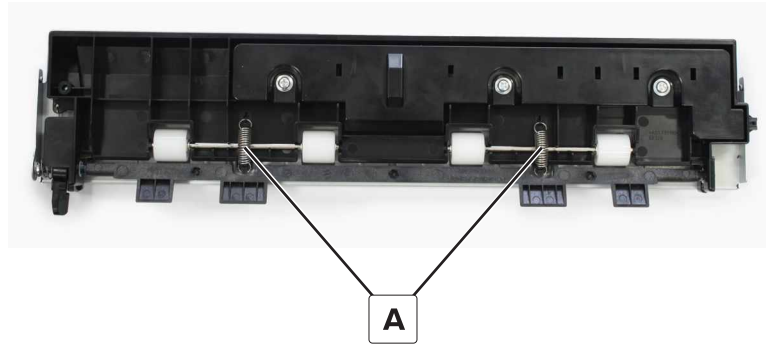
Sensor (booklet maker transport) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the transport paper guide assembly. See **"Booklet maker transport paper guide assembly removal" on page 462**.

3 Remove the three screws (A), and then remove the cover.
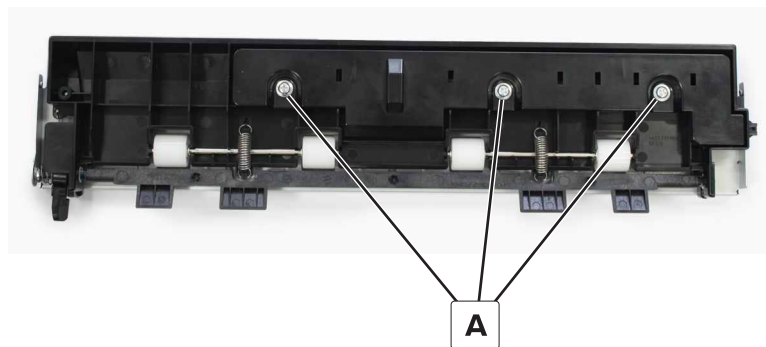
4 Disconnect the cable (B), and then remove the sensor or actuator (C).
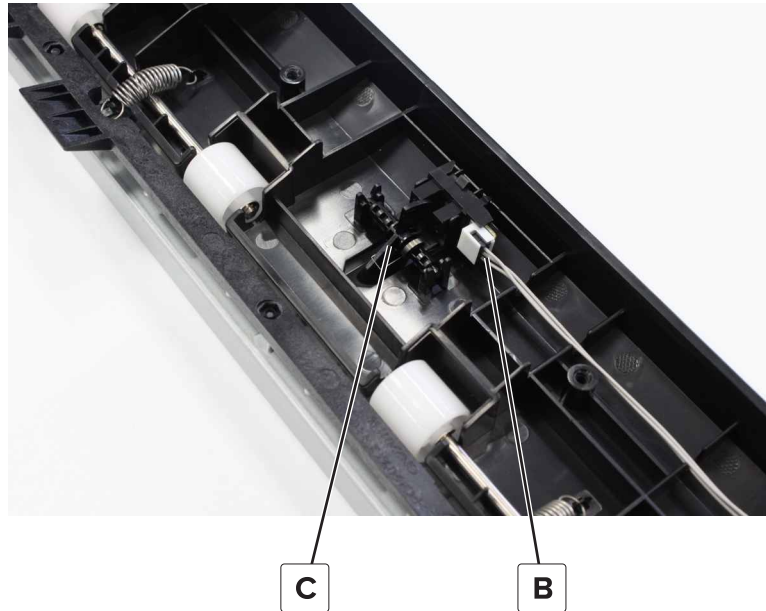
Booklet maker decurl lever removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the transport paper guide assembly. See **"Booklet maker transport paper guide assembly removal" on page 462**.

3 Remove the two screws (A), and then remove the plate.
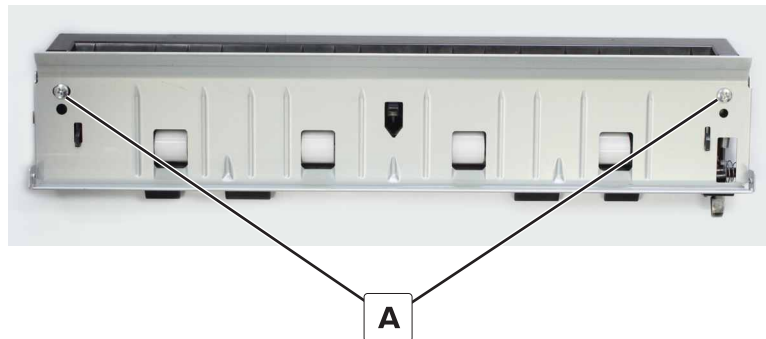
4 Remove the two springs (B), and then remove the lever (C).
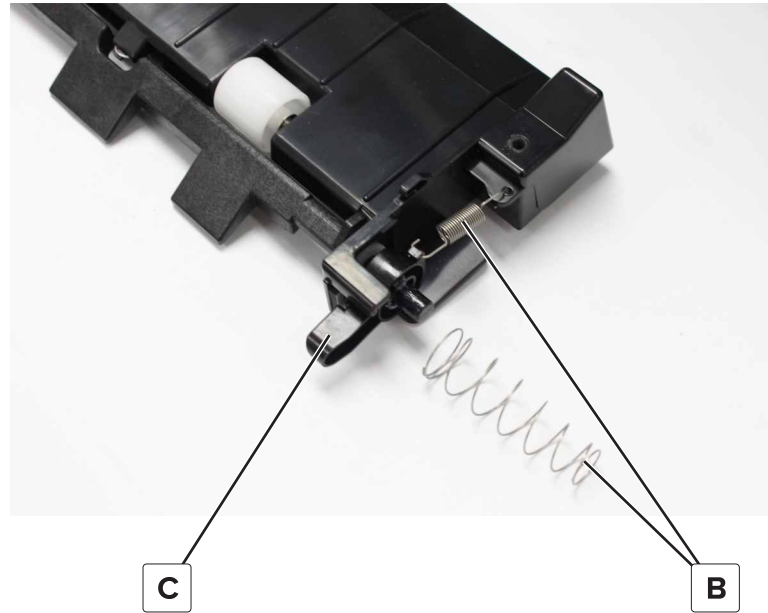
Booklet maker transport paper guide lever removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the transport paper guide assembly. See **"Booklet maker transport paper guide assembly removal" on page 462**.

3 Remove the decurl lever. See **"Booklet maker decurl lever removal" on page 465**.

4 Remove the two clips (A), and then remove the bushings.
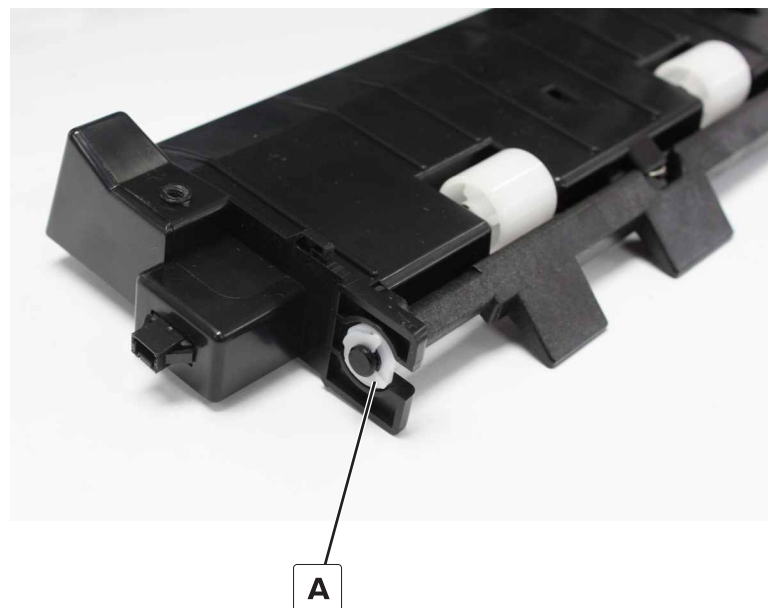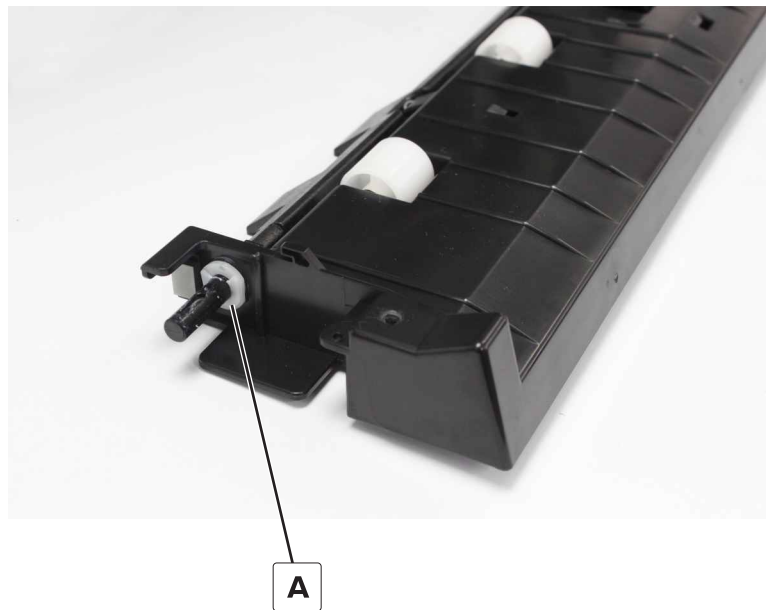
5 Remove the lever.

Motor (bifold roller) removal

1 Disconnect the cable (A).

2 Remove the four screws (B), and then remove the motor.
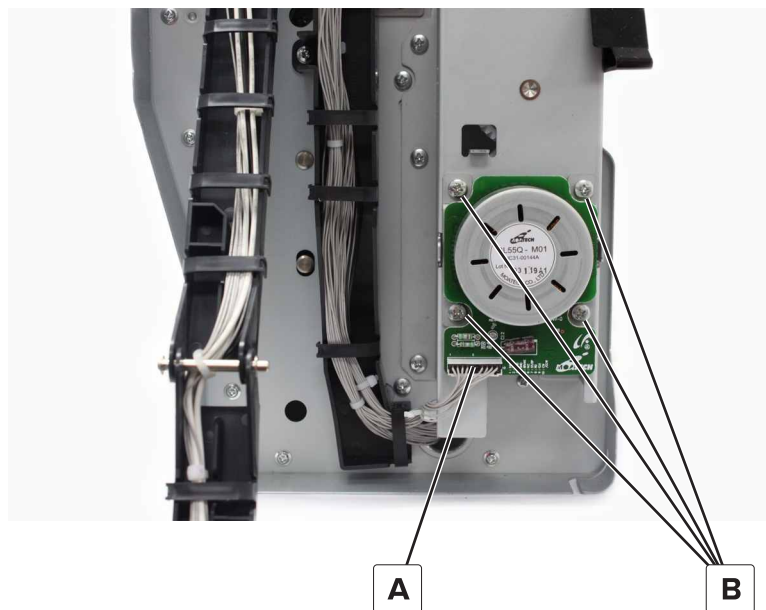
Bifold roller gears removal

1 Remove the screw (A), and then remove the cover.
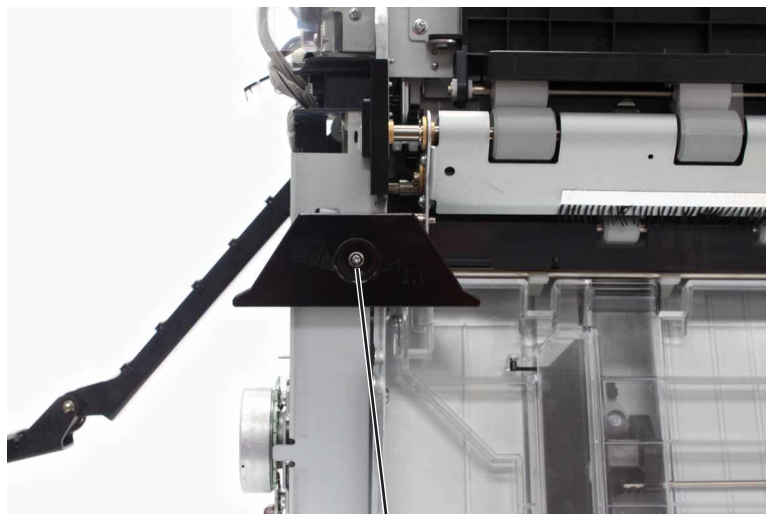
2 Remove the five screws (B), and then remove the bracket.
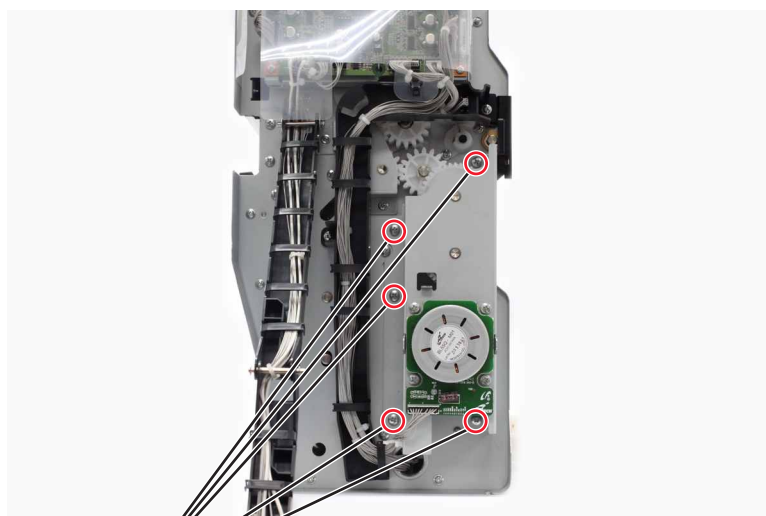
3 Remove the two clips (C), and then remove the three gears.
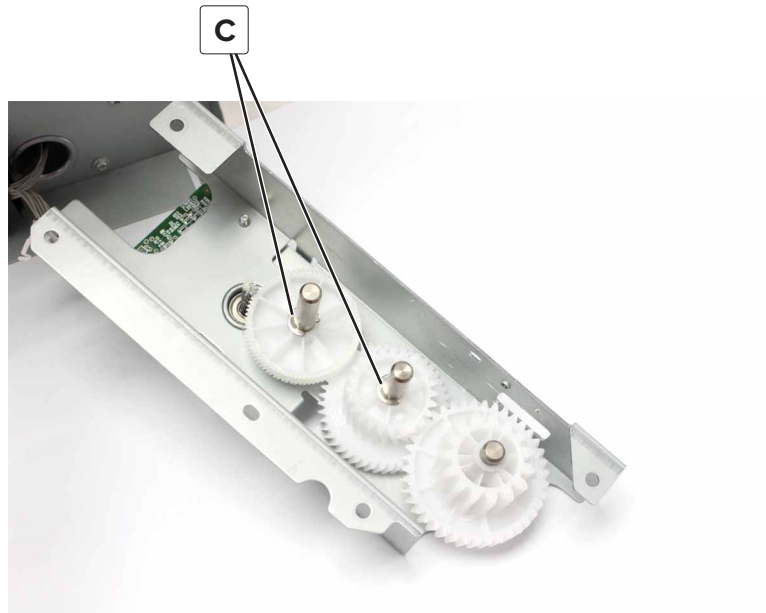
Trifold rollers removal

1 Remove the exit roller springs. See **"Booklet maker exit roller springs removal" on page 452**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the bifold roller gears bracket. See **"Bifold roller gears removal" on page 468**.

4 Remove the screw (A).

5 Remove the clip (B), and then remove the bushing.
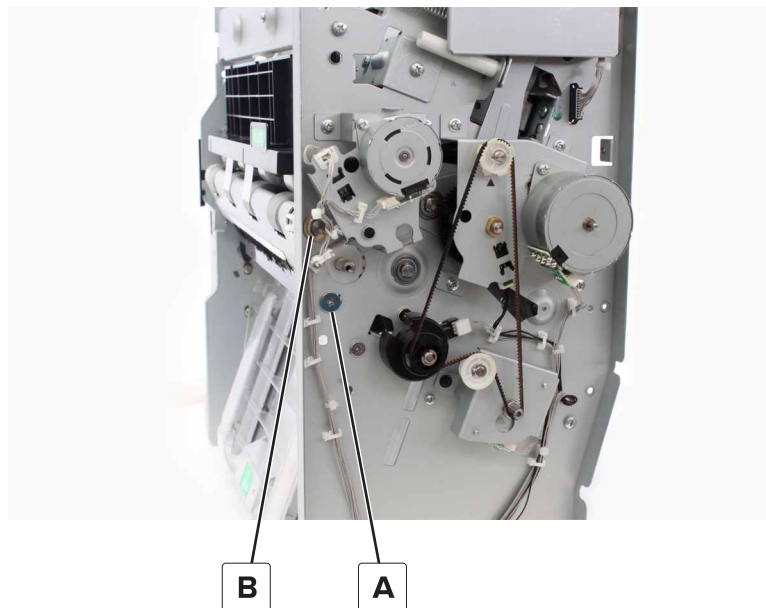
6 Remove the screw (C).

Parts removal

7 Remove the clip (D), and then remove the bushing.
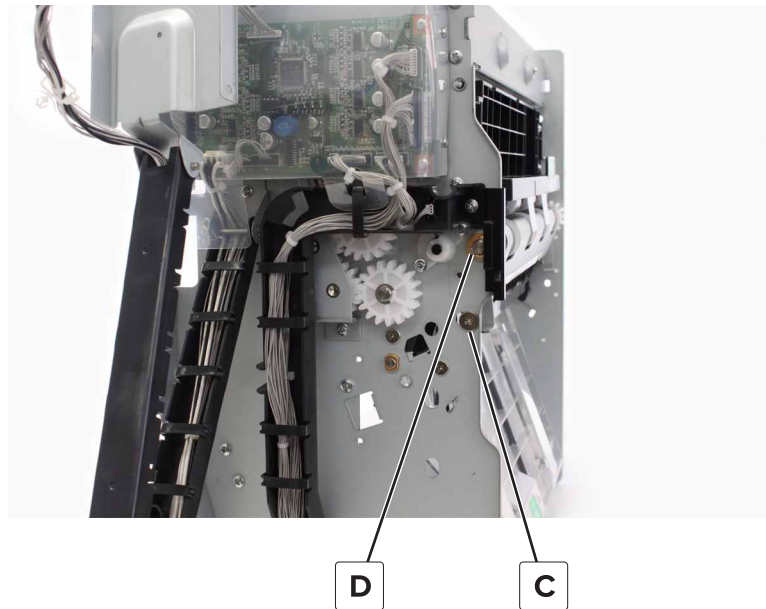
8 Remove the rollers.

Trifold gears removal

1 Remove the exit roller springs. See **"Booklet maker exit roller springs removal" on page 452**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the bifold roller gears bracket. See **"Bifold roller gears removal" on page 468**.

4 Remove the trifold rollers. See **"Trifold rollers removal" on page 469**.

5 Remove the clip (A), and then remove the two gears.

Parts removal
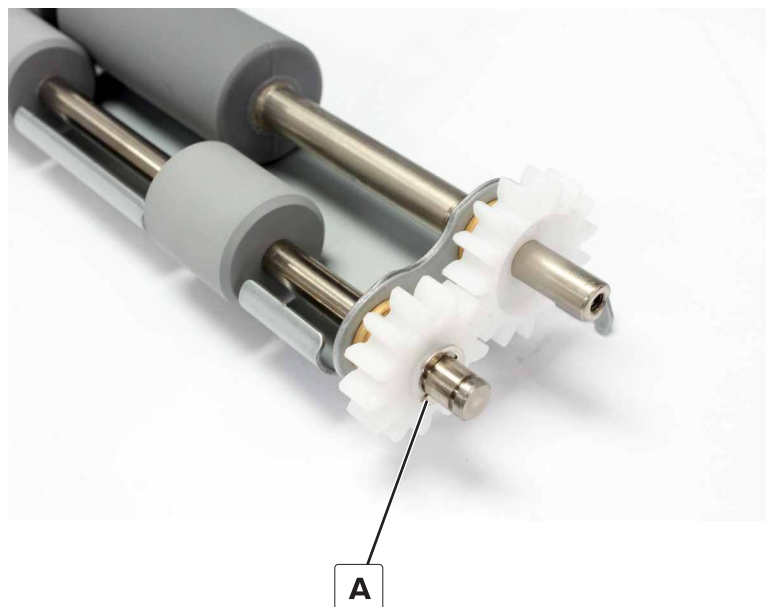
Booklet maker paddle belt removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.
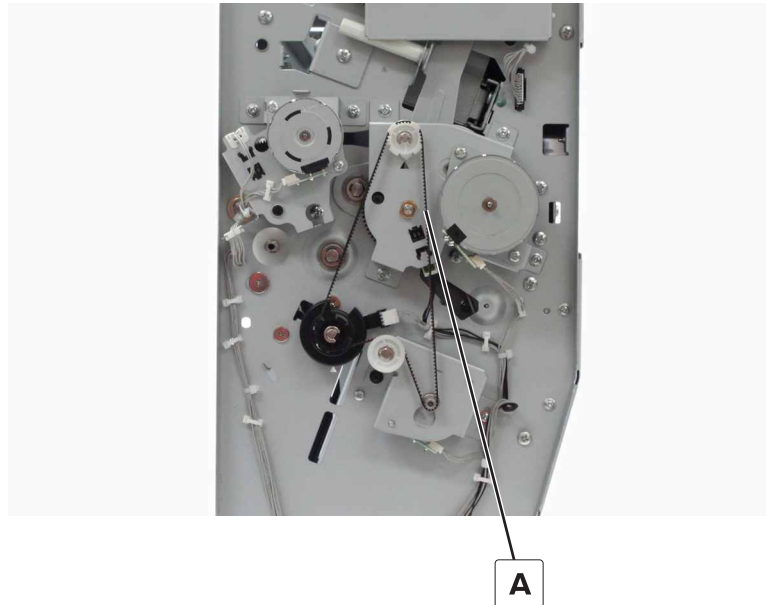
2 Remove the belt (A).

Booklet maker paddle gears removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the paddle belt. See **"Booklet maker paddle belt removal" on page 471**.

3 Remove the three clips (A), and then remove the gears.
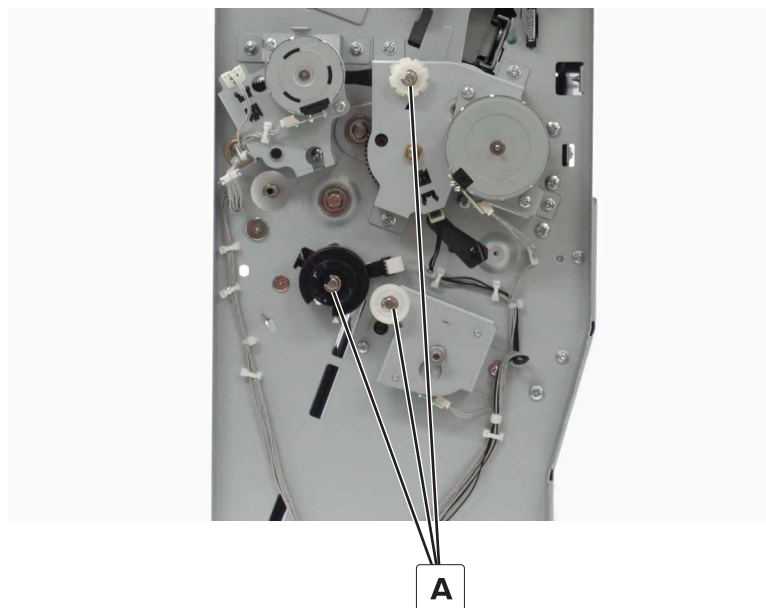
Installation note: Align the pointers on the gears with the triangles on the frame.
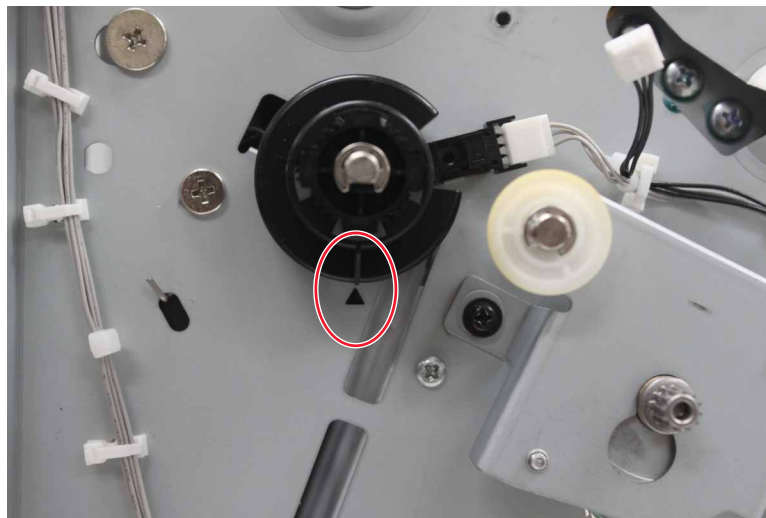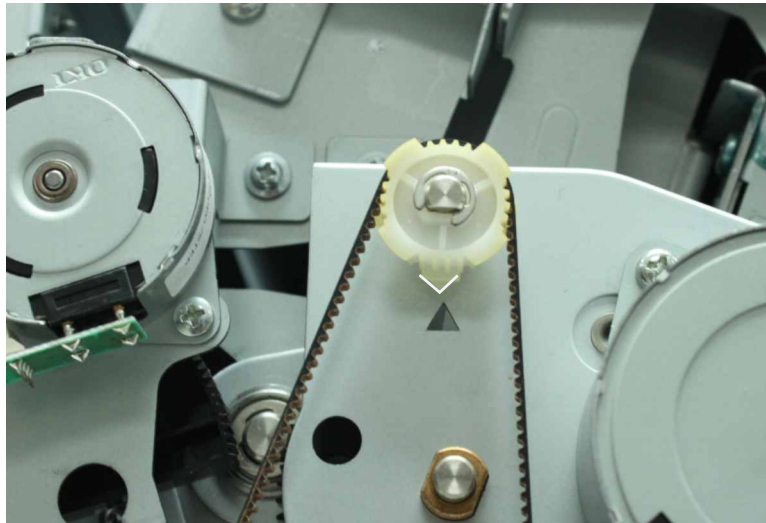
Parts removal

Motor (booklet maker paddle) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the paddle belt. See **"Booklet maker paddle belt removal" on page 471**.

3 Disconnect the cable (A).

4 Remove the two screws (B), and then remove the motor bracket.

A   **B**

5 Remove the two screws (C), and then remove the motor.

C
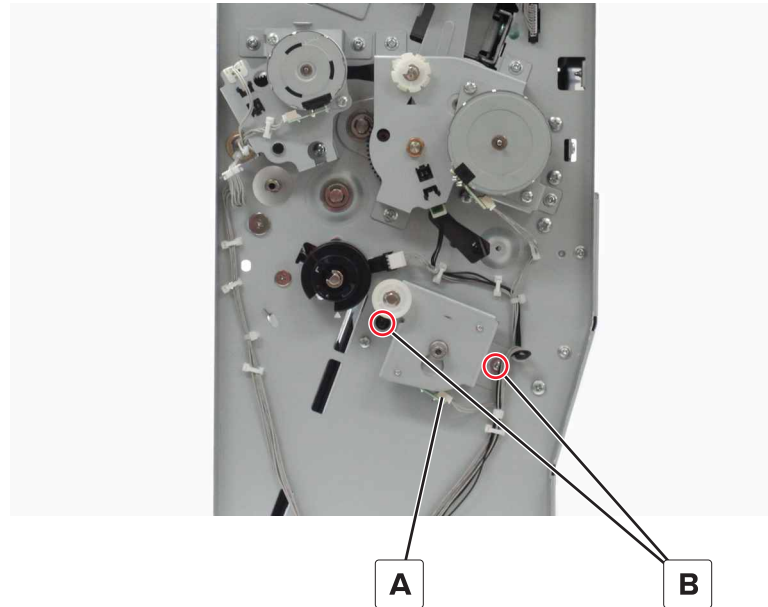
Installation note: Rotate the bracket counterclockwise to tighten the belt before installing all the screws.

Sensor (booklet maker paddle home) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the paddle belt. See **"Booklet maker paddle belt removal" on page 471**.

3 Remove the clip (A), and then remove the encoder.
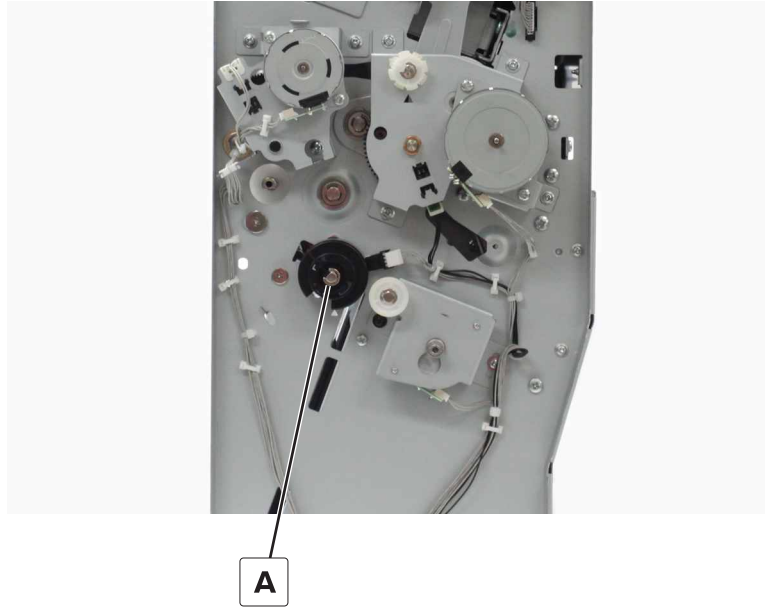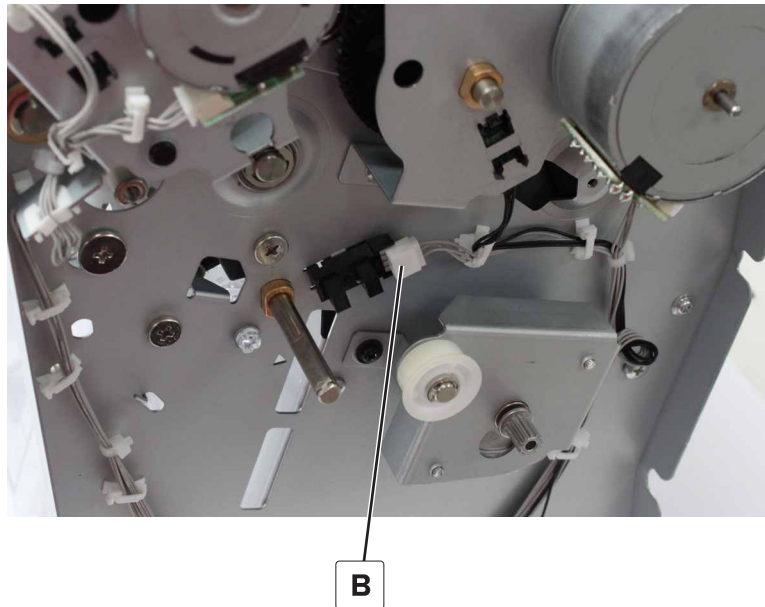
A

4 Disconnect the cable (B), and then remove the sensor.

B

Motor (booklet maker transport) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Disconnect the cable (A).

3 Remove the two screws (B), and then remove the motor.
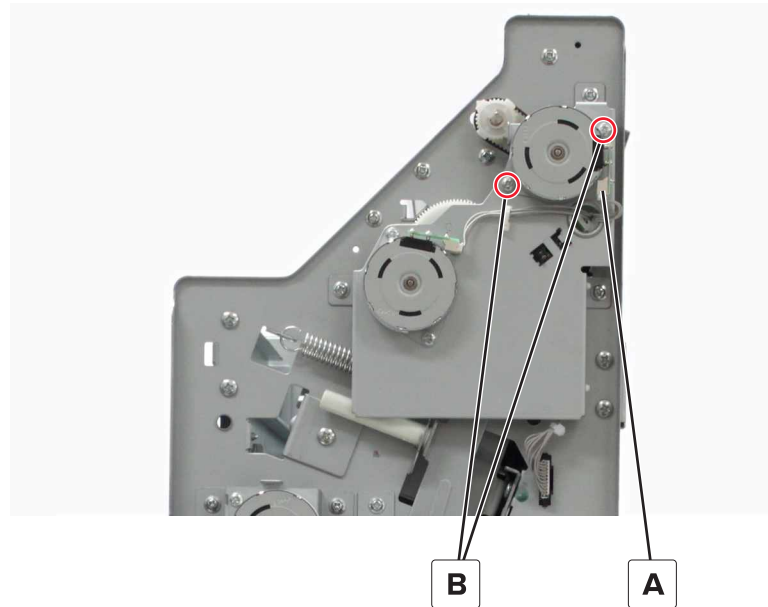
Motor (booklet maker decurl) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Disconnect the cable (A).

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

Transport and decurl motor bracket removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Disconnect the two cables (A).

3 Remove the three screws (B), and then remove the bracket.
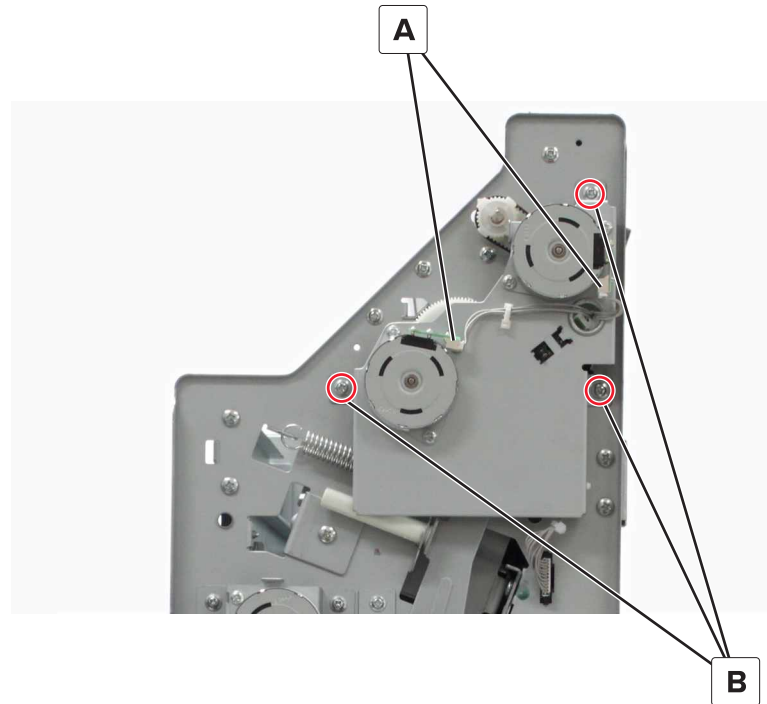
Bifold roller springs removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the booklet maker controller board holder. See **"Booklet maker controller board holder removal" on page 459**.

3 Remove the transport and decurl motor bracket removal. See **"Transport and decurl motor bracket removal" on page 476**.

4 Remove the spring (A).
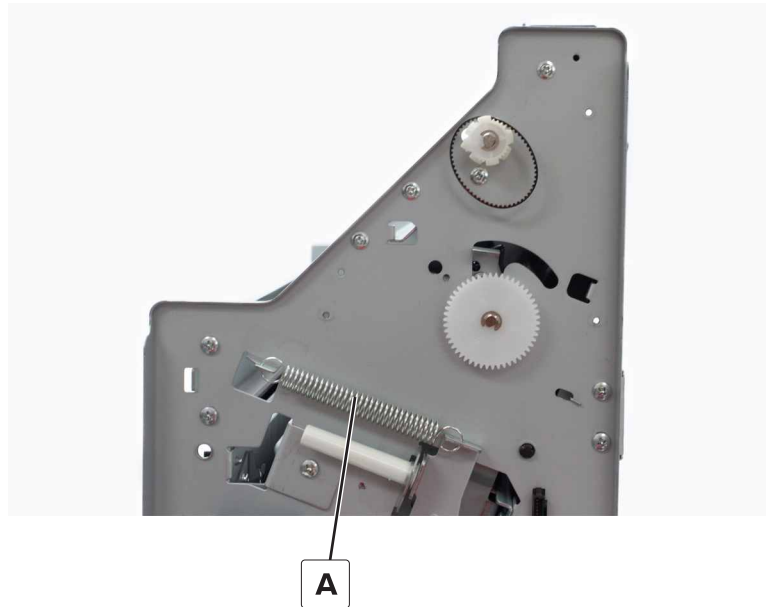
5 Remove the spring (B).
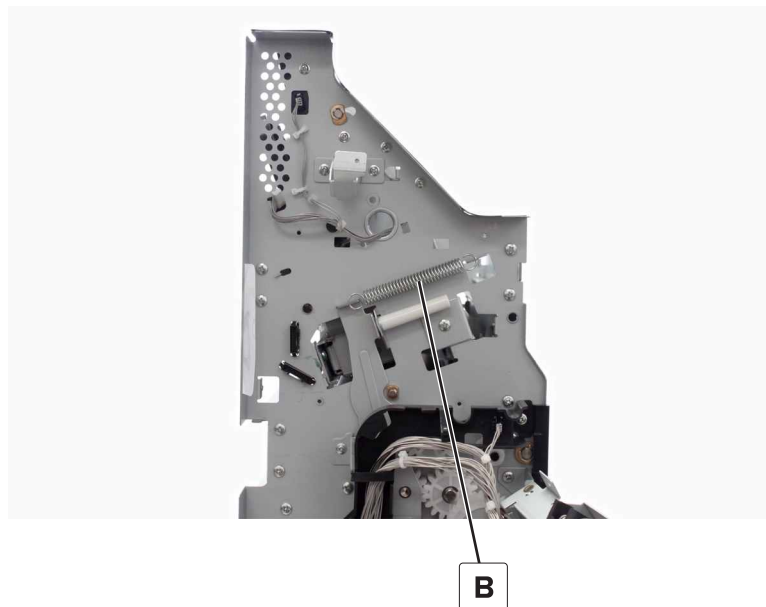
Booklet maker transport gear and belt removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the transport and decurl motor bracket removal. See **"Transport and decurl motor bracket removal" on page 476**.

3 Remove the belt (A).

4 Remove the clip (B), and then remove the gear.
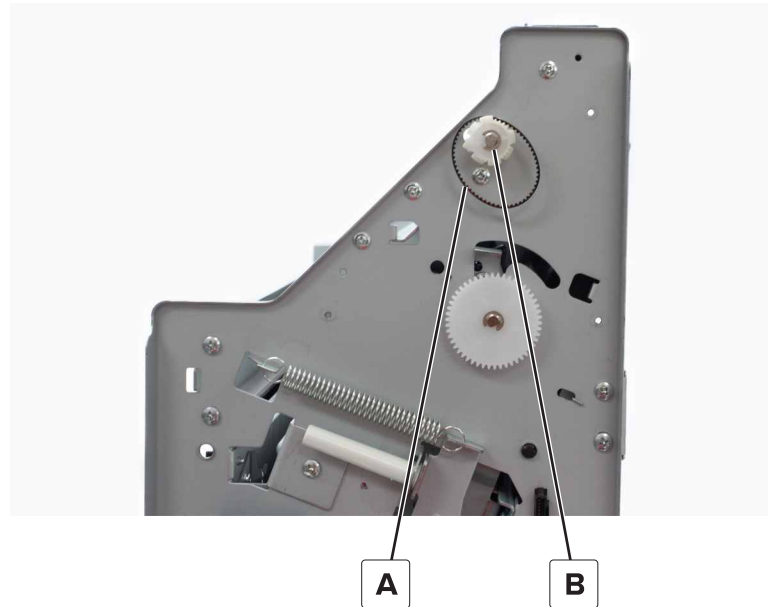
Booklet maker transport roller removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the transport and decurl motor bracket. See **"Transport and decurl motor bracket removal" on page 476**.

3 Remove the transport gear and belt. See **"Booklet maker transport gear and belt removal" on page 477**.

4 Remove the clip (A), and then remove the bushing.

Parts removal
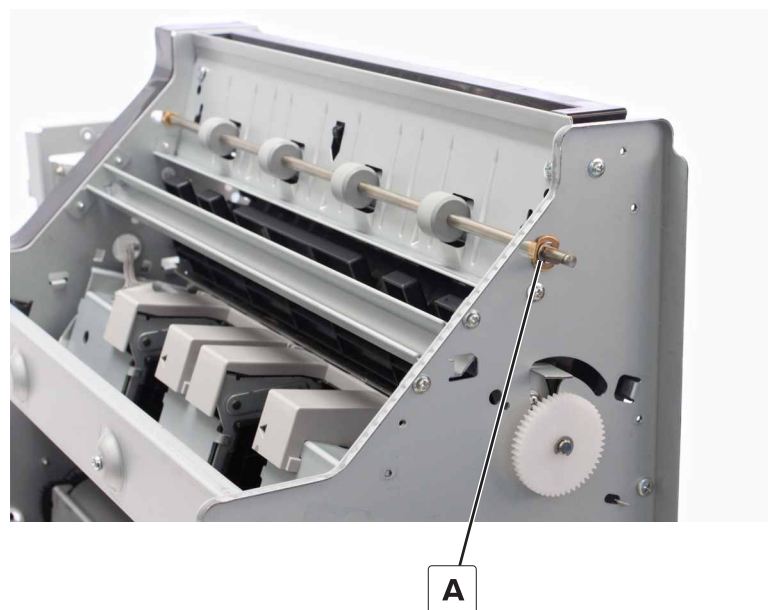
5 Remove the clip (B), and then remove the bushing.
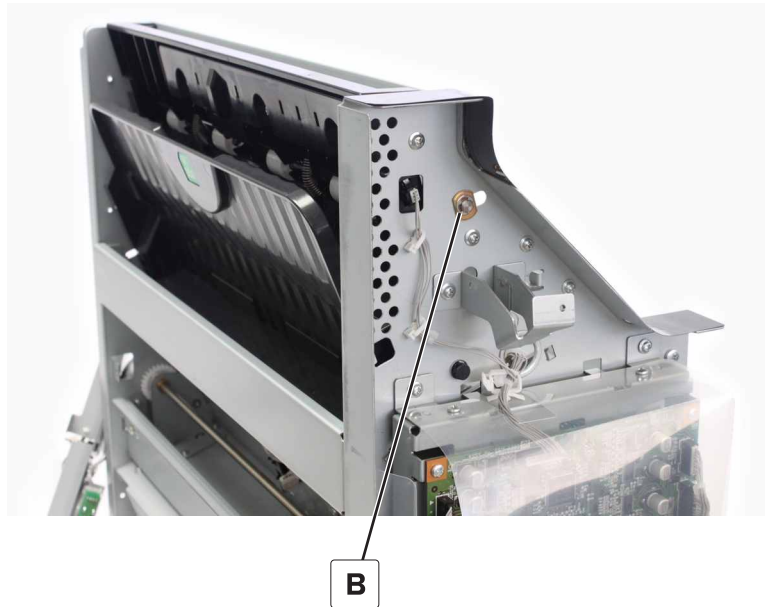
6 Remove the roller.

Booklet maker decurl gears removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the transport and decurl motor bracket removal. See **"Transport and decurl motor bracket removal" on page 476**.

3 Remove the clip (A), and then remove the gear.

Parts removal

4 Remove the clip (B), and then remove the gear.

B
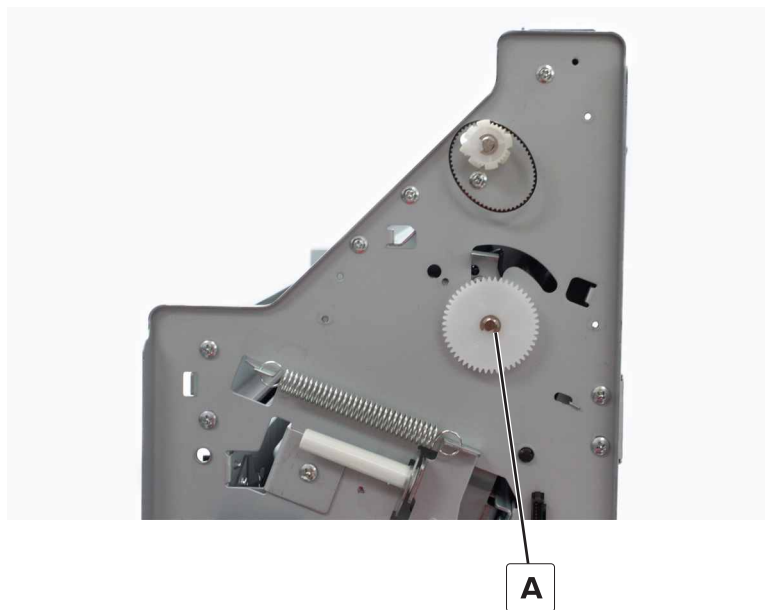
Sensor (booklet maker decurl) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the transport and decurl motor bracket removal. See **"Transport and decurl motor bracket removal" on page 476**.

3 Disconnect the cable (A), and then remove the sensor.

A
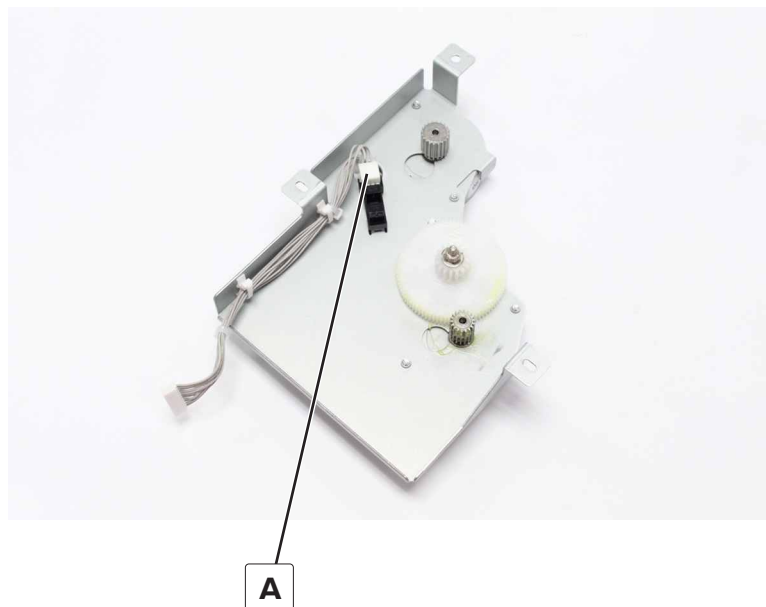
Booklet maker decurl guide removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the transport and decurl motor bracket. See **"Transport and decurl motor bracket removal" on page 476**.

3 Remove the clip (A), and then remove the gear.
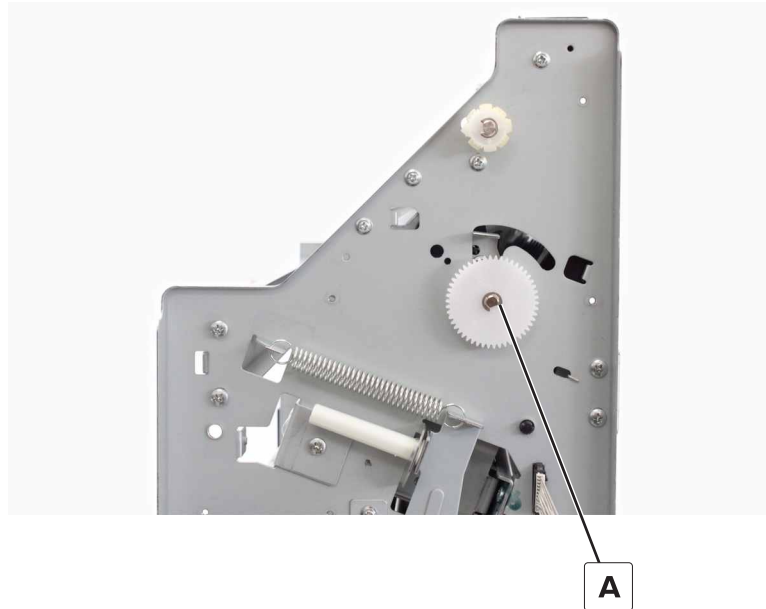
4 Remove the two screws (B).

5 Remove the clip (C), and then remove the bushing.

Parts removal

6 Remove the two screws (D), and then remove the brace.

D
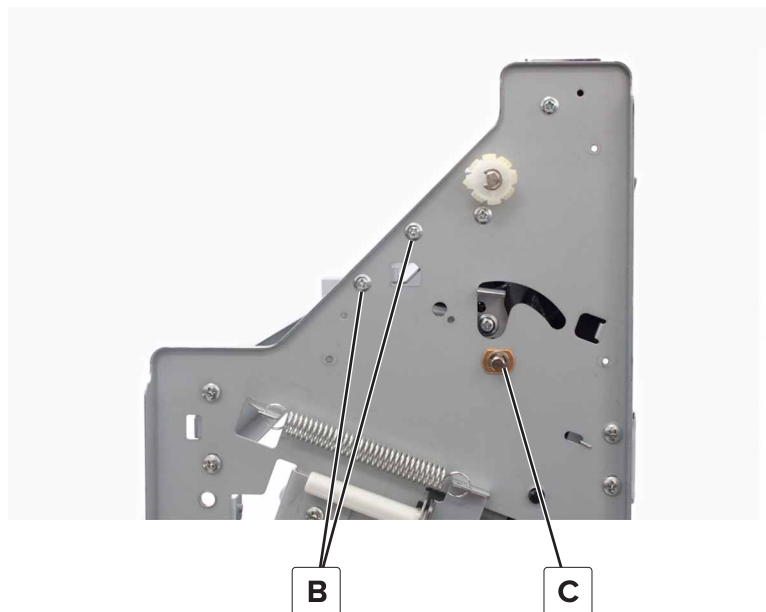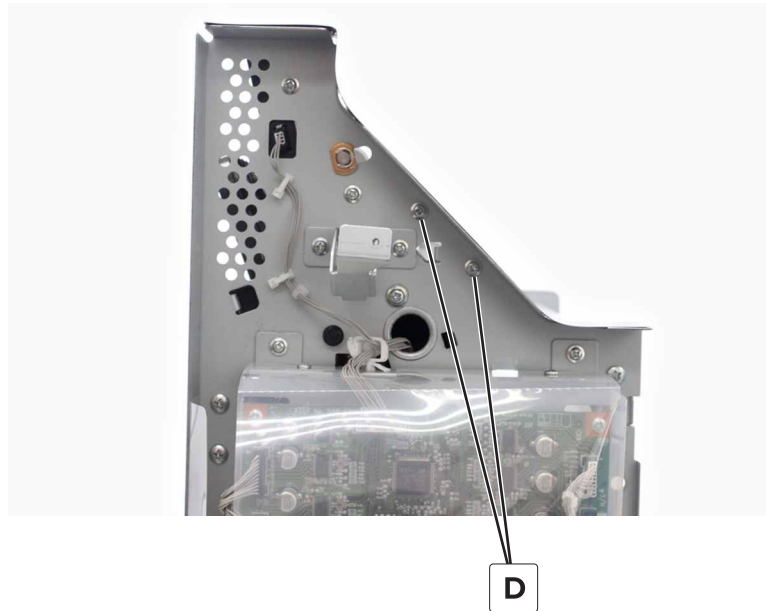
7 Separate the shaft and plate (E), and then remove the guide (F).
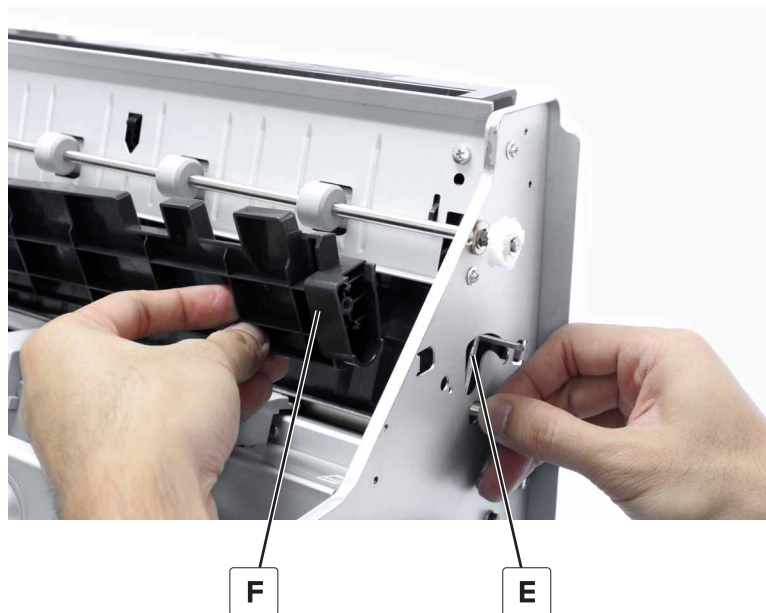
F   E

Motor (bifold guide) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Disconnect the cable (A).

3 Remove the two screws (B), and then remove the motor.
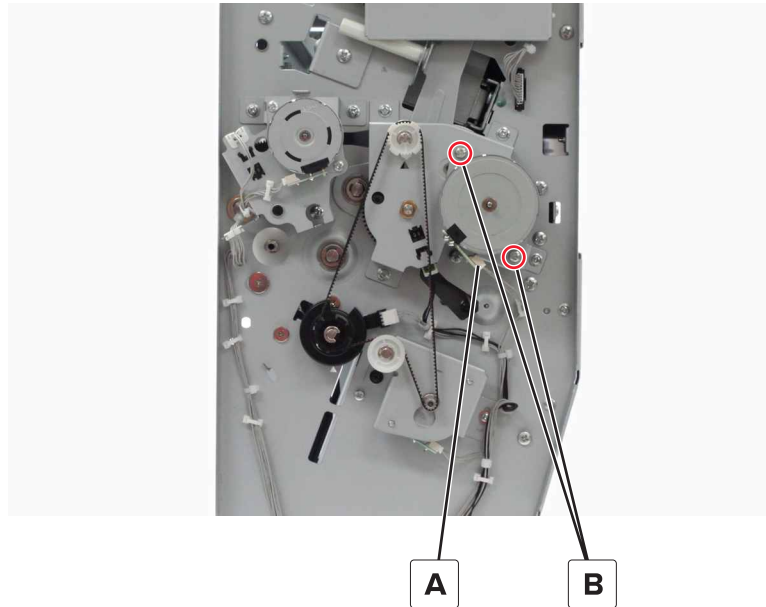
Bifold guide motor bracket removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the belt (A).

3 Remove the clip (B), and then remove the gear.

4 Disconnect the two cables (C).

5 Remove the four screws (D), and then remove the bracket.
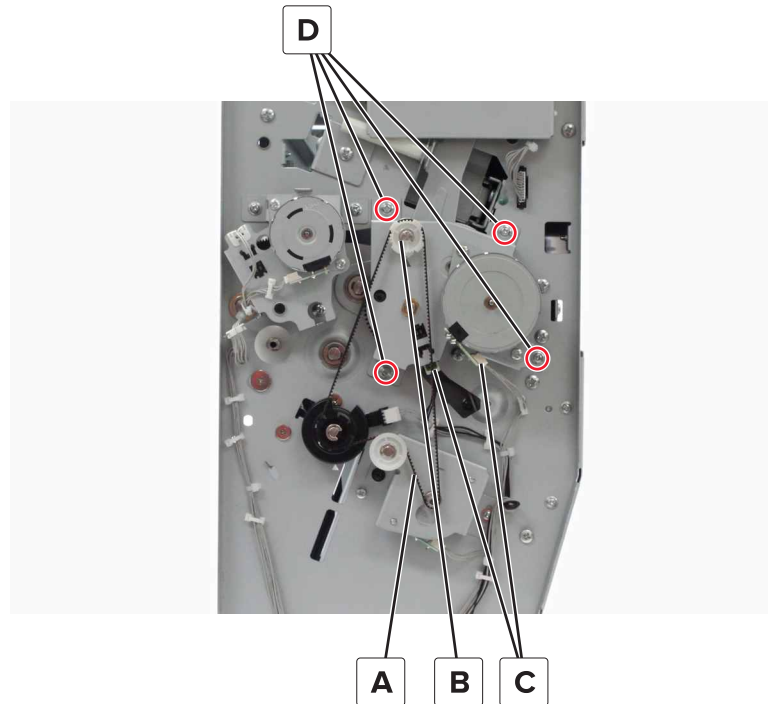
Sensor (bifold guide home) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the bifold guide motor bracket. See **"Bifold guide motor bracket removal" on page 483**.

3 Remove the sensor (A).

Motor (trifold guide) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Disconnect the cable (A).

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

Trifold guide motor bracket removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Disconnect the two cables (A).

3 Remove the three screws (B), and then remove the bracket.

Parts removal
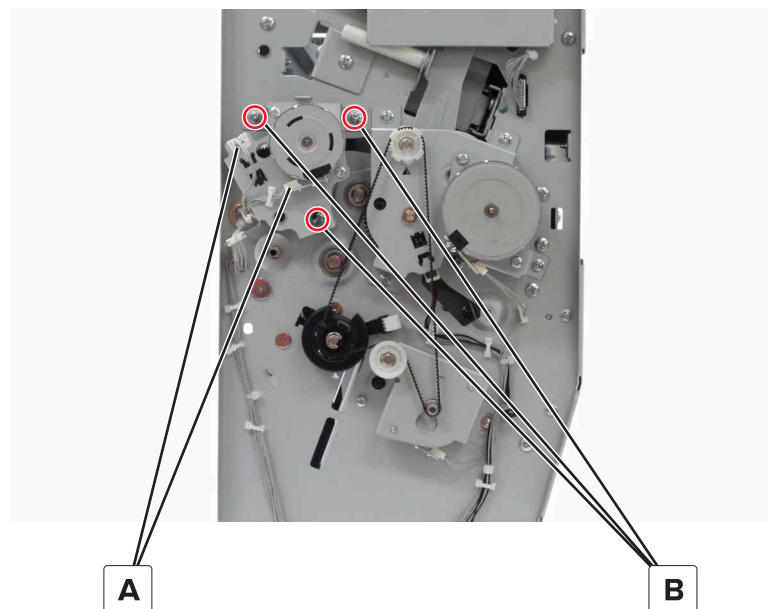
Trifold gate actuator removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the trifold guide motor bracket. See **"Trifold guide motor bracket removal" on page 485**.

3 Remove the clip (A), and then remove the actuator.

4 Remove the pin (B).

Sensor (trifold guide home) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the trifold guide motor bracket. See **"Trifold guide motor bracket removal" on page 485**.

3 Remove the sensor (A).
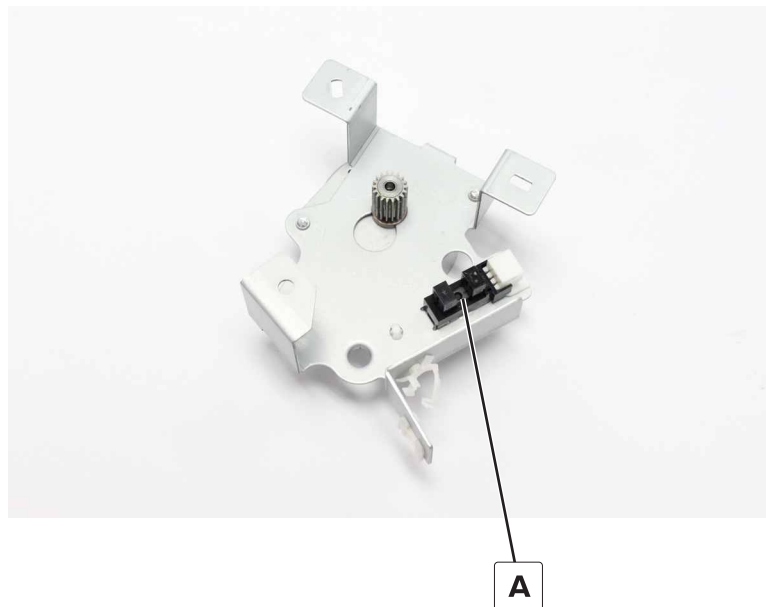
Parts removal

Motor (booklet maker aligner) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Disconnect the cable (A).

4 Remove the two screws (B), and then remove the motor.
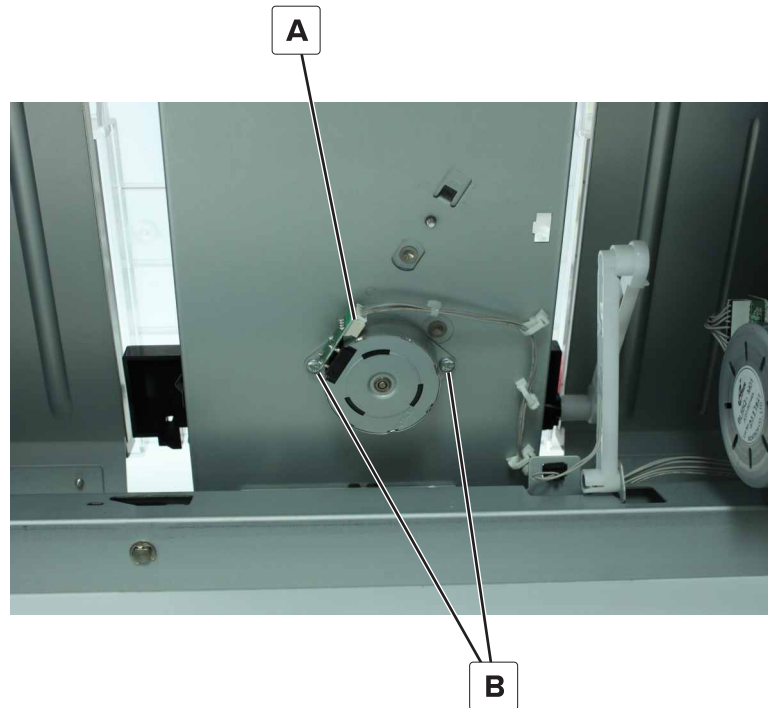
Motor (bifold knife) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Disconnect the cable (A).

