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Service Manual

Lexmark™ X792 printer

Machine Type 7562-4xx

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- ***Safety and Notices***
- ***Trademarks***
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Notices and safety information

The following laser notice labels may be affixed to this printer.

Laser notice

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for Class I (1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 60825-1.

Class I laser products are not considered to be hazardous. The printer contains internally a Class IIIb (3b) laser that is nominally a **10 milliwatt diode laser using an aluminum gallium indium phosphide structure laser** operating in the wavelength region of **645-670** nanometers. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

Laser

Der Drucker erfüllt gemäß amtlicher Bestätigung der USA die Anforderungen der Bestimmung DHHS (Department of Health and Human Services) 21 CFR Teil J für Laserprodukte der Klasse I (1). In anderen Ländern gilt der Drucker als Laserprodukt der Klasse I, der die Anforderungen der IEC (International Electrotechnical Commission) 60825-1 gemäß amtlicher Bestätigung erfüllt.

Laserprodukte der Klasse I gelten als unschädlich. Im Inneren des Druckers befindet sich ein Laser der Klasse IIIb (3b), bei dem es sich um einen Galliumarsenlaser mit 5 Milliwatt handelt, der Wellen der Länge 770-795 Nanometer ausstrahlt. Das Lasersystem und der Drucker sind so konzipiert, daß im Normalbetrieb, bei der Wartung durch den Benutzer oder bei ordnungsgemäßer Wartung durch den Kundendienst Laserbestrahlung, die Klasse I übersteigen würde, Menschen keinesfalls erreicht.

Avis relatif à l’utilisation de laser

Pour les Etats-Unis : cette imprimante est certifiée conforme aux provisions DHHS 21 CFR alinéa J concernant les produits laser de Classe I (1). Pour les autres pays : cette imprimante répond aux normes IEC 60825-1 relatives aux produits laser de Classe I.

Les produits laser de Classe I sont considérés comme des produits non dangereux. Cette imprimante est équipée d’un laser de Classe IIIb (3b) (arséniure de gallium d’une puissance nominale de 5 milliwatts) émettant sur des longueurs d’onde comprises entre 770 et 795 nanomètres. L’imprimante et son système laser sont conçus pour impossible, dans des conditions normales d’utilisation, d’entretien par l’utilisateur ou de révision, l’exposition à des rayonnements laser supérieurs à des rayonnements de Classe I .

Avvertenze sui prodotti laser

Questa stampante è certificata negli Stati Uniti per essere conforme ai requisiti del DHHS 21 CFR Sottocapitolo J per i prodotti laser di classe 1 ed è certificata negli altri Paesi come prodotto laser di classe 1 conforme ai requisiti della norma CEI 60825-1.

I prodotti laser di classe non sono considerati pericolosi. La stampante contiene al suo interno un laser di classe IIIb (3b) all’arseniuro di gallio della potenza di 5mW che opera sulla lunghezza d’onda compresa tra 770 e 795 nanometri. Il sistema laser e la stampante sono stati progettati in modo tale che le persone a contatto con la

stampante, durante il normale funzionamento, le operazioni di servizio o quelle di assistenza tecnica, non ricevano radiazioni laser superiori al livello della classe 1.

Avisos sobre el láser

Se certifica que, en los EE.UU., esta impresora cumple los requisitos para los productos láser de Clase I (1) establecidos en el subcapítulo J de la norma CFR 21 del DHHS (Departamento de Sanidad y Servicios) y, en los demás países, reúne todas las condiciones expuestas en la norma IEC 60825-1 para productos láser de Clase I (1).

Los productos láser de Clase I no se consideran peligrosos. La impresora contiene en su interior un láser de Clase IIIb (3b) de arseniuro de galio de funcionamiento nominal a 5 milivatios en una longitud de onda de 770 a 795 nanómetros. El sistema láser y la impresora están diseñados de forma que ninguna persona pueda verse afectada por ningún tipo de radiación láser superior al nivel de la Clase I durante su uso normal, el mantenimiento realizado por el usuario o cualquier otra situación de servicio técnico.

Declaração sobre Laser

A impressora está certificada nos E.U.A. em conformidade com os requisitos da regulamentação DHHS 21 CFR Subcapítulo J para a Classe I (1) de produtos laser. Em outros locais, está certificada como um produto laser da Classe I, em conformidade com os requisitos da norma IEC 60825-1.

Os produtos laser da Classe I não são considerados perigosos. Internamente, a impressora contém um produto laser da Classe IIIb (3b), designado laser de arseneto de potássio, de 5 milliwatts ,operando numa faixa de comprimento de onda entre 770 e 795 nanómetros. O sistema e a impressora laser foram concebidos de forma a nunca existir qualquer possiblidade de acesso humano a radiação laser superior a um nível de Classe I durante a operação normal, a manutenção feita pelo utilizador ou condições de assistência prescritas.

Laserinformatie

De printer voldoet aan de eisen die gesteld worden aan een laserprodukt van klasse I. Voor de Verenigde Staten zijn deze eisen vastgelegd in DHHS 21 CFR Subchapter J, voor andere landen in IEC 60825-1.

Laserprodukten van klasse I worden niet als ongevaarlijk aangemerkt. De printer is voorzien van een laser van klasse IIIb (3b), dat wil zeggen een gallium arsenide-laser van 5 milliwatt met een golflengte van 770-795 nanometer. Het lasergedeelte en de printer zijn zo ontworpen dat bij normaal gebruik, bij onderhoud of reparatie conform de voorschriften, nooit blootstelling mogelijk is aan laserstraling boven een niveau zoals voorgeschreven is voor klasse 1.

Lasermeddelelse

Printeren er godkendt som et Klasse I-laserprodukt, i overenstemmelse med kravene i IEC 60825-1.

Klasse I-laserprodukter betragtes ikke som farlige. Printeren indeholder internt en Klasse IIIB (3b)-laser, der nominelt er en 5 milliwatt galliumarsenid laser, som arbejder på bølgelængdeområdet 770-795 nanometer. Lasersystemet og printeren er udformet således, at mennesker aldrig udsættes for en laserstråling over Klasse I-niveau ved normal drift, brugervedligeholdelse eller obligatoriske servicebetingelser.

Laserilmoitus

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

Luokan I lasertuotteita ei pidetä haitallisina. Tulostimen sisällä on luokan IIIb (3b) laser, joka on nimellisteholtaan 5 mW:n galliumarsenidilaser ja toimii 770 - 795 nanometrin aallonpituuksilla. Laserjärjestelmä ja tulostin ovat rakenteeltaan sellaisia, että käyttäjä ei joudu alttiiksi luokkaa 1 suuremmalle säteilylle normaalin käytön, ylläpidon tai huollon aikana.

Huomautus laserlaitteesta

Tämä kirjoitin on Yhdysvalloissa luokan I (1) laserlaitteiden DHHS 21 CFR Subchapter J -määrityksen mukainen ja muualla luokan I laserlaitteiden IEC 60825-1 -määrityksen mukainen.

Luokan I laserlaitteiden ei katsota olevan vaarallisia käyttäjälle. Kirjoittimessa on sisäinen luokan IIIb (3b) 5 milliwatin galliumarsenidilaser, joka toimii aaltoalueella 770 - 795 nanometriä. Laserjärjestelmä ja kirjoitin on suunniteltu siten, että käyttäjä ei altistu luokan I määrityksiä voimakkaammalle säteilylle kirjoittimen normaalin toiminnan, käyttäjän tekemien huoltotoimien tai muiden huoltotoimien yhteydessä.

VARO! Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

VARNING! Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

Laser-notis

Denna skrivare är i USA certifierad att motsvara kraven i DHHS 21 CFR, underparagraf J för laserprodukter av Klass I (1). I andra länder uppfyller skrivaren kraven för laserprodukter av Klass I enligt kraven i IEC 60825-1.

Laserprodukter i Klass I anses ej hälsovådliga. Skrivaren har en inbyggd laser av Klass IIIb (3b) som består av en laserenhet av gallium-arsenid på 5 milliwatt som arbetar i våglängdsområdet 770-795 nanometer. Lasersystemet och skrivaren är utformade så att det aldrig finns risk för att någon person utsätts för laserstrålning över Klass I-nivå vid normal användning, underhåll som utförs av användaren eller annan föreskriven serviceåtgärd.

Laser-melding

Skriveren er godkjent i USA etter kravene i DHHS 21 CFR, underkapittel J, for klasse I (1) laserprodukter, og er i andre land godkjent som et Klasse I-laserprodukt i samsvar med kravene i IEC 60825-1.

Klasse I-laserprodukter er ikke å betrakte som farlige. Skriveren inneholder internt en klasse IIIb (3b)-laser, som består av en gallium-arsenlaserenhet som avgir stråling i bølgelengdeområdet 770-795 nanometer. Lasersystemet og skriveren er utformet slik at personer aldri utsettes for laserstråling ut over klasse I-nivå under vanlig bruk, vedlikehold som utføres av brukeren, eller foreskrevne serviceoperasjoner.

Avís sobre el Làser

Segons ha estat certificat als Estats Units, aquesta impressora compleix els requisits de DHHS 21 CFR, apartat J, pels productes làser de classe I (1), i segons ha estat certificat en altres llocs, és un producte làser de classe I que compleix els requisits d'IEC 60825-1.

Els productes làser de classe I no es consideren perillosos. Aquesta impressora conté un làser de classe IIIb (3b) d'arseniür de gal.li, nominalment de 5 mil.liwats, i funciona a la regió de longitud d'ona de 770-795 nanòmetres. El sistema làser i la impressora han sigut concebuts de manera que mai hi hagi exposició a la radiació làser per sobre d'un nivell de classe I durant una operació normal, durant les tasques de manteniment d'usuari ni durant els serveis que satisfacin les condicions prescrites.

レーザーに関するお知らせ

このプリンターは、米国ではＤＨＨＳ ２１ ＣＦＲサブチャプターＪのクラスＩ（１）の基準を満たしたレーザー製品であることが証明されています。また米国以外ではＩＥＣ ８２５の基準を満たしたクラスＩのレーザー製品であることが証明されています。

クラスＩのレーザー製品には危険性はないと考えられています。このプリンターはクラスⅢｂ（３ｂ）のレーザーを内蔵しています。このレーザーは、波長が７７０ ～ ７９５ナノメーターの範囲で、通常５ミリワットのガリウム砒化物を放射するレーザーです。このレーザーシステムとプリンターは、通常の操作、ユーザのメンテナンス、規定された修理においては、人体がクラスＩのレベル以上のレーザー放射に晒されることのないよう設計されています。

注意：

本打印机被美国认证合乎 DHHS 21 CFR Subchapter I 对分类 I (1) 激光产品的标准，而在其他地区则被认证合乎 IEC 825 的标准。

分类 I 激光产品一般认为不具危险性，本打印机内部含有分类 IIIb (3b) 的激光，在操作过程中会产生 5 毫瓦含镓及砷的微量激光，其波长范围在 770-795 nm 之间。本激光系统及打印机的设计，在一般操作、使用者维护或规定内的维修情况下，不会使人体接触分类 I 以上等级的辐射。

본프린터는 1등급 레이저 제품들에 대한 DHHS 21 CFR Subchapter 3의 규정을 준수하고 있음을 미국에서 인증받았으며, 그외의 나라에서도 IEC 825 규정을 준수하는 1등급 레이저 제품으로서 인증을 받았습니다.

1등급 레이저 제품들은 안전한 것으로 간주됩니다. 본 프린터는 5 밀리와트 갤륨 아르세나이드 레이저로서 770-795 나노미터의 파장대에서 활동하는 Class III (3b) 레이저를 내부에 갖고 있습니다. 본 레이저 시스템과 프린터는 정상 작동 중이나 유지 보수 중 또는 규정된 서비스 상태에서 상기의 Class I 수준의 레이저 방출에 사람이 절대 접근할 수 없도록 설계되어 있습니다.

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 electric shock and personal injury during disassembly and servicing of this product. Professional service personnel should understand this and take necessary precautions.
-  **CAUTION:** 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.

Consignes de sécurité

- La sécurité de ce produit repose sur des tests et des agréations portant sur sa conception d'origine et sur des composants particuliers. Le fabricant n'assume aucune responsabilité concernant la sécurité en cas d'utilisation de pièces de rechange non agréées.
- Les consignes d'entretien et de réparation de ce produit s'adressent uniquement à un personnel de maintenance qualifié.
- Le démontage et l'entretien de ce produit pouvant présenter certains risques électriques, le personnel d'entretien qualifié devra prendre toutes les précautions nécessaires.
-  **ATTENTION :** Ce symbole indique la présence d'une tension dangereuse dans la partie du produit sur laquelle vous travaillez. Débranchez le produit avant de commencer ou faites preuve de vigilance si l'exécution de la tâche exige que le produit reste sous tension.

Norme di sicurezza

- La sicurezza del prodotto si basa sui test e sull'approvazione del progetto originale e dei componenti specifici. Il produttore non è responsabile per la sicurezza in caso di sostituzione non autorizzata delle parti.
- Le informazioni riguardanti la manutenzione di questo prodotto sono indirizzate soltanto al personale di assistenza autorizzato.
- Durante lo smontaggio e la manutenzione di questo prodotto, il rischio di subire scosse elettriche e danni alla persona è più elevato. Il personale di assistenza autorizzato deve, quindi, adottare le precauzioni necessarie.
-  **ATTENZIONE:** Questo simbolo indica la presenza di tensione pericolosa nell'area del prodotto. Scollegare il prodotto prima di iniziare o usare cautela se il prodotto deve essere alimentato per eseguire l'intervento.

Sicherheitshinweise

- Die Sicherheit dieses Produkts basiert auf Tests und Zulassungen des ursprünglichen Modells und bestimmter Bauteile. Bei Verwendung nicht genehmigter Ersatzteile wird vom Hersteller keine Verantwortung oder Haftung für die Sicherheit übernommen.
- Die Wartungsinformationen für dieses Produkt sind ausschließlich für die Verwendung durch einen Wartungsfachmann bestimmt.
- Während des Auseinandernehmens und der Wartung des Geräts besteht ein zusätzliches Risiko eines elektrischen Schlags und körperlicher Verletzung. Das zuständige Fachpersonal sollte entsprechende Vorsichtsmaßnahmen treffen.
-  **ACHTUNG:** Dieses Symbol weist auf eine gefährliche elektrische Spannung hin, die in diesem Bereich des Produkts auftreten kann. Ziehen Sie vor den Arbeiten am Gerät den Netzstecker des Geräts, bzw. arbeiten Sie mit großer Vorsicht, wenn das Produkt für die Ausführung der Arbeiten an den Strom angeschlossen sein muß.

Pautas de Seguridad

- La seguridad de este producto se basa en pruebas y aprobaciones del diseño original y componentes específicos. El fabricante no es responsable de la seguridad en caso de uso de piezas de repuesto no autorizadas.
- La información sobre el mantenimiento de este producto está dirigida exclusivamente al personal cualificado de mantenimiento.
- Existe mayor riesgo de descarga eléctrica y de daños personales durante el desmontaje y la reparación de la máquina. El personal cualificado debe ser consciente de este peligro y tomar las precauciones necesarias.
-  **PRECAUCIÓN:** este símbolo indica que el voltaje de la parte del equipo con la que está trabajando es peligroso. Antes de empezar, desenchufe el equipo o tenga cuidado si, para trabajar con él, debe conectarlo.

Informações de Segurança

- A segurança deste produto baseia-se em testes e aprovações do modelo original e de componentes específicos. O fabricante não é responsável pela segunrança, no caso de uso de peças de substituição não autorizadas.
- As informações de segurança relativas a este produto destinam-se a profissionais destes serviços e não devem ser utilizadas por outras pessoas.
- Risco de choques eléctricos e ferimentos graves durante a desmontagem e manutenção deste produto. Os profissionais destes serviços devem estar avisados deste facto e tomar os cuidados necessários.
-  **CUIDADO:** Quando vir este símbolo, existe a possível presença de uma potencial tensão perigosa na zona do produto em que está a trabalhar. Antes de começar, desligue o produto da tomada eléctrica ou seja cuidadoso caso o produto tenha de estar ligado à corrente eléctrica para realizar a tarefa necessária.

Informació de Seguretat

- La seguretat d'aquest producte es basa en l'avaluació i aprovació del disseny original i els components específics.
  El fabricant no es fa responsable de les qüestions de
  seguretat si s'utilitzen peces de recanvi no autoritzades.
- La informació pel manteniment d'aquest producte està orientada exclusivament a professionals i no està destinada
  a ningú que no ho sigui.
- El risc de xoc elèctric i de danys personals pot augmentar durant el procés de desmuntatge i de servei d'aquest producte. El personal professional ha d'estar-ne assabentat i prendre
  les mesures convenients.
- 
  PRECAUCIÓ: aquest símbol indica que el voltatge de la part de l'equip amb la qual esteu treballant és perillós. Abans de començar, desendolleu l'equip o extremeu les precaucions si, per treballar amb l'equip, l'heu de connectar.

안전 사항

- 본 제품은 원래 설계 및 특정 구성품에 대한 테스트 결과로 안정성이 입증된 것입니다. 따라서 무허가 교체부품을 사용하는 경우에는 제조업체에서 안전에 대한 책임을 지지 않습니다.
- 본 제품에 관한 유지 보수 설명서는 전문 서비스 기술자 용으로 작성된 것이므로, 비 전문가는 사용할 수 없습니다.
- 본 제품을 해체하거나 정비할 경우, 전기적인 충격을 받거나 상처를 입을 위험이 커집니다. 전문 서비스 기술자는 이 사실을 숙지하고, 필요한 예방 조치를 취하도록 하십시오.
- 
  주의: 이 표시는 해당영역에서 고압전류가 흐른다는 위험 표시 입니다. 시작전에 플러그를 뽑으시거나, 주의를 기울여 주시기 바랍니다.

安全信息

- 本产品的安全性以原来设计和特定产品的测试结果和认证为基础。万一使用未经许可的替换部件，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，并不打算让其他人使用。
- 本产品在拆卸、维修时，遭受电击或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。
- 
  切记：当您看到此符号时，说明在您工作的产品区域有危险电压的存在。请在开始操作前拔掉产品的电源线，或者在产品必须使用电源来执行任务时，小心从事。

Preface

This manual contains maintenance procedures for service personnel. It is divided into the following chapters:

1. **General information** contains a general description of the printer and the maintenance approach used to repair it. Special tools and test equipment, as well as general environmental and safety instructions, are discussed.
2. **Diagnostic information** contains an error indicator table, symptom tables, and service checks used to isolate failing field replaceable units (FRUs).
3. **Diagnostic aids** contains tests and checks used to locate or repeat symptoms of printer problems.
4. **Repair information** provides instructions for making printer adjustments and removing and installing FRUs.
5. **Connector locations** uses illustrations to identify the connector locations and test points on the printer.
6. **Preventive maintenance** contains the lubrication specifications and recommendations to prevent problems.
7. **Parts catalog** contains illustrations and part numbers for individual FRUs.
   Appendix A contains representative print samples.

Navigation buttons

This manual contains navigation buttons in the right margin of each page, making it easier and quicker to navigate.

Button	Description
Previous 	Click  to move the document view backward by one page.
Next 	Click  to move the document view forward by one page.
Go Back 	Click  to return to the last page viewed.

Conventions

Note: A *note* provides additional information.

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

There are several types of caution statements:

	**CAUTION** A *caution* identifies something that might cause a servicer harm.

	**CAUTION** This type of caution indicates 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** This type of caution indicates a hot surface.

	**CAUTION** This type of caution indicates a tipping hazard.

	**CAUTION** This type of caution indicates the presence of visible and invisible laser radiation.

1. General information

The Lexmark™ X792 (7562-436) is a network-capable color printer that uses electrophotographic technology to deliver high-quality images, presentation graphics, line art, and text. It prints both four-color and monochrome print jobs.

The X792 represents the latest in Lexmark printer innovation, including a full-color eTask touch screen with improved messaging and animation, standard 160 GB or higher hard drive, enhanced security features, remote operator panel access and control, customizable reports, and access to the growing list of downloadable and customizable solutions.

A variety of connectivity options enable the printer to be used in all types of system environments. You can attach one internal adapter to support network configurations requiring Ethernet, Token-Ring, LocalTalk, serial, infrared, or additional parallel ports.

The printer also has flexible paper handling. It supports a wide variety of paper sizes, and has a standard multipurpose feeder that makes it easy to print on envelopes, transparencies, labels, card stock, and non-standard size paper. You can add optional inputs to the base printer, which can increase the printer paper capacity to 3750 sheets.

Models

The Lexmark X792 (7562-436) laser printer is available in the following models:

Lexmark X792de	7562-432	e-Task touch screen, duplex, no modem
Lexmark X792de	7562-436	e-Task touch screen, duplex
Lexmark X792dte	7562-436	e-Task touch screen, duplex, 550 drawer
Lexmark X792dtfe	7562-436	e-Task touch screen, duplex, 550 drawer, finisher
Lexmark X792dtpe	7562-436	e-Task touch screen, duplex, 550 drawer, hole punch
Lexmark X792dtme	7562-436	e-Task touch screen, duplex, 550 drawer, 5-bin mailbox
Lexmark X792dtse	7562-436	e-Task touch screen, duplex, 550 drawer, high-capacity output stacker
Lexmark XS796de	7562-496	e-Task touch screen, duplex, BSD
Lexmark XS796dte	7562-496	e-Task touch screen, duplex, 550 drawer, BSD

Maintenance approach

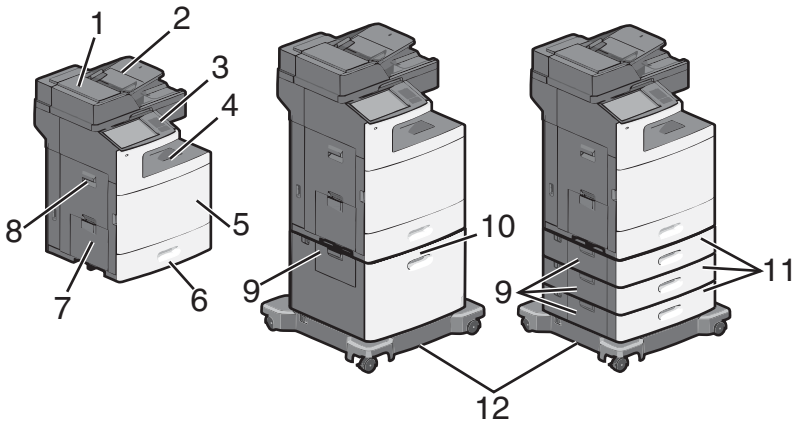
The diagnostic information in chapter two leads you to the correct field replaceable unit (FRU) or part. Use the information to troubleshoot print quality, paper jams, user status messages, error codes, or general symptoms, and then follow the instructions to repair the printer. After you complete the repair, perform tests as needed to verify the repair.

To begin diagnosing a problem, go to **“Diagnostic information” on page 2-1**.

Printer configurations

	**CAUTION—TIPPING HAZARD** Floor-mounted configurations require additional furniture for stability. You must use either a printer stand or printer base if you are using a high-capacity input tray, a duplex unit and an input option, or more than one input option. If you purchased a multifunction printer (MFP) that scans, copies, and faxes, you may need additional furniture. For more information, see **www.lexmark.com/multifunctionprinters**.

Some options may not be available for all models.



1	Automatic Document Feeder (ADF)
2	ADF input tray
2	Paper bail
3	Operator panel
4	Standard output bin
5	Front access door
6	Standard 550-sheet tray
7	Multipurpose feeder
8	Left access door
9	Tray paper jam access door
10	Optional 2000-sheet high-capacity feeder*
11	Optional 550-sheet tray*
12	Caster base
* The printer supports up to four 550-sheet trays, or one 2000-sheet tray with up to two 550-sheet trays.	

Options and features

Lexmark X792 printers support only Lexmark X792 paper-handling options. These options are not compatible with any other Lexmark printer.

Some of the following options are not available in every country or region.

Available internal options

- Memory cards
  - Printer memory
  - Flash memory
  - Fonts
- Firmware cards
  - Bar Code
  - PrintCryption™
  - Decryption card
- Printer hard disk
- Lexmark™ Internal Solutions Ports (ISP)
  - RS-232-C Serial ISP
  - Parallel 1284-B ISP
  - MarkNet™ N8250 802.11 b/g/n Wireless ISP
  - MarkNet N8130 10/100 Fiber ISP
  - MarkNet N8120 10/100/1000 Ethernet ISP

Media handling options

- 550-sheet trays
- 2000-sheet high-capacity feeder
- Banner media tray
- High-capacity output stacker
- 5-bin mailbox
- StapleSmart™ finisher

Printer specifications

Power specifications

Average nominal power requirements for the base printer configuration. (Power levels are shown in watts.) Maximum current shown in Amperes.

Printing states	Power
Off	0W
Sleep Mode	17W
Hibernate Mode	0.75W
Ready Mode	75W
Simplex printing	810W
Duplex printing	850W
Copying	1000W
ADF scanning	110W

Notes:

- Using a power converter or inverter is not recommended.
- The X790 series printers are ENERGY STAR qualified.
- All models ship with Sleep Mode set to On.

Electrical specifications

Low-voltage models

- 100 to 110 V ac at 50 to 60 hertz (Hz) nominal
- 90 to 121 V ac, extreme

- 110 to 127 V ac at 50 to 60 hertz (Hz) nominal
- 99 to 139.7 V ac, extreme

High-voltage models

- 220 to 240 V ac at 50 to 60 hertz (Hz) nominal (not available in all countries and regions)

Operating clearances

1	Top	152.4 mm (6 in.)
2	Right	101.6 mm (4 in.)
3	Front	482.6 mm (19 in.)
4	Left	241.3 mm (9.5 in.)
5	Rear	101.6 mm (4 in.)
Allow additional clearance around the printer for adding options, such as additional input drawers, high-capacity output stacker, banner tray, StapleSmart finisher, or 5-bin mailbox.		

Acoustics

All measurements are made in accordance with ISO 7779 and conform with ISO 9296.

Status	**1 meter average sound pressure dBA**	**Declared sound power level Bels**
Idle (standby)	29 dBA	4.3 Bels
Simplex printing (mono)	52 dBA	6.6 Bels
Simplex printing (color)	53 dBA	6.7 Bels
Duplex printing (mono)	52 dBA	6.7 Bels
Duplex printing (color)	53 dBA	6.7 Bels
ADF scan	54 dBA	6.8 Bels
ADF copy (mono)	53 dBA	6.7 Bels
ADF copy (color)	54 dBA	6.8 Bels
Quiet Mode printing (mono)	48 dBA	6.2 Bels
Measurements apply to 300 dpi, 600 dpi, and 1200 IQ printing.		

Environment

Printer Temperature and Humidity

- Operating
  - Temperature: 60 to 90° F (15.6 to 32.2° C)
  - Relative humidity: 8 to 80%
  - Maximum wet bulb temperature: 73° F (22.8° C)
  - Altitude: 10,000 ft. (0 to 3,048 meters)
  - Atmospheric pressure: < 74.6 kPa
- Power off
  - Temperature: 50 to 110° F (10 to 43.3° C)
  - Relative humidity: 8 to 80%
  - Maximum wet bulb temperature: 80.1° F (26.7° C)
  - Altitude: 10,000 ft. (0 to 3,048 meters)
  - Atmospheric pressure: 74.6 kPa
- Ambient operating environment*
  - Temperature: 60 to 90° F (15.6 to 32.2° C)
  - Relative humidity: 8 to 80%
- Storage and shipping (packaged printer) with or without print cartridge
  Temperature: -40 to 110° F (-40 to 43.3° C)

*In some cases, performance specifications (such as paper OCF, EP cartridge usage) are measured at an ambient condition.

Performance

The X792 printers support up to 50 ppm maximum print, copy, and scan speeds.

Performance speed depends on:

- Interface to the host (USB, serial, parallel, network)
- Host system and application
- Page complexity and content
- Printer options installed or selected
- Available printer memory
- Media size and type
- Resolution

Processor

1.2 GHZ Power PC processor

Time to first print XXXX need to update once spec has this

All first copy times are measured for 600 image quality, simplex printing on letter-size paper. The test job consists of the character “A” followed by a form feed (single-page job). The first copy time is defined as the elapsed time from pressing **Enter** on the keyboard to the page exiting to the output bin. All tests pick paper from the primary input tray and the page exits into the primary output bin.

Standby times may be longer if the toner control senses that toner flow needs to be checked or adjusted.

Time to first print from Ready state:

- Mono: as fast as 8 seconds
- Color: as fast as 8.5 seconds

Time to first print from Sleep mode: Mono or color: as fast as 27 seconds

Duty cycle

- 2,500–17,000 pages per month (recommended)
- 150,000 pages per month (maximum)

Memory configuration

1GB standard memory. Optional memory is available in 256MB, 512MB, and 1GB 200-pin X64 DDR2 SO-DIMM. There is only one DIMM slot available for optional memory.

Supported paper sizes, types, and weights

Paper sizes supported by the printer

Paper size	Dimensions	550-sheet trays (standard or optional	Optional 2000-sheet tray	Multipurpose feeder	Duplex unit
A4	210 x 297 mm (8.3 x 11.7 in.)	✓	✓	✓	✓
A5[1]	148 x 210 mm (5.8 x 8.3in.)	✓		✓	✓
A6[2]	105 x 148 mm (4.1 x 5.8 in.)			✓	
JIS B5[1]	182 x 257 mm (7.2 x 10.1 in.)	✓		✓	✓
Letter	216 x 279 mm (8.5 x 11 in.)	✓	✓	✓	✓
Legal	216 x 356 mm (8.5 x14 in.)	✓	✓	✓	✓
Executive[1]	184 x 267 mm (7.3 x 10.5 in.)	✓		✓	✓
Oficio	216 x340 mm (8.5 x 13.4 in>)	✓		✓	✓
Folio	216 x 330 mm (8.5 x 13 in.)	✓		✓	✓
Statement[1]	140 x 216 mm (5.5 x8.5 in.)	✓		✓	✓
Universal[1] Note: Turn size sensing off to support universal paper sizes that are close to standard sizes. Note: When the Horizontal Transport Unit (HTU) is installed, the maximum supported length is 360 mm (14.1 in.)	140 x 210 mm (5.5 x 8.3 in.) up to 216 x 356 mm (8.5 x 14 in.)	✓		✓	✓
	76 x 127 mm (3 x 5 in.) up to 216 x 356 mm (8.5 x 14 in.)			✓	
	76 x 127 mm (3 x 5 in.) up to 216 x 914 mm (8.5 x 36 in.)[3]			✓	
	76 x 127 mm (3 x 5 in.) up to 216 x 1219 mm (8.5 x 48 in.)[3]			✓	

Paper size	Dimensions	550-sheet trays (standard or optional	Optional 2000-sheet tray	Multipurpose feeder	Duplex unit
7 3/4 Envelopes (Monarch)[3]	98 x 191 mm (3.9 x 7.5 in.)			✓	
9 Envelope[3]	98 x 226 mm (3.9 x 8.9 in.)			✓	
10 Envelope[3]	105 x 241 mm (4.1 x 9.5 in.)			✓	
B5 Envelope[3]	176 x 250 mm (6.9 x 9.8 in.)			✓	
C5 Envelope[3]	162 x 229 mm (6.4 x 9 in.)			✓	
DL Envelope[3]	110 x 220 mm (4.3 x 8.7 in.)			✓	
Other Envelope[2,4]	86 x 165 mm (3.4 x 6.5 in.) to 216 x 356 mm (8.5 x 14 in.)			✓	

[1] This size is supported for offset in the finishing options, but results may be inconsistent (crinkled paper or paper jams, for example) and pages WILL NOT be stapled.

[2] Paper size not supported for offset or stapling in the finishing options.

[3] Supported by X792 models only.

[4] This size setting formats the page for 216 x 356 mm (8.5 x 14 in.) unless the size is specified by the software application.

Paper types and weights supported by the printer

Paper type	550-sheet trays (standard or optional	Optional 2000-sheet feeder	Multipurpose feeder	Duplex unit
Paper • Plain • Bond • Colored • Custom • Letterhead • Light • Heavy • Preprinted • Rough/Cotton • Recycled	✓	✓	✓	✓
Card stock	✓		✓ x	✓
Transparencies[1]	✓		✓	
Labels[2] • Paper • Vinyl	✓		✓	✓ x
Envelopes[3]			✓	

Paper type	550-sheet trays (standard or optional	Optional 2000-sheet feeder	Multipurpose feeder	Duplex unit
[1] Do not use inkjet or 3M CG3710 transparencies. [2] Paper labels are supported. Other media such as vinyl may show print quality defects in some environments, and prolonged vinyl label usage may reduce fuser life. For more information, see the Card Stock & Label Guide available on the Lexmark Web site at **http://support.lexmark.com**. [3] Use envelopes that lie flat when individually placed facedown on a table.				

Paper types and weights supported by the output bins

Use this table to determine the possible output destinations of print jobs which use supported paper types and weights. The paper capacity of each output bin is listed in parentheses. Paper capacity estimations are calculated based on 75 g/m^2 (20 lb) paper.

The finisher supports 60–176 g/m2 (16–47 lb) paper weights. The 5-bin mailbox supports 60–90 g/m2 (16–24 lb) paper weights.

Paper type	Standard exit bin (350 or 550 sheets)	Optional hardware		
		High-capacity output stacker (650 sheets)	5-bin mailbox (500 sheets)[1]	StapleSmart finisher (500 sheets)[1]
Paper • Plain • Bond • Colored • Custom • Letterhead • Light • Heavy • Preprinted • Rough/Cotton • Recycled	✓	✓	✓	✓
Card stock	✓	✓		
Envelopes	✓			
Labels	✓	✓		
Transparencies	✓	✓		
[1] Maximum of 50 sheets of 75 g/m2 (20 lb) paper per stapled packet. Results may vary with heavier paper.				

Media guidelines

Selecting the appropriate media for the printer helps avoid printing problems.

For detailed information about media characteristics, see the *Card Stock & Label Guide* available on the Lexmark Support Web site at **http://support.lexmark.com**.

Paper

To ensure the best print quality and feed reliability, use 90 g/m^2 (24 lb) xerographic, grain long paper. Business papers designed for general business use may also provide acceptable print quality.

We recommend Lexmark part number 12A5950 letter-size glossy paper and Lexmark part number 12A5951 A4-size glossy paper.

Always print several samples before buying large quantities of any type of media. When choosing any media, consider the weight, fiber content, and color.

The Laser printing process heats paper to high temperatures of 180°C (356°F) for non-MICR applications. Use only paper able to withstand these temperatures without discoloring, bleeding, or releasing hazardous emissions. Check with the manufacturer or vendor to determine whether the paper chosen is acceptable for laser printers.

When loading paper, note the recommended print side on the paper package, and load paper accordingly.

Paper characteristics

The following paper characteristics affect print quality and reliability. Consider these characteristics when evaluating new paper stock.

For detailed information, see the *Card Stock & Label Guide* available on the Lexmark Web site at http://support.lexmark.com.

Weight

The printer can automatically feed paper weights from 60 to 220 g/m^2 (16 to 58 lb bond) grain long. Paper lighter than 60 g/m^2 (16 lb) might not be stiff enough to feed properly, causing jams. For best performance, use 75 g/m^2 (20 lb bond) grain long paper. To use paper smaller than 182 x 257 mm (7.2 x 10.1 in.), we recommend 90 g/m^2 (24 lb bond) or heavier paper.

Curl

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

Smoothness

The degree of smoothness of paper directly affects print quality. If the paper is too rough, the toner does not fuse to the paper properly, resulting in poor print quality. If the paper is too smooth, it can cause paper feeding or print quality issues. Smoothness needs to be between 100 and 300 Sheffield points; however, smoothness between 150 and 250 Sheffield points produces the best print quality.

Moisture content

The amount of moisture in the paper affects both print quality and the ability of the printer to feed the paper properly. Leave the paper in its original wrapper until it is time to use it. This limits the exposure of the paper to moisture changes that can degrade its performance.

Condition paper while it is still in the original wrapper. To condition it, store it in the same environment as the printer for 24 to 48 hours before printing to let the paper stabilize in the new conditions. Extend the time several days if the storage or transportation environment is very different from the printer environment. Thick paper may also require a longer conditioning period because of the mass of material.

Grain direction

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

For 60 to 135 g/m^2 (16- to 36-lb bond) paper, grain long fibers are recommended. For heavier papers, grain short is recommended.

Fiber content

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

Unacceptable paper

The following papers are not recommended for use with the printer:

- Chemically treated papers used to make copies without carbon paper, also known as carbonless papers, carbonless copy paper (CCP), or no carbon required (NCR) paper
- Preprinted papers with chemicals that may contaminate the printer
- Preprinted papers that can be affected by the temperature in the printer fuser
- Preprinted papers that require a *registration* (the precise print location on the page) greater than ±0.09 in., such as optical character recognition (OCR) forms. In some cases, registration can be adjusted with the software application to successfully print on these forms.
- Coated papers (erasable bond), synthetic papers, or thermal papers
- Rough-edged, rough or heavily textured surface papers or curled papers
- Recycled papers that fail EN12281:2002 (European)
- Paper having a weight less than 60 g/m^2 (16 lb)
- Multiple-part forms or documents

Selecting paper

Proper paper loading helps prevent jams and ensures trouble-free printing.

To help avoid jams or poor print quality:

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

Tools required for service

Flat-blade screwdriver
#1 Phillips screwdriver, magnetic
#2 Phillips screwdriver, magnetic
#2 Phillips screwdriver, magnetic short-blade
Needlenose pliers
Diagonal side cutters
Spring hook
Feeler gauges
Analog or digital multimeter
Parallel wrap plug 1319128
Twinax/serial debug cable 1381963
Coax/serial debug cable 1381964

Acronyms

ASIC	Application-Specific Integrated Circuit
BLDC	Brushless DC Motor
BOR	Black Only Retract
C	Cyan
CRC	Cyclic Redundancy Check
CSU	Customer Setup
DIMM	Dual Inline Memory Module
DRAM	Dynamic Random Access Memory
EDO	Enhanced Data Out
EP	Electrophotographic Process
EPROM	Erasable Programmable Read-Only Memory
ESD	Electrostatic Discharge
FRU	Field Replaceable Unit
GB	Gigabyte
HCIT	High-Capacity Input Tray
HCOF	High-Capacity Output Finisher
HVPS	High Voltage Power Supply
ITU	Image Transfer Unit
K	Black
LASER	Light Amplification by Stimulated Emission of Radiation
LCD	Liquid Crystal Display
LED	Light-Emitting Diode
LVPS	Low Voltage Power Supply
M	Magenta
MROM	Masked Read Only Memory
MS	Microswitch
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

2. Diagnostic information



CAUTION

Remove the power cord from the electrical outlet before you connect or disconnect any cable or electronic card or assembly for personal safety and to prevent damage to the printer.