4 Remove the four screws (B), and then remove the motor.
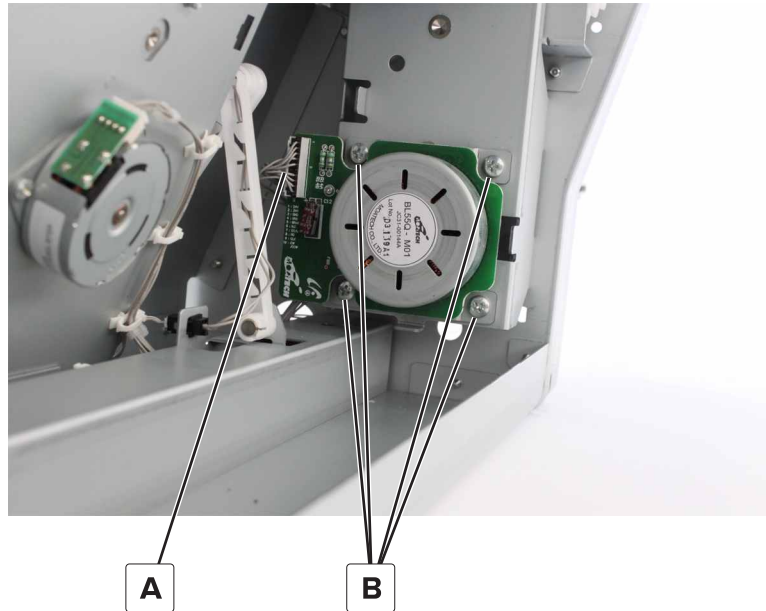
Motor (booklet maker tamper) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Disconnect the cable (A).

6 Remove the two screws (B), and then remove the motor.
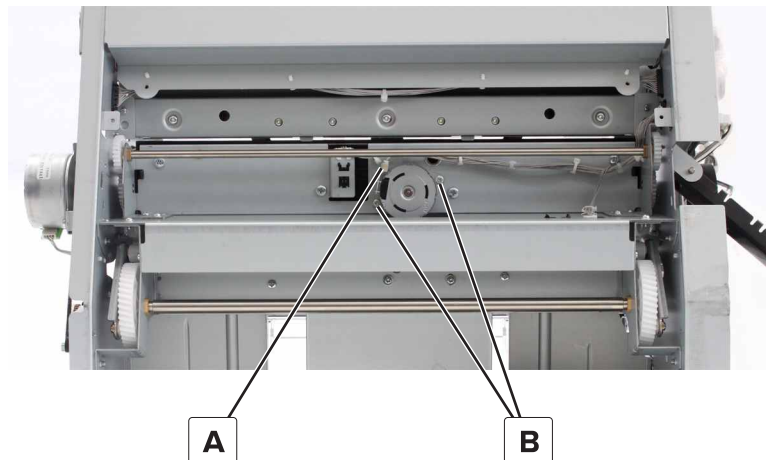
Booklet maker aligner front paper guide removal

1 Remove the aligner jam access cover. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

4 Remove the two screws (A).

5 Remove the screw (B).

Parts removal
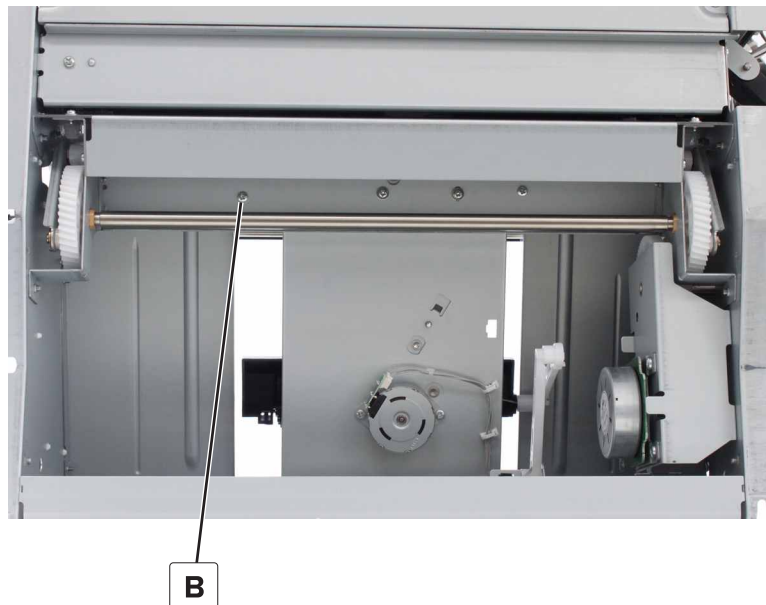
6 Remove the two screws (C), and then remove the guide.

Booklet maker aligner rear paper guide removal

1 Remove the aligner jam access cover. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

4 Remove the screw (A).
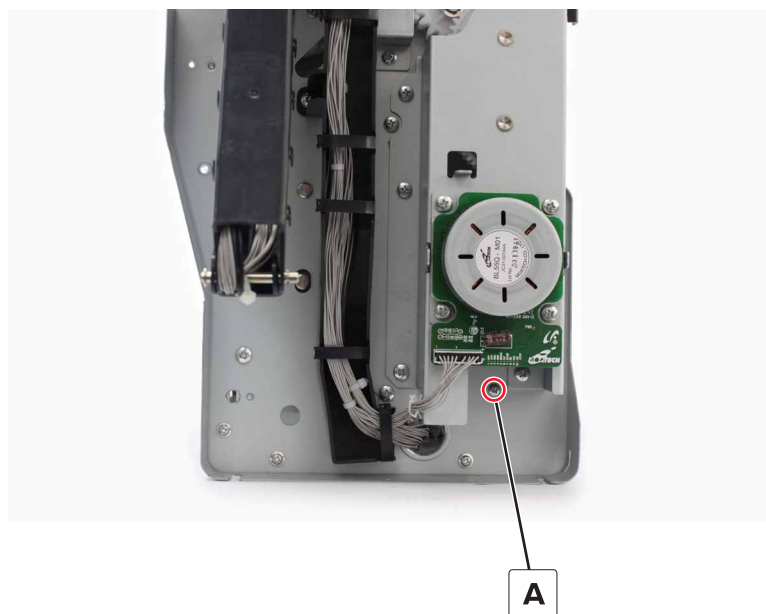
5 Remove the screw (B).
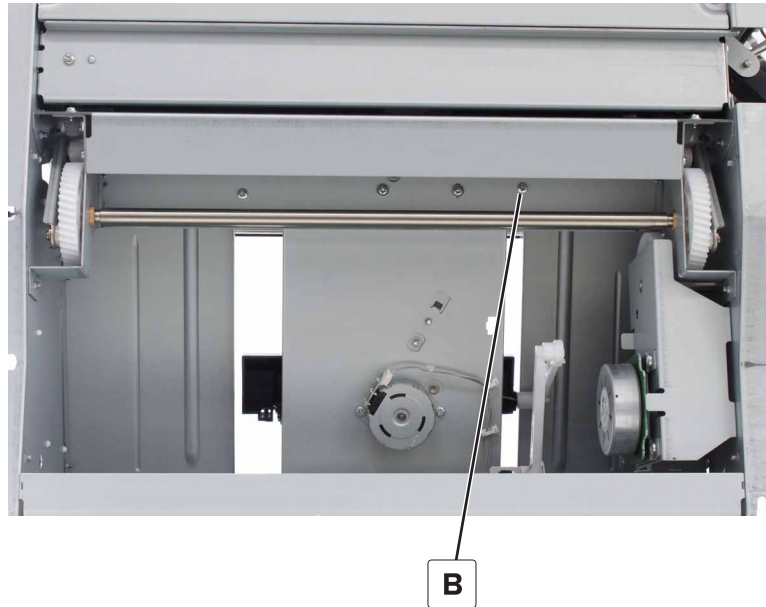
6 Remove the two screws (C), and then remove the guide.
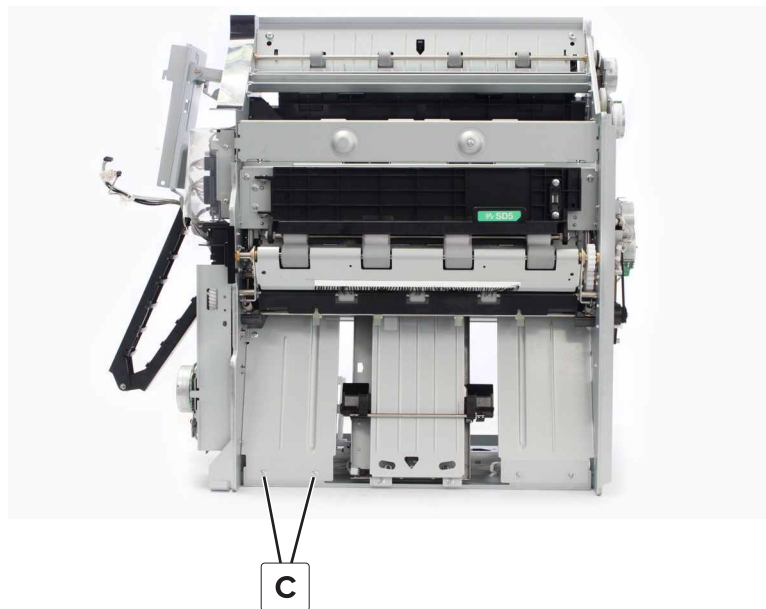
Sensor (booklet maker aligner home) removal

1 Remove the aligner jam access cover. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

4 Disconnect the cable (A), and then remove the sensor.
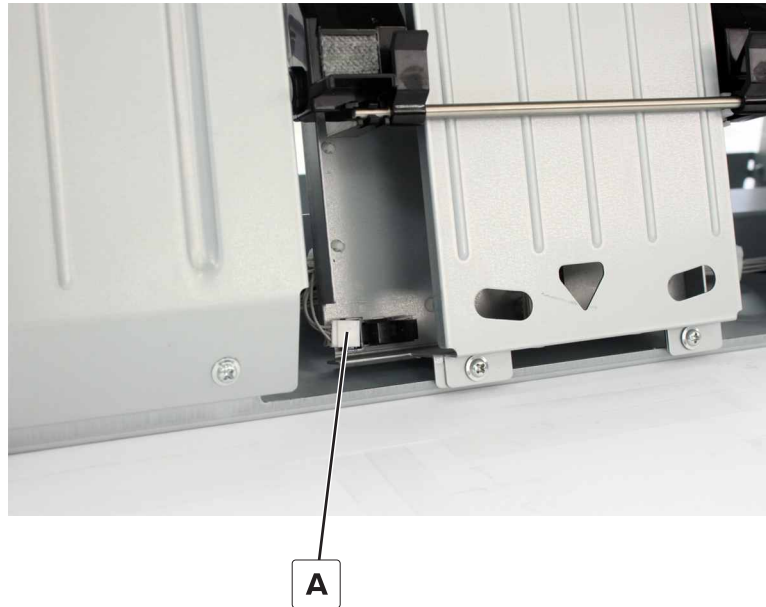
Booklet maker aligner assembly removal

1 Remove the aligner jam access cover. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

4 Slide the aligner (A) to the middle.

5 Disconnect the two cables (B).

Parts removal

492
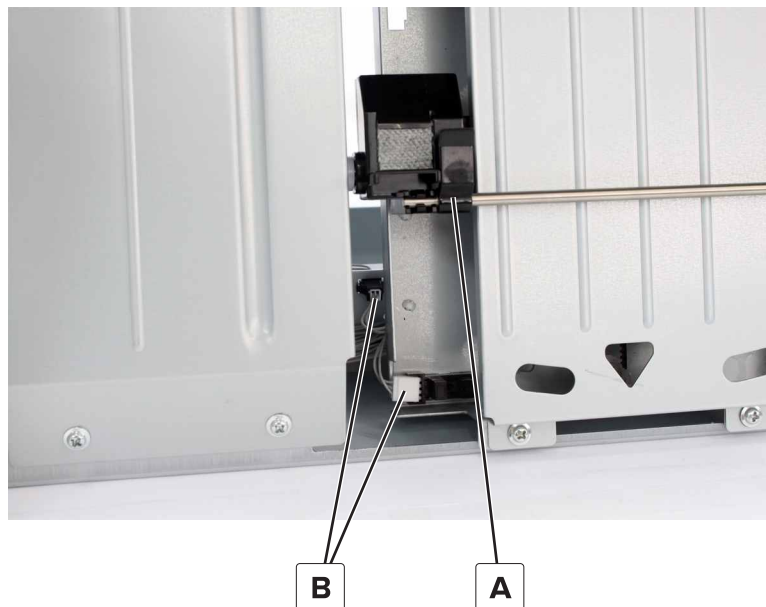
6 Remove the two screws (C).
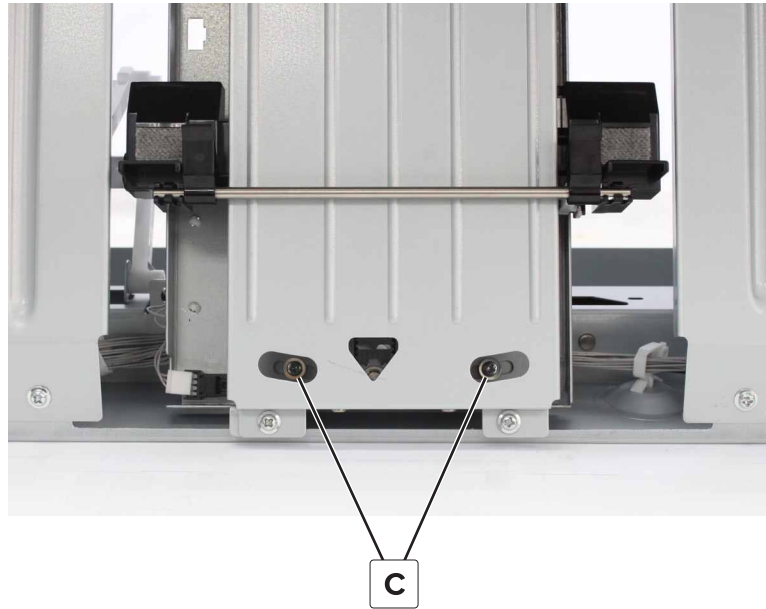
7 Disconnect the two cables (D).

8 Release the latch (E), and then disconnect the link.
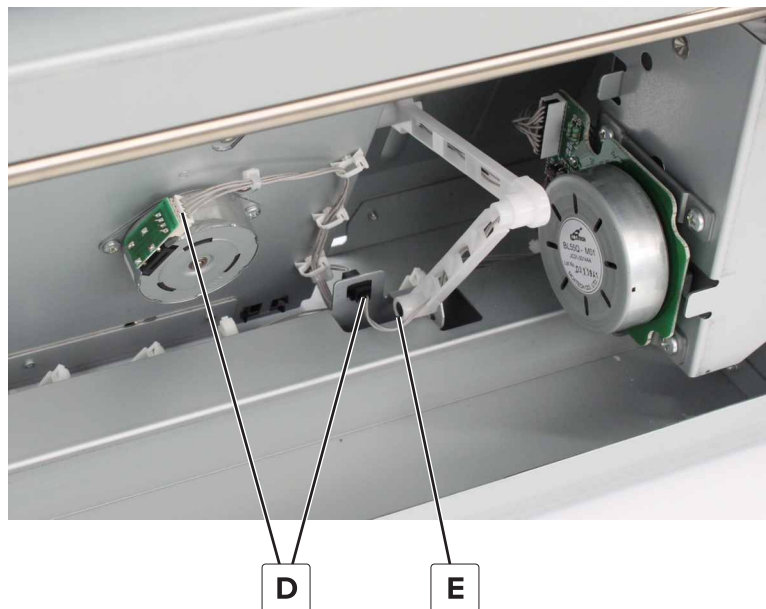
9 Remove the assembly.

Installation notes:

a Before installing, slide the aligner to the middle to prevent it from snagging the frame.

b Perform the adjustment procedure. See **"Bifold skew adjustment" on page 223**.

Booklet maker aligner removal

1 Remove the aligner jam access cover. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

4 Remove the aligner assembly. See **"Booklet maker aligner assembly removal" on page 492**.

5 Release the aligner from the two latches (A).
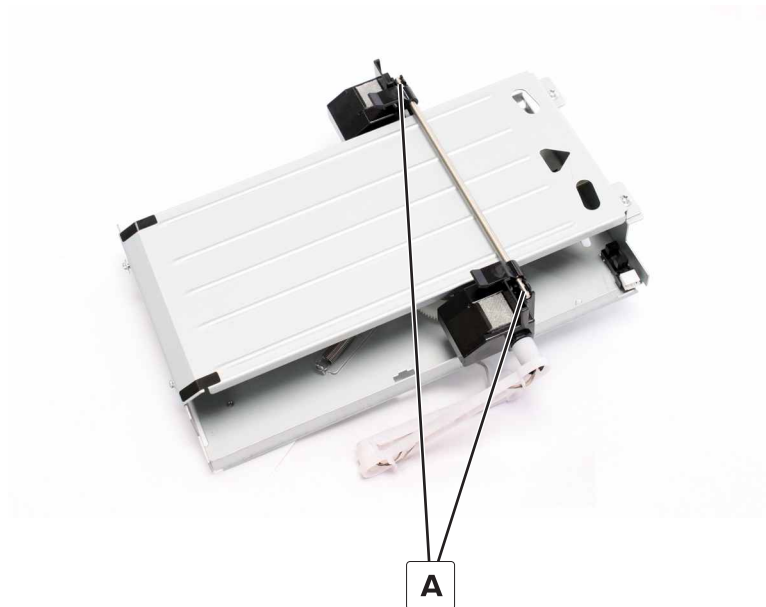
Installation note: Align the holder with the link.
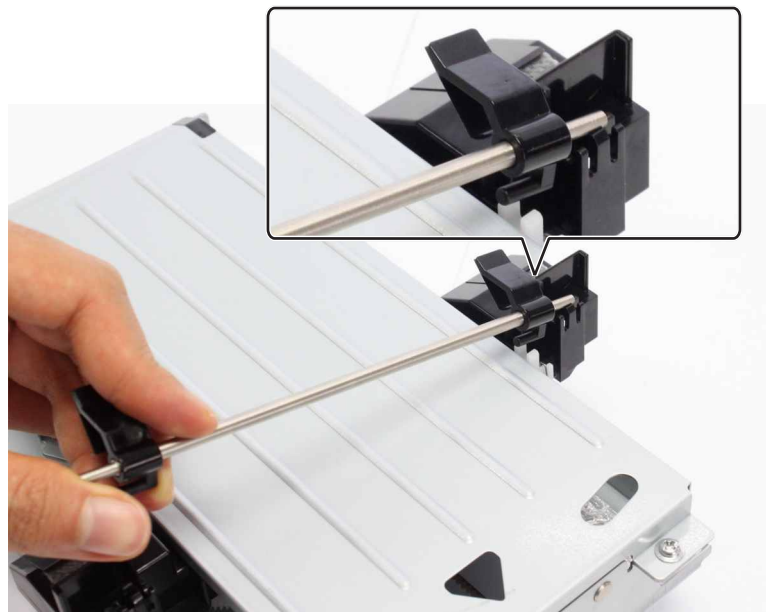
Booklet maker aligner middle paper guide removal

1 Remove the aligner jam access cover. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

4 Remove the aligner assembly. See **"Booklet maker aligner assembly removal" on page 492**.

5 Remove the aligner. See **"Booklet maker aligner removal" on page 494**.

6 Remove the four screws (A), and then remove the guide.
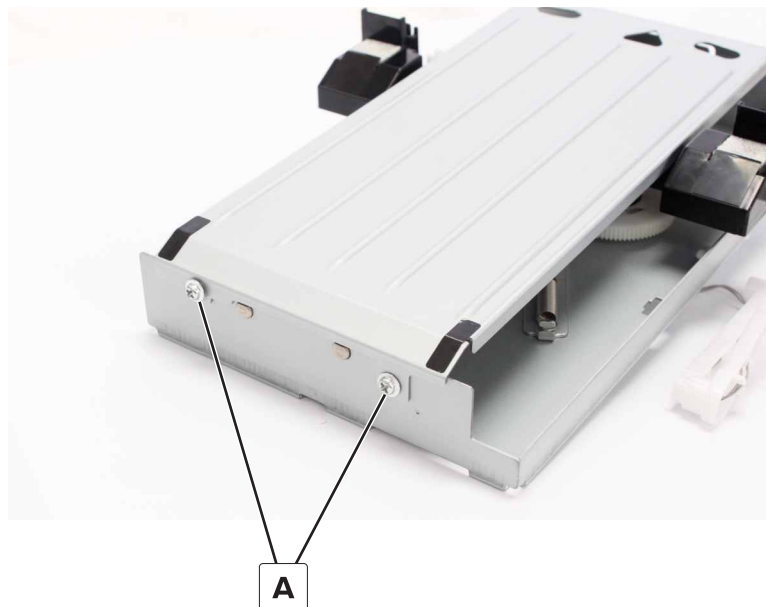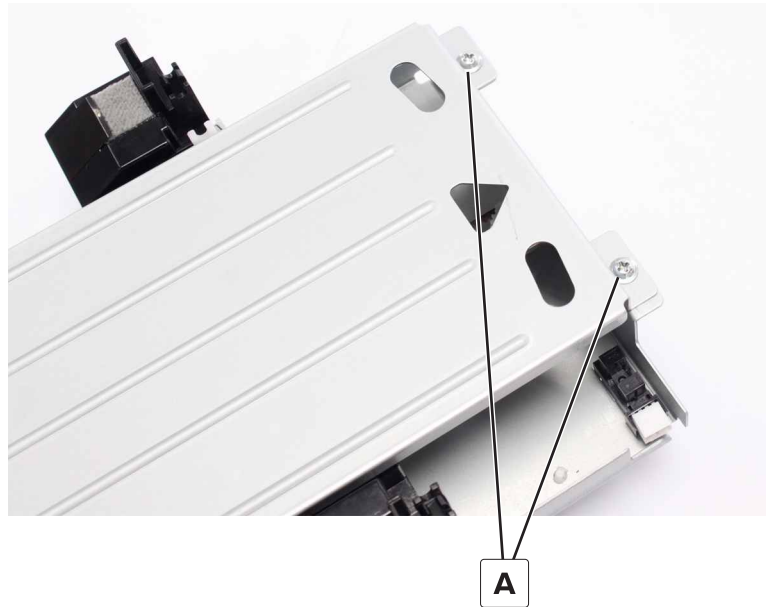
Booklet maker aligner belt removal

1 Remove the aligner jam access cover. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

4 Remove the aligner assembly. See **"Booklet maker aligner assembly removal" on page 492**.

5 Remove the aligner. See **"Booklet maker aligner removal" on page 494**.

6 Remove the aligner middle paper guide. See **"Booklet maker aligner middle paper guide removal" on page 495**.

7 Loosen the screw (A), and then remove the belt.
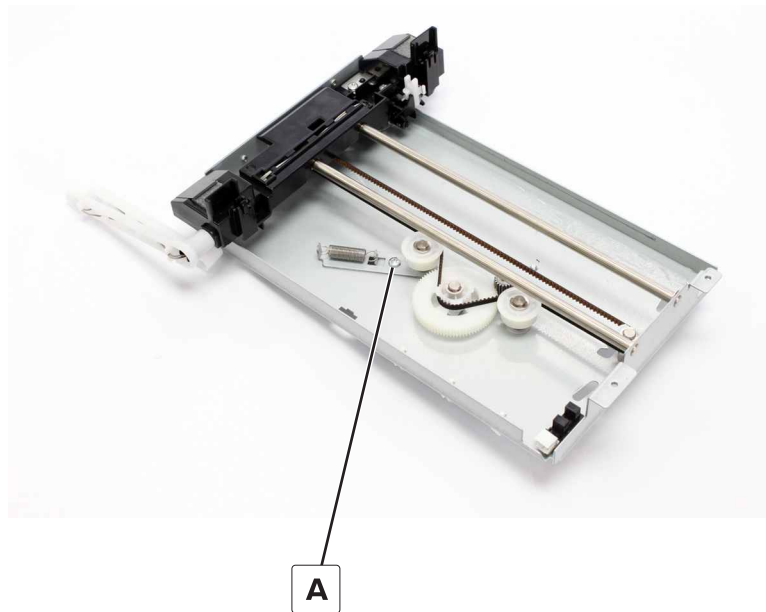
Installation note: Install the belt through the holder under the aligner carriage.
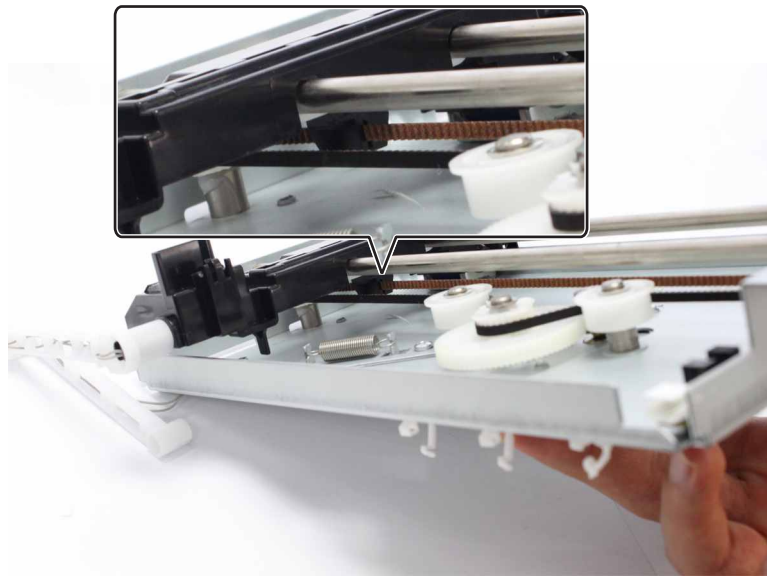
Booklet maker aligner gears removal

1 Remove the aligner jam access cover. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

4 Remove the aligner assembly. See **"Booklet maker aligner assembly removal" on page 492**.

5 Remove the aligner. See **"Booklet maker aligner removal" on page 494**.

6 Remove the aligner paper guide, middle. See **"Booklet maker aligner middle paper guide removal" on page 495**.

7 Remove the three clips (A), and then remove the gear and the two wheels.

Parts removal

8 Remove the two clips (B), and then remove the two gears.
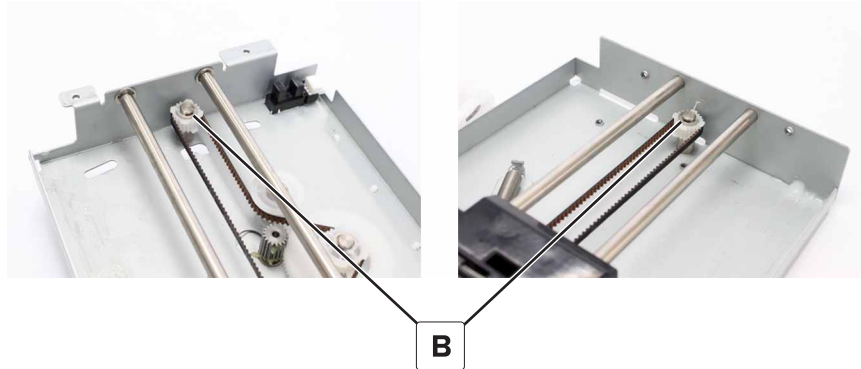
Booklet maker aligner solenoid removal

1 Remove the aligner jam access cover. See **"Booklet maker aligner jam access door removal" on page 456**.

2 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

3 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

4 Remove the aligner assembly. See **"Booklet maker aligner assembly removal" on page 492**.

5 Remove the aligner. See **"Booklet maker aligner removal" on page 494**.

6 Remove the aligner paper guide, middle. See **"Booklet maker aligner middle paper guide removal" on page 495**.

7 Release the belt from the holder.
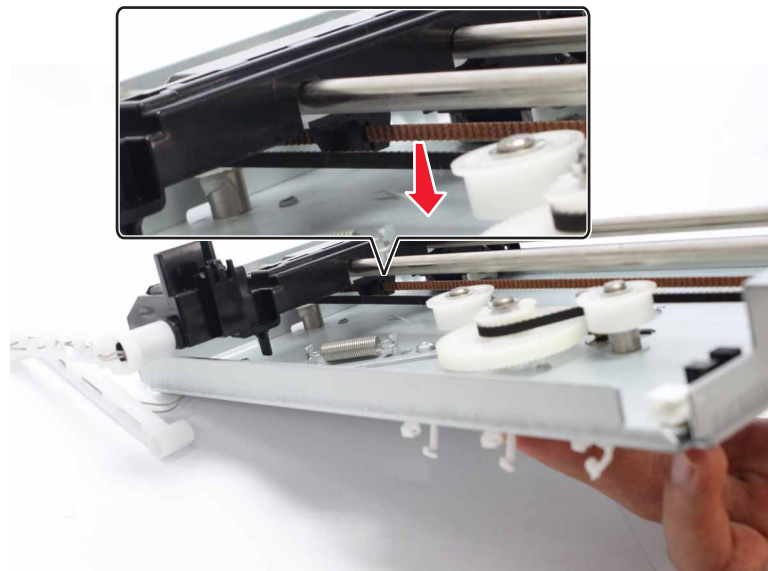
8 Remove the two clips (A), and then remove the two shafts.

9 Remove the two screws (B).

Parts removal

499
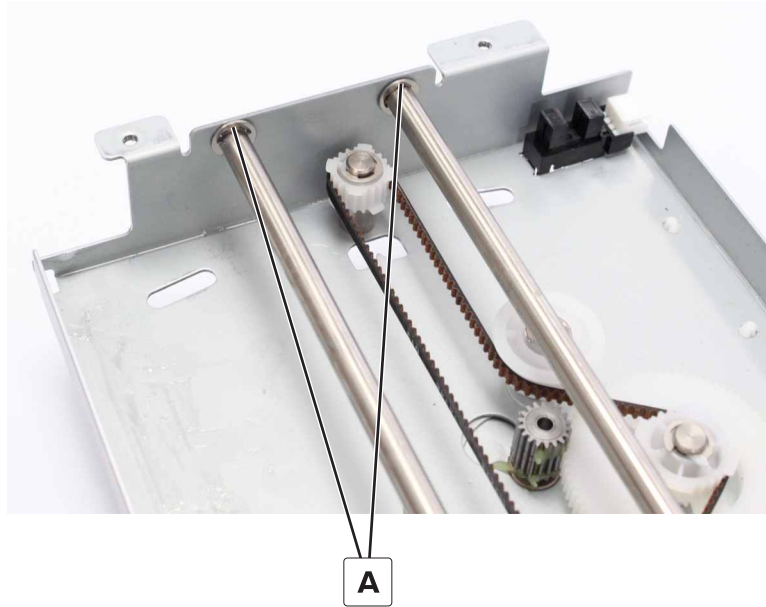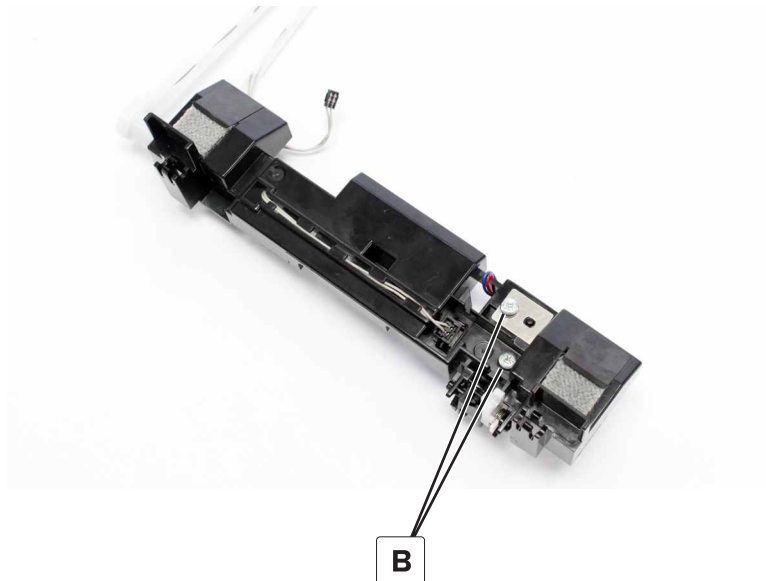
10 Disconnect the cable (C). Pry the link, and then remove the solenoid.

C
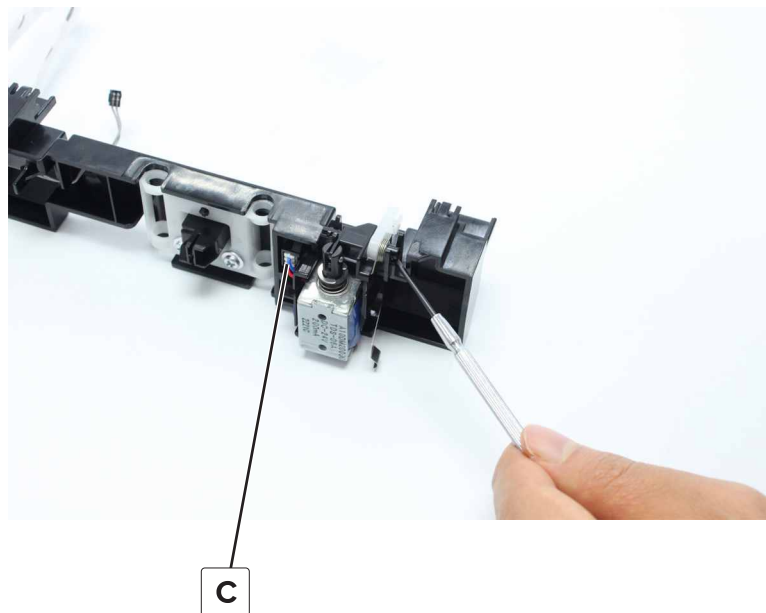
Installation note: Take note of the spring position and cable routing.
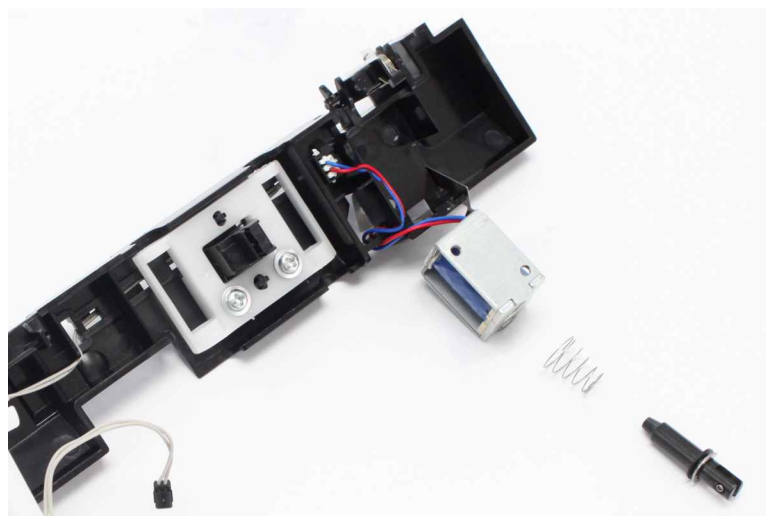
Trifold knife assembly removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the four screws (A), and then remove the assembly.
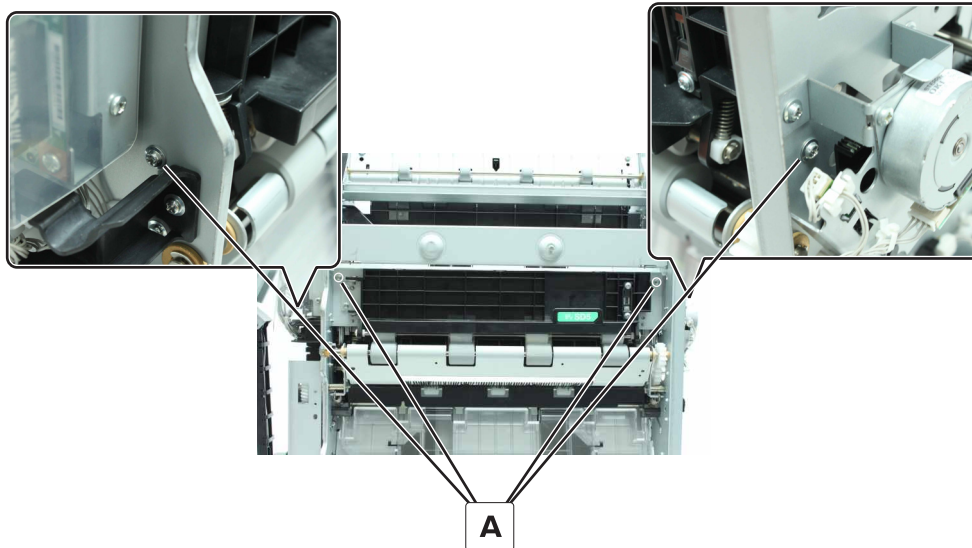
Booklet maker upper paddle removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the bifold guide motor bracket. See **"Bifold guide motor bracket removal" on page 483**.

3 Remove the trifold knife assembly. See **"Trifold knife assembly removal" on page 501**.

4 Remove the shaft (A).
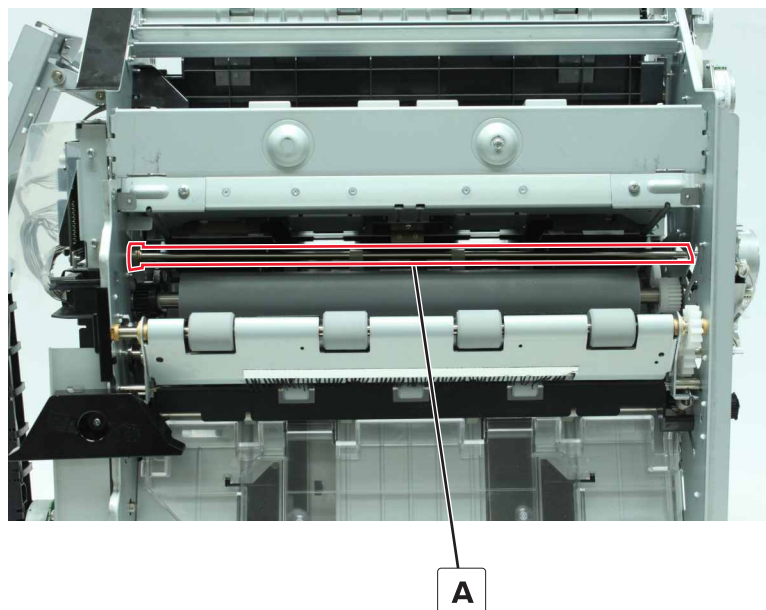
Trifold knife removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the trifold knife assembly. See **"Trifold knife assembly removal" on page 501**.

3 Remove the four screws (A), and then remove the knife.
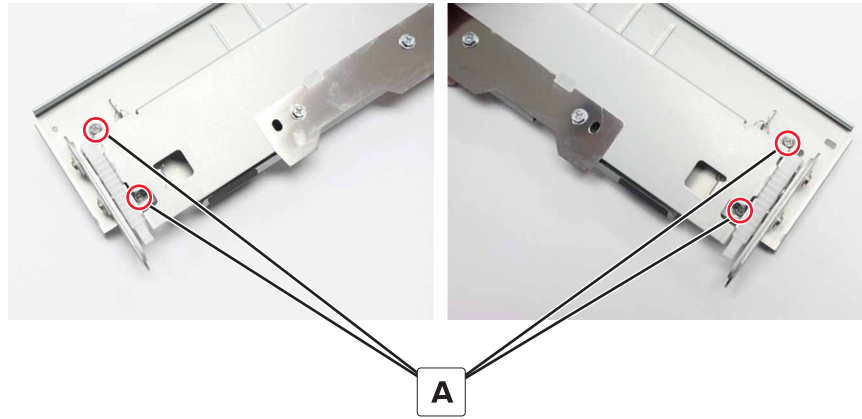
Trifold knife springs removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the trifold knife assembly. See **"Trifold knife assembly removal" on page 501**.

3 Remove the trifold knife. See **"Trifold knife removal" on page 502**.

4 Remove the two springs (A).
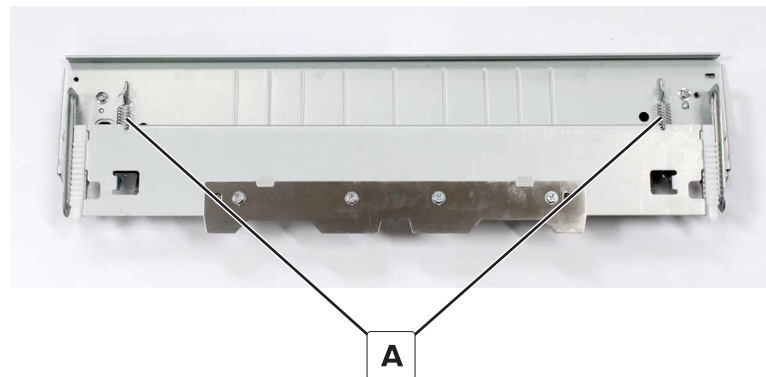
Bifold upper roller removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the bifold guide motor bracket. See **"Bifold guide motor bracket removal" on page 483**.

3 Remove the trifold knife assembly. See **"Trifold knife assembly removal" on page 501**.

4 Remove the clip (A), and then remove the gear.
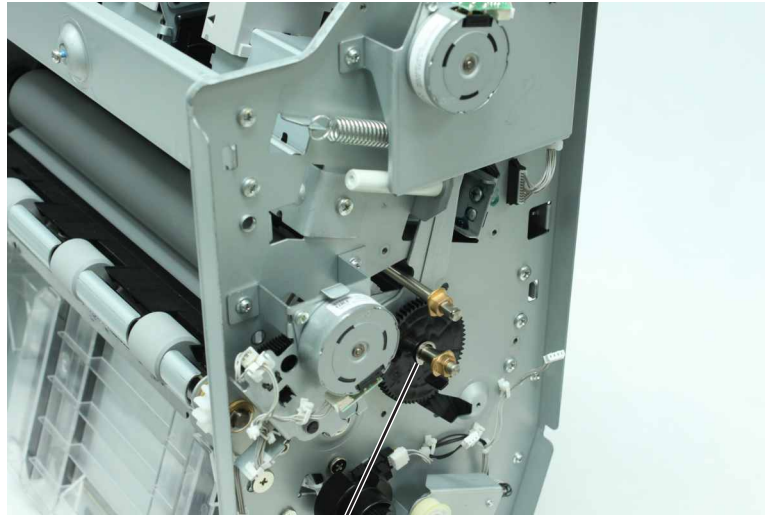
A

5 Disconnect the spring (B).

6 Remove the clip (C), and then remove the ball bearing.

C

B

7 Disconnect the cable (D).

8 Remove the two screws (E), and then set aside the cable holder.
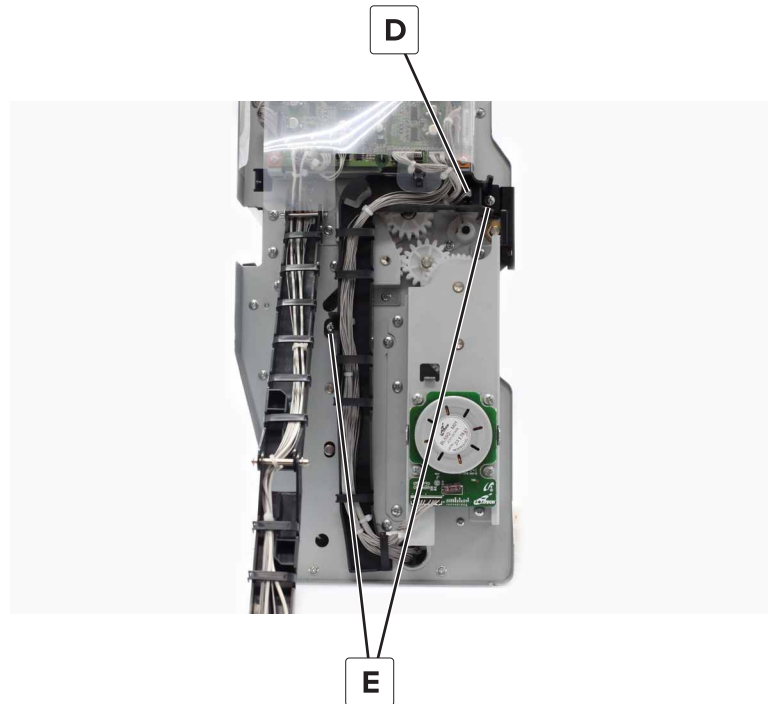
9 Remove the clip (F), and then remove the gear.

10 Remove the clip (G), and then remove the ball bearing.
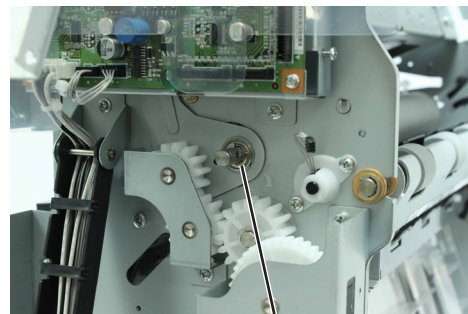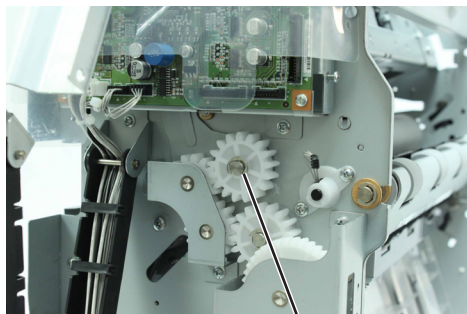
11 Remove the roller.
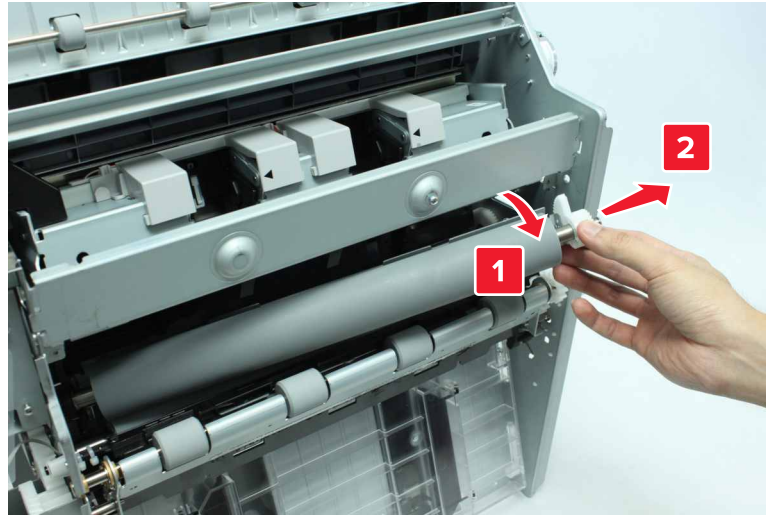
12 Remove the two screws (H), and then remove the gears.
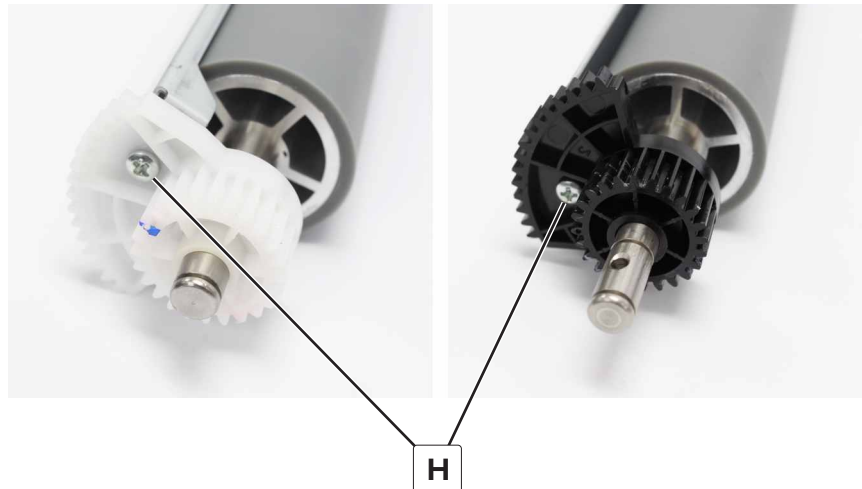
Bifold lower roller removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the bifold guide motor bracket. See **"Bifold guide motor bracket removal" on page 483**.

3 Remove the trifold guide motor bracket. See **"Trifold guide motor bracket removal" on page 485**.

4 Remove the trifold knife assembly. See **"Trifold knife assembly removal" on page 501**.

5 Remove the trifold gate actuator. See **"Trifold gate actuator removal" on page 486**.

6 Remove the trifold diverter See **"Trifold diverter removal" on page 511**.

7 Remove the bifold upper roller. See **"Bifold upper roller removal" on page 502**.

8 Remove the clip (A), and then remove the ball bearing.

A

9 Remove the clip (B), and then remove the gear.

10 Remove the clip (C), and then remove the ball bearing.
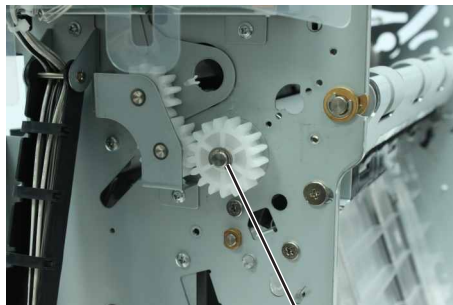
B

C

11 Move the roller to the rear, and then remove the gear (D) and pin from the shaft.
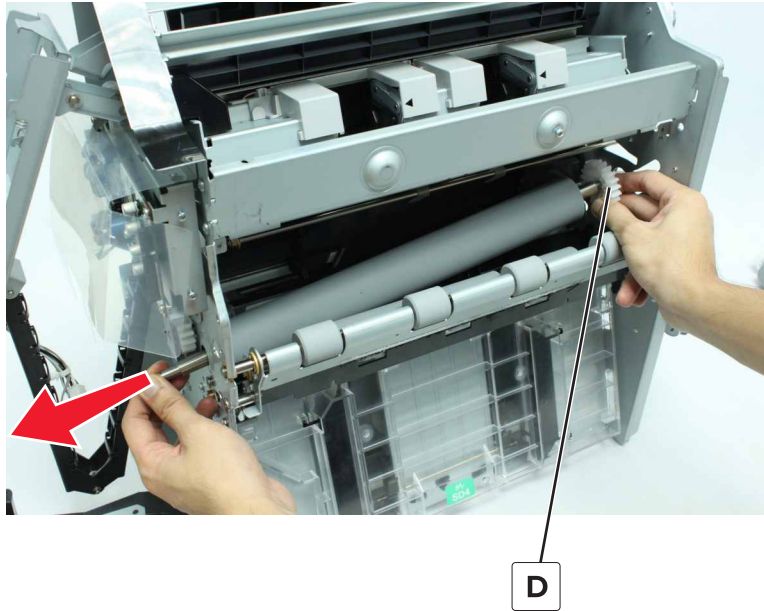
12 Move the roller to the front. Swing out, and then remove the roller.
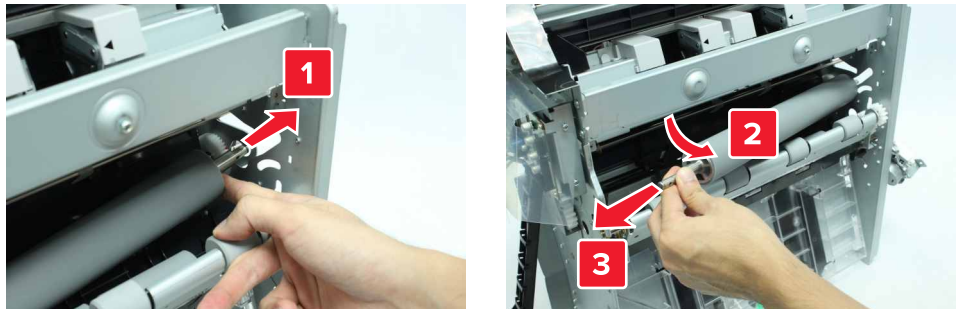
Booklet maker staple unit removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the trifold knife assembly. See **"Trifold knife assembly removal" on page 501**.

3 Remove the screw (A).

4 Release the two latches (B), and then remove the cable cover.
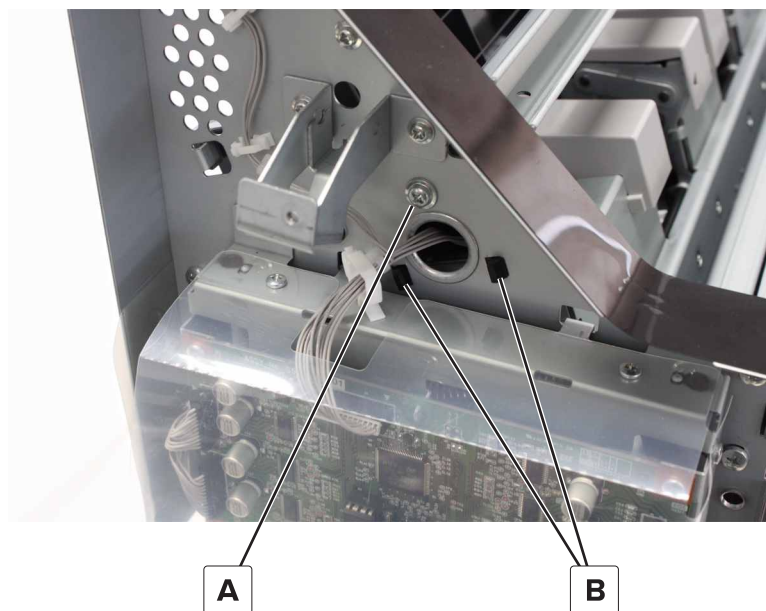
5 Disconnect the cable (C).
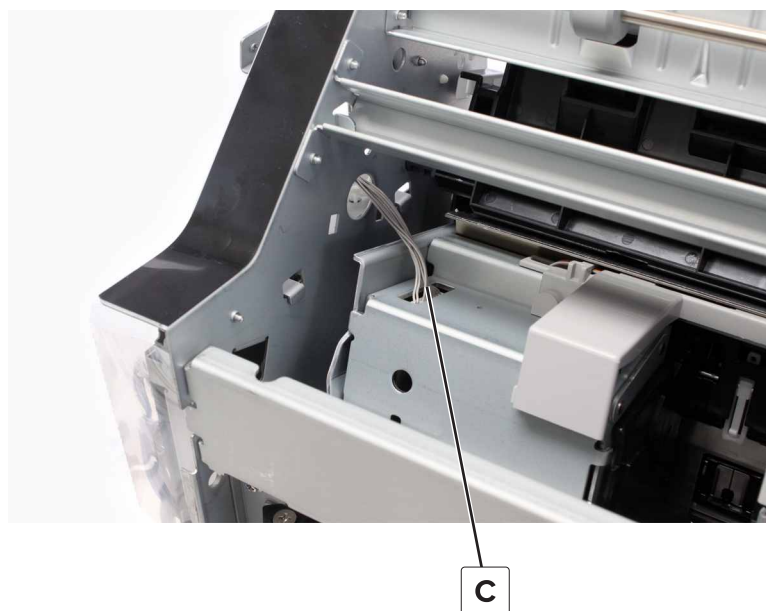
6 Remove the three screws (D).
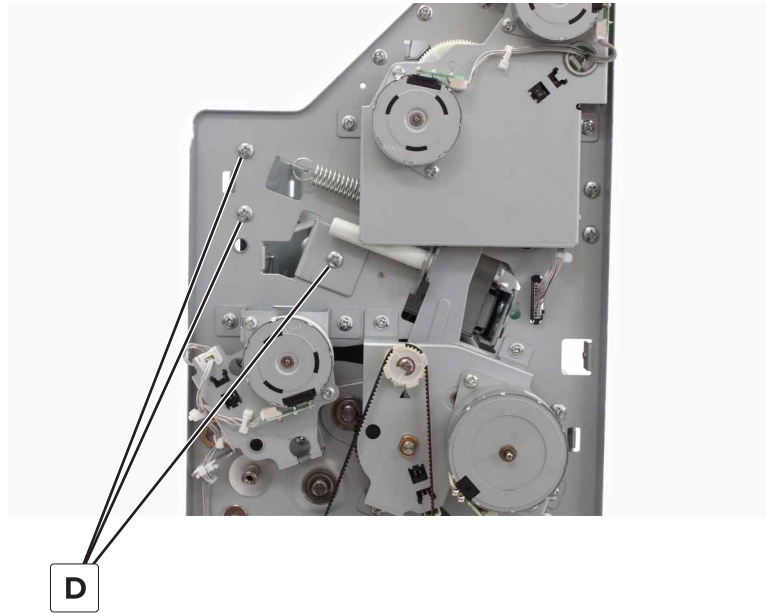
7 Disconnect the cable (E), and then remove the six screws (F).
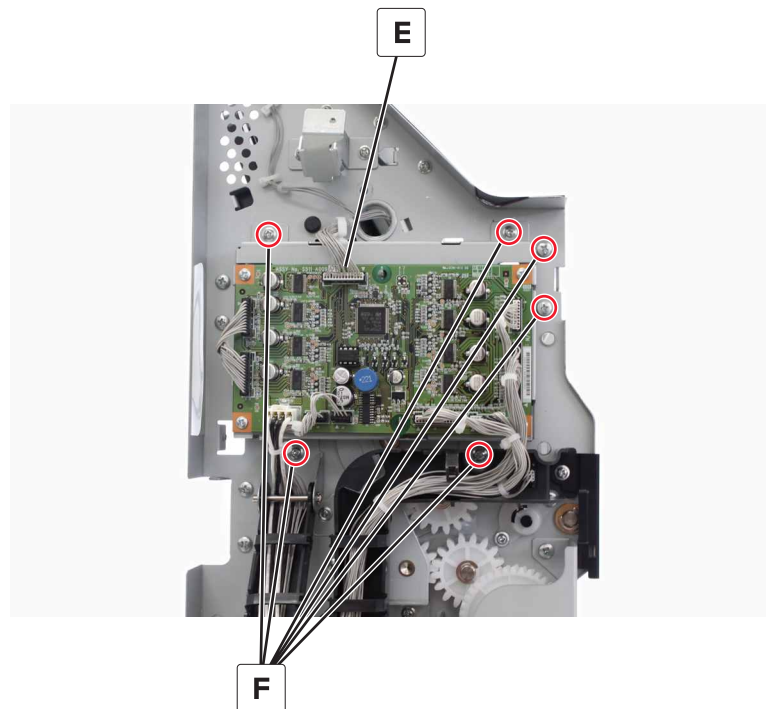
8 Remove the controller board holder and frame brace.

9 Remove the screw (G).
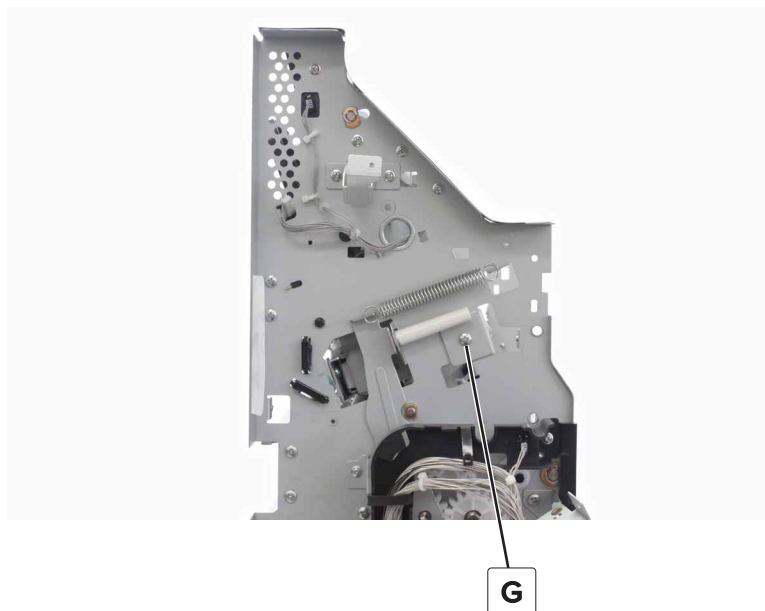
10 Remove the two screws (H), and then remove the brackets.

11 Remove the two screws (J).
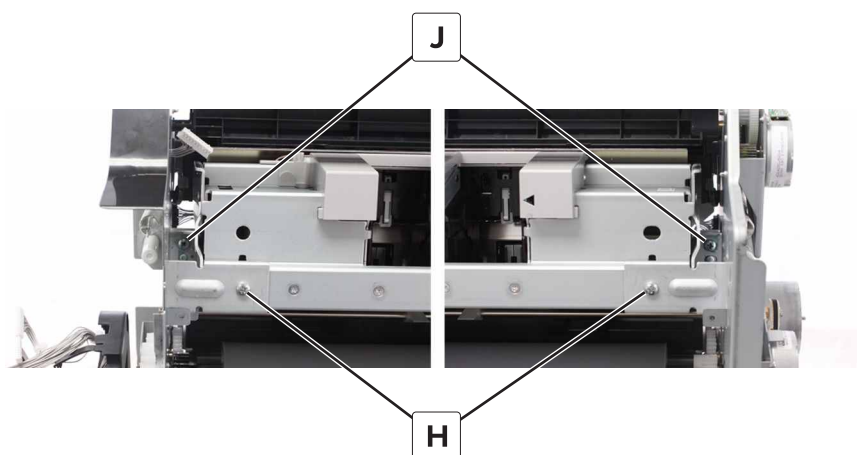
12 Remove the staple unit.
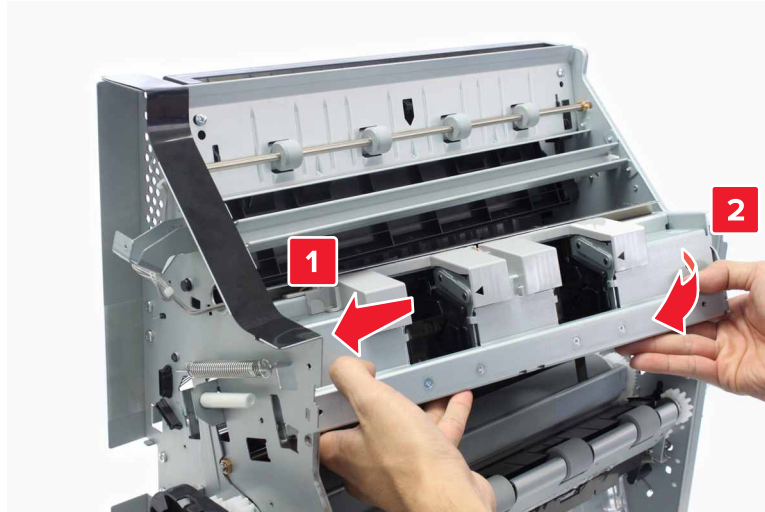
Trifold diverter removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the trifold guide motor bracket. See **"Trifold guide motor bracket removal" on page 485**.

3 Remove the trifold gate actuator. See **"Trifold gate actuator removal" on page 486**.

4 Remove the trifold knife assembly. See **"Trifold knife assembly removal" on page 501**.

5 Remove the pin (A).

6 Remove the clip (B), and then remove the bushing.

7 Remove the three screws (C).

Parts removal
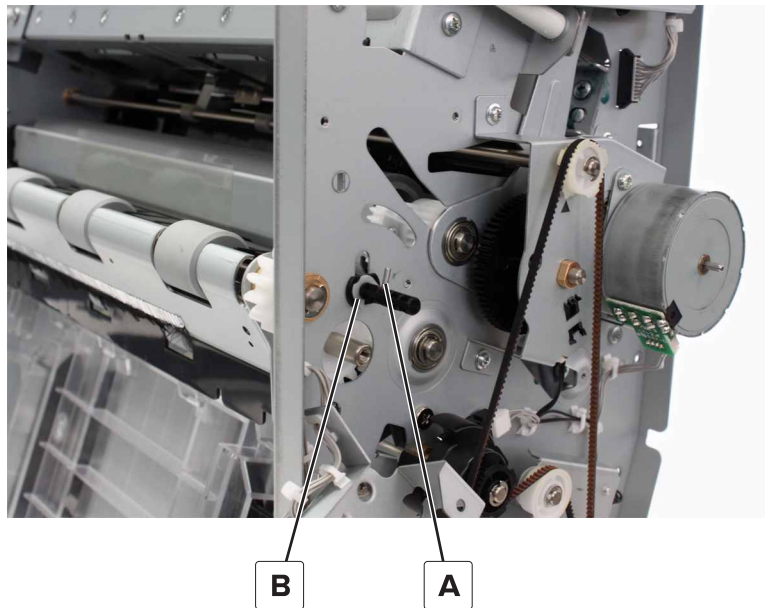
8 Remove the clip (D).
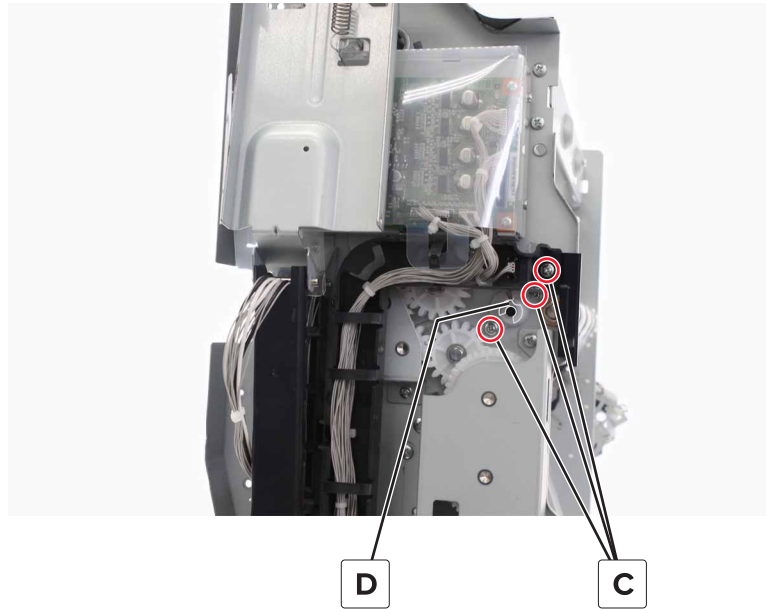
9 Disconnect the cable (E), and then remove the diverter.
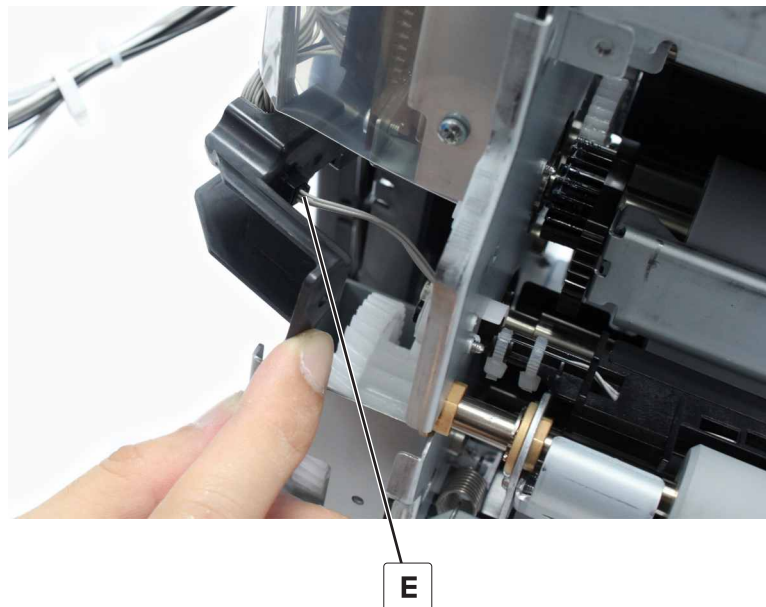
Sensor (booklet maker fold exit) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the trifold guide motor bracket. See **"Trifold guide motor bracket removal" on page 485**.

3 Remove the trifold gate actuator. See **"Trifold gate actuator removal" on page 486**.

4 Remove the trifold knife assembly. See **"Trifold knife assembly removal" on page 501**.

5 Remove the trifold diverter. See **"Trifold diverter removal" on page 511**.

6 Remove the three screws (A).
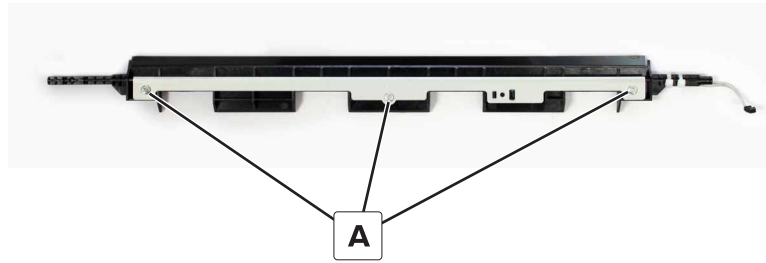
7 Disconnect the cable (B), and then remove the sensor.
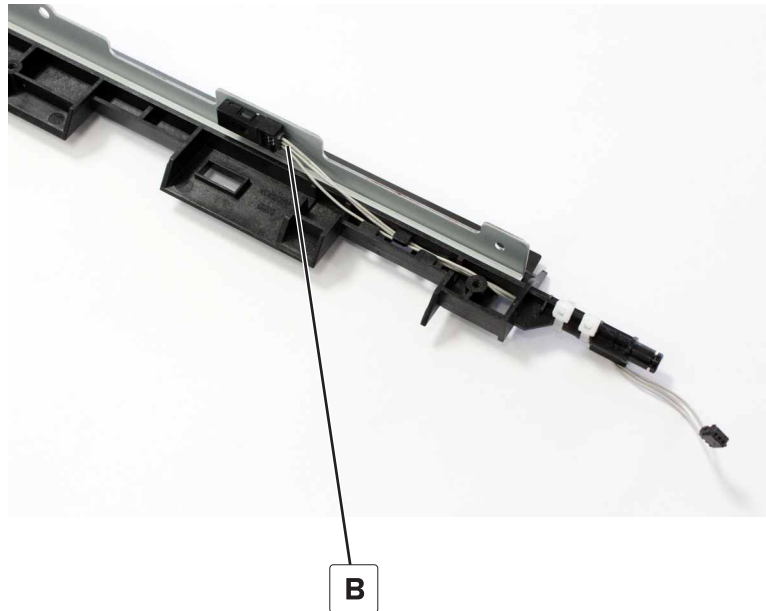
Bifold knife primary drive gears removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the motor (bifold knife). See **"Motor (bifold knife) removal" on page 487**.

Parts removal

4 Remove the four screws (A), and then remove the bracket.

A

5 Remove the two clips (B), and then remove the gears.

B

Bifold knife and tamper assembly removal

Note: This part is not a FRU.

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Remove the bifold knife primary drive gears bracket. See **[“Bifold knife primary drive gears removal” on page 513](#)**.

6 Remove the three screws (A).

7 Remove the three screws (B).
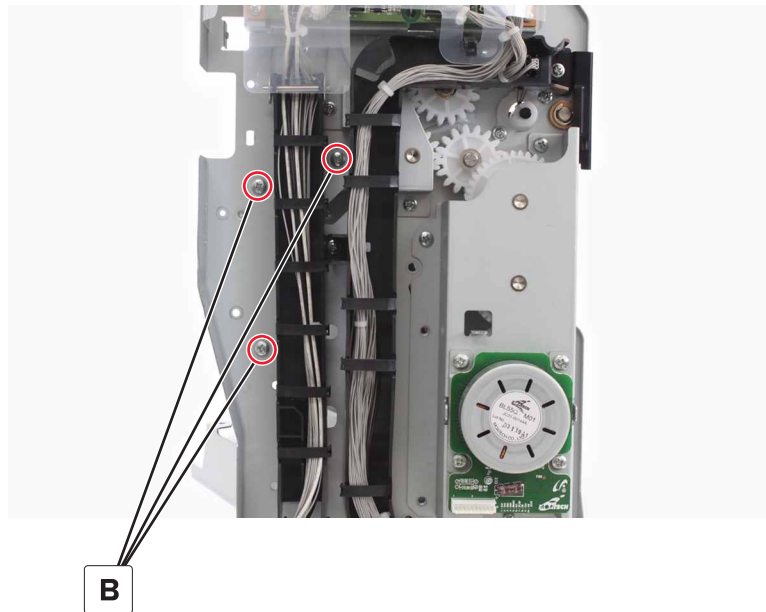
8 Disconnect the cable (C), and then remove the assembly.
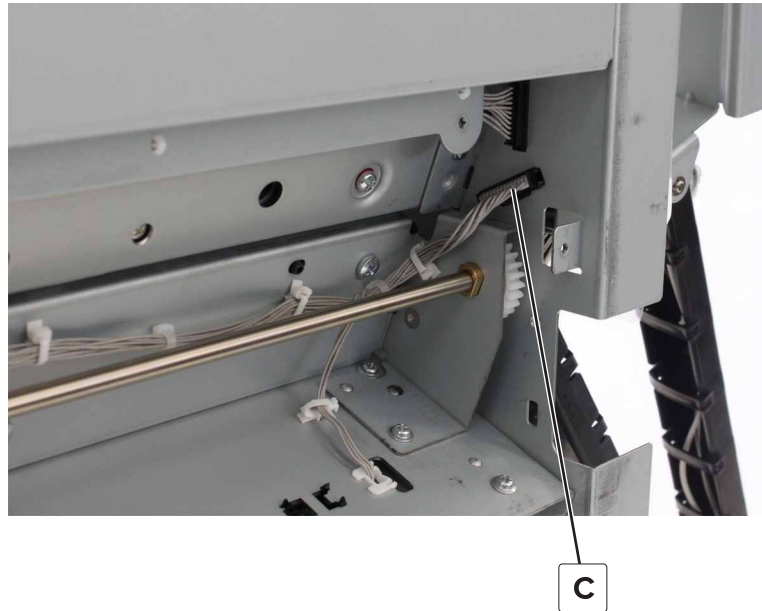
9 Remove the two screws (D), and then separate the bifold knife assembly and tamper assembly.
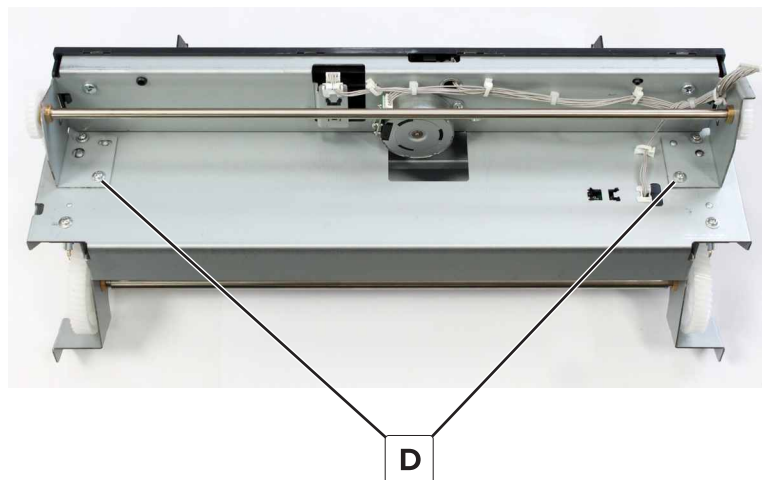
Sensor (bifold knife home) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Remove the bifold knife primary drive gears bracket. See **"Bifold knife primary drive gears removal" on page 513**.

6 Remove the bifold knife and tamper assembly. See **"Bifold knife and tamper assembly removal" on page 514**.

7 Disconnect the cable (A), and then remove the sensor.

Bifold knife plates removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Remove the bifold knife primary drive gears bracket. See **"Bifold knife primary drive gears removal" on page 513**.

6 Remove the bifold knife and tamper assembly. See **"Bifold knife and tamper assembly removal" on page 514**.

7 Remove the four clips (A), and then remove the four bushings.
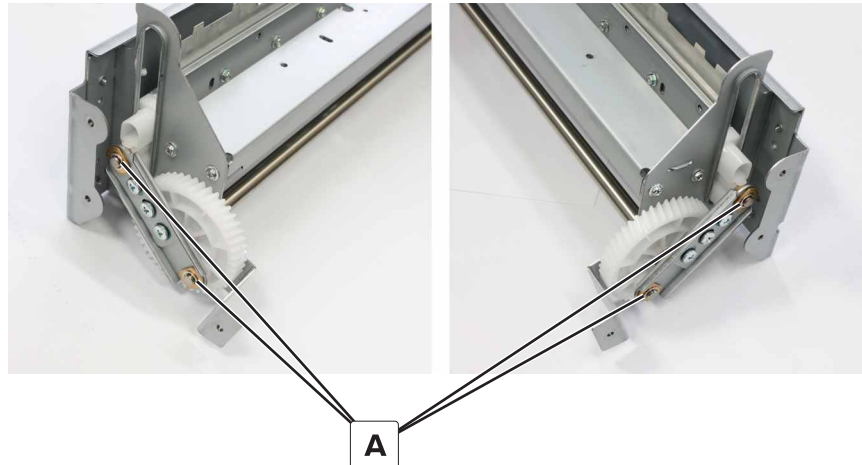
8 Remove the plates.

Bifold knife secondary drive gears removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Remove the bifold knife primary drive gears bracket. See **"Bifold knife primary drive gears removal" on page 513**.

6 Remove the bifold knife and tamper assembly. See **"Bifold knife and tamper assembly removal" on page 514**.

7 Remove the bifold knife plates. See **"Bifold knife plates removal" on page 517**.

8 Remove the two clips (A), and then remove the gears.

Installation note: Align the protruding shafts on each gear with each other.

Bifold knife removal

1   Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2   Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3   Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4   Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5   Remove the bifold knife primary drive gears bracket. See **"Bifold knife primary drive gears removal" on page 513**.

6   Remove the bifold knife and tamper assembly. See **"Bifold knife and tamper assembly removal" on page 514**.

7   Remove the bifold knife plates. See **"Bifold knife plates removal" on page 517**.

8   Remove the two screws (A).

9   Remove the three screws (B).

10   Remove the clip (C), and then remove the gear.
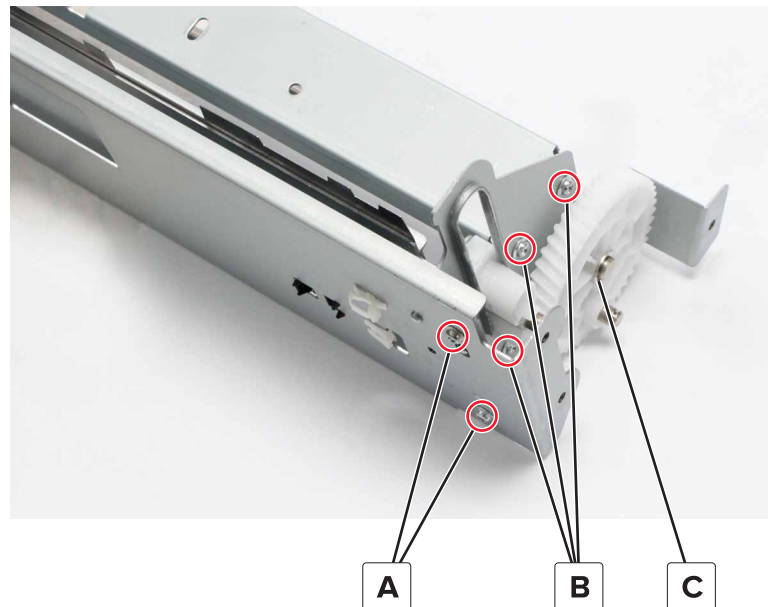
11   Remove the knife from the assembly.

12   Remove the four screws (D), and then remove the bushings.
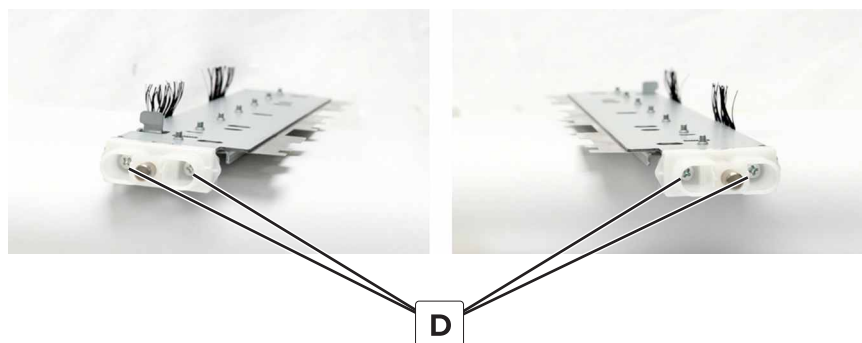
Parts removal

Bifold roller drive gears removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Remove the bifold roller gears bracket. See **"Bifold roller gears removal" on page 468**.

6 Remove the bifold knife primary drive gears bracket. See **"Bifold knife primary drive gears removal" on page 513**.

7 Remove the bifold knife and tamper assembly. See **"Bifold knife and tamper assembly removal" on page 514**.

8 Remove the three screws (A), and then set aside the cable holder.
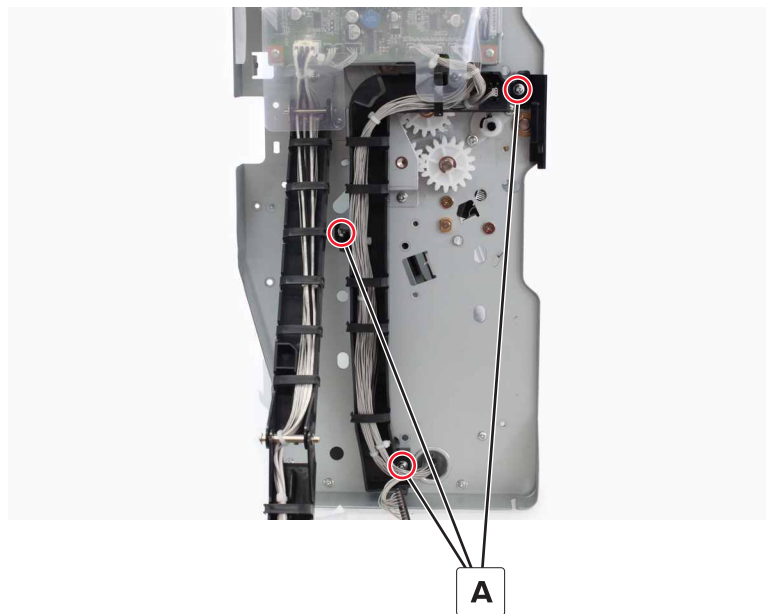
9 Remove the two clips (B), and then remove the gears.

10 Remove the two screws (C), and then remove the gear bracket.
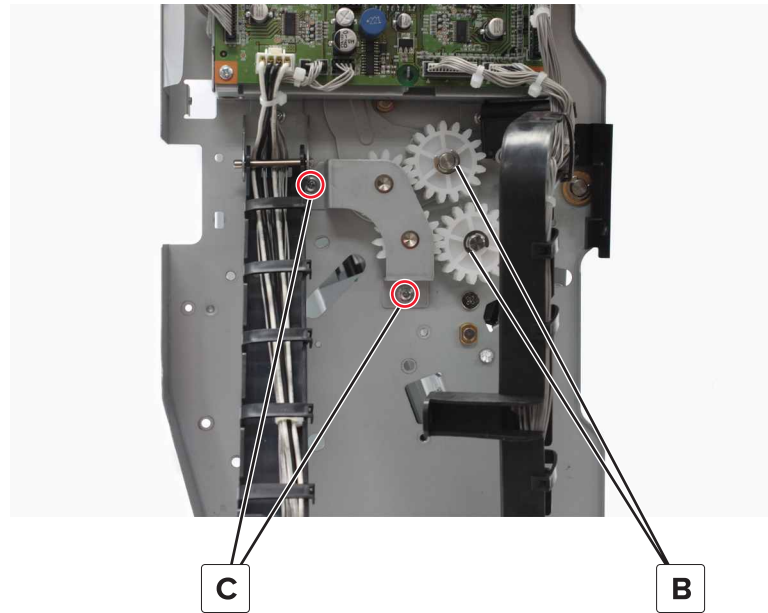
11 Remove the clip (D), and then remove the gear.
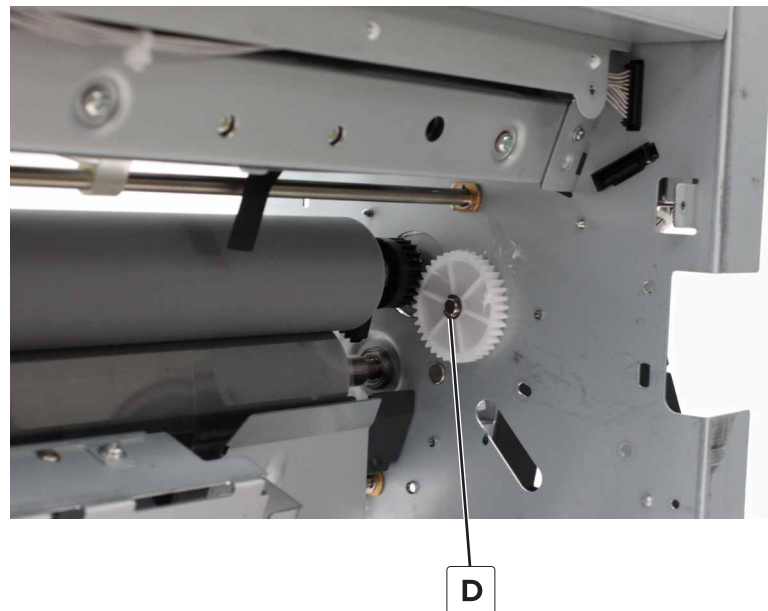
12 Remove the two clips (E), and then remove the gears.
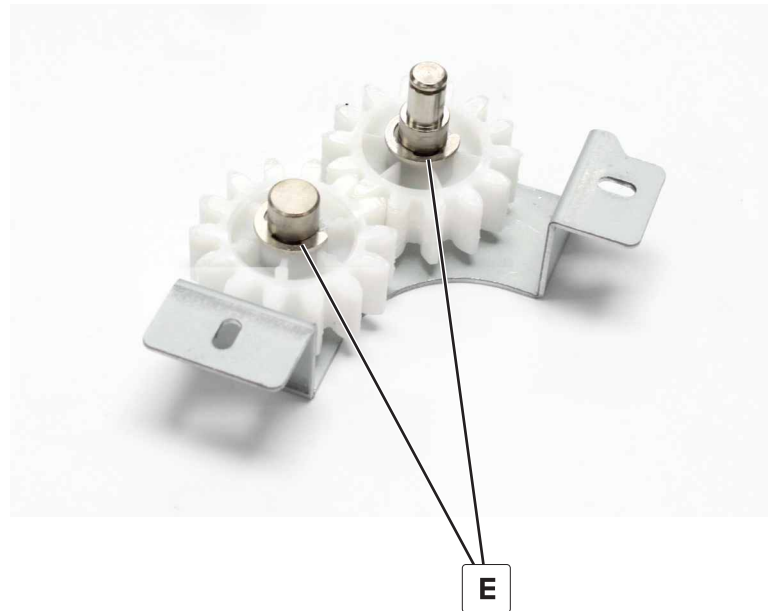
Installation note: Align the holes on the frame and arm, and then install the gear bracket.
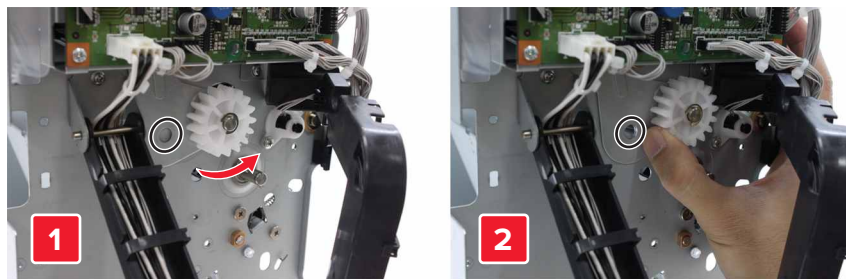
Bifold guide drive gears removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Remove the bifold guide motor bracket. See **"Bifold guide motor bracket removal" on page 483**.

6 Remove the bifold knife primary drive gears bracket. See **"Bifold knife primary drive gears removal" on page 513**.

7 Remove the bifold knife and tamper assembly. See **"Bifold knife and tamper assembly removal" on page 514**.

8 Remove the clip (A), and then remove the gear.
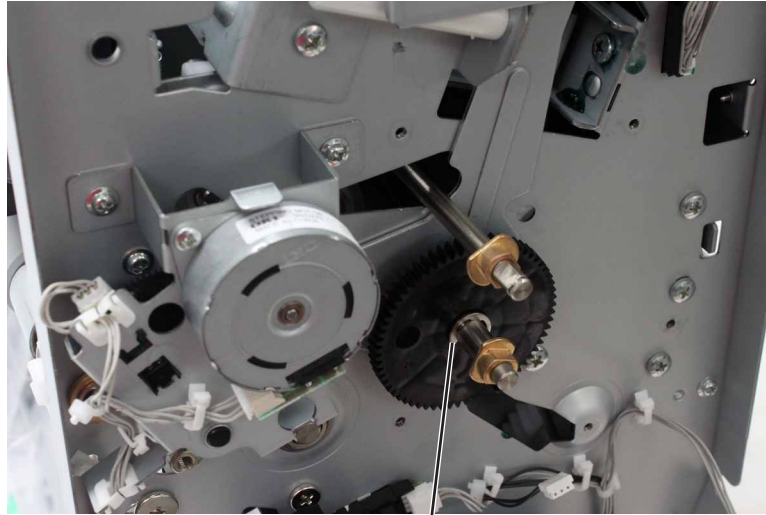
9 Remove the clip (B), and then remove the gear.

10 Remove the clip (C), and then remove the gear.
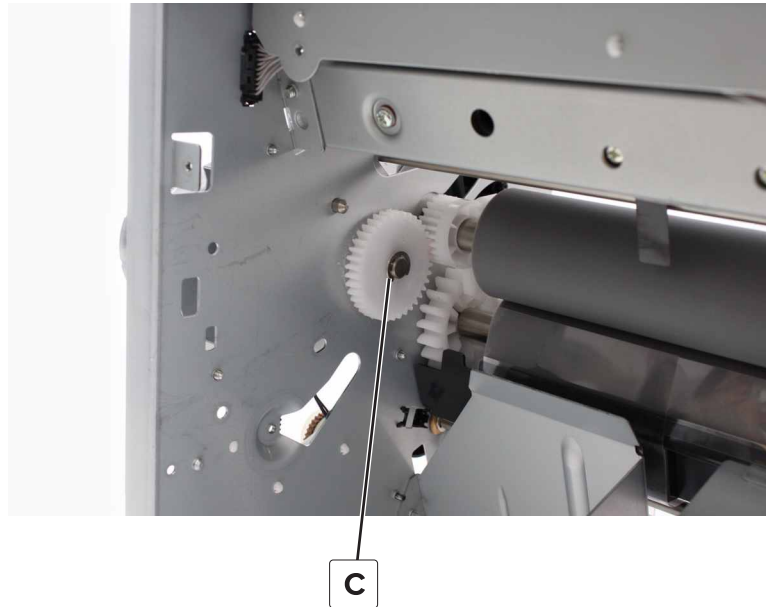
Installation notes:

a Show the marks on the inner gears through the hole, and then align the colors.
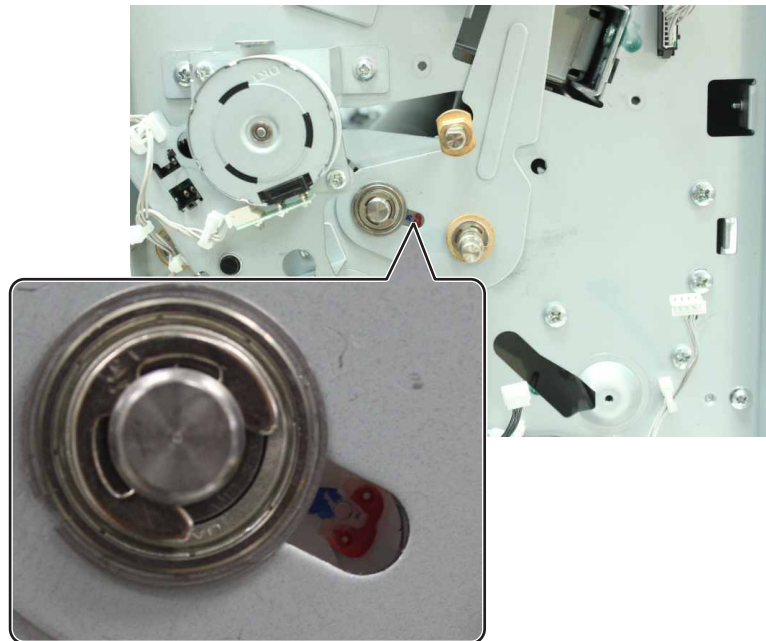
b Align the hole on the gear with the hole on the motor bracket.
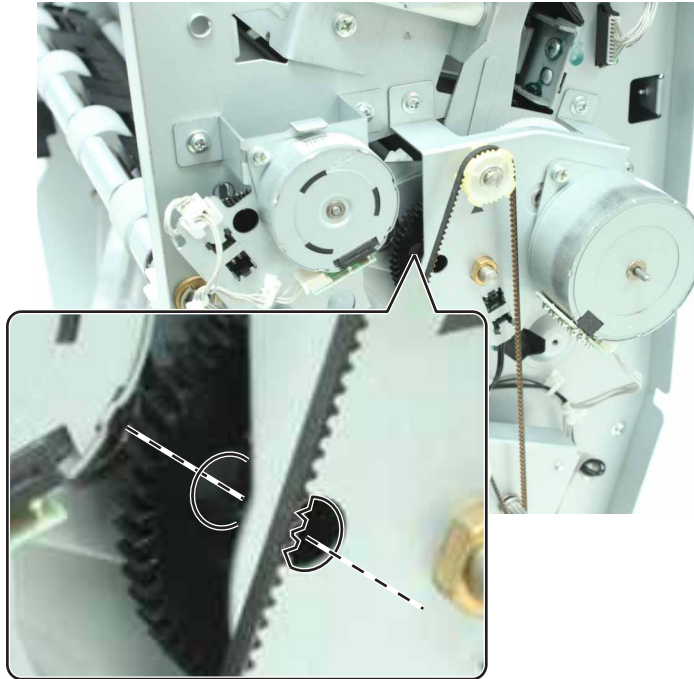
Booklet maker tamper tray removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Remove the bifold knife primary drive gears bracket. See **"Bifold knife primary drive gears removal" on page 513**.

6 Remove the bifold knife and tamper assembly. See **"Bifold knife and tamper assembly removal" on page 514**.

7 Remove the front and rear tamper plates.
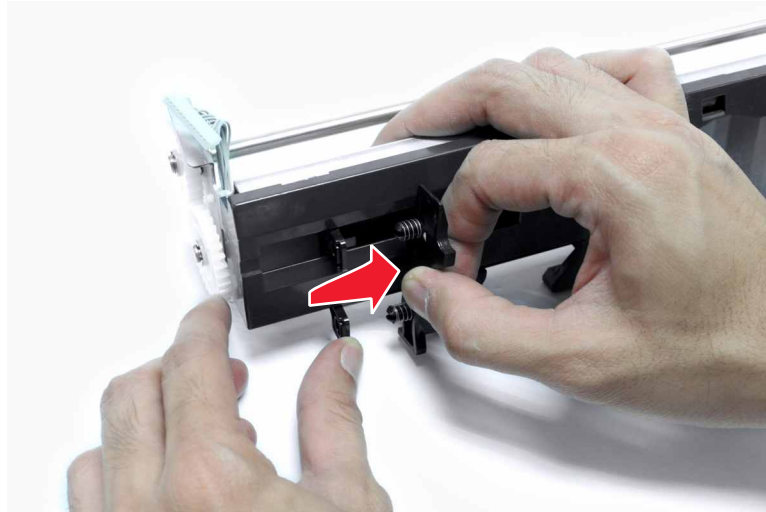
8 Remove the four screws (A).

9 Release the two latches (B), and then separate the tamper tray.

10 Remove the two tamper racks (C).

11 Remove the sensor (booklet maker tamper paper present) (D).

12 Remove the gear (E).
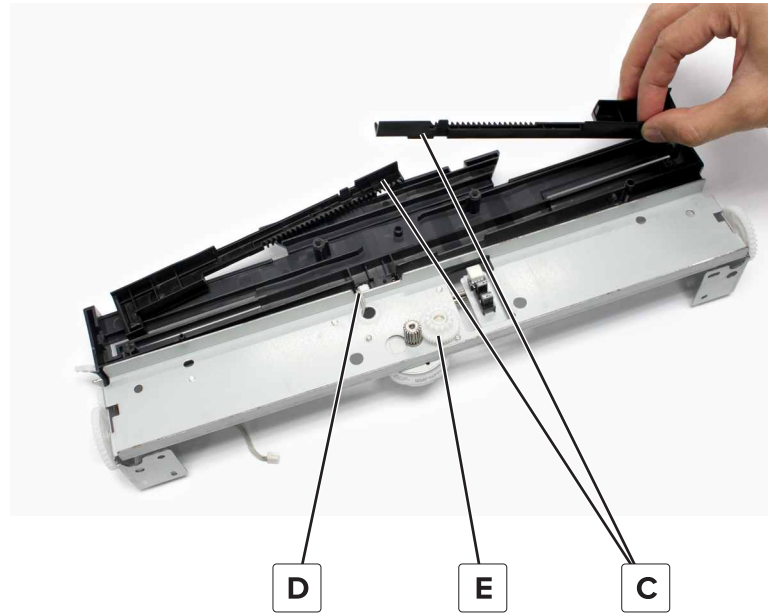
Installation notes:

a Install the sensor (booklet maker tamper paper present).

b Place the tamper racks (A) at the innermost position.

c Install the gear (B) on the tamper tray.
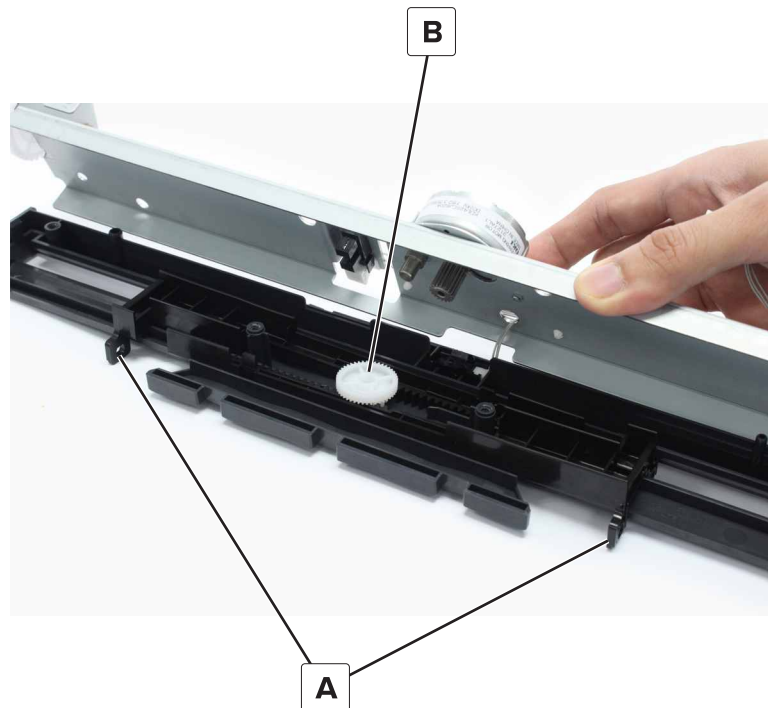
d Install the tamper tray on the metal bracket.

e Test if the tampers are synchronized, and then install the screws.

Sensor (booklet maker tamper home) removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Remove the bifold knife primary drive gears bracket. See **"Bifold knife primary drive gears removal" on page 513**.

6 Remove the bifold knife and tamper assembly. See **"Bifold knife and tamper assembly removal" on page 514**.

7 Remove the tamper tray. See **"Booklet maker tamper tray removal" on page 525**.

8 Disconnect the cable (A), and then remove the sensor.
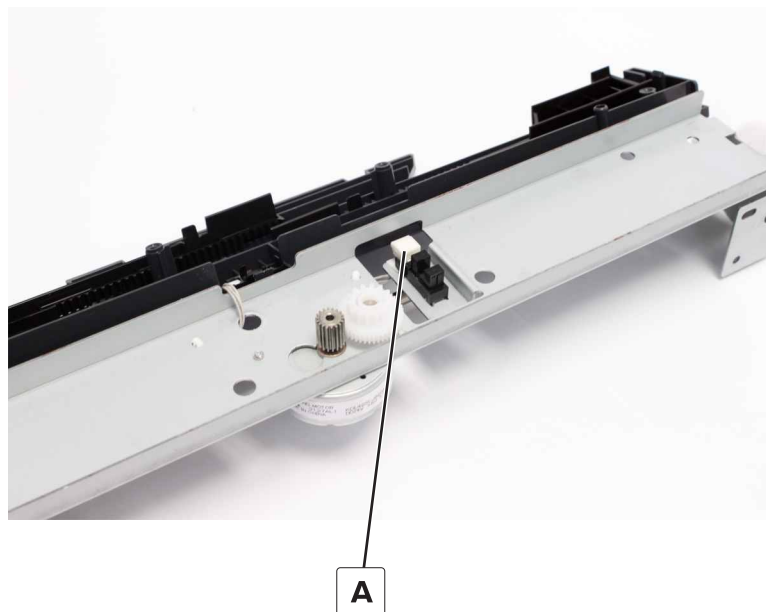
Bifold guide idler gears removal

1 Remove the front cover. See **"Booklet maker front cover removal" on page 453**.

2 Remove the right cover. See **"Booklet maker right cover removal" on page 453**.

3 Remove the top frame brace. See **"Top frame brace removal" on page 459**.

4 Remove the middle frame brace. See **"Middle frame brace removal" on page 461**.

5 Remove the bifold knife primary drive gears bracket. See **"Bifold knife primary drive gears removal" on page 513**.

6 Remove the bifold knife and tamper assembly. See **"Bifold knife and tamper assembly removal" on page 514**.

7 Remove the two clips (A), and then remove the two gears. Repeat this step for the gears on the other side.
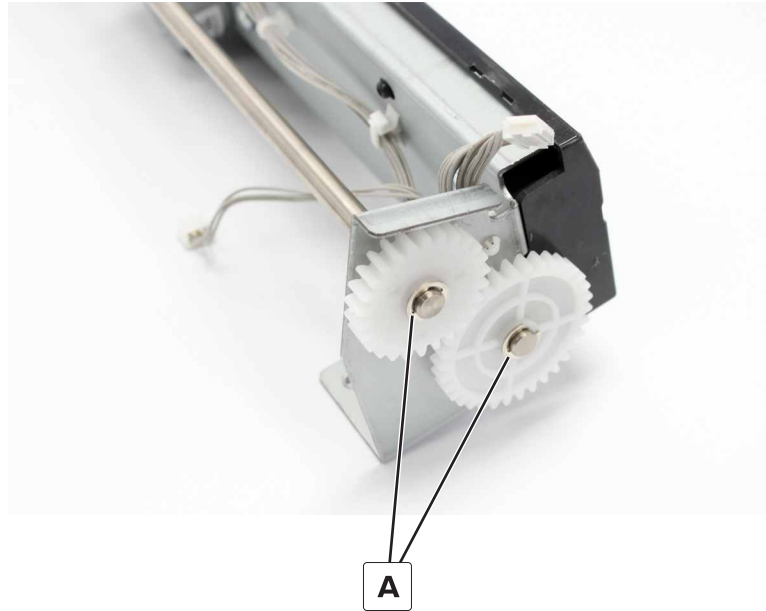
Component locations

Exterior locations

Configured model
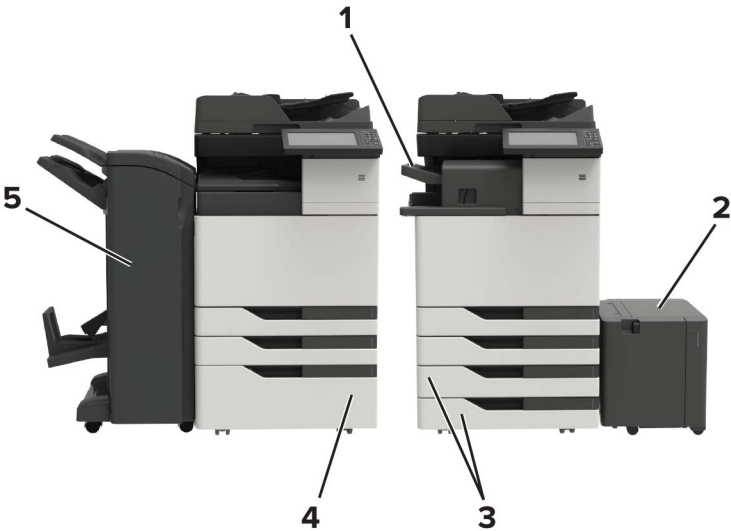
#	Part
1	Staple finisher **Notes:** • The staple finisher is not supported if another finisher is installed. • The staple finisher is not supported by CX924 printers.
2	3000-sheet tray **Note:** The 3000-sheet tray is supported only if the optional 2 x 500- or 2500-sheet tray is installed.
3	2 x 500-sheet tray
4	2500-sheet tray
5	Finisher • Staple, hole punch finisher • Hole punch, booklet finisher

Maintenance

Inspection guide

Use this guide in identifying the parts that must be inspected, cleaned, or replaced based on the page count.

If any unsafe conditions exist, then find out how serious the hazard is and if you can continue before you correct the hazard.

Check for the following while you are servicing the finishers:

- Damaged, missing, or altered parts
- Possible safety exposure from any non-Lexmark attachments

Clean the following parts with a damp cloth on every 300K page count:

- Rollers and idler rollers
- Paddles
- Bifold rollers

Lubrication specification

Lubricate only when the parts are replaced or if necessary, not on a scheduled basis. The use of lubricants other than those specified in this service manual may cause premature failure. Some unauthorized lubricants may chemically attack polycarbonate parts. Use Grease P/N 99A0394 Nyogel 744.

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: Staple finisher—Frame
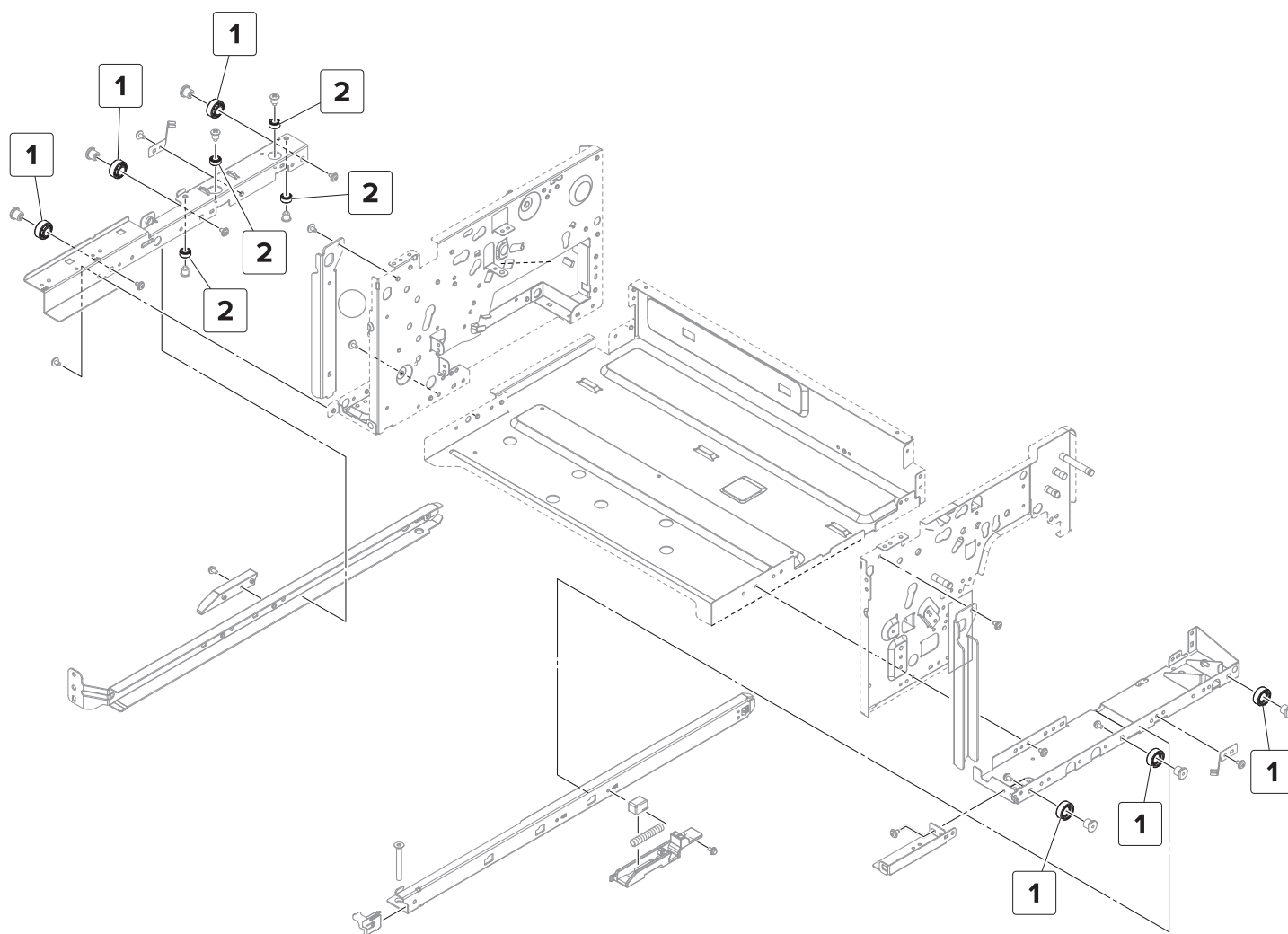
Assembly 1: Staple finisher—Frame

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9810	6	1	Staple finisher side guide wheel	--
2	40X9334	4	1	Staple finisher bottom guide wheel	--

Assembly 2: Staple finisher—Covers
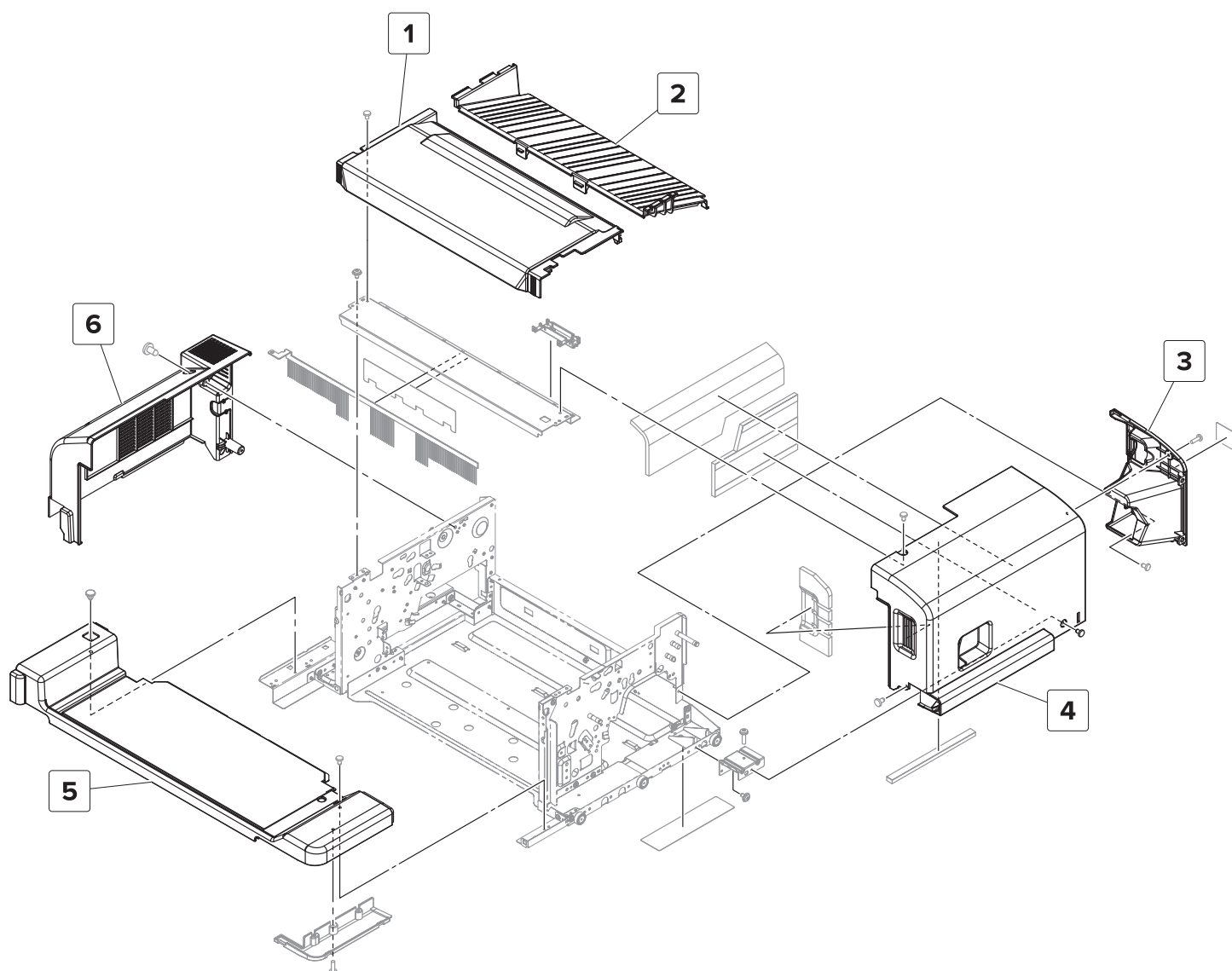
Assembly 2: Staple finisher—Covers

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9337	1	1	Staple finisher top cover	**"Staple finisher top cover removal" on page 227**
2	40X9395	1	1	Staple finisher upper guide cover	--
3	40X9336	1	1	Staple finisher right cover	**"Staple finisher right cover removal" on page 226**
4	40X9335	1	1	Staple finisher front cover	**"Staple finisher front cover removal" on page 225**
5	40X9811	1	1	Staple finisher rail cover	--
6	40X9338	1	1	Staple finisher rear cover	**"Staple finisher rear cover removal" on page 226**

Assembly 3: Staple finisher—Transport section 1
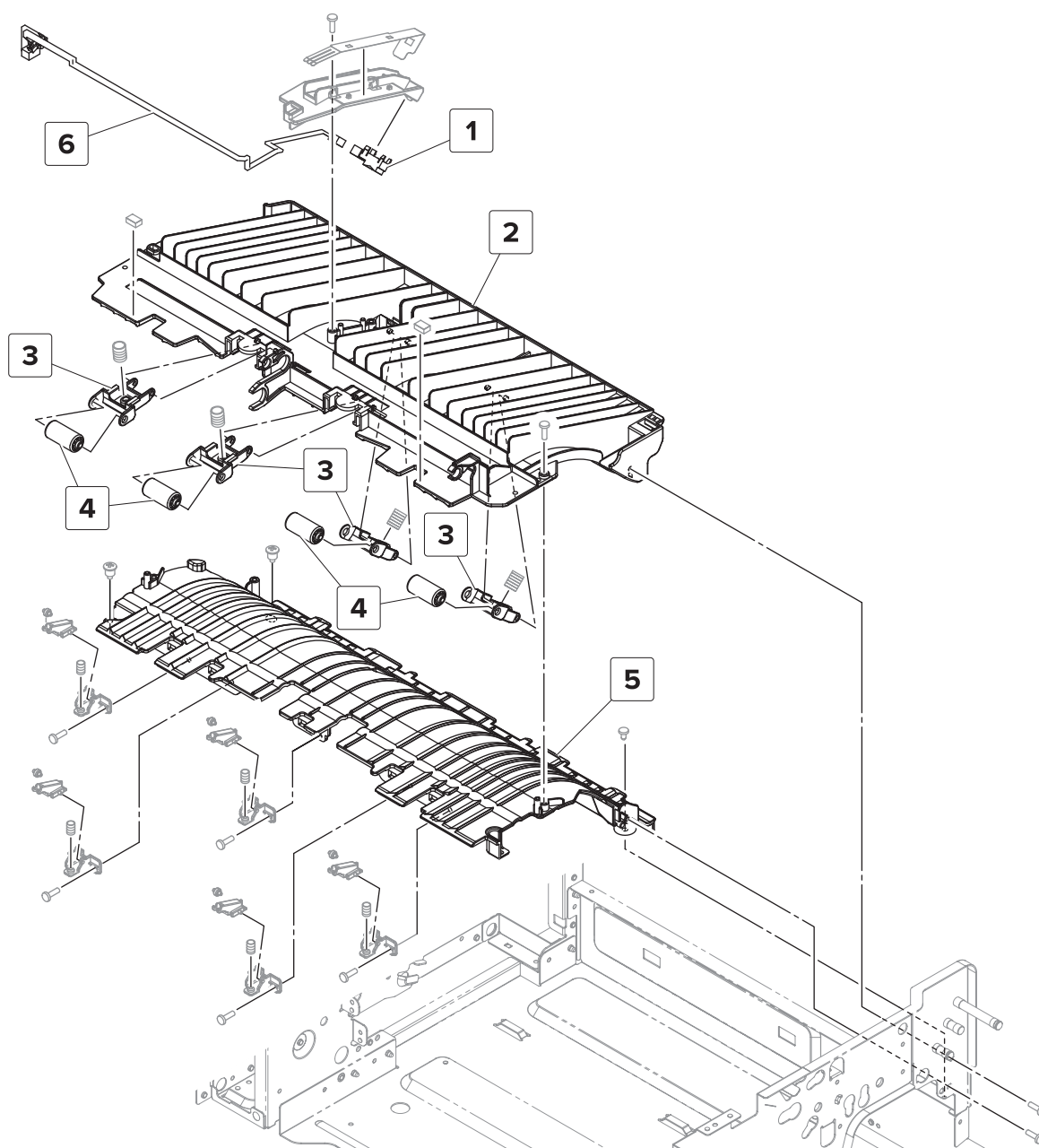
Assembly 3: Staple finisher—Transport section 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9347	1	1	Sensor (staple finisher paper feed)	**"Sensor (staple finisher paper feed) removal" on page 254**
2	40X9350	1	1	Staple finisher upper guide	**"Staple finisher upper guide removal" on page 283**
3	40X9898	4	1	Staple finisher paper feed idler holder	**"Staple finisher upper guide removal" on page 283**
4	40X9349	4	1	Staple finisher paper feed idler roller	**"Staple finisher upper guide removal" on page 283**
5	40X9351	1	1	Staple finisher lower guide	**"Staple finisher lower guide removal" on page 287**
6	40X9348	1	1	Staple finisher paper feed sensor cable	--

Assembly 4: Staple finisher—Transport section 2
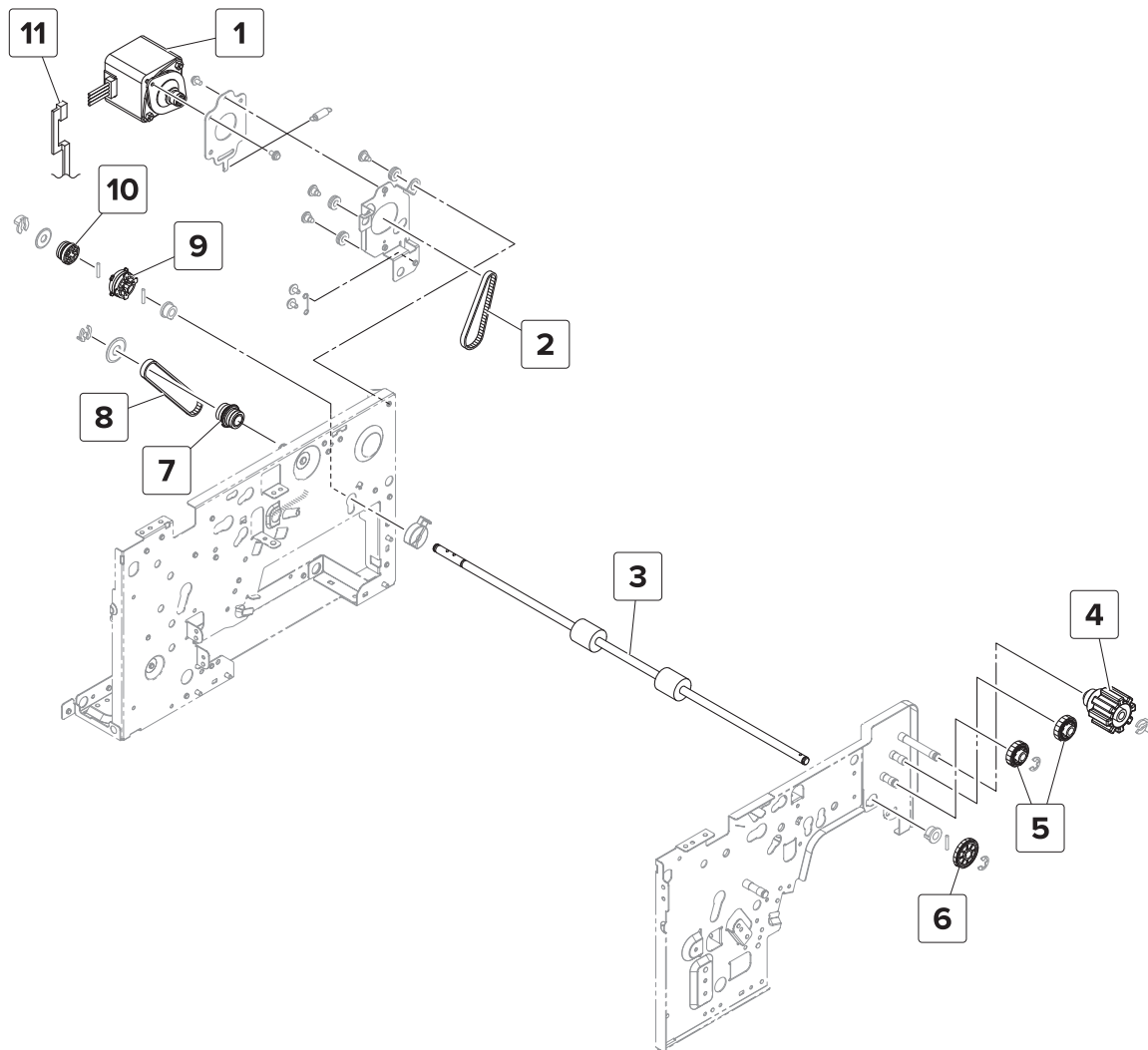
Assembly 4: Staple finisher—Transport section 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9366	1	1	Motor (staple finisher transport)	**"Motor (staple finisher transport) removal" on page 243**
2	40X9369	1	1	Staple finisher transport motor belt	--
3	40X9365	1	1	Staple finisher transport roller	**"Staple finisher transport roller removal" on page 297**
4	40X9817	1	1	Staple finisher jam removal knob	**"Staple finisher transport jam removal gears removal" on page 236**
5	40X9816	2	1	Staple finisher jam removal gear 1	**"Staple finisher transport jam removal gears removal" on page 236**
6	40X9371	1	1	Staple finisher jam removal gear 2	**"Staple finisher transport jam removal gears removal" on page 236**
7	40X9904	1	1	Staple finisher tamper feed roller secondary gear	--
8	40X9364	1	1	Staple finisher tamper feed roller primary belt	--
9	40X9370	1	1	Staple finisher tamper feed roller primary gear	--
10	40X9820	1	1	Staple finisher transport motor gear	--
11	40X9367	1	1	Staple finisher transport motor cable	--

Assembly 5: Staple finisher—Compiler feed roller assembly
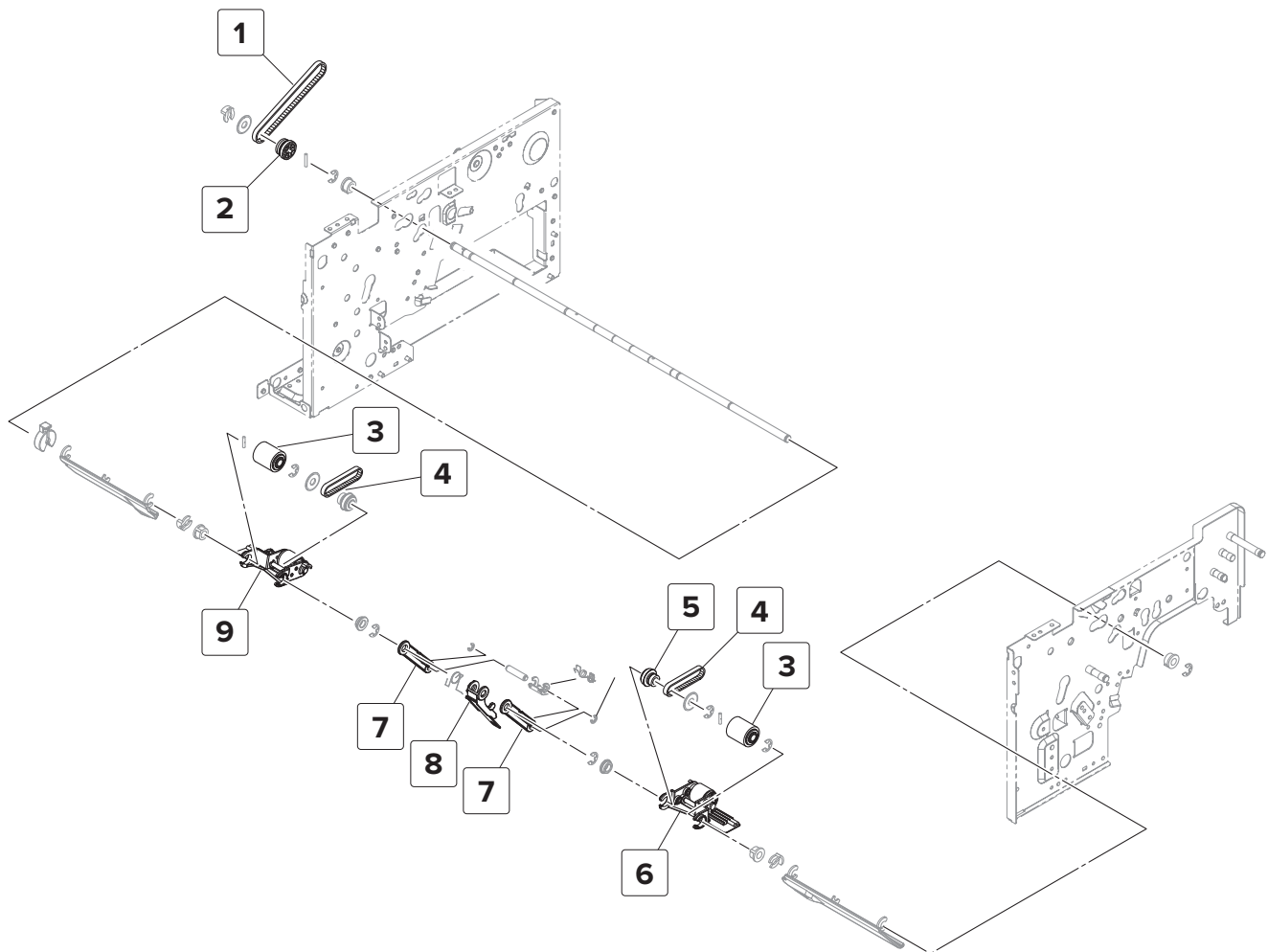
Assembly 5: Staple finisher—Compiler feed roller assembly