CAUTION

The printer weight is greater than 32 kg (70 lb) and requires three or more trained personnel to move it safely.

Troubleshooting map

To determine the corrective action necessary to repair a printer, look for the following information:

Topic	Section
POST sequence	**“Power-on Self Test (POST) sequence” on page 2-2**
Print quality issues	**“Print quality” on page 2-23** **“ADF & scanner print quality” on page 2-44**
Paper jams 200–299 400–499	**“Paper jams” on page 2-3**
User messages text 0–99	**“User messages” on page 2-49**
Error codes 100–199 800–899 900–999	**“Service errors” on page 2-58**
Other symptoms	**“Symptoms” on page 2-65**
Service checks	**“Service checks” on page 2-66**

Error code divisions

Error codes identifications have changed for this product. The following chart identifies some of the new code numbers that should be consistent across product lines.

Range	Description	Go to page…
Text prompts	User prompts without code numbers	**“User prompts” on page 2-49**
0–99	User attendance messages	**“User attendance messages (0–99)” on page 2-51**
100–199	Printer hardware errors	**“Printer hardware errors (100–199)” on page 2-58**
200–299	Printer and input option paper jams	**“Paper jams” on page 2-3**
400–499	Output option paper jams	**“Paper jams” on page 2-3**
800–899	ADF and flatbed scanner errors	**“ADF and flatbed scanner errors (800–899)” on page 2-60**
900–999	Firmware and/or system electronics	**“Firmware and/or system electronics (900–999))” on page 2-61**

Note: There may be printer error messages that are not contained in this service manual. Contact your next level of support for assistance.

Power-on Self Test (POST) sequence

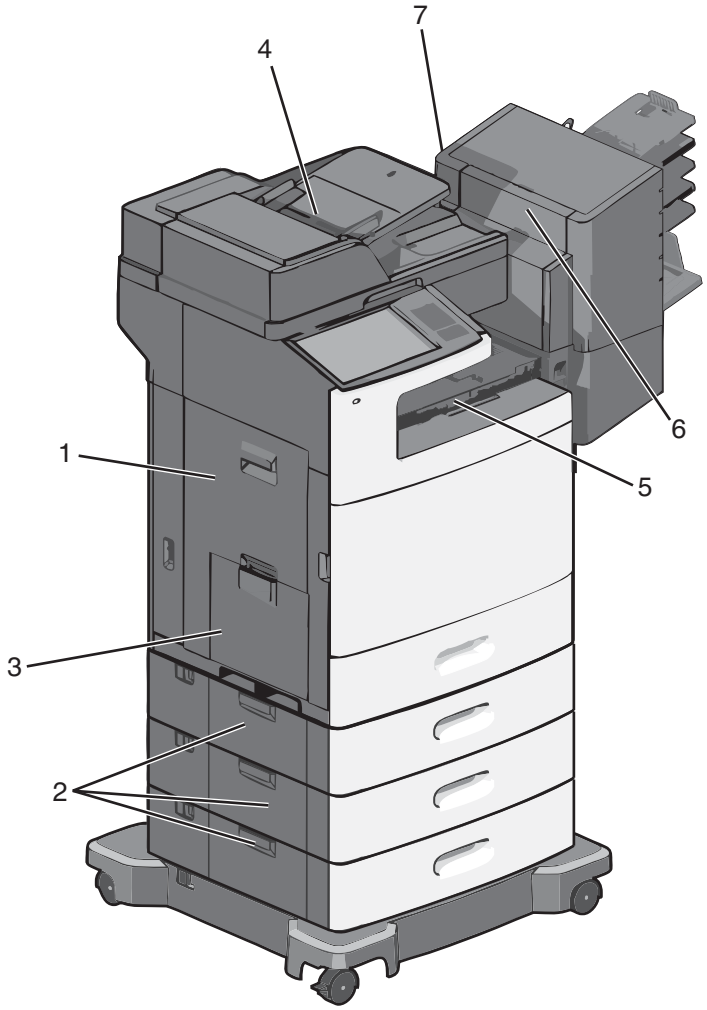
When you turn the printer on, it performs a Power-on Self Test (POST) sequence. Check for correct POST functioning of the base printer by observing the following:

1. The LED turns on.
2. The main fan turns on.
3. The operator panel turns on.
4. The fuser heater turns on. The fuser takes longer to warm up from a cold start than a warm start.
5. The operator panel LED starts blinking.
6. A splash screen appears on the display.
   The following errors or messages may appear:
   - `Close Door` or `Insert Cartridge` display if the front access door is open or the print cartridge is missing.
   - Any cartridge errors, such as `Defective Cartridge` or `Missing Cartridge`.
7. `Ready` appears on the display.
8. The main drive motor turns on.
9. The EP drive assembly drives the developer shaft located in the toner cartridge.
10. The exit rollers turn.
11. The printer may begin calibration.

Paper jams

Understanding jam numbers and locations

When a jam occurs, a message indicating the jam location appears on the display. To resolve any paper jam message, you must clear all jammed paper from the paper path.

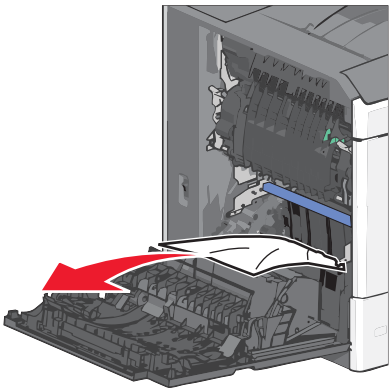


Area	Jam number	What to do	See
1	200–203 230–239	Open the side door, and then remove the jammed paper.	**“200 paper jam” on page 2-4** **“201 paper jam” on page 2-7** **“202–203 paper jams” on page 2-9** **“230–239 paper jams” on page 2-12**
2	24x	Open the side door of the specified tray, and then remove the jammed paper.	**“24x paper jam” on page 2-14**
3	250	Remove all paper from the multipurpose feeder, and then remove the jammed paper.	**“250 paper jam” on page 2-20**

Area	Jam number	What to do	See
4	280–291	Remove all paper from the ADF, and then remove the jammed paper.	**“280–289 paper jams” on page 2-21**

200 paper jam

1. Open the left access door.
2. Firmly grasp the jammed paper, and then gently pull it out.
   Note: Make sure all paper fragments are removed.



3. Close the door.
4. From the operator panel, touch **Continue, jam cleared**.

Additional checks—200 paper jam

Error code	Description	Action
200.01	Input sensor is made when printer powers up or covers are closed. Possible causes: • Paper jam leaving page over sensor • Defective input sensor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“Input, S1, narrow media, and near narrow media sensor service check” on page 2-147**.
200.02	Paper hit the input sensor too soon. Possible causes: • Damaged input sensor flag or input sensor • Loose input sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. The input sensor may not be functioning properly. Go to **“200.02—Paper Jam error service check” on page 2-90**.
200.03	Input sensor is never made or made late. Possible causes: • Faulty input sensor • Faulty staging deflector assembly • Faulty autocomp assembly	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“200.03, 200.08—Paper Jam error service check” on page 2-91**.

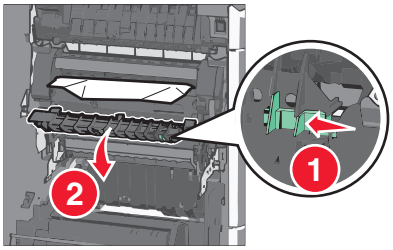
Error code	Description	Action
200.04	Input sensor flag broke early. Possible cause: • Incorrect paper settings • Faulty input sensor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Go to **“Input, S1, narrow media, and near narrow media sensor service check” on page 2-147**.
200.05, 200.07	Input sensor does not break or breaks late. Possible causes: • Incorrect paper settings • Incorrect paper loading • Incorrect paper guide setting • ITU module failure • Lower guide failure • Paper pick mechanism failure • Input sensor failure	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Flex the media, and stack it flat in the paper tray. 4. Properly set the paper guides in the paper tray. 5. Check the pick roll tires, and replace them if they are worn. 6. Go to **“200.05, 200.07—Paper Jam error service check” on page 2-92**.
200.08	Input sensor is never made or made late.	See **“200.03” on page 2-4**.
200.21, 200.22	Staging motor stalled or is under speed. Possible causes: • Faulty staging motor • Faulty cable/connector • Faulty system board	1. Check that the waste toner container is latched correctly in the printer. 2. Check for anything in the paper path that might cause the paper to jam. 3. If clearing a paper jam does not fix the problem, go to **“147.xx—Staging motor error service check” on page 2-84**.
200.31	Near narrow media sensor is made when the printer tries to print from an idle state. Possible causes: • Paper jam leaving paper over the sensor • Defective near narrow media sensor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“Input, S1, narrow media, and near narrow media sensor service check” on page 2-147**.
200.32	Near narrow media sensor is never made or is made late. • Damaged narrow media flag or narrow media sensor • Loose input sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“200.32—Paper Jam error service check” on page 2-93**.
200.33	Near narrow media sensor is never made or is made late. • Faulty input sensor • Faulty staging deflector assembly • Faulty autocomp assembly	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“200.33, 200.38—Paper Jam error service check” on page 2-95**.
200.34	Near narrow media sensor broke early. Possible causes: • Incorrect paper settings • Defective near narrow media sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Go to **“Input, S1, narrow media, and near narrow media sensor service check” on page 2-147**.

Error code	Description	Action
200.35, 200.37	Near narrow media sensor does not break or breaks late. • Incorrect paper settings • Incorrect paper loaded • Incorrect paper guide setting • ITU module failure • Lower guide failure • Paper pick mechanism failure • Near narrow media sensor failure	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Flex the media, and stack it flat in the paper tray. 4. Properly set the paper guides in the paper tray. 5. Check the pick roll tires, and replace them if they are worn. • Go to **"200.35, 200.37—Paper Jam error service check" on page 2-96**.
200.38	Near narrow media sensor is never made or is made late.	See **"200.33" on page 2-5**.
200.40	S1 sensor is made early. Possible causes: • Incorrect paper settings • Defective S1 sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. If clearing a paper jam does not fix the problem, go to **"241.02—Paper Jam error service check" on page 2-104**.
200.41	Narrow media sensor is made when printer tries to print from an idle state. Possible causes: • Paper jam leaving page over sensor • Defective narrow media sensor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **"Input, S1, narrow media, and near narrow media sensor service check" on page 2-147**.
200.42	Narrow media sensor is made early. Possible causes: • Incorrect paper settings • Defective narrow media sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. If clearing a paper jam does not fix the problem, go to **"200.42—Paper Jam error service check" on page 2-97**.
200.43	Narrow media sensor is never made or is made late.	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **"200.43, 200.48—Paper Jam error service check" on page 2-99**.
200.44	Narrow media sensor broke early. Possible causes: • Incorrect paper settings • Defective narrow media sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Go to **"Input, S1, narrow media, and near narrow media sensor service check" on page 2-147**.
200.45	Narrow media sensor does not break or breaks late. • Incorrect paper settings • Incorrect paper loaded • Incorrect paper guide setting • ITU module failure • Lower guide failure • Paper pick mechanism failure • Narrow media sensor failure	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Flex the media, and stack it flat in the paper tray. 4. Properly set the paper guides in the paper tray. 5. Check the pick roll tires, and replace them if they are worn. 6. Go to **"200.45, 200.47—Paper Jam error service check" on page 2-100**.
200.47	Narrow media sensor does not break or breaks late.	See **"200.45" on page 2-6**.

Error code	Description	Action
200.48	Narrow media sensor is never made or is made late.	See **“200.43” on page 2-6**.
200.49	S1 sensor is made when printer tries to print from an idle state. Possible causes: • Paper jam leaving paper over the sensor • Defective near narrow media sensor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“Input, S1, narrow media, and near narrow media sensor service check” on page 2-147**.

201 paper jam

1. Open the side door.
2. Determine where the jam is located, and then remove it:
   a. If paper is inside the fuser, then open the fuser access door.



   b. Firmly grasp the jammed paper on each side, and then gently pull it out.
   Warning: Do not touch the center of the fuser unit. Doing so will damage the fuser.

   Note: Make sure all paper fragments are removed.
3. Close the side door.
4. From the operator panel, touch **Continue, jam cleared**.

Additional checks—201 paper jam

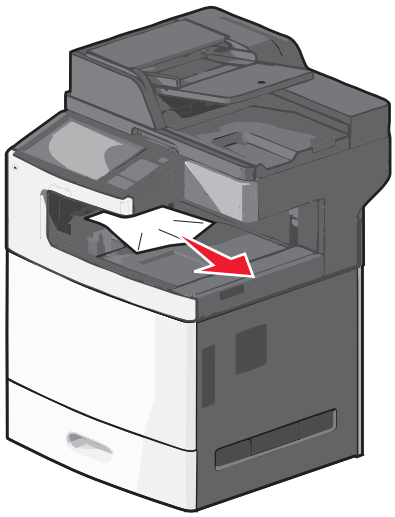
Error code	Description	Action
201.01	Bubble sensor active when printer powers up or a cover is closed. Possible causes: • Paper jam leaving paper over the sensor • Damaged bubble sensor • Damaged fuser autoconnect • Faulty fuser DC cable connection • Faulty fuser • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Flex the media, and stack it flat in the tray. 4. Properly set the paper guides in the paper tray. 5. If the problem persists, go to “**“Bubble sensor service check” on page 2-139**.
201.02	Bubble sensor is made early. Possible causes: • Incorrect paper settings • Defective near narrow media sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. If clearing a paper jam does not fix the problem, replace the fuser. See **“Fuser assembly removal” on page 4-56**.

Error code	Description	Action
201.03	Bubble sensor is never made or is made late. Possible causes: • Faulty bubble sensor • Faulty fuser connection	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“201.03, 201.05, 201.07, 201.08—Paper Jam error service check” on page 2-101**.
201.04	Bubble sensor broke early. Possible causes: • Incorrect paper settings • Defective bubble sensor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Go to **“121.xx—Fuser error service check” on page 2-69**.
201.05, 201.07, 201.08	Bubble sensor is never made or is made late.	See **“201.03” on page 2-8**.
201.42	A narrow banner media error has occurred.	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“Input, S1, narrow media, and near narrow media sensor service check” on page 2-147**.
201.51	Bubble sensor active when printer powers up or a cover is closed. (Fuser past life)	See **“201.01” on page 2-7**.
201.52	Bubble sensor is made early. (Fuser past life)	See **“201.02” on page 2-7**.
201.53	Bubble sensor is never made or is made late. (Fuser past life)	See **“201.03” on page 2-8**.
201.54	Bubble sensor broke early. (Fuser past life)	See **“201.04” on page 2-8**.
201.55, 201.57, 201.58	Bubble sensor is never made or is made late. (Fuser past life)	See **“201.03” on page 2-8**.

202–203 paper jams

Paper jam in the standard exit bin:

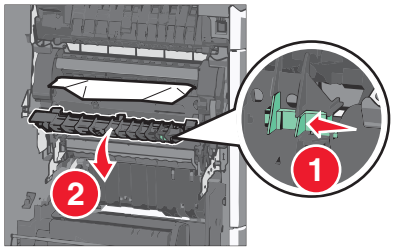
1. Firmly grasp the paper on each side, and then gently pull it out.
   Note: Make sure all paper fragments are removed.



2. From the operator panel, touch **Continue, jam cleared**.

Paper jam in the fuser:

1. Open the left access door.
2. Open the fuser access door**.**



3. Firmly grasp the jammed paper on each side, and then gently pull it out.
   Note: Make sure all paper fragments are removed.
4. Close the door.
5. From the operator panel, touch **Continue, jam cleared**.

Paper jam under the fuser:

1. Open the left access door.
2. If the paper is not visible, then remove the fuser unit.
3. Firmly grasp the jammed paper on each side, and then gently pull it out.
   Note: Make sure all paper fragments are removed.
4. Reinstall the fuser.
5. Close the door.
6. From the operator panel, touch **Continue, jam cleared**.

Additional checks—202–203 paper jams

Error code	Description	Action
202.01	Exit sensor is made when printer tries to print from an idle state. Possible causes: • Damaged paper exit sensor or paper exit sensor flag • Damaged fuser autoconnect • Faulty fuser • Faulty system board	1. Check for anything in the paper path that might cause the paper to jam. 2. The fuser exit sensor may not be functioning properly. Go to **"121.xx—Fuser error service check" on page 2-69**.
202.02	Exit sensor is made early. Possible causes: • Incorrect paper settings • Defective exit sensor	1. Check for anything in the paper path that might cause the paper to jam. 2. If clearing the jam does not solve the problem, go to **"121.xx—Fuser error service check" on page 2-69**.
202.03	Exit sensor is never made. Possible causes: • Improper paper loading • Paper wrapped in fuser • Damaged paper exit sensor or paper exit sensor flag • Damaged fuser autoconnect • Faulty fuser DC cable connection • Faulty fuser • Faulty system board	1. Check for anything in the paper path that might cause the paper to jam. 2. The fuser exit sensor may not be functioning properly. Go to **"121.xx—Fuser error service check" on page 2-69**.
202.04	Exit sensor broke early. Possible causes: • Damaged paper exit sensor or paper exit sensor flag • Faulty fuser • Faulty system board	The fuser exit sensor may not be functioning properly. Go to **"121.xx—Fuser error service check" on page 2-69**.
202.05, 202.07	Exit sensor never broke. Possible causes: • Damaged paper exit sensor or paper exit sensor flag • Faulty fuser • Faulty system board • Faulty output bin flag	1. Check exit sensor flag on fuser for proper operation.Be sure the paper is not hanging on the flag. 2. The fuser exit sensor may not be functioning properly. Go to **"121.xx—Fuser error service check" on page 2-69**.
202.08	Exit sensor is never made.	See **"202.03" on page 2-10**.
202.31	Bin-full sensor active when printing started. Possible causes: • Paper jam leaving paper over the sensor • Damaged bin-full sensor • Faulty system board.	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Flex the media, and stack it flat in the tray. 4. Properly set the paper guides in the paper tray. 5. If the problem persists, go to **"Pick arm stuck down service check" on page 2-158**.
202.32	Bin-full sensor is made early. Possible causes: • Incorrect paper settings • Defective bin-full sensor	1. Check for anything in the paper path that might cause the paper to jam. 2. If clearing the jam does not solve the problem, go to **"202.32—Paper Jam error service check" on page 2-103**.

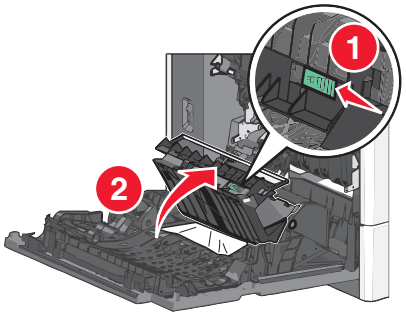
Previous
Next
Go Back

Error code	Description	Action
202.33	Bin-full sensor is never made or is made late.	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **"Pick arm stuck down service check" on page 2-158**.
202.34	Bin-full sensor broke early. Possible causes: • Incorrect paper settings • Defective bin-full sensor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Go to **"Pick arm stuck down service check" on page 2-158**.
202.35, 202.37	Bin-full sensor does not break or breaks late. • Incorrect paper settings • Incorrect paper loaded • Incorrect paper guide setting • Bin-full sensor failure	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Flex the media, and stack it flat in the paper tray. 4. Properly set the paper guides in the paper tray. 5. Check the pick roll tires, and replace them if they are worn. 6. Go to **"Pick arm stuck down service check" on page 2-158**.
202.38	Bin-full sensor is never made or is made late.	See **"202.33" on page 2-11**.
202.39	Fuser motor stalled. Possible causes: • Faulty cable/connector • Faulty fuser motor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **"120.xx—Motor (fuser) error service check" on page 2-68**.
202.51	Exit sensor is made when the printer tries to print from an idle state. (Fuser past life)	See **"202.01" on page 2-10**.
202.52	Exit sensor is made early. (Fuser past life)	See **"202.02" on page 2-10**.
202.53	Exit sensor is never made. (Fuser past life)	See **"202.03" on page 2-10**.
202.54	Exit sensor broke early. (Fuser past life)	See **"202.04" on page 2-10**.
202.55, 202.57	Exit sensor never broke. (Fuser past life)	See **"202.05, 202.07" on page 2-10**.
202.58	Exit sensor is never made. (Fuser past life)	See **"202.03" on page 2-10**.
203.01	Redrive bubble sensor is made when the printer powers up or covers are closed.	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **"Redrive bubble sensor service check" on page 2-159**.
203.02	Paper hit the redrive bubble sensor too soon. Possible causes: • Damaged redrive bubble sensor or redrive bubble sensor flag • Loose redrive bubble sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. The redrive bubble sensor may not be functioning properly. Go to **"Redrive bubble sensor service check" on page 2-159**.

Error code	Description	Action
203.03	Redrive bubble sensor is never made or is made late. Possible cause: Faulty redrive bubble sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **"Redrive bubble sensor service check" on page 2-159**.
203.04	Redrive bubble sensor flag broke early. Possible causes: • Incorrect paper settings • Defective redrive bubble sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media used. 3. Go to **"Redrive bubble sensor service check" on page 2-159**.
203.05, 203.07	Redrive bubble sensor does not break or breaks late. Possible causes: • Incorrect paper settings • Redrive bubble sensor failure	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media used. 3. Go to **"Redrive bubble sensor service check" on page 2-159**.
203.08	Redrive bubble sensor is never made or is made late.	See **"202.03" on page 2-10**.
203.21, 203.22	Paper path redrive motor stalled or is under speed. Possible causes: • Faulty paper path redrive motor • Faulty cable/connector • Faulty system board	1. Check that the waste toner container is latched correctly in the printer. 2. Check for anything in the paper path that might cause the paper to jam. 3. If clearing a paper jam does not fix the problem, go to **"149.xx—Paper path redrive motor error service check" on page 2-85**.

230–239 paper jams

1. Open the left access door.
2. Open the jam access door of the duplexer.



3. Grasp the jammed paper, and then gently pull it out.
   Note: Make sure all paper fragments are removed.
4. Close the door.
5. From the operator panel, touch **Continue, jam cleared.**

Additional checks—230 paper jam

Error code	Description	Action
231.01	D1 sensor is made when printer tries to print from an idle state. Possible causes: • Damaged D1 sensor • Faulty system board	1. Check for anything in the paper path that might cause the paper to jam. 2. The D1 sensor may not be functioning properly. Go to **“D1 and D2 sensor service check” on page 2-141**.
231.02	D1sensor is made early. Possible causes: • Incorrect paper settings • Defective D1 sensor	1. Check for anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“D1 and D2 sensor service check” on page 2-141**.
231.03	D1 sensor is never made. Possible causes: • Improper loading of paper • Damaged paper D1 sensor • Faulty system board	1. Check for anything in the paper path that might cause the paper to jam. 2. The D2 sensor may not be functioning properly. Go to **“D1 and D2 sensor service check” on page 2-141**.
231.04	D1 sensor broke early. Possible causes: • Damaged D1 sensor • Faulty fuser • Faulty system board	The D1 sensor may not be functioning properly. Go to **“D1 and D2 sensor service check” on page 2-141**.
231.05, 231.07	D1 sensor never broke. Possible causes: • Damaged D1 sensor • Faulty fuser • Faulty system board	1. Check for anything in the paper path that might cause the paper to jam. 2. If clearing the jam does not solve the problem, go to **“D1 and D2 sensor service check” on page 2-141**.
231.08	D1 sensor is never made.	See **“231.03” on page 2-13**.
232.01	D2 sensor is made when printer tries to print from an idle state. Possible causes: • Damaged D2 sensor • Faulty system board	1. Check for anything in the paper path that might cause the paper to jam. 2. The D2 sensor may not be functioning properly. Go to **“D1 and D2 sensor service check” on page 2-141**.
232.02	D2 sensor is made early. Possible causes: • Incorrect paper settings • Defective D2 sensor	1. Check for anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“D1 and D2 sensor service check” on page 2-141**.
232.03	D2 sensor is never made. Possible causes: • Improper loading of paper • Damaged paper D2 sensor • Faulty system board	1. Check for anything in the paper path that might cause the paper to jam. 2. The D2 sensor may not be functioning properly. Go to **“D1 and D2 sensor service check” on page 2-141**.

232.04	D2 sensor broke early. Possible causes: • Damaged D2 sensor • Faulty fuser • Faulty system board	The D2 sensor may not be functioning properly. Go to **“D1 and D2 sensor service check” on page 2-141**.
232.05, 232.07	D2 sensor never broke. Possible causes: • Damaged D2 sensor • Faulty fuser • Faulty system board	1. Check for anything in the paper path that might cause the paper to jam. 2. If clearing the jam does not solve the problem, go to **“D1 and D2 sensor service check” on page 2-141**.
232.08	D2 sensor is never made.	See **“232.03” on page 2-13**.

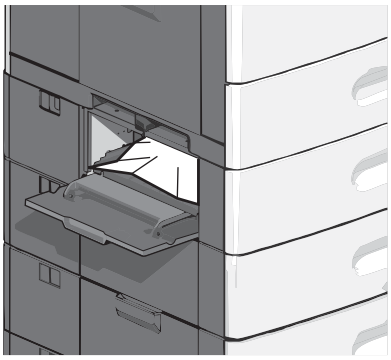
24x paper jam

Paper jam in Tray 1:

1. Open the left access door.
2. Grasp the jammed paper on each side, and then gently pull it out.
3. Close the door.
4. From the operator panel, touch **Continue, jam cleared**.

Paper jam in the optional trays:

1. Open the side door of the specified optional tray.



2. Grasp the jammed paper on each side, and then gently pull it out.
3. Close the side door.
4. From the operator panel, touch **Continue, jam cleared**.

Additional checks—24x paper jam

Error code	Description	Action
241.01	S1 sensor is made when printer powers up or covers are closed. Possible causes: • Paper jam leaving page over sensor • Defective S1 sensor • Faulty system card	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing a paper jam does not fix the problem, go to **“Input, S1, narrow media, and near narrow media sensor service check” on page 2-147**.
241.02	Paper hit S1 sensor too soon. Possible causes: • Damaged S1 sensor flag or S1 sensor • Loose input sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. The input sensor may not be functioning properly. Go to **“241.02—Paper Jam error service check” on page 2-104**.
241.03	While feeding from tray 2, the paper never reaches the next sensor. Possible causes: • Obstruction on the paper path • Damaged media leading edge • Incorrect paper loading • Incorrect paper guide setting • Jam clearance cover partially open • Drive assembly failure	1. Remove anything in the paper path. 2. Flex the media, and stack it flat in the tray. 3. Check if the jam clearance cover can close properly. 4. If problem persists, go to **“241.03, 242.03, 243.03, 244.03, 242.05, 243.05, 244.05, 245.05—Paper jam (550-sheet/2000-sheet input option) service check” on page 2-106**.
241.04	S1sensor flag broke early. Possible cause: • Incorrect paper settings • Defective S1 sensor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Go to **“Input, S1, narrow media, and near narrow media sensor service check” on page 2-147**.
241.05, 241.07	While feeding from tray 1, the S1 input sensor is never made. Possible causes: • Incorrect paper loading • Incorrect paper guide setting • Pick rolls (tires) failure • Paper pick mechanism failure • System board failure	1. Remove all media present in the paper path. 2. Flex the media, and stack it flat in the tray or multipurpose feeder. 3. Properly set paper guides in the paper tray. 4. Check the pick rolls (tires) and replace if worn. 5. If the problem persists, go to **“Input, S1, narrow media, and near narrow media sensor service check” on page 2-147**.
241.08	While feeding from tray 1, the S1 sensor does not break. Possible causes: • Incorrect media setting • Incorrect paper loading • Incorrect media restraint setting • Paper pick mechanism failure • Transport belt motor failure	1. Clear away anything in the paper path that might cause the paper to jam. 2. Be sure the paper settings match the media. 3. Flex the media, and stack it flat in the tray. 4. Properly set media restraints in the paper tray. 5. Check the pick arm rolls (tires) and replace if worn.

Error code	Description	Action
241.21, 241.22	Tray 1 motor stalled. Possible causes: • Incorrect paper loading • Paper pick mechanism failure • System board failure	1. Remove all media present in the paper path. 2. Be sure the paper settings match the media. 3. Flex the media, and stack it flat in the tray or multipurpose feeder. 4. If the previous actions do not fix the problem, go to**"146.xx—Autocomp (tray 1) motor error service check" on page 2-83**.
242.01	Tray 2 sensor is reached during POR or after clearing the paper jam, tray 2 sensor is still triggered. Possible causes: • Obstruction on the sensor flag • Obstruction on the paper path • Paper got stuck between the sensor • Pick roll failure • Paper pick failure • System board failure	1. Clear anything in the paper path that might cause the paper to jam. 2. Check if the sensor flag is free from any obstruction. 3. Properly install the media on the tray. 4. If problem persists, go to **"242.01, 243.01, 244.01, 245.01 —Paper Jam (550-sheet/2000-sheet input option) service check" on page 2-105**.
242.03	While feeding from tray 3, the paper never reaches the next sensor. Possible causes: • Obstruction on the paper path • Damaged media leading edge • Incorrect paper loading • Incorrect paper guide setting • Jam clearance cover partially open • Drive assembly failure	1. Remove anything in the paper path. 2. Flex the media, and stack it flat in the tray. 3. Check if the jam clearance cover can close properly. 4. If problem persists, go to **"241.03, 242.03, 243.03, 244.03, 242.05, 243.05, 244.05, 245.05—Paper jam (550-sheet/2000-sheet input option) service check" on page 2-106**.
242.05	While feeding from tray 2, the paper took a long time to clear the pass thru sensor. Possible causes: • Incorrect paper size • Incorrect paper guide setting • Obstruction on the paper path • Drive assembly failure • Paper pick mechanism failure • System board failure • Obstructed pass thru sensor • Pick rolls failure	1. Clear the paper path. 2. Make sure the paper setting match the media. 3. Check if the pick roll are worn out. 4. If problem persists, go to **"241.03, 242.03, 243.03, 244.03, 242.05, 243.05, 244.05, 245.05—Paper jam (550-sheet/2000-sheet input option) service check" on page 2-106**
242.08	While feeding from tray 2, the paper did not reached the pass thru sensor. Possible causes: • Contaminated or worn-out pick tire • Damaged pick assembly • Incorrect media loading • Obstruction on the paper path • Damage tray restraints	1. Check if media is loaded properly 2. Check tray restraints 3. Clear the paper path 4. Reseat the option tray 2. 5. Check the pick arm roll in tray 2 and replace if worn. 6. If problem persists, go to **"280.06—Media missing jam service check" on page 2-113**.

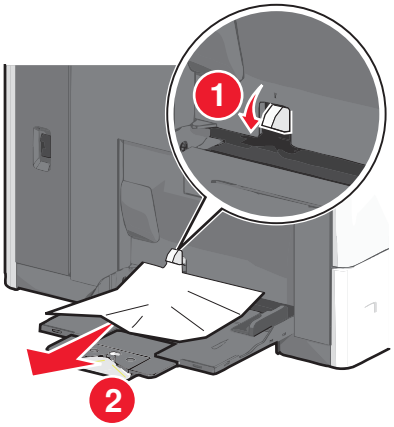
Error code	Description	Action
243.01	Tray 3 sensor is reached during POR or after clearing the paper jam, tray 3 sensor is still triggered. Possible causes: • Obstruction on the sensor flag • Obstruction on the paper path • Paper got stuck between the sensor • Pick roll failure • Paper pick failure • System board failure	1. Clear anything in the paper path that might cause the paper to jam. 2. Check if the sensor flag is free from any obstruction. 3. Properly install the media on the tray. 4. If problem persists, go to **“242.01, 243.01, 244.01, 245.01 —Paper Jam (550-sheet/2000-sheet input option) service check” on page 2-105**.
243.03	While feeding from tray 4, the paper never reaches the next sensor. Possible causes: • Obstruction on the paper path • Damaged media leading edge • Incorrect paper loading • Incorrect paper guide setting • Jam clearance cover partially open • Drive assembly failure	1. Remove anything in the paper path. 2. Flex the media, and stack it flat in the tray. 3. Check if the jam clearance cover can close properly. 4. If problem persists, go to **“241.03, 242.03, 243.03, 244.03, 242.05, 243.05, 244.05, 245.05—Paper jam (550-sheet/2000-sheet input option) service check” on page 2-106**.
243.05	While feeding from tray 3, the paper took a long time to clear the pass thru sensor. Possible causes: • Incorrect paper size • Incorrect paper guide setting • Obstruction on the paper path • Drive assembly failure • Paper pick mechanism failure • System board failure • Obstructed pass thru sensor • Pick rolls failure	1. Clear the paper path. 2. Make sure the paper setting match the media. 3. Check if the pick roll are worn out. 4. If problem persists, go to **“241.03, 242.03, 243.03, 244.03, 242.05, 243.05, 244.05, 245.05—Paper jam (550-sheet/2000-sheet input option) service check” on page 2-106**
243.08	While feeding from tray 3, the paper did not reached the pass thru sensor. Possible causes: • Contaminated or worn-out pick tire • Damaged pick assembly • Incorrect media loading • Obstruction on the paper path • Damage tray restraints	1. Check if media is loaded properly. 2. Check tray restraints. 3. Clear the paper path. 4. Reseat the option tray 3. 5. Check the pick arm roll in tray 3 and replace if worn. 6. If problem persists, go to **“280.06—Media missing jam service check” on page 2-113**.

Error code	Description	Action
244.01	Tray 4 sensor is reached during POR or after clearing the paper jam, tray 4 sensor is still triggered. Possible causes: • Obstruction on the sensor flag • Obstruction on the paper path • Paper got stuck between the sensor • Pick roll failure • Paper pick failure • System board failure	1. Clear anything in the paper path that might cause the paper to jam. 2. Check if the sensor flag is free from any obstruction. 3. Properly install the media on the tray. 4. If problem persists, go to **“242.01, 243.01, 244.01, 245.01 —Paper Jam (550-sheet/2000-sheet input option) service check” on page 2-105**.
244.03	While feeding from tray 5, the paper never reaches the next sensor. Possible causes: • Obstruction on the paper path • Damaged media leading edge • Incorrect paper loading • Incorrect paper guide setting • Jam clearance cover partially open • Drive assembly failure	1. Remove anything in the paper path. 2. Flex the media, and stack it flat in the tray. 3. Check if the jam clearance cover can close properly. 4. If problem persists, go to **“241.03, 242.03, 243.03, 244.03, 242.05, 243.05, 244.05, 245.05—Paper jam (550-sheet/2000-sheet input option) service check” on page 2-106**.
244.05	While feeding from tray 4, the paper took a long time to clear the pass thru sensor. Possible causes: • Incorrect paper size • Incorrect paper guide setting • Obstruction on the paper path • Drive assembly failure • Paper pick mechanism failure • System board failure • Obstructed pass thru sensor • Pick rolls failure	1. Clear the paper path. 2. Make sure the paper setting match the media. 3. Check if the pick roll are worn out. 4. If problem persists, go to **“241.03, 242.03, 243.03, 244.03, 242.05, 243.05, 244.05, 245.05—Paper jam (550-sheet/2000-sheet input option) service check” on page 2-106**
244.08	While feeding from tray 4, the paper did not reached the pass thru sensor. Possible causes: • Contaminated or worn-out pick tire • Damaged pick assembly • Incorrect media loading • Obstruction on the paper path • Damage tray restraints	1. Check if media is loaded properly. 2. Check tray restraints. 3. Clear the paper path. 4. Reseat the option tray 4. 5. Check the pick arm roll in tray 4 and replace if worn. 6. If problem persists, go to **“280.06—Media missing jam service check” on page 2-113**.

Error code	Description	Action
245.01	Tray 5 sensor is reached during POR or after clearing the paper jam, tray 5 sensor is still triggered. Possible causes: • Obstruction on the sensor flag • Obstruction on the paper path • Paper got stuck between the sensor • Pick roll failure • Paper pick failure • System board failure	1. Clear anything in the paper path that might cause the paper to jam. 2. Check if the sensor flag is free from any obstruction. 3. Properly install the media on the tray. 4. If problem persists, go to **“242.01, 243.01, 244.01, 245.01 —Paper Jam (550-sheet/2000-sheet input option) service check” on page 2-105**.
245.05	While feeding from tray 5, the paper took a long time to clear the pass thru sensor. Possible causes: • Incorrect paper size • Incorrect paper guide setting • Obstruction on the paper path • Drive assembly failure • Paper pick mechanism failure • System board failure • Obstructed pass thru sensor • Pick rolls failure	1. Clear the paper path. 2. Make sure the paper setting match the media. 3. Check if the pick roll are worn out. 4. If problem persists, go to **“241.03, 242.03, 243.03, 244.03, 242.05, 243.05, 244.05, 245.05—Paper jam (550-sheet/2000-sheet input option) service check” on page 2-106**
245.08	While feeding from tray 5, the paper did not reached the pass thru sensor. Possible causes: • Contaminated or worn-out pick tire • Damaged pick assembly • Incorrect media loading • Obstruction on the paper path • Damage tray restraints	1. Check if media is loaded properly. 2. Check tray restraints. 3. Clear the paper path. 4. Reseat the option tray 5. 5. Check the pick arm roll in tray 5 and replace if worn. 6. If problem persists, go to **“280.06—Media missing jam service check” on page 2-113**.

250 paper jam

1. Remove all paper from the multipurpose feeder.
2. Grasp the jammed paper on each side, and then gently pull it out.



Note: Make sure all paper fragments are removed.

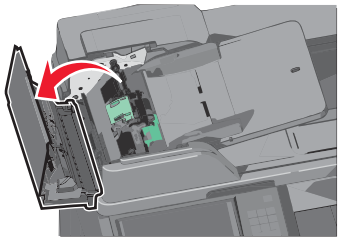
3. Reload paper into the multipurpose feeder, and then adjust the paper guides.
4. From the operator panel, touch **Continue, jam cleared**.