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9364	1	1	Staple finisher compiler feed roller belt	**"Staple finisher compiler feed roller shaft assembly removal" on page 292**
2	40X9820	1	1	Staple finisher compiler feed roller gear	**"Staple finisher compiler feed roller shaft assembly removal" on page 292**
3	40X9359	2	1	Staple finisher compiler feed roller	**"Staple finisher compiler feed rollers and gears removal" on page 294**
4	40X9360	2	1	Staple finisher aligner roller belt	**"Staple finisher compiler feed rollers and gears removal" on page 294**
5	40X9409	1	1	Gear, 16/26T	--
6	40X9910	1	1	Staple finisher front aligner roller	**"Staple finisher aligner roller removal" on page 291**
7	40X9362	2	1	Staple finisher stack clamp holder	--
8	40X9815	1	1	Staple finisher stack clamp	--
9	40X9911	1	1	Staple finisher rear aligner roller	**"Staple finisher aligner roller removal" on page 291**

Assembly 6: Staple finisher—Compiler section 1
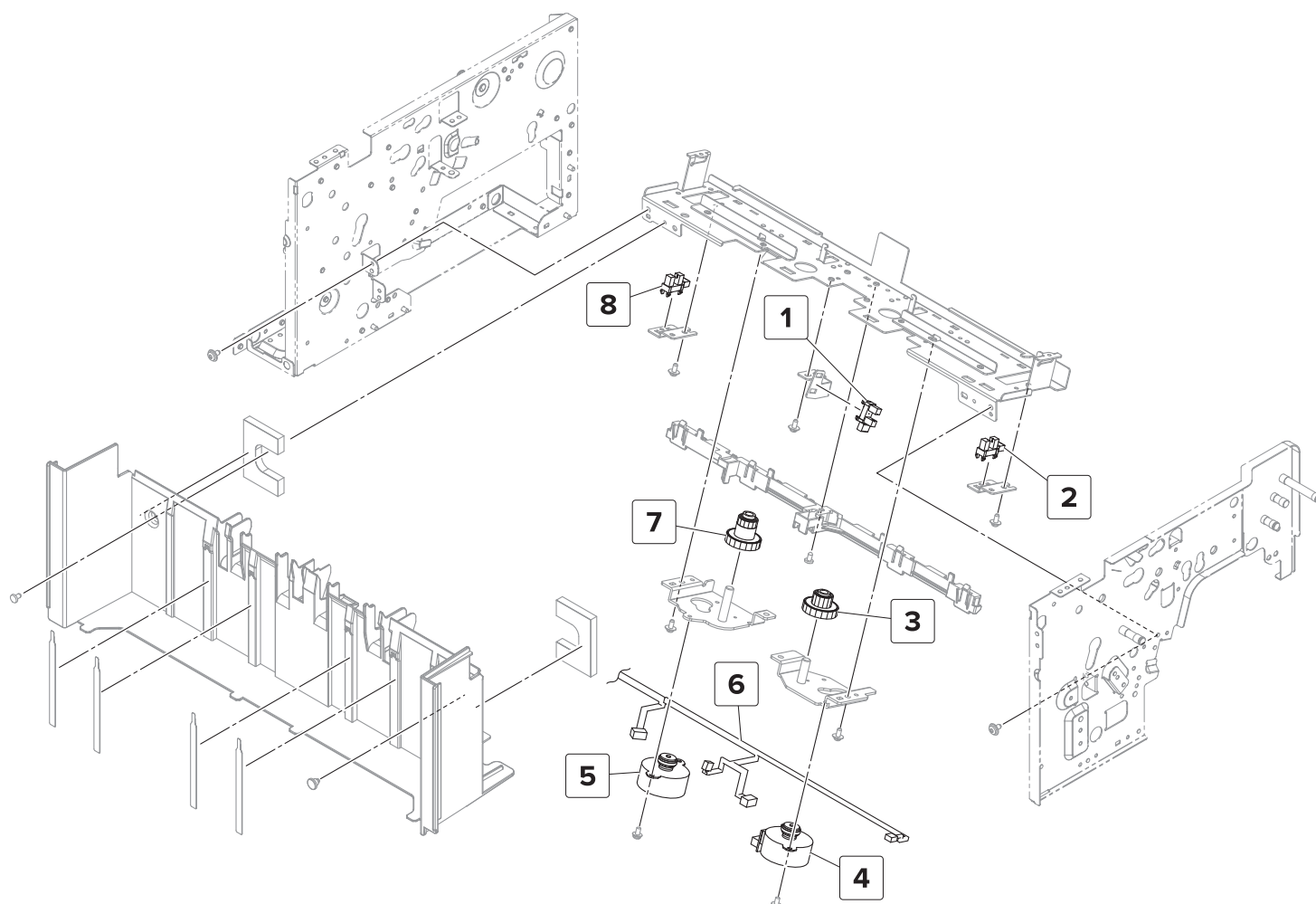
Assembly 6: Staple finisher—Compiler section 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9343	1	1	Sensor (staple finisher tamper paper present)	**"Staple finisher tamper sensors removal" on page 235**
2	40X9343	1	1	Sensor (staple finisher front tamper home)	**"Staple finisher tamper sensors removal" on page 235**
3	40X9397	1	1	Staple finisher front tamper gear	**"Staple finisher tamper drive gears removal" on page 309**
4	40X9380	1	1	Motor (staple finisher front tamper)	**"Motor (staple finisher tamper) removal" on page 234**
5	40X9380	1	1	Motor (staple finisher rear tamper)	**"Motor (staple finisher tamper) removal" on page 234**
6	40X9396	1	1	Staple finisher tamper cable	--
7	40X9826	1	1	Staple finisher rear tamper gear	**"Staple finisher tamper drive gears removal" on page 309**
8	40X9343	1	1	Sensor (staple finisher rear tamper home)	**"Staple finisher tamper sensors removal" on page 235**

Assembly 7: Staple finisher—Compiler section 2
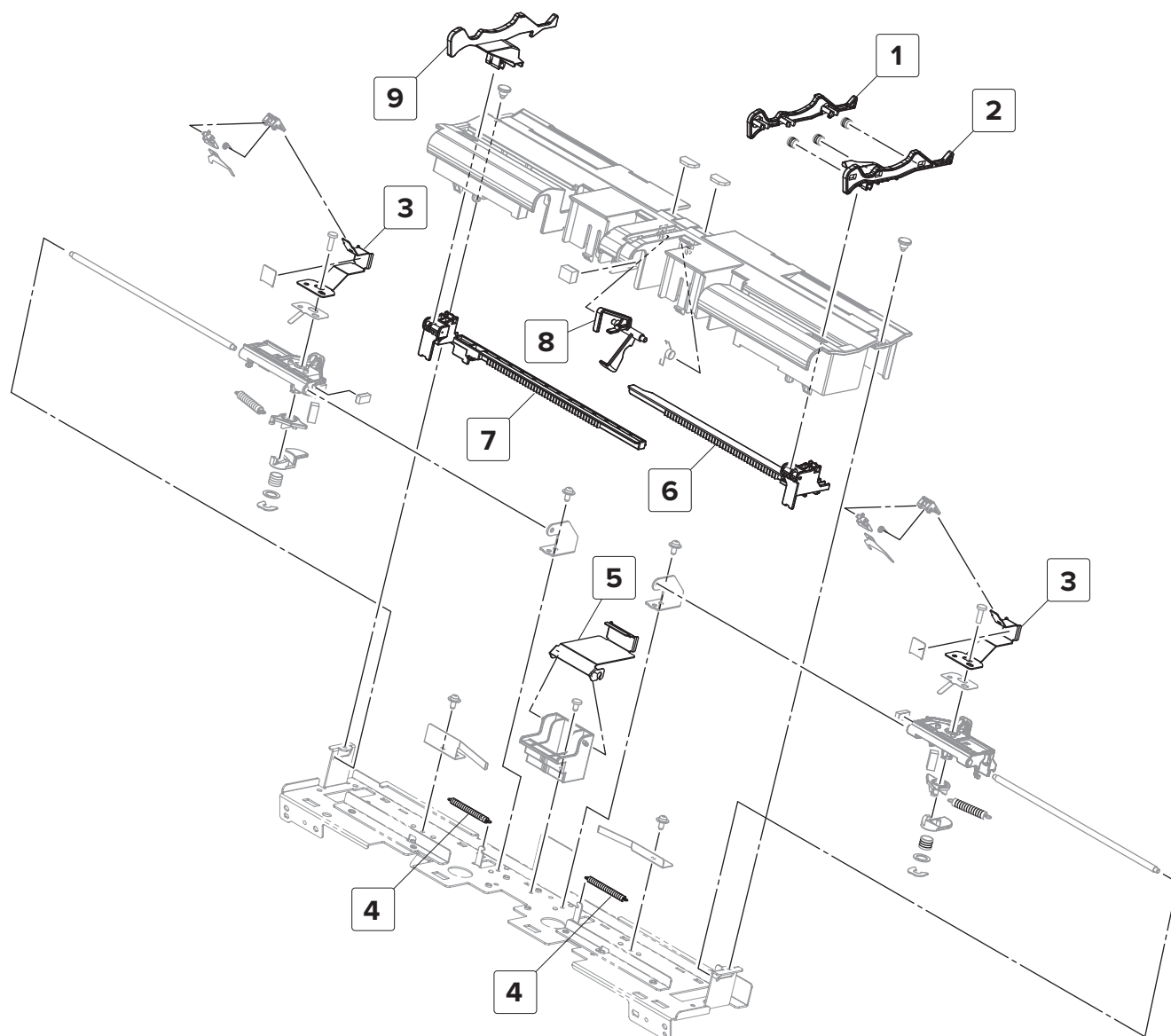
Assembly 7: Staple finisher—Compiler section 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9398	1	1	Staple finisher front tamper	**"Staple finisher tamper racks removal" on page 311**
2	40X9176	1	1	Staple finisher front tamper holder	**"Staple finisher tamper racks removal" on page 311**
3	40X9642	2	1	Staple finisher front and rear aligners	**"Staple finisher tamper racks removal" on page 311**
4	40X9404	2	1	Staple finisher aligner spring	--
5	40X9643	1	1	Staple finisher middle aligner	**"Staple finisher tamper racks removal" on page 311**
6	40X9827	1	1	Staple finisher front tamper rack	**"Staple finisher tamper racks removal" on page 311**
7	40X9828	1	1	Staple finisher rear tamper rack	**"Staple finisher tamper racks removal" on page 311**
8	40X9401	1	1	Staple finisher tamper paper present sensor actuator	**"Staple finisher tamper racks removal" on page 311**
9	40X9437	1	1	Staple finisher rear tamper	**"Staple finisher tamper racks removal" on page 311**

Assembly 8: Staple finisher—Aligner section
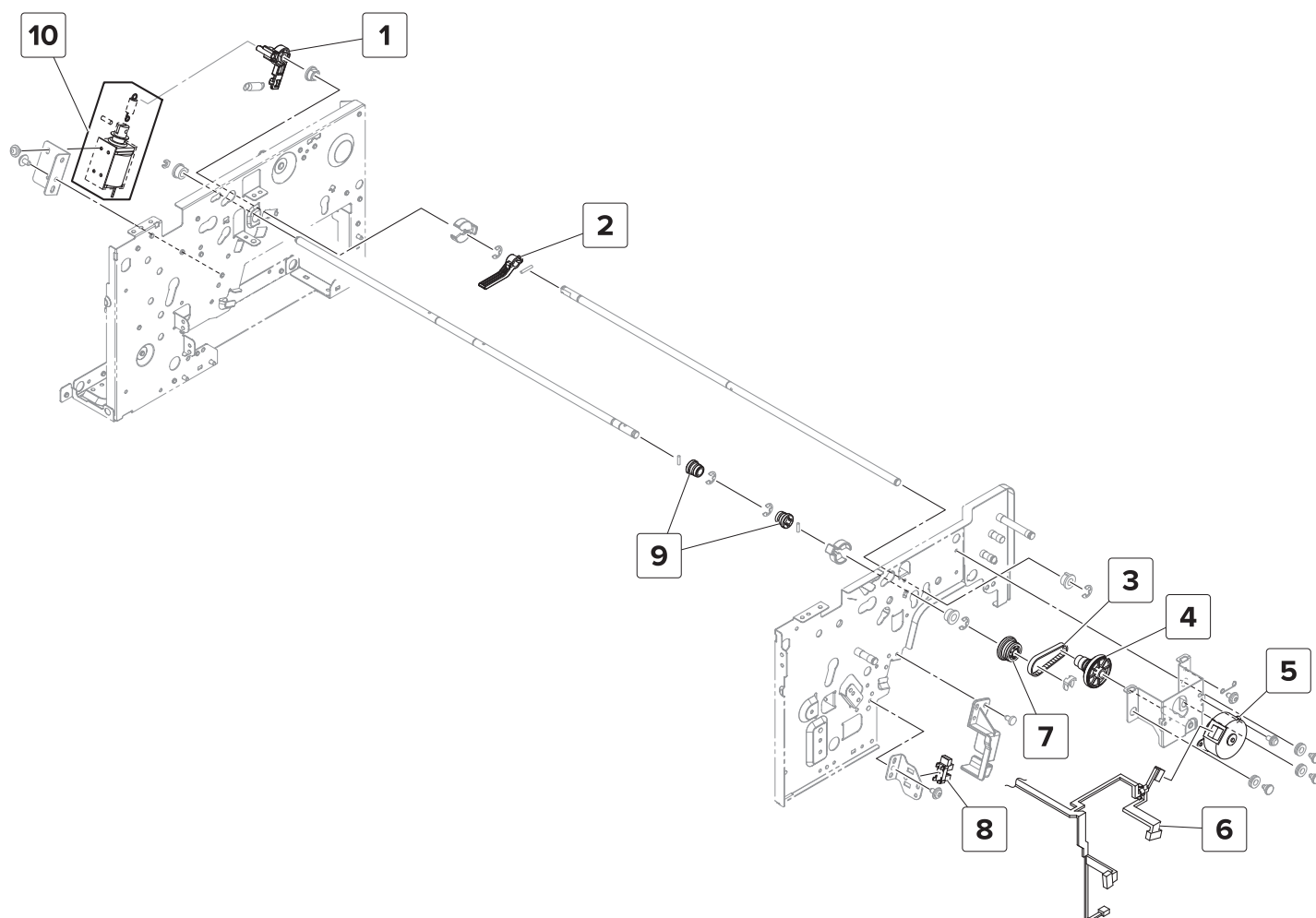
Assembly 8: Staple finisher—Aligner section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9385	1	1	Staple finisher stack lever actuator	**"Staple finisher stack lever actuator removal" on page 265**
2	40X9384	1	1	Staple finisher stack lever	**"Staple finisher stack lever removal" on page 296**
3	40X9360	1	1	Staple finisher aligner drive belt	**"Staple finisher aligner belt and gears removal" on page 251**
4	40X9825	1	1	Staple finisher aligner drive gear	**"Staple finisher aligner belt and gears removal" on page 251**
5	40X9380	1	1	Motor (staple finisher aligner)	**"Motor (staple finisher aligner) removal" on page 250**
6	40X9383	1	1	Staple finisher aligner section cables	--
7	40X9382	1	1	Staple finisher aligner secondary gear	**"Staple finisher aligner belt and gears removal" on page 251**
8	40X9343	1	1	Sensor (staple finisher staple unit carriage home)	**"Sensor (staple finisher staple unit home) removal" on page 253**
9	40X9386	2	1	Staple finisher aligner roller gear	**"Staple finisher aligner roller gears removal" on page 299**
10	40X9379	1	1	Staple finisher stack clamp solenoid	**"Staple finisher stack clamp solenoid removal" on page 266**

Assembly 9: Staple finisher—Staple section
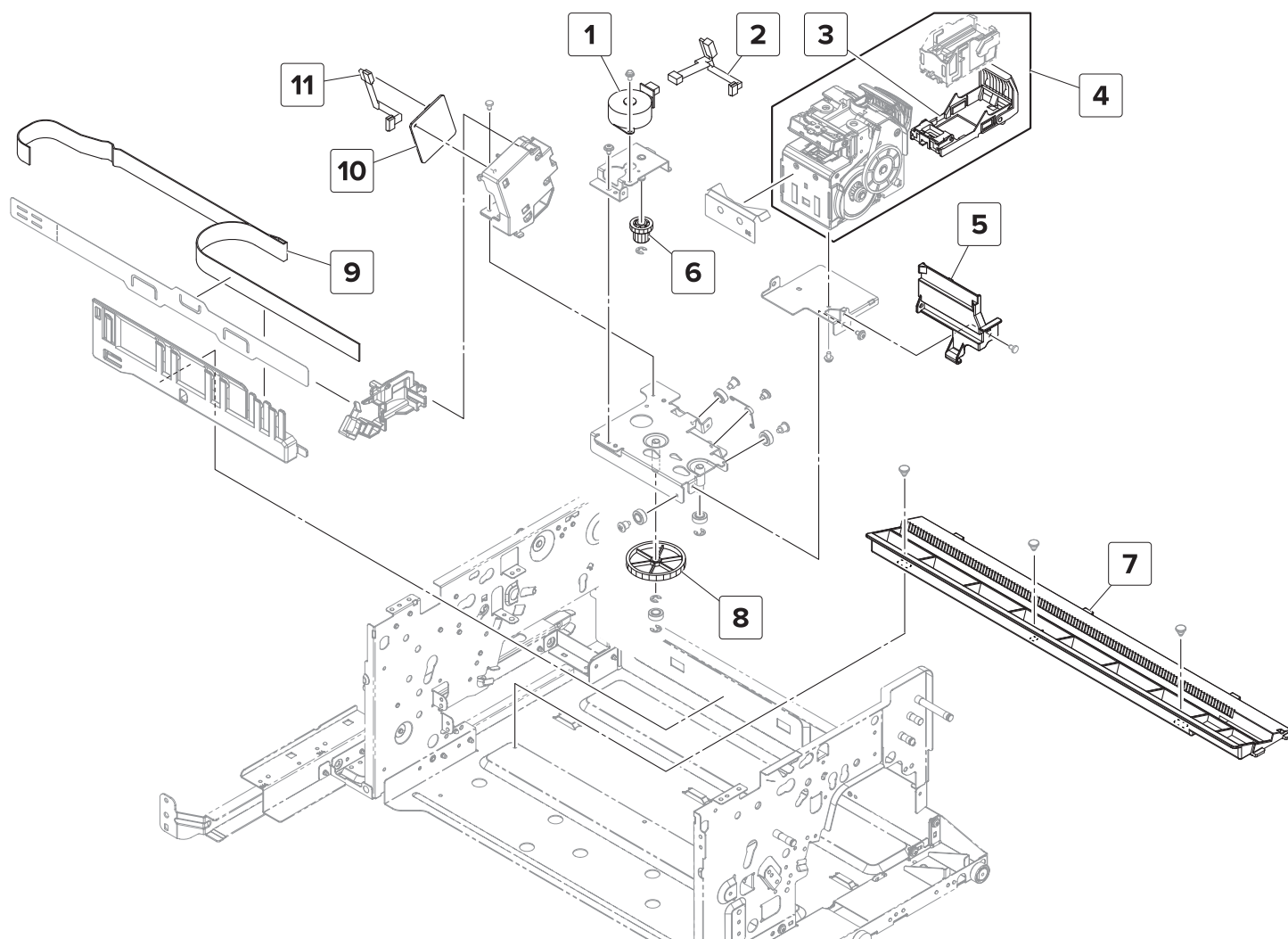
Assembly 9: Staple finisher—Staple section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9407	1	1	Motor (staple finisher staple unit carriage)	**"Motor (staple finisher staple unit carriage) removal" on page 259**
2	40X9829	1	1	Staple finisher staple unit cable	--
3	41X1968	1	1	Staple cartridge holder	--
4	40X9411	1	1	Staple finisher staple unit	**"Staple finisher staple unit removal" on page 256**
5	40X8969	1	1	Staple finisher staple unit holder	**"Staple finisher staple unit removal" on page 256**
6	40X9608	1	1	Staple finisher staple unit carriage drive gear	**"Staple finisher staple unit carriage gears removal" on page 260**
7	40X9406	1	1	Staple finisher staple unit rail	**"Staple finisher staple unit rail removal" on page 288**
8	40X9363	1	1	Staple finisher staple unit carriage gear	**"Staple finisher staple unit carriage gears removal" on page 260**
9	40X9405	1	1	Staple finisher FFC	**"Staple finisher FFC removal" on page 263**
10	40X9410	1	1	Staple finisher interface board	**"Staple finisher interface board removal" on page 258**
11	40X9408	1	1	Staple finisher staple unit carriage motor cable	--

Assembly 10: Staple finisher—Exit section 1
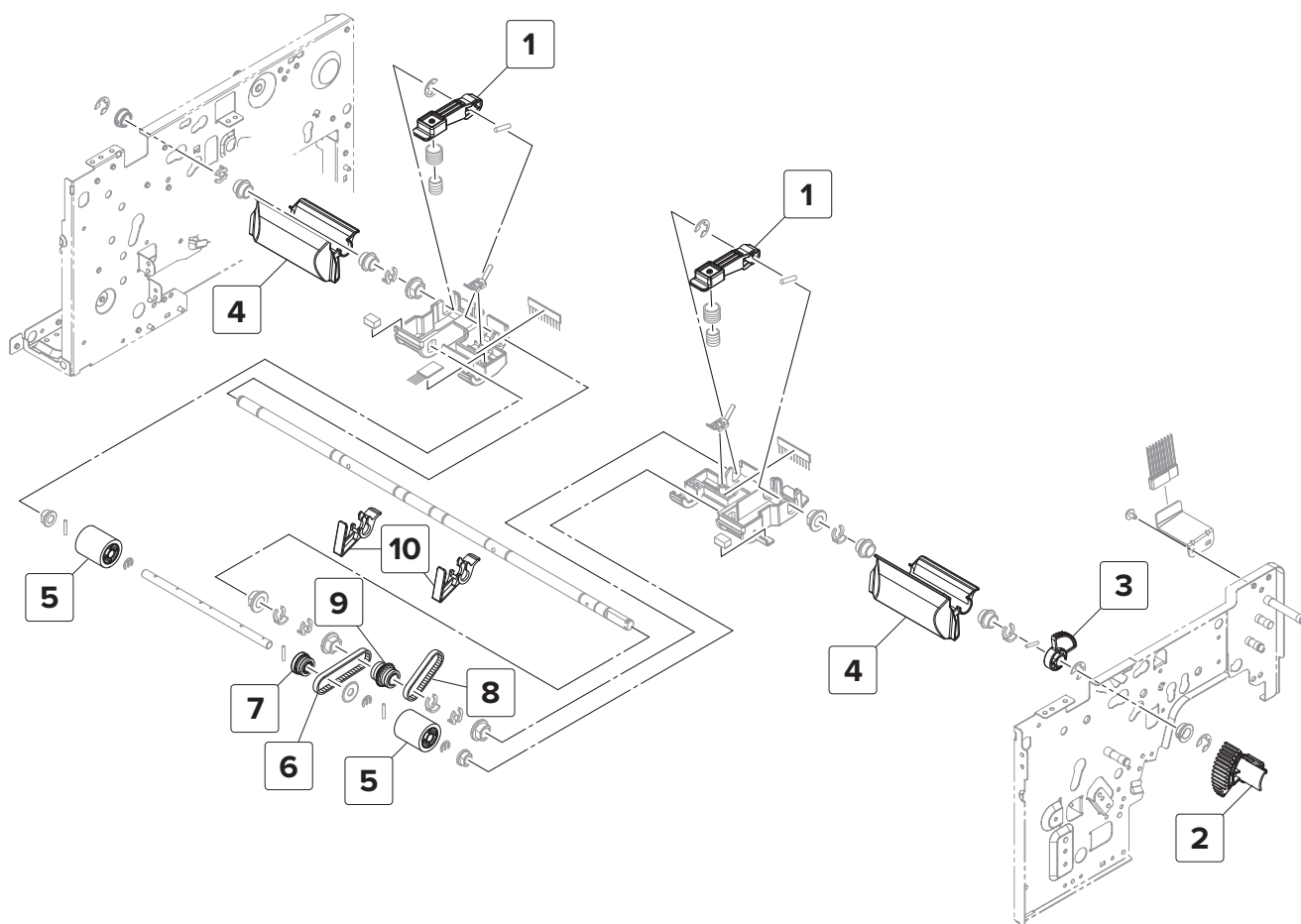
Assembly 10: Staple finisher—Exit section 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9548	2	1	Staple finisher upper exit roller holder	**"Staple finisher upper exit roller belts and gear removal" on page 305**
2	40X9357	1	1	Staple finisher upper exit actuator	**"Staple finisher upper exit actuator removal" on page 281**
3	40X9356	1	1	Staple finisher eject cam	**"Staple finisher eject cam removal" on page 303**
4	40X9355	2	1	Staple finisher upper exit roller guide	--
5	40X9291	2	1	Staple finisher upper exit roller	**"Staple finisher upper exit roller removal" on page 304**
6	40X9813	1	1	Staple finisher upper exit roller secondary belt	**"Staple finisher upper exit roller belts and gear removal" on page 305**
7	40X9820	1	1	Staple finisher upper exit roller secondary gear	**"Staple finisher upper exit roller removal" on page 304**
8	40X9360	1	1	Staple finisher upper exit roller primary belt	**"Staple finisher upper exit roller belts and gear removal" on page 305**
9	40X9904	1	1	Staple finisher upper exit roller primary gear	**"Staple finisher upper exit roller belts and gear removal" on page 305**
10	40X9814	2	1	Staple finisher eject guide	**"Staple finisher eject guide removal" on page 302**

Assembly 11: Staple finisher—Exit section 2
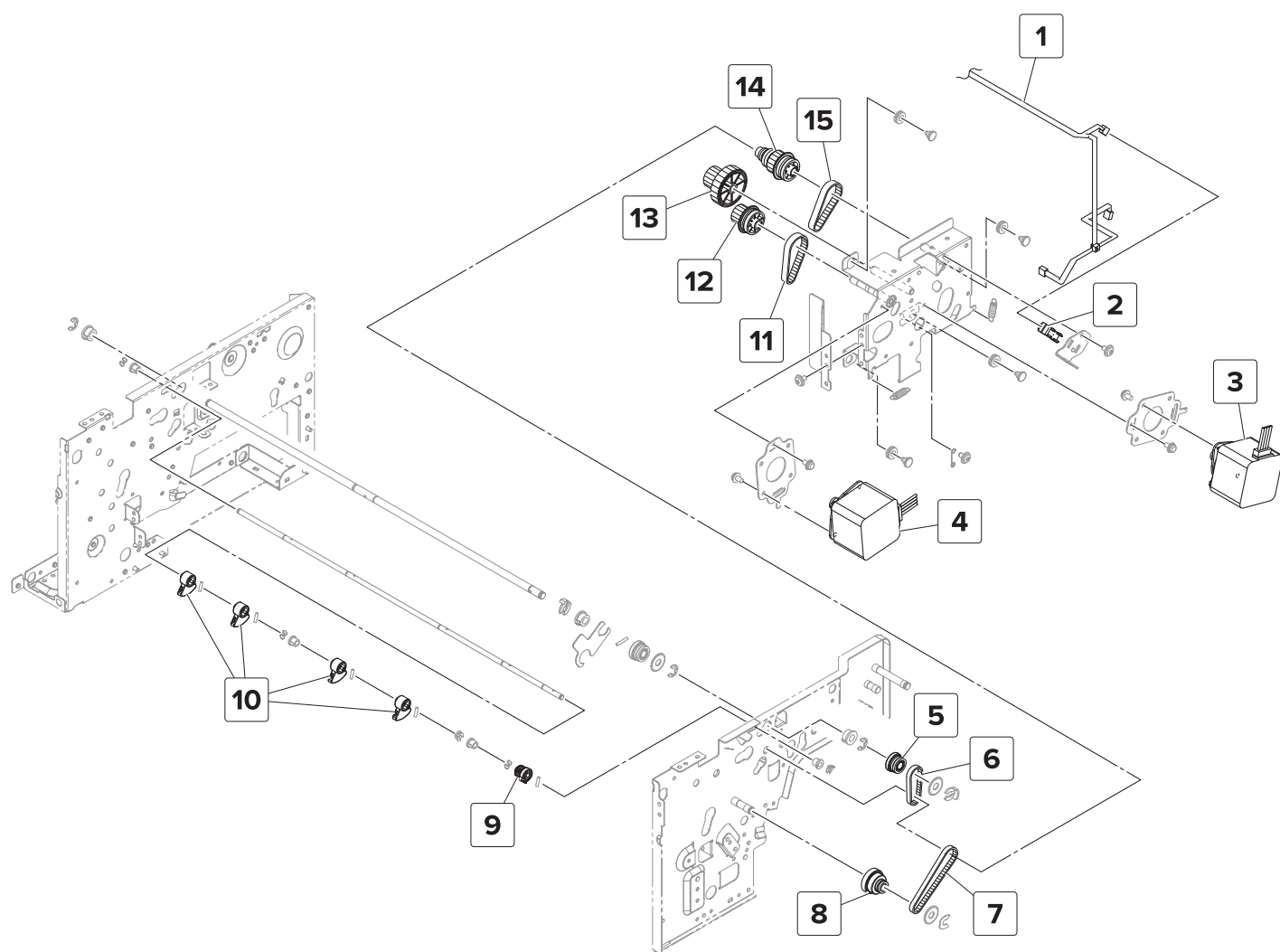
Assembly 11: Staple finisher—Exit section 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9374	1	1	Staple finisher exit section cable	--
2	40X9343	1	1	Sensor (staple finisher upper exit roller)	**"Sensor (staple finisher upper exit roller) removal" on page 252**
3	40X9366	1	1	Motor (staple finisher exit)	**"Motor (staple finisher exit) removal" on page 249**
4	40X9366	1	1	Motor (staple finisher upper exit)	**"Motor (staple finisher upper exit) removal" on page 247**
5	40X9820	1	1	Staple finisher upper exit roller drive gear	**"Staple finisher upper exit roller drive gears removal" on page 276**
6	40X9822	1	1	Staple finisher upper exit roller drive belt	--
7	40X9369	1	1	Staple finisher exit roller drive belt	--
8	40X9821	1	1	Staple finisher exit roller drive gear	**"Staple finisher exit roller drive belts and gears removal" on page 279**
9	40X9824	1	1	Staple finisher exit guide lift cam gear	**"Staple finisher exit guide lift cam removal" on page 275**
10	40X9377	4	1	Staple finisher exit guide lift cam	**"Staple finisher exit guide lift cam removal" on page 275**
11	40X9376	2	1	Staple finisher upper exit belt	**"Staple finisher exit roller drive belts and gears removal" on page 279**
12	40X9819	1	1	Staple finisher upper exit gear	**"Staple finisher exit roller drive belts and gears removal" on page 279**
13	40X9818	1	1	Staple finisher upper exit idler gear	**"Staple finisher exit roller drive belts and gears removal" on page 279**
14	40X9375	1	1	Staple finisher exit gear	**"Staple finisher exit roller drive belts and gears removal" on page 279**
15	40X9376	2	1	Staple finisher exit belt	**"Staple finisher exit roller drive belts and gears removal" on page 279**

Assembly 12: Staple finisher—Exit section 3
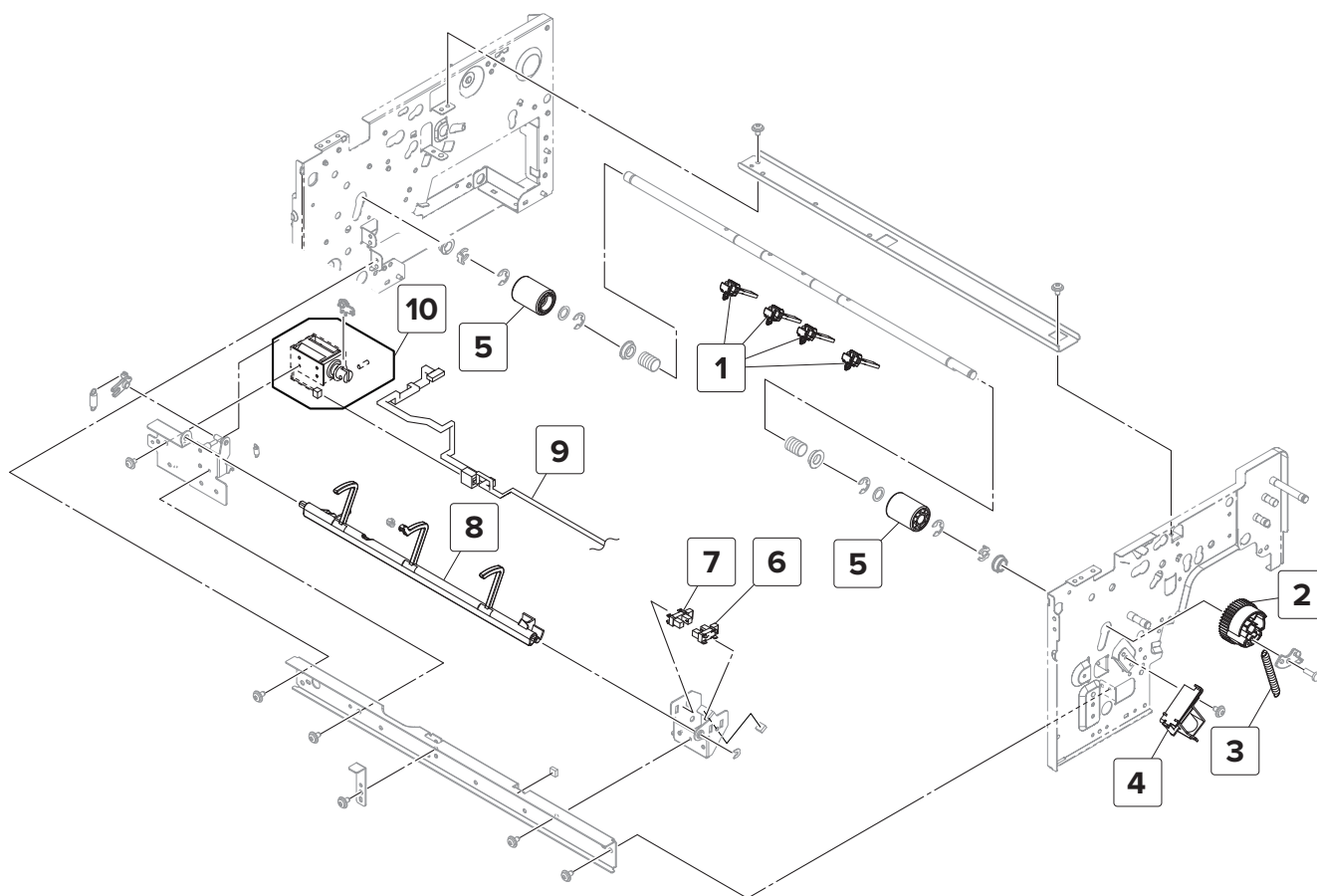
Assembly 12: Staple finisher—Exit section 3

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9394	4	1	Staple finisher lower exit roller paddle	**"Staple finisher lower exit roller paddles removal" on page 229**
2	40X9388	1	1	Staple finisher exit roller gear	**"Staple finisher exit roller gear removal" on page 282**
3	40X9914	1	1	Staple finisher tension spring	--
4	40X9387	1	1	Staple finisher exit roller solenoid	**"Staple finisher exit roller solenoid removal" on page 280**
5	40X9393	2	1	Staple finisher lower exit roller	**"Staple finisher lower exit roller removal" on page 282**
6	40X9343	1	1	Sensor (staple finisher bin stack height)	**"Staple finisher bin stack height assembly sensors removal" on page 230**
7	40X9343	1	1	Sensor (staple finisher bin level)	**"Staple finisher bin stack height assembly sensors removal" on page 230**
8	40X9390	1	1	Staple finisher bin stack height actuator	**"Staple finisher bin stack height actuator removal" on page 232**
9	40X9392	1	1	Staple finisher bin stack height cable	--
10	40X9391	1	1	Staple finisher bin stack height solenoid	**"Staple finisher bin stack height solenoid removal" on page 231**

Parts catalog

Assembly 13: Staple finisher—Bin section 1
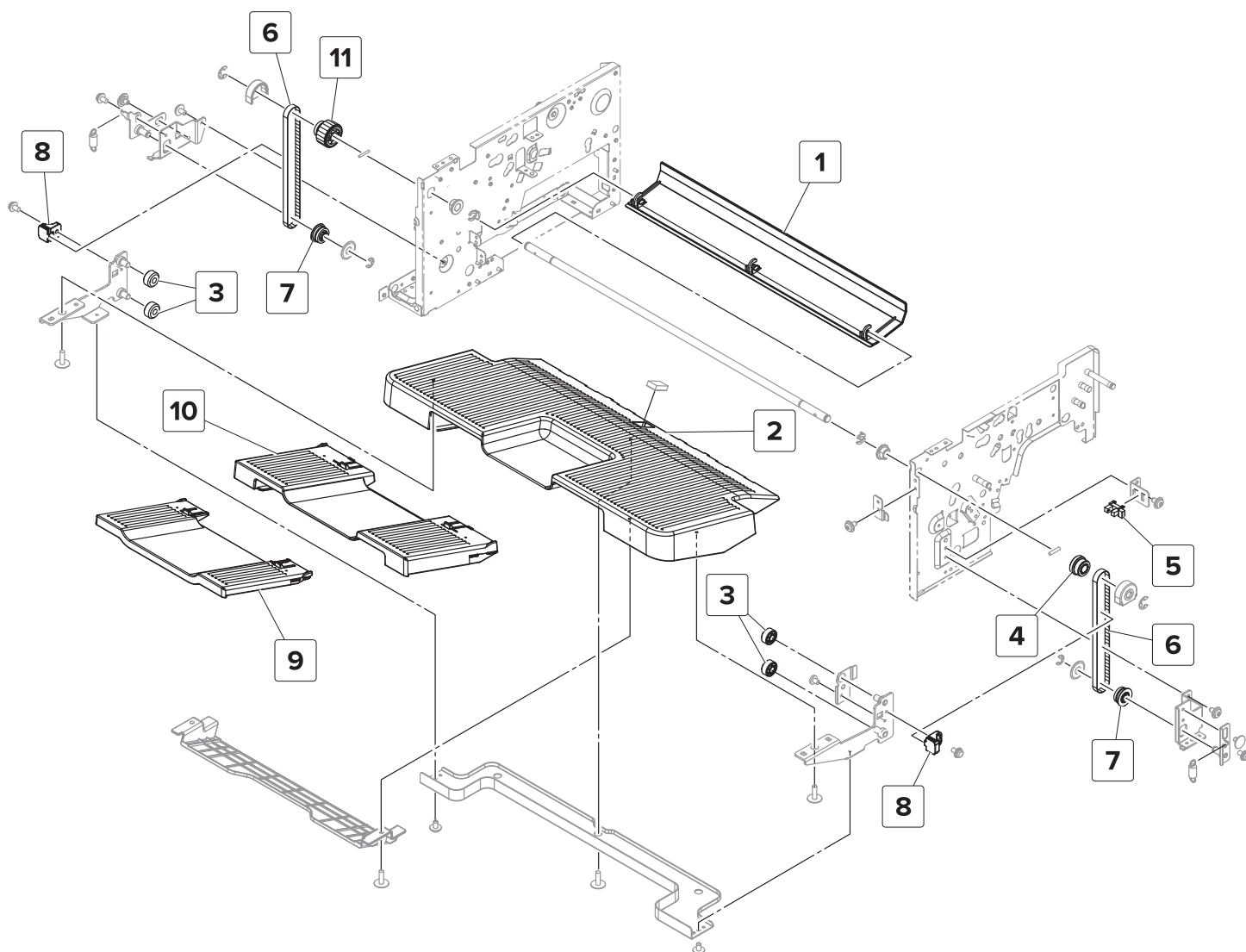
Assembly 13: Staple finisher—Bin section 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9346	1	1	Staple finisher exit guide	**"Staple finisher exit guide removal" on page 228**
2	40X9340	1	1	Staple finisher bin	**"Staple finisher bin removal" on page 228**
3	40X9345	4	1	Staple finisher elevator wheel	--
4	40X9903	1	1	Staple finisher elevator top front gear	**"Staple finisher elevator drive gears removal" on page 267**
5	40X9343	1	1	Sensor (staple finisher elevator home)	**"Sensor (staple finisher elevator home) removal" on page 253**
6	40X9341	2	1	Staple finisher elevator belt	**"Staple finisher elevator belts removal" on page 268**
7	40X9812	2	1	Staple finisher elevator bottom gear	**"Staple finisher elevator drive gears removal" on page 267**
8	40X9909	2	1	Staple finisher belt holder	**"Staple finisher elevator belts removal" on page 268**
9	40X9640	1	1	Staple finisher bin extender 1	--
10	40X9645	1	1	Staple finisher bin extender 2	--
11	40X9342	1	1	Staple finisher elevator top rear gear	**"Staple finisher elevator drive gears removal" on page 267**

Assembly 14: Staple finisher—Bin section 2
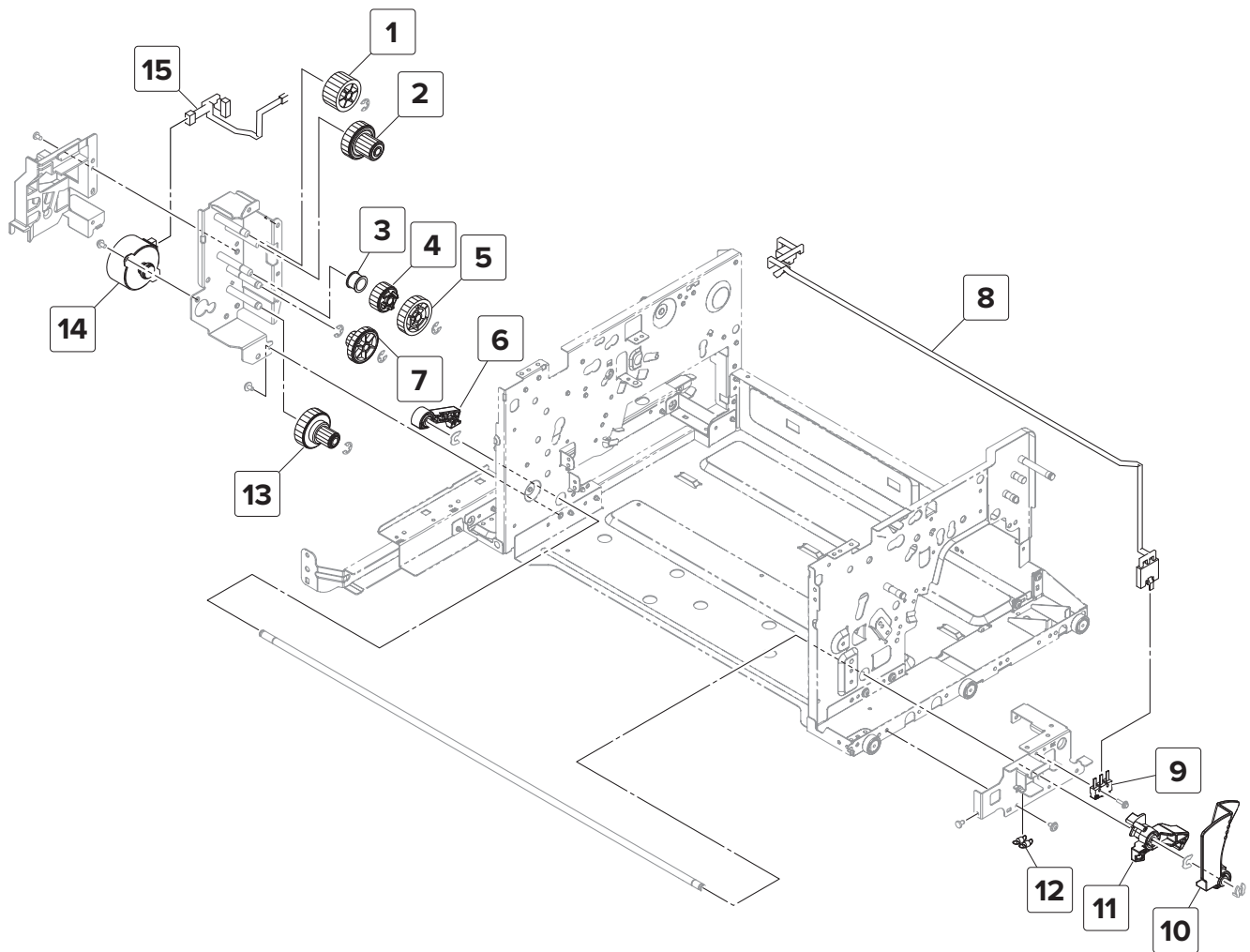
Assembly 14: Staple finisher—Bin section 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9418	1	1	Staple finisher elevator idler gear 5	**"Staple finisher elevator drive gears removal" on page 267**
2	40X9831	1	1	Staple finisher elevator idler gear 4	**"Staple finisher elevator drive gears removal" on page 267**
3	40X9832	1	1	Staple finisher spring	--
4	40X9833	1	1	Staple finisher elevator idler gear 3	**"Staple finisher elevator drive gears removal" on page 267**
5	40X9834	1	1	Staple finisher elevator idler gear 2	**"Staple finisher elevator drive gears removal" on page 267**
6	40X9419	1	1	Staple finisher rear lock	**"Staple finisher locks removal" on page 237**
7	40X9835	1	1	Staple finisher elevator idler gear 1	**"Staple finisher elevator drive gears removal" on page 267**
8	40X9830	1	1	Staple finisher lock switch cable	--
9	40X9840	1	1	Staple finisher lock switch	**"Staple finisher lock switch removal" on page 237**
10	40X9839	1	1	Staple finisher release handle	--
11	40X9838	1	1	Staple finisher front lock	--
12	40X9837	1	1	Staple finisher tension spring	--
13	40X9836	1	1	Staple finisher elevator drive gear	**"Staple finisher elevator drive gears removal" on page 267**
14	40X9416	1	1	Motor (staple finisher elevator)	**"Motor (staple finisher elevator) removal" on page 246**
15	40X9417	1	1	Staple finisher elevator section cable	--

Assembly 15: Staple finisher—Electronics
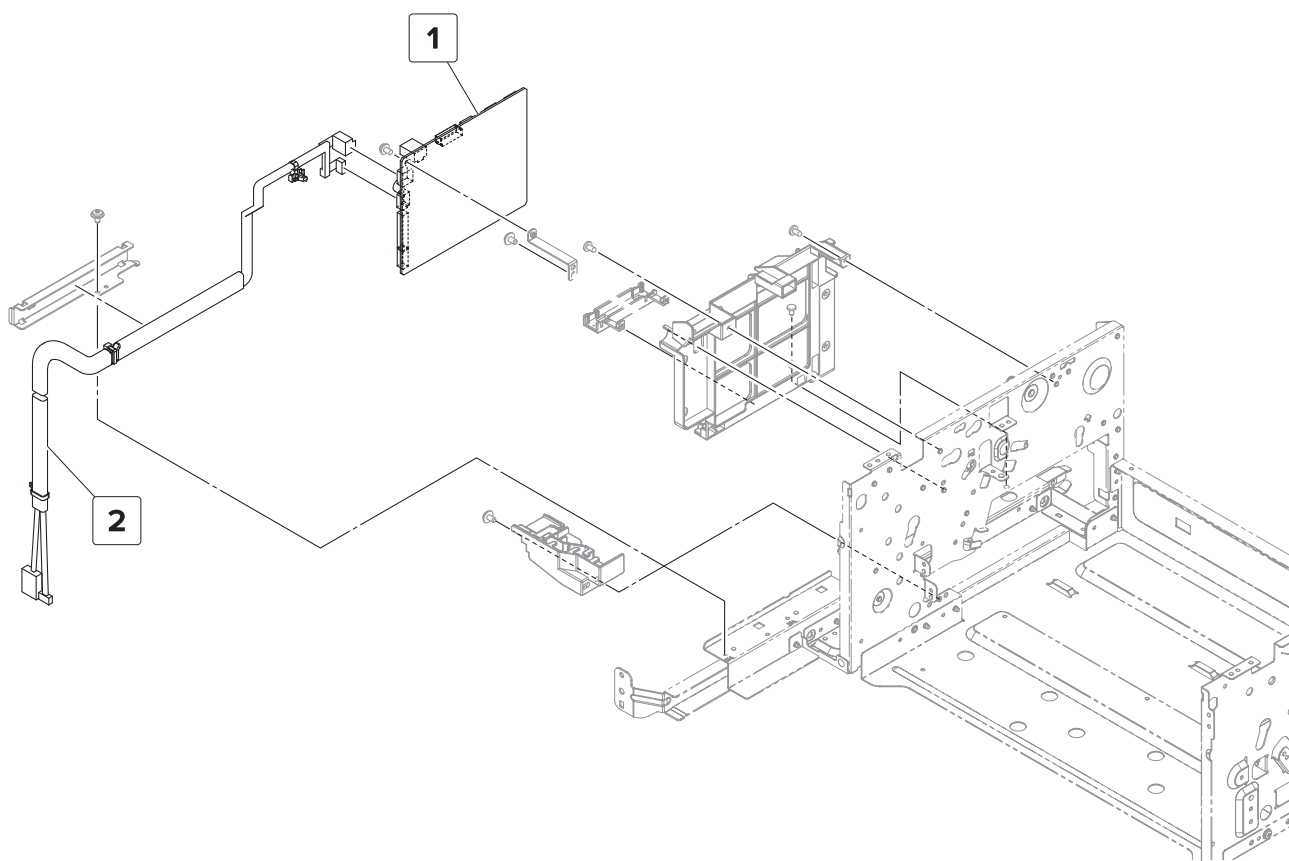
Assembly 15: Staple finisher—Electronics

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9421	1	1	Staple finisher controller board	**"Staple finisher controller board removal" on page 240**
2	40X9422	1	1	Staple finisher interface cable	**"Staple finisher interface cable removal" on page 241**

Assembly 16: Horizontal paper transport—Covers 1
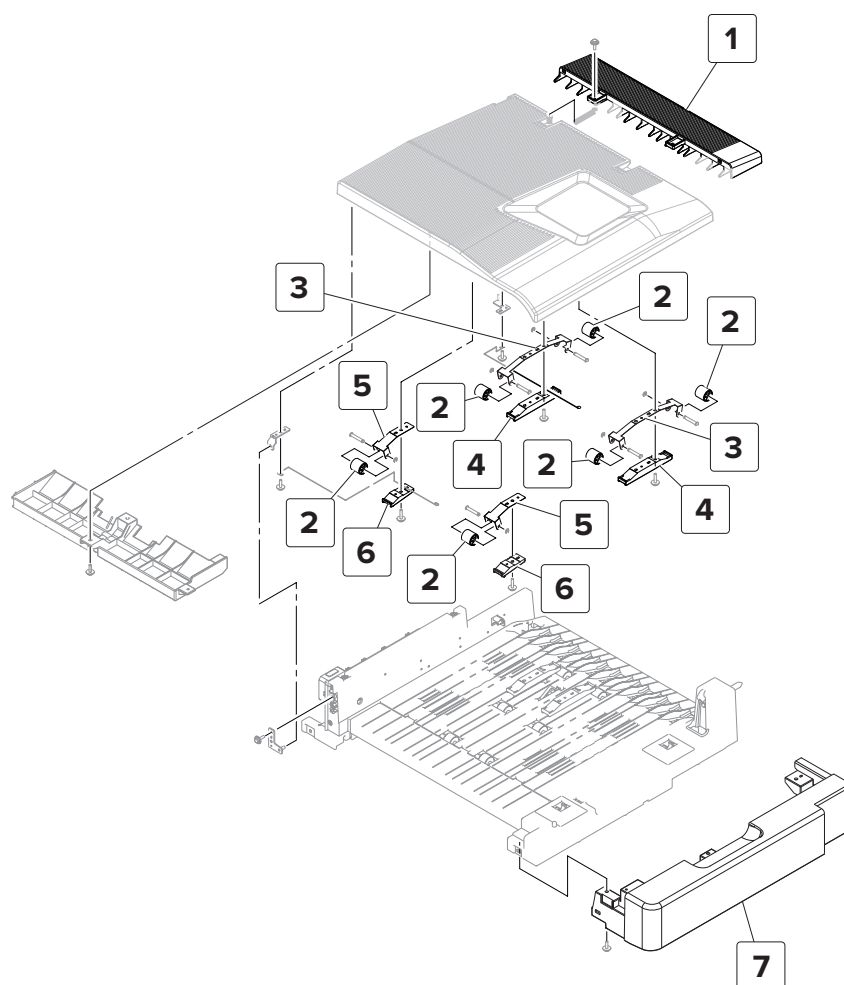
Assembly 16: Horizontal paper transport—Covers 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9314	1	1	HPT right top cover	**"HPT right top cover removal" on page 320**
2	40X9462	6	1	HPT transport idler roller	--
3	40X9333	2	1	HPT transport idler holder 1	--
4	40X8996	2	1	HPT transport idler holder bracket 1	--
5	40X9428	2	1	HPT transport idler holder 2	--
6	40X9206	2	1	HPT transport idler holder bracket 2	--
7	40X9315	1	1	HPT front cover	--
NS	40X9329	1	1	HPT guide	--

Assembly 17: Horizontal paper transport—Covers 2
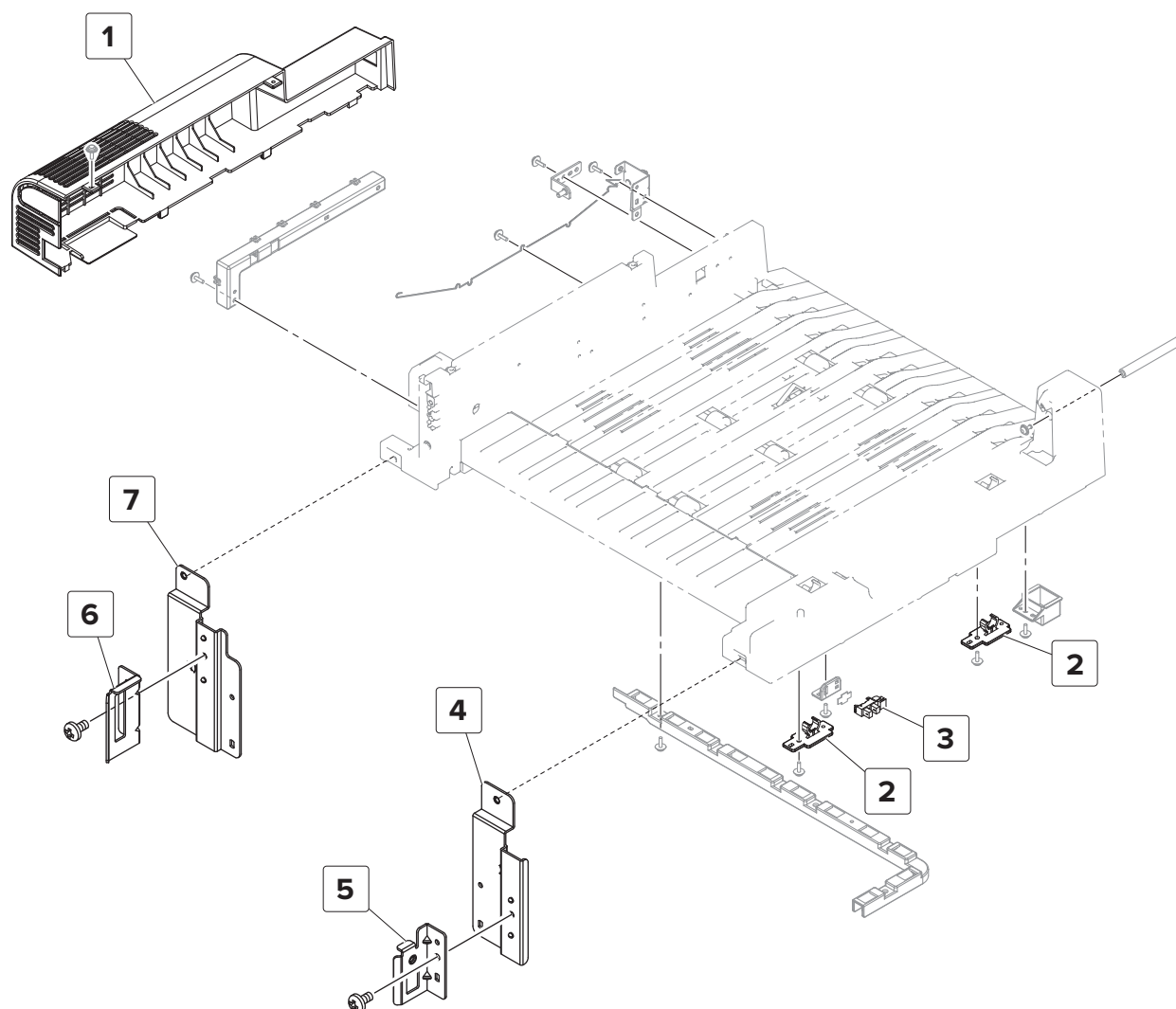
Assembly 17: Horizontal paper transport—Covers 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9321	1	1	HPT rear cover	**"HPT rear cover removal" on page 321**
2	40X9322	2	1	HPT door locks	**"HPT door locks removal" on page 317**
3	40X9313	1	1	Sensor (HPT door)	**"Sensor (HPT door) removal" on page 319**
4	41X0972	1	1	Front HPT mounting plate	--
5	41X0971	1	1	Front finisher mounting plate	--
6	41X0969	1	1	Rear finisher mounting plate	--
7	41X0970	1	1	Rear HPT mounting plate	--

Assembly 18: Horizontal paper transport—Drive section
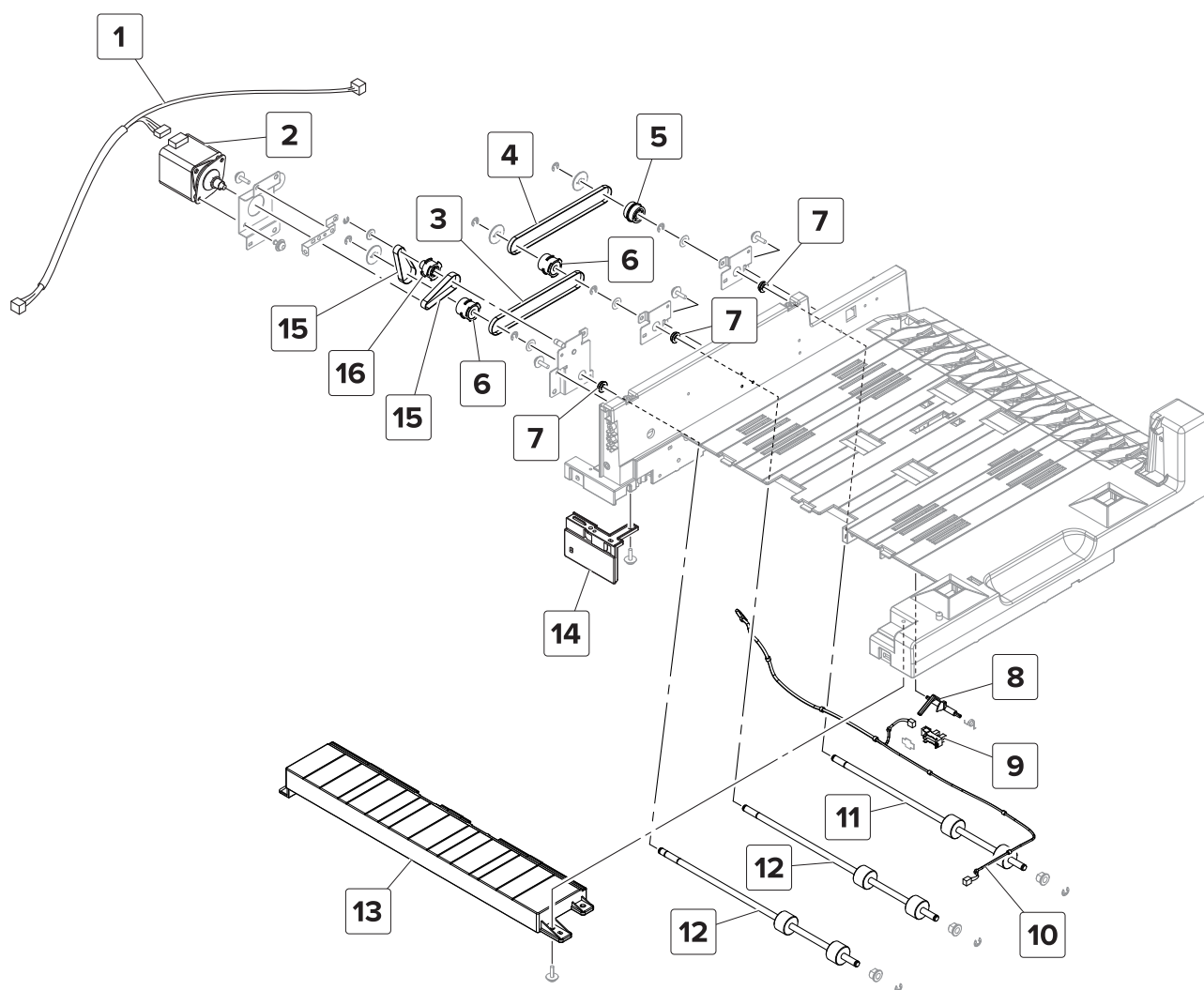
Assembly 18: Horizontal paper transport—Drive section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9920	1	1	HPT transport motor cable	**"Motor (HPT transport) removal" on page 323**
2	40X9323	1	1	Motor (HPT transport)	**"Motor (HPT transport) removal" on page 323**
3	40X9841	1	1	HPT transport roller belt 2	**"HPT belts and gears removal" on page 325**
4	40X9842	1	1	HPT transport roller belt 1	**"HPT belts and gears removal" on page 325**
5	40X9175	1	1	HPT transport roller 1 gear	**"HPT belts and gears removal" on page 325**
6	40X9480	2	1	HPT transport roller 2 gear	**"HPT belts and gears removal" on page 325**
7	40X9368	3	1	HPT transport roller ball bearing	**"HPT transport rollers removal" on page 325**
8	40X9326	1	1	HPT paper feed sensor actuator	**"HPT feed sensor actuator removal" on page 319**
9	40X9313	1	1	Sensor (HPT feed)	**"Sensor (HPT feed) removal" on page 318**
10	40X9919	1	1	HPT cable	**"HPT cable removal" on page 321**
11	40X9325	1	1	HPT transport roller 1	**"HPT transport rollers removal" on page 325**
12	40X9921	2	1	HPT transport roller 2	**"HPT transport rollers removal" on page 325**
13	40X9330	1	1	HPT inner paper guide	**"HPT inner paper guide removal" on page 317**
14	40X9332	1	1	HPT holding bracket	**"HPT holding bracket removal" on page 318**
15	40X9324	2	1	HPT transport motor belt	**"HPT belts and gears removal" on page 325**
16	40X9327	1	1	HPT transport motor gear	**"HPT belts and gears removal" on page 325**

Assembly 19: SHPF—Covers
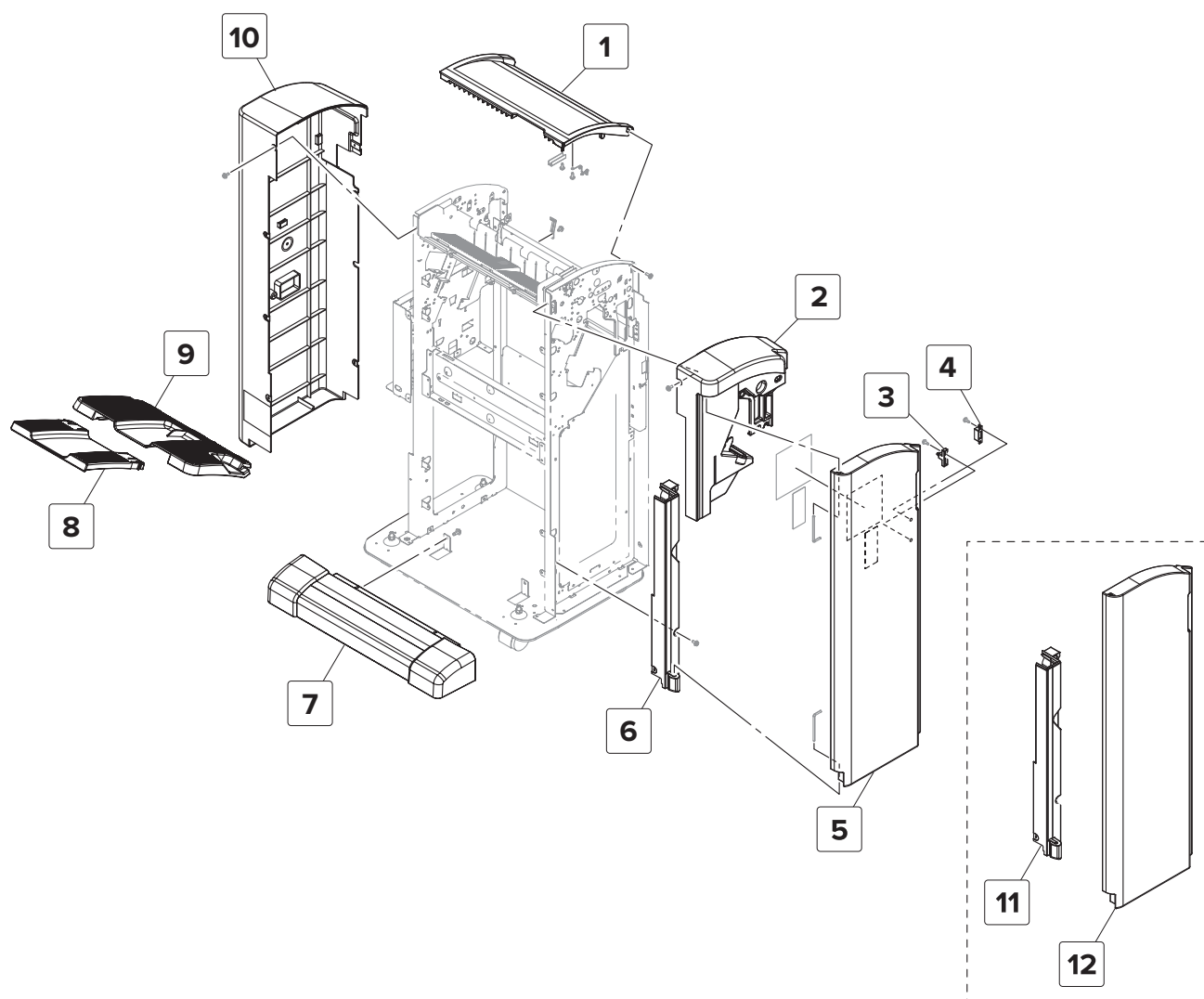
Assembly 19: SHPF—Covers

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9510	1	1	SHPF top door	**"SHPF top door removal" on page 335**
2	40X9513	1	1	SHPF top inner cover	**"SHPF top inner cover removal" on page 332**
3	40X8876	1	1	SHPF front door sensor actuator	--
4	40X9456	1	1	SHPF magnetic catch lock	--
5	40X9512	1	1	SHPF front door • Before replacing this part, check if the correct SHPF post cover (40X9514) is installed. This part only pairs with 40X9514. • This part uses two metal shafts to secure the front door to the post cover.	**"SHPF front door removal" on page 332**
6	40X9514	1	1	SHPF post cover • Before replacing this part, check if the correct SHPF front door (40X9512) is installed. This part only pairs with 40X9512. • This part uses two metal shafts to secure the front door to the post cover.	**"SHPF post cover removal" on page 334**

Assembly 20: SHPF—Covers *(continued)*
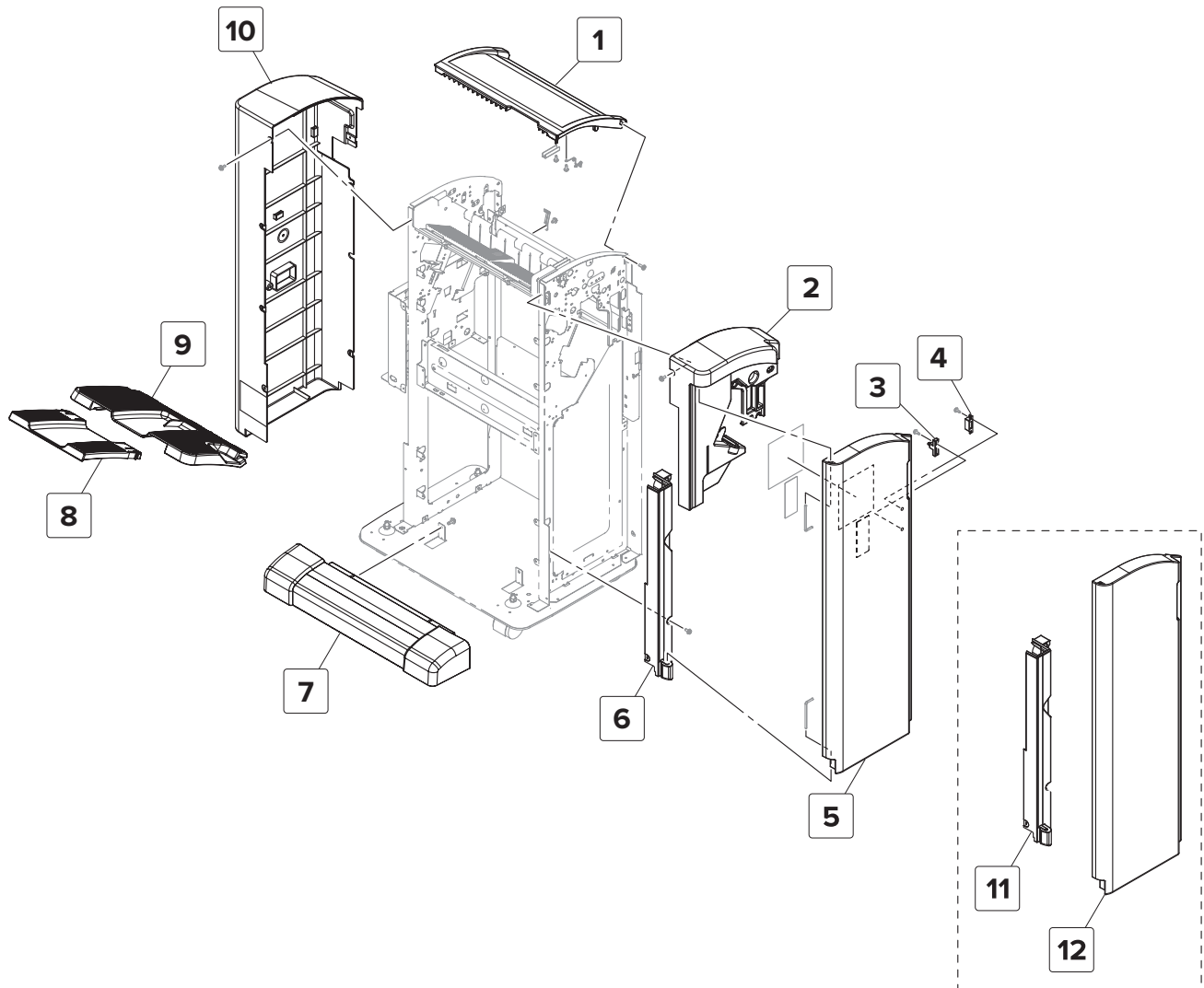
Assembly 20: SHPF—Covers *(continued)*

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
7	40X9515	1	1	SHPF lower cover	**"SHPF lower cover removal" on page 330**
8	40X9517	1	1	SHPF top bin extender	**"SHPF elevator bin removal" on page 327**
9	40X9310	1	1	SHPF top bin	**"SHPF elevator bin removal" on page 327**
10	40X9511	1	1	SHPF rear cover	**"SHPF rear cover removal" on page 335**
11	41X2669	1	1	SHPF post cover • Before replacing this part, check if the correct SHPF front door (41X2668) is installed. This part only pairs with 41X2668. • The post cover has a slot where the shaft on the front door is secured.	--
12	41X2668	1	1	SHPF front door • Before replacing this part, check if the correct SHPF post cover (41X2669) is installed. This part only pairs with 41X2669. • The front door has an integrated shaft which is secured to the slot on the post cover.	--

Assembly 21: SHPF—Frame
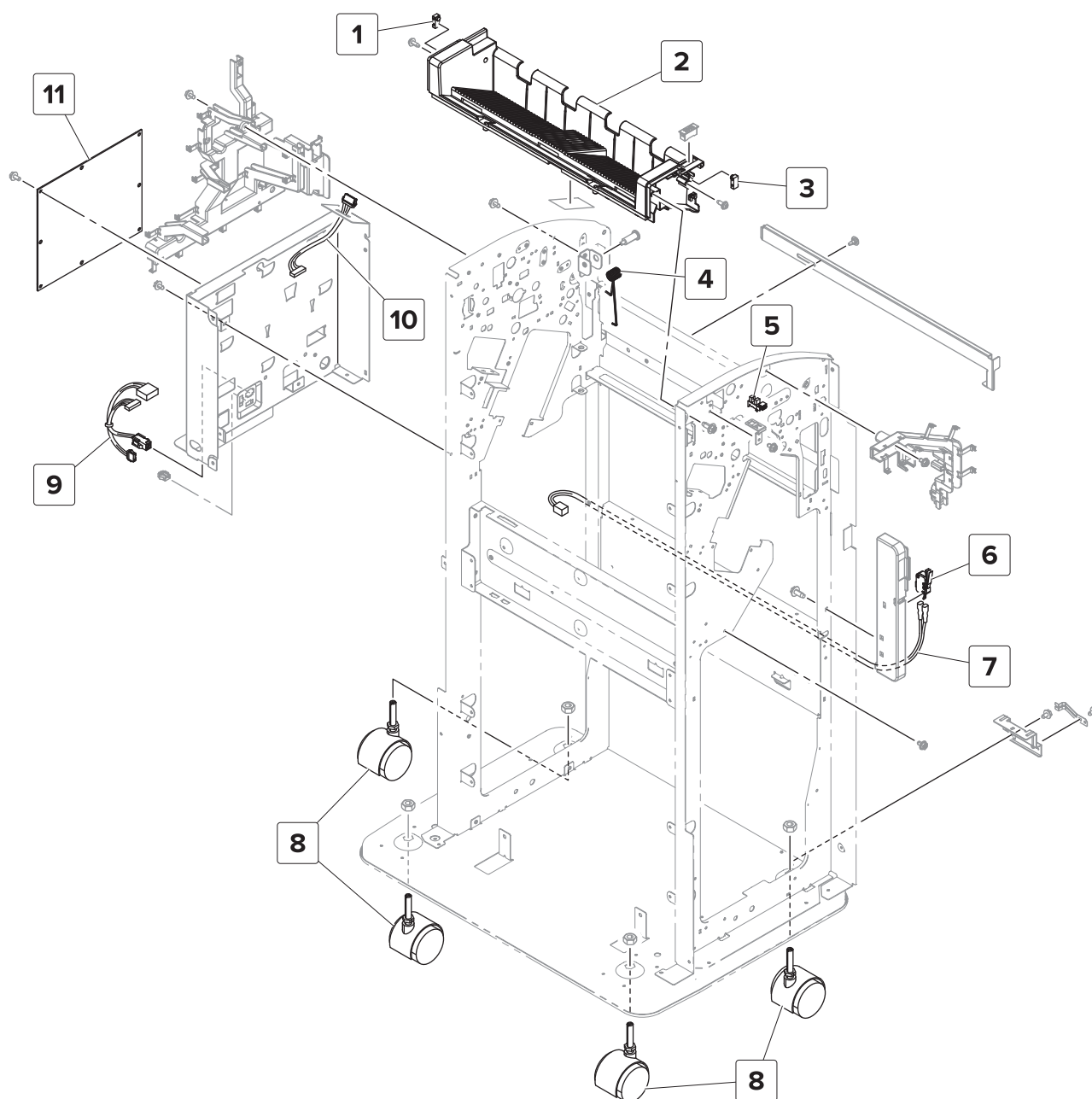
Assembly 21: SHPF—Frame

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9540	1	1	Sensor (SHPF top bin full, transmit)	**"Sensor (SHPF top bin full) removal" on page 360**
2	40X9518	1	1	SHPF top bin holder	**"SHPF top bin removal" on page 430**
3	40X9538	1	1	Sensor (SHPF top bin full, receive)	**"Sensor (SHPF top bin full, receive) removal" on page 384**
4	40X9873	1	1	SHPF top jam access door spring	**"SHPF top jam access door and SHPF diverter removal" on page 391**
5	40X8869	1	1	Sensor (SHPF top door)	**"Sensor (SHPF top door) removal" on page 383**
6	40X9527	1	1	SHPF front door switch	**"SHPF front door switch removal" on page 331**
7	40X9555	1	1	SHPF front door switch cable	--
8	40X9519	4	1	SHPF caster wheel	**"SHPF caster wheel removal" on page 330**
9	40X9556	1	1	Booklet maker interface extension cable	--
10	40X9554	1	1	HPT interface extension cable	--
11	40X9528	1	1	SHPF controller board	**"SHPF controller board removal" on page 361**

Assembly 22: SHPF—Transport section 1
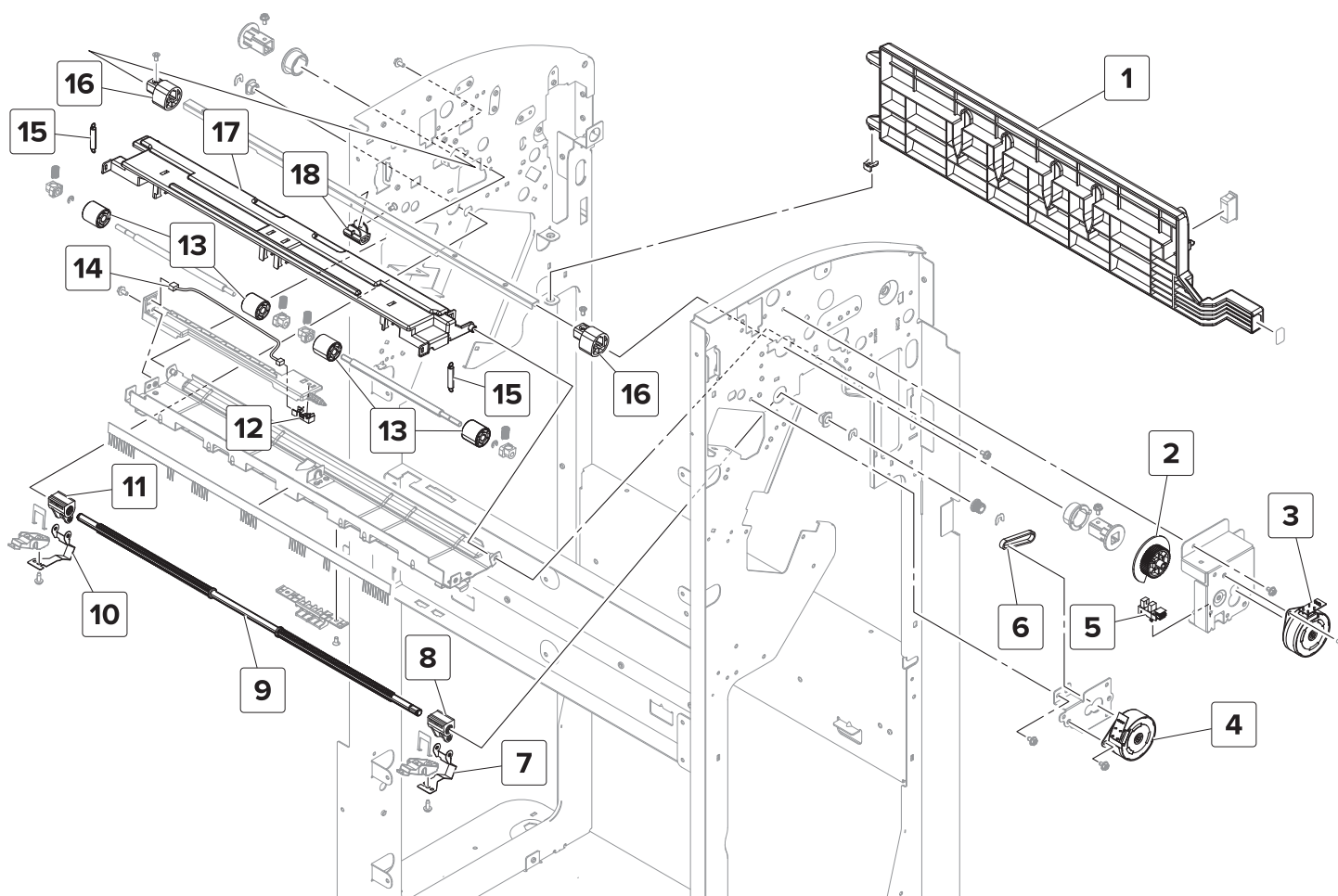
Assembly 22: SHPF—Transport section 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9319	1	1	HPBF booklet gate jam access door	**"Booklet gate jam access door removal" on page 336**
2	40X9559	1	1	SHPF compiler feed roller release cam encoder	**"SHPF compiler feed roller release encoder removal" on page 387**
3	40X9531	1	1	Motor (SHPF compiler feed roller release)	**"Motor (SHPF compiler feed roller release) removal" on page 385**
4	40X9530	1	1	Motor (SHPF aligner)	**"Motor (SHPF aligner) removal" on page 388**
5	40X8869	1	1	Sensor (SHPF compiler feed roller release)	**"Sensor (SHPF compiler feed roller release) removal" on page 386**
6	40X9558	1	1	SHPF aligner belt	--
7	40X9846	1	1	SHPF front aligner	**"SHPF aligner shaft removal" on page 415**
8	40X9915	1	1	SHPF front aligner holder	**"SHPF aligner shaft removal" on page 415**
9	40X9843	1	1	SHPF aligner shaft	**"SHPF aligner shaft removal" on page 415**
10	40X9845	1	1	SHPF rear aligner	**"SHPF aligner shaft removal" on page 415**
11	40X9844	1	1	SHPF rear aligner holder	**"SHPF aligner shaft removal" on page 415**
12	40X8968	1	1	Sensor (SHPF compiler feed)	**"Sensor (SHPF compiler feed) removal" on page 439**
13	40X9563	4	1	SHPF compiler feed idler roller	**"SHPF compiler feed idler roller assembly removal" on page 437**
14	40X9560	1	1	SHPF compiler feed sensor cable	--
15	40X8927	2	1	SHPF compiler idler roller holder spring	**"SHPF compiler feed idler roller assembly removal" on page 437**
16	40X8867	2	1	SHPF compiler feed roller release cam	**"SHPF compiler feed roller release cam removal" on page 433**
17	40X9847	1	1	SHPF compiler idler roller holder	**"SHPF compiler feed idler roller assembly removal" on page 437**
18	40X9561	1	1	SHPF compiler feed roller release middle cam	**"SHPF compiler feed roller release cam removal" on page 433**

Assembly 23: SHPF—Transport section 2
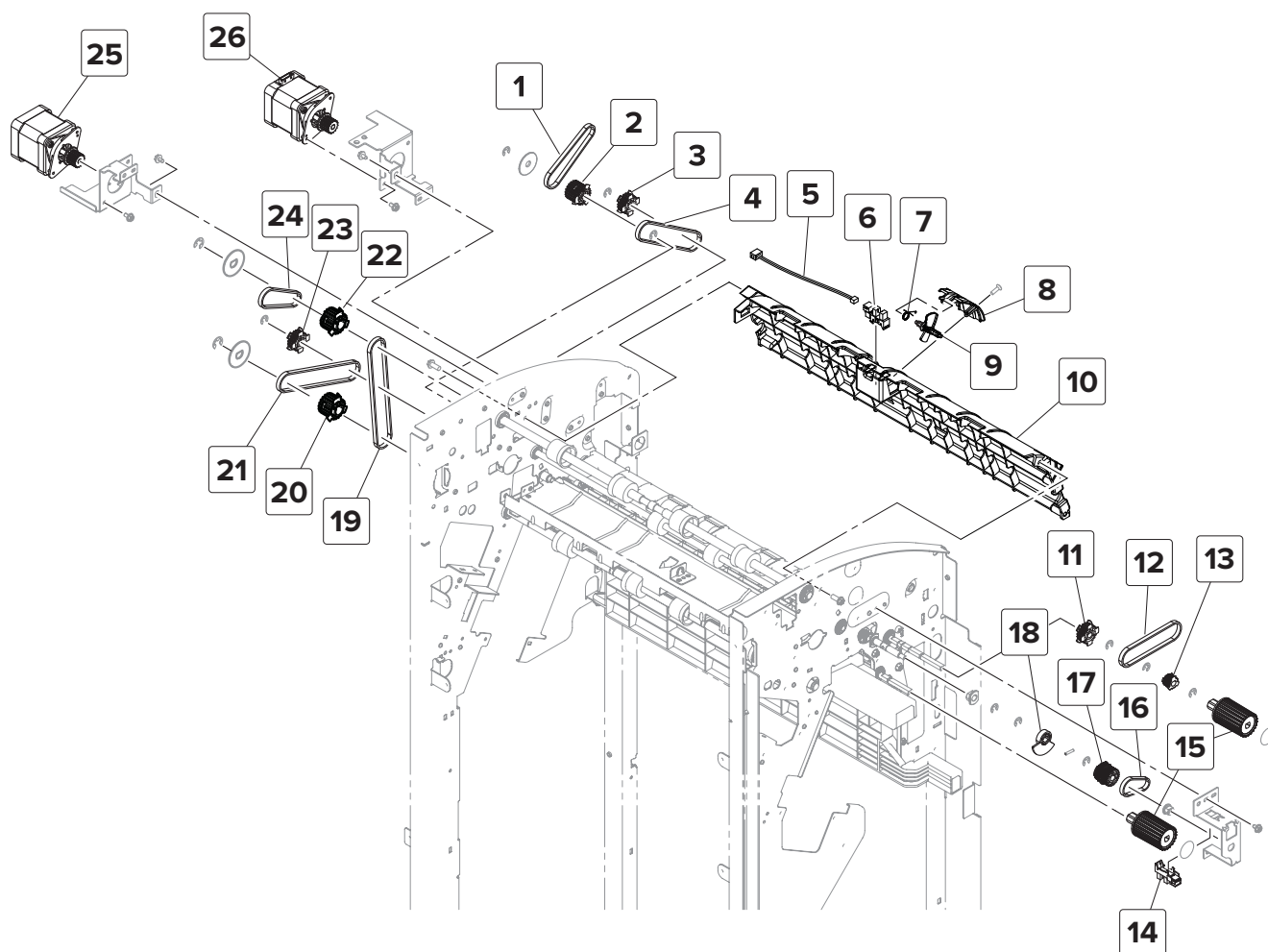
Assembly 23: SHPF—Transport section 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9565	1	1	SHPF top bin transport roller belt	--
2	41X2214	1	1	SHPF top bin transport roller gear **Note:** This part may not be compatible with the finisher. For more information, see the note that follows this table.	--
3	40X9574	1	1	SHPF diverter feed roller gear	**"SHPF entrance and diverter feed roller gears removal" on page 390**
4	40X9566	1	1	SHPF diverter feed roller belt	--
5	40X9570	1	1	SHPF top bin exit sensor cable	--
6	40X8869	1	1	Sensor (SHPF top bin exit)	**"Sensor (SHPF top bin exit) removal" on page 394**
7	40X9448	1	1	SHPF torsion coil spring	--
8	40X9400	1	1	SHPF top bin exit sensor cover	**"Sensor (SHPF top bin exit) removal" on page 394**
9	40X9571	1	1	SHPF top bin exit sensor actuator	**"Sensor (SHPF top bin exit) removal" on page 394**
10	40X9426	1	1	SHPF top bin exit paper guide	**"SHPF top bin exit paper guide removal" on page 395**
11	40X9574	1	1	SHPF diverter feed roller gear	--
12	40X9221	1	1	SHPF entrance roller belt	**"SHPF entrance and diverter feed roller gears removal" on page 390**
13	40X9224	1	1	SHPF diverter cam drive gear	**"SHPF entrance and diverter feed roller gears removal" on page 390**
14	40X8869	1	1	Sensor (SHPF diverter cam)	**"Sensor (SHPF diverter cam) removal" on page 389**
15	40X9399	2	1	SHPF jam removal knob	**"SHPF diverter feed roller knob removal" on page 333**
16	40X9558	1	1	SHPF diverter cam belt	**"SHPF diverter cam removal" on page 388**
17	40X9270	1	1	SHPF diverter cam gear	**"SHPF diverter cam removal" on page 388**
18	40X8943	1	1	SHPF diverter cam sensor encoder	**"SHPF diverter cam removal" on page 388**
19	40X9569	1	1	SHPF compiler feed roller belt	--

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
20	40X9572	1	1	SHPF compiler feed roller gear	--
21	40X9568	1	1	SHPF booklet maker pre-feed roller belt	--
22	40X9572	1	1	SHPF top bin exit roller gear	--
23	40X9574	1	1	SHPF booklet maker pre-feed roller gear	--
24	40X9567	1	1	SHPF top bin exit belt	--
25	40X9533	1	1	Motor (SHPF transport)	**"Motor (SHPF transport) removal" on page 353**
26	40X9533	1	1	Motor (SHPF feed)	**"Motor (SHPF feed) removal" on page 352**
NS	41X2171	1	1	SHPF top bin transport roller and transport roller gear	--

Note: When replacing an SHPF top bin transport roller gear, use SHPF top bin transport roller gear (41X2214) if the following conditions are met:

- 2/3-hole punching SHPF (The last six digits of the finisher serial number is greater than or equal to 001000)
- 2/4-hole punching SHPF (The last six digits of the finisher serial number is greater than or equal to 000590)
- 2/3-hole punching booklet finisher (The last six digits of the finisher serial number is greater than or equal to 000128)
- 2/4-hole punching booklet finisher (The last six digits of the finisher serial number is greater than or equal to 000168)

If these conditions are not met, then use SHPF top bin transport roller and transport roller gear (41X2171).

582

Assembly 24: SHPF—Transport section 3
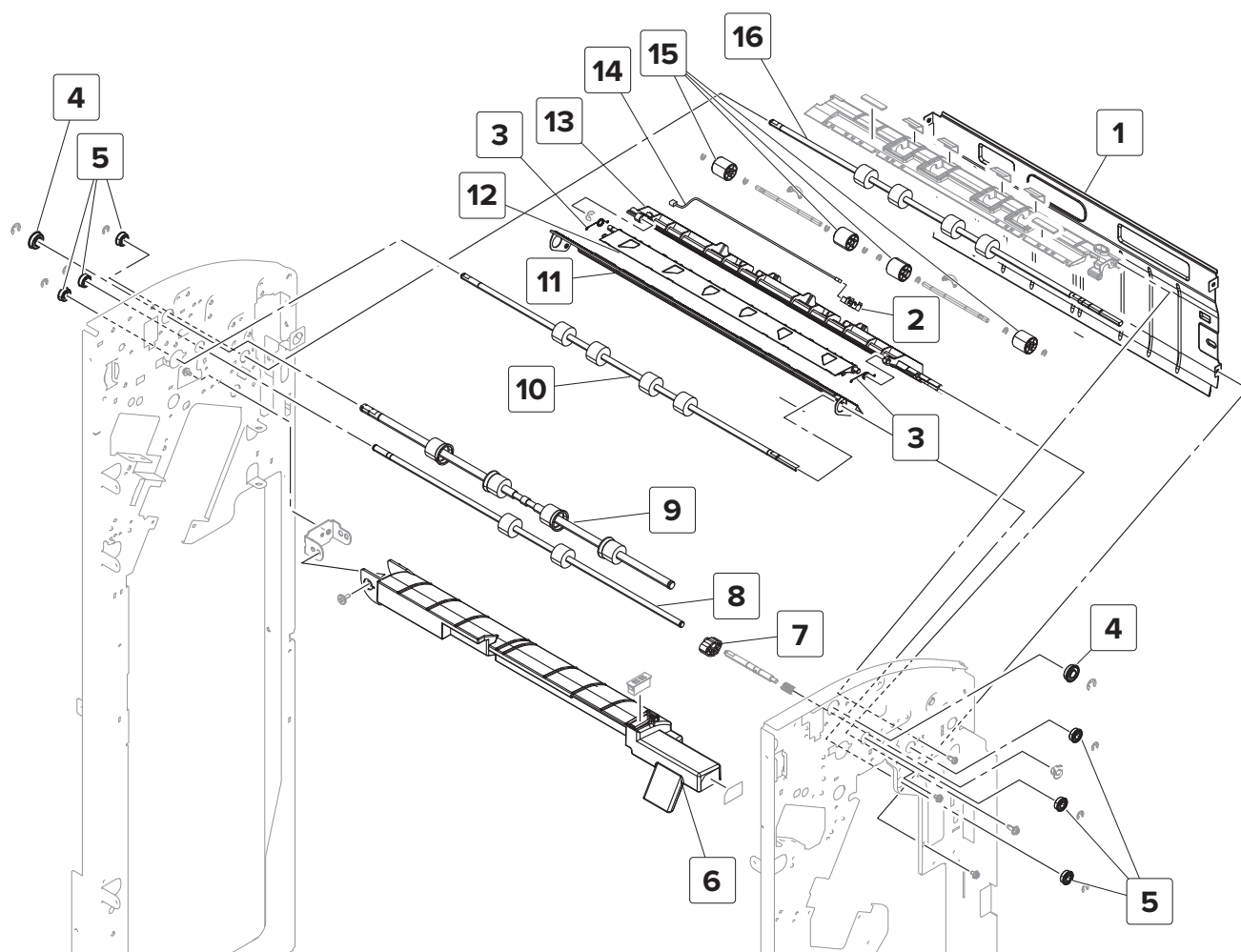
Assembly 24: SHPF—Transport section 3

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9577	1	1	SHPF booklet maker feed guide	--
2	40X8968	1	1	Sensor (SHPF booklet gate)	**"SHPF booklet maker upper pre-feed guide removal" on page 421**
3	40X9415	1	1	SHPF torsion coil spring	--
4	40X9440	2	1	Ball bearing	--
5	40X9589	6	1	Ball bearing	--
6	40X9580	1	1	SHPF jam access door	**"SHPF jam access door removal" on page 338**
7	40X9587	1	1	SHPF diverter cam	**"SHPF diverter cam removal" on page 388**
8	41X2215	1	1	SHPF top bin transport roller **Note:** This part may not be compatible with the finisher. For more information, see the note that follows this table.	**"SHPF top bin transport roller removal" on page 435**
9	40X9585	1	1	SHPF top bin exit roller	**"SHPF top bin exit roller removal" on page 431**
10	40X9584	1	1	SHPF booklet maker pre-feed roller	**"SHPF booklet maker pre-feed roller removal" on page 418**
11	40X9578	1	1	SHPF booklet maker lower pre-feed guide	**"SHPF booklet maker lower pre-feed guide removal" on page 419**
12	40X9490	1	1	SHPF booklet maker movable guide	**"SHPF booklet maker upper pre-feed guide removal" on page 421**
13	40X8883	1	1	SHPF booklet maker upper pre-feed guide	**"SHPF booklet maker upper pre-feed guide removal" on page 421**
14	40X9579	1	1	SHPF booklet gate sensor cable	**"SHPF booklet maker upper pre-feed guide removal" on page 421**
15	40X9353	4	1	SHPF booklet maker pre-feed idler roller	**"SHPF entrance idler and roller removal" on page 444**
16	40X9582	1	1	SHPF diverter feed roller	**"SHPF diverter feed roller removal" on page 423**
NS	41X2171	1	1	SHPF top bin transport roller and transport roller gear	**"Motor (SHPF feed) removal" on page 352**

Note: When replacing an SHPF top bin transport roller, use SHPF top bin transport roller (41X2215) if the following conditions are met:

- 2/3-hole punching SHPF (The last six digits of the finisher serial number is greater than or equal to 001000)
- 2/4-hole punching SHPF (The last six digits of the finisher serial number is greater than or equal to 000590)
- 2/3-hole punching booklet finisher (The last six digits of the finisher serial number is greater than or equal to 000128)
- 2/4-hole punching booklet finisher (The last six digits of the finisher serial number is greater than or equal to 000168)

If these conditions are not met, then use SHPF top bin transport roller and transport roller gear (41X2171).

Assembly 25: SHPF—Transport section 4
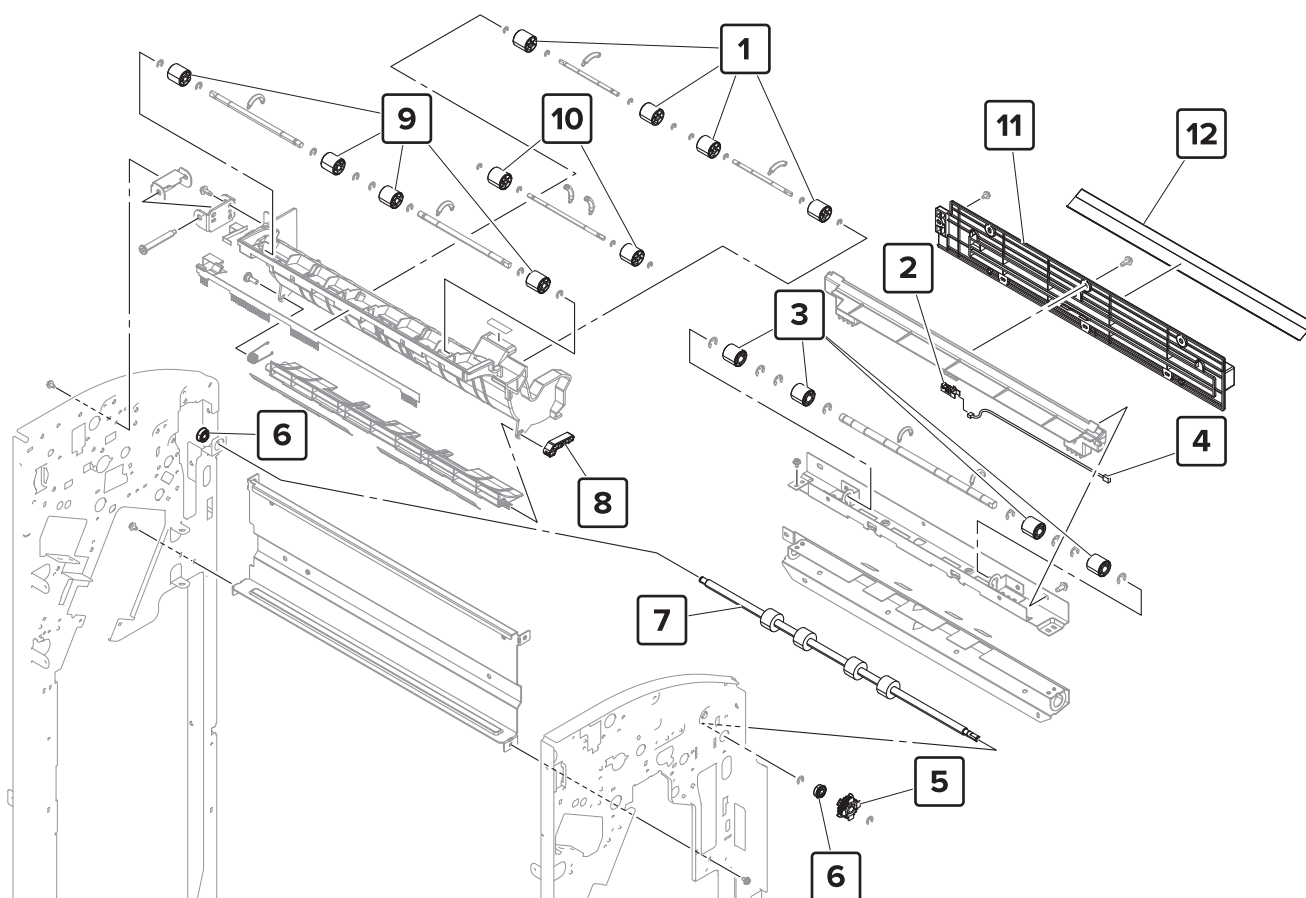
Assembly 25: SHPF—Transport section 4

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9353	4	1	SHPF diverter feed idler roller	**"SHPF top jam access door and SHPF diverter removal" on page 391**
2	40X8968	1	1	Sensor (SHPF entrance)	**"Sensor (SHPF entrance) removal" on page 443**
3	40X9593	4	1	SHPF entrance idler roller	**"SHPF entrance idler and roller removal" on page 444**
4	40X9590	1	1	SHPF entrance sensor cable	**"Sensor (SHPF entrance) removal" on page 443**
5	40X9574	1	1	SHPF entrance roller gear	**"SHPF entrance idler and roller removal" on page 444**
6	40X9589	2	1	Ball bearing	**"SHPF entrance idler and roller removal" on page 444**
7	40X9588	1	1	SHPF entrance roller	**"SHPF entrance idler and roller removal" on page 444**
8	40X9465	1	1	SHPF diverter lever	**"SHPF top jam access door and SHPF diverter removal" on page 391**
9	40X9331	4	1	SHPF top bin exit idler roller	**"SHPF top jam access door and SHPF diverter removal" on page 391**
10	40X9353	2	1	SHPF top bin transport idler roller	**"SHPF top jam access door and SHPF diverter removal" on page 391**
11	41X2544	1	1	Finisher entrance guide	--
12	41X2545	1	1	Front entrance guide film	--

Assembly 26: SHPF—Elevator bin section 1
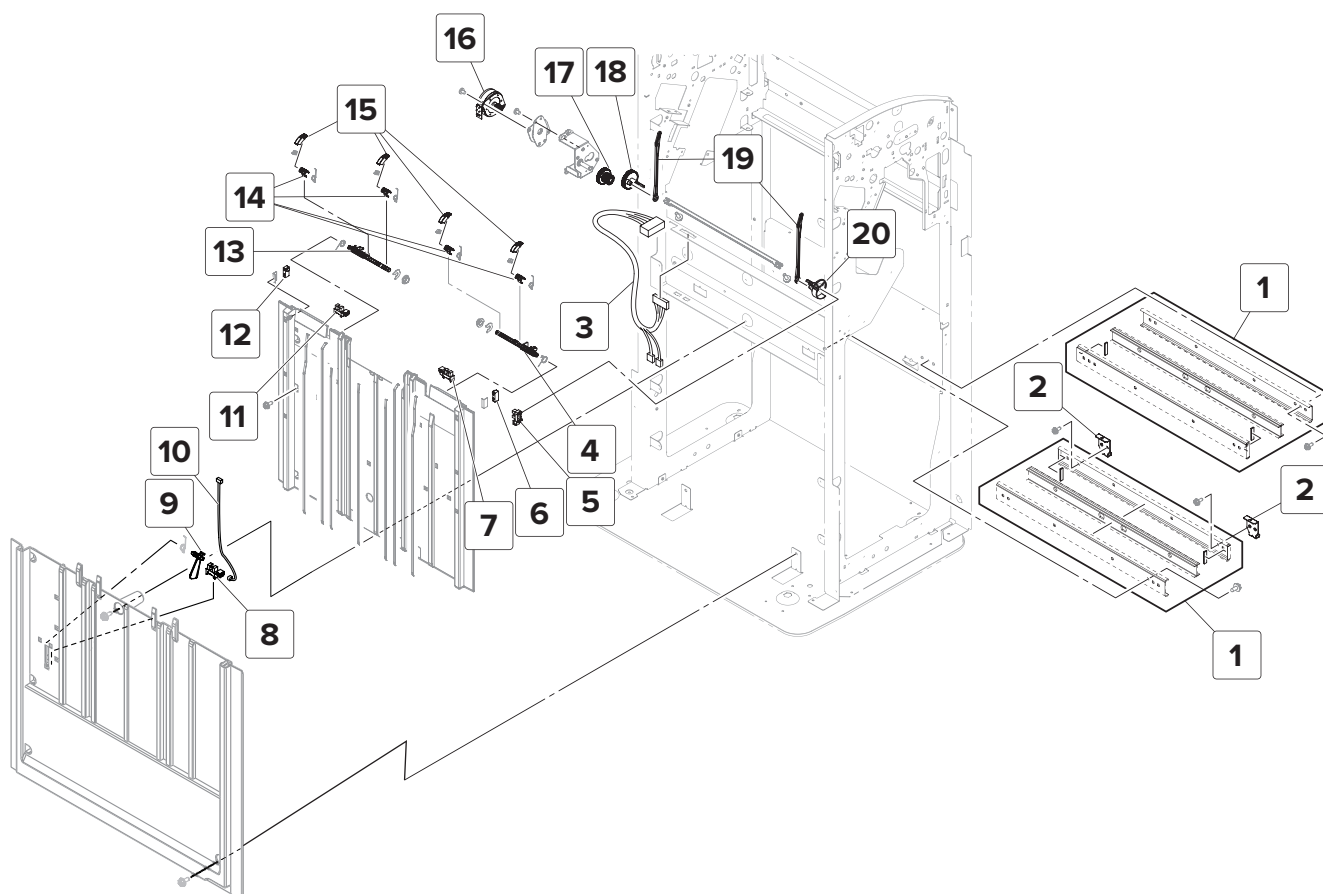
Assembly 26: SHPF—Elevator bin section 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9521	1	1	Booklet maker rail	--
2	40X8881	2	1	Booklet maker mount	--
3	40X9597	1	1	SHPF elevator bin stack height cable	--
4	40X9043	1	1	SHPF elevator bin front stack height sensor actuator	**"SHPF elevator bin stack height sensor actuator removal" on page 346**
5	40X8869	1	1	Sensor (SHPF elevator bin stack height actuator arm control)	**"SHPF upper left cover sensors removal" on page 345**
6	40X9538	1	1	Sensor (SHPF elevator bin stack height, receive)	**"SHPF upper left cover sensors removal" on page 345**
7	40X8869	1	1	Sensor (SHPF elevator bin front stack height)	**"SHPF upper left cover sensors removal" on page 345**
8	40X8869	1	1	Sensor (SHPF elevator bin full)	**"Sensor (SHPF elevator bin full) removal" on page 339**
9	40X9506	1	1	SHPF elevator bin full sensor actuator	**"Sensor (SHPF elevator bin full) removal" on page 339**
10	40X9877	1	1	SHPF elevator bin full sensor cable	**"Sensor (SHPF elevator bin full) removal" on page 339**
11	40X8869	1	1	Sensor (SHPF elevator bin rear stack height)	**"SHPF upper left cover sensors removal" on page 345**
12	40X9540	1	1	Sensor (SHPF elevator bin stack height, transmit)	**"SHPF upper left cover sensors removal" on page 345**
13	40X9477	1	1	SHPF elevator bin rear stack height sensor actuator	**"SHPF elevator bin stack height sensor actuator removal" on page 346**
14	40X9498	4	1	SHPF elevator bin stack height finger holder	--
15	40X9021	4	1	SHPF elevator bin stack height finger	**"SHPF elevator bin stack height sensor actuator removal" on page 346**
16	40X9532	1	1	Motor (SHPF elevator bin stack height)	**"Motor (SHPF elevator bin stack height) removal" on page 349**
17	40X9596	1	1	SHPF elevator bin stack height drive gear	**"SHPF elevator bin stack height drive gear removal" on page 348**
18	40X9594	1	1	SHPF elevator bin stack height sensor actuator arm gear	**"SHPF elevator bin stack height sensor actuator arms and gears removal" on page 347**

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
19	40X8954	2	1	SHPF elevator bin stack height sensor actuator arm	**"SHPF elevator bin stack height sensor actuator arms and gears removal" on page 347**
20	40X9464	1	1	SHPF actuator	--

592

Assembly 27: SHPF—Elevator bin section 2
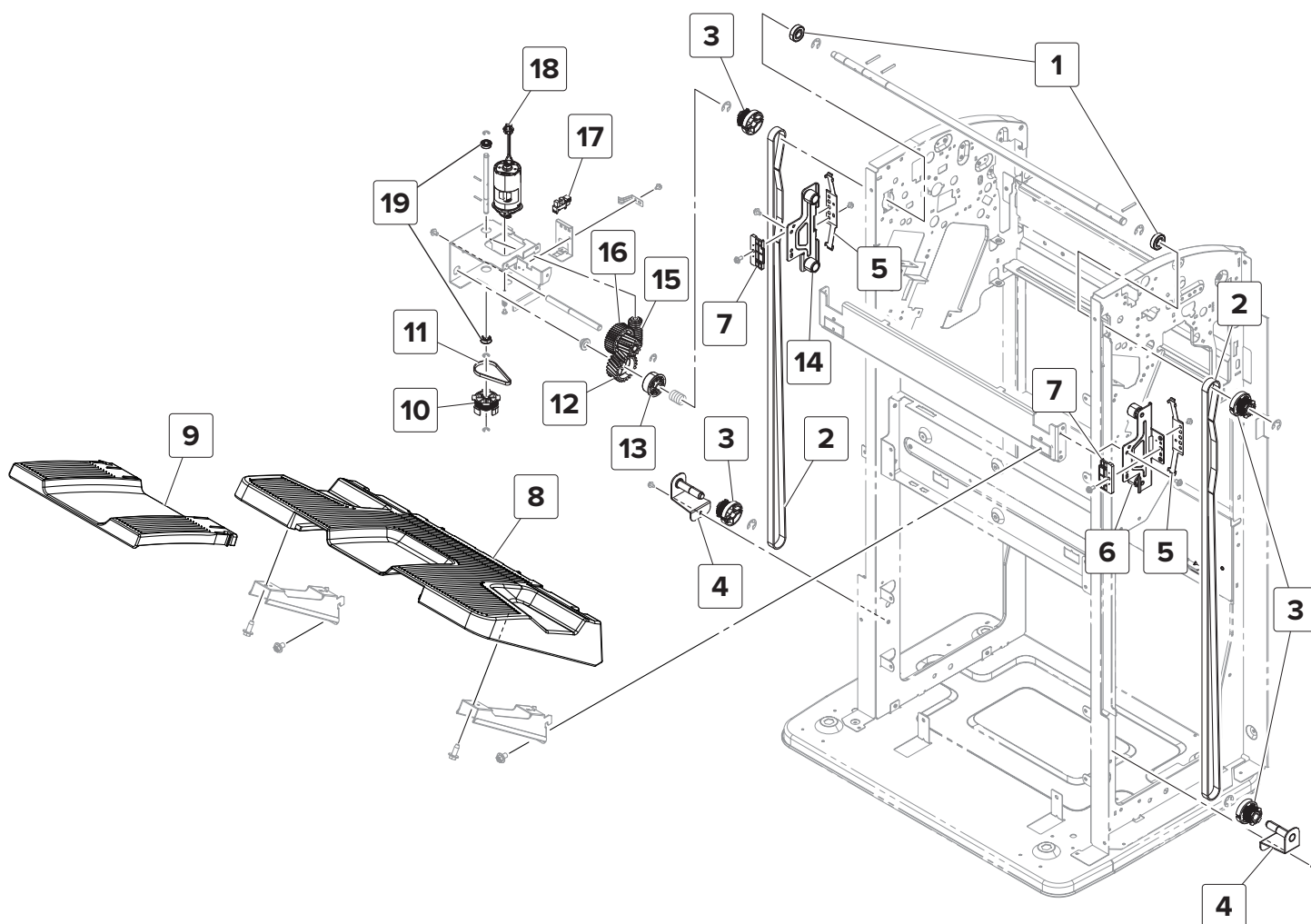
Assembly 27: SHPF—Elevator bin section 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9575	2	1	Ball bearing	--
2	40X9603	2	1	SHPF elevator belt	**"SHPF elevator belts removals" on page 374**
3	40X9607	4	1	SHPF elevator gear	--
4	40X9311	2	1	SHPF elevator gear bracket	--
5	40X9427	2	1	SHPF elevator belt spring	**"SHPF elevator belts removals" on page 374**
6	40X9605	1	1	SHPF elevator bin front bracket	**"SHPF elevator belts removals" on page 374**
7	40X8991	2	1	SHPF elevator belt holder	**"SHPF elevator belts removals" on page 374**
8	40X9609	1	1	SHPF elevator bin	**"SHPF elevator bin removal" on page 327**
9	40X9517	1	1	SHPF elevator bin extender	**"SHPF elevator bin removal" on page 327**
10	40X9168	1	1	SHPF elevator motor encoder	--
11	40X9601	1	1	SHPF elevator motor encoder belt	--
12	40X9849	1	1	SHPF elevator bin clutch gear	**"SHPF elevator drive assembly removal" on page 358**
13	40X9631	1	1	SHPF elevator bin clutch bushing	**"SHPF elevator drive assembly removal" on page 358**
14	40X9604	1	1	SHPF elevator bin rear bracket	**"SHPF elevator belts removals" on page 374**
15	40X9636	1	1	SHPF elevator drive gear	**"SHPF elevator drive assembly removal" on page 358**
16	40X9187	1	1	SHPF elevator bin idler gear	**"SHPF elevator drive assembly removal" on page 358**
17	40X8869	1	1	Sensor (SHPF elevator position)	**"Sensor (SHPF elevator position) removal" on page 357**
18	40X9534	1	1	Motor (SHPF elevator)	**"Motor (SHPF elevator) removal" on page 356**
19	40X9589	2	1	Ball bearing	--

Assembly 28: SHPF—Staple unit assembly
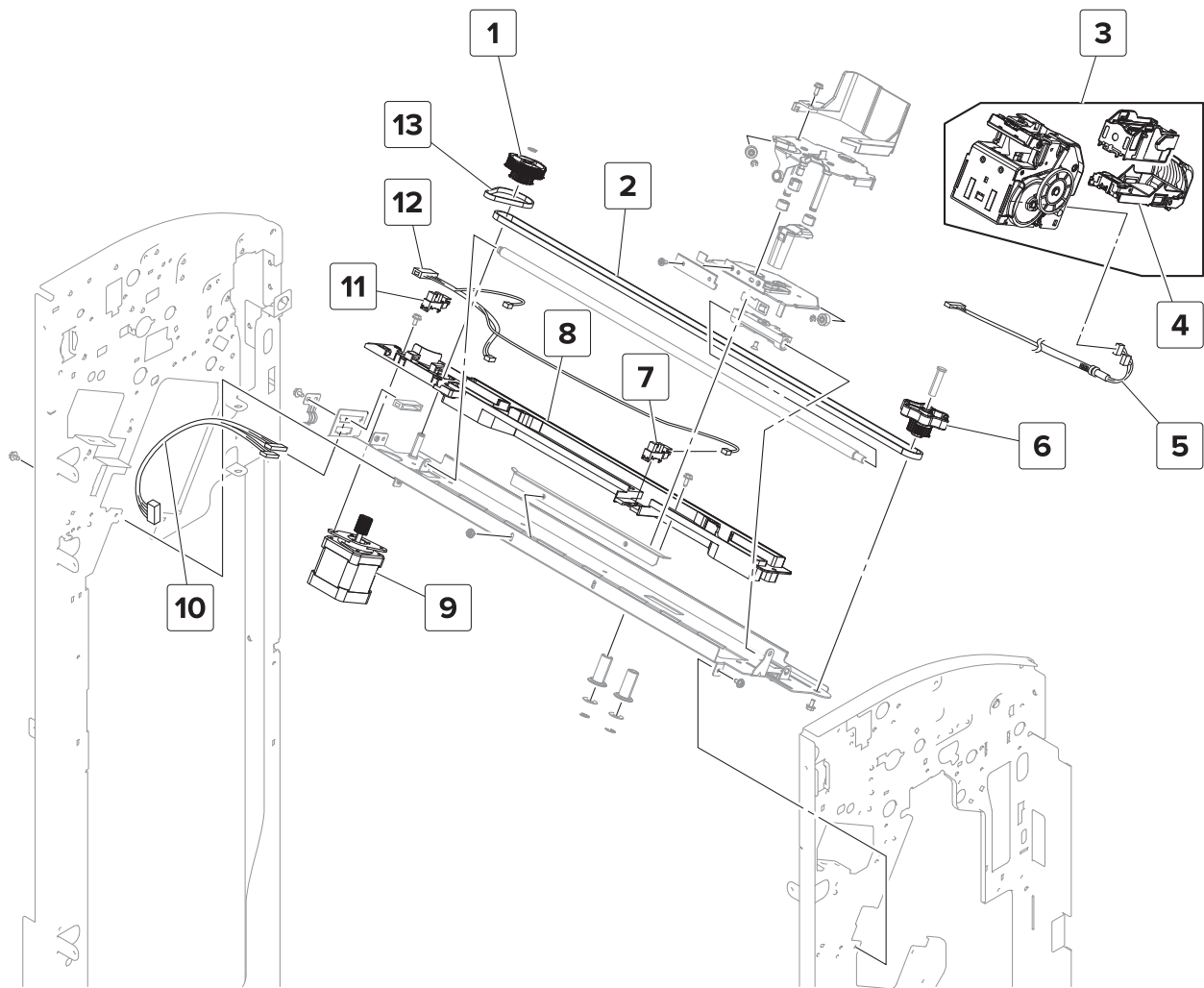
Assembly 28: SHPF—Staple unit assembly

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9520	1	1	SHPF staple unit carriage drive gear	**"SHPF staple unit drive belt and gear removal" on page 366**
2	40X9611	1	1	SHPF staple unit carriage belt	--
3	40X9610	1	1	SHPF staple unit	**"SHPF staple unit removal" on page 368**
4	40X9413	1	1	SHPF staple cartridge	--
5	40X9851	1	1	SHPF staple unit cable	--
6	40X8975	1	1	SHPF staple unit knob	**"SHPF staple unit drive belt and gear removal" on page 366**
7	40X8869	1	1	Sensor (SHPF staple unit carriage center)	**"SHPF staple unit position sensors removal" on page 365**
8	40X9616	1	1	SHPF staple unit carriage rail	--
9	40X9535	1	1	Motor (SHPF staple unit carriage)	**"Motor (SHPF staple unit carriage) removal" on page 367**
10	40X9614	1	1	SHPF staple unit interface cable	--
11	40X8869	1	1	Sensor (SHPF staple unit carriage home)	**"SHPF staple unit position sensors removal" on page 365**
12	40X9850	1	1	SHPF staple unit carriage sensor cable	--
13	40X9612	1	1	SHPF staple unit carriage drive belt	**"SHPF staple unit drive belt and gear removal" on page 366**

Assembly 29: SHPF—Compiler section 1
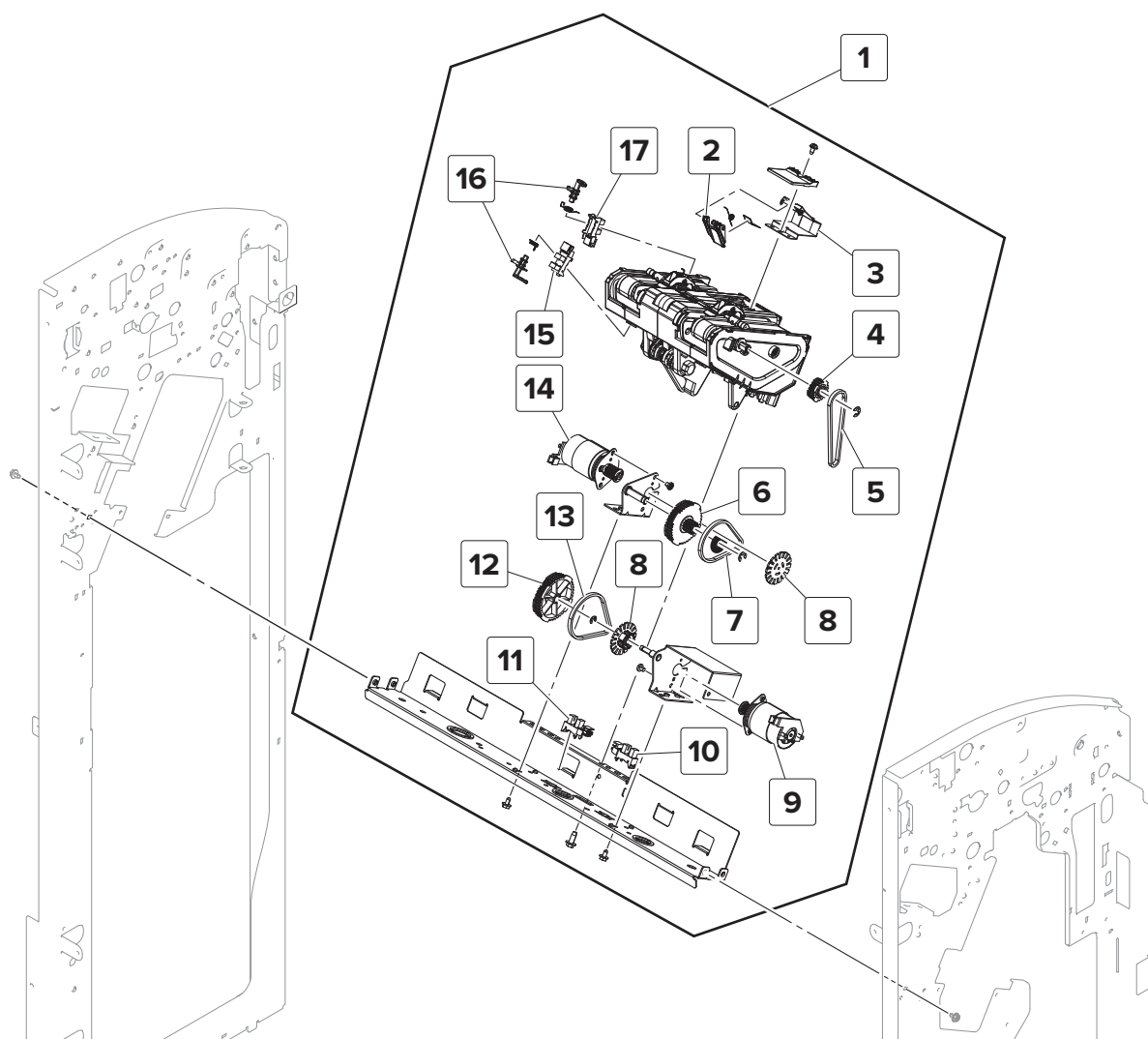
Assembly 29: SHPF—Compiler section 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X2182	1	1	SHPF ejector	**"SHPF compiler assembly removal" on page 400**
2	40X9496	1	1	SHPF compiler stack clamp	--
3	40X9622	1	1	SHPF middle aligner	**"SHPF middle aligner removal" on page 412**
4	40X9625	1	1	SHPF compiler eject gear	**"SHPF compiler eject gear removal" on page 414**
5	40X9617	1	1	SHPF compiler eject belt	--
6	40X9621	1	1	SHPF compiler pre-eject drive gear	--
7	40X9618	1	1	SHPF compiler pre-eject drive belt	--
8	41X2002	1	1	SHPF pre-eject motor and eject motor encode	--
9	41X2001	1	1	Motor (SHPF compiler eject) **Note:** Make sure to also replace PN 41X2002 every time this FRU is replaced.	**"Motor (SHPF compiler eject) removal" on page 396**
10	40X8869	1	1	Sensor (SHPF compiler eject)	**"SHPF compiler eject sensors removal" on page 398**
11	40X8869	1	1	Sensor (SHPF compiler pre-eject)	**"SHPF compiler eject sensors removal" on page 398**
12	40X9624	1	1	SHPF compiler eject drive gear	--
13	40X9620	1	1	SHPF compiler eject drive belt	--
14	41X2000	1	1	Motor (SHPF compiler pre-eject) **Note:** Make sure to also replace PN 41X2002 every time this FRU is replaced.	**"Motor (SHPF compiler pre-eject) removal" on page 397**
15	40X8869	1	1	Sensor (SHPF eject clamp position)	**"Sensor (SHPF eject clamp position) removal" on page 399**
16	40X9623	2	1	SHPF compiler eject sensor actuators	--
17	40X8869	1	1	Sensor (SHPF eject clamp home)	--