Additional checks—250 paper jam

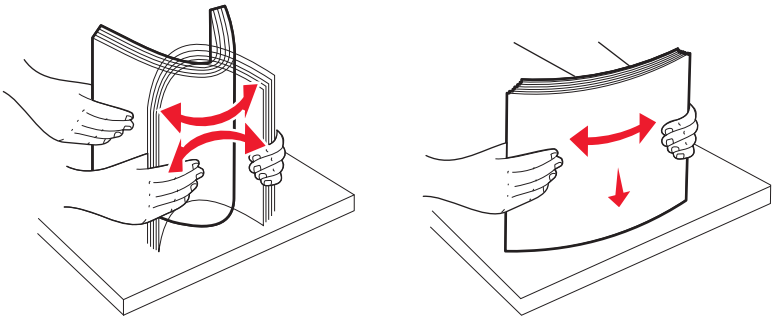
Error code	Description	Action
250.02	S1 sensor is made early with paper input from the MPF. Possible causes: • Incorrect paper settings • Defective S1 sensor	1. Clear away anything in the paper path that might cause the paper to jam. 2. If clearing the jam does not solve the problem, go to **"241.02—Paper Jam error service check" on page 2-104**.
250.03	S1 sensor is never made with paper input from the MPF. Possible causes: • Improper paper loading • Damaged paper S1sensor • Faulty system board	1. Clear away anything in the paper path that might cause the paper to jam. 2. The S1 sensor may not be functioning properly. Go to **"Input, S1, narrow media, and near narrow media sensor service check" on page 2-147**.
250.05	S1 sensor never broke. Possible causes: • Damaged S1sensor • Faulty system board	1. Check for anything in the paper path that might cause the paper to jam. 2. If clearing the jam does not solve the problem, go to **"Input, S1, narrow media, and near narrow media sensor service check" on page 2-147**.
250.21 250.22	Multipurpose feeder motor stalled. Possible causes: • Tray 1 motor failure • Cabling failure • MPF gear assembly failure • System board failure	1. Remove all the media present in the paper path. 2. Be sure the paper settings match the media. 3. Flex the media, and stack it flat in the tray or MPF. 4. If the problem persists, go to **"250.21, 250.22—MPF motor error service check" on page 2-110**.

280–289 paper jams

1. Remove all original documents from the ADF.
2. Open the ADF door.



3. Grasp the jammed paper on both side, and then gently pull it out.
   Note: Make sure all paper fragments are removed.
4. Close the ADF door.
5. Flex and stack the original documents.



6. Reload the original documents into the ADF, and then adjust the paper guide.
7. From the operator panel, touch **Continue**.

Additional checks—280–289 paper jams

Error code	Description	Action
280.06	Paper missing.	1. Remove all media present in the media path. 2. Check the ADF input sensor for proper operation. Go to **"280.06—Media missing jam service check" on page 2-113**.
282.01	Scanner Static Jam—ADF skew sensor	1. Remove all media present in media path. 2. Check the ADF skew sensor for proper operation. Go to **"282.01—Sensor (ADF sheet through) static jam service check" on page 2-114**.
282.03	Scanner Static Jam—ADF pickup jam	1. Remove all media present in the media path. 2. Check for obstructions in the media path. 3. If the problem persists, go to **"282.03—Sensor (ADF sheet through) late jam service check" on page 2-114**.
283.01	Scanner static jam—scanning sensor.	1. Remove all media present in media path. 2. Check ADF scanning sensor for proper operation. Go to **"283.01—Sensor (1st scan) static jam service check" on page 2-116**.

Error code	Description	Action
283.03	Scanner ADF feed jam.	1. Remove all media present in the media path. 2. Check for obstructions in the media path. 3. If the problem persists, go to **“283.03—Sensor (ADF 1st scan) late jam service check” on page 2-117**.
283.05	ADF scanning sensor jam. Possible cause is sensor never made.	1. Remove all media present in the media path. 2. Check for obstructions in the media path. 3. Check the ADF jam sensor for proper operation. Go to **“283.05—Sensor (2nd scan) lingering jam service check” on page 2-118**.
284.01	Scanner static jam—jam sensor.	1. Remove all media present in media path. 2. Check ADF jam sensor for proper operation. Go to **“284.01—Sensor (2nd scan) static jam service check” on page 2-119**.
284.03	ADF jam sensor jam.	Go to **“284.03—Sensor (ADF media exit) late jam service check” on page 2-120**.
285.01 285.03 285.07	Scanner static jam—ADF exit sensor.	1. Remove all media present in the media path. 2. Check the ADF media exit sensor for proper operation. Go to **“285.01, 285.03, 285.07—Sensor (ADF media exit) static jam service check” on page 2-121**.
285.05	Scanner ADF eject jam.	1. Remove all media present in the media path. 2. Check for obstructions in the media path. 3. Check the sensor (ADF media exit) for proper operation. Go to**“285.05—Sensor (ADF media exit) late jam service check” on page 2-122**.
290.11	Scanner ADF cover open jam. Possible causes: • ADF cover sensor flag • ADF cover sensor • ADF improper grounding of the feed shaft to skew shaft or feed shaft to ADF upper cover.	1. Remove all media present in the media path. 2. Check ADF left door interlock sensor for proper operation. Go to **“290.11—ADF top door open jam service check” on page 2-123**.
291.06	Flatbed cover open.	1. Remove all media present in the media path. 2. Check the ADF closed interlock switch for proper operation. Go to **“Switch (ADF closed interlock) jam service check” on page A-164**.

Print quality

Note: These symptoms may require replacement of one or more CRUs (Customer Replaceable Units) designated as supplies or maintenance items, which are the responsibility of the customer. With the customer's permission, you may need to install a developer (toner) cartridge or photoconductor unit.

Service tip: Before troubleshooting any print quality problems, do the following:

1. Print a menu settings page, and then check the life status of all supplies. Any supplies that are low should be replaced.
   Note: Be sure and keep the original menu page to restore the customer's custom settings if needed.
2. On the menu page, make sure the following is set to the default level:
   - Color Correction: Set to Auto.
   - Print Resolution: Set to 1200 dpi (print quality problems should be checked at different resolution settings).
   - Toner Darkness: Set to 4 (default).
   - Color Saver: Set to OFF.
   - RGB Brightness, RGB Contrast, RGB Saturation: Set to 0.
   - Color Balance: Select **Reset Defaults** to zero out all colors.
   - Check the paper type, texture and weight settings against what is loaded in the printer.

   Once the printer has been restored to its default levels, do the following:
3. Inspect the transfer module for damage. Replace if damaged.
4. Inspect the print cartridges for damage. Replace if damaged.
5. If paper other than 20 lb plain letter/A4 paper is being used, load 20 lb plain letter/A4 and print the Print Quality pages to see if the problem remains. Use Tray 1 to test print quality problems.
6. Print the Print Quality Pages, and then look for variations in the print from what is expected.

An incorrect printer driver for the installed software can cause problems. Incorrect characters could print, and the copy may not fit the page correctly.

Measure all voltages from the connector to the printer ground.

Symptom table—print quality

Symptom	Action
Background (fog)	Go to **“Background (fog)” on page 2-24**.
Blank page	Go to **“Blank page” on page 2-26**.
Blurred or fuzzy print	Go to **“Blurred or fuzzy print” on page 2-27**.
Characters have jagged or uneven edges	Go to **“Characters have jagged or uneven edges” on page 2-27**
Clipped images	Go to **“Clipped images” on page 2-27**
Colors not properly aligned	Go to **“Colors not properly aligned” on page 2-28**
Horizontal banding	Go to **“Horizontal banding” on page 2-29**.
Horizontal lines	Go to **“Horizontal lines” on page 2-29**.
Light colored line, white line, or incorrectly colored line	Go to **“Light colored line, white line, or incorrectly colored line” on page 2-30**.
Media damage	Go to **“Media damage” on page 2-31**
Mottle (2–5mm speckles)	Go to **“Mottle (2–5mm speckles)” on page 2-32**.
Paper curl	Go to **“Paper curl” on page 2-32**
Print irregularities	Go to **“Print irregularities” on page 2-32**.
Print is too dark	Go to **“Print is too dark” on page 2-34**

Previous
Next
Go Back

Symptom	Action
Print is too light	Go to **“Print is too light” on page 2-34**
Random marks	Go to **“Random marks” on page 2-35**
Repeating defects	Go to **“Repeating defects” on page 2-36**
Shadow images	Go to **“Shadow images” on page 2-37**.
Skew	Go to **“Skew” on page 2-38**
Solid color or black pages	Go to **“Solid color or black pages” on page 2-40**.
Toner rubs off	Go to **“Toner rubs off” on page 2-41**
Transparency print quality is poor	Go to **“Transparency print quality is poor” on page 2-42**
Vertical banding	Go to **“Vertical banding” on page 2-42**.
Vertical lines	Go to **“Vertical lines” on page 2-43**

Background (fog)



Try one or more of the following:

- MAKE SURE PRINT CARTRIDGES ARE INSTALLED CORRECTLY AND ARE NOT DEFECTIVE
  Reinstall or replace the print cartridge.

- MAKE SURE THE TRANSFER BELT IS NOT WORN OR DEFECTIVE
  Replace the transfer belt. For more information, see the instruction sheet that came with the replacement part.

- MAKE SURE THE FUSER IS NOT WORN OR DEFECTIVE
  Replace the fuser. For more information, see the instruction sheet that came with the replacement part.

- MAKE SURE THERE IS NO TONER IN THE PAPER PATH
  Clean any visible toner from the paper path.

- RECALIBRATE THE PRINTER
  Perform color adjust from the operator panel Quality menu.

- CHECK THE SOFTWARE PROGRAM OR APPLICATION
  The software program or application may have specified an off-white background.

Additional checks—background

Step	Questions / actions	Yes	No
1	Replace the print cartridge. **Does this fix the problem?**	Problem solved.	Go to step 2.
2	Check the high voltage contact from the HVPS to the transfer module. See **“ITU block assembly removal” on page 4-71**. **Is the problem found?**	Replace the ITU block assembly.	Go to step 3.
3	Reseat the JHVPS1 connector on the system board. **Does this fix the problem?**	Problem solved.	Go to step 4.
4	Replace the HVPS. See **“High-voltage power supply (HVPS) board removal” on page 4-63**. **Does this fix the problem?**	Problem solved.	Go to step 5.
5	Clean the printhead. **Does this fix the problem?**	Problem solved.	Replace the printhead. See **“Printhead removal, installation, and alignment” on page 4-117**.

Blank page

Try one or more of the following:

- MAKE SURE THERE IS NO PACKING MATERIAL LEFT ON THE PRINT CARTRIDGE

  Remove the print cartridge and make sure the packing material is properly removed. Reinstall the print cartridge.

- MAKE SURE THE PRINT CARTRIDGE IS NOT LOW ON TONER

  When a cartridge low message appears, make sure that toner is distributed evenly among all four print cartridges or whichever color has the shadow images:

  1. Remove the print cartridge.

     Warning: Be careful not to touch the photoconductor drum. Doing so may affect the print quality of future print jobs.

  2. Firmly shake the cartridge side-to-side and front-to-back several times to redistribute the toner.
  3. Reinsert the print cartridge.

  Note: If print quality does not improve, replace the print cartridge of the color that is not printing.

Additional checks—blank page

Step	Questions / actions	Yes	No
1	**Are all the packing material for the cartridge in question removed?**	Go to step 2.	Remove the packing material.
2	Replace the cartridge for the color in question. **Does this fix the problem?**	Problem solved.	Go to step 3.
3	Check the high voltage contact from the HVPS to the photoconductor charge roll. See **“Cartridge contact block assembly removal” on page 4-38**. **Are the spring(s) defective?**	Replace the cartridge contact block assembly.	Go to step 4.
4	Turn off the printer and check the continuity of the HVPS cable. **Is there continuity?**	Go to step 5.	Replace the cable assembly.
5	Replace the HVPS. See **“High-voltage power supply (HVPS) board removal” on page 4-63**. **Does this fix the problem?**	Problem solved.	Go to step 6.
6	Replace the printhead. See **“Printhead removal, installation, and alignment” on page 4-117**. **Does this fix the problem?**	Problem solved.	Replace the system board. See **“System board removal” on page 4-142**.

Blurred or fuzzy print

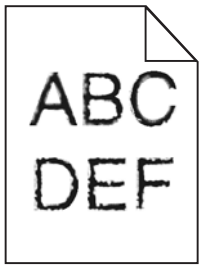
Try one or more of the following:

- CHECK THE EP DRIVE ASSEMBLY AND TRANSFER MODULE
  Blurred or fuzzy print is usually caused by a problem in the EP drive assembly or in the transfer module. Check the EP drive assembly and transfer module for correct operation.

- CHECK PAPER FEEDING FROM EACH INPUT SOURCE
  Blurred print can be caused by incorrect feeding from one of the input paper sources, paper trays, or duplex paper path.

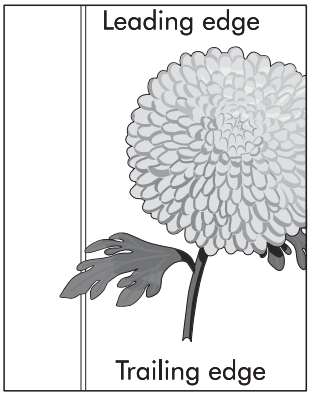
- CHECK THE HIGH-VOLTAGE CONTACTS
  Check the high voltage spring contacts to ensure they are not bent, corroded, or damaged. Replace as necessary.

Characters have jagged or uneven edges



If you are using downloaded fonts, verify that the fonts are supported by the printer, the host computer, and the software program.

Clipped images



Try one or more of the following:

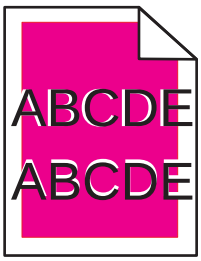
- CHECK THE GUIDES
  Move the width and length guides in the tray to the correct positions for the paper size loaded.

- CHECK THE PAPER SIZE SETTING
  Make sure the paper size setting matches the paper loaded in the tray:
  1. From the operator panel Paper menu, check the Paper Size setting.
  2. Before sending the job to print, specify the correct size setting:

- For Windows users, specify the size from Print Properties.
- For Macintosh users, specify the size from the Page Setup dialog.

- RESEAT THE CARTRIDGES

Colors not properly aligned



Color has shifted outside of the appropriate area or has been superimposed over another color area. Try one or more of the following:

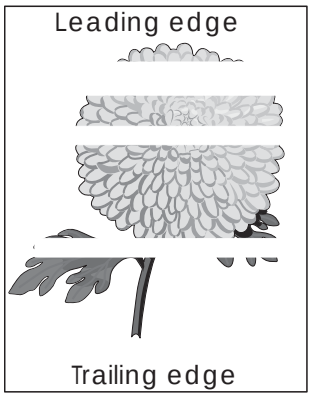
- PERFORM COLOR ADJUST FROM THE PRINTER QUALITY MENU

- REMOVE AND REINSTALL THE PRINT CARTRIDGE

- ADJUST THE COLOR ALIGNMENT FROM THE CONFIGURATION MENU
  1. Enter the Configuration menu: Turn the printer off, hold down **2** and **6** while turning the printer back on, and release the buttons when the splash screen appears.
  2. Touch **Color Alignment** > **Print Alignment Page**.
     The color alignment pages print.
  3. Touch **Color Alignment**.
  4. On the printed alignment pages, find the straightest of the 20 lines beside the letter A.
  5. From the Color Alignment menu, touch the left or right arrow to select that number.
  6. Repeat steps 2 and 5 to align sets B through L.
  7. Reprint the alignment page and repeat the alignment as needed.
  8. Touch **Back** > **Exit Config Menu**.

- REALIGN THE COLOR PORTION OF THE PRINTHEAD
  See **“Color alignment (cyan, yellow, and magenta)” on page 4-125**.

Horizontal banding

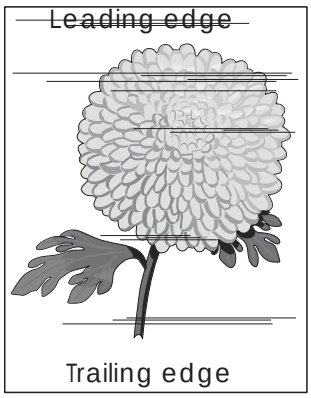


Try one or more of the following:

- MAKE SURE THERE IS NO DEFECTIVE PRINT CARTRIDGE
  Measure the distance between repeating bands. If the distance between bands either 27 or 36mm, then replace the defective print cartridge.

- MAKE SURE THE TRANSFER BELT IS NOT DEFECTIVE
  Replace the defective transfer belt. For more information, see the instruction sheet that came with the replacement part.

Horizontal lines



Try one or more of the following:

- SELECT ANOTHER TRAY OR FEEDER
  - From the operator panel Paper Menu, select Default Source.
  - For Windows users, select the paper source from Print Properties.
  - For Macintosh users, select the paper source from the Print dialog and pop-up menus.

- MAKE SURE THERE IS NO WORN, DEFECTIVE, OR EMPTY PRINT CARTRIDGE
  Replace the worn, defective, or empty print cartridge.

Additional checks—horizontal lines

Step	Questions / actions	Yes	No
1	1. Check the media condition. 2. Load new, dry, recommended media. 3. Re-print the defective image. **Does the error continue?**	Go to step 2.	Problem solved.
2	1. Check the media transfer route. 2. Check the media route for contamination or obstacles. **Are there obstacles in the route?**	Go to step 3.	Remove obstacles or contamination.
3	Check the print cartridge for proper installation. **Is the above component properly installed?**	Go to step 4.	Inspect, clean and reinstall or replace the print cartridge.
4	Check the transfer roll assembly for contamination and wear. **Is the above component free of excess wear and contamination?**	Go to step 5.	Replace the ITU assembly. Go to **"ITU assembly removal" on page 4-68**.
5	1. Check the heat roll and pressure roll. 2. Remove the fuser unit assembly.  **CAUTION: Allow the fuser unit assembly to cool down.** **Is there contamination or cracks on the heat roll and/ or pressure roll?**	Replace the fuser unit assembly. Go to **"Fuser assembly removal" on page 4-56**.	Go to step 7.
6	Perform a print test. **Does the problem remain?**	Contact your next highest level of tech support.	Problem solved.

Light colored line, white line, or incorrectly colored line

Try one or more of the following:

- MAKE SURE THERE IS NO DEFECTIVE PRINT CARTRIDGE
  Replace the defective print cartridge.

- MAKE SURE THE TRANSFER BELT IS NOT DEFECTIVE
  Replace the defective transfer belt. For more information, see the instruction sheet that came with the replacement part.

Media damage



Additional checks—media damage

Step	Questions / actions	Yes	No
1	Check printer installation placement. Check the installation surface for irregularities. Check for missing printer foot. **Is the setup surface normal?**	Go to step 2.	Correct the installation placement.
2	Check the media feed. Remove the media tray assembly. Properly load media in the media tray assembly. Properly install the media tray assembly in the printer. Re-print the defective image. **Does the error continue?**	Go to step 3.	Problem solved.
3	Check the media condition. Load new, dry, recommended media. Re-print the defective image. **Does the error continue?**	Go to step 4.	Problem solved.
4	Check the transfer roll assembly for contamination and wear. **Is the above component free of excess wear and contamination?**	Go to step 5.	Replace the ITU assembly. Go to **"ITU assembly removal" on page 4-68**.
5	Check the alignment assembly for proper adjustment. Go to **"Aligning the staging paper path reference edge" on page 4-140**. **Does the problem remain?**	Inspect the machine for obstructions in the media path.	Replace the alignment assembly.

Mottle (2–5mm speckles)



The problem is caused by the photoconductor being dirty. Keep running prints through, and the problem normally clears up. If the problem persists, replace the cartridge of the color causing the spots.

Paper curl

- CHECK THE PAPER TYPE AND WEIGHT SETTINGS
  Make sure the paper type and weight settings match the paper loaded in the tray:
  1. From the printer Paper menu, check the Paper Type and Paper Weight settings.
  2. Before sending the job to print, specify the correct type settings from the computer:
     - For Windows users, specify the setting from Print Properties.
     - For Macintosh users, specify the setting from the Print dialog.

- LOAD PAPER FROM A FRESH PACKAGE
  Paper absorbs moisture due to high humidity. Store paper in its original wrapper until you use it.

Print irregularities



Try one or more of the following:

- LOAD PAPER FROM A FRESH PACKAGE
  The paper may have absorbed moisture due to high humidity. Store paper in its original wrapper until you use it.

- CHECK THE PAPER TYPE AND WEIGHT SETTINGS

Make sure the paper type and weight settings match the paper loaded in the tray:

1. From the printer Paper menu, check the Paper Type and Paper Weight settings.
2. Before sending the job to print, specify the correct type settings from the computer:
   - For Windows users, specify the setting from Print Properties.
   - For Macintosh users, specify the setting from the Print dialog.

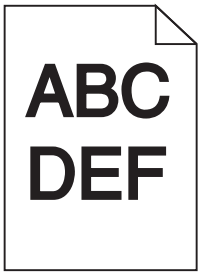
- LOAD STANDARD PAPER WITHOUT TEXTURED OR ROUGH FINISHES

- MAKE SURE THERE IS NO DEFECTIVE PRINT CARTRIDGE
  Replace the worn or defective print cartridge.

- MAKE SURE THE TRANSFER BELT IS NOT DEFECTIVE
  Replace the defective transfer belt. For more information, see the instruction sheet that came with the replacement part.

- MAKE SURE THE FUSER IS NOT DEFECTIVE
  Replace the defective fuser. For more information, see the instruction sheet that came with the replacement part.

Print is too dark



Try one or more of the following:

- LOAD PAPER FROM A FRESH PACKAGE
  The paper may have absorbed moisture due to high humidity. Store paper in its original wrapper until you use it.

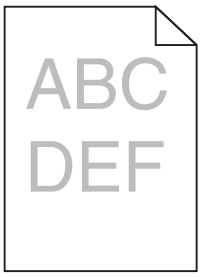
- AVOID TEXTURED PAPER WITH ROUGH FINISHES

- CHECK THE TONER DARKNESS
  Press to enter the Administrative menus and navigate to:
  Settings > Print Settings > Toner Darkness

- CHECK THE PAPER TYPE SETTING
  Make sure the paper type setting matches the paper loaded in the tray:
  1. From the operator panel Paper menu, check the Paper Type setting.
  2. Before sending the job to print, specify the correct type setting from the computer:
     - For Windows users, specify the type from Print Properties.
     - For Macintosh users, specify the type from the Print dialog.

- MAKE SURE THERE IS NO DEFECTIVE PRINT CARTRIDGE
  Replace the defective print cartridge.

Print is too light



Try one or more of the following:

- LOAD PAPER FROM A FRESH PACKAGE
  The paper may have absorbed moisture due to high humidity. Store paper in its original wrapper until you use it.
- AVOID TEXTURED PAPER WITH ROUGH FINISHES

- CHECK THE PAPER TYPE SETTING

Make sure the paper type setting matches the paper loaded in the tray:

1. From the operator panel Paper menu, check the Paper Type setting.
2. Before sending the job to print, specify the correct type setting from the computer:
   - For Windows users, specify the type from Print Properties.
   - For Macintosh users, specify the type from the Print dialog.

- MAKE SURE THE PRINT CARTRIDGE IS NOT LOW ON TONER

  When a cartridge low message appears, make sure that toner is distributed evenly among all four print cartridges or whichever color has the shadow images:

  1. Remove the print cartridge.

     Warning: Be careful not to touch the photoconductor drum. Doing so may affect the print quality of future print jobs.

  2. Firmly shake the cartridge side-to-side and front-to-back several times to redistribute the toner.
  3. Reinsert the print cartridge.

  Note: If print quality does not improve, replace the print cartridge of the color that is not printing.

- MAKE SURE THERE IS NO DEFECTIVE PRINT CARTRIDGE

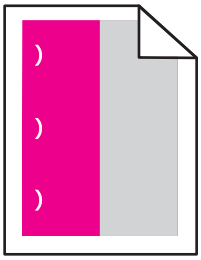
  Replace the defective print cartridge.

Random marks

Service tip: The primary cause of random marks is due to loose material moving around inside the printer and attaching to the photoconductor unit, developer roll, or transfer module.

Step	Questions / actions	Yes	No
1	**Is there any loose or foreign material on the cartridge roll?**	Replace the print cartridge.	Go to step 3.
2	**Is there any loose or foreign material on the transfer module?**	Replace ITU assembly. See **“ITU assembly removal” on page 4-68**.	Contact your next level of support.

Repeating defects



Previous
Next
Go Back

Print quality defect locator chart

The printer has an internal copy of the defect locator chart under the Help Menu.

From the home screen, navigate to:

> **Help** > **Print Defects**

Verify the proper image size by measuring any of the marks on the printed chart and comparing them to the corresponding measurement in the chart.

Using the charts

Measure repeating horizontal lines from the reference lines at the top to determine what may have caused the lines to form in that pattern. Be sure to use portrait orientation for the test file.

Distance between defects	Part to replace
37.7 mm (3.71 in.) 41.6 mm (1.64 in.) 42.7 mm (1.68 in.) 94.2 mm (3.71 in.)	Print cartridge
95 mm (3.74 in.) 146.7 mm (5.78 in.)	Fuser See **“Fuser assembly removal” on page 4-56**.
42.2 mm (1.66 in.) 47.1 mm (1.85 in.) 59.7 mm (2.35 in.)	ITU See **“ITU block assembly removal” on page 4-71**.

Shadow images



Try one or more of the following:

- CHECK THE PAPER TYPE AND WEIGHT SETTINGS
  Make sure the paper type and weight settings match the paper loaded in the tray or feeder:
  1. From the operator panel Paper menu, check the Paper Type and Paper Weight settings.
  2. Before sending the print job, specify the correct paper type setting:
     - For Windows users, specify the paper type from Print Properties.
     - For Macintosh users, specify the paper type from the Print dialog.

- MAKE SURE THE PRINT CARTRIDGE IS NOT LOW ON TONER
  When a cartridge low message appears, make sure that toner is distributed evenly among all four print cartridges or whichever color has the shadow images.
  1. Remove the print cartridge.

  Warning: Be careful not to touch the photoconductor drum. Doing so may affect the print quality of future print jobs.

  2. Firmly shake the cartridge side-to-side and front-to-back several times to redistribute the toner.
  3. Reinsert the print cartridge.

  Note: If print quality does not improve, replace the print cartridge of the color that is not printing.

Additional checks—shadow images

Service tip: Install a new print cartridge if available before doing this additional check. Shadow images can be caused by the photoconductor, cleaning blade, and other parts inside the print cartridge.

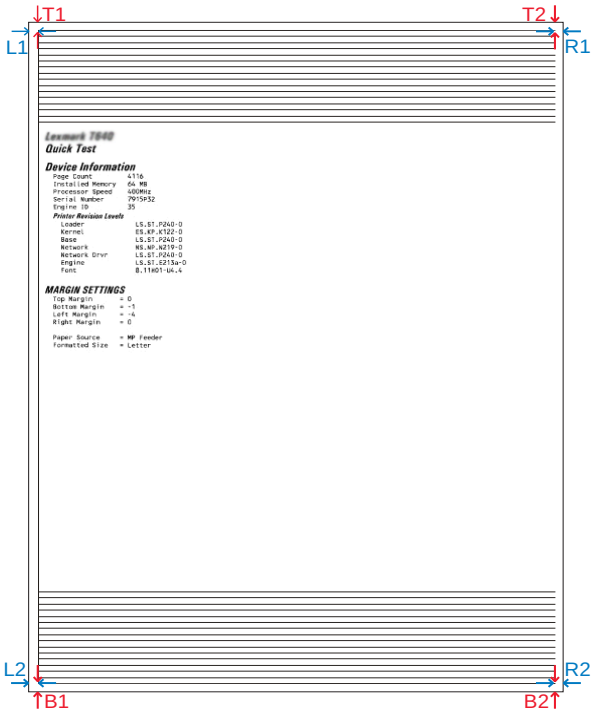
Step	Questions / actions	Yes	No
1	**Is there any toner contamination on the fuser assembly?**	Replace the fuser. See **"Fuser assembly removal" on page 4-56**.	Contact your next level of support.

Skew



CHECK THE PRINTER SKEW

1. Measure from the edge of the paper to the black line to find L1, L2, T1, T2, R1, R2, B1, and B2 as shown below:



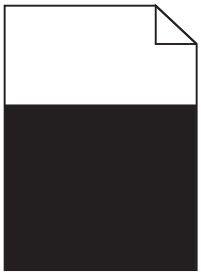
2. Determine if the printer meets the skew specifications based on the values listed on the table.

Skew Specification				
	(L2-L1)	**(R2-R1)**	**(T2-T1)**	**(B2-B1)**
Letter	≤1.4 mm	≤1.4 mm	≤1 mm	≤1 mm
A4	≤1.5 mm	≤1.5 mm		
Legal	≤1.8 mm	≤1.8 mm		

Additional checks—skew

Step	Questions / actions	Yes	No
1	1. Check printer installation placement. 2. Check the installation surface for irregularities. 3. Check for damaged printer caster. **Is the setup surface normal?**	Go to step 2.	Correct the installation placement.
2	1. Properly load media into the media tray assembly and ensure all guides are set correctly. 2. Properly install the media tray assembly into the printer. 3. Re-print the defective image. **Does the error continue?**	Go to step 3.	Problem solved.
3	Check for obstructions in the area of the media feed units. **Are the media feed unit assemblies free from any obstructions?**	Go to step 4.	Remove obstructions.
4	Check the ITU assembly for contamination and wear. **Is the above component free of excess wear and contamination?**	Go to step 5.	Replace ITU assembly. Go to **"ITU block assembly removal" on page 4-71**.
5	Check the printhead for proper alignment. Go to **"Aligning the printhead" on page 4-123**. **Does the problem remain?**	Go to step 6.	Problem solved.
6	Perform a print test. **Does the problem remain?**	Contact your next level of support.	Problem solved.

Solid color or black pages



- MAKE SURE THE PRINT CARTRIDGES ARE INSTALLED CORRECTLY, ARE NOT DEFECTIVE AND NOT LOW ON TONER
  Remove and reinstall the print cartridges.

Service tip: A solid color page is generally caused by a problem in the high voltage system or an incorrect high voltage in the printing process resulting in toner development on the entire photoconductor drum.

Additional checks—solid color or black pages

Step	Questions / actions	Yes	No
1	Replace the print cartridge for the color in question. **Does this fix the problem?**	Problem solved.	Go to step 2.
2 	Check the high voltage contact from the HVPS to the cartridge. See **"Cartridge contact block assembly removal" on page 4-38**. **Are the spring(s) defective?**	Replace the cartridge contact block assembly.	Go to step 3.
3	Turn the printer off, and then check the continuity of the HVPS cable. See **"High-voltage power supply (HVPS) board removal" on page 4-63**. **Is there continuity?**	Go to step 4.	Replace the cable assembly.
4	Replace the HVPS. See **"High-voltage power supply (HVPS) board removal" on page 4-63**. **Did this solve the problem?**	Problem solved.	Replace the system board. See **"System board removal" on page 4-142**.

Toner rubs off



Try one or more of the following:

- CHECK THE PAPER TYPE AND WEIGHT SETTINGS
  Make sure the paper type and weight settings match the paper loaded in the tray or feeder:
  1. From the operator panel Paper menu, check the Paper Type and Paper Weight settings. Change the Paper Weight setting from Normal to Heavy.
  2. Before sending the print job, specify the correct paper type setting:
     - For Windows users, specify the paper type from Print Properties.
     - For Macintosh users, specify the paper type from the Print dialog.

- CHECK THE PAPER TEXTURE SETTING
  From the operator panel Paper menu, make sure the Paper Texture setting matches the paper loaded in the tray or feeder. If necessary, change the Paper Texture setting from Normal to Rough.

Additional checks—toner rubs off

Step	Questions / actions	Yes	No
1	**Is the fuser properly installed?**	Go to step 2.	Install the fuser properly.
2	Replace the fuser. See **“Fuser assembly removal” on page 4-56**. **Does this fix the problem?**	Problem solved.	Replace the LVPS. see **“Low-voltage power supply (LVPS) removal” on page 4-77**.

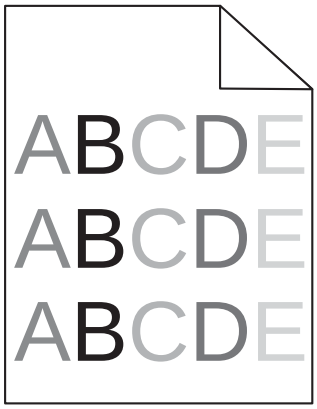
Transparency print quality is poor

Try one or more of the following:

- CHECK THE TRANSPARENCIES
  Use only transparencies that meet the printer specifications.

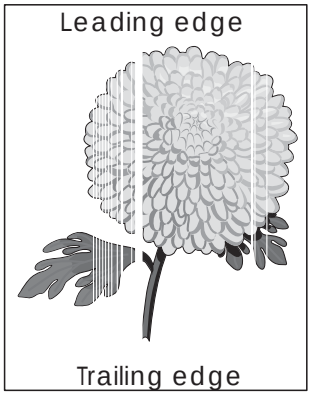
- CHECK THE PAPER TYPE SETTINGS
  Make sure the paper type settings match the paper loaded in the tray or feeder:
  1. From the operator panel Paper menu, check the Paper Type setting.
  2. Before sending the print job, specify the correct paper type setting:
     - For Windows users, specify the paper type from Print Properties.
     - For Macintosh users, specify the paper type from the Print dialog.

Uneven print density



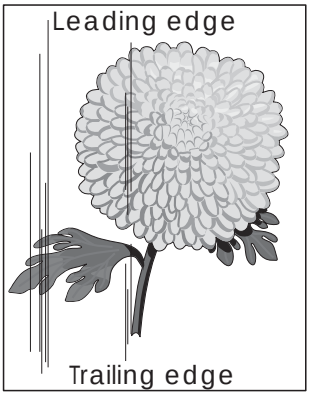
- MAKE SURE THERE IS NO DEFECTIVE OR WORN PRINT CARTRIDGE.
  Replace the print cartridge.

Vertical banding



Replace the print cartridge.

Vertical lines



Step	Check	Yes	No
1	1. Check the media condition. 2. Load new, dry, recommended media. 3. Re-print the defective image. **Does the error continue?**	Go to step 2.	Problem solved.
2	**Are the media transfer route and the media path free of contamination or debris?**	Go to step 3.	Remove debris or contamination.
3	Check the cartridge for contamination and wear. **Is the above component free of excess wear and contamination?**	Go to step 4.	Replace the print cartridge.
4	Check the ITU assembly for contamination and wear. **Is the above component free of excess wear and contamination?**	Go to step 5.	Replace the ITU assembly. Go to **"ITU assembly removal" on page 4-68**.
5	Check the print cartridge for proper installation. **Is the above component properly installed?**	Go to step 7.	Inspect, clean and reinstall replace the print cartridge.
6	Perform a print test. **Does the problem remain?**	Contact your next level of support.	Problem solved.

ADF & scanner print quality

Note: Get a printout as a base, and then follow the symptom table to identify the possible failing FRU.

Image quality symptoms:

- Dark print — **“Dark image quality (using ADF or Scanner)” on page 2-44**.
- Vertical stripes— **“Vertical lines (process direction using the ADF)” on page 2-45**.
- Spots— **“Spots (using flatbed scanner)” on page 2-45**.
- Skew—**“Skew (using ADF)” on page 2-47**.
- Media damage— **“Media damage (using ADF)” on page 2-48**.

Note: When horizontal lines and/or spots occur periodically, it is possibly caused by a particular roll. In this case, measure the interval on the print test, and check the relation to the roll in the printer. The interval does not necessarily match circumference of the roll.

Dark image quality (using ADF or Scanner)

Before starting, check the media route for foreign objects, such as staples, clips, and scraps, in the media path.

Step	Check	Yes	No
1	Check the large and small platen glass on the scanner unit assembly. **Is the large and small platen glass contaminated?**	Clean both sides of the large and small platen glass.	Go to step 2.
2	Check the three mirrors in the scanner unit assembly. **Are the three mirrors contaminated or show signs of dust?**	Clean the three mirrors in the scanner unit assembly.	Go to step 3.
3	Check the white strip on the bottom of the large platen glass. **Is the white strip contaminated?**	Clean the white strip and POR the machine.	Go to step 4.
4	Check the scanner lens. **Is the scanner lens contaminated?**	Clean the scanner lens.	Go to step 5.
5	Perform a print test using the ADF & scanner unit assemblies. **Does the error continue?**	Replace the CCD/card lens assembly. Go to	Problem solved.
6	Perform a print test using the ADF & scanner unit assemblies. **Does the error continue?**	Replace the scanner controller card assembly. Go to **“ADF controller card removal” on page 4-164**.	Problem solved.

Vertical lines (process direction using the ADF)

Step	Check	Yes	No
1	Check the small platen glass on the scanner unit assembly. **Is the large and small platen glass contaminated or damaged?**	Clean or replace the scanner platen glass cover.	Go to step 2.
2	Check the three mirrors in the scanner unit assembly. **Are the three mirrors contaminated or show signs of dust?**	Clean the three mirrors in the scanner unit assembly.	Go to step 3.
3	Check the white strip on the bottom of the large platen glass. **Is the white strip contaminated?**	Clean the white strip and POR the machine.	Go to step 4.
4	Perform a print test using the scanner unit assembly. **Does the error continue?**	Replace the scanner unit assembly. Go to **"ADF unit assembly removal" on page 4-193**.	Problem solved.
5	Perform a print test using the ADF unit assembly. **Does the error continue?**	Replace the scanner controller card assembly. Go to **"ADF controller card removal" on page 4-164**.	Problem solved.

Spots (using flatbed scanner)

Step	Check	Yes	No
1	Check the large platen glass on the scanner unit assembly. **Is the large platen glass contaminated or damaged?**	Clean or replace the scanner platen glass cover.	Go to step 2.
2	Check the three mirrors in the scanner unit assembly. **Are the three mirrors contaminated or show signs of dust?**	Clean the three mirrors in the scanner unit assembly.	Go to step 3.
3	Check the white strip on the bottom of the large platen glass. **Is the white strip contaminated?**	Clean the white strip and POR the machine.	Go to step 4.

Step	Check	Yes	No
4	Perform a print test using the scanner CCD assembly. **Does the error continue?**	Replace the scanner CCD assembly. Go to **"ADF duplex CCD assembly removal" on page 4-166**.	Problem solved.
5	Perform a print test using the flatbed scanner assembly. **Does the error continue?**	Replace the scanner controller card assembly. Go to **"ADF controller card removal" on page 4-164**.	Problem solved.

Skew (using ADF)

The printed image is not paralleled with both sides of the media.

Step	Check	Yes	No
1	Check printer installation placement. Check the installation surface for irregularities. Check for damaged printer caster. **Is the setup surface normal?**	Go to step 2.	Correct the installation placement.
2	Properly load document into the ADF unit assembly and ensure all guides are set correctly. Re-print the defective image. **Does the error continue?**	Go to step 3.	Problem solved.
3	Check for obstructions in the area of the media feed path in the ADF. **Is the media feed path free from any obstructions?**	Go to step 4.	Remove obstructions.
4	**Is the ADF left cover assembly properly and evenly closed?**	Go to step 5.	Open then properly close the ADF left cover assembly.
5	Check the ADF/pick roll assembly for damage and wear. **Is the ADF feed/pick roll assembly free from damage and wear?**	Go to step 6.	Replace the ADF feed/pick roll assembly. Go to **“ADF feed/pick roll assembly removal” on page 4-173**.
6	Check the ADF separator roll. **Is the ADF separator roll free from damage and wear?**	Go to step 7.	Replace the ADF separation roll. Go to **“ADF separator roll removal” on page 4-184**.

Media damage (using ADF)

Step	Check	Yes	No
1	Properly load document into the ADF unit assembly and ensure all guides are set correctly. Re-print the defective image. **Does the error continue?**	Go to step 2.	Problem solved.
2	Check for obstructions in the area of the media feed path in the ADF. **Is the media feed path free from any obstructions?**	Go to step 3.	Remove obstructions.
3	**Is the ADF left cover assembly properly and evenly closed?**	Go to step 4.	Open then properly close the ADF left cover assembly.
4	Check the ADF/pick roll assembly for damage and wear. **Is the ADF feed/pick roll assembly free from damage and wear?**	Go to step 5.	Replace the ADF feed/pick roll assembly. Go to **"ADF feed/pick roll assembly removal" on page 4-173**.
5	Check the ADF separator roll. **Is the separator roll free from damage and wear?**	Go to step 6.	Replace the separator roll. Go to **"ADF separator roll removal" on page 4-184**.
6	Check the ADF controller card assembly. Replace the ADF controller card assembly. Go to **"ADF controller card removal" on page 4-164**. Perform a print test using the ADF. **Does the error continue?**	Replace the system card assembly. Go to **"System board removal" on page 4-142**.	Problem solved.

User messages

User prompts

Error code	Action
Close Front Door	Close the front door securely. If you continuously get this error, then either the 24 V interlock switch or the 5 V interlock switch is bad. See **“Bubble sensor service check” on page 2-139** and **“Bubble sensor service check” on page 2-139**.
Disk Corrupted, Reformat?	The printer has attempted a disk recovery and cannot repair the disk. The disk must be formatted to use. **Warning:** All files stored on the disk will be lost.
Held Jobs May Not Be Restored	The printer has attempted to restore Held jobs, but not all were restored.
Insert Tray <x>	Insert tray to clear the message.
Load <source> <custom type name>	Load paper in the indicated source and of the indicated type. Additional messages may include: • Paper loaded—Select **Continue**. • Show Me—the printer will present instructions. • Cancel Job—the printer job can be canceled. • Wait for supplies—If job parking is enabled, and the job meets all the requirements for allowing the job to be parted, the printer adds this message.
Load <source> <Custom String>	Load paper in the indicated source, and select **Continue**. Additional messages may include: • Show Me—the printer will present instructions. • Cancel Job—the printer job can be canceled. • Wait for supplies—If job parking is enabled, and the job meets all the requirements for allowing the job to be parted, the printer adds this message.
Load <source> <size>	Load paper in the indicated source and of the indicated size, and select **Continue**. Additional messages may include: • Show Me—the printer will present instructions. • Cancel Job—the printer job can be canceled. • Wait for supplies—If job parking is enabled, and the job meets all the requirements for allowing the job to be parted, the printer adds this message.
Load Manual <custom type name>	If paper loaded is in the manual feeder, the job continues. If paper is not in the feeder, pressing **Select** indicates to the printer it should search for a source with the proper custom type. Additional messages may include: • Show Me—the printer will present instructions. • Cancel Job—the printer job can be canceled.
Load Manual <custom string>	If paper loaded is in the manual feeder, the job continues. If paper is not in the feeder, pressing **Select** indicates to the printer it should search for a source with the proper custom string. Additional messages may include: • Show Me—the printer will present instructions. • Cancel Job—the printer job can be canceled.

Error code	Action
Load Manual <size>	If paper loaded is in the manual feeder, the job continues. If paper is not in the feeder, pressing **Select** indicates to the printer it should search for a source with the proper size. Additional messages may include: • Show Me—the printer will present instructions. • Cancel Job—the printer job can be canceled.
Load Manual <type> <size>	If paper loaded is in the manual feeder, the job continues. If paper is not in the feeder, pressing **Select** indicates to the printer it should search for a source with the proper type and size. Additional messages may include: • Show Me—the printer will present instructions. • Cancel Job—the printer job can be canceled.
Paper Changes Needed	Make sure the correct paper size is loaded in the paper tray.
PC Unit Exposure Warning	This warning occurs when the front door is left open too long. Close the front door to prevent damage to the PC unit. Select `Tell me more` for further information.
Remove All Color Supplies	If Color Lockout mode is enabled, this message appears (unless the printer is in Diagnostics Menu or Configuration Menu).
Remove Paper Standard Bin	The standard output bin is full. Remove the media to continue.
Remove Packaging Material	If packaging material is detected by the printer, `Check all areas`, `Check <area name>`, or `Check <number of> areas` may appear. Press **Select** to continue.
Restore Held Jobs Go/Stop?	If the printer detects Print and Hold (or parked) jobs stored on the hard disk during Power-On Self Test (POST). Choices are: • Restore—Print jobs are restored, and `Restoring Held Jobs x/y`, where x is the number of the job restored and y is the total number of jobs to restore. You can quit restoring, and the remainder of the jobs will remain on the disk, but cannot be accessed until they are restored at the next POR. • Do not restore—Held jobs will remain on the disk, but cannot be accessed until they are restored at the next POR. `Held jobs may not be restored` appears. • Tell me more—additional information is available
Securely Clearing Disk Space	Disk wiping process is recovering disk space. The message clears when all memory blocks are cleared.
Tray Length Guide Missing	Replace the tray length guide.
Unsupported USB device, Please Remove	Remove the unrecognized device to continue.
Unsupported USB hub, Please Remove	Remove the unrecognized device to continue.
Unsupported Mode	Unplug camera and change it to a mode where the camera can access PictBridge. Plug the camera back in to continue.
Unsupported Disk	Remove the unsupported disk to continue.

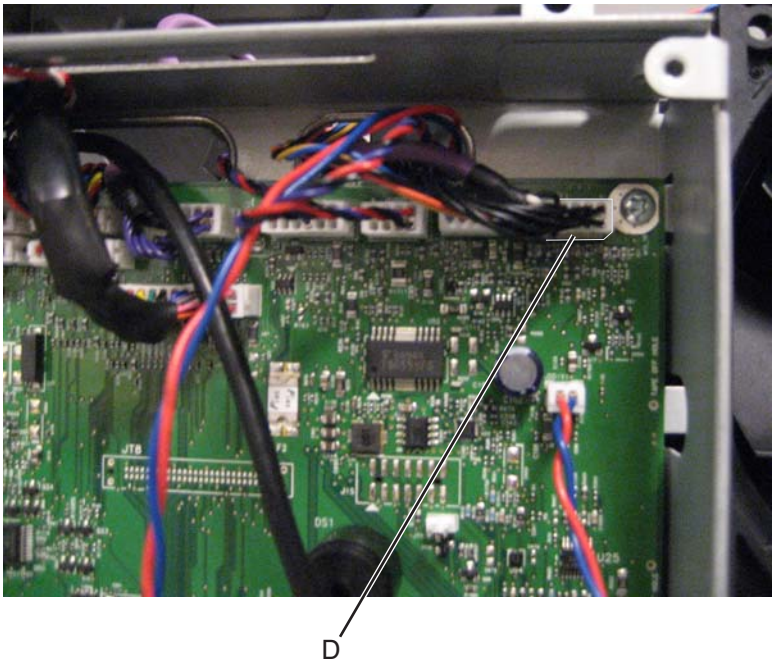
User attendance messages (0–99)

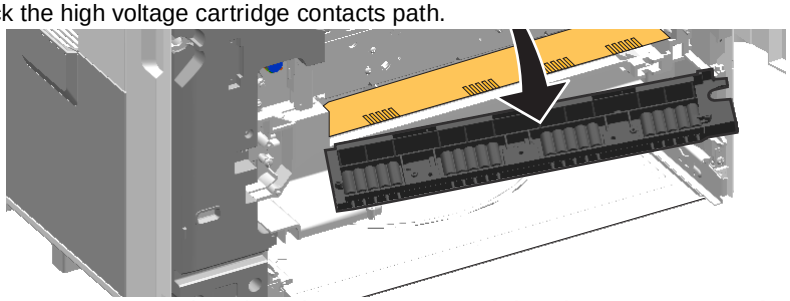
Error code	Action
31 Defective or Missing <*color*> Cartridge	• Reseat the specified print cartridge. • Inspect the print cartridge contacts for damage/contamination. Replace the print cartridge if defective. • Inspect the cartridge cable connection. Properly connect the cable if not connected properly. Replace the cable if damaged. • Replace the indicated cartridge. • If the problem still exists, replace the system board. See **"System board removal" on page 4-142**.
32 Unsupported Cartridge	• Check to see if the print cartridge is a supported cartridge. **Note:** Once the cartridge shipped with the printer is exhausted, it must be replaced by a supply cartridge (refer to the *User's Guide* for part numbers.) If the specified print cartridge is a supported cartridge, reseat the cartridge. • Inspect the print cartridge contacts for damage or contamination. Replace the print cartridge if defective. • Inspect the cartridge cable connection. Properly connect the cable if not connected properly. Replace the cable if damaged. • If the problem still exists, replace the system board. See **"System board removal" on page 4-142**.
34 Short Paper	• Select **Continue** to clear the message and continue printing. **Note:** The printer does not automatically reprint the page that prompted the message. • Check the tray length and width guides to ensure the media is properly fitted. • Make sure the print job is requesting the correct size of media. • Adjust the Paper Size setting for the media size being used. • If the MP Feeder Size is set to Universal, make sure the media is large enough for the formatted data. • Cancel the current job. Replace the paper pick mechanism. See **"Paper pick mechanism assembly removal" on page 4-114**. • If the problem still exists, replace the system board. See **"System board removal" on page 4-142**.
35 Insufficient memory to support Resource Save feature	• Select **Continue** to disable Resource Save and continue printing. • To enable Resource Save after receiving this message: - Make sure the link buffers are set to Auto, then exit the menus to activate the link buffer changes. - When `Ready` is displayed, enable Resource Save. • Install additional memory. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
37 Insufficient memory to collate job	• Select **Continue** to print the portion of the job already stored and begin collating the rest of the job. • Cancel the current job. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
37 Insufficient memory for Flash Memory Defragment operation	• Select **Continue** to stop the defragment operation and continue printing. • Delete fonts, macros, and other data in printer memory. • Install additional printer memory. • If this does not fix the problem, replace the system. See **"System board removal" on page 4-142**.

Error code	Action
37 Insufficient memory, Some Held Jobs Were Not Restored	• The printer deleted some held jobs in order to process current jobs. • Select **Continue** to clear the message. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
37 Insufficient memory, Some Held Jobs Will Not Be Restored	• The printer was unable to restore some or all of the confidential or held jobs on the hard disk. • Select **Continue** to clear the message. • If this message occurs again, replace the hard drive. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
37 Insufficient Defrag Memory	There is insufficient memory to perform the Flash Memory Defragment operation. The user can: • Delete font, macros, and other data in memory. • Install additional printer memory.
38 Memory Full	The following options are available: • Select **Continue** to clear the message and continue printing. The job may not print correctly. • Cancel the current job. • Install additional printer memory. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
39 Complex Page	The page is too complex to print. Options are: • Select **Continue** to continue. The job may not print correctly. • Cancel the job.
50 PPDS Font Error	• Select **Continue** to clear the message and continue printing. The job may not print correctly. • Cancel the current job. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
51 Defective Flash	• Select **Continue** to clear the message and continue printing. • Install different flash memory before downloading any resources to flash. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
52 Flash Full	• Select **Continue** to clear the message and continue printing. **Note:** Downloaded fonts and macros not previously stored in flash memory are deleted. • Delete fonts, macros, and other data stored in flash memory. • Install a larger capacity flash memory card. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
53 Unformatted Flash	• Select **Continue** to clear the message and continue printing. • Format the flash memory before storing any resources on it. If the error message remains, replace the flash memory. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.

Error code	Action
54 Serial option <*x*> error	• Make sure the serial link is set up correctly and the appropriate cable is in use. • Make sure the serial interface parameters (protocol, baud, parity, and data bits) are set correctly on the printer and host computer. • Select **Continue** to clear the message and continue printing. The job may not print correctly. • POR the printer. If this does not fix the problem, replace the PCI card.
54 Std Network Software Error	• Select **Continue** to clear the message and continue printing. The job may not print correctly. • Program new firmware for the network interface. • POR the printer. If this does not fix the problem, replace the PCI card.
55 Unsupported Option in Slot <*x*>	1. Turn the printer off. 2. Unplug the power cord from the wall outlet. 3. Remove the unsupported option. 4. Connect the power cord to a properly grounded outlet. 5. Turn the printer on. If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
56 Standard Parallel Port Disabled	• Select **Continue** to clear the message. The printer discards any data received through the parallel port. • Make sure the Parallel Buffer menu item is not set to `Disabled`. • If this does not fix the problem, replace the PCI card.
56 Parallel Port <*x*> Disabled	• Select **Continue** to clear the message. The printer discards any data received through the parallel port. • Make sure the Parallel Buffer menu item is not set to `Disabled`. • If this does not fix the problem, replace the PCI card.
56 Serial Port <*x*> Disabled	• Select **Continue** to clear the message. The printer discards any data received through the serial port. • Make sure the Serial Buffer menu item is not set to `Disabled`. • If this does not fix the problem, replace the PCI card.
56 Standard USB Port Disabled	• Select **Continue** to clear the message. The printer discards any data received through the USB port. • Make sure the USB Buffer menu item is not set to `Disabled`. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
57 Configuration Change Held Jobs May Not Be Restored See Configuration Change, above - not in IR as 57	Configuration changes may be: • Code version changes • Paper handling options removed • The disk was installed from a different model or speed of printer.
58 Too Many Flash Options	Too many flash options are installed. To continue: 1. Turn off and unplug the printer. 2. Remove the excess flash memory. 3. Plug in the printer, and turn it on. If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.

Error code	Action
58 Too Many Trays Attached	1. Turn off and unplug the printer. 2. Remove options until the supported number of options for that model. Models C734 supports three options and models C736 supports four options. 3. Plug in the printer, and turn it on. If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
59 Incompatible Tray <x>	There is an incompatible tray. To remove the option: 1. Turn off and unplug the printer. 2. Remove all option trays. 3. Install one option, plug in the printer and turn it on. 4. Continue adding one option at a time and checking whether the error occurs. 5. Install all options except the one identified as a problem. - If no problem occurs, replace the option. - If the same error occurs, replace the system board. 6. Plug in and power on.
61 Defective Disk	• Select **Continue** to clear the message and continue printing. • Install a different hard disk before performing any operations that require a hard disk. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
62 Disk full	• Select **Continue** to clear the message and continue processing. • Any information not previously stored on the hard disk is deleted. • Delete fonts, macros, and other data stored on the hard disk. • Install a larger hard disk. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
63 Unformatted disk	• Select **Continue** to clear the message and continue printing. • Format the disk. • If the error message remains, replace the hard disk. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
64 Unsupported disk format	• Select **Continue** to clear the message and continue printing. • Format the disk. • If the error message remains, replace the hard disk. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
80 Fuser Near Life Warning	• Select **Continue** to clear the message and continue printing. • `Show Me`, `View Supplies`, and `Tell Me More` displays additional information. • Order a replacement fuser. When print quality is reduced, install the new fuser using the instruction sheet that comes with the replacement fuser. **Note:** Be sure to reset the fuser count as instructed on the sheet. • If this does not fix the problem, replace the system board.See **"System board removal" on page 4-142**.
80 Fuser Life Warning	• Select **Continue** to clear the message and continue printing. • `Show Me`, `View Supplies`, and `Tell Me More` displays additional information. • Order a replacement fuser. When print quality is reduced, install the new fuser using the instruction sheet that comes with the replacement fuser. **Note:** Be sure to reset the fuser count as instructed on the sheet. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.

Error code	Action
80 Replace Fuser	• `Show Me`, `View Supplies`, and `Tell Me More` displays additional information. • Replace the fuser. See **"Fuser assembly removal" on page 4-56**. **Note:** Be sure to reset the fuser count as instructed on the sheet. • If this does not fix the problem, replace the system board. See **"System board removal" on page 4-142**.
80 Fuser Missing	• Reinstall the fuser. See **"Fuser assembly removal" on page 4-56**. • Reseat connectors behind fuser. They may get dislodged and not make good contact when the fuser is installed. • Check the cable connectors for damage at the system board and at the LVPS.
80.41 Fuser missing	• Install the fuser. Replace the fuser if the problem persists. • If the problem continues, turn the printer off and remove the system board shield. See **"System board shield removal" on page 4-29**. Check the cable in connector JFSR1 (D) for proper connection to the system board, the cable for pinch points, and the cable or the connector for any other damage. If the connector is damaged on system board, replace the system board. See **"System board removal" on page 4-142**. If the fuser cable is damaged, replace the cable.  • Check for continuity in the fuser cable. If continuity is not present, replace the fuser cable. If the problem persists after replacing cable, replace the system board. See **"System board removal" on page 4-142**.
82 Waste Toner Nearly Full	• Select **Continue** to clear the message and continue printing. • If printing continues, order a replacement waste toner box immediately. • If the problem persists, open the front access door and check the aligner shaft for binding. Clear the binding if possible. If not possible, contact your next level of support.
82 Replace Waste Toner	• Replace the waste toner box using the instruction sheet that comes with the replacement waste toner box. • Ensure that there is no interference between the waste toner box and the printer. • If the problem persists, open the front access door and check the aligner shaft for binding. Clear the binding if possible. • If the problem persists, replace the system board. See **"System board removal" on page 4-142**. • If the problem persists, contact your next level of support.

Error code	Action
82 Waste Toner Missing	• Insert the waste toner box. • Check the cable in connector JBUMP1on the system board for defects and proper connection. If the cable wiring or the cable connection is defective, replace the bump multipurpose feeder/duplex motor assembly. If the cable in JBUMP1 connector is damaged on the system board, replace the system board. See **“System board removal” on page 4-142**. • Check the aligner shaft and the mechanical system for binds. • Replace the bump multipurpose feeder/duplex motor assembly. • If the problem persists, replace the system board. See **“System board removal” on page 4-142**.
82.41	If you continuously get this error, then the problem is aligner motor error. Go to **“147.xx—Staging motor error service check” on page 2-84**.
83.*xx* Transfer Module Life Warning	• Select **Continue** to clear the message and continue printing. • Order a replacement transfer module. When print quality is reduced, install the new transfer module using the instruction sheet that comes with the replacement transfer module. • If the problem persists, replace the system board. See **“System board removal” on page 4-142**.
83.*xx* Replace Transfer Module	• Replace the transfer module using the instruction sheet that comes with the replacement transfer module. See **“ITU assembly removal” on page 4-68**. • If the problem persists, replace the system board. See **“System board removal” on page 4-142**.
84.11 <*color*> PC Unit Life Warning	• Select **Ignore** to clear the message and continue printing. • Order the specified photoconductor unit. When print quality is reduced, install the new specified photoconductor unit using the instruction sheet that comes with the replacement specified photoconductor unit. • If the problem persists, replace the system board. See **“System board removal” on page 4-142**.
84 Replace <*color*> PC Unit	• Replace the specified photoconductor unit using the instruction sheet that comes with the replacement specified photoconductor unit. • If the problem persists, replace the system board. See **“System board removal” on page 4-142**.
84 <*color*> PC Unit Missing	• Scroll down the operator panel to see if the printer is showing that all four of the PC units are missing. If so, check the HVPS cable between the system board and the HVPS. Ensure that the cable is not plugged in backwards on the HVPS. Disconnect and reconnect the cable to make sure there is good contact. • Insert or reinstall the specified print cartridge. • Check the high voltage cartridge contacts path.  • If the contacts are good, replace the HVPS. See **“High-voltage power supply (HVPS) board removal” on page 4-63**. • If the problem persists, replace the system board. See **“System board removal” on page 4-142**.

Error code	Action
84 <color> PC Unit Near Life Warning	• Select **Ignore** to clear the message and continue printing. • Order the specified photoconductor unit. When print quality is reduced, install the new specified photoconductor unit using the instruction sheet that comes with the replacement specified photoconductor unit. • If the problem persists, replace the system board. See **"System board removal" on page 4-142**.
88.xx <*color*> Cartridge Low	• `Show Me`, `View Supplies`, and `Tell Me More` displays additional information. • Replace the specified print cartridge. • Select **Continue** to clear the message and continue printing. • If the problem persists, replace the system board. See **"System board removal" on page 4-142**.
88.xx <color> Cartridge Nearly Low	• `Show Me`, `View Supplies`, and `Tell Me More` displays additional information. • Replace the specified print cartridge. • Select **Continue** to clear the message and continue printing. • If the problem persists, replace the system board. See **"System board removal" on page 4-142**.
88.xx Replace <*color*> Cartridge	• `Show Me`, `View Supplies`, and `Tell Me More` displays additional information. • Replace the specified print cartridge. • Select **Continue** to clear the message and continue printing. • If the problem persists, replace the system board. See **"System board removal" on page 4-142**.

Service errors

Printer hardware errors (100–199)

Error code	Description	Action
110 Printhead Error	An error has occurred in the printhead.	• POR the printer. • If the error message persists, go to **“110.xx—Printhead error service check” on page 2-66**.
120.xx Fuser Motor Error	An error has occurred in the fuser motor.	• POR the printer. • If the error message persists, go to **“120.xx—Motor (fuser) error service check” on page 2-68**
121.00–121.59 Fuser Error	An error has occurred in the fuser.	• Remove and reseat the fuser. See **“Fuser assembly removal” on page 4-56**. • POR the printer. • If the error message persists, go to **“121.xx—Fuser error service check” on page 2-69**.
125.00–125.69 ITU Error	An error has occurred in the ITU.	• Remove and reseat the ITU. • POR the printer. • If the error message persists, go to **“125.xx, 145.xx—ITU error service check” on page 2-72**.
126.08–126.09 LVPS Error	An error has occurred in the LVPS.	• POR the printer. • If the error message persists, go to **“126.xx—LVPS error service check” on page 2-73**.
133.xx Cartridge Sensor Error	An error has occurred in a cartridge sensor. 133.01 = black, 133.02 = cyan, 133.03 = magenta, and 133.04 = yellow.	• POR the printer. • If the error message persists, go to **“133.xx—Cartridge sensor error service check” on page 2-74**.
133.05	A timeout error has occurred while waiting for the indicated cartridge.	• POR the printer. • If the error message persists, go to **“133.xx—Cartridge sensor error service check” on page 2-74**.
141.01–141.09 Black cartridge motor error	An error has occurred in the black cartridge motor.	• POR the printer. • If the error message persists, go to **“141.xx—Black cartridge motor error service check” on page 2-77**.
142.01–142.09 Cyan cartridge motor error	An error has occurred in the cyan cartridge motor.	• POR the printer. • If the error message persists, go to **“142.xx—Cyan cartridge motor error service check” on page 2-78**.
143.01–143.09 Magenta cartridge motor error	An error has occurred in the magenta cartridge motor.	• POR the printer. • If the error message persists, go to **“143.xx—Magenta cartridge motor error service check” on page 2-80**.
144.01–144.09 Yellow cartridge motor error	An error has occurred in the yellow cartridge motor.	• POR the printer. • If the error message persists, go to **“144.xx—Yellow cartridge motor error service check” on page 2-81**.

Error code	Description	Action
145.01–145.19 Retract Motor Error	An error has occurred in the all-color retract motor.	• POR the printer. • If the error message persists, go to **"125.xx, 145.xx—ITU error service check" on page 2-72**.
146.01–146.22 Autocomp Motor Error	Tray 1 motor has failed.	• POR the printer. • If the error message persists, go to **"146.xx—Autocomp (tray 1) motor error service check" on page 2-83**.
147.01–147.22 Staging Motor Error	The staging motor has failed.	• POR the printer. • If the error message persists, go to **"147.xx—Staging motor error service check" on page 2-84**.
149.01–149.22 Paper Path Redrive Motor Error	The paper path redrive motor has failed.	• POR the printer. • If the error message persists, go to **"149.xx—Paper path redrive motor error service check" on page 2-85**.
150.01–150.22 Motor Error	Duplex motor has failed.	• POR the printer. • If the error message persists, go to **"150.xx—Duplex motor error service check" on page 2-85**.
151.01–151.09 ITU Motor Error	An error has occurred in the ITU motor.	• POR the printer. • If the error message persists, go to **"151.xx—ITU motor error service check" on page 2-87**.
171.01–171.03 Main Fan Error	An error has occurred in the main fan.	• POR the printer. • If the error message persists, go to **"171.xx—Main fan error service check" on page 2-88**.
172.01–172.03 LVPS Fan Error	An error has occurred in the LVPS fan.	• POR the printer. • If the error message persists, go to **"172.xx—LVPS fan error service check" on page 2-88**.
173.01–173.03 Blower Fan Error	An error has occurred in the blower fan.	• POR the printer. • If the error message persists, go to **"173.xx—Blower fan error service check" on page 2-89**.

ADF and flatbed scanner errors (800–899)

Error code	Description	Action
840.01	The scanner has been manually disabled	Enter the configuration mode to re-enable the scanner.
840.02	The scanner has automatically been disabled by the controller	Enter the configuration mode to re-enable the scanner.
840.03	Scanner cable has been unplugged.	Go to **“840.03—Scanner cable service check” on page 2-124**.
841.xx	The scanner image ASIC has failed	1. Check all connections on the ADF controller card assembly. 2. Replace the scanner controller card assembly if problem remains. Go to **“Scanner interface card removal” on page 4-223**.
842.xx	The ADF controller card has lost communication with the system.	1. Check all connections on the ADF controller card assembly. 2. Replace the ADF controller card assembly if problem remains. Go to **“ADF controller card removal” on page 4-164**.
843.xx	The scanner carriage home position detection has failed.	1. Turn the machine off/on. 2.See **“Sensor (ADF top door interlock) service check” on page 2-160**.
844.xx	The flatbed scanner exposure lamp has failed.	Replace the exposure lamp. Go to **“ADF duplex CCD assembly removal” on page 4-166**.
845.xx	Scanner card has failed.	Go to **“845.xx—Scanner card service check” on page 2-125**.
846.00	Flatbed fan has failed.	Go to **“846.00—Scanner flatbed fan service check” on page 2-126**.
849.00	Machine has an installed modem but ConfigID indicates that it should not.	Remove the modem.
849.10	Machine has an installed hard drive that should not be present.	Uninstall the hard drive.

Firmware and/or system electronics (900–999))

Error code	Description	Action
900.00–900.99 (except 900.05) Software Error	An unrecoverable RIP software error occurred while an unknown process was running.	• Go to **"900.xx System software error" on page 2-127**.
910.*xx*–915.*xx* Engine Software Error	An engine software error has occurred.	• POR the printer. • If the error persists, replace the system board. See **"System board removal" on page 4-142**.
938.01 Electronics Hardware Error	The system board is not in the correct level.	• POR the printer. • If the error persists, replace the system board. See **"System board removal" on page 4-142**.
938.02 Electronics Hardware Error	A system board timeout error has occurred.	• POR the printer. • If the error persists, replace the system board. See **"System board removal" on page 4-142**.
938.03–938.04 Electronics Hardware Error	A communication error has occurred.	• POR the printer. • If the error persists, replace the system board. See **"System board removal" on page 4-142**.
938.05–938.08 Electronics Hardware Error	Under-voltage was detected.	• POR the printer. • If the error message persists, replace the LVPS. See **"Low-voltage power supply (LVPS) removal" on page 4-77**.
938.09 Electronics Hardware Error	The printhead PLL failed to achieve lock.	• POR the printer. • If the error message persists, go to **"110.xx—Printhead error service check" on page 2-66**.
938.10 Electronics Hardware Error	The humidity sensor failed.	• POR the printer. • If the error message persists, go to **"System board removal" on page 4-142**.
938.11–938.14 Electronics Hardware Error	A cartridge sensor failed.	• POR the printer. • If the error message persists, go to **"133.xx—Cartridge sensor error service check" on page 2-74**.
938.15 Electronics Hardware Error	An output bin sensor not connected error occurred.	• POR the printer. • If the error message persists, go to **"Pick arm stuck down service check" on page 2-158**.
938.16 Electronics Hardware Error	An MPF paper out sensor not connected error occurred.	• POR the printer. • If the error message persists, go to **"938.16—MPF paper out sensor error service check" on page 2-130**.
938.18 Electronics Hardware Error	A waste toner sensor not connected error occurred.	• POR the printer. • If the error message persists, go to **"938.18—Waste toner sensor error service check" on page 2-131**.
938.19 Electronics Hardware Error	A waste toner full sensor not connected error occurred.	• POR the printer. • If the error message persists, go to **"938.19—Waste toner full sensor error service check" on page 2-132**.
938.20 Electronics Hardware Error	A duplex motor failure occurred.	• POR the printer. • If the error message persists, go to **"150.xx—Duplex motor error service check" on page 2-85**.

Error code	Description	Action
938.21 Electronics Hardware Error	A staging motor failure occurred.	• POR the printer. • If the error message persists, go to **"147.xx—Staging motor error service check" on page 2-84**.
938.22 Electronics Hardware Error	A printhead failure error occurred.	• POR the printer. • If the error message persists, go to **"110.xx—Printhead error service check" on page 2-66**.
938.23 Electronics Hardware Error	An autocomp motor error occurred.	• POR the printer. • If the error message persists, go to **"146.xx—Autocomp (tray 1) motor error service check" on page 2-83**.
938.24 Electronics Hardware Error	A paper path redrive motor failure error occurred.	• POR the printer. • If the error message persists, go to **"149.xx—Paper path redrive motor error service check" on page 2-85**.
938.25–938.26 Electronics Hardware Error	A printhead failure error occurred.	• POR the printer. • If the error message persists, go to **"110.xx—Printhead error service check" on page 2-66**.
938.27 Electronics Hardware Error	A weather station failure occurred.	• POR the printer. • If the error message persists, go to **"938.27, 938.29, 938.30—Weather station error service check" on page 2-133**.
938.28 Electronics Hardware Error	A remote weather station failure occurred.	• POR the printer. • If the error message persists, go to **"938.28—Remote weather station error service check" on page 2-134**.
938.29–938.30 Electronics Hardware Error	A weather station failure occurred.	• POR the printer. • If the error message persists, go to **"938.27, 938.29, 938.30—Weather station error service check" on page 2-133**.
938.31 Electronics Hardware Error	A printhead failure error occurred.	• POR the printer. • If the error message persists, go to **"110.xx—Printhead error service check" on page 2-66**.
950.00–950.29 NVRAM Failure	A mismatch occurred between the OP panel NVRAM and the system board NVRAM.	• POR the printer. • If the error message persists, go to **"950.00–950.29—EPROM mismatch failure" on page 2-135**.
952.01–952.99 NVRAM Error	A recoverable CRC error has occurred.	POR the printer to clear the error.
953.01–953.99 NVRAM Failure	An NVRAM failure occurred in the OP panel.	• POR the printer. • If the error persists, replace the OP panel UICC card. See **"OP panel UICC card removal" on page 4-109**.
954.01–954.99 NVRAM Failure	A system NVRAM failure has occurred.	• POR the printer. • If the error message persists, replace the system board. See **"System board removal" on page 4-142**.

Error code	Description	Action
955.00–955.99 Code Failure	A system board memory failure has occurred.	• POR the printer. • If the error message persists, replace the system board. See **“System board removal” on page 4-142**.
956.00–956.99 System Card Failure	A processor failure has occurred.	• POR the printer. • If the error message persists, go to **“956.xx—System board failure service check” on page 2-136**.
957.00–957.99 System Failure	An ASIC failure has occurred.	• POR the printer. • If the error message persists, replace the system board. See **“System board removal” on page 4-142**.
958.00–958.99 Memory Failure	A processor failure has occurred.	• POR the printer. • If the error message persists, replace the system board. See **“System board removal” on page 4-142**.
959.00–959.05 Engine Code Error	Invalid engine code has been detected.	• POR the printer. • If the error message persists, download the engine code again. • POR the printer again. • If the error message persists, replace the system board. See **“System board removal” on page 4-142**.
959.20–959.28 System Failure	A system board failure has occurred.	• POR the printer. • If the error message persists, replace the system board. See **“System board removal” on page 4-142**.
960.00–960.99 Memory Error	A memory failure has occurred.	• POR the printer. • If the error message persists, RAM soldered on board is bad. Replace the system board. See **“System board removal” on page 4-142**.
961.00–961.99 Memory Failure	A memory failure has occurred.	• POR the printer. • If the error message persists, RAM soldered on board is bad. Replace the system board. See **“System board removal” on page 4-142**.
964.00–964.99 Emulation Error	A CRC error with Download Emulation (DLE) has occurred.	• POR the printer. • Download code a second time.
975.00–975.99 Network Error	The system detected an unrecognizable network port.	Contact your next level of support.
976.00–976.99 Network Error	The system detected an unrecoverable software error in network port.	Contact your next level of support.
982.00–982.12 <*device*> Communication Error	A communications error by the specified device has occurred.	1. Turn the power off. 2. Remove, and reinstall the output option. 3. Turn the main power back on. 4. Check all output option interface connections if the problem remains.
990.00–990.29 Option Error	An option error has occurred.	Contact your next level of support.
990.01 Service Tray2	An input option error has occurred.	Go to **“990.01—POST error (2000-sheet input option) service check” on page 2-136**.

Error code	Description	Action
990.05 Service Tray2	An input option error has occurred.	Go to **“990.05—POST error (550-sheet input option) service check” on page 2-137**.
991.00–991.99 <*device*> Error	The specified device has detected an error.	• POR the printer. • If the error message persists, replace the system board. See **“System board removal” on page 4-142**.

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Symptoms

Symptom table—base printer

Symptom	Action
Dead printer	Go to **“Dead printer service check” on page 2-143**.
Tray linking will not work.	Go to **“Tray linking service check” on page 2-167**.
Paper pick mechanism—pick arm is stuck in the down position	Go to **“Pick arm stuck down service check” on page 2-158**.

Symptom table—500-sheet tray input option

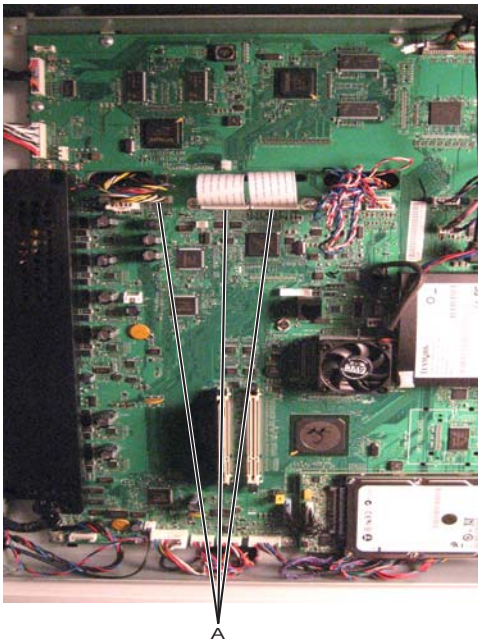
Symptom	Action
Printer fails to recognize the option is installed.	Go to **“Input option not detected (550-sheet/2000-sheet input option) service check” on page 2-146**.
Printer keeps on prompting that the jam door is open even if it’s close.	Go to **“Jam clearance cover open (550-sheet/2000-sheet input option) service check” on page 2-149**.
Tray X does not recognize the media size loaded.	Go to **“Media size error (550-sheet/2000-sheet input option) service check.” on page 2-151**.
Tray missing message appears even if media tray is installed.	Go to **“Media tray missing (550-sheet input option) service check” on page 2-152**.
Double feed	Go to **“Double feed (550-sheet/2000-sheet input option) service check” on page 2-144**.
Printout is skewed.	Go to **“Skew (550-sheet input option) service check” on page 2-160**.
Tray LED won’t light up during paper jam or tray empty.	Go to **“Tray jam indicator (550-sheet/2000-sheet input option) service check” on page 2-167**.

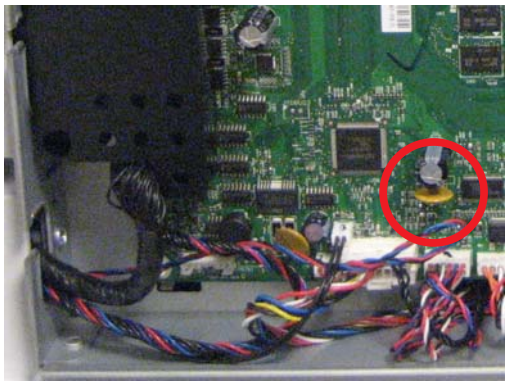
Symptom table—2000-Sheet High Capacity Feeder input option

Symptom	Action
Printer fails to recognize the option is installed.	Go to **“Input option not detected (550-sheet/2000-sheet input option) service check” on page 2-146**.
Printer keeps on prompting that the jam door is open even if it’s close.	Go to **“Jam clearance cover open (550-sheet/2000-sheet input option) service check” on page 2-149**
Tray X does not recognize the media size loaded.	Go to **“Media size error (550-sheet/2000-sheet input option) service check.” on page 2-151**.
Tray missing message appears even if media tray is installed.	Go to **“Media tray missing (2000-sheet input option) service check” on page 2-154**.
Double feed	Go to **“Double feed (550-sheet/2000-sheet input option) service check” on page 2-144**.
Printout is skewed.	Go to **“Skew (2000-sheet input option) service check” on page 2-162**.
Printer prompts that tray is empty even if there’s paper in the tray.	Go to **“Tray empty (2000-sheet input option) service check” on page 2-164**.
Tray LED won’t light up during paper jam or tray empty.	Go to **“Tray jam indicator (550-sheet/2000-sheet input option) service check” on page 2-167**.