Assembly 30: SHPF—Compiler section 2
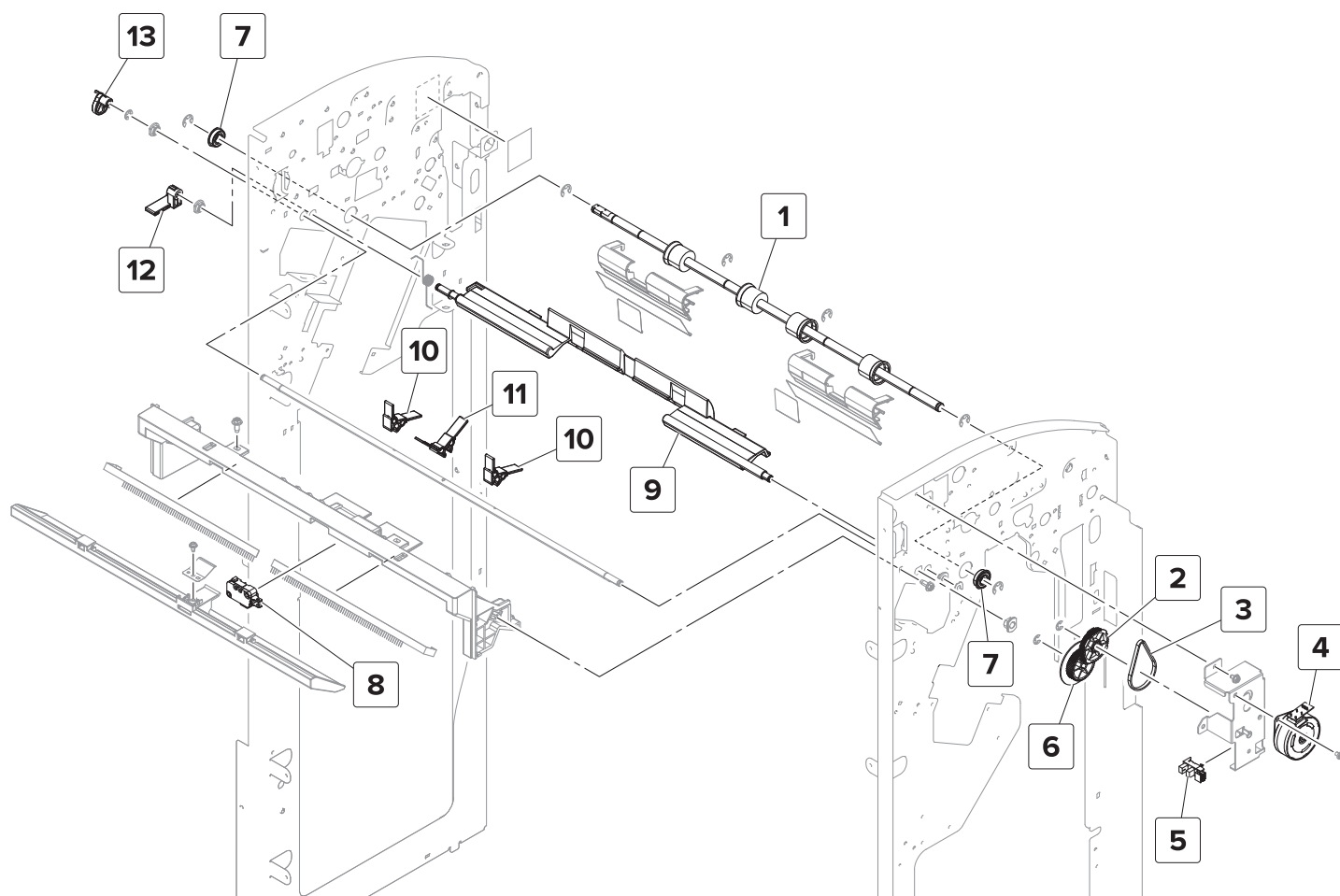
Assembly 30: SHPF—Compiler section 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9637	1	1	SHPF compiler feed roller	**"SHPF compiler feed roller removal" on page 450**
2	40X9634	1	1	SHPF paddle drive gear	**"SHPF paddle drive gears removal" on page 381**
3	40X9629	1	1	SHPF paddle drive belt	**"SHPF paddle motor FRUs removal" on page 382**
4	40X9530	1	1	Motor (SHPF paddle)	**"Motor (SHPF paddle) removal" on page 381**
5	40X8869	1	1	Sensor (SHPF paddle home)	**"SHPF paddle motor FRUs removal" on page 382**
6	40X9853	1	1	SHPF paddle drive encoder	**"SHPF paddle drive gears removal" on page 381**
7	40X9440	2	1	Ball bearing	--
8	40X9543	1	1	SHPF elevator bin stack limit switch	**"SHPF elevator bin stack limit switch removal" on page 429**
9	40X9633	1	1	SHPF compiler guide	**"SHPF compiler guide removal" on page 441**
10	40X9632	2	1	SHPF paddles	**"SHPF paddles removal" on page 328**
11	40X9852	1	1	SHPF middle paddle	**"SHPF paddles removal" on page 328**
12	41X2185	1	1	SHPF compiler guide lever	**"SHPF paddle cam and compiler guide lever removal" on page 360**
13	40X9627	1	1	SHPF paddle cam	**"SHPF paddle cam and compiler guide lever removal" on page 360**

Assembly 31: SHPF—Compiler section 3
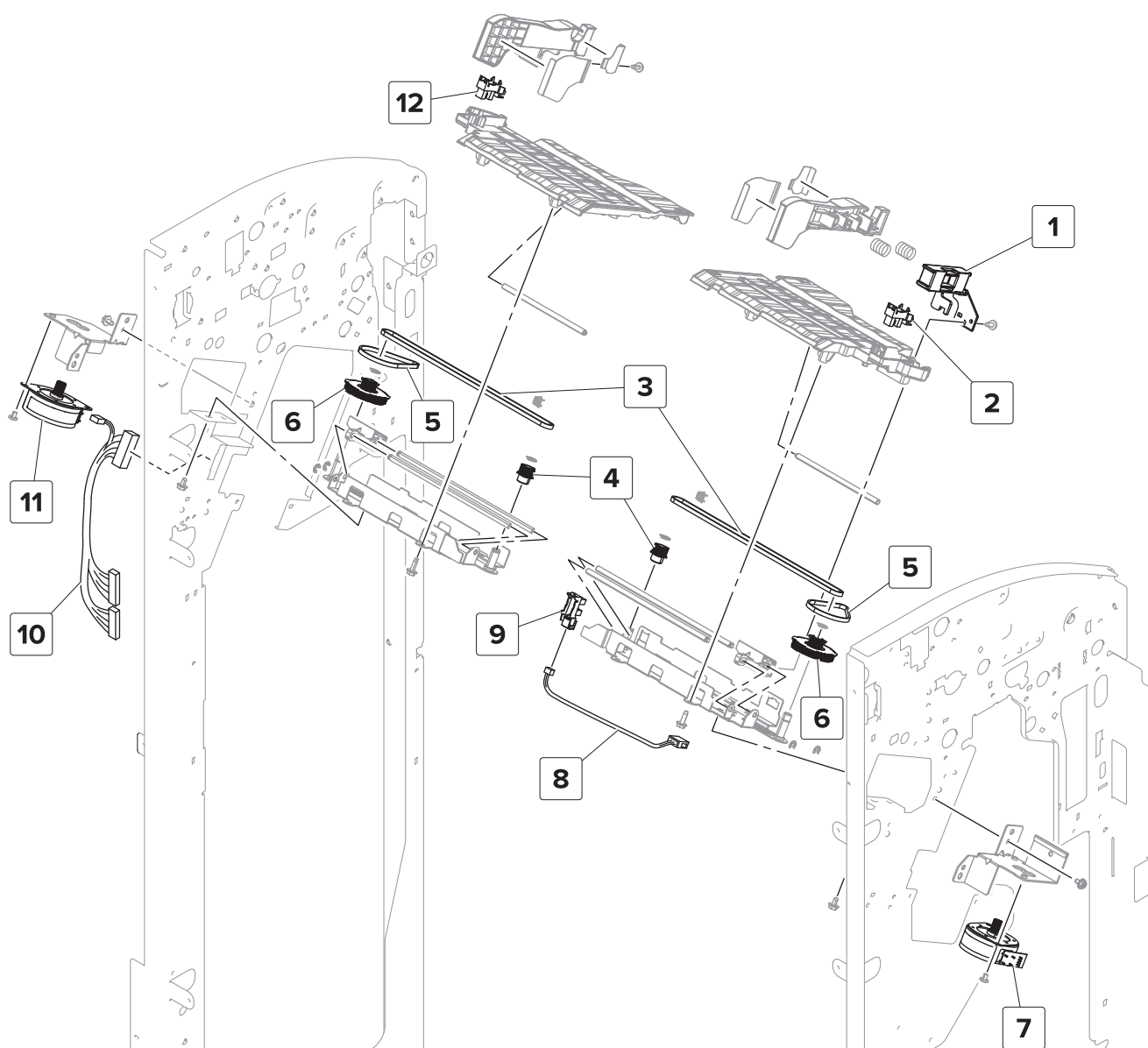
Assembly 31: SHPF—Compiler section 3

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9195	1	1	SHPF front tamper holder	--
2	40X8869	1	1	Sensor (SHPF front tamper home)	**"Sensor (SHPF front tamper home) removal " on page 351**
3	40X9641	2	1	SHPF tamper belt	**"SHPF tamper belts and gears removal" on page 409**
4	40X9595	2	1	SHPF tamper gear	**"SHPF tamper belts and gears removal" on page 409**
5	40X9344	2	1	SHPF tamper drive belt	**"SHPF tamper belts and gears removal" on page 409**
6	40X9485	2	1	SHPF tamper drive gear	**"SHPF tamper belts and gears removal" on page 409**
7	40X9530	1	1	Motor (SHPF front tamper)	**"Motor (SHPF front tamper) removal" on page 350**
8	40X9717	1	1	SHPF aligner position sensor cable	--
9	40X8869	1	1	Sensor (SHPF aligner position)	**"Sensor (SHPF aligner position) removal" on page 411**
10	40X9638	1	1	SHPF ejector cable	--
11	40X9530	1	1	Motor (SHPF rear tamper)	**"Motor (SHPF rear tamper) removal" on page 354**
12	40X8869	1	1	Sensor (SHPF rear tamper home)	**"Sensor (SHPF rear tamper home) removal" on page 355**

Assembly 32: SHPF—Punch unit 1

1
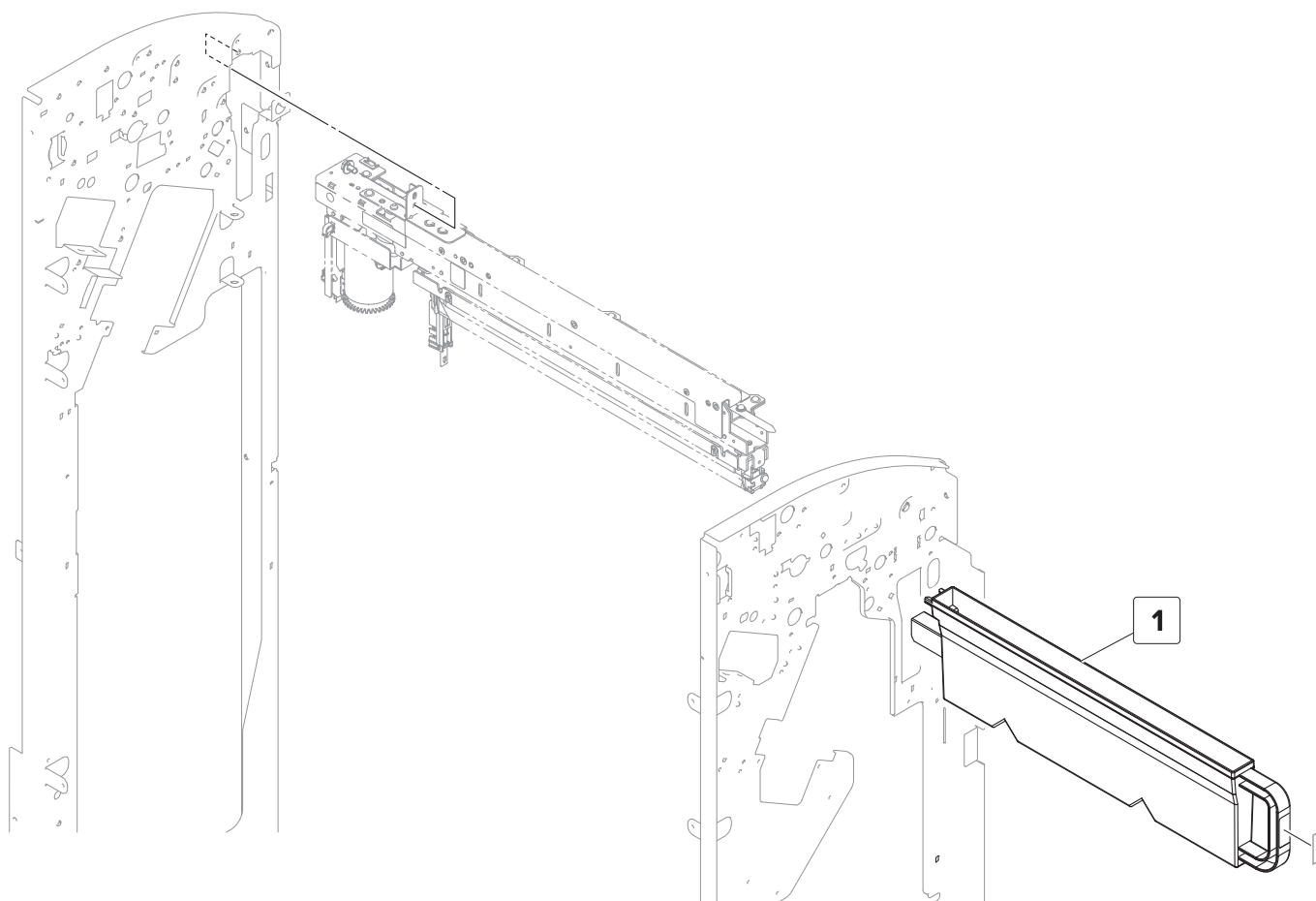
Assembly 32: SHPF—Punch unit 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9550	1	1	Hole punch box	--

Assembly 33: SHPF—Punch unit 2
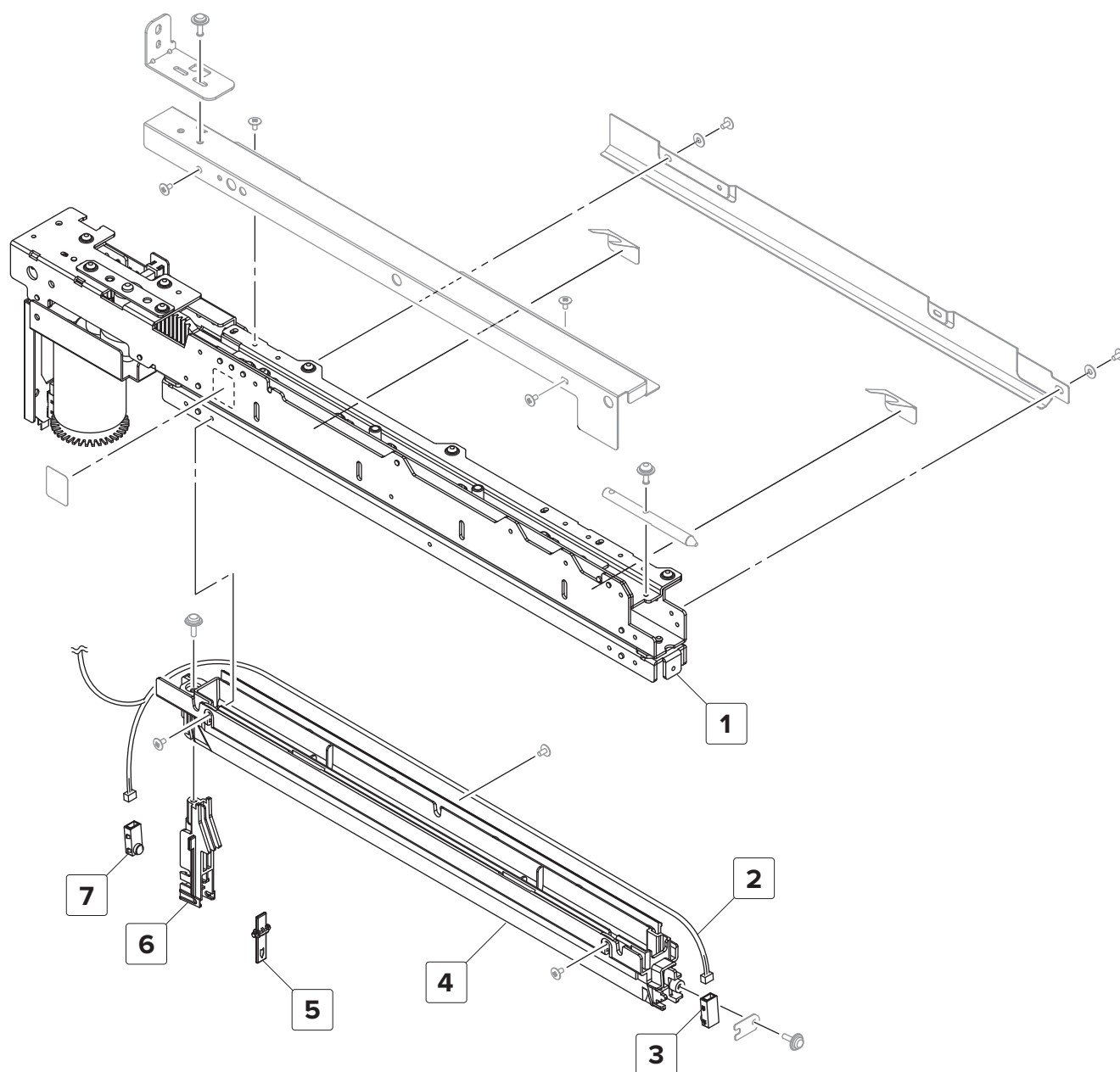
Assembly 33: SHPF—Punch unit 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	41X0968	1	1	Punch unit—2/4 holes	--
1	41X0967	1	1	Punch unit—2/3 holes	--
1	40X9986	1	1	Punch unit—Sweden	**"Punch unit removal" on page 361**
2	40X9549	1	1	Punch unit cable	--
3	40X9547	1	1	Sensor (hole punch box full, transmit)	**"Sensor (hole punch box full) removal" on page 362**
4	40X9918	1	1	SHPF duct guide	--
5	40X9546	1	1	Hole punch box full sensor actuator	--
6	40X9545	1	1	Hole punch box full sensor holder	--
7	40X9928	1	1	Sensor (hole punch box full, receive)	**"Sensor (hole punch box full) removal" on page 362**

Assembly 34: Booklet maker—Covers
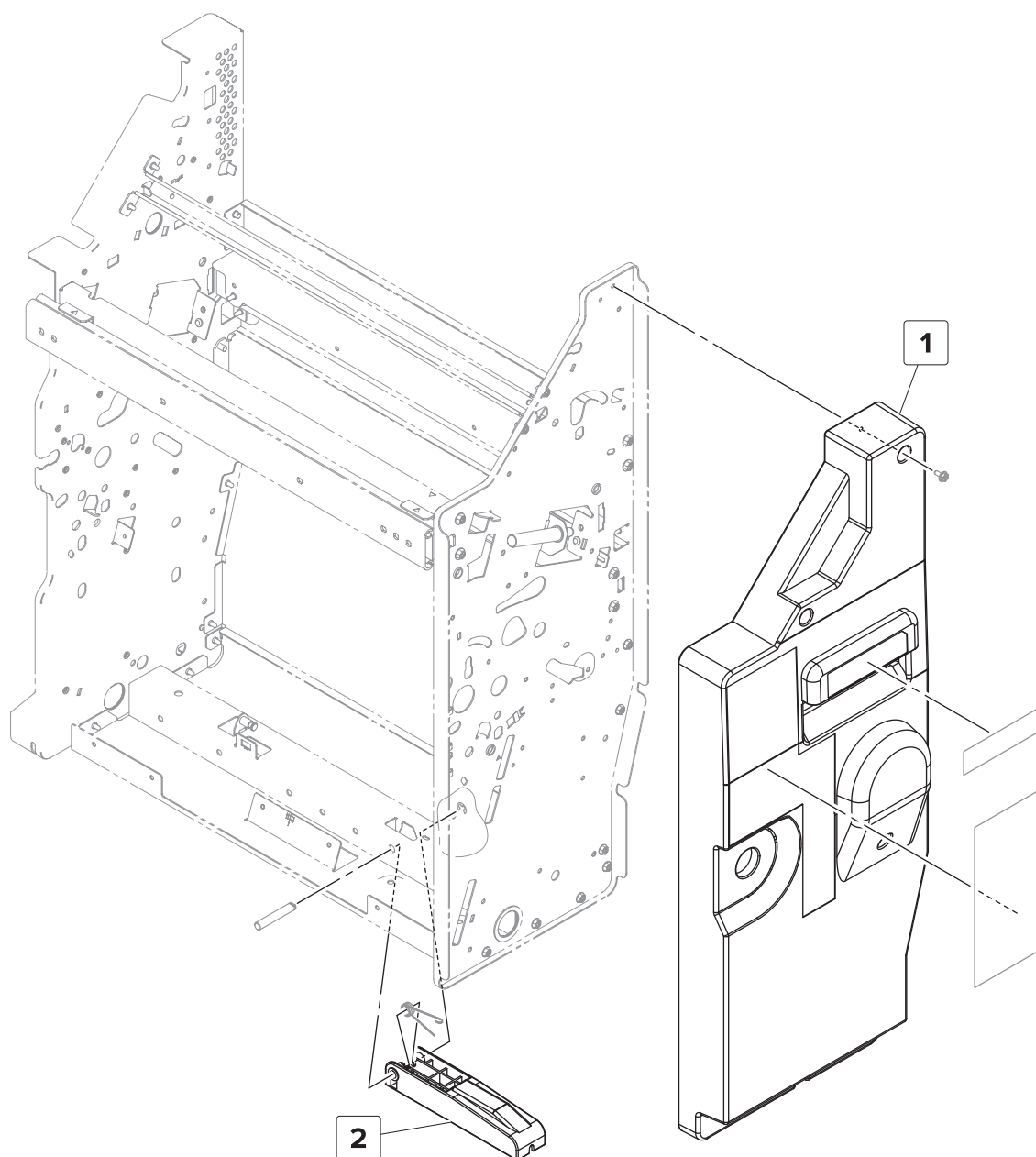
Assembly 34: Booklet maker—Covers

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9423	1	1	Booklet maker front cover	**"Booklet maker front cover removal" on page 453**
2	40X9424	1	1	Booklet maker support	**"Booklet maker support removal" on page 454**

Assembly 35: Booklet maker—Electronics
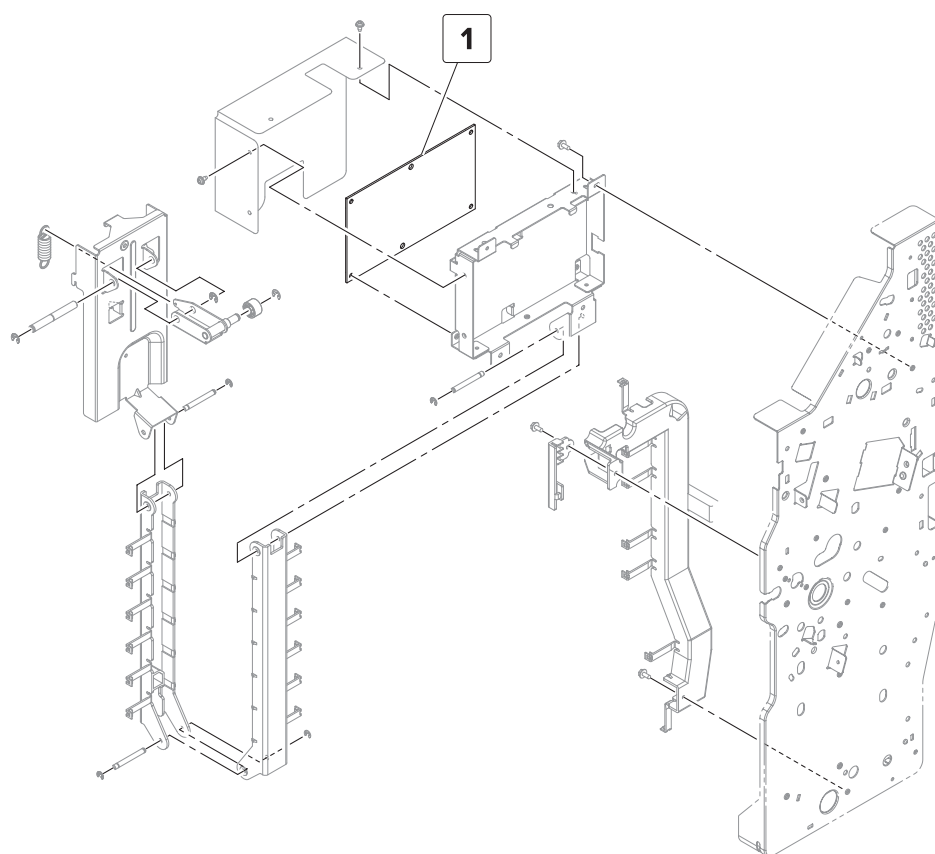
Assembly 35: Booklet maker—Electronics

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9429	1	1	Booklet maker controller board	**"Booklet maker controller board removal" on page 458**

Assembly 36: Booklet maker—Fold section 1
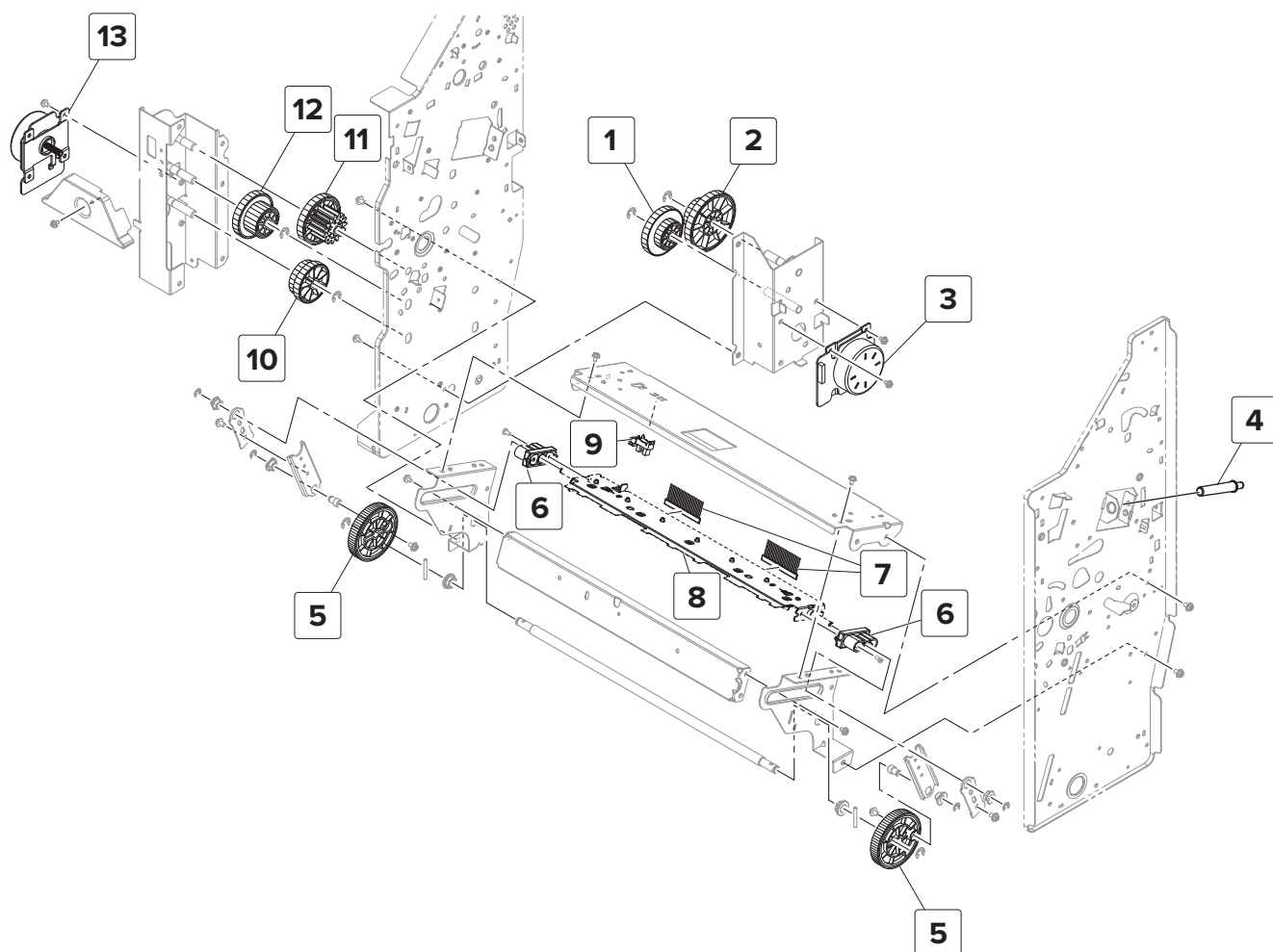
Assembly 36: Booklet maker—Fold section 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9433	1	1	Bifold knife primary drive gear	**"Bifold knife primary drive gears removal" on page 513**
2	40X9856	1	1	Bifold knife idler gear	**"Bifold knife primary drive gears removal" on page 513**
3	40X9432	1	1	Motor (bifold knife)	**"Motor (bifold knife) removal" on page 487**
4	40X9425	1	1	Retracting shaft	--
5	40X9436	2	1	Bifold knife secondary drive gears	**"Bifold knife secondary drive gears removal" on page 518**
6	40X9431	2	1	Bifold knife slider	**"Bifold knife removal" on page 519**
7	40X9430	2	1	Bifold knife static brush	**"Bifold knife removal" on page 519**
8	40X9913	1	1	Bifold knife	**"Bifold knife removal" on page 519**
9	40X8869	1	1	Sensor (bifold knife home)	**"Sensor (bifold knife home) removal" on page 516**
10	40X9858	1	1	Bifold roller drive gear	**"Bifold roller gears removal" on page 468**
11	40X9857	1	1	Bifold roller idler gear 2	**"Bifold roller gears removal" on page 468**
12	40X9435	1	1	Bifold roller idler gear 1	**"Bifold roller gears removal" on page 468**
13	40X9432	1	1	Motor (bifold roller)	**"Motor (bifold roller) removal" on page 467**

Assembly 37: Booklet maker—Fold section 2
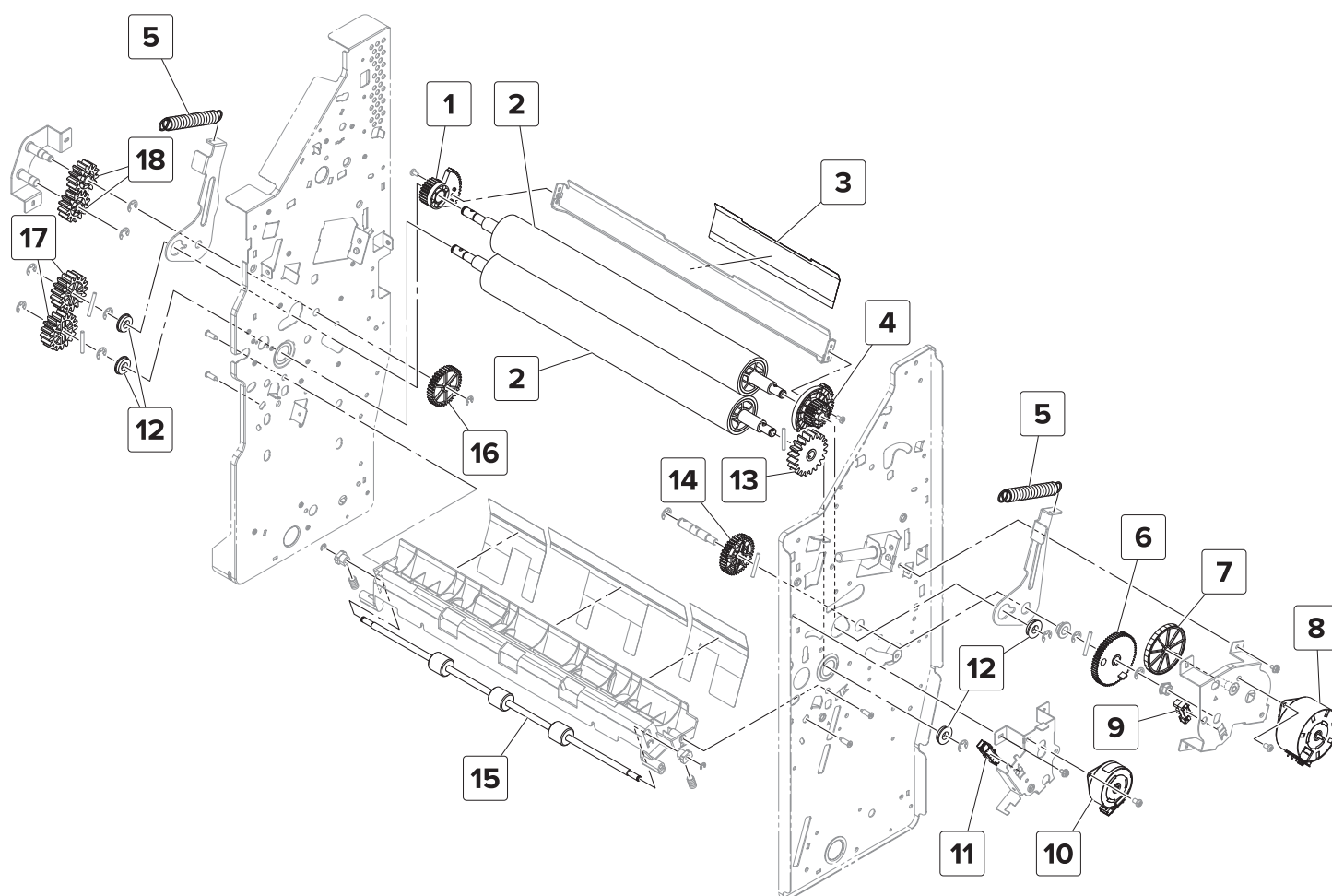
Assembly 37: Booklet maker—Fold section 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9442	1	1	Trifold knife actuator	**"Bifold upper roller removal" on page 502**
2	40X9449	2	1	Bifold rollers	**"Bifold upper roller removal" on page 502** **"Bifold lower roller removal" on page 505**
3	40X9414	1	1	Bifold guide	--
4	40X9861	1	1	Bifold roller timing gear	**"Bifold upper roller removal" on page 502**
5	40X9439	2	1	Bifold roller springs	**"Bifold roller springs removal" on page 476**
6	40X9862	1	1	Bifold guide home sensor actuator	**"Bifold roller drive gears removal" on page 520**
7	40X9863	1	1	Bifold guide drive gear	**"Bifold guide drive gears removal" on page 522**
8	40X9447	1	1	Motor (bifold guide)	**"Bifold guide drive gears removal" on page 522**
9	40X8869	1	1	Sensor (bifold guide home)	**"Sensor (bifold guide home) removal" on page 484**
10	40X9446	1	1	Motor (trifold guide)	**"Motor (trifold guide) removal" on page 485**
11	40X8869	1	1	Sensor (trifold guide home)	**"Sensor (trifold guide home) removal" on page 486**
12	40X9440	4	1	Bifold roller ball bearing	**"Bifold upper roller removal" on page 502**
13	40X9443	1	1	Lower bifold roller gear	**"Bifold lower roller removal" on page 505**
14	40X9444	1	1	Trifold knife front idler gear	**"Bifold roller drive gears removal" on page 520**
15	40X9352	1	1	Trifold exit roller	--
16	40X9441	1	1	Trifold knife rear idler gear 2	**"Bifold roller drive gears removal" on page 520**
17	40X9859	2	1	Bifold roller gear	**"Bifold roller drive gears removal" on page 520**
18	40X9860	2	1	Trifold knife rear idler gear 1	**"Bifold roller drive gears removal" on page 520**

Assembly 38: Booklet maker—Fold section 3
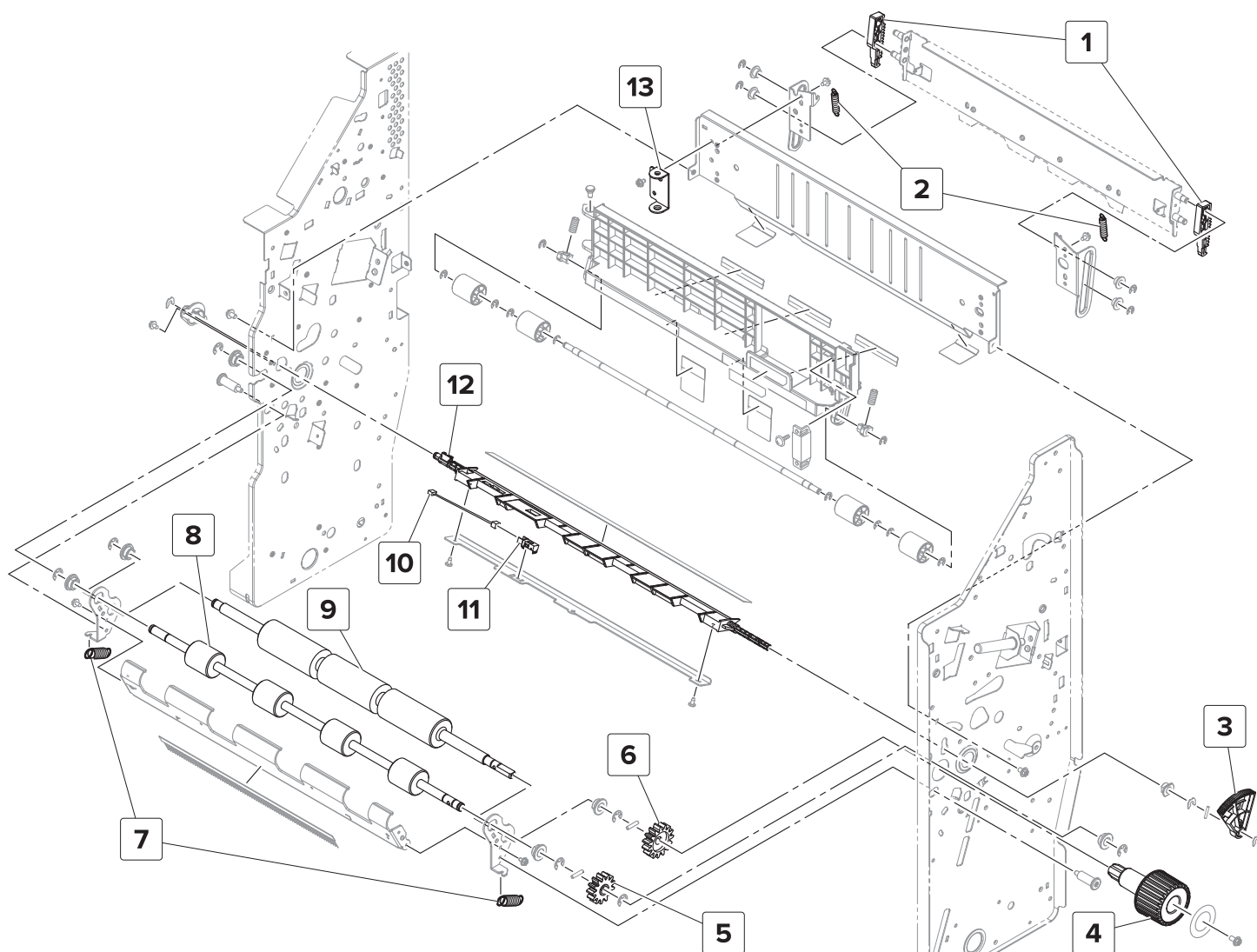
Assembly 38: Booklet maker—Fold section 3

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9562	2	1	Trifold knife slider	--
2	40X9459	2	1	Trifold knife springs	**"Trifold knife springs removal" on page 502**
3	40X9458	1	1	Trifold gate actuator	**"Trifold gate actuator removal" on page 486**
4	41X2030	1	1	Trifold jam knob	**"Trifold jam knob removal" on page 452**
5	40X9865	1	1	Bifold exit roller gear	**"Trifold gears removal" on page 470**
6	40X9453	1	1	Trifold roller gear	**"Trifold gears removal" on page 470**
7	41X2091	2	1	Booklet maker exit roller springs	**"Booklet maker exit roller springs removal" on page 452**
8	40X9864	1	1	Bifold exit roller	**"Trifold rollers removal" on page 469**
9	41X2031	1	1	Trifold roller	**"Trifold rollers removal" on page 469**
10	40X9219	1	1	Booklet maker fold exit sensor cable	--
11	40X8968	1	1	Sensor (booklet maker fold exit)	**"Sensor (booklet maker fold exit) removal" on page 512**
12	40X9524	1	1	Trifold diverter	**"Trifold diverter removal" on page 511**
13	40X9457	1	1	Bifold jam access door hinge	**"Trifold knife removal" on page 502**

Assembly 39: Booklet maker—Transport section
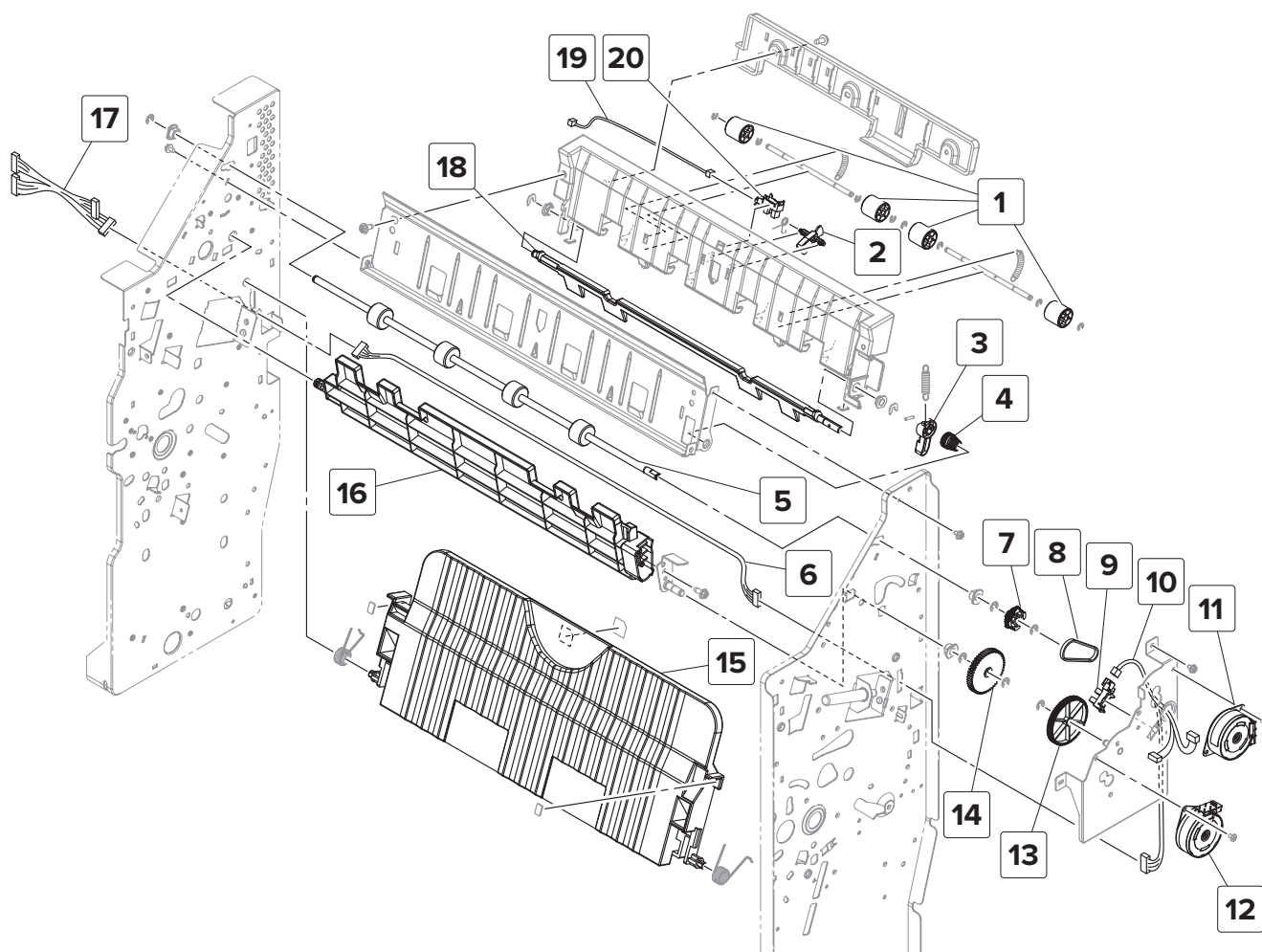
Assembly 39: Booklet maker—Transport section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9353	4	1	Booklet maker transport idler roller	**"Booklet maker transport idler rollers removal" on page 463**
2	40X9463	1	1	Booklet maker transport sensor actuator	**"Sensor (booklet maker transport) removal" on page 464**
3	40X9600	1	1	Booklet maker decurl lever	**"Booklet maker decurl lever removal" on page 465**
4	40X9445	1	1	Booklet maker pressure spring	--
5	40X9461	1	1	Booklet maker transport roller	**"Booklet maker transport roller removal" on page 478**
6	40X9867	1	1	Booklet maker transport section extension cable	--
7	40X9469	1	1	Booklet maker transport gear	**"Booklet maker transport gear and belt removal" on page 477**
8	40X9467	1	1	Booklet maker transport belt	**"Booklet maker transport gear and belt removal" on page 477**
9	40X8869	1	1	Sensor (booklet maker decurl)	**"Sensor (booklet maker decurl) removal" on page 480**
10	40X9474	1	1	Booklet maker transport section cable	--
11	40X9470	1	1	Motor (booklet maker transport)	**"Motor (booklet maker transport) removal" on page 474**
12	40X9446	1	1	Motor (booklet maker decurl)	**"Motor (booklet maker decurl) removal" on page 475**
13	40X9468	1	1	Booklet maker decurl gears	**"Booklet maker decurl gears removal" on page 479**
14	40X9866	1	1	Booklet maker decurl gears	**"Booklet maker decurl gears removal" on page 479**
15	40X9438	1	1	Booklet maker jam access door	**"Booklet maker jam access door removal" on page 461**
16	40X9473	1	1	Booklet maker decurl guide	**"Booklet maker decurl guide removal" on page 481**
17	40X9868	1	1	Transport and compiler section cable	--
18	40X9296	1	1	Booklet maker transport paper guide lever	**"Booklet maker transport paper guide lever removal" on page 466**
19	40X9869	1	1	Booklet maker transport sensor cable	--
20	40X8869	2	1	Sensor (booklet maker transport)	**"Sensor (booklet maker transport) removal" on page 464**

Assembly 40: Booklet maker—Staple section
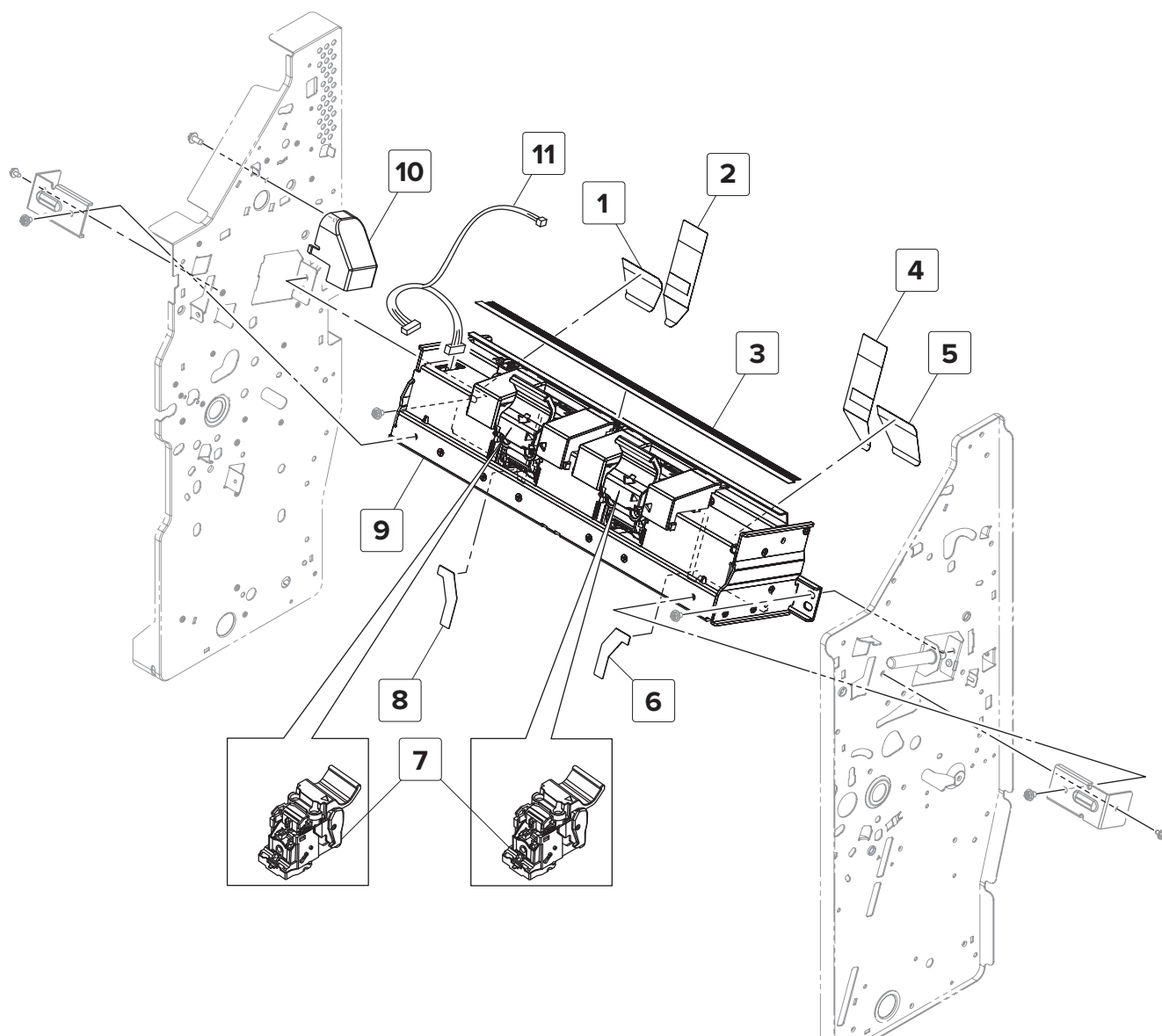
Assembly 40: Booklet maker—Staple section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9307	1	1	Plastic film	--
2	40X9526	1	1	Plastic film	--
3	40X9460	1	1	Static brush	--
4	40X9466	1	1	Plastic film	--
5	40X9450	1	1	Plastic film	--
6	40X8976	1	1	Plastic film	--
7	40X9476	2	1	Booklet maker staple cartridge	--
8	40X9303	1	1	Plastic film	--
9	40X9478	1	1	Booklet maker staple unit	**"Booklet maker staple unit removal" on page 507**
10	40X9907	1	1	Booklet maker cover	--
11	40X9870	1	1	Booklet maker staple unit cable	--

Assembly 41: Booklet maker—Compiler section
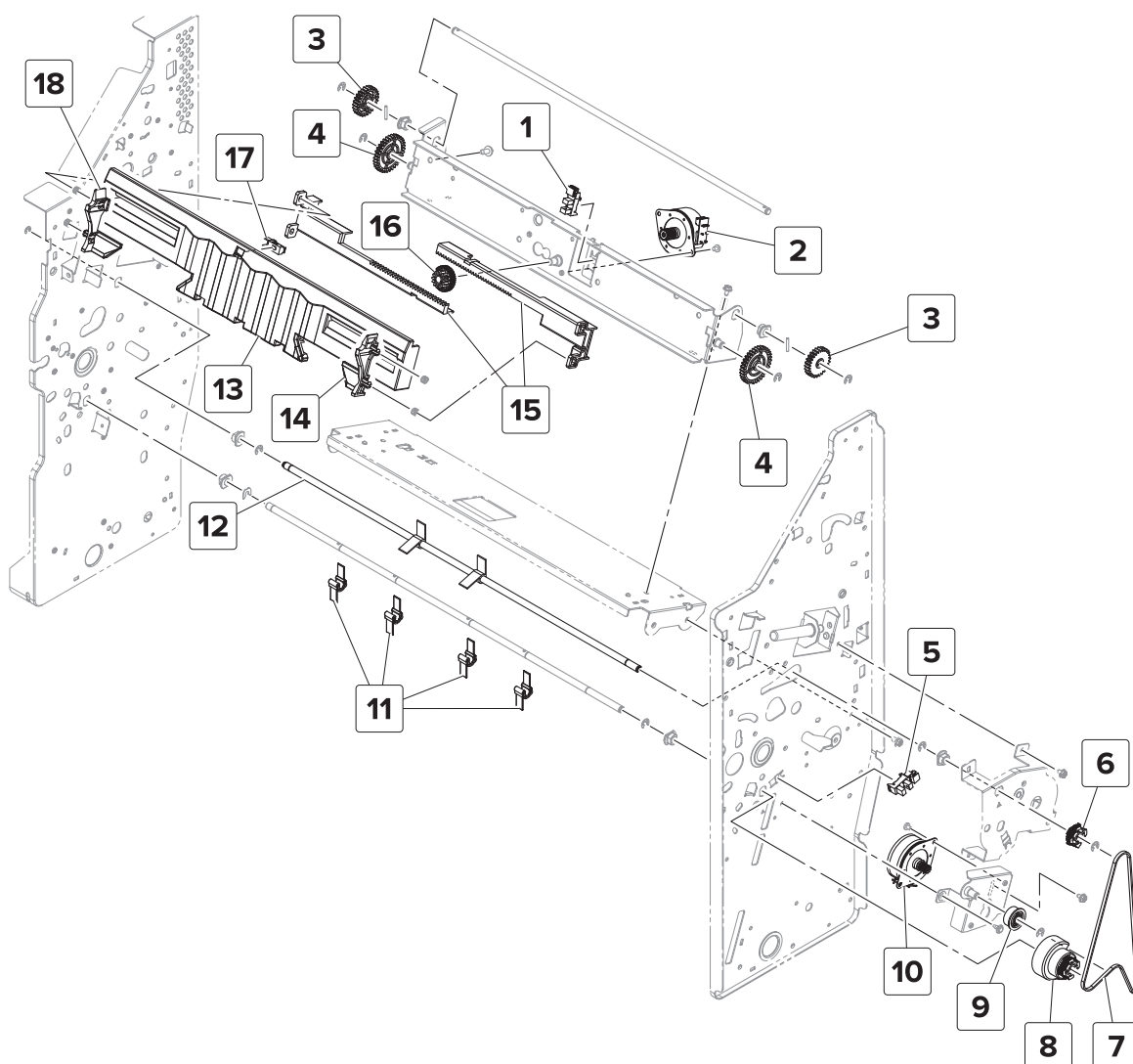
Assembly 41: Booklet maker—Compiler section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X8869	1	1	Sensor (booklet maker tamper home)	**"Sensor (booklet maker tamper home) removal" on page 528**
2	40X9446	1	1	Motor (booklet maker tamper)	**"Motor (booklet maker tamper) removal" on page 488**
3	40X9581	2	1	Bifold guide idler gear 2	**"Bifold guide idler gears removal" on page 528**
4	40X9583	2	1	Bifold guide idler gear 1	**"Bifold guide idler gears removal" on page 528**
5	40X8869	1	1	Sensor (booklet maker paddle home)	**"Sensor (booklet maker paddle home) removal" on page 473**
6	40X9469	1	1	Booklet maker paddle gear	**"Booklet maker paddle gears removal" on page 471**
7	40X9479	1	1	Booklet maker paddle belt	**"Booklet maker paddle belt removal" on page 471**
8	40X9871	1	1	Booklet maker paddle encoder	**"Booklet maker paddle gears removal" on page 471**
9	40X9493	1	1	Booklet maker paddle tensioner pulley	**"Booklet maker paddle gears removal" on page 471**
10	40X9481	1	1	Motor (booklet maker paddle)	**"Motor (booklet maker paddle) removal" on page 472**
11	40X9483	4	1	Booklet maker lower paddle	**"Booklet maker lower paddle removal" on page 458**
12	40X9482	1	1	Booklet maker upper paddle	**"Booklet maker upper paddle removal" on page 501**
13	40X9487	1	1	Booklet maker tamper tray	**"Booklet maker tamper tray removal" on page 525**
14	40X9876	1	1	Booklet maker front tamper	**"Booklet maker tamper tray removal" on page 525**
15	40X8965	2	1	Booklet maker tamper rack	**"Booklet maker tamper tray removal" on page 525**
16	40X9016	1	1	Booklet maker tamper drive gear	**"Booklet maker tamper tray removal" on page 525**
17	40X8968	1	1	Sensor (booklet maker tamper paper present)	**"Booklet maker tamper tray removal" on page 525**
18	40X9492	1	1	Booklet maker rear tamper	**"Booklet maker tamper tray removal" on page 525**

Assembly 42: Booklet maker—Aligner assembly
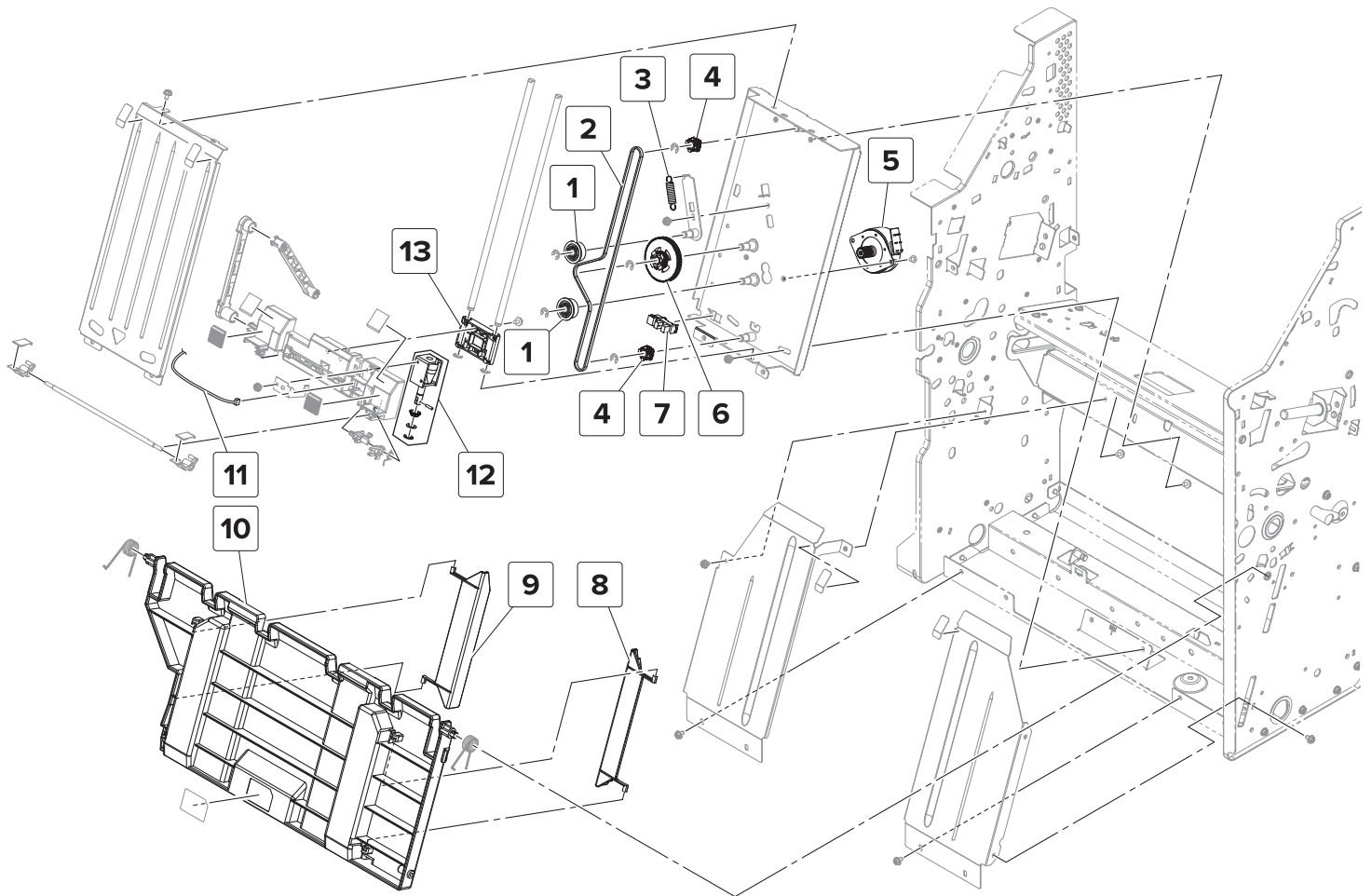
Assembly 42: Booklet maker—Aligner assembly

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9493	2	1	Booklet maker aligner tensioner pulley	**"Booklet maker aligner gears removal" on page 497**
2	40X9494	1	1	Booklet maker aligner belt	**"Booklet maker aligner belt removal" on page 496**
3	40X9495	1	1	Booklet maker aligner tensioner spring	--
4	40X9874	2	1	Booklet maker aligner gear	**"Booklet maker aligner gears removal" on page 497**
5	40X9446	1	1	Motor (booklet maker aligner)	**"Motor (booklet maker aligner) removal" on page 487**
6	40X9875	1	1	Booklet maker aligner drive gear	**"Booklet maker aligner gears removal" on page 497**
7	40X8869	1	1	Sensor (booklet maker aligner home)	**"Sensor (booklet maker aligner home) removal" on page 491**
8	40X8964	1	1	Booklet maker compiler stack front guide	**"Booklet maker aligner jam access door removal" on page 456**
9	40X9489	1	1	Booklet maker compiler stack rear guide	**"Booklet maker aligner jam access door removal" on page 456**
10	40X9854	1	1	Booklet maker aligner jam access door	**"Booklet maker aligner jam access door removal" on page 456**
11	40X9916	1	1	Booklet maker aligner solenoid cable	**"Booklet maker aligner solenoid removal" on page 498**
12	40X9497	1	1	Booklet maker aligner solenoid	**"Booklet maker aligner solenoid removal" on page 498**
13	40X8993	1	1	Booklet maker aligner carriage	**"Booklet maker aligner solenoid removal" on page 498**

Assembly 43: Booklet maker—Exit section
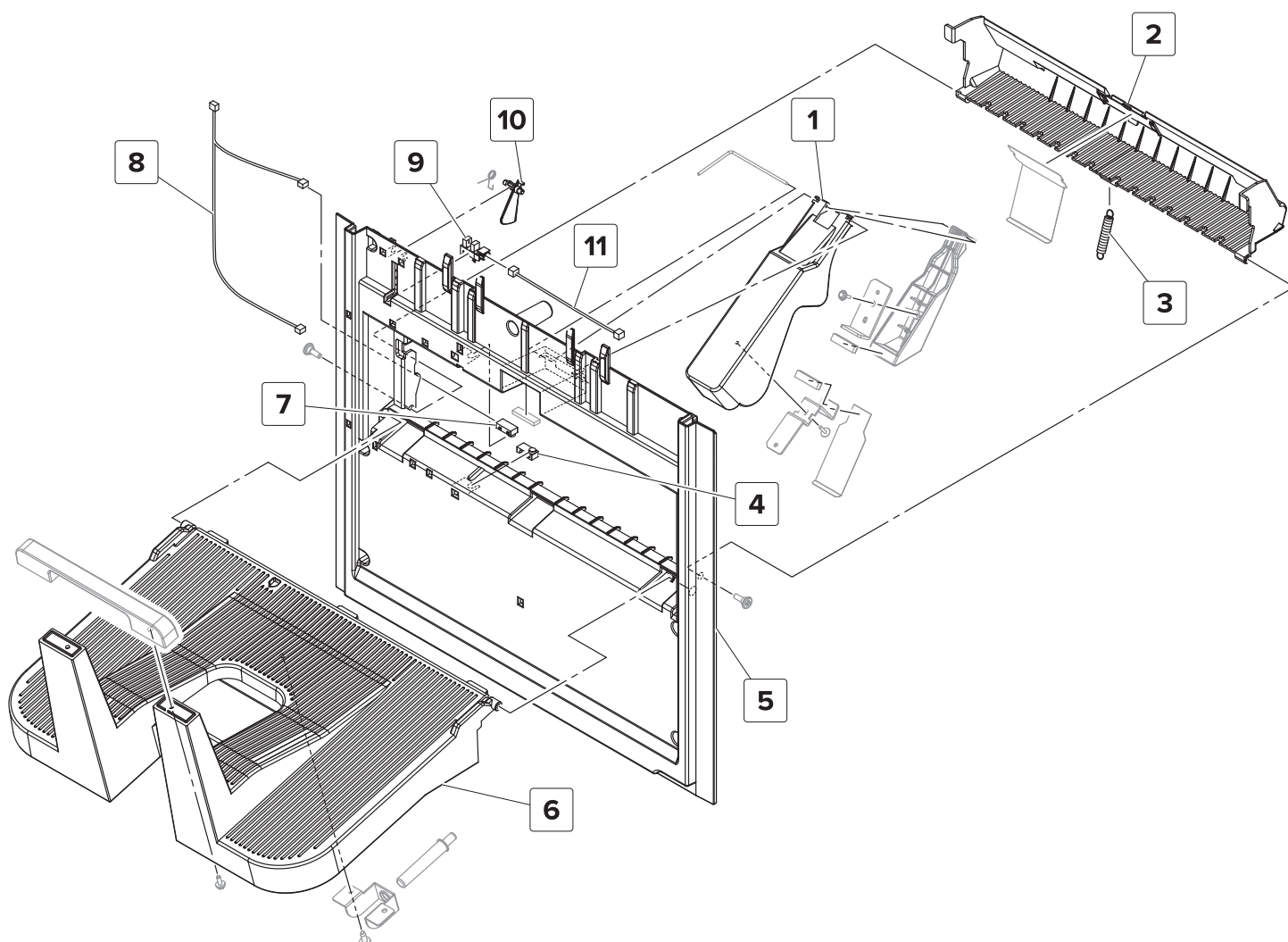
Assembly 43: Booklet maker—Exit section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9501	1	1	HPBF bin bail	**"HPBF bin bail removal" on page 329**
2	40X9502	1	1	HPBF exit roller cover	**"HPBF exit roller cover removal" on page 343**
3	40X9503	1	1	HPBF exit roller cover spring	**"HPBF exit roller cover removal" on page 343**
4	40X9538	1	1	Sensor (HPBF bin empty, transmit)	**"HPBF lower left cover sensors removals" on page 343**
5	40X9508	1	1	HPBF lower left cover	**"Lower left cover removals" on page 340**
6	40X9499	1	1	HPBF bin	**"Lower left cover removals" on page 340**
7	40X9540	1	1	Sensor (HPBF bin empty, receive)	**"HPBF lower left cover sensors removals" on page 343**
8	40X9504	1	1	HPBF bin empty sensor cable	--
9	40X8869	1	1	Sensor (SHPF elevator bin full)	**"HPBF lower left cover sensors removals" on page 343**
10	40X9506	1	1	HPBF elevator bin full sensor actuator	**"HPBF lower left cover sensors removals" on page 343**
11	40X9877	1	1	HPBF elevator bin full sensor cable	--

Assembly 44: SHPF and booklet maker—Wiring

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
NS	40X9208	1	1	SHPF interface cable	--
NS	40X8874	1	1	SHPF J4, J5, and J10 cable harness	--
NS	40X9006	1	1	SHPF J9 cable harness	--
NS	40X9412	1	1	SHPF ejector cable harness	--
NS	40X8918	1	1	SHPF upper left cover cable harness	--
NS	40X9509	1	1	Booklet maker J8 and J9 cable harness	--
NS	40X9878	1	1	Booklet maker interface cable	--
NS	40X8986	1	1	Booklet maker J7 cable harness	--
NS	40X9032	1	1	Booklet maker J10 and J11 cable harness	--

Options and features

Media handling options

Some options may not be available for all models.