Service checks

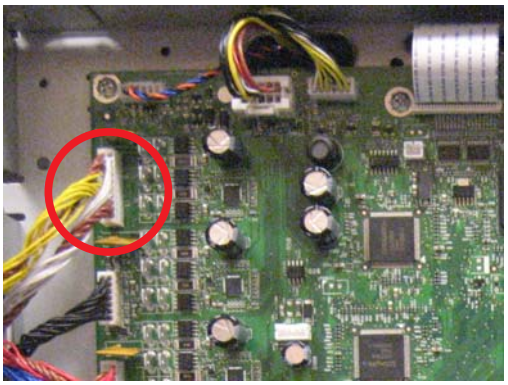
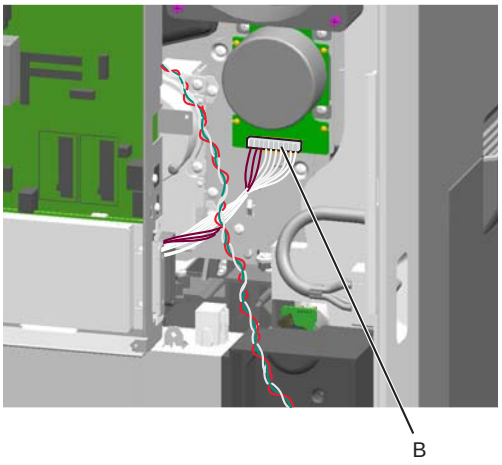
110.xx—Printhead error service check

Step	Questions / actions	Yes	No
1	View the Event Log: 1. Turn off the printer, press and hold **3** and **6** and turn on the printer. 2. Select **EVENT LOG** > **Display Log**. **Has a 110.xx error occurred three times or more?**	Replace the printhead. See **"Printhead removal, installation, and alignment" on page 4-117**.	Go to step 2.
2	Turn the printer off, and open the system board shield. Check the printhead cables (A) in connectors JMM1, JPH1, and JPH2 for proper connection to the system board.  **Are the cables properly connected?**	Go to step 3.	Reseat the cables.
3	Check the printhead cables in connectors JMM1, JPH1, and JPH2 for damage. **Are the cables damaged?**	Replace the printhead. See **"Printhead removal, installation, and alignment" on page 4-117**.	Go to step 4.

Step	Questions / actions	Yes	No
4	Measure the resistance across fuse F11 on the system board.  **Is the fuse blown?**	Replace the system board. See **“System board removal” on page 4-142**.	Go to step 5.
5	Perform the printhead verification to check whether the new printhead solves the problem. See **“Printhead verification” on page 3-52**. **Does the printhead motor pass the test?**	Replace the printhead. See **“Printhead removal, installation, and alignment” on page 4-117**.	Replace the system board. See **“System board removal” on page 4-142**.

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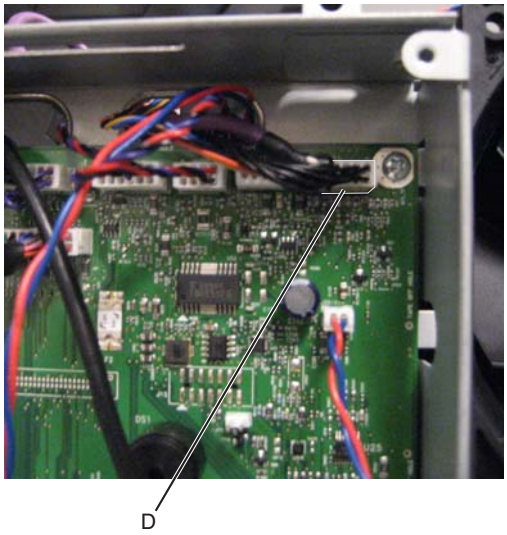
120.xx—Motor (fuser) error service check

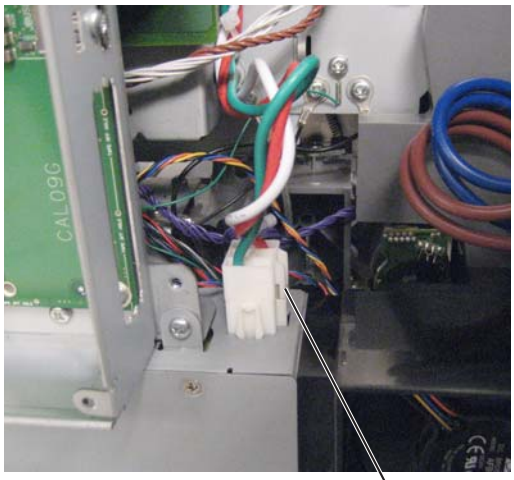
Step	Questions / actions	Yes	No
1	Turn the printer off, open the system board shield, and remove the RIP card shield. Check the cable in connector JYF1 (BLDC Y & Fuser cable) for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the BLDC Y & Fuser cable. See **"EP drive assembly removal" on page 4-50**.	Go to step 3.
3	Remove the rear cover. See **"Rear cover removal" on page 4-23**. Check the cable (B) for proper connection to the fuser motor.  **Is the cable properly connected?**	Go to step 4.	Reseat the cable.
4	**Is the BLDE Y & Fuser cable damaged?**	Replace the BLDC Y & Fuser cable. See **"EP drive assembly removal" on page 4-50**.	Go to step 5.

Step	Questions / actions	Yes	No
5	Replace the fuser motor. See **"Fuser drive assembly removal" on page 4-57**. **Does the problem reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

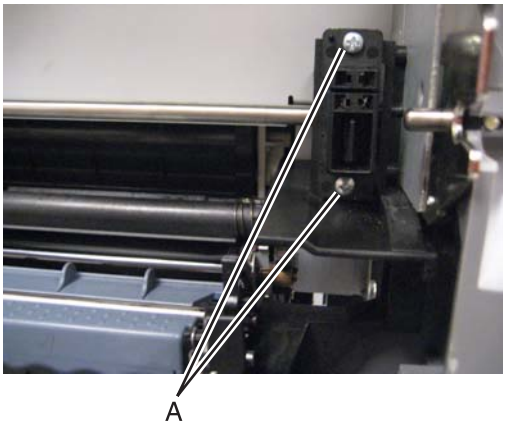
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121.xx—Fuser error service check

Step	Questions / actions	Yes	No
1	Replace the fuser. See **"Fuser assembly removal" on page 4-56**. **Does the error clear?**	Problem solved.	Go to step 2.
2	Open the system board shield. Check the cable in connector JFSR1 (D) for proper connection to the system board.  **Is the cable properly connected?**	Go to step 3.	Reseat the cable.
3	Check the cable for damage. **Is the cable damaged?**	Replace the Fuser and system card LVPS cable. See **"Fuser system card and LVPS cable removal" on page 4-59**.	Go to step 4.

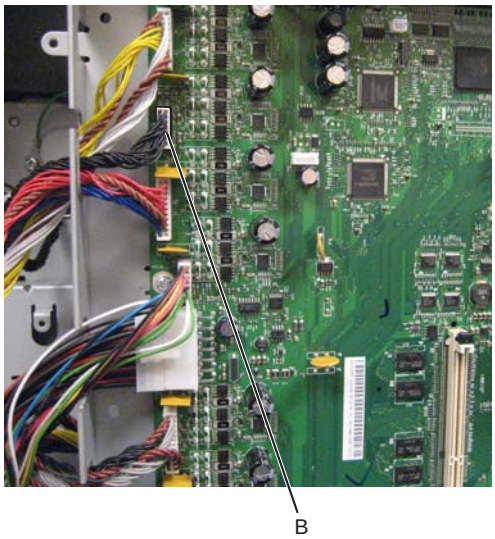
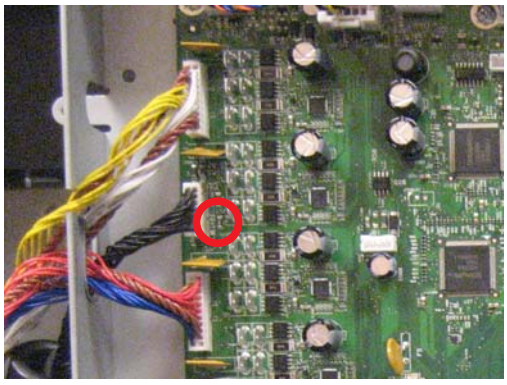
Step	Questions / actions	Yes	No
4	Check the cable (E) on the LVPS for proper connection.  **Is the cable properly connected?**	Go to step 5.	Reseat the cable.
5	Check the cable on the LVPS for damage. **Is the cable damaged?**	Replace the Fuser and system card LVPS cable. See **“Fuser system card and LVPS cable removal” on page 4-59**.	Go to step 6.

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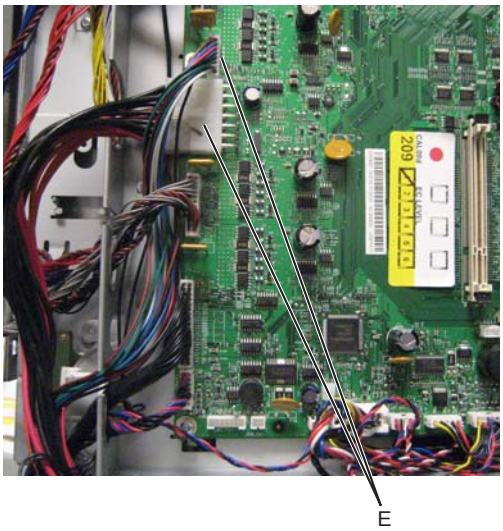
Step	Questions / actions	Yes	No
6	Open the left access door, remove the two screws (A), and pull out the fuser autoconnect enough to check the cable for proper connection.   **Is the cable properly connected?**	Go to step 7.	Reseat the cable.
7	Check the cable for damage. **Is the cable damaged?**	Replace the Fuser and system card LVPS cable. See **“Fuser system card and LVPS cable removal” on page 4-59**.	Replace the system board. See **“System board removal” on page 4-142**.

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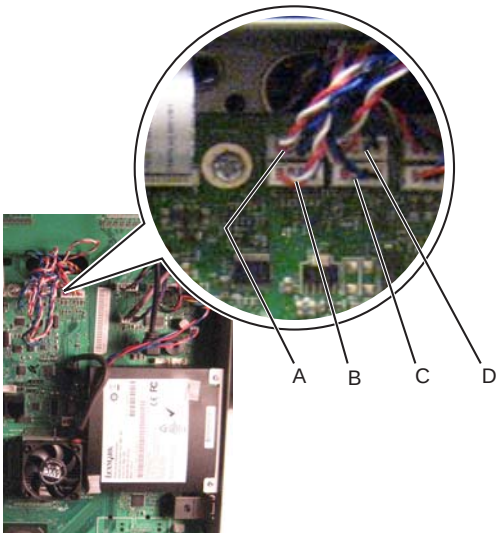
125.xx, 145.xx—ITU error service check

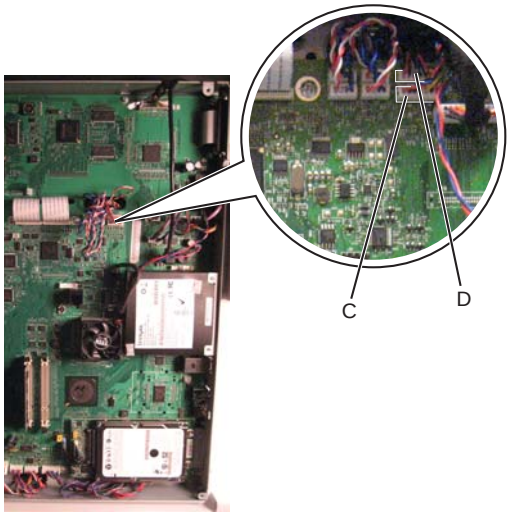
Step	Questions / actions	Yes	No
1	Replace the ITU assembly. See **"ITU assembly removal" on page 4-68**. **Does the error clear?**	Problem solved.	Go to step 2.
2	Turn the printer off, open the system board shield, and remove the RIP card shield. Check the ITU autoconnect cable in connector JITM1 (B) for proper connection to the system board.  **Is the cable properly connected?**	Go to step 3.	Reseat the cable.
3	Check the cable for damage. **Is the cable damaged?**	Replace the ITU autoconnect cable. See **"ITU autoconnect removal" on page 4-69**.	Go to step 4.
4	Measure the resistance across fuse F20 on the system board.  **Is the fuse blown?**	Replace the system board. See **"System board removal" on page 4-142**.	Replace the ITU autoconnect cable. See **"ITU autoconnect removal" on page 4-69**.

126.xx—LVPS error service check

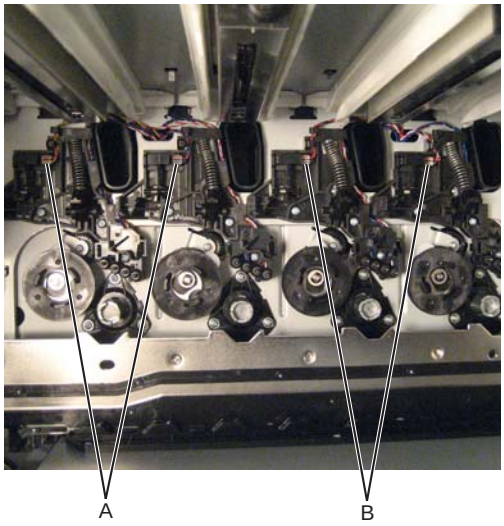
Step	Questions / actions	Yes	No
1	Turn the printer off, open the system board shield, and remove the RIP card shield. Check the cables in connector JLVPS1 and J17 (E) for proper connection to the system board.  **Are the cables properly connected?**	Go to step 2.	Reseat the cables.
2	Check the cables for damage. **Are the cables damaged?**	Replace the LVPS. See **"Low-voltage power supply (LVPS) removal" on page 4-77**.	Replace the system board. See **"System board removal" on page 4-142**.

133.xx—Cartridge sensor error service check

Step	Questions / actions	Yes	No
1	Turn the printer off and open the system board shield. Check the cables in the indicated connectors for proper connection to the system board.  The cables are interchangeable on the terminals, so check all four cables for any 133.xx error. **Are the cables properly connected?**	Go to step 2.	Reseat the cable.

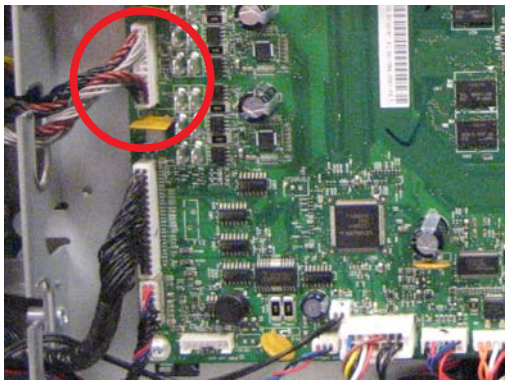
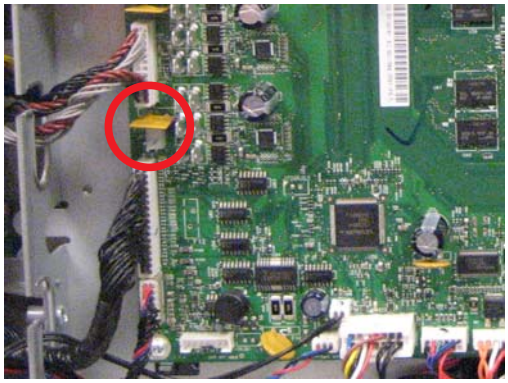
Step	Questions / actions	Yes	No
2	Check the cables in the indicated connectors for proper connection to the system board.  133.01 or 133.05 Black—D (JCMKM1) 133.02 or 133.05 Cyan—C (JCMCY1) 133.03 or 133.05 Magenta—D (JCMKM1) 133.04 or 133.05 Yellow—C (JCMCY1) **Are the cables properly connected?**	Go to step 3.	Reseat the cable.

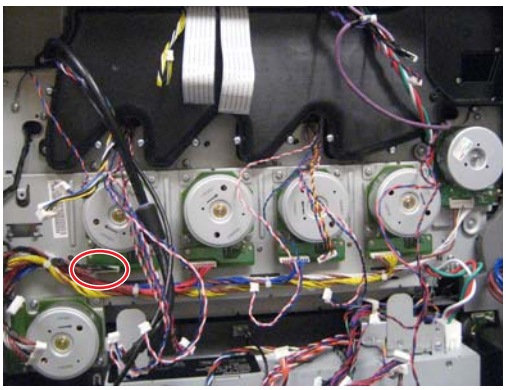
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Step	Questions / actions	Yes	No
3	Check the cables in connectors JCMKM1 and JCMCY1 for damage, and then remove all four cartridges and check the other ends of the cables connected to the sensors on the memory blocks.  133.01 or 133.05 Black—B (JCMKM1) 133.02 or 133.05 Cyan—A (JCMCY1) 133.03 or 133.05 Magenta—B (JCMKM1) 133.04 or 133.05 Yellow—A (JCMCY1) **Is either cable damaged?**	Replace the cable.	Go to step 3.
4	Replace the indicated cartridge memory block. See **“Cartridge memory block removal” on page 4-40**. **Does this fix the problem?**	Problem solved.	Replace the system board. See **“System board removal” on page 4-142**.

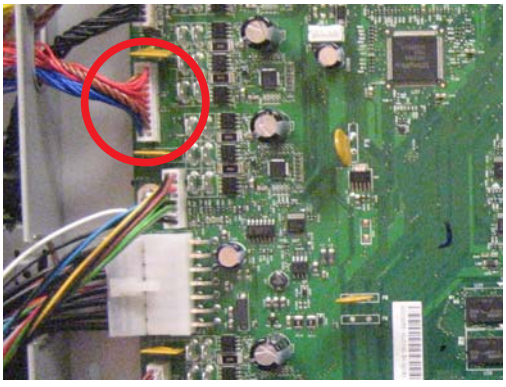
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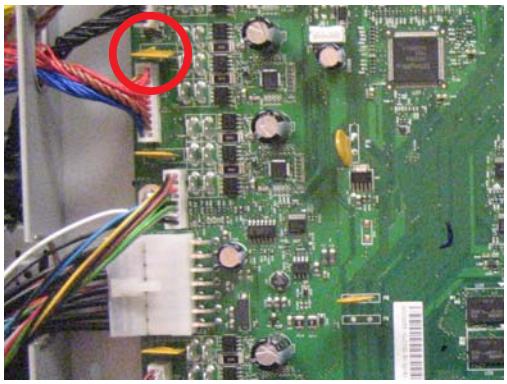
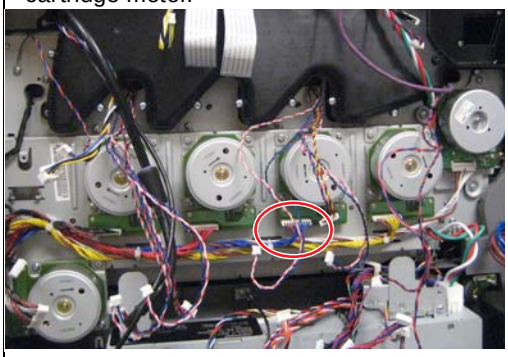
141.xx—Black cartridge motor error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, open the system board shield, and remove the RIP card shield. Check the cable in the connector JKI1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the BLDC K ITU cable. See **"EP drive assembly removal" on page 4-50**.	Go to step 3.
3	Measure the resistance across the fuse F10 on the system board.  **Is the fuse blown?**	Replace the system board. See **"System board removal" on page 4-142**.	Go to step 4.

Step	Questions / actions	Yes	No
4	Remove the system board cage. See **“System board cage with board removal” on page 4-148**. Check the cable connected to the black cartridge motor.  **Is the cable connected properly?**	Go to step 5.	Reseat the cable.
5	Replace the EP drive assembly. See **“EP drive assembly removal” on page 4-50**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

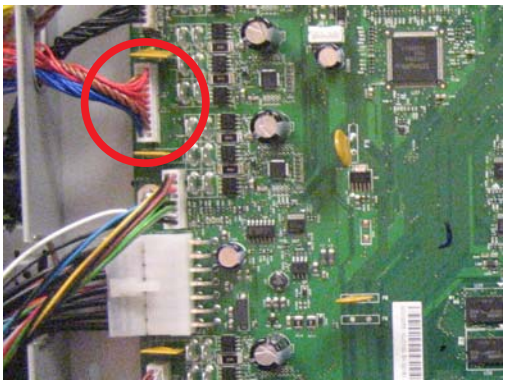
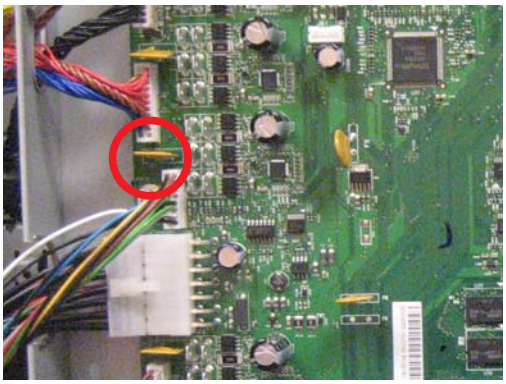
142.xx—Cyan cartridge motor error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, open the system board shield, and remove the RIP card shield. Check the cable in the connector JCM1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the BLDC C&M cable. See **“EP drive assembly removal” on page 4-50**.	Go to step 3.

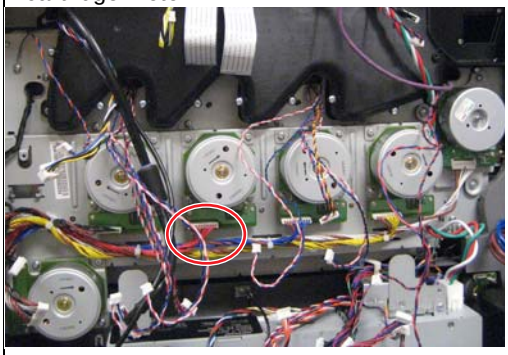
Step	Questions / actions	Yes	No
3	Measure the resistance across the fuse F16 on the system board.  **Is the fuse blown?**	Replace the system board. See **"System board removal" on page 4-142**.	Go to step 4.
4	Remove the system board cage. See **"System board cage with board removal" on page 4-148**. Check the cable connected to the cyan cartridge motor.  **Is the cable connected properly?**	Go to step 5.	Reseat the cable.
5	Replace the EP drive assembly. See **"EP drive assembly removal" on page 4-50**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

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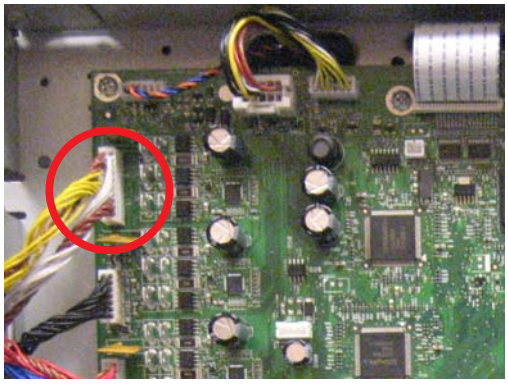
143.xx—Magenta cartridge motor error service check

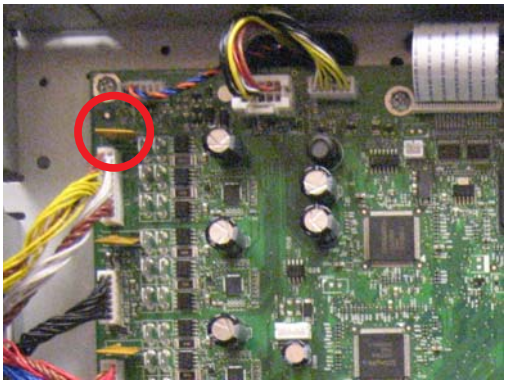
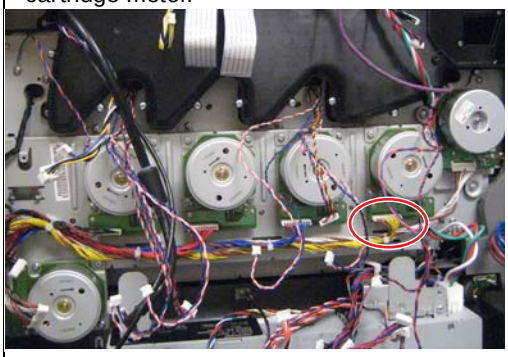
Step	Questions / actions	Yes	No
1	Turn the printer off, open the system board shield, and remove the RIP card shield. Check the cable in the connector JCM1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the BLDC C&M cable. See **“EP drive assembly removal” on page 4-50**.	Go to step 3.
3	Measure the resistance across the fuse F9 on the system board.  **Is the fuse blown?**	Replace the system board. See **“System board removal” on page 4-142**.	Go to step 4.

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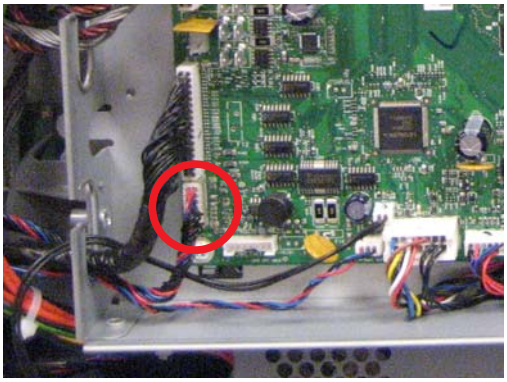
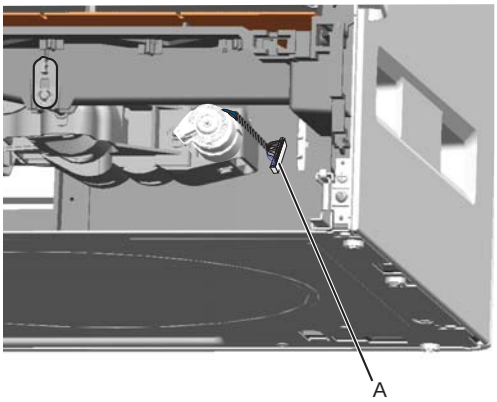
Step	Questions / actions	Yes	No
4	Remove the system board cage. See **"System board cage with board removal" on page 4-148**. Check the cable connected to the magenta cartridge motor.  **Is the cable connected properly?**	Go to step 5.	Reseat the cable.
5	Replace the EP drive assembly. See **"EP drive assembly removal" on page 4-50**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

144.xx—Yellow cartridge motor error service check

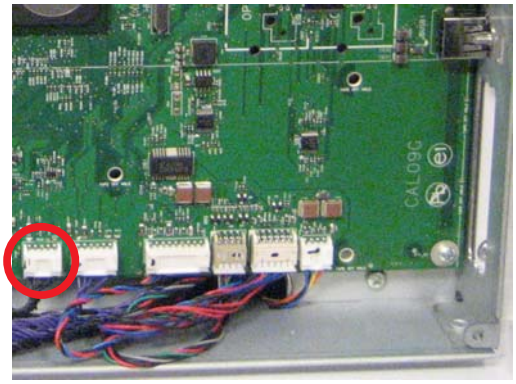
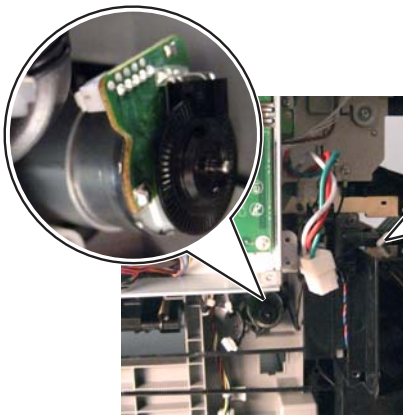
Step	Questions / actions	Yes	No
1	Turn the printer off, open the system board shield, and remove the RIP card shield. Check the cable in the connector JYF1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the BLDC Y & Fuser cable. See **"EP drive assembly removal" on page 4-50**.	Go to step 3.

Step	Questions / actions	Yes	No
3	Measure the resistance across the fuse F12 on the system board.  **Is the fuse blown?**	Replace the system board. See **"System board removal" on page 4-142**.	Go to step 4.
4	Remove the system board cage. See **"System board cage with board removal" on page 4-148**. Check the cable connected to the yellow cartridge motor.  **Is the cable connected properly?**	Go to step 5.	Reseat the cable.
5	Replace the EP drive assembly. See **"EP drive assembly removal" on page 4-50**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

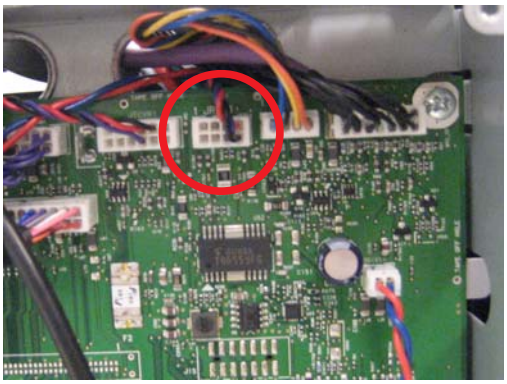
146.xx—Autocomp (tray 1) motor error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JTRAY1 (A) for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the Tray 1 machine side cable. See **“Autocomp W2W cable” on page 7-57**.	Go to step 3.
3	Remove the standard media tray. Check the cable (A) from the paper pick mechanism assembly to the printer.  **Is the cable properly connected?**	Go to step 4.	Reseat the cable.
4	Remove the paper pick mechanism assembly. See **“Paper pick mechanism assembly removal” on page 4-114**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

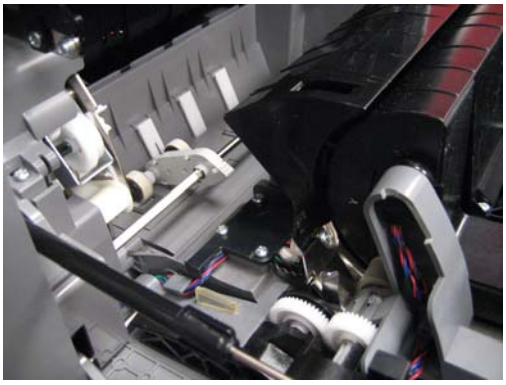
147.xx—Staging motor error service check

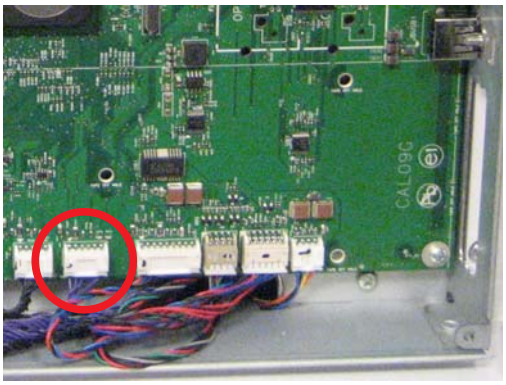
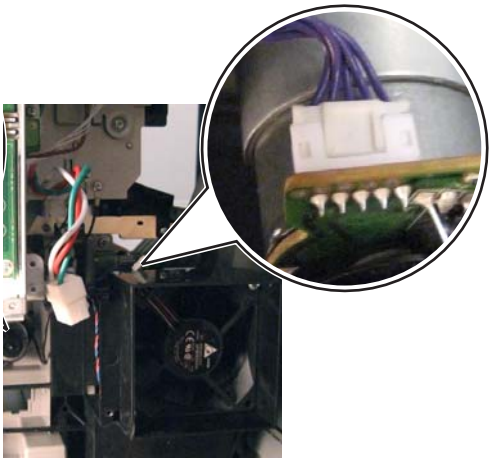
Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JSTAG1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the cable. See **“Staging paper path reference edge assembly removal” on page 4-136** to access the cable.	Go to step 3.
3	Remove the LVPS. See **“Low-voltage power supply (LVPS) removal” on page 4-77**. Check the cable connection to the motor.  **Is the cable connected correctly to the staging motor?**	Go to step 4.	Reseat the cable.
4	Replace the staging paper path reference edge assembly. See **“Staging paper path reference edge assembly removal” on page 4-136**. **Dose the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

149.xx—Paper path redrive motor error service check

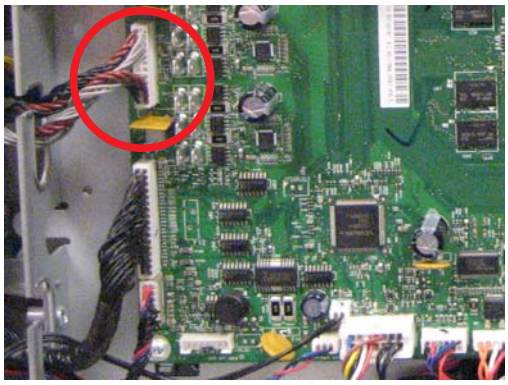
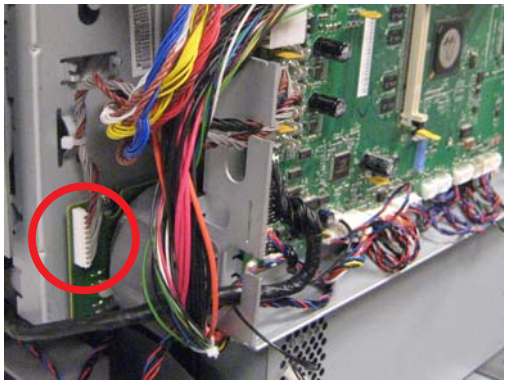
Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JRDR1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Replace the staging deflector assembly. See **"Staging deflector assembly removal" on page 4-134**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

150.xx—Duplex motor error service check

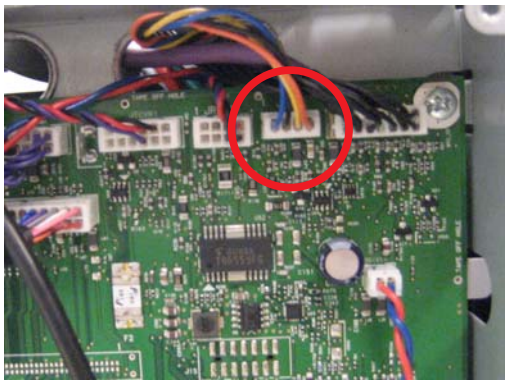
Step	Questions / actions	Yes	No
1	Open the left access door assembly, and check the duplex assembly gears for damage.  **Is the duplex assembly damaged?**	Replace the duplex assembly. See **"Staging paper path reference edge assembly removal" on page 4-136**.	Go to step 2.