1	Standard 2 x 500-sheet tray
2	Optional 2 x 500-sheet tray
3	Optional 2500-sheet tray
4	Optional 3000-sheet tray
5	Multipurpose feeder
6	Staple finisher
7	Staple, hole punch finisher
8	Hole punch booklet finisher

Theory of operation

Staple finisher operation

Staple finisher sections
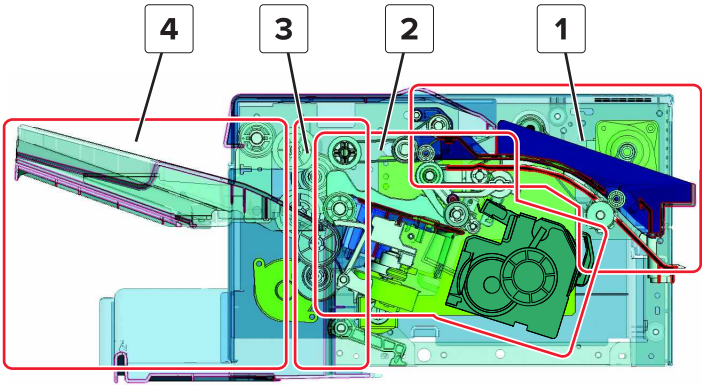
#	Part
1	Feed section
2	Compiler section
3	Exit section
4	Elevator bin section

Standard print job paper path
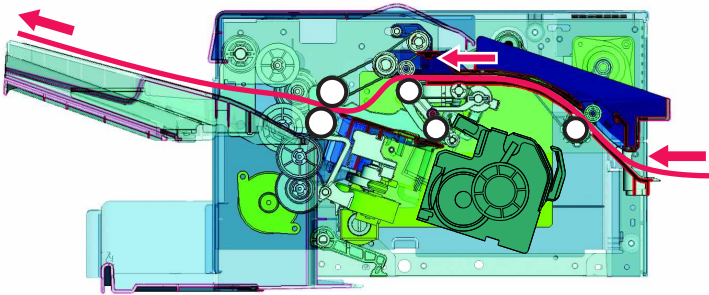
Offset or staple job paper path
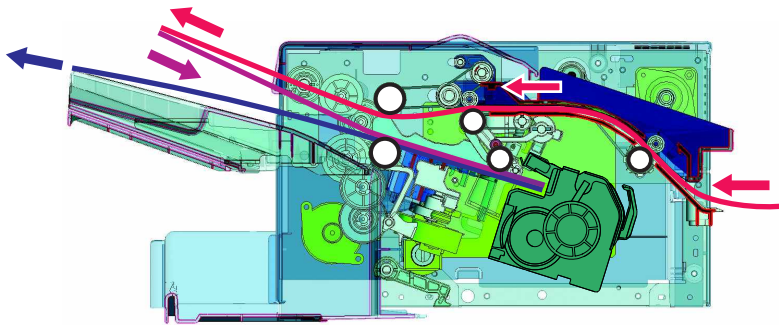
Staple finisher feed and exit section

Staple finisher feed and exit section parts
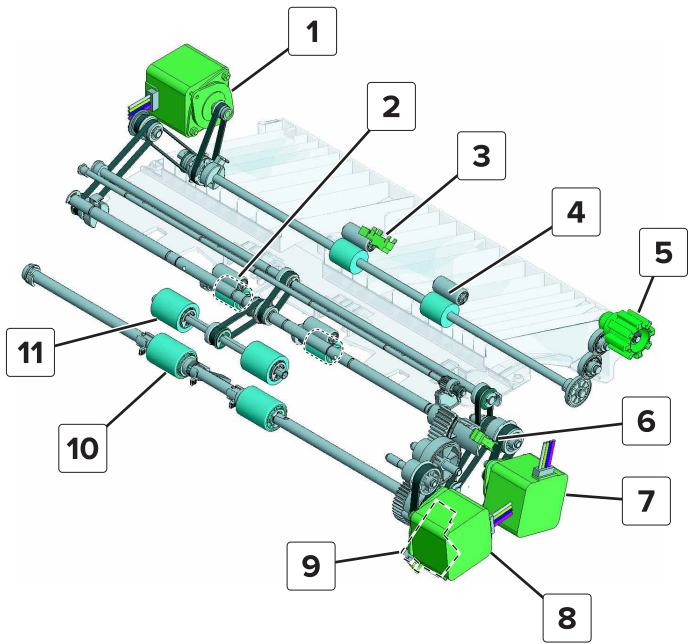
#	Part
1	Motor (staple finisher transport)
2	Compiler feed roller
3	Sensor (staple finisher paper feed)
4	Transport roller
5	Jam removal knob
6	Sensor (staple finisher upper exit roller)

Theory of operation

#	Part
7	Motor (staple finisher exit)
8	Motor (staple finisher upper exit)
9	Upper exit roller solenoid
10	Lower exit roller
11	Upper exit roller

Feed section paper path

The staple finisher is installed on the printer standard bin and receives paper from the printer exit roller. The motor (staple finisher transport) drives the transport roller and the compiler feed roller. The transport roller feeds the paper from the printer exit roller to the compiler feed roller. The sensor (staple finisher paper feed), positioned above the transport roller, detects the leading and trailing edges of the paper. If no finishing is required, then the paper is transported to the exit section. If finishing is required, then the paper is transported to the compiler section.

Note: By turning the jam removal knob, the transport and compiler feed rollers can be manually rotated to clear jams.
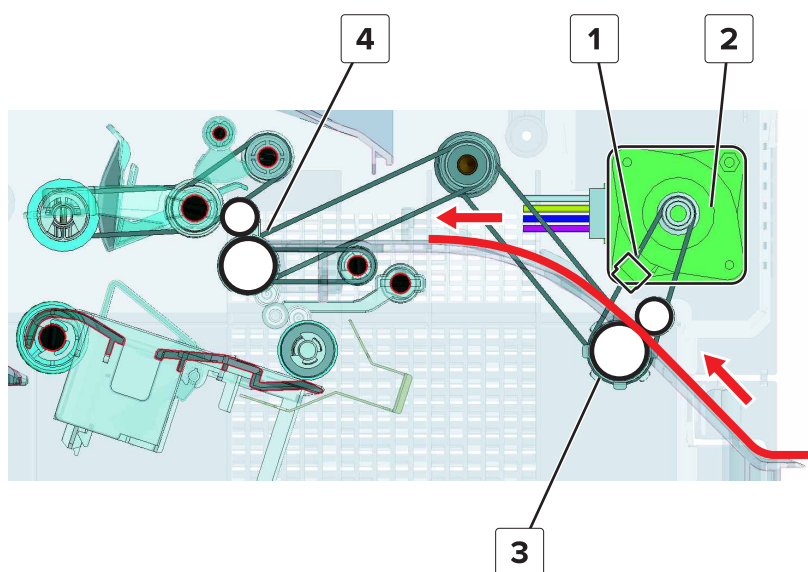
#	Part
1	Sensor (staple finisher paper feed)
2	Motor (staple finisher transport)
3	Transport roller
4	Compiler feed roller

Exit section paper path for standard print jobs

The motor (staple finisher upper exit) rotates the exit guide lift cams causing the cams to release the eject guides. The guides swing down due to their weight, and then divert the paper between the upper and lower exit rollers. The motor (staple finisher upper exit) lowers the upper exit roller to come into contact with the paper. The upper exit roller solenoid connects the lower exit roller to the motor (staple finisher exit). The motor drives the upper and lower exit rollers to feed the paper to the bin.

The paper passing through the exit rollers lowers the tamper paper present sensor actuator. As the trailing edge passes through the roller, the actuator returns to its original position, signaling that the paper is in the bin. The upper exit roller returns to its home position.
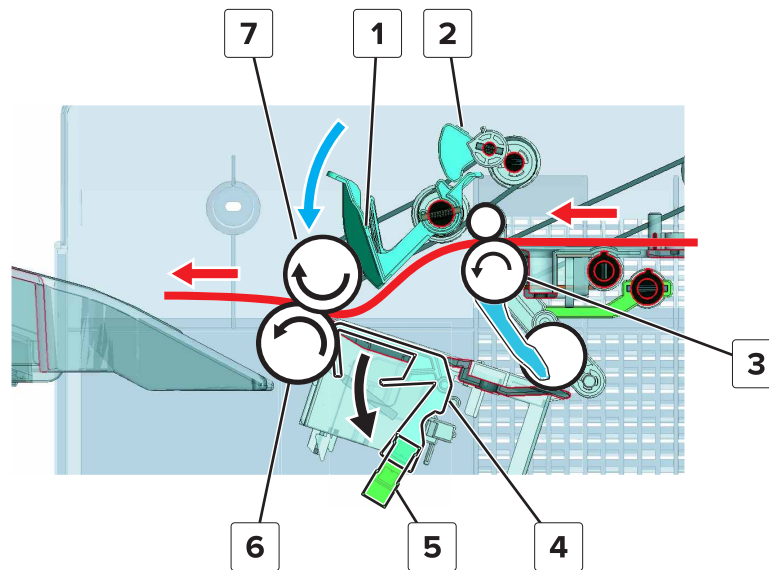
#	Part
1	Eject guides
2	Exit guide lift cams
3	Compiler feed roller
4	Tamper paper present sensor actuator
5	Sensor (staple finisher tamper paper present)
6	Lower exit roller
7	Upper exit roller

Staple finisher compiler section

Staple finisher compiler section parts

At the compiler section, the sheets of paper are aligned for offset and staple jobs. The sheets are individually fed and aligned in the compiler assembly, and then fed out to the exit section.
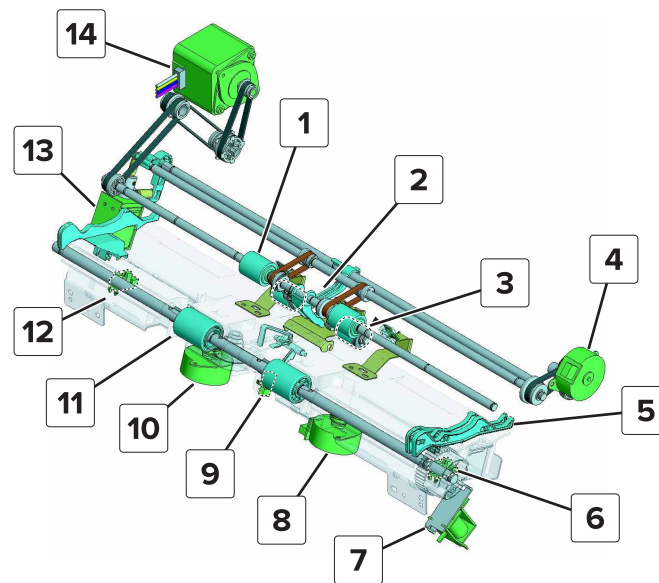
#	Part
1	Compiler feed roller
2	Stack lever
3	Aligner roller
4	Motor (staple finisher aligner)
5	Front tamper
6	Sensor (staple finisher front tamper home)
7	Exit roller solenoid
8	Motor (staple finisher front tamper)
9	Sensor (staple finisher tamper paper present)
10	Motor (staple finisher rear tamper)
11	Lower exit roller
12	Sensor (staple finisher rear tamper home)
13	Stack lever solenoid
14	Motor (staple finisher transport)

Compiler section paper feed

After receiving the paper from the feed section, the compiler feed roller pushes the paper between the raised upper exit roller and lower exit roller. The paper falls due to its weight, and the trailing edge lands on the compiler assembly. The paper toggles the sensor (staple finisher tamper paper present).
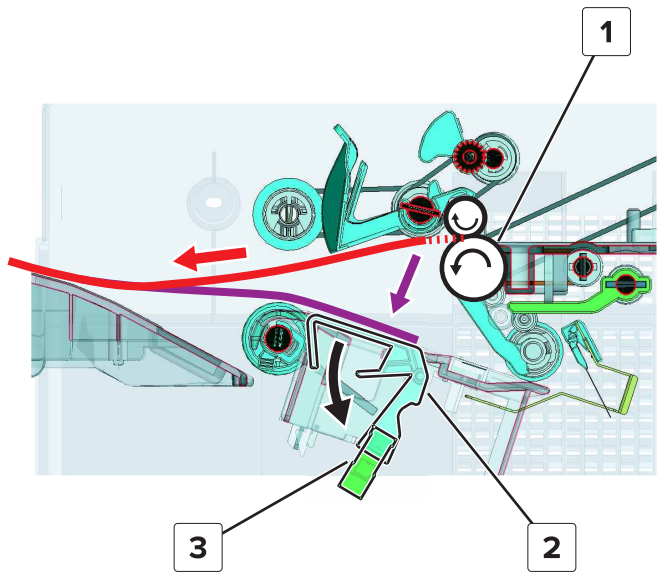
#	Part
1	Compiler feed roller
2	Tamper paper present sensor actuator
3	Sensor (staple finisher tamper paper present)

Compiler section paper alignment

The motor (staple finisher upper exit) lowers the upper exit roller to come into contact with the paper. The motor (staple finisher exit) drives the upper exit roller to feed the paper to the aligner roller. The upper exit roller returns to the home position and stops rotating to release the paper.

The motor (staple finisher aligner) drives the aligner roller. The roller pushes the paper to the aligners to align the short edge.
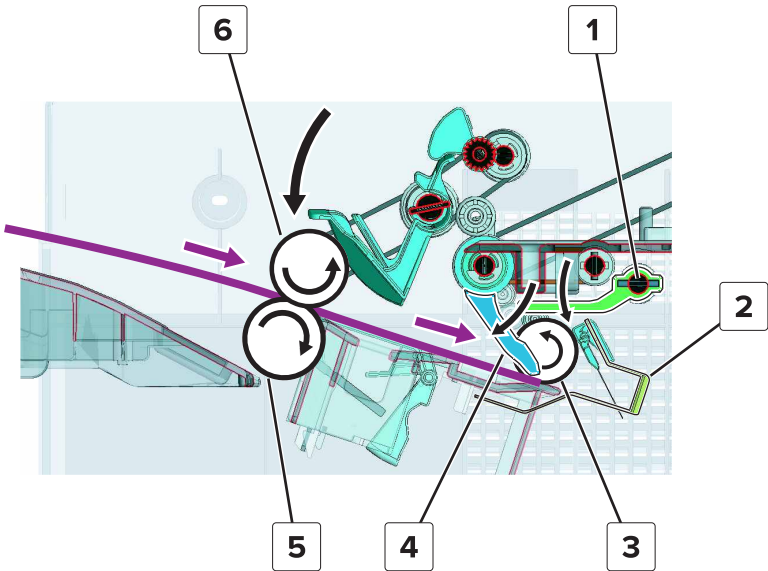
#	Part
1	Stack lever
2	Aligners
3	Aligner roller
4	Stack clamp
5	Lower exit roller
6	Upper exit roller

The front and rear tamper motors control their respective tampers. The long edges are aligned when the tampers move and come into contact with the paper.

- For staple jobs, both tampers move to align the paper at the middle.
- For offset jobs, the paper is aligned to the rear or front of the compiler section.

After the paper is aligned, the stack lever solenoid lowers the stack lever. The lever presses the stack clamp, and the clamp holds the edge of the paper in place.

The second sheet of paper is transported over the first sheet. The stack clamp moves up, and then the upper exit roller feeds both sheets to the aligner roller. The upper exit roller returns to the home position to release the paper. The alignment process for the short and long edges repeats.

Note: Subsequent sheets of paper are fed and aligned in the same manner.
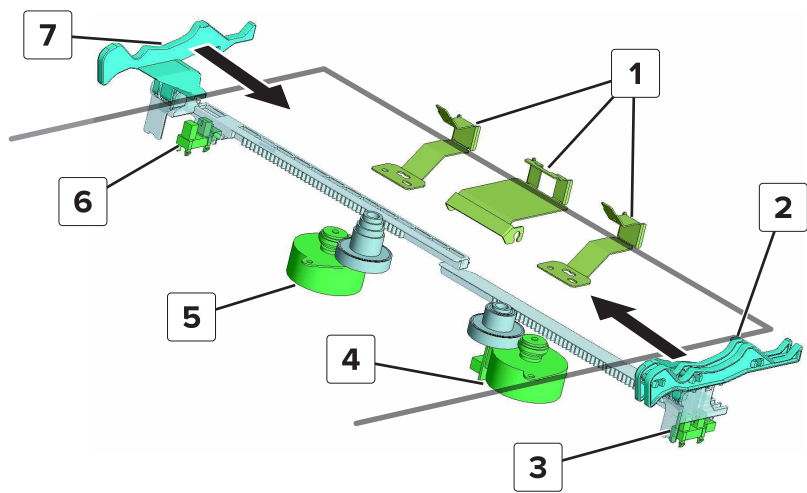
#	Part
1	Aligners
2	Front tamper
3	Sensor (staple finisher front tamper home)
4	Motor (staple finisher front tamper)
5	Motor (staple finisher rear tamper)
6	Sensor (staple finisher rear tamper home)
7	Rear tamper

Theory of operation

Compiler section exit

After all the sheets of paper are aligned, the upper exit roller moves down, and with the lower exit roller, holds the stack in place. If it is a staple job, then the stack is stapled. The stack clamp moves up to release the edge of the stack. The aligner roller and both exit rollers feed the stack to the bin.

#	Part
1	Stack lever
2	Aligner roller
3	Stack clamp
4	Lower exit roller
5	Upper exit roller
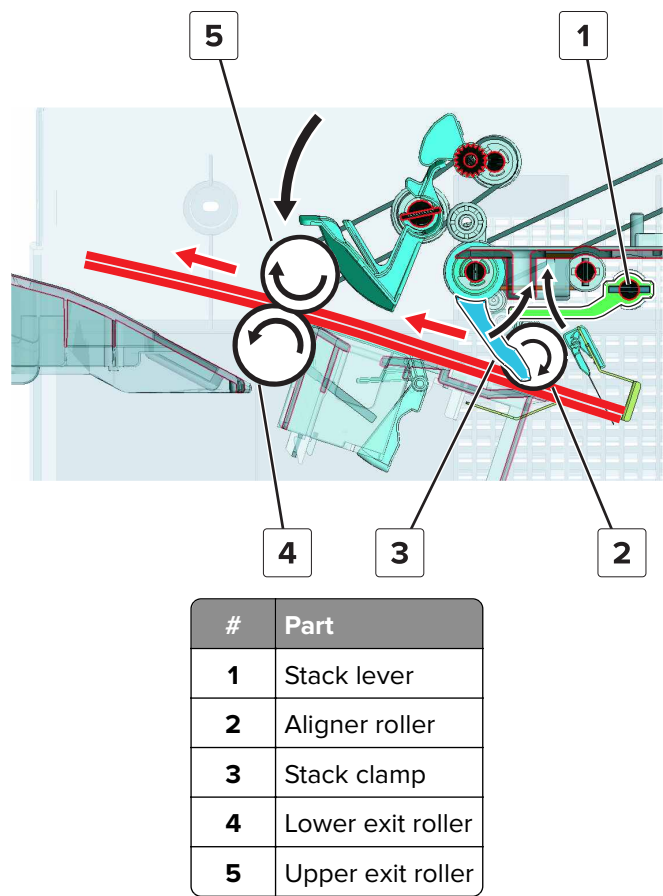
After the trailing edge of the stack passes the exit rollers, the lower exit roller paddles push the edge to feed the stack to the bin. The lower exit roller continues to rotate to return to the home position. The tamper paper present sensor actuator returns to its original position, signaling that the stack is on the bin.

#	Part
1	Aligner roller
2	Tamper paper present sensor actuator
3	Sensor (staple finisher tamper paper present)
4	Lower exit roller paddles
5	Lower exit roller
6	Upper exit roller
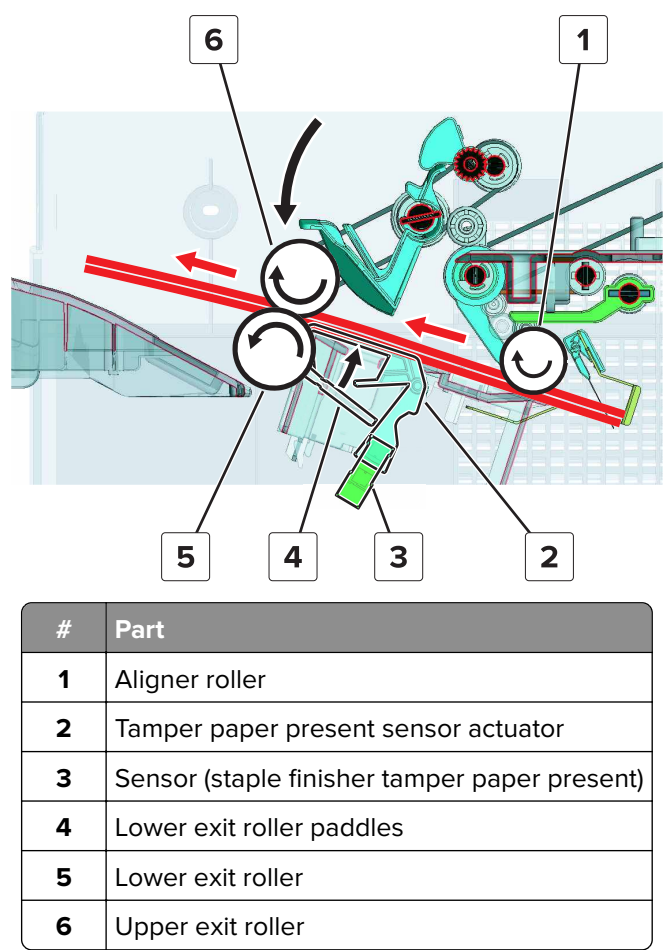
Staple unit operation

The motor (staple finisher staple unit carriage) controls the movement of the staple unit. The staple unit moves depending on the number of staples required. The sensor (staple finisher staple unit home) detects the staple unit home position at the front of the finisher.
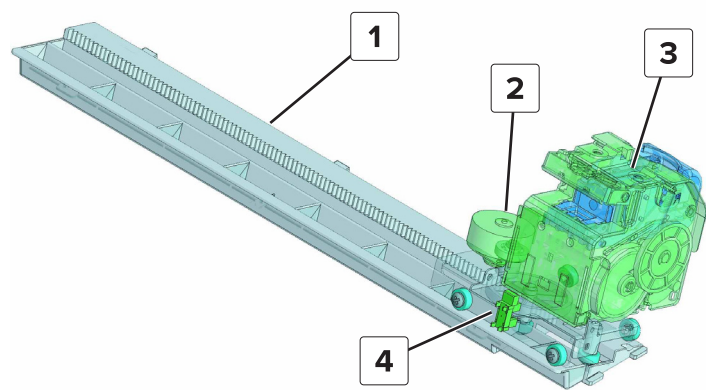
#	Part
1	Rail
2	Motor (staple finisher staple unit carriage)

Theory of operation

#	Part
3	Staple unit
4	Sensor (staple finisher staple unit home)

The motor (staple unit) controls the stapling. The paper stack is positioned under the staple arm, which clamps the stack to hold it in place during stapling. If the number of sheets in the stack exceeds the limit, then the stack is fed to the bin without being stapled.
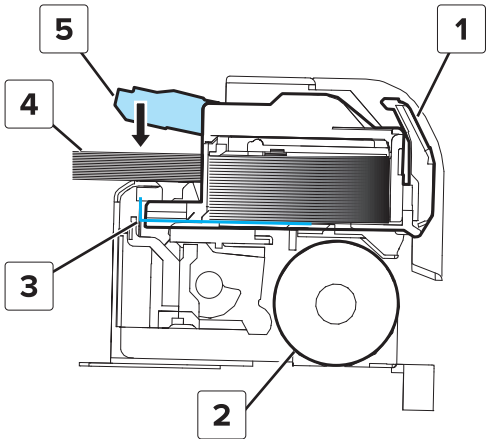
#	Part
1	Staple cartridge
2	Motor (staple unit)
3	Staple
4	Paper stack
5	Staple arm

Staple finisher bin section

The bin height depends on the amount of paper on the bin. The motor (staple finisher elevator) controls the bin movement.

Theory of operation

640
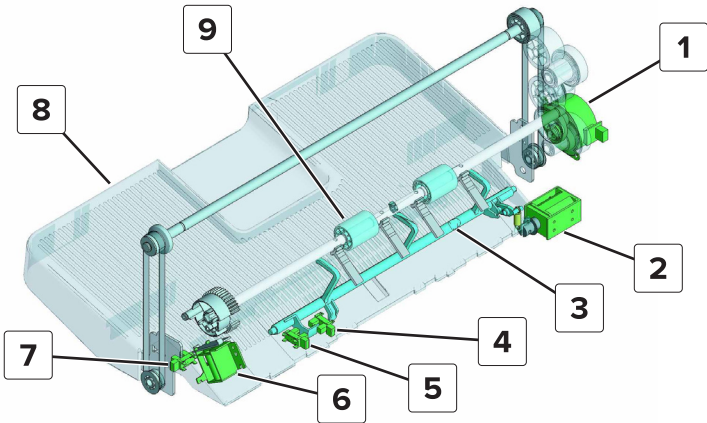
#	Part
1	Motor (staple finisher elevator)
2	Bin stack height solenoid
3	Bin stack height actuator
4	Sensor (staple finisher bin level)
5	Sensor (staple finisher bin stack height)
6	Exit roller solenoid
7	Sensor (staple finisher elevator home)
8	Bin
9	Lower exit roller

Bin stack height detection

The bin stack height solenoid lowers the bin stack height actuator to come into contact with the paper on the bin. At the end of the actuator, the sensor (staple finisher bin level) and sensor (staple finisher bin stack height) are installed at different heights. The combination of results from the sensors determines the height of the bin.
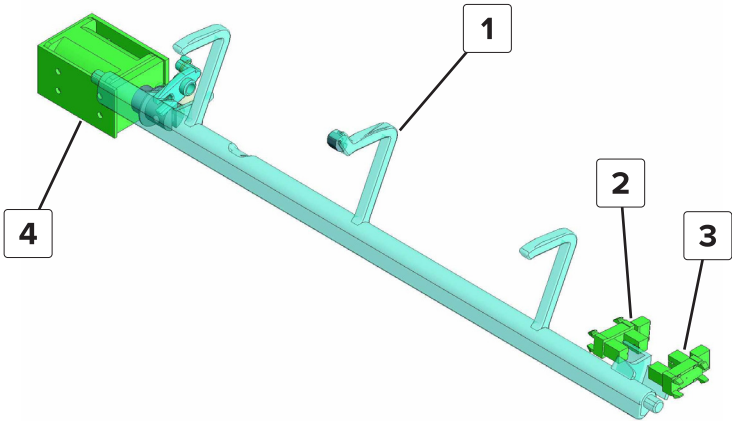
#	Part
1	Bin stack height actuator
2	Sensor (staple finisher bin level)
3	Sensor (staple finisher bin stack height)
4	Bin stack height solenoid

Bin level full detection

When the sensor (staple finisher elevator home) detects the elevator bracket, the printer determines that the bin is full.
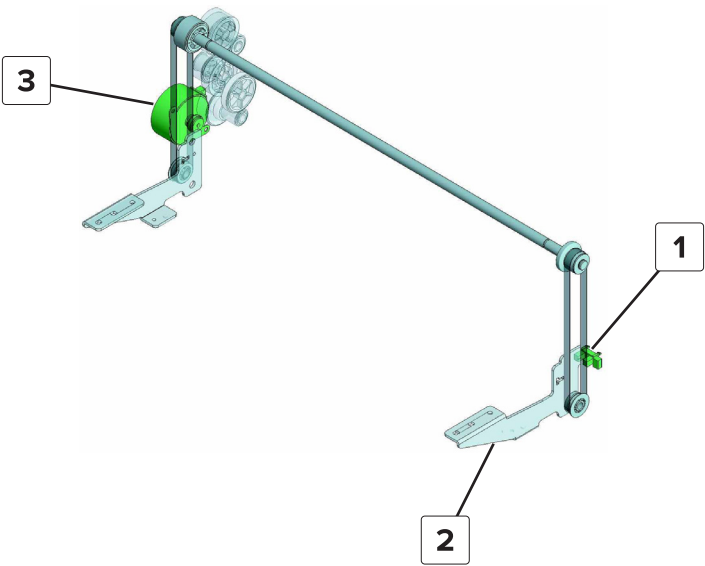
#	Part
1	Sensor (staple finisher elevator home)
2	Elevator bracket
3	Motor (staple finisher elevator)

Horizontal paper transport (HPT) operation

The HPT is installed on the printer standard bin and feeds the paper from the printer exit roller to the SHPF entrance roller. The motor (HPT transport) drives the three transport rollers, and the sensor (HPT feed) detects the paper as it passes through the rollers.

Theory of operation
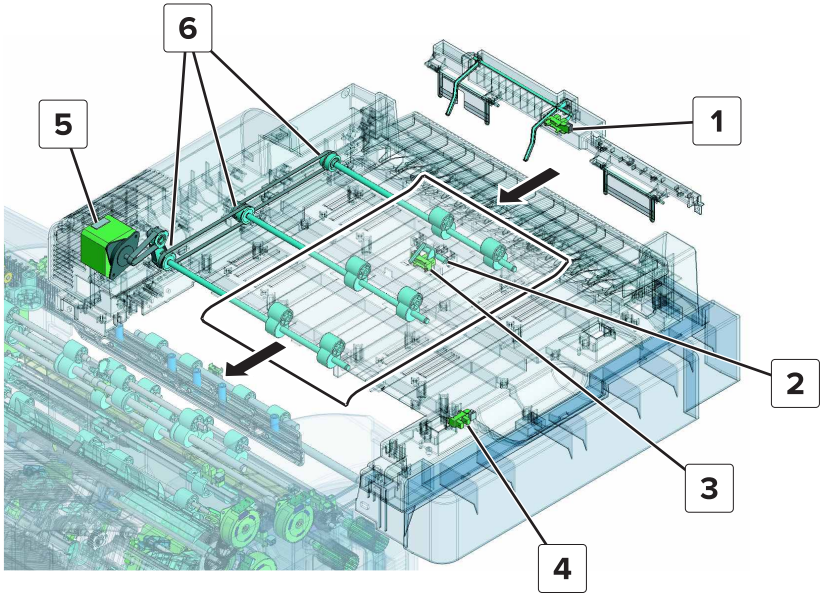
#	Part
1	Sensor (HPT bin full)
2	HPT feed sensor actuator
3	Sensor (HPT feed)
4	Sensor (HPT door)
5	Motor (HPT transport)
6	HPT transport rollers

For print jobs that do not require finishing, the paper is fed on top of the HPT. The sensor (HPT bin full) detects if the bin is full.

Theory of operation
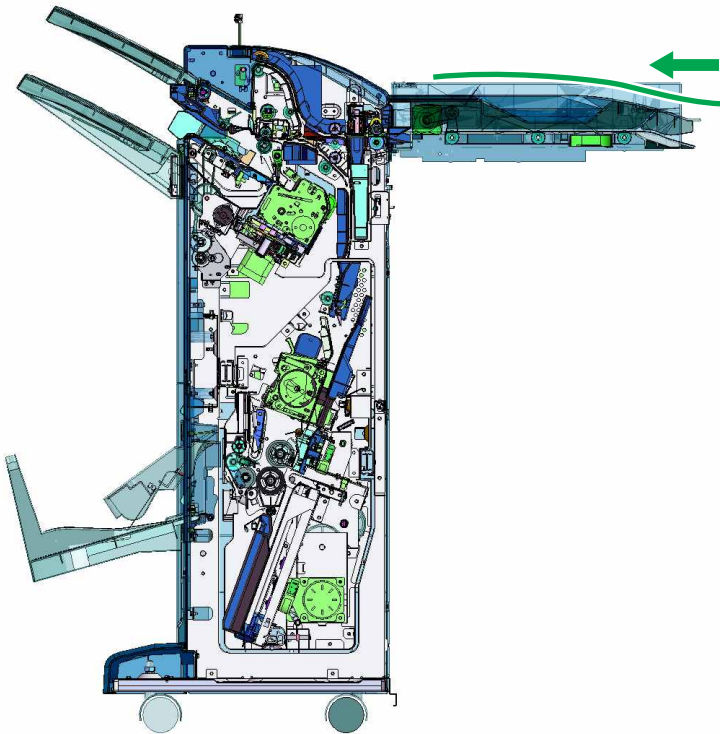
Staple, hole punch finisher (SHPF) operation

SHPF sections
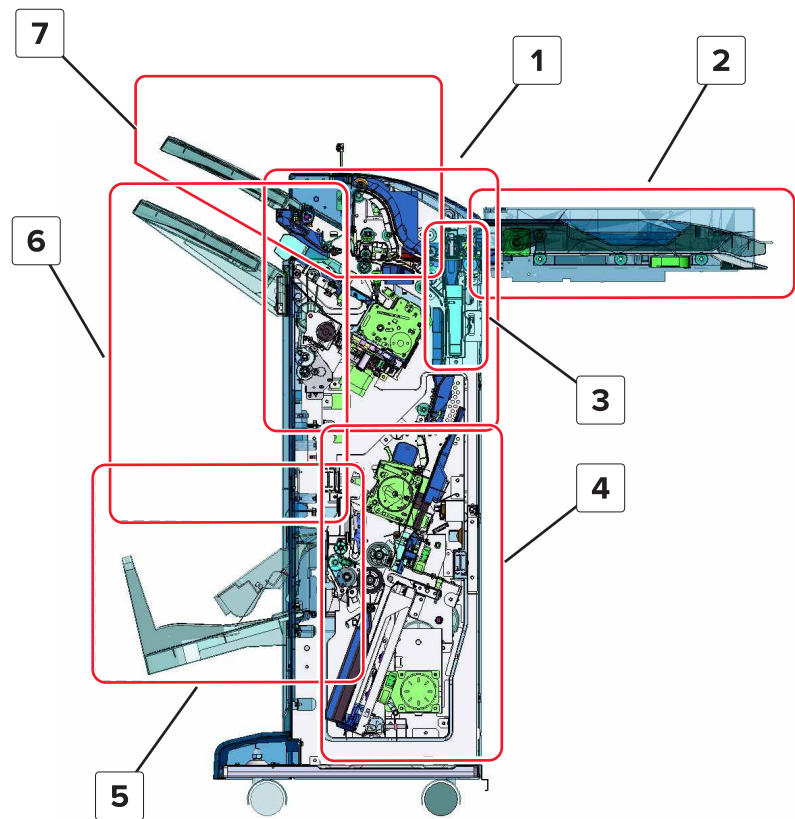
#	Part
1	Compiler section
2	Horizontal paper transport
3	Punch unit
4	Booklet maker
5	Booklet maker exit section
6	Elevator bin exit section
7	Top bin exit section

SHPF top bin exit and elevator bin exit sections

The motor (SHPF feed) drives the entrance roller, diverter, and top bin transport roller. The motor (SHPF transport) drives the top bin exit roller and compiler feed roller.

The entrance roller feeds the paper from the horizontal paper transport into the finisher. The punch unit is located between the entrance roller and diverter feed roller. If punching is required, the trailing edge of the paper is punched.

Theory of operation

Top bin exit section paper path
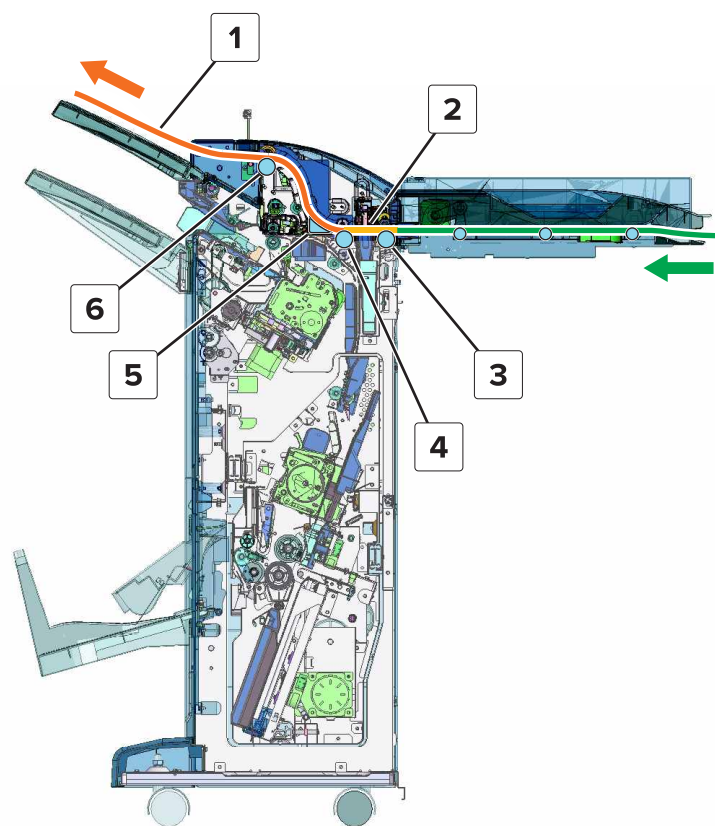
#	Part
1	Paper path
2	Punch unit
3	Entrance roller
4	Diverter feed roller
5	Diverter
6	Top bin exit roller

Top bin exit section paper feed

The diverter feed roller pushes the paper to the diverter. The diverter moves down to guide the paper through the top bin exit paper guide. The sensor (SHPF top bin exit) detects the paper as it passes through the paper path, and the sensor (SHPF top bin full) determines if the bin is full.
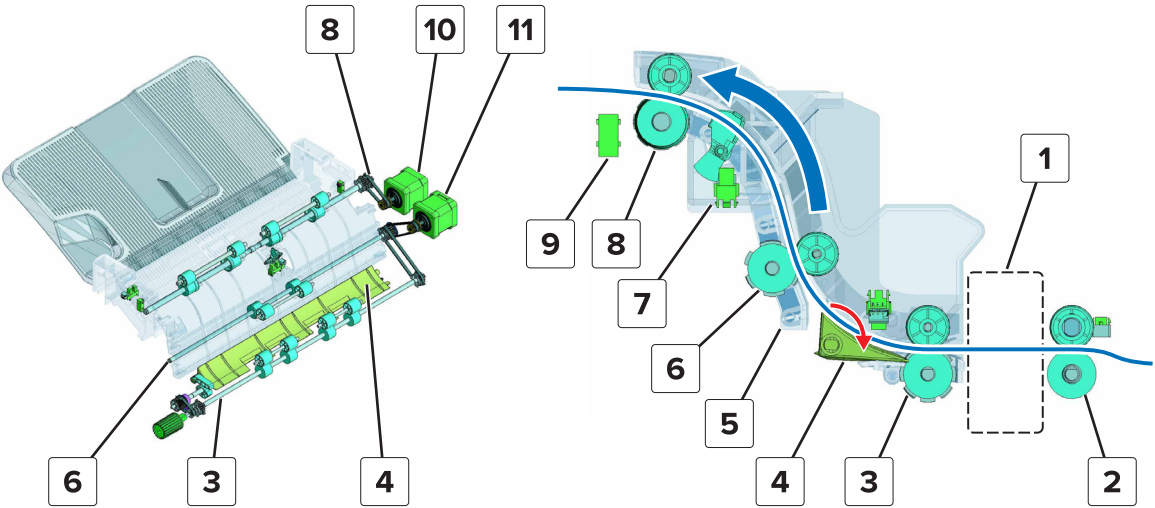
#	Part
1	Punch unit
2	Entrance roller
3	Diverter feed roller
4	Diverter
5	Top bin exit paper guide
6	Top bin transport roller
7	Sensor (SHPF top bin exit)
8	Top bin exit roller
9	Sensor (SHPF top bin full, transmit and receive)
10	Motor (SHPF transport)
11	Motor (SHPF feed)

Theory of operation

Elevator bin exit section paper path
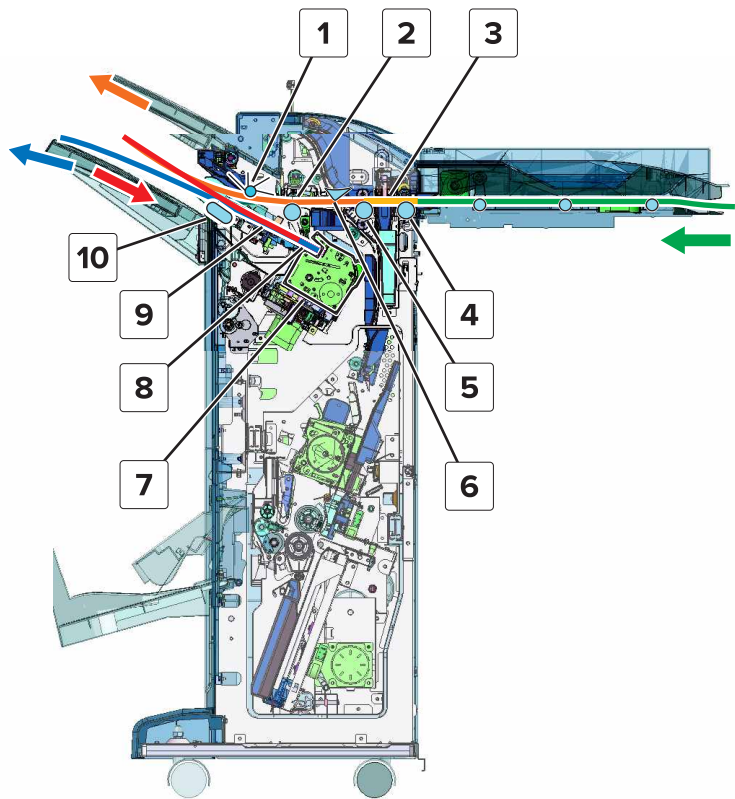
#	Part
1	Paddles
2	Compiler feed roller
3	Punch unit
4	Entrance roller
5	Diverter feed roller
6	Diverter
7	Staple unit
8	Stapling operation
9	Tamper section
10	Aligner roller

Elevator bin exit section paper feed

The diverter swings up to guide the paper to the compiler feed roller. The motor (SHPF transport) drives the diverter feed roller to feed the paper over the compiler section and to the elevator bin.
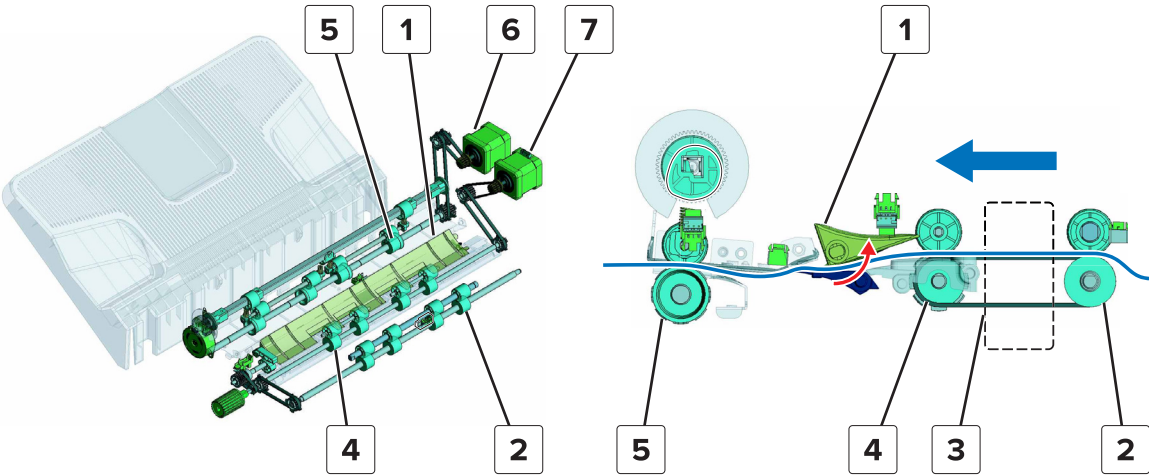
#	Part
1	Diverter
2	Entrance roller
3	Punch unit
4	Diverter feed roller
5	Compiler feed roller
6	Motor (SHPF transport)
7	Motor (SHPF feed)

Diverter operation

The position of the diverter determines whether to feed the paper to the top bin or to the elevator bin. The motor (SHPF feed) controls the diverter, and the sensor (SHPF diverter) detects the diverter position.
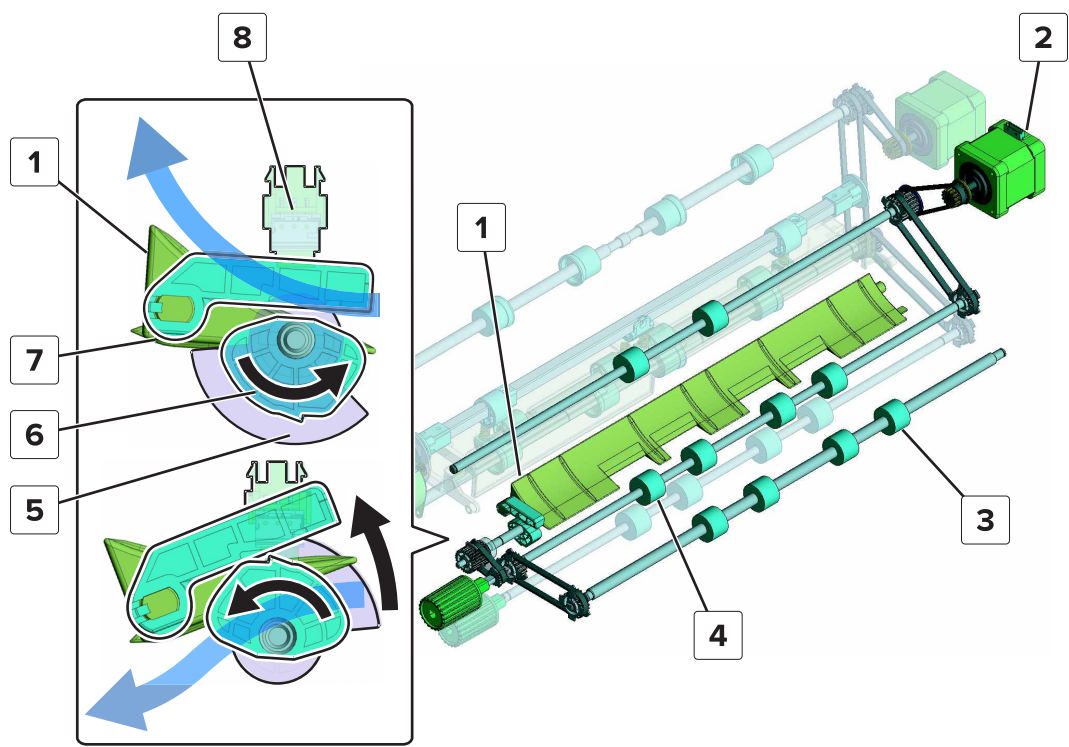
#	Part
1	Diverter
2	Motor (SHPF feed)
3	Entrance roller
4	Diverter feed roller
5	Compiler feed roller
6	Diverter cam
7	Diverter lever
8	Sensor (SHPF diverter)

SHPF punch unit operation

Skew correction is applied to the paper when it reaches the entrance rollers. The paper is fed to the punch unit, and then the trailing edge is punched.
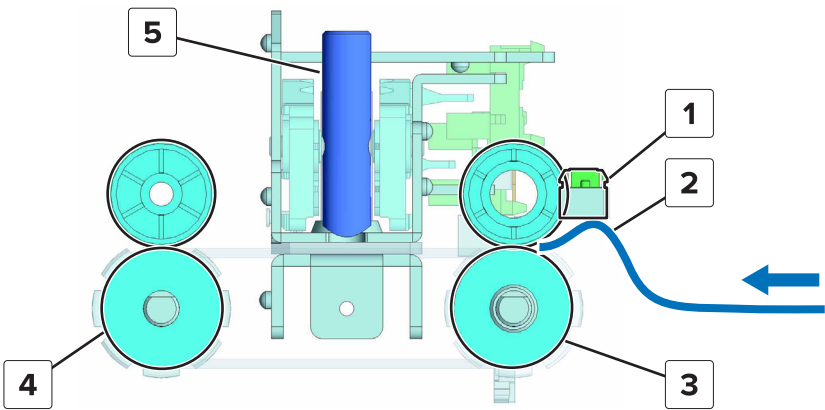
#	Part
1	Sensor (SHPF entrance)
2	Skew correction
3	Entrance roller
4	Diverter feed roller
5	Puncher

The motor (punch drive) moves the punch unit frames in opposite directions. The motion causes the slots on the frames to move the punchers up and down.
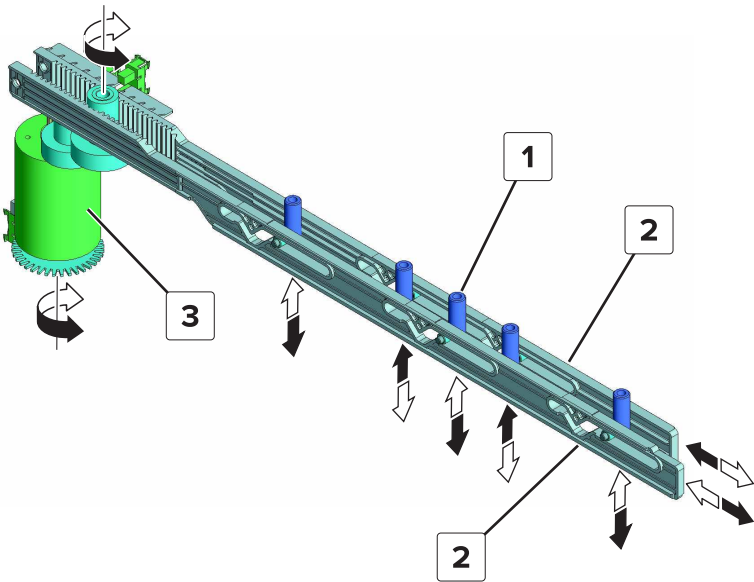
#	Part
1	Puncher
2	Punch unit frames
3	Motor (punch drive)

The chad accumulate in the hole punch box below the punch unit. When the light from the sensor (SHPF hole punch box full, transmit) is blocked, the printer determines that the box is full.

Theory of operation

The sensor (SHPF hole punch box full, receive) also detects if the box is inserted in the finisher. When the box is out of the finisher, the actuator lowers, blocking the light.
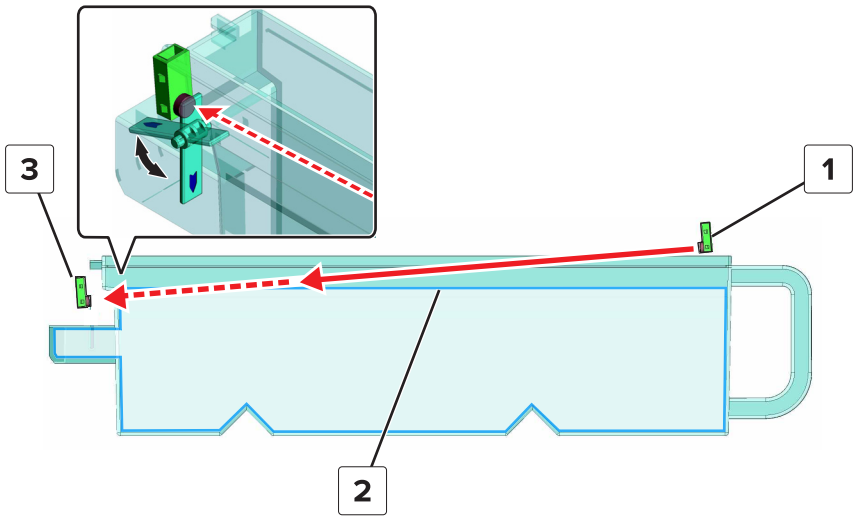
#	Part
1	Sensor (SHPF hole punch box full, transmit)
2	Hole punch box capacity
3	Sensor (SHPF hole punch box full, receive)

SHPF compiler section operation

SHPF compiler section feed

While the paper is transported to the finisher, the motor (SHPF aligner) rotates the aligner shaft. The rotation adjusts the position of the front and rear aligners according to the paper width.

Theory of operation
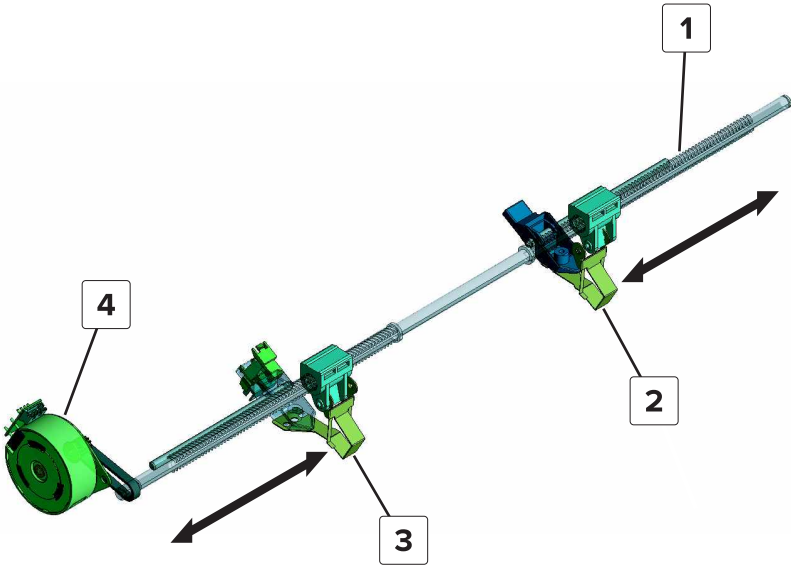
#	Part
1	Aligner shaft
2	Rear aligner
3	Front aligner
4	Motor (SHPF aligner)

The tamper motors move the front and rear tampers to the middle.
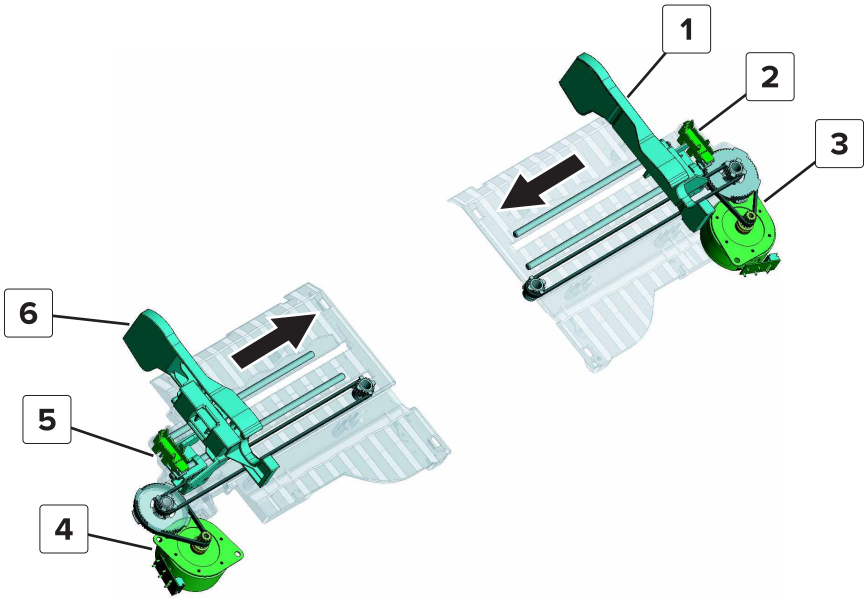
#	Part
1	Rear tamper
2	Sensor (SHPF rear tamper home)
3	Motor (SHPF rear tamper)
4	Motor (SHPF front tamper)
5	Sensor (SHPF front tamper home)
6	Front tamper

The motor (SHPF compiler feed roller release) drives the compiler feed roller release cams. The rotation of the cam controls the up and down movement of the compiler feed idler rollers. The sensor (SHPF compiler feed roller release) determines the position of the cams.

Theory of operation
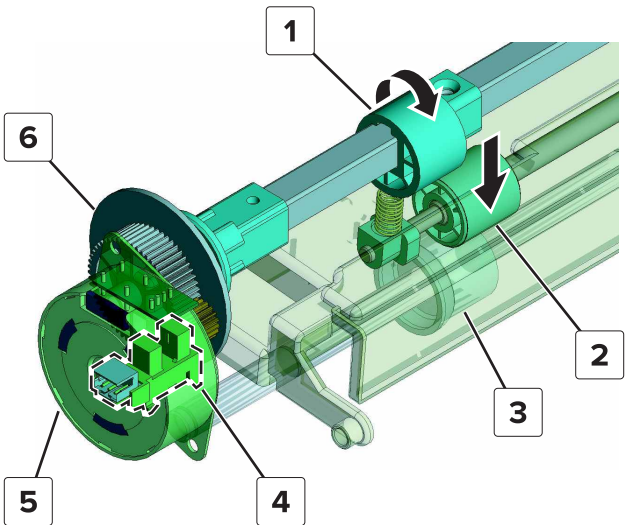
#	Part
1	Exit roller cam
2	Exit idler assembly
3	Compiler feed roller
4	Sensor (SHPF compiler feed roller release)
5	Motor (SHPF compiler feed roller release)
6	Compiler feed roller release cam encoder

SHPF compiler section paper feed

The manner in which paper is fed to the compiler assembly depends on the paper type.

- **Non-plain paper**—All sheets are individually fed to the compiler assembly.
- **Plain paper**—The first two sheets of the stack are simultaneously fed to the compiler assembly. The succeeding sheets are individually fed.

The following sequence explains the process of feeding and aligning plain paper in the compiler assembly.

The first sheet is fed between the compiler feed roller and idler rollers.