Step	Questions / actions	Yes	No
2	Turn the printer off, and open the system board shield. Check the cable in connector JDUPL1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 3.	Reseat the cable.
3	Check the cable for damage. **Is the cable damaged?**	Replace the cable. See **“Staging paper path reference edge assembly removal” on page 4-136** to access the cable.	Go to step 4.
4	Remove the rear cover and the left cover. See **“Rear cover removal” on page 4-23** and **“Left cover removal” on page 4-16**. Check the cable connection to the duplex motor.  **Is the cable connected correctly to the staging motor?**	Go to step 5.	Reseat the cable.
5	Replace the reference edge assembly. See **“Staging paper path reference edge assembly removal” on page 4-136**. **Dose the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

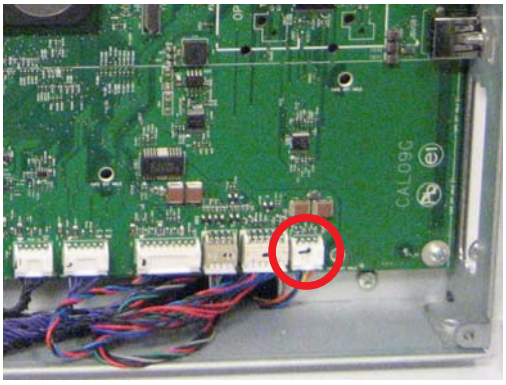
151.xx—ITU motor error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, open the system board shield, and remove the connector shield. Check the cable in connector JKI1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the BLDC K ITU cable. See **"EP drive assembly removal" on page 4-50**.	Go to step 3.
3	Remove the rear cover. See **"Rear cover removal" on page 4-23**. Check the cable connection to the ITU motor.  **Is the cable properly connected?**	Go to step 4.	Reseat the cable.
4	Replace the EP drive assembly. See **"EP drive assembly removal" on page 4-50**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

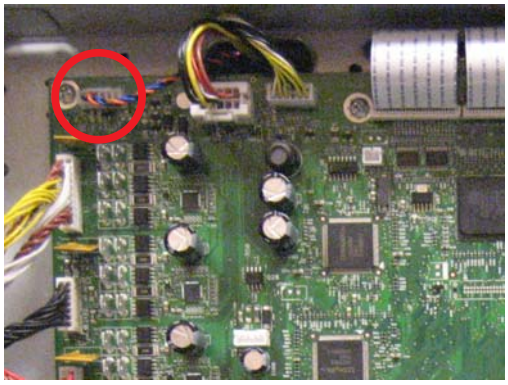
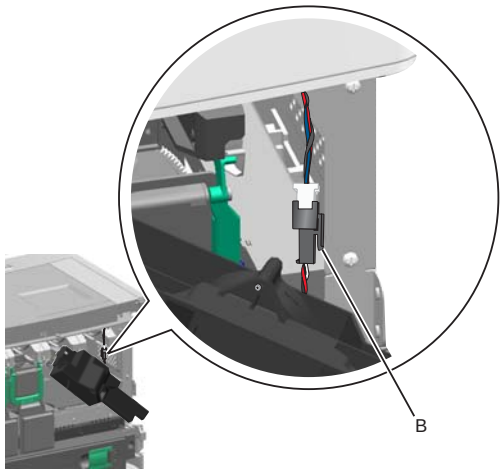
171.xx—Main fan error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JM1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Replace the main fan. See **"Main fan removal" on page 4-84**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

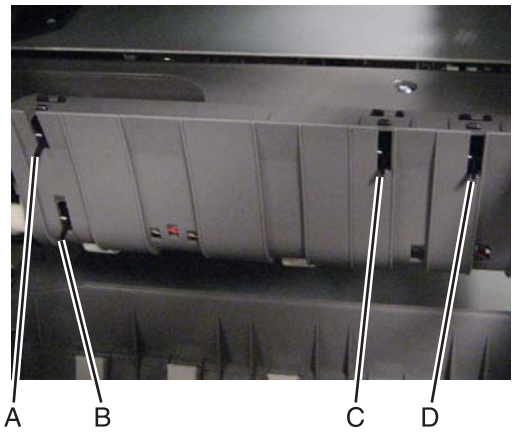
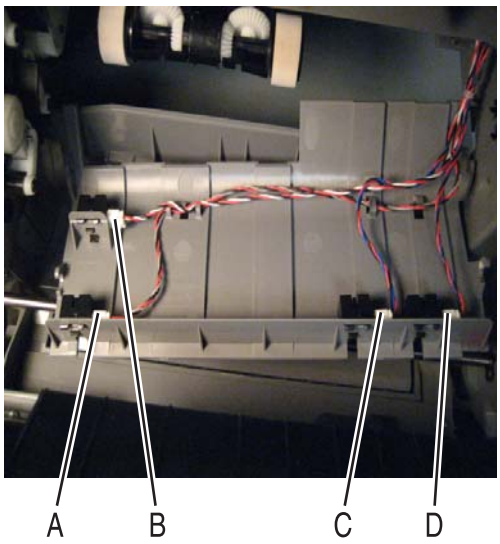
172.xx—LVPS fan error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JL1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Replace the LVPS fan. See **"LVPS fan removal" on page 4-81**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

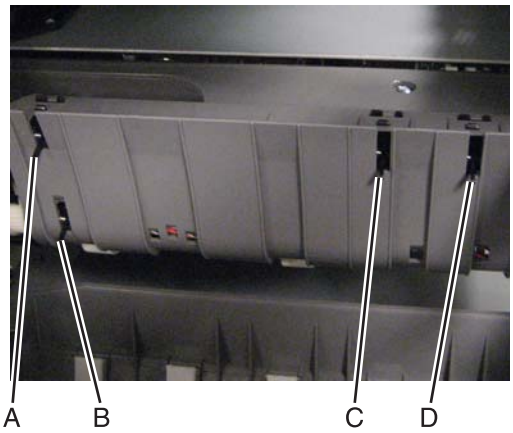
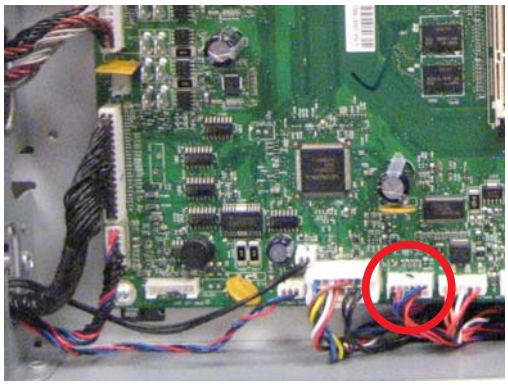
173.xx—Blower fan error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JBLW1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the blower & right side waste cable. See **"Printhead access cover removal" on page 4-22** to access the cable on top of the frame.	Go to step 3.
3	Remove the cartridge blower assembly. See **"Cartridge blower assembly removal" on page 4-35**. Check the cable (B) connected to the assembly.  **Is the cable connected to the blower fan?**	Go to step 4.	Reseat the cable.
4	Replace the cartridge blower assembly. See **"Cartridge blower assembly removal" on page 4-35**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

200.02—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Open the left access door. Check the input flag (A) for damage.  **Is the input flag damaged?**	Replace the input sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 2.
2	Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.  **Is the input sensor (A) in the staging deflector assembly loose?**	Reseat the sensor and add a sensor retainer. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Contact your next level of support.

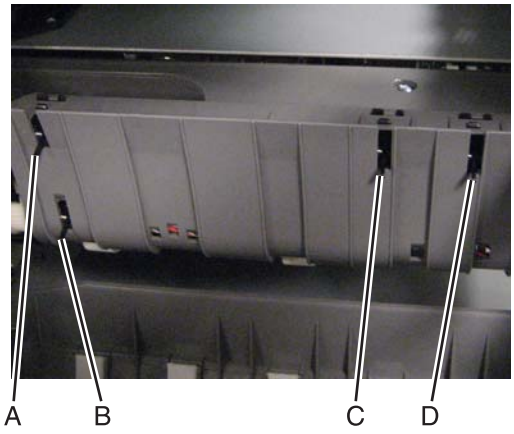
200.03, 200.08—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Remove the input tray. **Are the pick tires worn?**	Replace the pick tires. See **“Pick rolls removal” on page 4-116**.	Go to step 2.
2	Open the left access door. Check the input sensor flag (A) for damage.  **Is the input sensor flag damaged?**	Replace the input sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 3.
3	**Is the staging deflector assembly damaged?**	Replace the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.	Go to step 4.
4	Turn the printer off, and open the system board shield. Check the cable in connector JPP2 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 5.	Reseat the cable.

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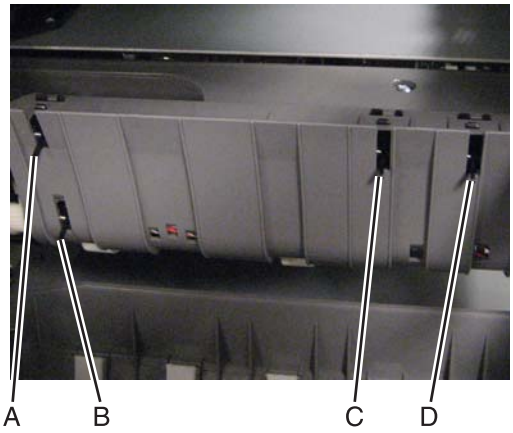
Step	Questions / actions	Yes	No
5	Check the cable in connector JPP2 for any other damage. **Is the cable damaged?**	Replace the paper path cable. See **"Paper path cables" on page 7-57**.	Go to step 6.
6	Remove the staging deflector assembly. See **"Staging deflector assembly removal" on page 4-134**. **Is the cable connected correctly?**	Go to step 7.	Reseat the cable.
7	Replace the input sensor. See **"Sensor (input, S1, narrow media, near narrow media) removal" on page 4-133**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

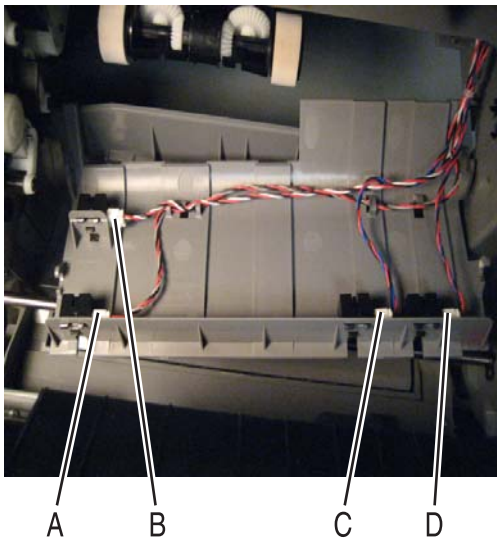
200.05, 200.07—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Reseat the ITU. **Did the error clear?**	Problem solved.	Go to step 2.
2	Open the left access door. Check the input sensor flag (A) for damage.  **Is the input sensor flag damaged?**	Replace the input sensor See **"Sensor (input, S1, narrow media, near narrow media) removal" on page 4-133**.	Go to step 3.
3	**Is the staging deflector assembly damaged?**	Replace the staging deflector assembly. See **"Staging deflector assembly removal" on page 4-134**.	Go to step 4.
4	Replace the ITU. **Did the error clear?**	Problem solved.	Go to step 5.

Step	Questions / actions	Yes	No
5	Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**. **Is the cable connected correctly?**	Go to step 6.	Reseat the cable.
6	Replace the input sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**	Problem solved.

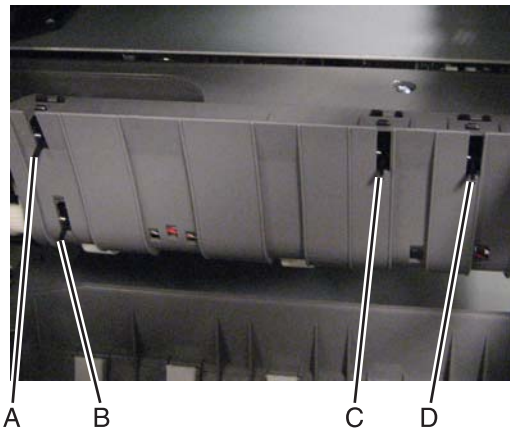
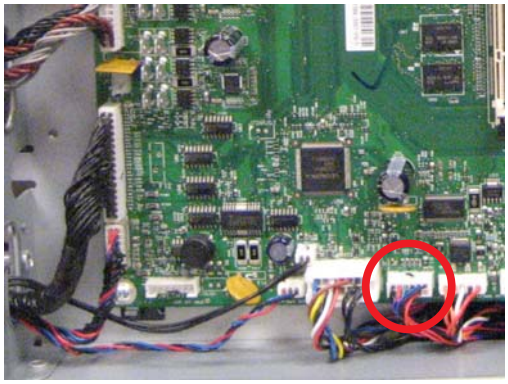
200.32—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Open the left access door. Check the near narrow media sensor flag (D) for damage.  **Is the near narrow media flag damaged?**	Replace the near narrow media sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 2.

Step	Questions / actions	Yes	No
2	Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.  **Is the near narrow media sensor (D) in the staging deflector assembly loose?**	Reseat the sensor and add a sensor retainer. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Contact your next level of support.

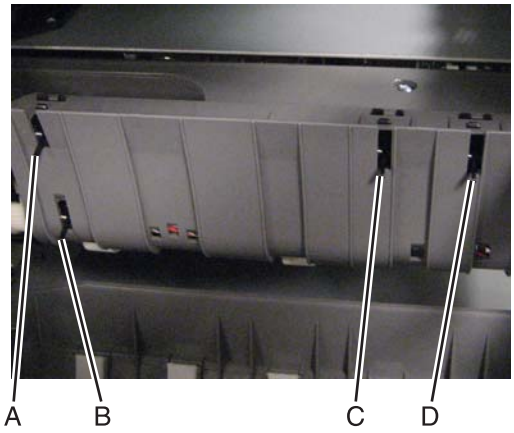
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200.33, 200.38—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Remove the input tray. **Are the pick tires worn?**	Replace the pick tires. See **“Pick rolls removal” on page 4-116**.	Go to step 2.
2	Open the left access door. Check the near narrow media sensor flag (D) for damage.  **Is the near narrow media sensor flag damaged?**	Replace the near narrow media sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 3.
3	**Is the staging deflector assembly damaged?**	Replace the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.	Go to step 4.
4	Turn the printer off, and open the system board shield. Check the cable in connector JPP2 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 5.	Reseat the cable.

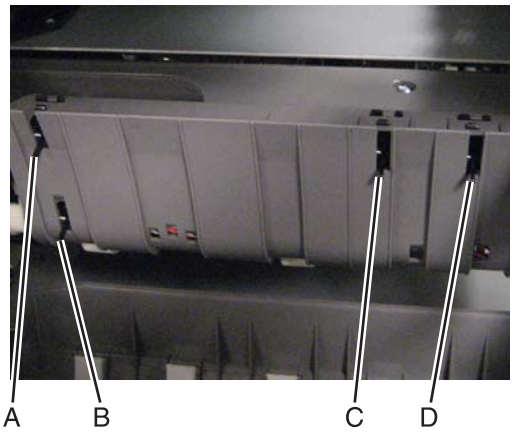
Step	Questions / actions	Yes	No
5	Check the cable in connector JPP2 for any other damage. **Is the cable damaged?**	Replace the paper path cable. See **“Paper path cables” on page 7-57**.	Go to step 6.
6	Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**. **Is the cable connected correctly?**	Go to step 7.	Reseat the cable.
7	Replace the near narrow media sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

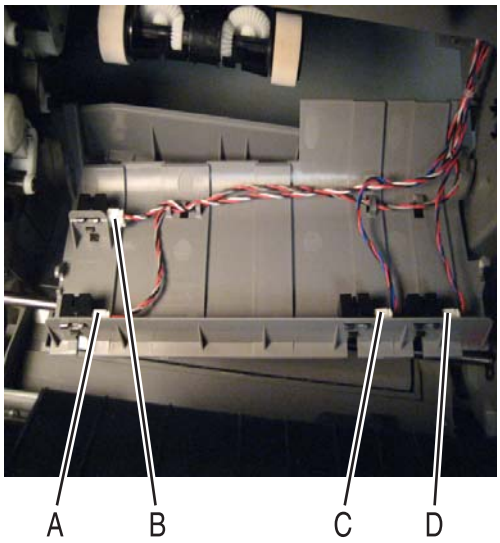
200.35, 200.37—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Reseat the ITU. **Does the error clear?**	Problem solved.	Go to step 2.
2	Open the left access door. Check the near narrow media sensor flag (D) for damage.  **Is the near narrow media sensor flag damaged?**	Replace the near narrow media sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 3.
3	**Is the staging deflector assembly damaged?**	Replace the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.	Go to step 4.
4	Replace the ITU. **Does the error clear?**	Problem solved.	Go to step 5.

Step	Questions / actions	Yes	No
5	Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**. **Is the cable connected correctly?**	Go to step 6.	Reseat the cable.
6	Replace the near narrow media sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

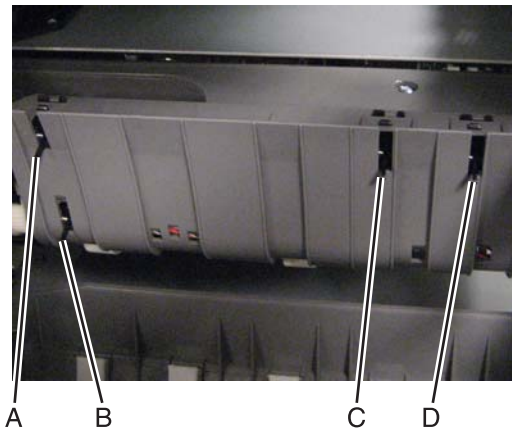
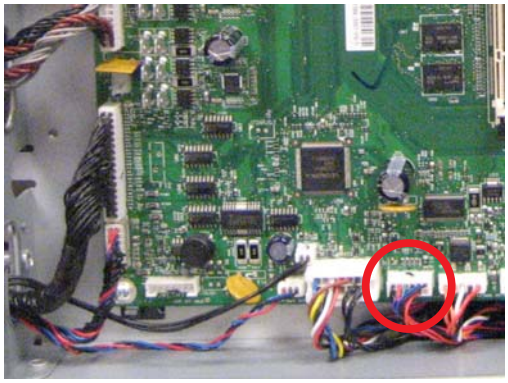
200.42—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Open the left access door. Check the narrow media flag (C) for damage.  **Is the narrow media flag damaged?**	Replace the narrow media sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 2.

Step	Questions / actions	Yes	No
2	Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.  **Is the narrow media sensor (C) in the staging deflector assembly loose?**	Reseat the sensor and add a sensor retainer. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Contact your next level of support.

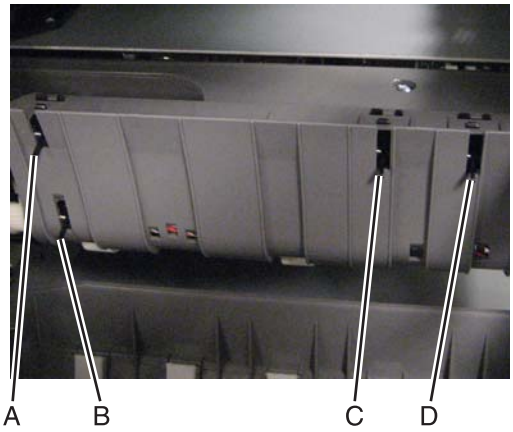
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200.43, 200.48—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Remove the input tray. **Are the pick tires worn?**	Replace the pick tires. See **“Pick rolls removal” on page 4-116**.	Go to step 2.
2	Open the left access door. Check the narrow media sensor flag (C) for damage.  **Is the narrow media sensor flag damaged?**	Replace the narrow media sensor flag. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 3.
3	**Is the staging deflector assembly damaged?**	Replace the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.	Go to step 4.
4	Turn the printer off, and open the system board shield. Check the cable in connector JPP2 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 5.	Reseat the cable.

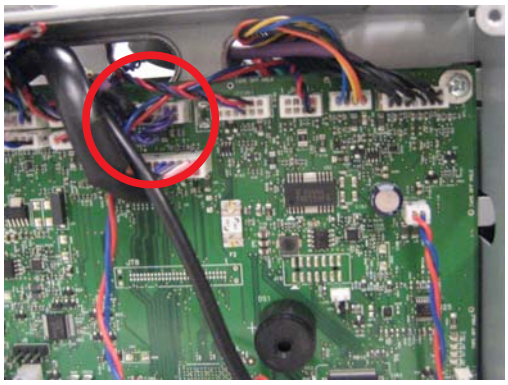
Step	Questions / actions	Yes	No
5	Check the cable in connector JPP2 for any other damage. **Is the cable damaged?**	Replace the paper path cable. See **“Paper path cables” on page 7-57**.	Go to step 6.
6	Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**. **Is the cable connected correctly?**	Go to step 7.	Reseat the cable.
7	Replace the narrow media sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

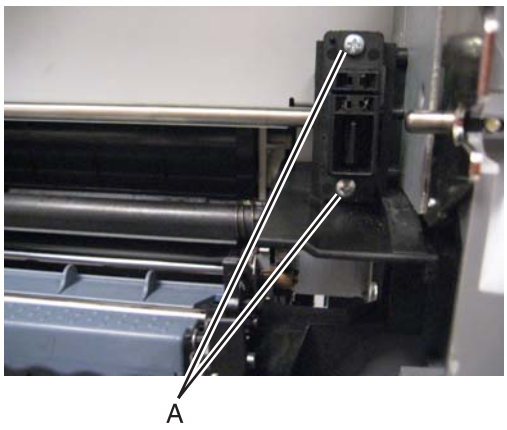
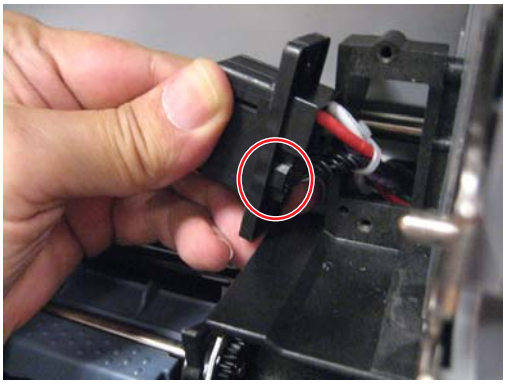
200.45, 200.47—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Reseat the ITU. **Does the error clear?**	Problem solved.	Go to step 2.
2	Open the left access door. Check the near narrow media sensor flag (D) for damage.  **Is the near narrow media sensor flag damaged?**	Replace the near narrow media sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 3.
3	**Is the staging deflector assembly damaged?**	Replace the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.	Go to step 4.
4	Replace the ITU. **Does the error clear?**	Problem solved.	Go to step 5.

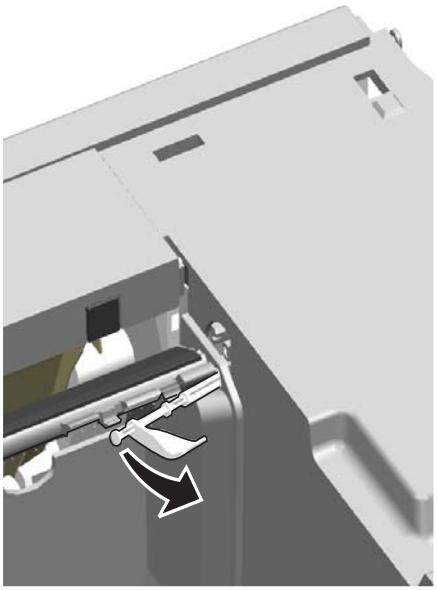
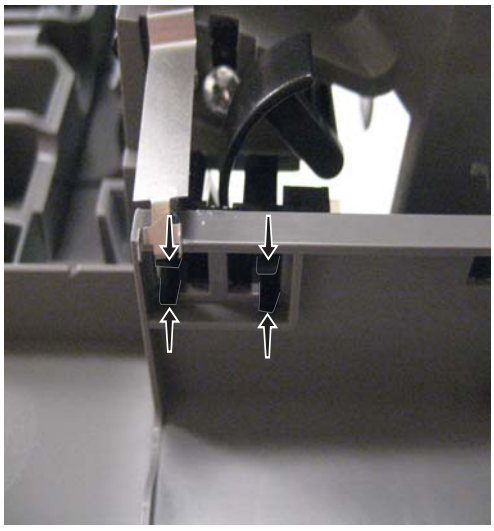
Step	Questions / actions	Yes	No
5	Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**. **Is the cable connected correctly?**	Go to step 6.	Reseat the cable.
6	Replace the near narrow media sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

201.03, 201.05, 201.07, 201.08—Paper Jam error service check

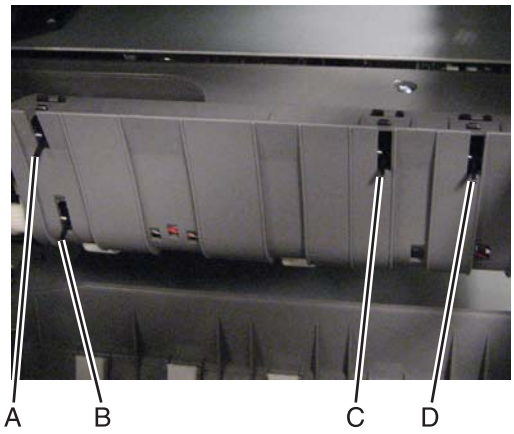
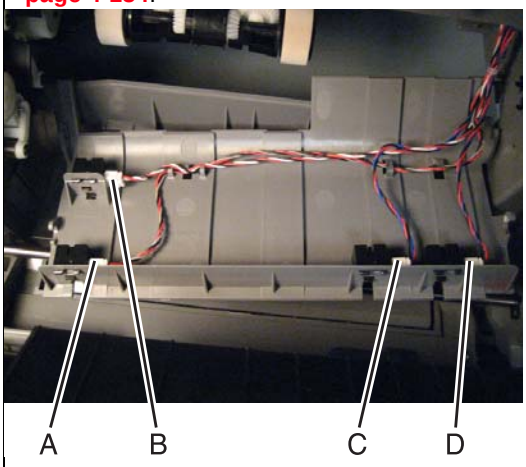
Step	Questions / actions	Yes	No
1	Replace the fuser. **Does the problem clear?**	Problem solved.	Go to step 2.
2	Open the system board shield. Check the cable in connector JFSR1 for proper connection to the system card.  **Is the cable connected correctly?**	Go to step 3.	Reseat the cable.
3	Check the cable for damage. **Is the cable damaged?**	Replace the fuser system card and LVPS cable. See **“Fuser system card and LVPS cable removal” on page 4-59**.	Go to step 4.

Step	Questions / actions	Yes	No
4	Open the left access door, remove the two screws (A), and pull out the fuser autoconnect enough to check the cable for proper connection.   **Is the cable connected correctly?**	Go to step 5.	Reseat the cable.
5	Check the cable for damage. **Is the cable damaged?**	Replace the fuser system card and LVPS cable. See **“Fuser system card and LVPS cable removal” on page 4-59**.	Reseat the cable.

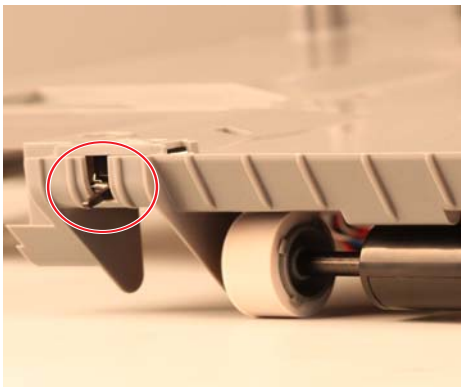
202.32—Paper Jam error service check

Step	Questions / actions	Yes	No
1	**Is the bin-full flag damaged?** 	Replace the bin-full flag. See **“Bin-full flag removal” on page 4-33**.	Go to step 2.
2	Remove the top cover assembly.  **Is the sensor in the top cover assembly loose?**	Reseat the sensor.	Contact your next level of support.

241.02—Paper Jam error service check

Step	Questions / actions	Yes	No
1	Open the left access door. Check the S1 sensor flag (B) for damage.  **Is the S1 flag damaged?**	Replace the S1 sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 2.
2	Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.  **Is the S1 sensor (B) in the staging deflector assembly loose?**	Reseat the sensor and add a sensor retainer. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Contact your next level of support.

242.01, 243.01, 244.01, 245.01 —Paper Jam (550-sheet/2000-sheet input option) service check

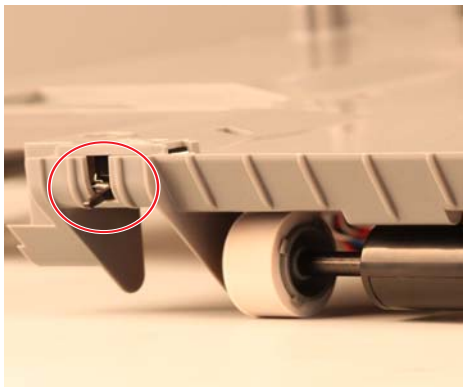
Step	Questions / actions	Yes	No
1	Check for any obstruction on the paper path. **Is the paper path free of obstruction?**	Go to step 2.	Clear paper path for obstructions.
2	Check if the jam clearance cover can close properly. **Does the jam clearance cover close properly?**	Go to step 3.	For 550-sheet input option: Replace the 550-sheet drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**. For 2000-sheet input option: Replace the 2000-sheet drawer assembly.
3	Check if the pass thru sensor is seated correctly and the sensor flag can move back to its original position when it is triggered.  **Is the pass thru sensor free of obstruction?**	Go to step 4.	Install the pass thru sensor correctly.
4	3. Navigate to **INPUT TRAY TESTS** > **SENSOR TESTS**. 4. Try to trigger the pass thru sensor flag. **Does the status on the panel change?**	Go to step 5.	For 550-sheet input option: Replace the pass thru sensor. See **“550-sheet tray pass thru sensor removal” on page 4-239**. For 2000-sheet input option: Replace the pass thru sensor. See **“2000-sheet high-capacity feeder pass thru sensor removal” on page 4-283**.

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Step	Questions / actions	Yes	No
5	For 550-sheet input option: Replace the controller card assembly. See **“550-sheet tray controller card assembly removal” on page 4-231**. For 2000-sheet input option: Replace the controller card assembly. See **“2000-sheet high-capacity feeder controller card assembly removal” on page 4-250**. **Does the problem persists?**	For 550-sheet input option: Replace the 550-sheet drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**. For 2000-sheet input option: Replace the 2000-sheet drawer assembly.	Problem solved.

241.03, 242.03, 243.03, 244.03, 242.05, 243.05, 244.05, 245.05—Paper jam (550-sheet/ 2000-sheet input option) service check

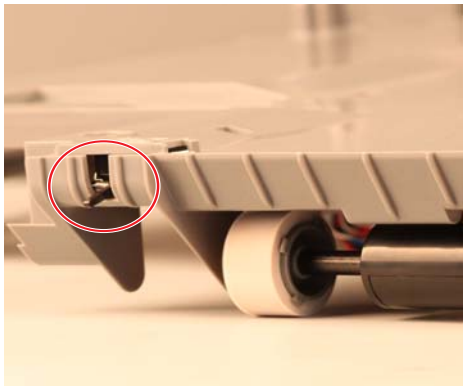
Step	Questions / actions	Yes	No
1	Check for any obstruction on the paper path. **Is the paper path free of obstruction?**	Go to step 2.	Clear paper path for obstructions.
2	1. Check if the jam clearance cover can close properly. 2. Check if jam clearance cover friction lock is not retracted.  **Does the jam clearance cover close properly?**	Go to step 3.	For 550-sheet input option: Replace the 550-sheet drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**. For 2000-sheet input option: Replace the 2000-sheet jam clearance cover. See **“2000-sheet high-capacity feeder jam clearance cover removal” on page 4-258**.

Step	Questions / actions	Yes	No
3	Check if the pass thru sensor is seated correctly and not damage.  **Is the pass thru sensor not damaged?**	Go to step 4.	For 550-sheet input option: Replace the pass thru sensor. See **"550-sheet tray pass thru sensor removal" on page 4-239**. For 2000-sheet input option: Replace the pass thru sensor. See **"2000-sheet high-capacity feeder pass thru sensor removal" on page 4-283**.
4	Check the pick roll assembly for contamination and wear. **Is the component free of excess wear and contamination?**	Go to step 5.	For 550-sheet input option: Replace the pick roll assembly. See **"550-sheet tray pick roll assembly removal" on page 4-244**. For 2000-sheet input option: Replace the pick roll assembly. See **"2000-sheet high-capacity feeder pick roll assembly removal" on page 4-291**.
5	Check the drive assembly for wear or damage. Make sure the rollers are touching each other when the jam clearance cover is closed. **Is the drive assembly not damaged?**	Go to step 6.	For 550-sheet input option: Replace the 550-sheet drawer assembly. See **"550-sheet drawer assembly removal" on page 4-229**. For 2000-sheet input option: Replace the 2000-sheet high-capacity feeder drive assembly. See **"2000-sheet high-capacity feeder drive assembly removal" on page 4-251**.
6	Check the next pass thru sensor above the defective option. Refer to the paper path guide. **Is the sensor not damaged?**	Go to step 7.	Go to step 3.

Step	Questions / actions	Yes	No
7	For 550-sheet input option: Replace the controller card assembly. See **“550-sheet tray controller card assembly removal” on page 4-231**. For 2000-sheet input option: Replace the controller card assembly. See **“2000-sheet high-capacity feeder controller card assembly removal” on page 4-250**. **Does the problem persists?**	Go to step 8.	Problem solved.
8	For 550-sheet input option: Replace the media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**. For 2000-sheet input option: Replace the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**. **Does the problem persists?**	For 550-sheet input option: Replace the 550-sheet drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**. For 2000-sheet input option: Replace the 2000-sheet high-capacity feeder input option.	Problem solved.

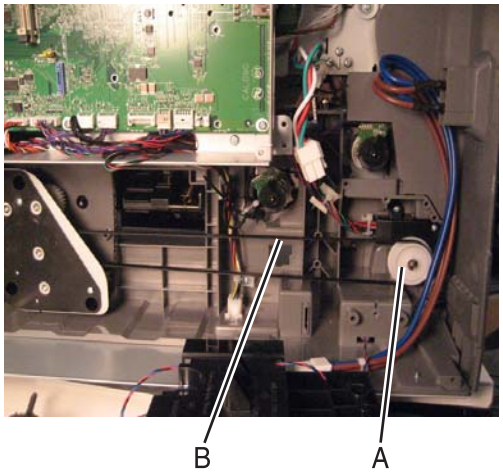
242.08, 243.08, 244.08, 245.08—Paper jam (550-sheet/2000-sheet input option) service check

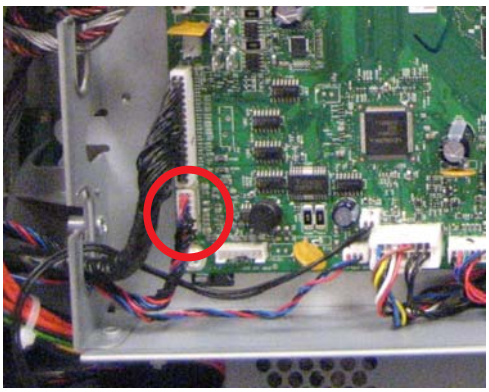
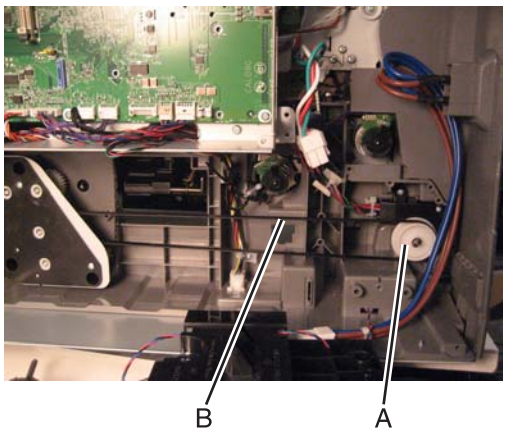
Step	Questions / actions	Yes	No
1	Check for any obstruction on the paper path. **Is the paper path free of obstruction?**	Go to step 2.	Clear paper path for obstructions.
2	1. Check if the jam clearance cover can close properly. 2. Check if the jam clearance cover friction lock is not retracted.  **Does the jam clearance cover close properly?**	Go to step 3.	For 550-sheet input option: Replace the 550-sheet drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**. For 2000-sheet input option: Replace the 2000-sheet high-capacity feeder jam clearance cover. See **“2000-sheet high-capacity feeder jam clearance cover removal” on page 4-258**.

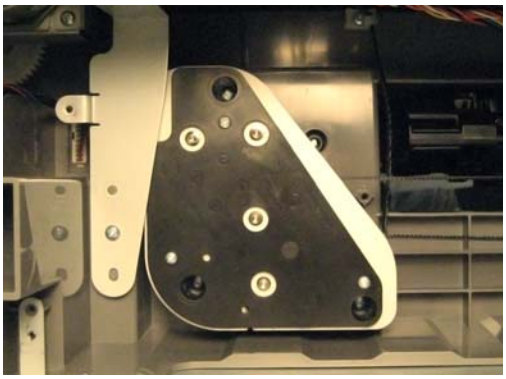
Step	Questions / actions	Yes	No
3	Check if the pass thru sensor is seated correctly and the sensor flag can move back to its original position when it is triggered.  **Is the pass-thru sensor free of obstruction?**	Go to step 4.	Install the pass thru sensor correctly.
4	1. Bring the printer up in Diagnostics mode (turn off the printer, press and hold **3** and **6**, turn on the printer, and hold the buttons until the splash screen appears). 2. Navigate to **INPUT TRAY TESTS** > **FEED TEST**. 3. Select the input source. 4. Select **Single**. **Does the error persists?**	Go to step 5.	Problem solved.
5	Check the pick roll assembly. **Is the pick roll assembly not damaged?**	Go to step 6.	For 550-sheet input option: Replace the pick roll assembly. See **"550-sheet tray pick roll assembly removal" on page 4-244**. For 2000-sheet input option: Replace the pick roll assembly. See **"2000-sheet high-capacity feeder pick roll assembly removal" on page 4-291**.

Step	Questions / actions	Yes	No
6	1. Check the pick assembly for mechanical wear or damage. 2. Check if the pick arm spring is not dislodge. **Is the pick assembly not damaged?**	Go to step 7.	For 550-sheet input option: Replace the pick assembly. See **“550-sheet tray pick assembly removal” on page 4-240**. For 2000-sheet input option: Replace the pick assembly. See **“2000-sheet high-capacity feeder pick assembly removal” on page 4-285**.
7	For 550-sheet input option: Replace the media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**. For 2000-sheet input option: Replace the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**. **Does the problem persists?**	For 550-sheet input option: Replace the 550-sheet drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**. For 2000-sheet input option: Replace the 2000-sheet high-capacity feeder input option.	Problem solved.

250.21, 250.22—MPF motor error service check

Step	Questions / actions	Yes	No
1	Open the left access door. **Does the MPF wheels turn freely?**	Go to step 3.	Go to step 2.
2	Remove the LVPS fan shield. See **“LVPS exit duct removal” on page 4-80**.  **Are the gears (A) damaged?**	Replace the MPF pick parts. See **“MPF pick parts packet, including” on page 7-5**.	Replace the MPF paper pick assembly. See **“MPF paper pick assembly removal (including the MPF ratchet collar and MPF drive pulley)” on page 4-94**.

Step	Questions / actions	Yes	No
3	Turn the printer off, and open the system board shield. Check the cable in connector JTRAY1 for proper connection to the system card.  **Is the cable connected correctly?**	Go to step 4.	Reseat the cable.
4	Check the cable in connector JTRAY1 for damage. **Is the cable damaged?**	Replace the Tray 1 machine side cable. See **"Autocomp W2W cable" on page 7-57**.	Go to step 5.
5	Remove the input tray. **Is the input tray cable connected correctly?**	Go to step 6.	Reseat the cable.
6	Remove the LVPS. See **"Low-voltage power supply (LVPS) removal" on page 4-77**.  **Is the MPF drive belt (B) broken?**	Replace the MPF drive belt. See **"MPF drive assembly removal" on page 4-100**.	Go to step 7.

Step	Questions / actions	Yes	No
7	**Is the MPF drive assembly damaged?** 	Replace the MPF drive assembly. See **“MPF drive assembly removal” on page 4-100**.	Go to step 8.
8	Replace the Input tray feed assembly. See… **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

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280.06—Media missing jam service check

Step	Check	Yes	No
1	1. Remove all documents from the ADF. 2. Place an undamaged document in the ADF, and perform a ADF test. **Does the error remain?**	Go to step 2.	Problem solved.
2	Check the sensor (ADF document set) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Touch **TBD.** **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 6.	Go to step 5.
3	Check the sensor (2nd scan) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF document set). See **"Sensor (ADF document set) removal" on page 4-196**.	Replace the connection.
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **"ADF controller card removal" on page 4-164**. Go to step 5.	Problem solved.
5	Perform a print test using the ADF. **Does the problem persists?**	Contact your next level of support.	Problem solved.

282.01—Sensor (ADF sheet through) static jam service check

Step	Check	Yes	No
1	Check the media path. **Is the media path free of media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (ADF sheet through) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Observe the line “sensor (ADF sheet through”**.** **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor (ADF sheet through) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF sheet through). See **“Sensor (ADF sheet through) removal” on page 4-199**.	Replace the connection.
4	Place an undamaged document in the ADF, and perform a ADF test. **Does the error persists?**	Replace the ADF controller card assembly. See **“ADF controller card removal” on page 4-164**. Go to step 5.	Problem solved.
5	Perform a print test using the ADF. **Does the problem persists?**	Contact your next level of support.	Problem solved.

282.03—Sensor (ADF sheet through) late jam service check

Step	Check	Yes	No
1	Check the original document condition. **Is the original document free of paper clips and staples as well as damage such as creases, tears, holes or excessive wear?**	Go to step 2.	Remove damaged original document and replace with a new undamaged original document. Perform an ADF test. If the problem remains, go to step 2.
2	Check the ADF pick roll assembly for wear or gear damage. **Is the ADF feed/pick roll assembly or the ADF separation roll assembly free of excess wear or gear damage?**	Go to step 3.	Clean or replace the ADF feed/pick roll assembly or the ADF separation roll assembly. See **“ADF feed/pick roll assembly removal” on page 4-173** or **“ADF separator torque limiter assembly removal” on page 4-185**.

Step	Check	Yes	No
3	Check the media path for contaminates. **Is the media path free of excess media dust and foreign objects such as paper clips and staples?**	Go to step 4.	Remove all contaminants from the media path.
4	Check the ADF feed drive motor assembly for proper connection. **Is the above component properly connected?**	Replace the ADF feed drive motor assembly. See **"ADF feed drive motor assembly removal" on page 4-170**.	Replace the connection.
5	Check the sensor (ADF sheet through) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Observe the line "sensor (ADF sheet through)". **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 7.	Go to step 6.
6	Check the sensor (ADF sheet through) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF sheet through). See **"Sensor (ADF sheet through) removal" on page 4-199**.	Replace the connection.
7	Place an undamaged document in the ADF, and perform a ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **"ADF controller card removal" on page 4-164**. Go to step 11.	Problem solved.
8	Perform a print test using the ADF. **Does the problem remain?**	Contact your next level of support.	Problem solved.

283.01—Sensor (1st scan) static jam service check

Step	Check	Yes	No
1	Check the media path. **Is the media path free of media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (ADF 1st scan) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Observe the line “sensor (ADF 1st can)”. **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor (ADF 1st scan) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF 1st scan). See **“Sensor (ADF 1st scan) removal” on page 4-195**.	Replace the connection.
4	Place an undamaged document in the ADF, and perform a ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **“ADF controller card removal” on page 4-164**. Go to step 5.	Problem solved.
5	Perform a print test using the ADF. **Does the problem remain?**	Contact your next level of support.	Problem solved.

283.03—Sensor (ADF 1st scan) late jam service check

Step	Check	Yes	No
1	Check the original document condition. **Is the original document free of paper clips and staples as well as damage such as creases, tears, holes or excessive wear?**	Go to step 2.	Remove damaged original document and replace with a new undamaged original document. Perform an ADF test. If the problem remains, go to step 2.
2	Check the ADF rolls for wear. **Is the ADF feed/pick roll assembly or the ADF separation roll guide assembly free of excess wear?**	Go to step 3.	Clean or replace the ADF feed/pick roll assembly or the ADF separation roll assembly. See **"ADF feed/ pick roll assembly removal" on page 4-173** or **"ADF separator torque limiter assembly removal" on page 4-185**.
3	Check the media path for contaminates. **Is the media path free of excess media dust and foreign objects such as paper clips and staples?**	Go to step 4.	Remove all contaminates from the media path.
4	Check the sensor (ADF 1st scan) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Observe the line "sensor (ADF 1st scan)". **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 6.	Go to step 5.
5	Check the sensor (ADF 1st scan) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF 1st scan). See **"Sensor (ADF 1st scan) removal" on page 4-195**.	Replace the connection.
6	Check the ADF feed drive motor assembly for proper connection. **Is the above component properly connected?**	Replace the ADF feed drive motor assembly. See **"ADF feed drive motor assembly removal" on page 4-170**.	Replace the connection.
7	Place an undamaged document in the ADF, and perform a ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **"ADF controller card removal" on page 4-164**. Go to step 8.	Problem solved.
8	Perform a print test using the ADF. **Does the problem remain?**	Contact your next level of support.	Problem solved.

283.05—Sensor (2nd scan) lingering jam service check

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Step	Check	Yes	No
1	Check the media size setup and tray guides for the ADF. **Does the media size in use, match the size set for the ADF?**	Go to step 2.	Replace the media, or change the media size setup.
2	Check the original document condition. **Is the original document free of paper clips and staples as well as damage such as creases, tears, holes or excessive wear?**	Go to step 3.	Remove damaged original document and replace with a new undamaged original document. Perform an ADF test. If the problem remains, go to step 2.
3	Check the media path for contaminants. **Is the media path free of excess media dust and foreign objects such as paper clips and staples?**	Go to step 4.	Remove all contaminants from the media path.
4	Check the sensor (ADF 2nd scan) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Observe the line “sensor (ADF 2nd scan)”. **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 6.	Go to step 5.
5	Check the sensor (ADF 2nd scan) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF 2nd scan). See **“Sensor (ADF 2nd scan) removal” on page 4-195**.	Replace the connection.
6	Check the ADF transport drive motor assembly for proper connection. **Is the above component properly connected?**	Replace the ADF transport drive motor assembly. See **“ADF transport drive motor bracket assembly with cable removal” on page 4-190**.	Replace the connection.
7	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **“ADF controller card removal” on page 4-164**. Go to step 8.	Problem solved.
8	Perform a print test using the ADF. **Does the problem remain?**	Contact your next level of support.	Problem solved.

284.01—Sensor (2nd scan) static jam service check

Step	Check	Yes	No
1	Check the media path. **Is the media path free of media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (2nd scan) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Touch **Observe the line "sensor (ADF 2nd scan).** **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor (ADF 2nd scan) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF 2nd scan). See **"Sensor (ADF 2nd scan) removal" on page 4-195**.	Replace the connection.
4	Place an undamaged document in the ADF, and perform a ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **"ADF controller card removal" on page 4-164**. Go to step 5.	Problem solved.
5	Perform a print test using the ADF. **Does the problem remain?**	Contact your next level of support.	Problem solved.

284.03—Sensor (ADF media exit) late jam service check

Step	Check	Yes	No
1	Check the original document condition. **Is the original document free of paper clips and staples as well as damage such as creases, tears, holes or excessive wear?**	Go to step 2.	Remove damaged original document and replace with a new undamaged original document. Perform an ADF test. If the problem remains, go to step 2.
2	Check the media path for contaminants. **Is the media path free of excess media dust and foreign objects such as paper clips and staples?**	Go to step 3.	Remove all contaminants from the media path.
3	Check the sensor (ADF media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Observe the line “sensor (ADF media exit). **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 5.	Go to step 4.
4	Check the sensor (ADF media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF media exit). See **“Sensor (ADF media exit) fan bracket assembly removal” on page 4-198**.	Replace the connection.
5	Check the ADF transport drive motor assembly for proper connection. **Is the above component properly connected?**	Replace the ADF transport drive motor assembly. See **“ADF transport drive motor bracket assembly with cable removal” on page 4-190**.	Replace the connection.
6	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **“ADF controller card removal” on page 4-164**. Go to step 7.	Problem solved.
7	Perform a print test using the ADF. **Does the problem remain?**	Contact your next level of support.	Problem solved.

285.01, 285.03, 285.07—Sensor (ADF media exit) static jam service check

Step	Check	Yes	No
1	Check the media path. **Is the media path free of media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (ADF media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Observe the line “sensor (ADF media exit)”. **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor (ADF media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF media exit). See **“Sensor (ADF media exit) fan bracket assembly removal” on page 4-198**	Replace the connection.
4	Place an undamaged document in the ADF, and perform a ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **“ADF controller card removal” on page 4-164**. Go to step 5.	Problem solved.
5	Perform a print test using the ADF. **Does the problem remain?**	Contact your next level of support.	Problem solved.

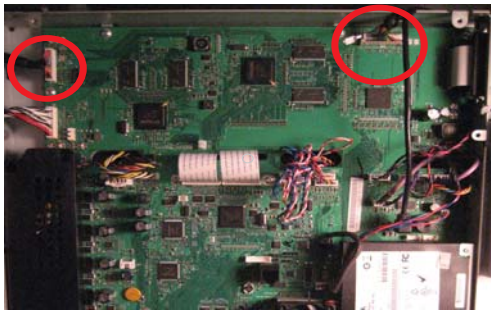
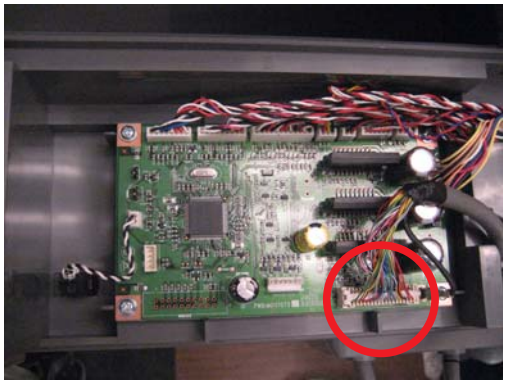
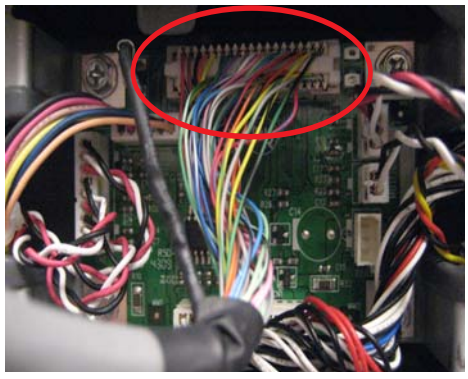
285.05—Sensor (ADF media exit) late jam service check

Step	Check	Yes	No
1	Check the original document condition. **Is the original document free of paper clips and staples as well as damage such as creases, tears, holes or excessive wear?**	Go to step 2.	Remove damaged original document and replace with a new undamaged original document. Perform an ADF test. If the problem remains, go to step 2.
2	Check the ADF rolls for wear. **Is the ADF feed/pick roll assembly or the ADF separation roll guide assembly free of excess wear?**	Go to step 3.	Clean or replace the ADF feed/pick roll assembly or the ADF separation roll assembly. See **“ADF feed/ pick roll assembly removal” on page 4-173** or **“ADF separator torque limiter assembly removal” on page 4-185**.
3	Check the media path for contaminants. **Is the media path free of excess media dust and foreign objects such as paper clips and staples?**	Go to step 4.	Remove all contaminants from the media path.
4	Check the sensor (ADF media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Observe the line “sensor (ADF media exit). **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 6.	Go to step 5.
5	Check the sensor (ADF media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF media exit). See **“Sensor (ADF media exit) fan bracket assembly removal” on page 4-198**.	Replace the connection.
6	Check the ADF transport drive motor assembly for proper connection. **Is the above component properly connected?**	Replace the ADF transport drive motor assembly. See **“ADF transport drive motor bracket assembly with cable removal” on page 4-190**.	Replace the connection.
7	Place an undamaged document in the ADF, and perform a ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **“ADF controller card removal” on page 4-164**. Go to step 8.	Problem solved.
8	Perform a print test using the ADF. **Does the problem remain?**	Contact your next level of support.	Problem solved.

290.11—ADF top door open jam service check

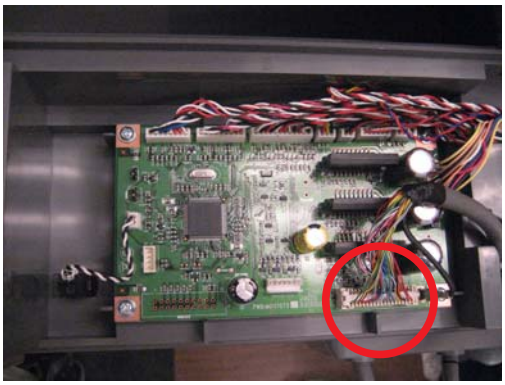
Step	Check	Yes	No
1	1. Remove all documents from the ADF. 2. Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Go to step 2.	Problem solved.
2	Check the sensor (ADF top door interlock) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SCANNER TESTS.** 3. Touch **Sensor Tests.** 4. Observe the line “sensor (ADF top door interlock)”. **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor (ADF top door interlock) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF top door interlock). See **“Sensor (ADF top door interlock) removal” on page 4-199**.	Replace the connection.
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller card assembly. See **“ADF controller card removal” on page 4-164**. Go to step 5.	Problem solved.
5	Perform a print test using the ADF. **Does the problem remain?**	Contact your next level of support.	Problem solved.

840.03—Scanner cable service check

Step	Questions / actions	Yes	No
1	Remove the system board upper shield. See **“System board upper shield removal” on page 4-30**. Check the cable for proper connection.  Remove the ADF rear cover. See **“ADF rear cover removal” on page 4-161**. Check the cable for proper connection.  Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-205**. Check the cable for proper connection.  **Are any of the cables unplugged?**	Reseat the cable.	Go to step 2.

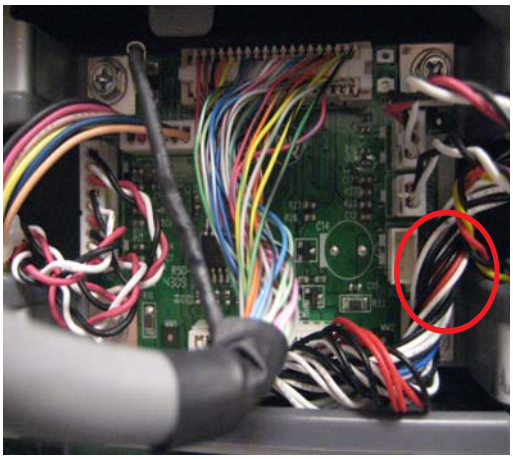
Step	Questions / actions	Yes	No
2	Check the cable for damage. **Are any of the cables damaged?**	Replace the cable.	Go to step 3.
3	Replace the ADF controller card. See **"ADF controller card removal" on page 4-164**. **Does the error clear?**	Problem solved.	Go to step 4.
4	Replace the scanner interface card. See **"Scanner interface card removal" on page 4-223**. **Does the error clear?**	Problem solved.	Replace the system board. See **"System board removal" on page 4-142**.

845.xx—Scanner card service check

Step	Questions / actions	Yes	No
1	Remove the system board upper shield. See **"System board upper shield removal" on page 4-30**. Check the cable for proper connection.  Remove the ADF rear cover. See **"ADF rear cover removal" on page 4-161**. Check the cable for proper connection.  **Are any of the cables unplugged?**	Reseat the cable.	Go to step 2.

Step	Questions / actions	Yes	No
2	Check the cable for damage. **Are any of the cables damaged?**	Replace the cable.	Go to step 3.
3	Replace the ADF controller card. See **“ADF controller card removal” on page 4-164**. **Does the error clear?**	Problem solved.	Replace the system board. See **“System board removal” on page 4-142**.

846.00—Scanner flatbed fan service check

Step	Questions / actions	Yes	No
1	Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-205**. Check the cable for proper connection.  **Is the cable connected properly?**	Replace the flatbed fan. See **“Flatbed scanner cooling fan removal” on page 4-210**.	Reseat the cable.

900.xx System software error

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

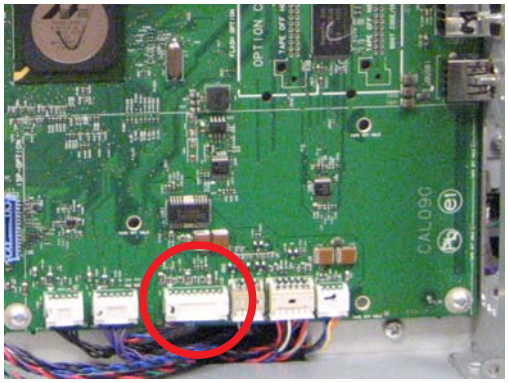
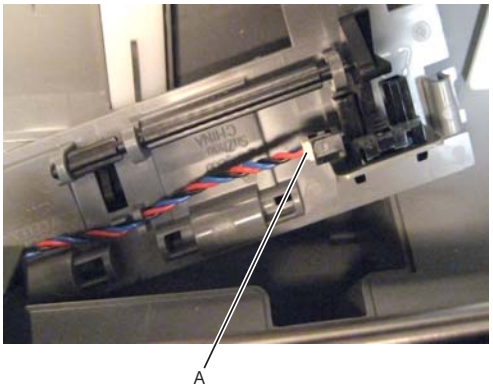
Note: Before troubleshooting, determine the operating system used when the error occured. If possible determine whether a PostScript or PCL file was sent to the device when the error occured. Ask the customer which Lexmark Solutions applications are installed on the device.

Step	Action and questions	Yes	No
1	POR the device. **Does the error reoccur?**	Go to step 2.	Problem resolved.
2	• Write down the exact 900.xx error code displayed on the device. • Turn the device off. • Clear the print queues. • Disconnect all communication cables, and remove all memory options. • Remove all ISP and modem cards. • Restart the device into diagnostic mode. **Does the 900.xx error reoccur during startup?**	Go to step 3.	Go to step 6.
3	Check all the cables connected to the RIP board for proper connectivity. **Are the cables properly connected?**	Go to step 5.	Go to step 4.
4	Properly connect the cables to the RIP board. Restart the device into diagnostic mode. **Does the 900.xx error reoccur during startup?**	Go to step 5.	Go to step 6.
5	Replace the RIP board, and restart the device. **Does this fix the problem?** **Note:** If an error, different from the original 900.xx, is displayed, consult the service check for that error.	Problem resolved.	Go to step 31.
6	Print the following: • Error log • Menu settings page • Network settings page **Does the 900.xx error reoccur while these pages were printing?**	Go to step 31.	Go to step 7.
7	Re-attach the communications cable. Restart the printer to operating mode. Send the printer a print job. **Does the 900.xx error reoccur?** **Note:** Before performing this step, write down this information about the file being sent to the printer: • Application used • Operating system • Driver type • File type (PCL, PostScript, XPS, etc.)	Go to step 8.	Go to step 10.

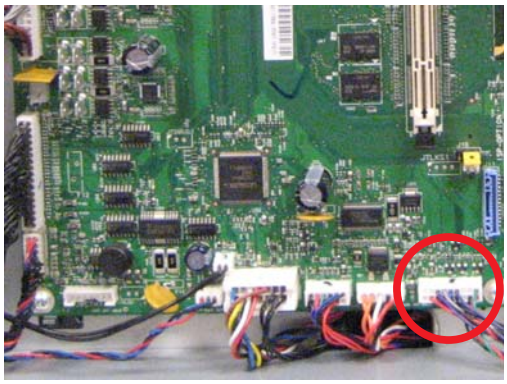
Step	Action and questions	Yes	No
8	Restart the printer to operating mode. Send a different print job to the device. **Does the 900.xx error reoccur?**	Go to step 9.	Go to step 10.
9	Upgrade the firmware. Contact your next level of support for the correct firmware level to use. Restart the printer to operating mode. Send the printer a print job. **Does the 900.xx error reoccur?**	Go to step 31.	Go to step 10.
10	Is the device a Multi Function Printer?	Go to step 11.	Go to step 13.
11	Run a copy job. **Does the 900.xx error reoccur?**	Go to step 31.	Go to step 12.
12	Run a scan to PC job. **Does the 900.xx error reoccur?**	Go to step 31.	Go to step 13.
13	Is there optional memory installed?	Go to step 14.	Go to step16.
14	Reinstall the memory, and send a print job to the device. **Does the 900.xx error reoccur?**	Go to step 15.	Go to step 16.
15	Install a Lexmark recommended memory option. Send a print job to the device. **Does the 900.xx error reoccur?**	Go to step 31.	Problem resolved.
16	Is there a modem installed on the device?	Go to step 17.	Go to step 21.
17	Reinstall the modem. Restart the device. **Does the 900.xx error reoccur?**	Go to step 18.	Go to step 20.
18	Upgrade the firmware. Contact your next level of support for the correct firmware level to use. Restart the printer to operating mode. Send the printer a print job. **Does the 900.xx error reoccur?**	Go to step 19.	Problem resolved.
19	Replace the modem. Restart the device. **Does the 900.xx error reoccur?**	Go to step 31.	Problem resolved.
20	Run a fax job. **Does the 900.xx error reoccur?**	Go to step 31.	Go to step 21.
21	Are there any ISP (internal solutions port) options installed?	Go to step 22.	Problem resolved.
22	Reinstall the first ISP option. Restart the device. **Does the 900.xx error reoccur?**	Go to step 24.	Go to step 23.
23	Run a job to test the option. **Does the 900.xx error reoccur?**	Go to step 24.	Go to step 26.
24	Upgrade the firmware. Contact your next level of support for the correct firmware level to use. Restart the printer to operating mode. **Does the 900.xx error reoccur?**	Go to step 25.	Problem resolved.

Step	Action and questions	Yes	No
25	Replace the faulty ISP option. Restart the device. **Does the 900.xx error reoccur?**	Go to step 31.	Go to step 26.
26	Are there any more ISP options to install?	Go to step 27	Problem resolved.
27	Install the next ISP option. Restart the device. **Does the 900.xx error reoccur?**	Go to step 29.	Go to step 28.
28	Run a job to test the option. **Does the 900.xx error reoccur?**	Go to step 29.	Go to step 26.
29	Upgrade the firmware. Contact your next level of support for the correct firmware level to use. Restart the printer to operating mode. **Does the 900.xx error reoccur?**	Go to step 30.	Go to step 26.
30	Replace the faulty ISP option. Restart the device. **Does the 900.xx error reoccur?**	Go to step 31.	Go to step 26.
31	Contact your next level of support. You will need the following information for them: • Exact 900.xx error digits and complete error message • Printed menu settings page • Printed network settings page • Device error log • A sample print file if error appears to be isolated to a single file • File/Application used if error is related to specific print file • Device Operating System • Driver used (PCL/PS) • Frequency of the occurrence of the error		

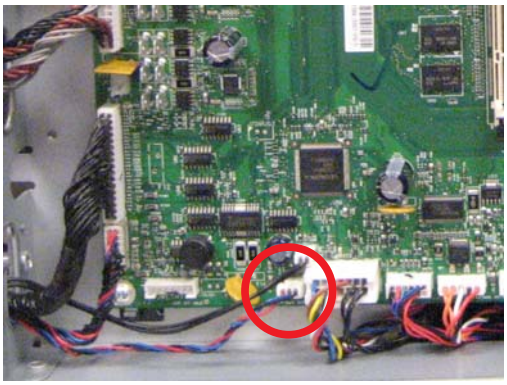
938.16—MPF paper out sensor error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JMPF1(MPF sensor cable) for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable in the JMPF1(MPF sensor cable) connector for damage. **Is the cable damaged?**	Replace the MPF sensor cable. See **"MPF sensor cable" on page 7-57**.	Go to step 3.
3	Remove the MPF sensor plate assembly. See **"MPF sensor plate assembly removal" on page 4-102**. Check the cable connected to the sensor.  **Is the cable properly connected?**	Go to step 4.	Reseat the cable.
4	Replace the MPF sensor plate assembly. See **"MPF sensor plate assembly removal" on page 4-102**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

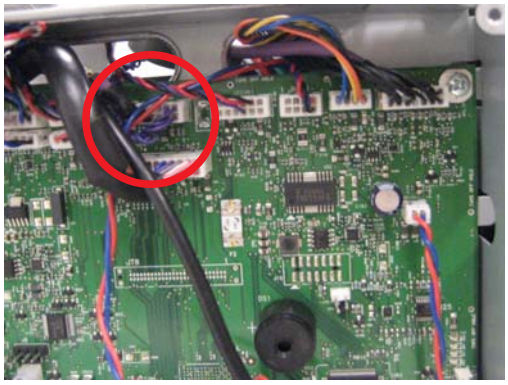
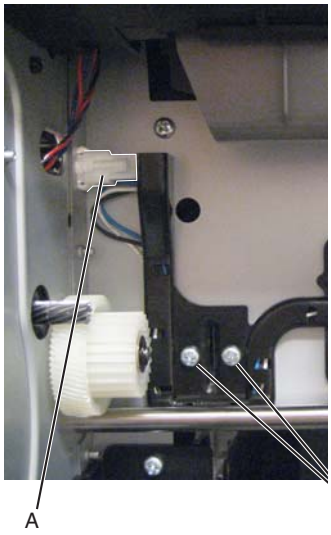
938.18—Waste toner sensor error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JWTB1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the waste toner cable. See **“Waste toner cable removal” on page 4-155**.	Go to step 3.
3	Remove the waste toner sensor. See **“Waste toner sensor removal” on page 4-154**. Check the cable connected to the sensor. **Is the cable properly connected?**	Go to step 4.	Reseat the cable.
4	Replace the waste toner sensor. See **“Waste toner sensor removal” on page 4-154**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

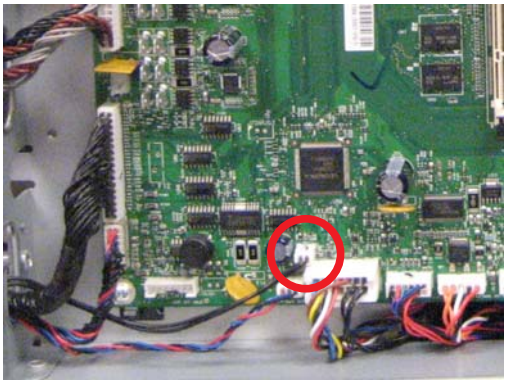
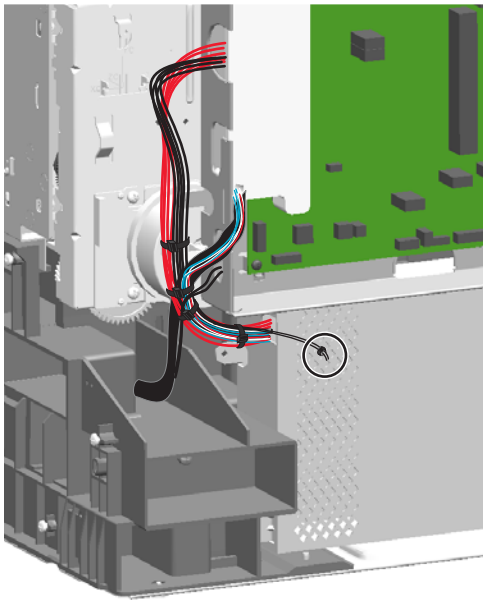
938.19—Waste toner full sensor error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JWTBF1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the waste toner cable. See **“Waste toner full cable removal” on page 4-157**.	Go to step 3.
3	Remove the waste toner full sensor. See **“Waste toner sensor removal” on page 4-154**. Check the cable connected to the sensor. **Is the cable properly connected?**	Go to step 4.	Reseat the cable.
4	Replace the waste toner full sensor. See **“Waste toner sensor removal” on page 4-154**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

938.27, 938.29, 938.30—Weather station error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JFSRD1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the thermistor and redrive cable. See **“Fuser thermistor removal” on page 4-62**.	Go to step 3.
3	Remove the fuser, and check the connection of the thermistor and redrive cable (A). See **“Fuser assembly removal” on page 4-56**.  **Is the cable properly connected?**	Go to step 4.	Reseat the cable.
4	Replace the fuser thermal guide assembly. See **“Fuser thermistor removal” on page 4-62**. **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

938.28—Remote weather station error service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector JCCT2 (weather station compensation thermistor) for proper connection to the system board.  **Is the cable properly connected?**	Go to step 2.	Reseat the cable.
2	Check the cable for damage. **Is the cable damaged?**	Replace the weather station compensation thermistor. See step 3.	Go to step 3.
3	Replace the weather station compensation thermistor: Clip the cable tie to remove the thermistor from the LVPS.  **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

950.00–950.29—EPROM mismatch failure

Warning: When replacing any of the following components, replace only one component at a time or the printer will be rendered inoperable:

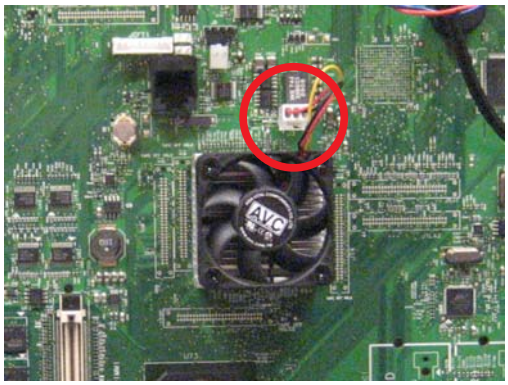
- System board
- OP panel UICC card

Replace the required component, bring the printer up in Diagnostics mode (see **"Diagnostics menus" on page 3-8**), and verify that the problem is fixed before performing a POR.

This error code indicates a mismatch between the operator panel assembly and the system board.

Step	Questions / actions	Yes	No
1	**Has the OP panel UICC card been replaced recently?**	Replace the operator panel assembly with a new, and not previously installed, UICC card. See **"OP panel UICC card removal" on page 4-109**.	Go to step 2.
2	**Has the system board been replaced recently?**	Replace the system board with a new, and not previously installed, system board. See **"System board removal" on page 4-142**.	Go to step 3.
3	Turn the printer power off for ten or more seconds. Then turn the printer back on (POR the printer). **Is the error gone, and can the printer print?**	Problem solved.	Go to step 4.
4	Clear the NVRAM of the printer: 1. Turn the printer power off. 2. With the printer off, press and hold **6**, **7** and **8** on the keypad. 3. Turn the printer on. 4. When `Restoring Factory Defaults` appears, release the buttons. **Note:** If the printer locks up on the Restoring Factory Defaults, wait two minutes, and then turn the printer power off. After ten seconds or more, turn the printer power back on without holding down any buttons. **Does the error message still appear?**	Go to step 5.	Problem solved.
5	Replace the OP panel UICC card. See **"OP panel UICC card removal" on page 4-109**. **Does the error message still appear?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

956.xx—System board failure service check

Step	Questions / actions	Yes	No
1	Turn the printer off, and open the system board shield. Check the cable in connector J3 (system board fan connector) for proper connection to the system board.  **Is the cable properly connected?**	Replace the system board. See **"System board removal" on page 4-142**.	Reseat the cable.

990.01—POST error (2000-sheet input option) service check

Step	Questions / actions	Yes	No
1	Be sure that the following connectors are properly connected on the 2000-sheet controller card and on the other end. • Elevator home sensor • Paper level sensor connector • Jam door clearance sensor connector • Pass thru sensor connector • Pick motor connector • Feed motor connector • Elevator motor connector **Are all connectors properly connected?**	Go to step 2.	Properly connect all connectors.
2	Replace the 2000-sheet high-capacity feeder elevator home sensor. See **"2000-sheet high-capacity feeder elevator home sensor removal" on page 4-254**. **Does the problem persists?**	Go to step 3.	Problem solved.
3	Replace the 2000-sheet high-capacity feeder pass thru sensor. See **"2000-sheet high-capacity feeder pass thru sensor removal" on page 4-283**. **Does the problem persists?**	Go to step 4.	Problem solved.

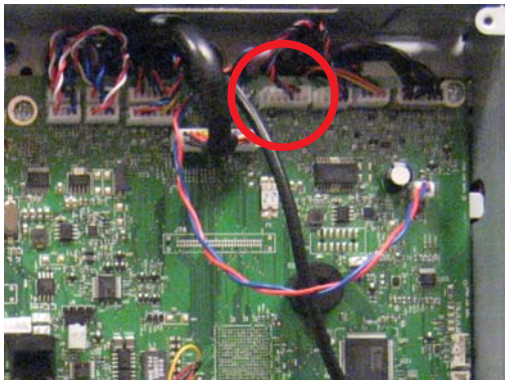
Step	Questions / actions	Yes	No
4	Replace the 2000-sheet high-capacity feeder jam door clearance sensor. See **"2000-sheet high-capacity feeder jam door clearance sensor removal" on page 4-264**. **Does the problem persists?**	Go to step 5.	Problem solved.
5	Replace the 2000-sheet high-capacity feeder lift drive motor assembly. See **"2000-sheet high-capacity feeder lift drive motor assembly removal" on page 4-279**. **Does the problem persists?**	Go to step 6.	Problem solved.
6	Replace the 2000-sheet high-capacity feeder pick assembly. See **"2000-sheet high-capacity feeder pick assembly removal" on page 4-285**. **Does the problem persists?**	Go to step 7.	Problem solved.
7	Replace the 2000-sheet high-capacity feeder drive assembly. See **"2000-sheet high-capacity feeder drive assembly removal" on page 4-251**. **Does the problem persists?**	Go to step 9.	Problem solved.
8	Replace the 2000-sheet high-capacity feeder controller card assembly. See **"2000-sheet high-capacity feeder controller card assembly removal" on page 4-250**. **Does the problem persists?**	Replace the 2000-sheet high-capacity feeder input option.	Problem solved.

990.05—POST error (550-sheet input option) service check

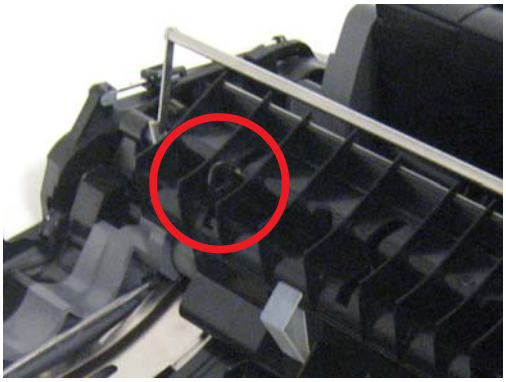
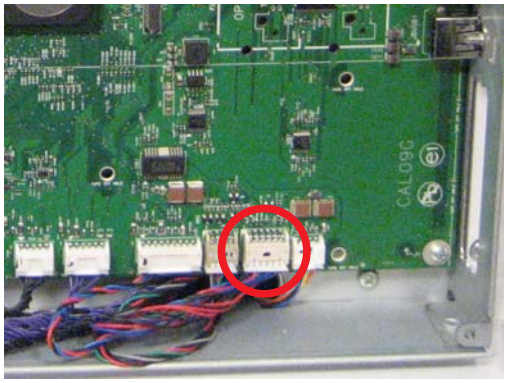
Step	Questions / actions	Yes	No
1	Be sure that the following connectors are properly connected on the 550-sheet controller card and on the other end. • Paper level sensor connector • Jam door clearance sensor • Pass thru sensor connector • Pick Motor connector • Feed Motor connector **Are all connectors properly connected?**	Go to step 2.	Properly connect all connectors.
2	Replace the 550-sheet tray pass thru sensor. See **"550-sheet tray pass thru sensor removal" on page 4-239**. **Does the problem persists?**	Go to step 3.	Problem solved.

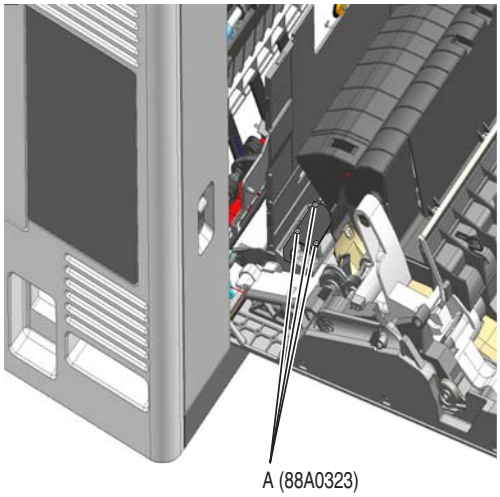
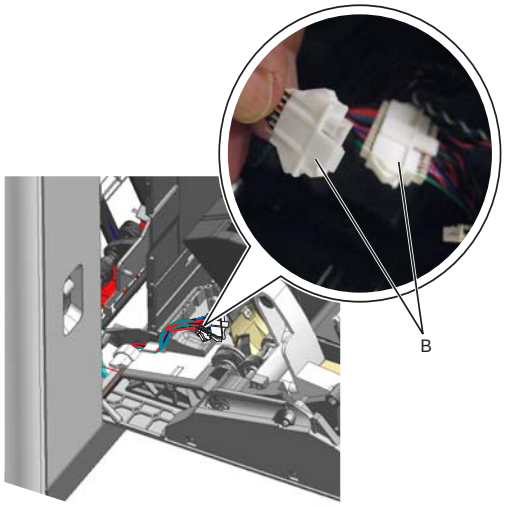
Step	Questions / actions	Yes	No
3	Replace the 2000-sheet high-capacity feeder pick assembly. See **“2000-sheet high-capacity feeder pick assembly removal” on page 4-285**. **Does the problem persists?**	Go to step 4.	Problem solved.
4	Replace the 550-sheet controller card assembly. See **“550-sheet tray controller card assembly removal” on page 4-231**. **Does the problem persists?**	Replace the 550-sheet drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**.	Problem solved.