Theory of operation
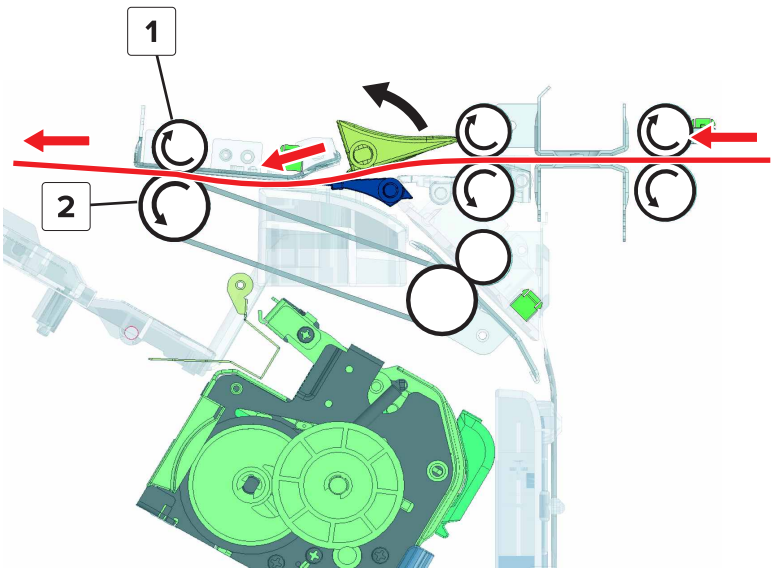
#	Part
1	Compiler feed idler rollers
2	Compiler feed roller

The compiler feed roller rotates in reverse, and then feeds the paper to the pre-feed guide.
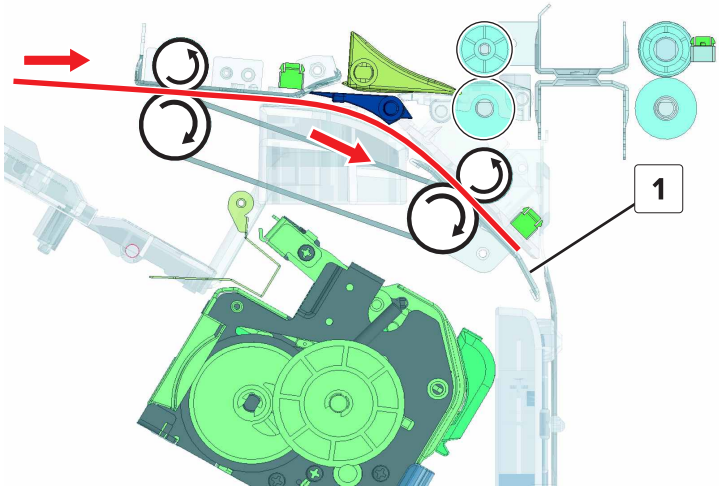
#	Part
1	Pre-feed guide

Theory of operation

The idler rollers and diverter raise, and then the second sheet is transported over the first sheet.
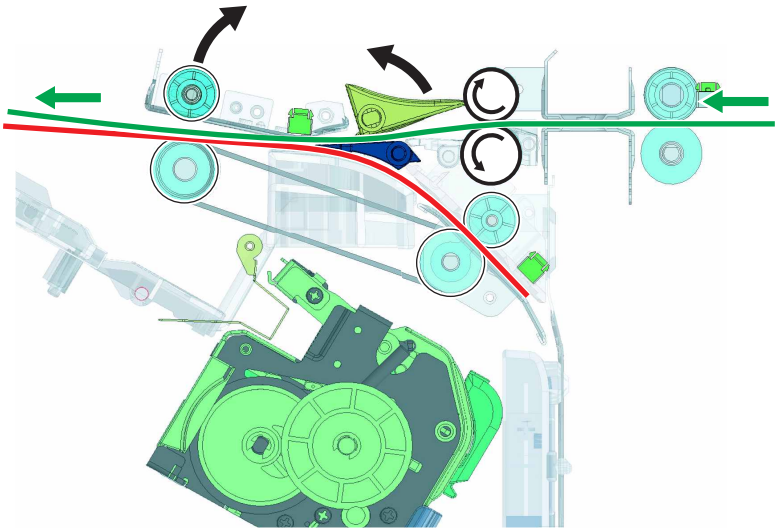
The idler rollers lower, and then the two sheets are fed over the tamper plates. Before the trailing edge passes the compiler feed roller, the tamper plates return to their home position.
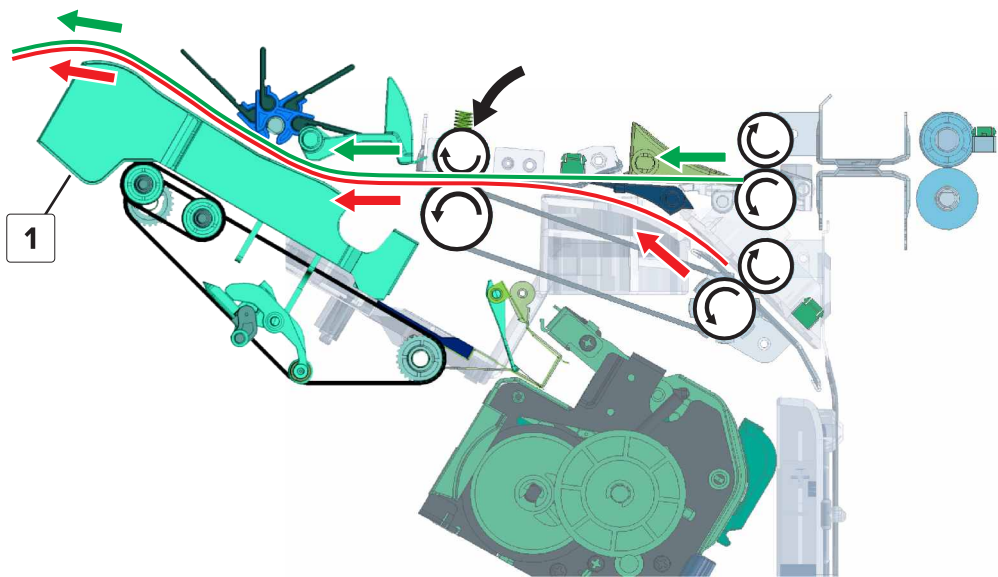
#	Part
1	Tamper plate

After the trailing edge passes the compiler feed roller, the compiler guide moves down to push down the paper to the compiler assembly. The rotation of the motor (SHPF paddle) and paddle cam control the position of the guide.

Theory of operation
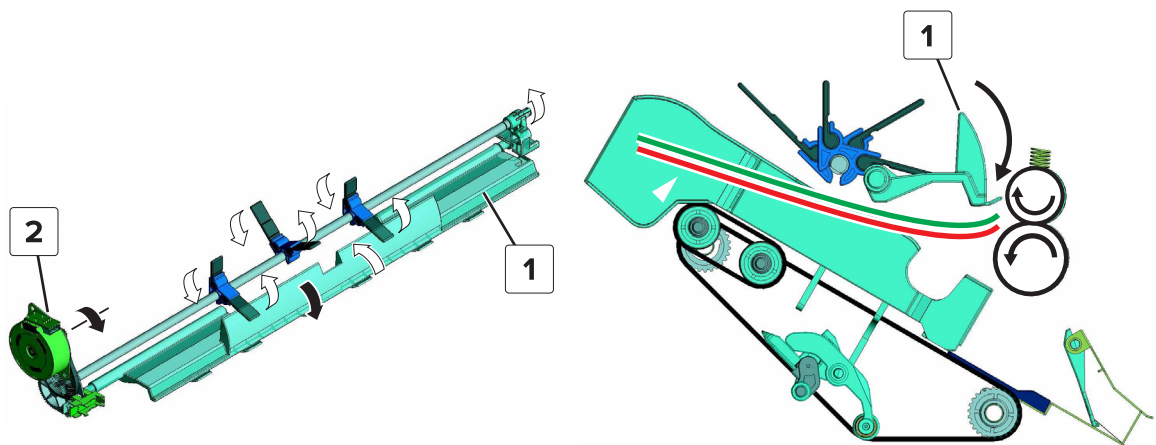
#	Part
1	Compiler guide
2	Motor (SHPF paddle)

SHPF compiler section paper alignment

The aligner paddles and aligner roller rotate to push the paper to the aligners. The motor (SHPF paddle) and motor (SHPF compiler pre-eject) drive the aligner paddles and aligner roller respectively.

Both tamper plates move to align the paper stack in the middle. If in offset mode, then the stack is aligned either to the front side or rear side. Depending on the paper width and on which side to align the stack, one tamper moves and then stops at a preset position. The other tamper pushes the stack to the stationary tamper.
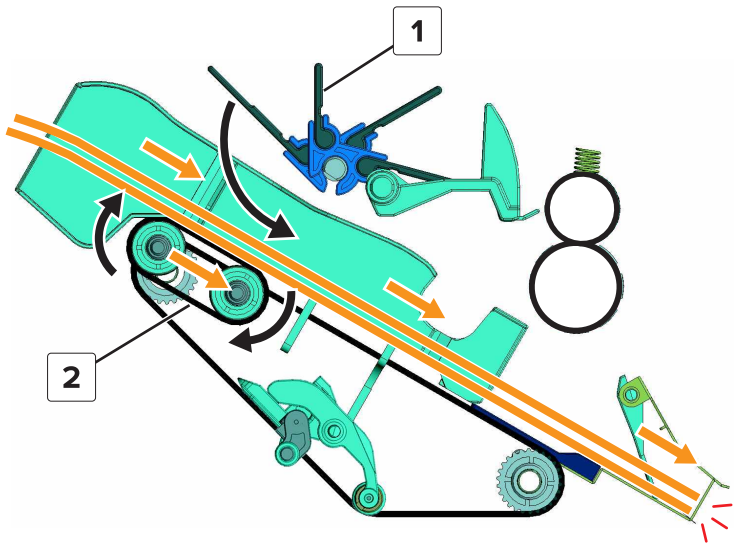
#	Part
1	Paddle
2	Aligner roller

Theory of operation

The third sheet is fed over the stack, and then the aligner paddles push the third sheet to the aligners. Succeeding sheets are individually fed and aligned in the same manner as the third sheet.
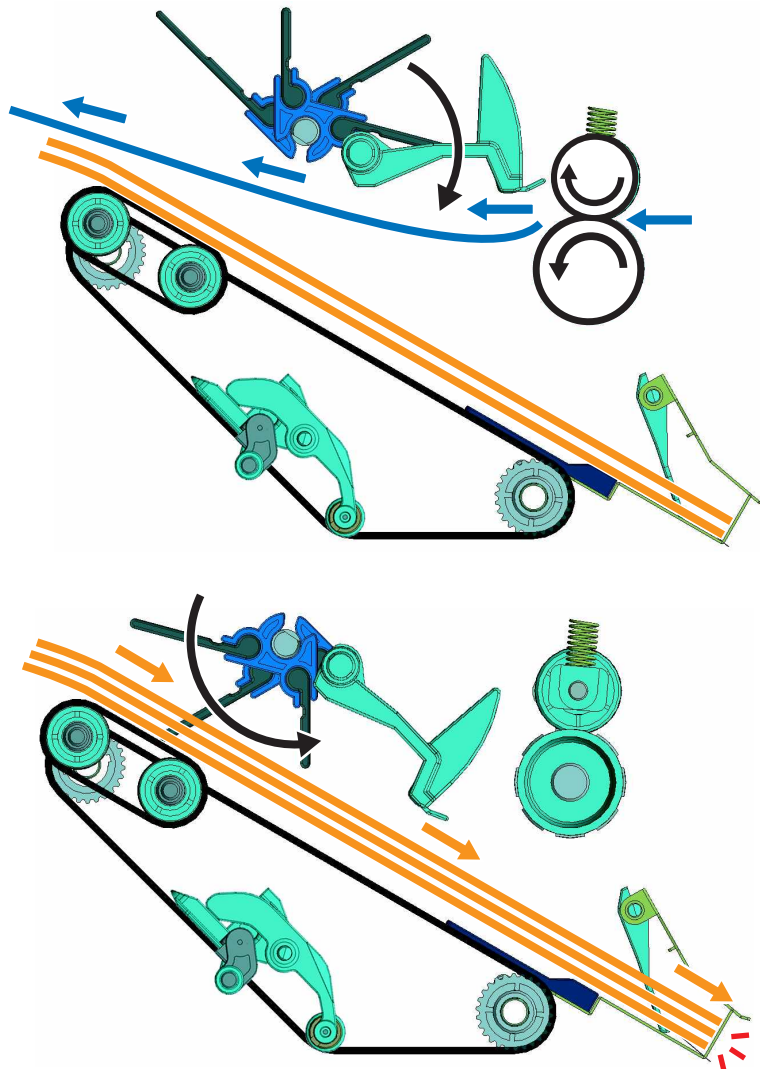
For staple jobs, the trailing edge of the stack is stapled. For two-point staple jobs, the motor (SHPF aligner) drives the aligner shaft to prevent the front and rear aligners from interfering with the staple unit.

SHPF stapling operation

The motor (SHPF staple unit carriage) controls the movement of the staple unit carriage. The sensors determine the location of the carriage along the rail. The carriage moves according to the number of staples required.
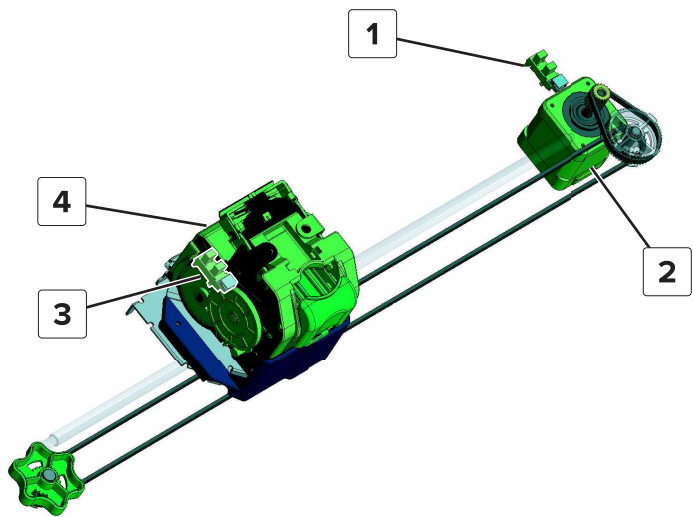
#	Part
1	Sensor (SHPF staple unit carriage home)
2	Motor (SHPF staple unit carriage)
3	Sensor (SHPF staple unit carriage center)
4	Staple unit

The motor (staple unit) controls the stapling. The sheets are positioned under the clincher staple arm, which clamps the sheets to hold them in place during stapling. If the number of sheets to be stapled exceeds the limit, then the stack is fed to the bin without being stapled.
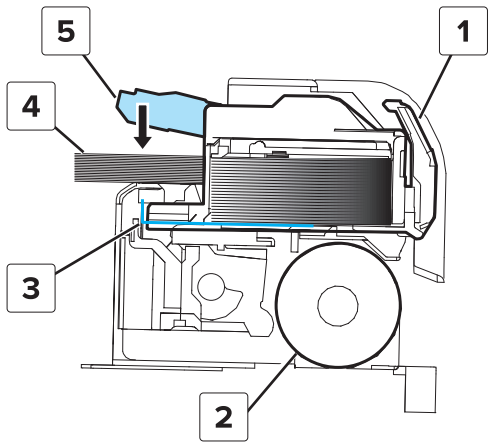
#	Part
1	Staple cartridge
2	Motor (staple unit)
3	Staple
4	Paper stack
5	Staple arm

Theory of operation

SHPF stapling operation for multiple staple jobs

To enable the finisher to handle multiple staple jobs, the first two sheets of each paper stack are simultaneously fed to the compiler assembly. The following example demonstrates two staple jobs.

After the last sheet of the first stack is fed to the compiler assembly, the first sheet of the second stack is fed between the compiler feed roller and idler rollers.

#	Part
1	Compiler feed idler rollers
2	Compiler feed roller
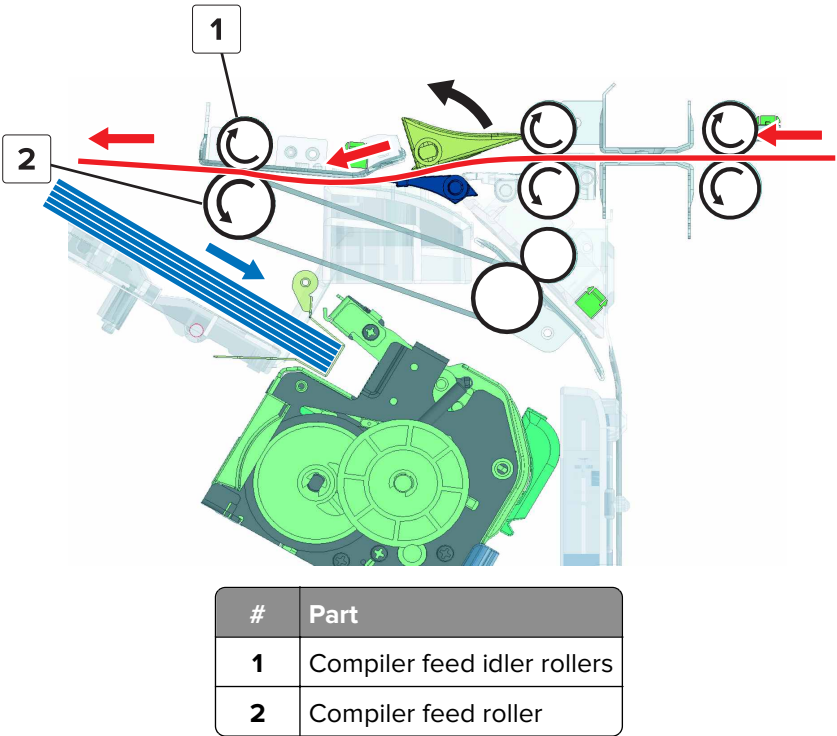
While the first stack is being aligned, the compiler feed roller rotates in reverse and then feeds the paper to the pre-feed guide.
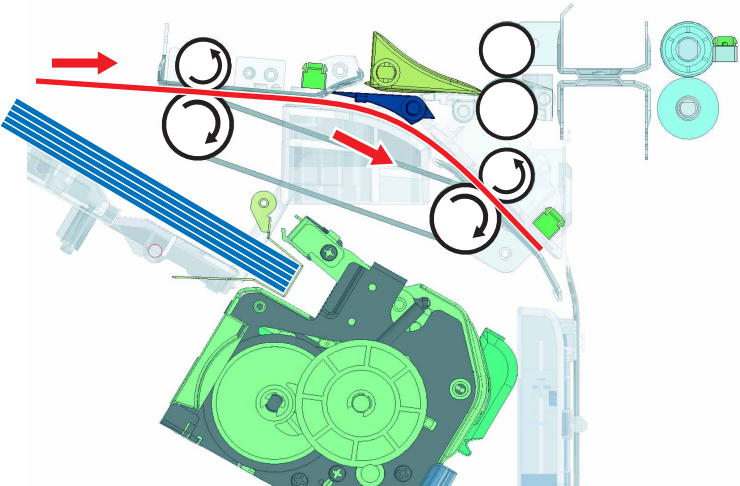
The idler rollers raise, and while the first stack is being stapled, the second sheet is positioned over the first sheet.
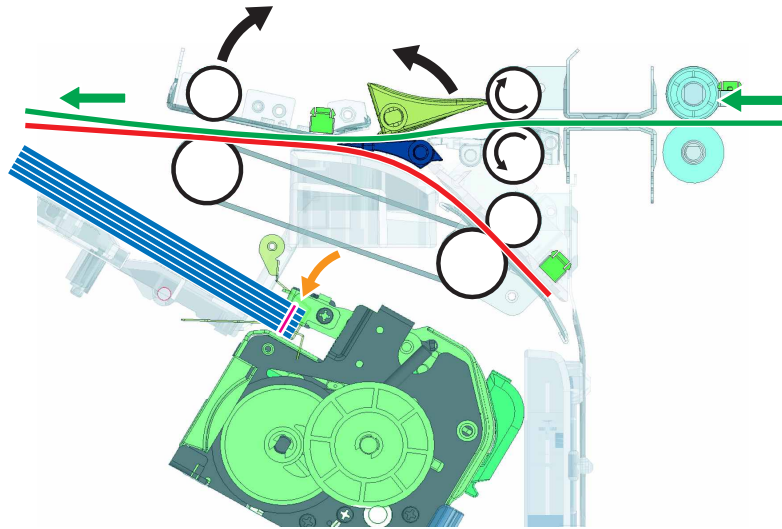
The idler rollers lower, and then the two sheets are fed to the compiler assembly. At the same time, the first stack is fed to the elevator bin. Unlike the first and second sheets, the succeeding sheets of the second stack are individually fed to the compiler assembly.

The succeeding jobs are done in the same manner as the first and second stacks.
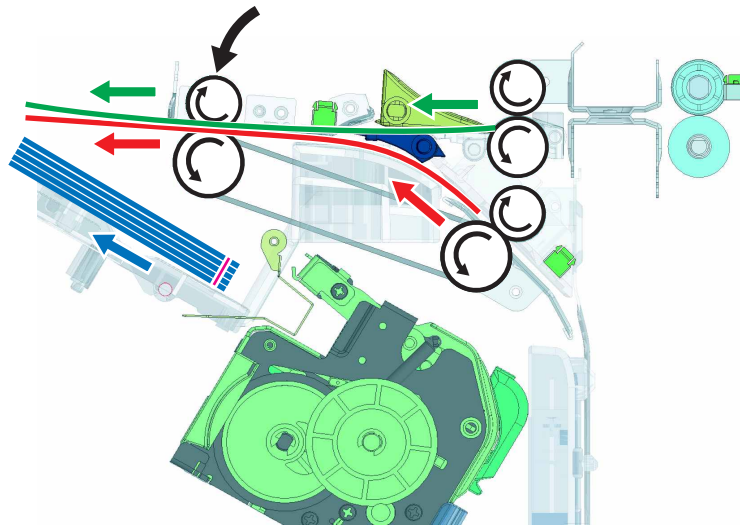
SHPF compiler section exit

After alignment or stapling, the motor (SHPF compiler pre-eject) controls the middle aligner to push the stack to the eject clamp. The motor (SHPF compiler eject) controls the eject clamp to push the stack to the elevator bin.
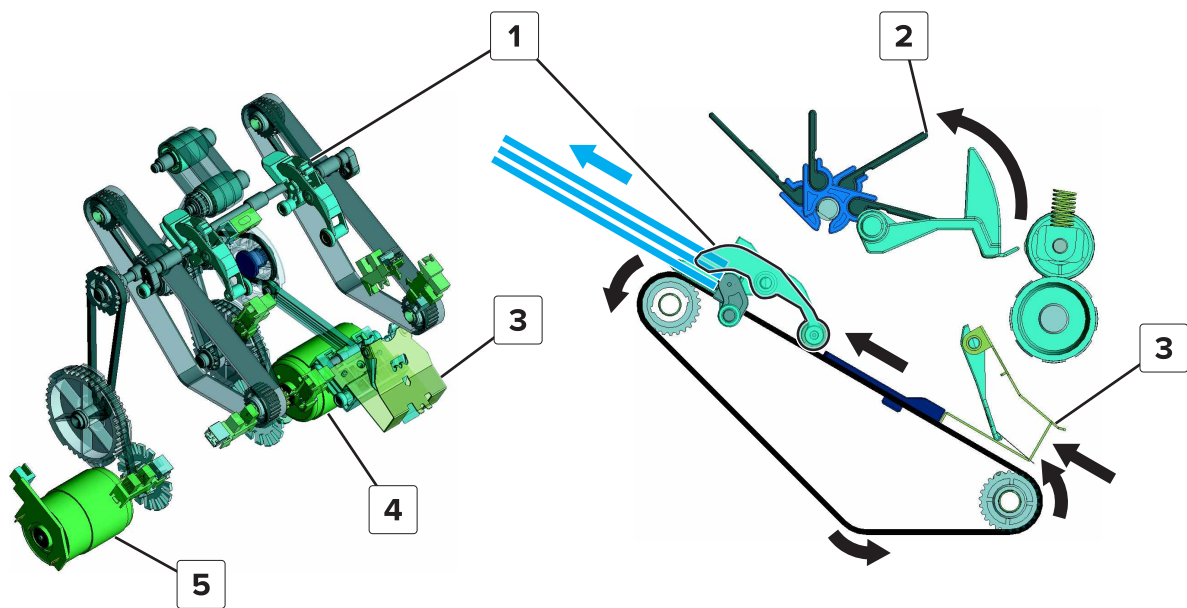
#	Part
1	Eject clamp
2	SHPF paddles
3	SHPF middle aligner
4	Motor (SHPF compiler eject)
5	Motor (SHPF compiler pre-eject)

Elevator bin section operation

Elevator bin configurations

The location of the elevator bin full position and sensor (SHPF elevator bin full) would vary depending on the presence of a booklet maker.

The height of the elevator bin depends on the amount of paper on the bin. The motor (SHPF elevator) controls the bin height.

Theory of operation
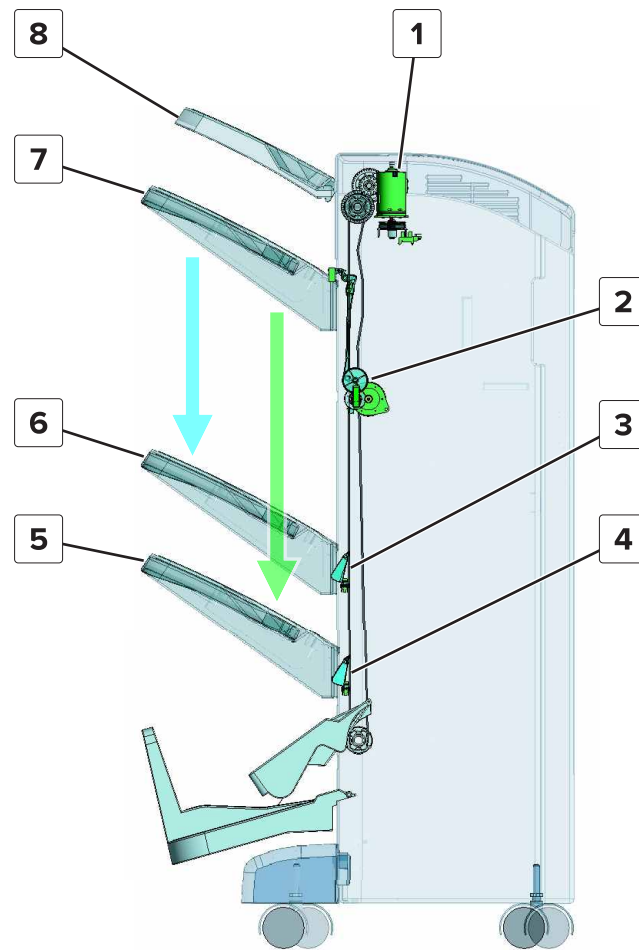
#	Part
1	Motor (SHPF elevator)
2	Motor (SHPF elevator bin stack height)
3	Sensor (SHPF elevator bin full) (booklet maker installed)
4	Sensor (SHPF elevator bin full) (booklet maker not installed)
5	Elevator bin full position (booklet maker not installed)
6	Elevator bin full position (booklet maker installed)
7	Elevator bin home position
8	Top bin

Elevator bin stack height detection

Each time paper is fed out to the bin, the motor (SHPF elevator bin stack height) lowers the elevator bin stack height fingers to come into contact with the edge of the stack. If the fingers are unable to lower and the sensors (SHPF elevator bin stack height, front and rear) are blocked, then the bin lowers until the two sensors are unblocked.
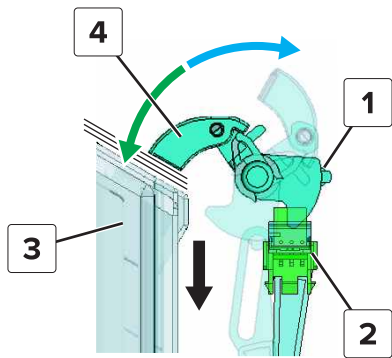
#	Part
1	Elevator bin stack height sensor actuator
2	Sensor (SHPF elevator bin stack height)
3	Elevator bin
	Elevator bin stack height finger

When stapled sheets are fed to the bin, the height of the edge of the stack can be higher than the height detected by the paper detection levers. If the stack blocks the light between the sensors (SHPF elevator bin stack height), then the bin lowers.

As the bin continues to move down due to the paper stack, the bin triggers the sensor (SHPF elevator bin full), and then the bin stops moving.
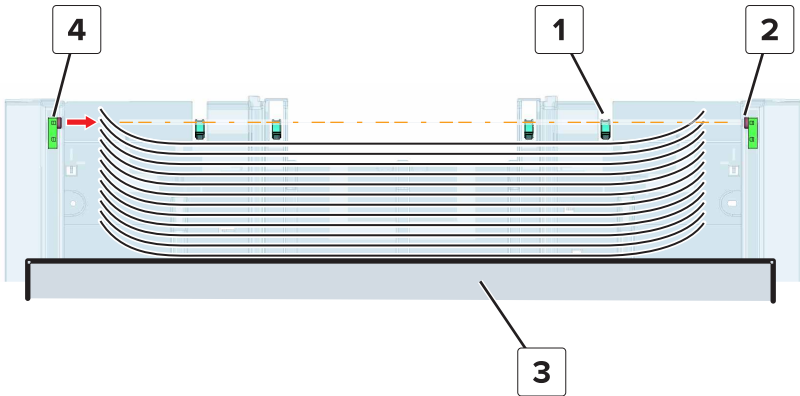
#	Part
1	Elevator bin stack height fingers
2	Sensor (SHPF elevator bin stack height, transmit)
3	Sensor (SHPF elevator bin stack height, receive)
4	Elevator bin

If the elevator bin is moving up, and the paper stack touches the tamper plates, then the sensor (SHPF elevator bin stack limit) is triggered. This action causes the elevator bin to stop moving up.

Note: If the width of the paper stack is less than the distance between the tamper plates, then the stack triggers the sensor (SHPF elevator bin stack limit). This action also causes the bin to stop moving up.

Theory of operation
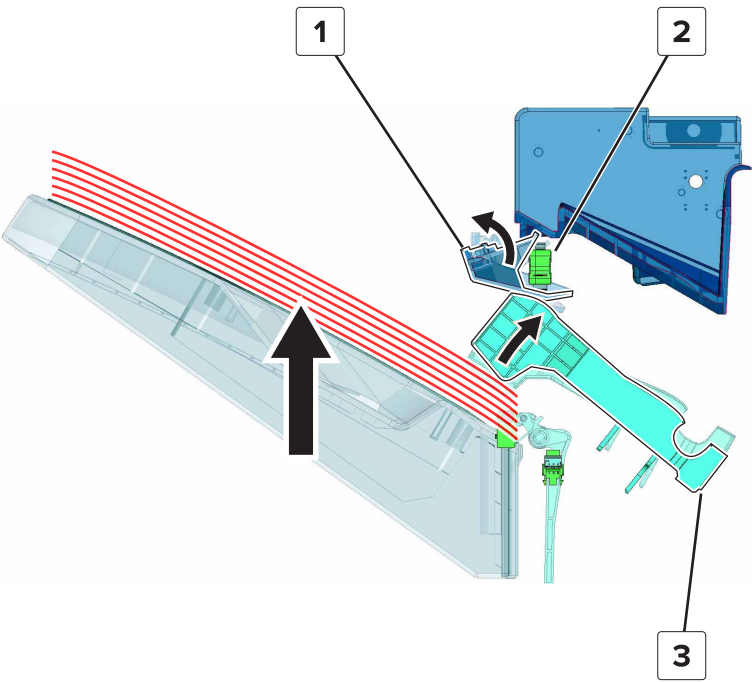
#	Part
1	SHPF elevator bin stack limit actuator
2	Sensor (SHPF elevator bin stack limit)
3	SHPF tamper plate

Booklet maker operation

Booklet maker sections
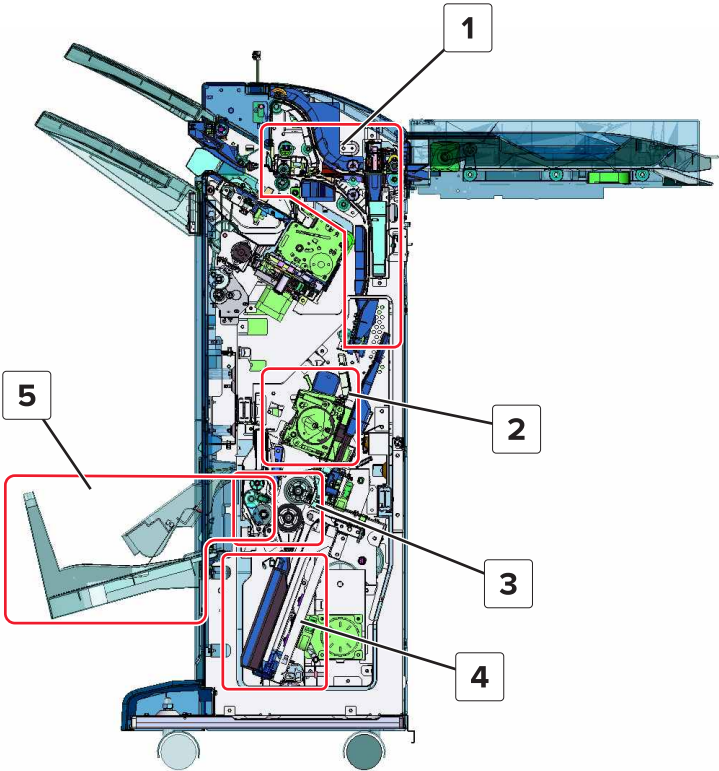
#	Part
1	Feed section
2	Staple unit
3	Bifold and trifold sections
4	Compiler section
5	Exit section

Booklet maker paper path
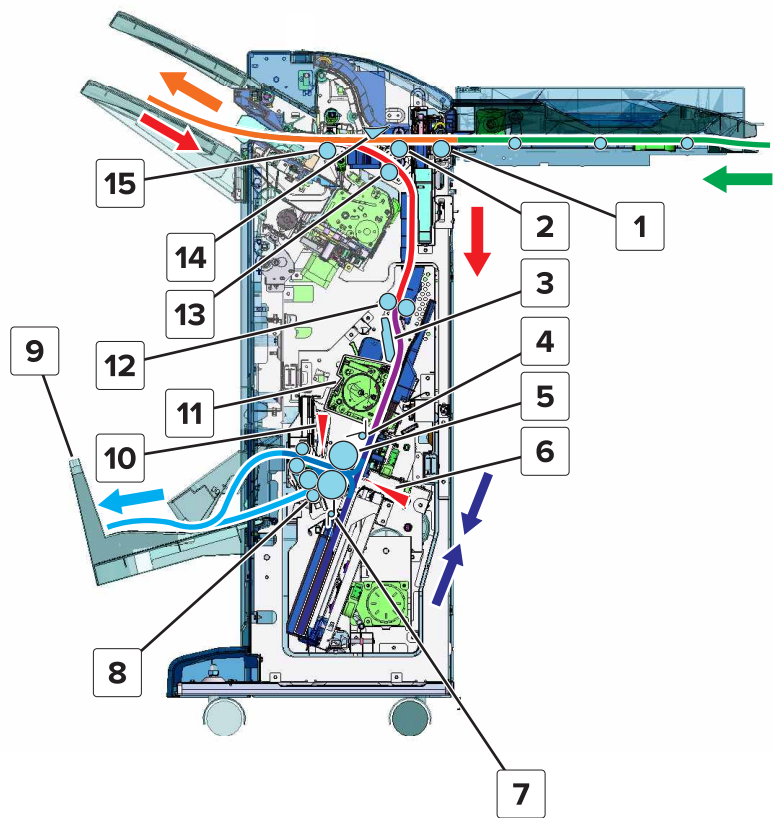
#	Part
1	SHPF entrance roller
2	SHPF diverter feed roller
3	Decurl guide
4	Booklet maker upper paddle
5	Bifold top roller
6	Bifold knife
7	Booklet maker lower paddle
8	Trifold roller
9	Hole punch, booklet finisher (HPBF) bin
10	Trifold knife
11	Booklet maker staple unit
12	Booklet maker transport roller
13	SHPF booklet maker pre-feed roller
14	SHPF diverter
15	SHPF compiler feed roller

Booklet maker paper feed

The motor (SHPF transport) drives the compiler feed roller and pre-feed roller. The rollers transport the paper from the top of the SHPF to the booklet maker transport roller.
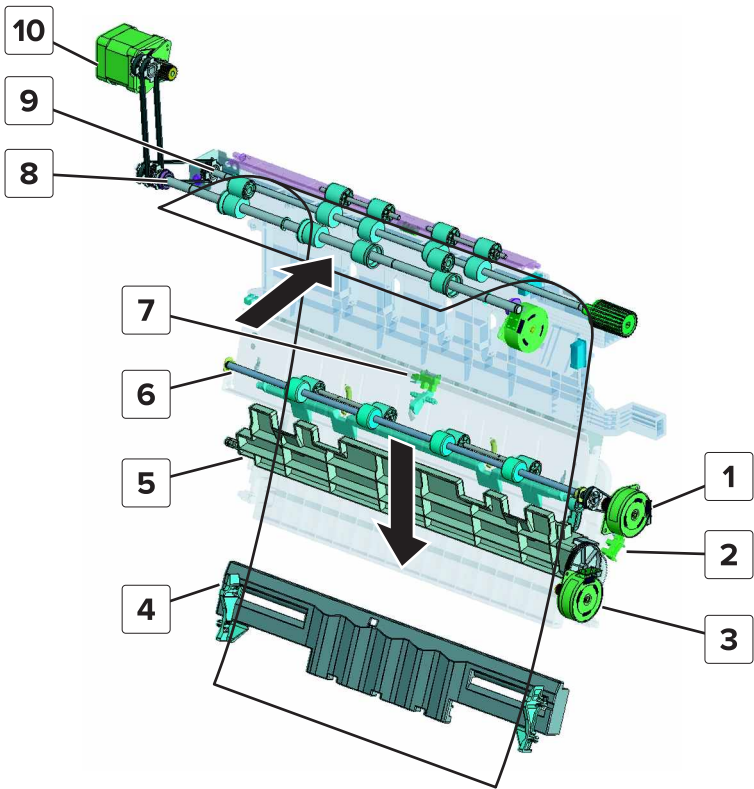
#	Part
1	Motor (booklet maker transport)
2	Sensor (booklet maker decurl)
3	Motor (booklet maker decurl)
4	Booklet maker tamper
5	Booklet maker decurl guide
6	Booklet maker transport roller
7	Sensor (booklet maker transport)
8	SHPF compiler feed roller
9	SHPF booklet maker pre-feed roller
10	Motor (SHPF transport)

Theory of operation
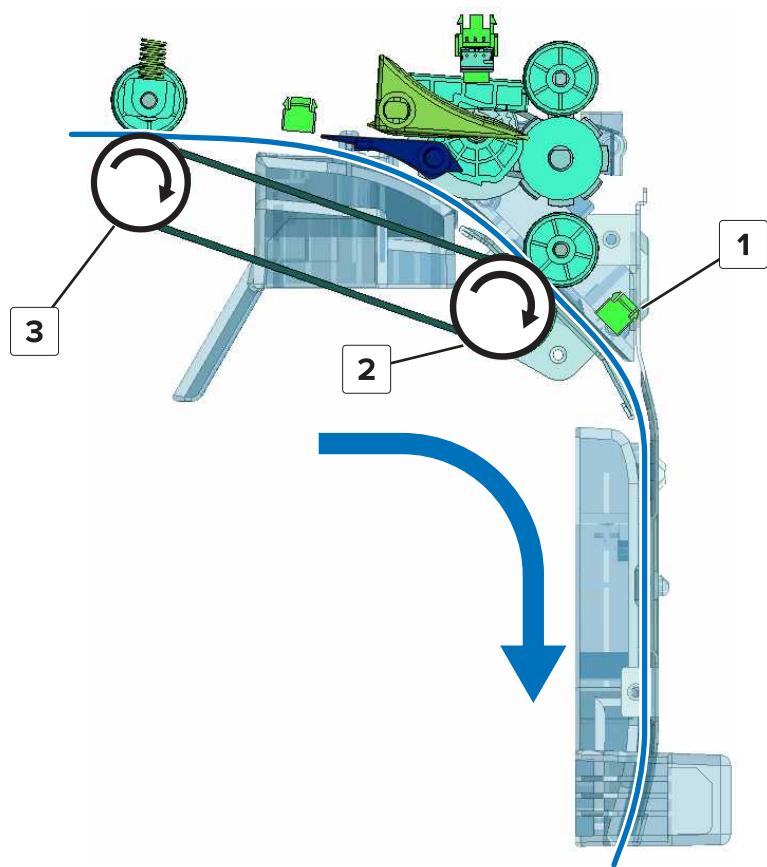
#	Part
1	Sensor (SHPF booklet gate)
2	SHPF booklet maker pre-feed roller
3	SHPF compiler feed roller

At the booklet maker, the motor (booklet maker transport) drives the transport roller to feed the paper to the decurl guide. The motor (booklet maker decurl) controls the decurl guide. The guide moves back and forth to straighten the paper and prevent jams.
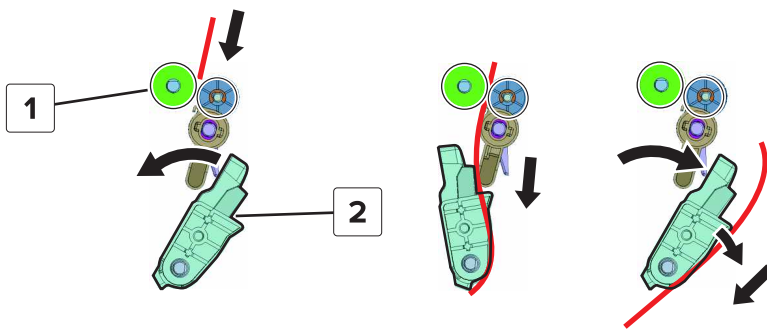
#	Part
1	Booklet maker transport roller
2	Booklet maker decurl guide

Theory of operation

Booklet maker compiler section paper feed and alignment

When the sensor (SHPF booklet gate) detects the leading edge of the paper, the motor (booklet maker tamper) moves the tampers to a width that is slightly wider than the paper. The motor (booklet maker aligner) moves the aligner to a preset position depending on the paper length.

The motor (booklet maker paddle) rotates the upper and lower paddles. The paddles push down the paper to align the short edge on the aligner. After the trailing edge of the paper passes the sensor (booklet maker transport), the tampers move back and forth to align the long edge of the paper.

The paddles stop rotating after the trailing edge of the paper passes the sensor (SHPF booklet gate). The tampers return to the home position after the alignment is completed. Succeeding sheets are individually fed and are aligned in the same manner.

After all of the sheets are aligned, the aligner solenoid retracts the stack clamp to hold the paper stack in place for folding. The aligner moves to a preset position depending on the number of folds needed.
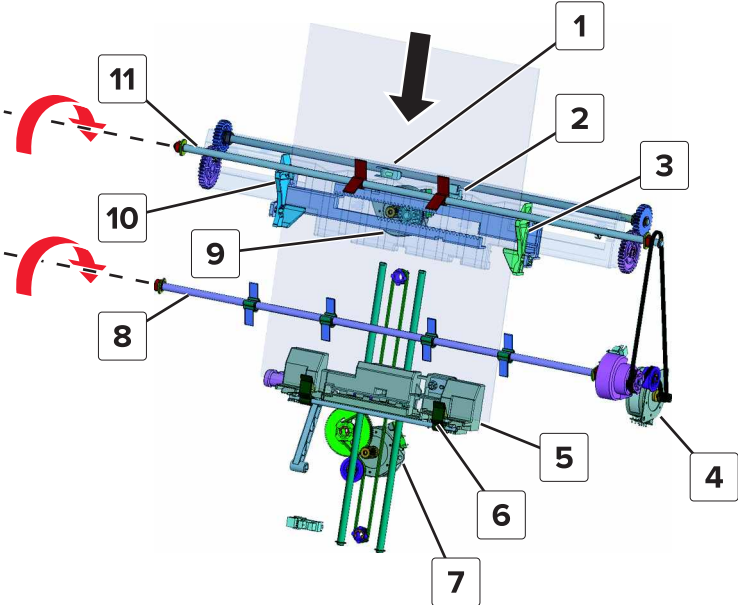
#	Part
1	Sensor (booklet maker tamper paper present)
2	Sensor (booklet maker tamper home)
3	Front tamper plate
4	Motor (booklet maker paddle)
5	Aligner
6	Stack clamp
7	Motor (booklet maker aligner)
8	Lower paddle
9	Motor (booklet maker tamper)
10	Rear tamper plate
11	Upper paddle

Theory of operation

Booklet maker staple unit operation

For booklet jobs, the aligner moves the paper stack to the staple unit before folding.
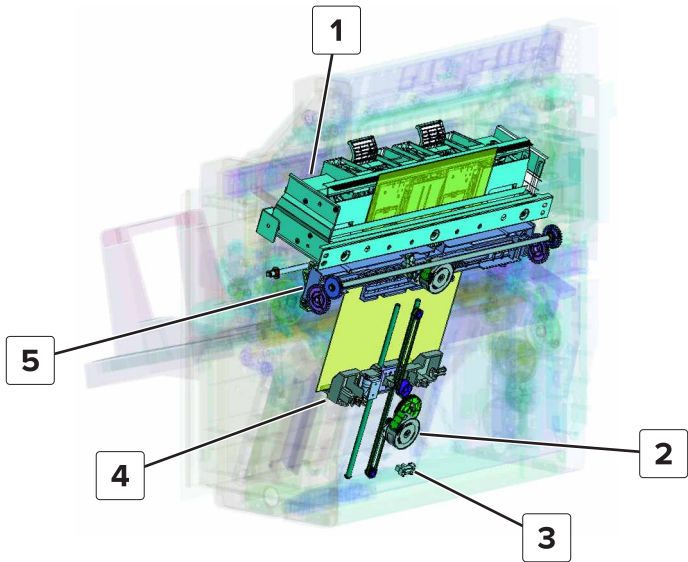
#	Part
1	Staple unit
2	Motor (booklet maker aligner)
3	Sensor (booklet maker aligner home)
4	Aligner
5	Tamper assembly

The motor (booklet maker staple unit) controls the stapling process. The paper stack is held between the paper press and clincher for stapling. The stack is then fed to the bifold section.

Theory of operation
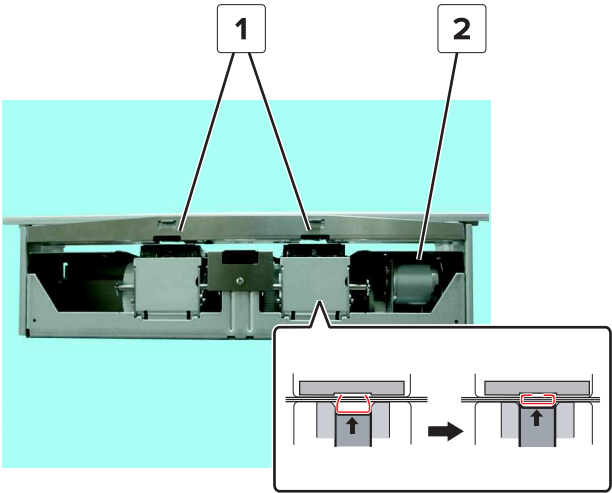
#	Part
1	Clincher
2	Motor (booklet maker staple unit)

Bifold and trifold sections

Bifold section parts
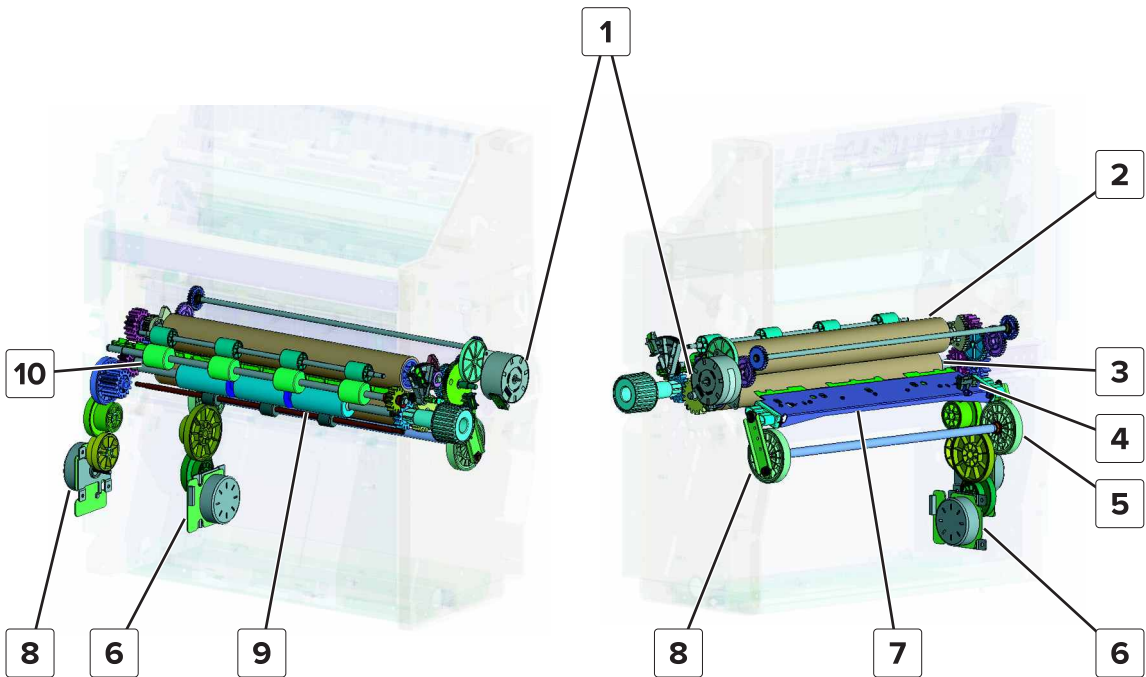
#	Part
1	Motor (bifold guide)
2	Bifold top roller
3	Bifold bottom roller
4	Sensor (bifold knife home)
5	Bifold knife secondary drive gears
6	Motor (bifold knife)
7	Bifold knife
8	Motor (bifold roller)
9	Trifold roller
10	Booklet maker exit roller

Theory of operation

Bifolding

The bifold knife is connected to the motor (bifold knife) by the primary and secondary drive gears. The knife pushes the middle of the paper between the bifold rollers. The motor (bifold roller) drives the rollers to feed and fold the paper between the rollers.

The sensor (bifold knife home) detects the home position of the knife. The motor (bifold knife) stops after the sensor detects that the knife has returned to the home position.
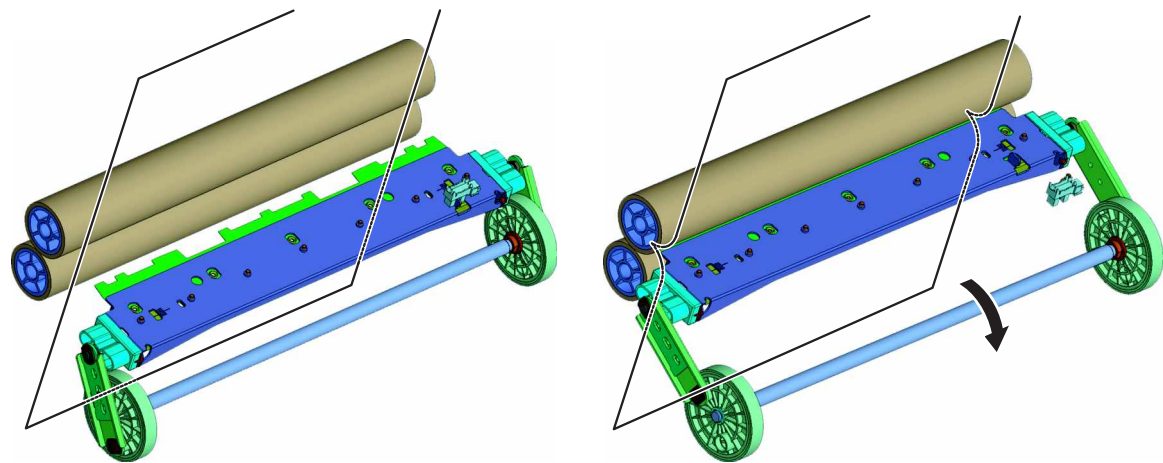
Trifold section parts
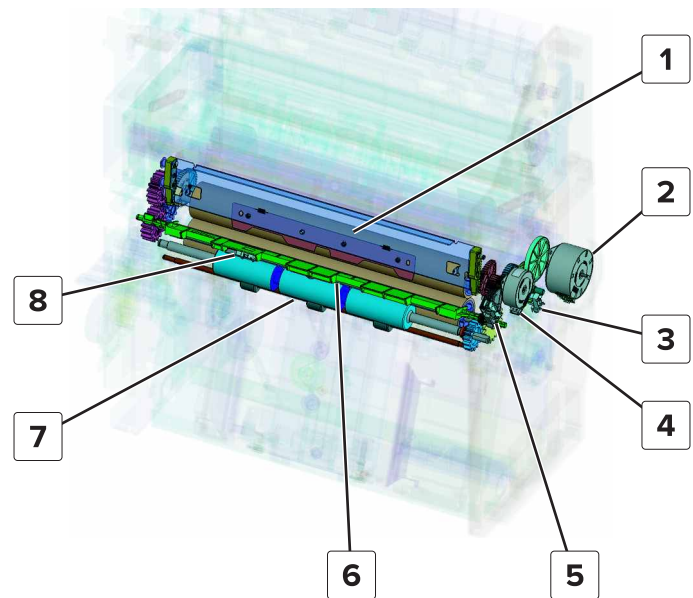
#	Part
1	Trifold knife
2	Motor (bifold guide)
3	Sensor (bifold guide home)
4	Motor (trifold guide)
5	Sensor (trifold guide home)

#	Part
6	Trifold diverter
7	Trifold roller
8	Sensor (booklet maker fold exit)

Trifolding

The first fold is done between the bifold rollers. The process of the first fold is the same with the bifold process, but the fold is done at a different position. The paper is fed to the trifold rollers for the second fold.

The motor (bifold guide) drives the trifold diverter. The bifold rollers feed the paper so that the folded edge is between the trifold diverter and trifold knife.
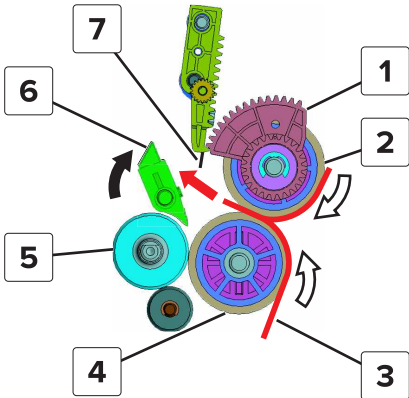
#	Part
1	Trifold knife actuator
2	Bifold top roller
3	Paper
4	Bifold bottom roller
5	Trifold roller
6	Trifold diverter
7	Trifold knife

The motor (trifold guide) moves down the trifold knife actuators to move down the trifold knife. The knife pushes the paper between the trifold roller and bifold lower roller.
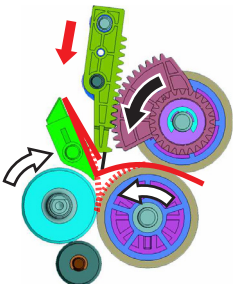
Theory of operation

The paper is fed to the trifold roller for the second fold, and then the trifold diverter returns to the home position.
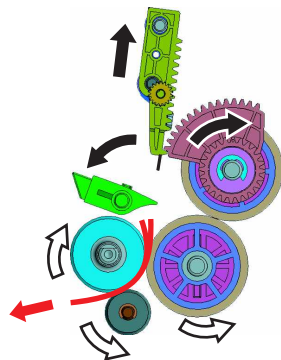
Booklet maker exit section

Booklet maker exit section parts
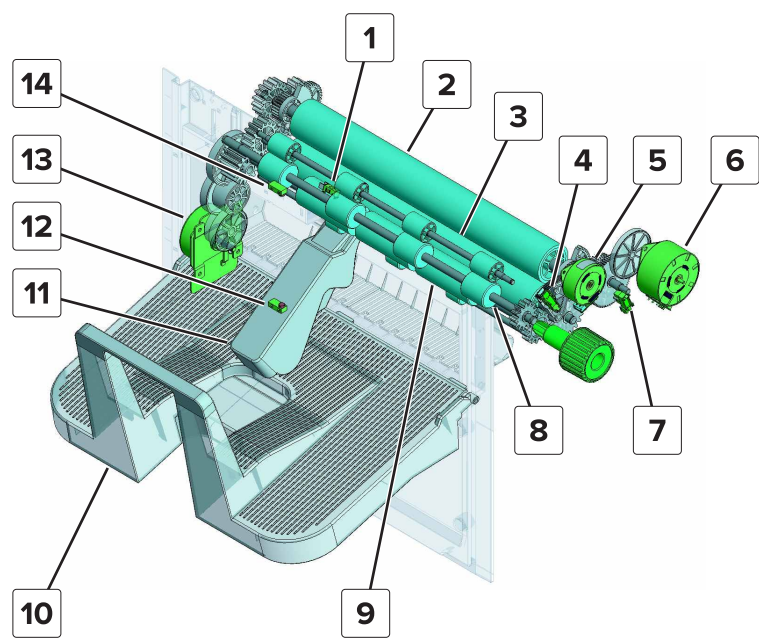
#	Part
1	Sensor (booklet maker fold exit)
2	Bifold top roller
3	Bifold bottom roller
4	Sensor (trifold guide home)
5	Motor (trifold guide)
6	Motor (bifold guide)
7	Sensor (bifold guide home)
8	Exit roller
9	Trifold roller

Theory of operation

#	Part
10	HPBF bin
11	HPBF bin bail
12	Sensor (HPBF bin empty, transmit)
13	Motor (bifold roller)
14	Sensor (HPBF bin empty, receive)

Booklet maker exit section paper path

The paper is fed out to the HPBF bin. Depending on the number of folds, the paper passes either through the bifold exit or trifold exit.

#	Part
1	Bifold exit (upper slit)
2	Trifold exit (lower slit)

For bifold jobs, the motor (bifold roller) drives the bifold rollers and exit roller to feed the paper to the bin.

For trifold jobs, the motor (bifold roller) drives the bifold rollers and trifold roller to feed the paper to the bin.

If light from the sensor (HPBF bin empty, transmit) is blocked, then paper is present on the bin. When the preset number of booklets have been fed to the bin and the sensor is still blocked, then the printer determines that the bin is full.
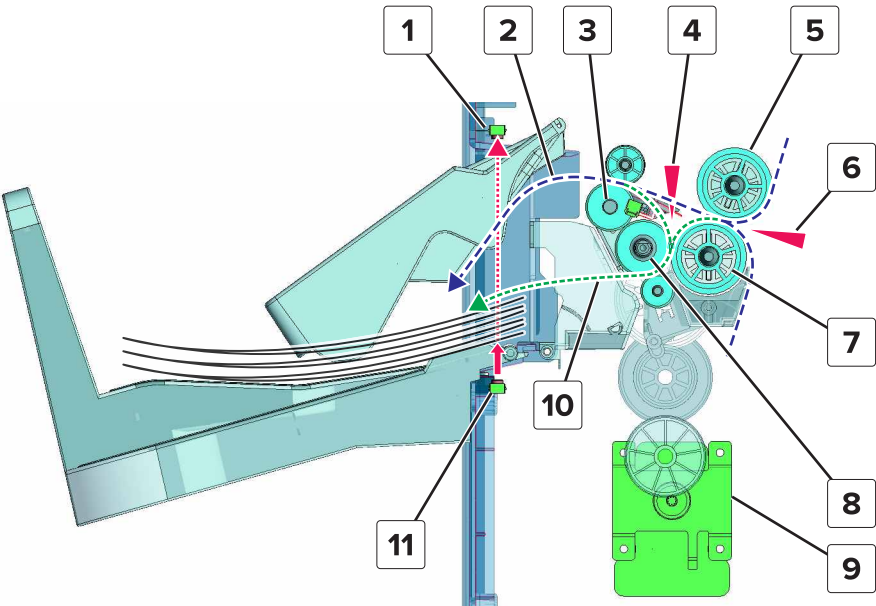
#	Part
1	Sensor (HPBF bin empty, receive)
2	Bifold job
3	Booklet maker exit roller
4	Trifold knife
5	Bifold top roller
6	Bifold knife
7	Bifold bottom roller
8	Trifold roller
9	Motor (bifold roller)
10	Trifold job
11	Sensor (HPBF bin empty, transmit)

Theory of operation

Acronyms

Acronyms

ASIC	Application-specific integrated circuit
BLDC	Brushless DC motor
BOR	Black only retract
C	Cyan
CCD	Charge coupled device
CCP	Carbonless copy paper
CRC	Cyclic redundancy check
CSU	Customer setup
CTLS	Capacitance toner level sensing
DIMM	Dual inline memory module
DRAM	Dynamic random access memory
EDO	Enhanced data out
EP	Electrophotography
EPROM	Erasable programmable read-only memory
ESD	Electrostatic discharge
FFC	Flat flexible cable
FRU	Field replaceable unit
GB	Gigabyte
HCF	High-capacity feeder
HCIT	High-capacity input tray
HCOF	High-capacity output finisher
HVPS	High voltage power supply
ITU	Image transfer unit
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

Index

J

jam, clearing
  booklet finisher 32, 42
  staple finisher 36, 38
  staple, hole punch finisher 40
jams
  avoiding 30
  locating jam areas 31
  locations 31

L

low insertion force (LIF) connector 220
lubrication
  guidelines 533

M

menus
  diagram of 205
menus diagram 205

O

options
  media handling options 629
output bin quick feed 208
output device diagnostics
  motor tests 208
  sensor tests 208

P

paper jam in the booklet finisher 32
paper jam in the staple finisher 36
paper jam, clearing
  booklet finisher 32
  staple finisher 36
paper jams
  avoiding 30
parts catalog legend 534
printer configurations 531
printer control panel
  indicator light 201
  Sleep button light 201
printer diagnostics
  input tray quick print 208

R

removal
  bifold exit jam access door 455
  bifold guide drive gears 522
  bifold guide idler gears 528
  bifold guide motor bracket 483

bifold knife 519
bifold knife and tamper assembly 514
bifold knife plates 517
bifold knife primary drive gears 513
bifold knife secondary drive gears 518
bifold lower roller 505
bifold roller drive gears 520
bifold roller gears 468
bifold roller springs 476
bifold upper roller 502
booklet gate jam access door 336
booklet maker aligner 494
booklet maker aligner assembly 492
booklet maker aligner belt 496
booklet maker aligner front paper guide 489
booklet maker aligner gears 497
booklet maker aligner jam access door 456
booklet maker aligner middle paper guide 495
booklet maker aligner rear paper guide 490
booklet maker aligner solenoid 498
booklet maker controller board 458
booklet maker controller board holder 459
booklet maker decurl gears 479
booklet maker decurl guide 481
booklet maker decurl lever 465
booklet maker exit roller springs 452
booklet maker front cover 453
booklet maker jam access door 461
booklet maker lower paddle 458
booklet maker paddle belt 471
booklet maker paddle gears 471
booklet maker right cover 453
booklet maker staple unit 507
booklet maker support 454
booklet maker tamper tray 525
booklet maker transport belt 477
booklet maker transport gear 477
booklet maker transport idler rollers 463
booklet maker transport paper guide
  assembly 462
booklet maker transport paper guide lever 466
booklet maker transport roller 478
booklet maker trifold rollers 469
booklet maker upper paddle 501
exit motor bracket 273
HPBF bin and lower left cover 340
HPBF bin bail 329
HPBF elevator bin full sensor actuator 343
HPBF exit roller cover 343
HPT belts and gears 325
HPT cable 321
HPT door 320

U

V

Z

Part number index

Part number index

Part number index

Part number index

Part number index

Part number index

Part number index

Part number index

Part number index

Part number index

Part number index

Part number index

Part number index

Part number index

Part name index

Part name index

Part name index

Part name index

Part name index

Part name index

Part name index

Part name index

Part name index

Part name index

Part name index

Part name index

Part name index