Bin-full sensor service check

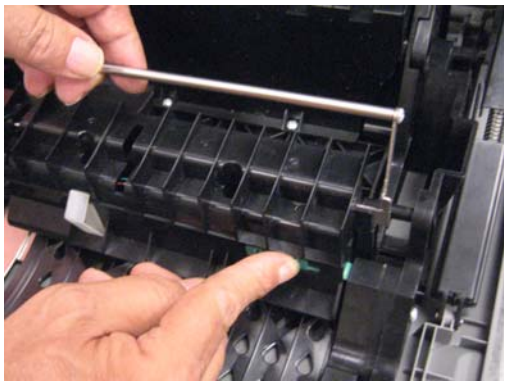
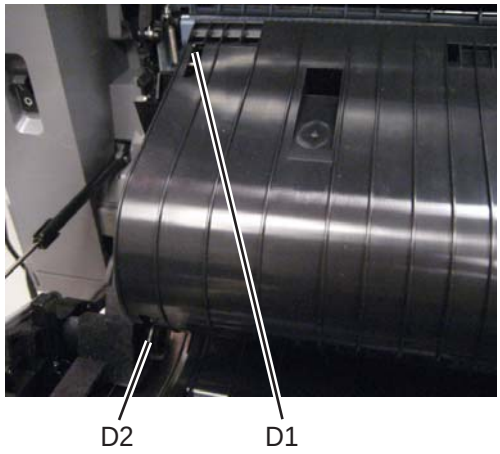
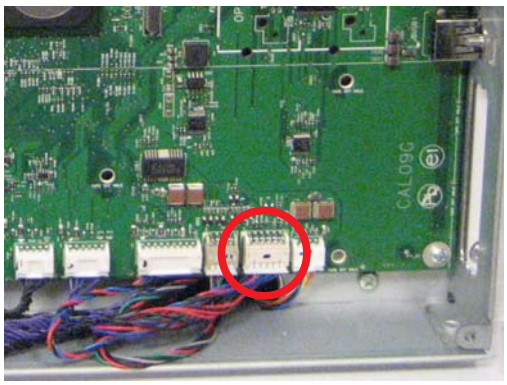
Step	Questions / actions	Yes	No
1	**Is the bin-full flag damaged?**	Replace the bin-full flag. See **“Bin-full flag removal” on page 4-33**.	Go to step 2.
2	Turn the printer off, and open the system board shield. Check the cable in connector JTCVR1 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 3.	Reseat the cable.
3	Check the cable in connector JTCVR1 for damage. **Is the cable damaged?**	Replace the bin-full and output beacon cable. To access the cable, see **“AIO top cover removal” on page 4-5**.	Go to step 4.
4	Remove the top cover assembly. **Is the cable properly connected?**	Go to step 5.	Reseat the cable.
5	Replace the bin-full sensor. See **“Bin-full sensor removal” on page 4-34** **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

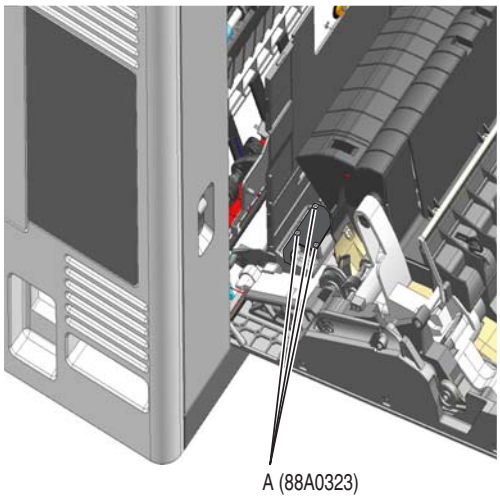
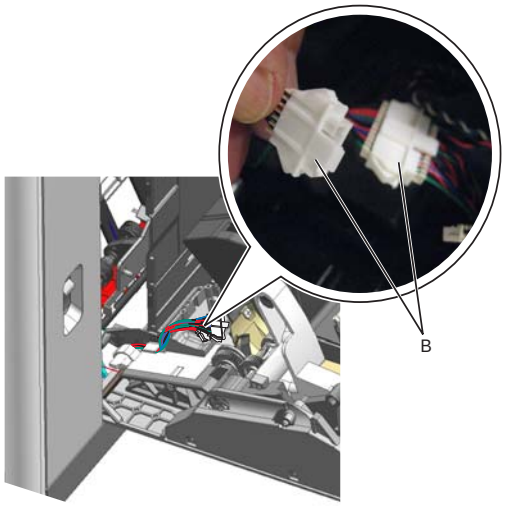
Bubble sensor service check

Step	Questions / actions	Yes	No
1	Open the left access door, and check the fuser bubble sensor flag.  **Is the bubble sensor flag damaged?**	Replace the damaged sensor. See **“Sensor (D1, D2, and fuser bubble) removal” on page 4-131**.	Go to step 2.
2	Open the system board shield. Check the cable in connector JDP1 for proper connection to the system card.  **Is the cable properly connected?**	Go step 3.	Reseat the cable.
3	Check the cable for damage. **Is the cable damaged?**	Replace the duplexer cable. To access the cable, see **“LVPS exit duct removal” on page 4-80** and **“Left cover removal” on page 4-16**.	Go step 4.

Step	Questions / actions	Yes	No
4	Remove the duplex cable cover.  Check the cable for proper connection.  **Is the cable connected correctly?**	Go to step 5.	Reseat the cable.
5	Check the cable for damage. **Is the cable connected correctly?**	Replace the duplexer cable. To access the cable, see **“LVPS exit duct removal” on page 4-80** and **“Left cover removal” on page 4-16**.	Go to step 6.
6	Replace the duplex assembly. See **“Duplex assembly removal” on page 4-48**. **Is the problem fixed?**	Problem solved.	Replace the system board. See **“System board removal” on page 4-142**.

D1 and D2 sensor service check

Step	Questions / actions	Yes	No
1	Open the left access door, and open the duplex assembly.   **Is the D1 or D2 flag damaged?**	Replace the damaged sensor. See **“Sensor (D1, D2, and fuser bubble) removal” on page 4-131**.	Go to step 2.
2	Open the system board shield. Check the cable in connector JDP1 for proper connection to the system card.  **Is the cable properly connected?**	Go step 3.	Reseat the cable.

Step	Questions / actions	Yes	No
3	Check the cable for damage. **Is the cable damaged?**	Replace the duplexer cable. To access the cable, see **“LVPS exit duct removal” on page 4-80** and **“Left cover removal” on page 4-16**.	Go step 4.
4	Remove the duplex cable cover.  Check the cable for proper connection.  **Is the cable connected correctly?**	Go to step 5.	Reseat the cable.

Step	Questions / actions	Yes	No
5	Check the cable for damage. **Is the cable properly connected?**	Replace the duplexer cable. To access the cable, see **"LVPS exit duct removal" on page 4-80** and **"Left cover removal" on page 4-16**.	Go to step 6.
6	Replace the duplex assembly. See **"Duplex assembly removal" on page 4-48**. **Does the problem persists?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

Dead printer service check

A dead printer is a condition where the display is blank, the LED on the operator panel is off, no fans turn, no motors turn, and the fuser lamp does not come on.

If a 550-sheet option assembly is installed, remove the option and check the base printer for correct operation. If the base printer operates correctly, replace the 550-sheet option assembly.

Warning: Observe all necessary ESD precautions when removing and handling the system board or any installed option cards or assemblies. See **"Handling ESD-sensitive parts" on page 4-1**.



CAUTION

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.

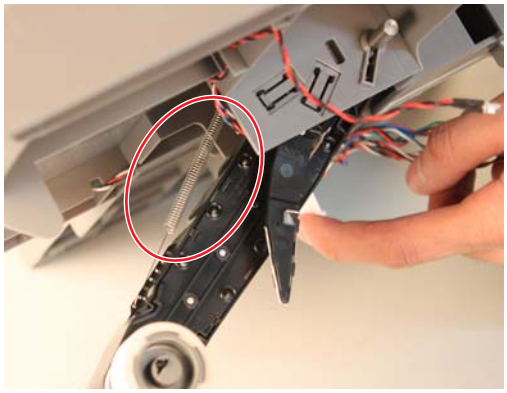
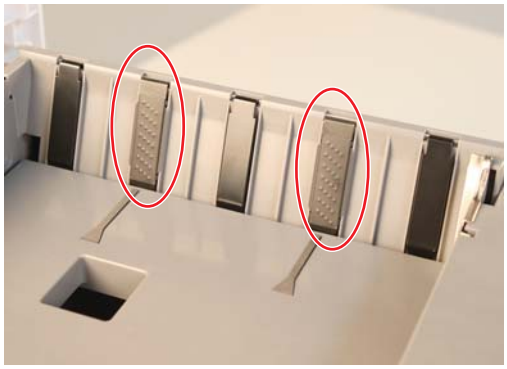
Remove any input and output paper handling options from the printer.

Step	Questions / actions	Yes	No
1	**Is the AC line cord damaged?**	Replace the line cord.	Go to step 2.
2	Turn the printer off, open the system board shield, and remove the connector shield. Check the system board for +5 V dc between JLVPS1 pin 6 and ground. **Is the voltage correct?**	Replace the system board. See **"System board removal" on page 4-142**.	Go to step 3.
3	**Is the JLVPS1 cable correctly installed at JLVPS1 on the system board?**	Go to step 4.	Reseat the cable.
4	1. Turn the printer off. 2. Disconnect the JLVPS1 cable from the system board. 3. Turn the printer on, and then measure the voltage between the JLVPS1 cable pin 6 and the pin 15 (black wire). **Does this measure approximately +5 V dc?**	Go to step 5.	Replace the LVPS. See **"Low-voltage power supply (LVPS) removal" on page 4-77**.

Step	Questions / actions	Yes	No
5	1. Turn the printer off. 2. Disconnect the cables in J5, JFSR1, JHVPS, JCM1, JITM1, JKI1, JOOPT1, and JYF1. 3. Connect the JLVPS1 cable to the system board. 4. POR the printer. **Is the printer still dead?**	Contact your next level of support.	Go to step 6.
6	Connect one cable at a time, and POR the printer. **Is the failing part found?**	Replace the failing part.	Contact you next level of support.

Double feed (550-sheet/2000-sheet input option) service check

Step	Questions / actions	Yes	No
1	Check if the media supported and environmental specification are supported by this machine. See **“Environment” on page 1-5** and **“Supported paper sizes, types, and weights” on page 1-6** to check the printer specifications. **Are the media and environment supported?**	Go to step 3.	Replace the media.
2	Check the pick rolls for contamination and wear. **Are the pick rolls free of contamination and wear?**	Go to step 3.	For 550-sheet input option: Replace the pick roll assembly. See **“550-sheet tray pick roll assembly removal” on page 4-244**. For 2000-sheet input option: Replace the pick roll assembly. See **“2000-sheet high-capacity feeder pick roll assembly removal” on page 4-291**.

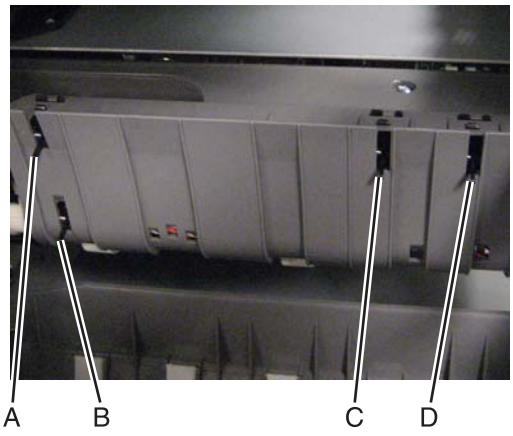
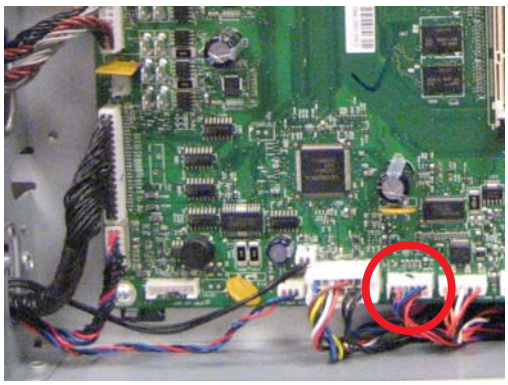
Step	Questions / actions	Yes	No
3	1. Check the pick assembly for damage. 2. Check if the pick arm spring is not detached.  **Is the pick assembly damaged?**	For 550-sheet input option: Replace the pick assembly. See **"550-sheet tray pick assembly removal" on page 4-240**. For 2000-sheet input option: Replace the pick assembly. See **"2000-sheet high-capacity feeder pick assembly removal" on page 4-285**.	Go to step 4.
4	1. Check the media trays for mechanical damage. 2. Check the media restrains. 3. Check for wears on the dams (for 2000-sheet input option only).  **Is there damage or wear on the media tray?**	Replace the whole input option.	For 550-sheet input option: Replace the media tray assembly. See **"550-sheet media tray assembly removal" on page 4-230**. For 2000-sheet input option: Replace the media tray assembly. See **"2000-sheet high-capacity feeder media tray assembly removal" on page 4-282**.

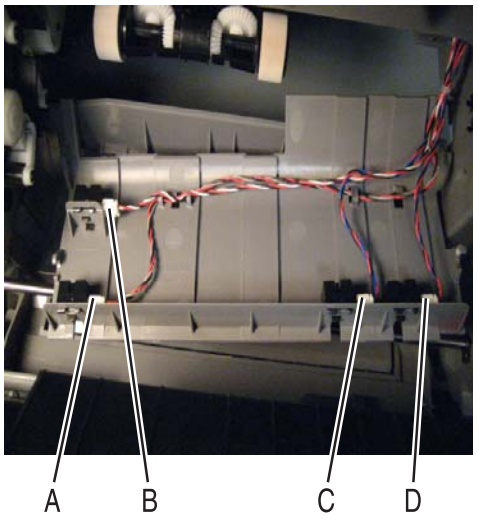
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Input option not detected (550-sheet/2000-sheet input option) service check

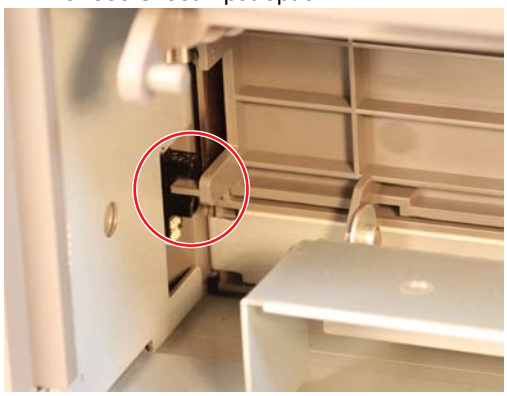
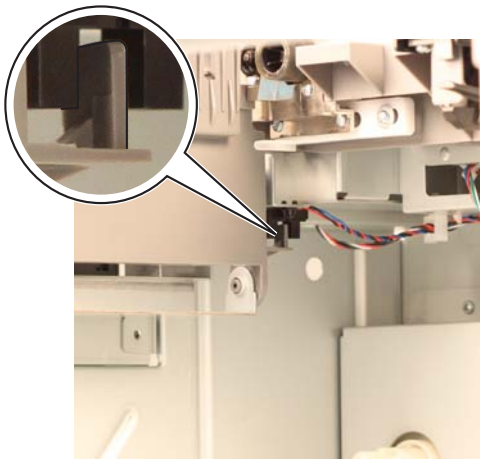
Step	Questions / actions	Yes	No
1	Check the autoconnect connector for any damage. **Is the autoconnect connector not damaged?**	Go step 3.	For 550-sheet input option: Replace the drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**. For 2000-sheet input option: Replace the lift drive motor assembly. See **“2000-sheet high-capacity feeder lift drive motor assembly removal” on page 4-279**.
2	Be sure that Power In (PWR IN), PPORT (engine), and PPORT (Next option) connectors are connected properly on the controller card. **Are the connectors connected properly?**	Go to step 4.	Properly connect the connectors.
3	For 550-sheet input option: Replace the controller card assembly. See **“550-sheet tray controller card assembly removal” on page 4-231**. For 2000-sheet input option: Replace the controller card assembly. See **“2000-sheet high-capacity feeder controller card assembly removal” on page 4-250**. **Does the problem persist?**	For 550-sheet input option: Replace the drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**. For 2000-sheet input option: Replace the drawer assembly.	Problem solved.

Input, S1, narrow media, and near narrow media sensor service check

Step	Questions / actions	Yes	No
1	Open the left access door. Check the sensor flag for damage.  A—Input sensor B—S1 sensor C—Narrow media sensor D—Near narrow media sensor **Is the sensor flag damaged?**	Replace the input sensor. See **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133**.	Go to step 2.
2	Turn the printer off, and open the system board shield. Check the cable in connector JPP2 for proper connection to the system board.  **Is the cable properly connected?**	Go to step 3.	Reseat the cable.
3	Check the cable in connector JPP2 for damage. **Is the cable damaged?**	Replace the paper path cable. See **“Paper path cables” on page 7-57**.	Go to step 4.

Step	Questions / actions	Yes	No
4	Remove the staging deflector assembly, and check the sensor cable connection. See **“Staging deflector assembly removal” on page 4-134**.  A—Input sensor B—S1 sensor C—Narrow media sensor D—Near narrow media sensor **Is the cable properly connected?**	Go to step 5.	Reseat the cable.
5	Replace the sensor. **“Sensor (input, S1, narrow media, near narrow media) removal” on page 4-133** **Does the error reoccur?**	Replace the system board. See **“System board removal” on page 4-142**.	Problem solved.

Jam clearance cover open (550-sheet/2000-sheet input option) service check

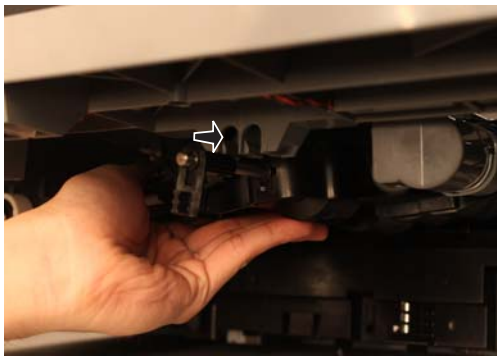
Step	Questions / actions	Yes	No
1	1. Check if the jam clearance cover can close properly. 2. Check if the jam clearance cover friction lock is not retracted. • For 550-sheet input option:  • For 2000-sheet input option:  **Does the jam clearance cover close properly?**	Go to step 2.	For 550-sheet input option: Replace the drawer assembly. See **"550-sheet drawer assembly removal" on page 4-229**. For 2000-sheet input option: Replace the jam clearance cover. See **"2000-sheet high-capacity feeder jam clearance cover removal" on page 4-258**.
2	Check if the jam clearance cover flag is broken. **Is the jam clearance cover flag not damaged?**	Go to step 2.	For 550-sheet input option: Replace the drawer assembly. See **"550-sheet drawer assembly removal" on page 4-229**. For 2000-sheet input option: Replace the jam clearance cover. See **"2000-sheet high-capacity feeder jam clearance cover removal" on page 4-258**.

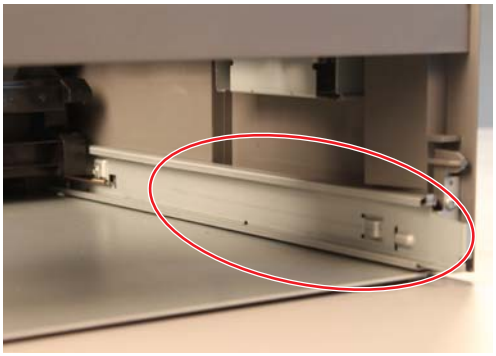
Step	Questions / actions	Yes	No
3	1. POR the printer. 2. Bring the printer up in Diagnostics mode (turn off the printer, press and hold **3** and **6**, turn on the printer, and hold the buttons until the splash screen appears). 3. Navigate to **INPUT TRAY TESTS** > **SENSOR TESTS**. 4. Open and close the jam clearance cover. **Does the status on the sensor changed?**	Go to step 4.	For 550-sheet input option: Replace the drawer assembly. See **"550-sheet drawer assembly removal" on page 4-229**. For 2000-sheet input option: Replace the jam door clearance sensor. See **"2000-sheet high-capacity feeder jam door clearance sensor removal" on page 4-264**.
4	For 550-sheet input option: Replace the controller card assembly. See **"550-sheet tray controller card assembly removal" on page 4-231**. For 2000-sheet input option: Replace the controller card assembly. See **"2000-sheet high-capacity feeder controller card assembly removal" on page 4-250**. **Does the problem persists?**	For 2000-sheet input option: Replace the 2000-sheet high-capacity feeder drawer assembly. For 550-sheet input option: Replace the drawer assembly. See **"550-sheet drawer assembly removal" on page 4-229**.	Problem solved.

Media size error (550-sheet/2000-sheet input option) service check.

Step	Questions / actions	Yes	No
1	**Is the media tray inserted properly**?	Go to step 2.	Insert the media tray properly.
2	Check for any obstructions between the media size actuator and the input option finger size sensor. **Is the tray free from obstruction?**	Go to step 3.	Clear any obstructions.
3	**Is the media size actuator free from damage or deformation?**	Go to step 4.	For 550-sheet input option: Replace the drawer assembly. See **"550-sheet drawer assembly removal" on page 4-229**. For 2000-sheet input option: Replace the drawer assembly.
4	Check the rear restrain on the media tray for any damage. **Is the rear restrain not damaged?**	Go to step 5.	For 550-sheet input option: Replace the media tray assembly. See **"550-sheet media tray assembly removal" on page 4-230**. For 2000-sheet input option: Replace the media tray assembly. See **"2000-sheet high-capacity feeder media tray assembly removal" on page 4-282**.
5	For 550-sheet input option: Replace the controller card assembly. See **"550-sheet tray controller card assembly removal" on page 4-231**. For 2000-sheet input option: Replace the controller card assembly. See **"2000-sheet high-capacity feeder controller card assembly removal" on page 4-250**. **Does the problem persists?**	For 550-sheet input option: Replace the drawer assembly. See **"550-sheet drawer assembly removal" on page 4-229**. For 2000-sheet input option: Replace the drawer assembly.	Problem solved.

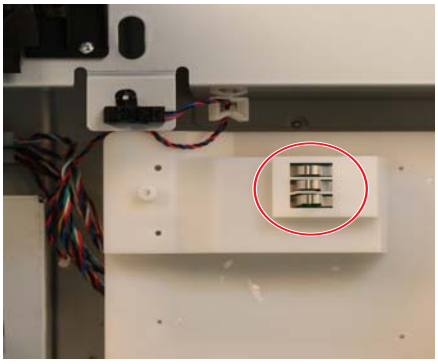
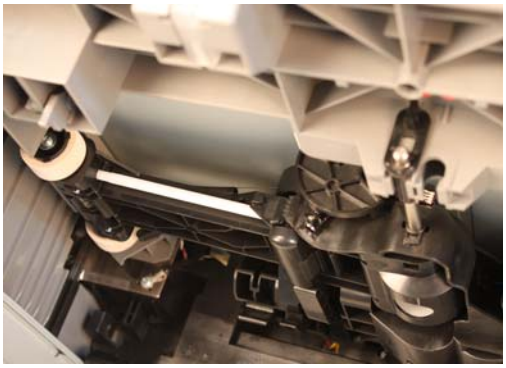
Media tray missing (550-sheet input option) service check

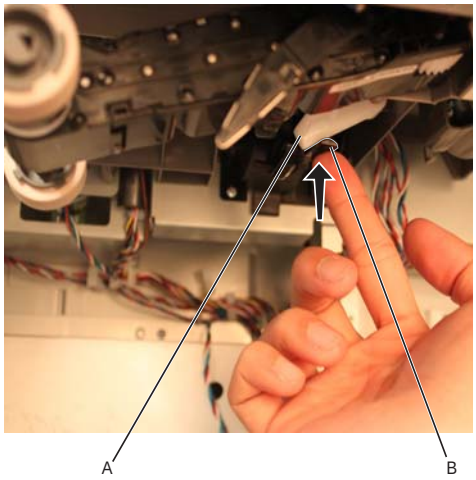
Step	Questions / actions	Yes	No
1	Be sure that the 550-sheet tray pick assembly is inserted to the correct hole and slot during installation.   **Is the tray pick assembly inserted on the correct hole and slot?**	Go to step 2.	Properly install the 550-sheet tray pick assembly.
2	Check the 550-sheet tray pick assembly for damage. **Is the tray pick assembly damaged?**	Replace the 550-sheet tray pick assembly. See **“550-sheet tray pick assembly removal” on page 4-240**.	Go to step 3.

Step	Questions / actions	Yes	No
3	Check for any damage or obstruction on the tray slides assembly.  **Is the 550-sheet drawer assembly free of damage or obstruction?**	Replace the 550-sheet drawer assembly. See **“550-sheet drawer assembly removal” on page 4-229**.	Clear any obstructions.

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Media tray missing (2000-sheet input option) service check

Step	Questions / actions	Yes	No
1	**Does the 2000-sheet high-capacity feeder media tray assembly close properly?**	Go to step 2.	Go to step 4.
2	Check the media size actuator.  **Is the media actuator not deformed or not damaged?**	Go to step 3.	Replace the 2000-sheet high-capacity feeder drawer assembly.
3	Check each of the tact switch at the back of the controller card if it ticks when pressed. **Is the tact switch not damaged?**	Go to step 4.	Replace the 2000-sheet high-capacity feeder controller card assembly. See **“2000-sheet high-capacity feeder controller card assembly removal” on page 4-250**.
4	Check if the pick arm assembly is not hanging down.  **Is the pick arm hanging?**	Go to step 5.	Go to step 6.

Step	Questions / actions	Yes	No
5	Press the actuator assembly (B) to lock the pick arm on its default position.  **Does the problem persists?**	Go to step 6.	Problem solved.
6	Check the 2000-sheet high-capacity feeder bellcrank assembly if the recoil spring is loose. **Is the recoil spring fastened on the bellcrank?**	Go to step 7.	Reinstall the recoil spring.
7	Check the tray slide assembly for damage. **Does the tray slide assembly retracts?**	Replace the 2000-sheet high-capacity feeder media tray assembly. See **"2000-sheet high-capacity feeder media tray assembly removal" on page 4-282**.	Replace the 2000-sheet high-capacity feeder drawer assembly.

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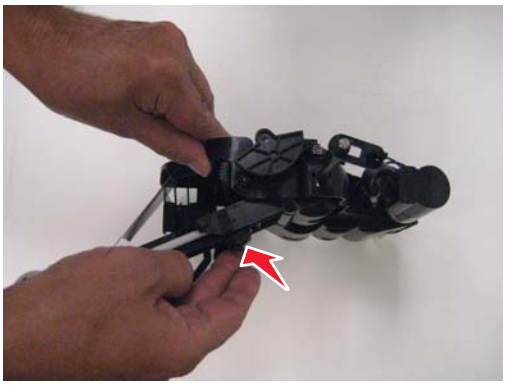
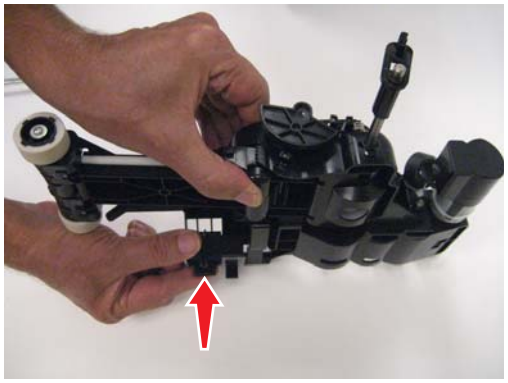
Networking service check

Note: Before starting this service check, print out the network setup page. This page is found under **Menu**—**Reports**—**Network Settings**. Consult the network administrator to verify that the physical and wireless network settings displayed on the network settings page for the device are properly configured. If a wireless network is used, verify that the printer is in range of the host computer or wireless access point, and there is no electronic interference. Have the network administrator verify that the device is using the correct SSID, and wireless security protocols. For more network troubleshooting information, consult the Lexmark Network Setup Guide.

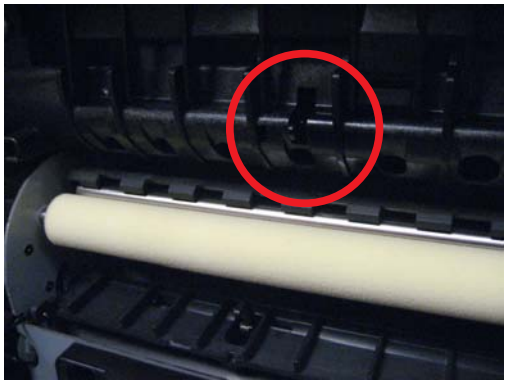
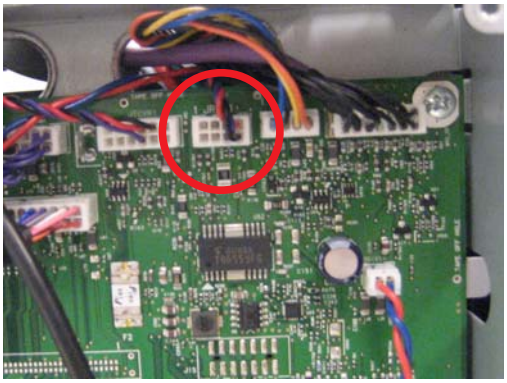
Step	Questions / actions	Yes	No
1	If the device is physically connected to the network, verify that the ethernet cable is properly connected on both ends. **Is the cable properly connected?**	Go to step 3. If the network is wireless, got to step 3.	Go to step 2.
2	Connect the ethernet cable. **Is the problem solved?**	Problem solved.	Go to step 3.
3	Check the printer's online status under Printers and Faxes on the host computer. Delete all print jobs in the print queue. **Is the printer online and in a Ready state?**	Go to step 5.	Go to step 4.
4	Change the printer status to online. **Is the problem solved?**	Problem solved.	Go to step 5.
5	**Does the IP address displayed on the network settings page match the IP address in the port of the drivers using the printer**?	Go to step 10.	Go to step 6.
6	**Does the LAN use DHCP?** **Note:** A printer should use a static IP address on a network.	Go to step 7.	Go to step 9.
7	**Are the first two segments of the IP address 169.254?**	Go to step 8.	Go to step 9
8	POR the printer. **Is the problem solved?**	Problem solved.	Go to step 10.
9	Reset the address on the printer to match the IP address on the driver. **Is the problem solved?**	Problem fixed.	Go to step 10.
10	Have the network admin verify that the printer and PC's IP address have identical subnet addresses. **Are the subnet addresses the same?**	Go to step 12.	Go to step 11.
11	Using the subnet address supplied by the network admin, assign a unique IP address to the printer. **Note:** The printer IP address should match the IP address on the printer driver. **Is the problem solved?**	Problem solved.	Go to step 12.
12	**Is the device physically connected (ethernet cable) to the network?**	Go to step 13.	Go to step15.

Step	Questions / actions	Yes	No
13	Try using a different ethernet cable. **Is the problem solved?**	Problem solved.	Go to step 14.
14	Have the network administrator check the network drop for activity. **Is the drop functioning properly?**	Replace the system board. See **“System board removal” on page 4-142**.	Contact the network administrator.
15	**Is the printer on the same wireless network as the other devices?**	Go to step 17.	Go to step 16.
16	Assign the correct wireless network to the printer. **Is the problem solved?**	Problem solved.	Go to step 17.
17	**Are the other devices on the wireless network communicating properly?**	Go to step 18.	Contact the network administrator.
18	Verify that the ISP wireless card cable is properly seated in their connectors. **Is the wireless card seated correctly?**	Go to step 20.	Go to step 19.
19	Properly reseat the ISP cables. **Is the problem solved?**	Problem solved.	Go to step 20.
20	Replace the ISP wireless card. See Installing an Internal Solutions Port (ISP). **Is the problem solved?**	Problem solved.	Replace the system board. See **“System board removal” on page 4-142**.

Pick arm stuck down service check

Step	Questions / actions	Yes	No
1	With the assembly still in the printer, push up on the bar on the bottom of the pick arm to raise the arm, and then pull the larger latch in the back forward to lock it in place.   **Is the problem solved?**	Problem solved.	Replace the paper pick mechanism assembly. See **“Paper pick mechanism assembly removal” on page 4-114**.

Redrive bubble sensor service check

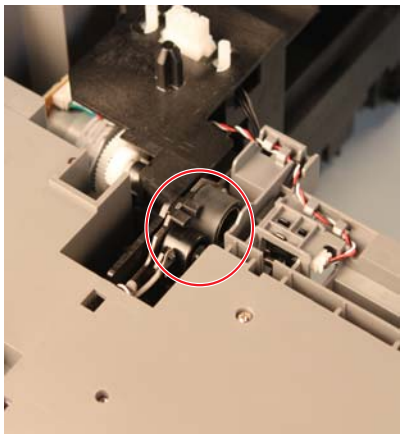
Step	Questions / actions	Yes	No
1	Open the left access door, and remove the fuser. Check the redrive bubble sensor flag for damage.  **Is the redrive bubble sensor flag damaged?**	Replace the paper path redrive assembly. See **"Paper path redrive assembly with sensors removal" on page 4-112**.	Go to step 2.
2	Turn the printer off, and open the system board shield. Check the cable in connector JRDR1 for proper connection to the system card.  **Is the cable properly connected?**	Go to step 3.	Reseat the cable.
3	Replace the paper path redrive assembly. See **"Paper path redrive assembly with sensors removal" on page 4-112**. **Does the error reoccur?**	Replace the system board. See **"System board removal" on page 4-142**.	Problem solved.

Sensor (ADF top door interlock) service check

Step	Questions / actions	Yes	No
1	1. Bring the printer up in Diagnostics mode (turn off the printer, press and hold **3** and **6**, turn on the printer, and hold the buttons until the splash screen appears). 2. Select **SCANNER TESTS**. 3. Select **Sensor Test**. 4. Observe the line item “Sensor (ADF top door interlock”. **Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked?**	The sensor is working properly.	Go to step 2.
2	Check the above sensor for proper connection. **Is the above sensor connected properly?**	Replace the sensor (ADF top door interlock). Go to **“Sensor (ADF top door interlock) removal” on page 4-199**.	Replace the connection.

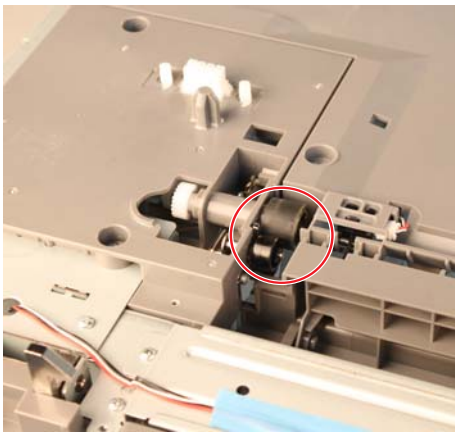
Skew (550-sheet input option) service check

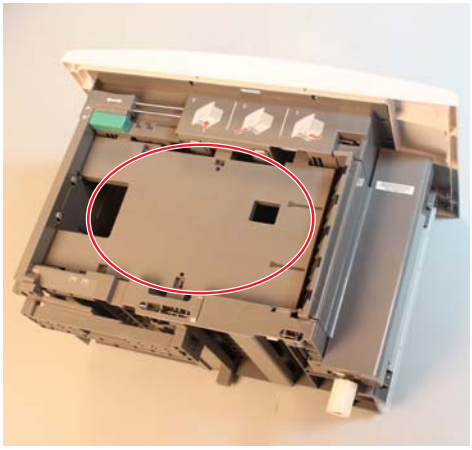
Step	Questions / actions	Yes	No
1	1. Bring the printer up in Diagnostics mode (turn off the printer, press and hold **3** and **6**, turn on the printer, and hold the buttons until the splash screen appears). 2. Select **PRINT TESTS**. 3. Select **Tray 1** for the paper source. 4. Select **Single**. **Is the printout skewed?**	Go to **“Skew” on page 2-38**.	Go to step 2.
2	**Is there a 2000-sheet high-capacity feeder option installed?**	Go to **“Skew (2000-sheet input option) service check” on page 2-162**.	Go to step 3.
3	1. Remove the 550-sheet input option one by one. 2. Perform a print test on each of the 550-sheet input option. **Is one of the 550-sheet input options causing the skew?**	Go to step 4.	Go to step 1.
4	1. Check the paper restrains for damage and if it’s set correctly. 2. Check for mechanical damage on the tray. **Is the media tray damaged?**	Replace the 550-sheet media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**.	Go to step 5.

Step	Questions / actions	Yes	No
5	Check the pick roll assembly. **Is the pick roll assembly free of wear or contamination?**	Go to step 6.	Replace the 550-sheet tray pick roll assembly. See **“550-sheet tray pick roll assembly removal” on page 4-244**.
6	1. Check the pick assembly for damage. 2. Check if the pick arm spring is not detached. **Is the pick assembly damaged?**	Replace the 550-sheet tray pick assembly. See **“550-sheet tray pick assembly removal” on page 4-240**.	Go to step 7.
7	1. Check the 550-sheet tray drive assembly for damage. 2. Check the 550-sheet tray drive assembly rollers if they are in contact when the jam door cover is closed.  **Is the 550-sheet tray drive assembly damaged?**	Replace the 550-sheet tray drive assembly. See **“550-sheet tray drive assembly removal ” on page 4-234**.	Replace the 550-sheet input option.

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Skew (2000-sheet input option) service check

Step	Questions / actions	Yes	No
1	1. Bring the printer up in Diagnostics mode (turn off the printer, press and hold **3** and **6**, turn on the printer, and hold the buttons until the splash screen appears). 2. Select **PRINT TESTS**. 3. Select **Tray 1** for the paper source. 4. Select **Single**. **Is the printout skewed?**	Go to **"Skew" on page 2-38**.	Go to step 2.
2	**Are there any 550-sheet input options between the base printer and the 2000-sheet high-capacity feeder input option?**	Go to step 3.	Go to step 4.
3	Perform a print test on each of the 550-sheet input option. **Is one of the 550-sheet input options causing the skew?**	Replace the 550-sheet input option. or Go to **"Skew (550-sheet input option) service check" on page 2-160**.	Go to step 4.
4	1. Remove all 550-sheet input option leaving the 2000-sheet high-capacity feeder input option. 2. Perform a print test. **Is the printout skewed?**	Go to step 5.	Go to **"Skew (550-sheet input option) service check" on page 2-160**.
5	Check if there's a contact between the rollers of the 2000-sheet high-capacity feeder drive assembly and if the jam clearance cover is properly closed.  **Is there a contact between the rollers?**	Go to step 6.	Replace the 2000-sheet high-capacity feeder drive assembly. See **"2000-sheet high-capacity feeder drive assembly removal" on page 4-251**.

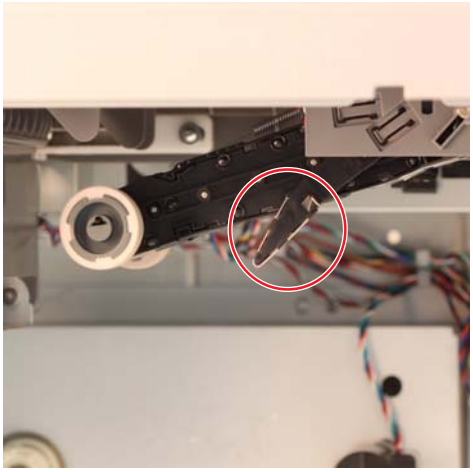
Step	Questions / actions	Yes	No
6	1. Remove the 2000-sheet high-capacity feeder media tray assembly from the drawer. 2. Check the media tray for damage. 3. Check if the elevator plate is level.  4. Check the lift drive gears for damage. **Is the media tray assembly damaged?**	Replace the 2000-sheet high-capacity feeder media tray assembly. See **"2000-sheet high-capacity feeder media tray assembly removal" on page 4-282**.	Go to step 7.
7	Check the bellcrank of the machine. **Is the bellcrank dislodged?**	Properly install the bellcrank.	Replace the 2000-sheet high-capacity feeder input option.

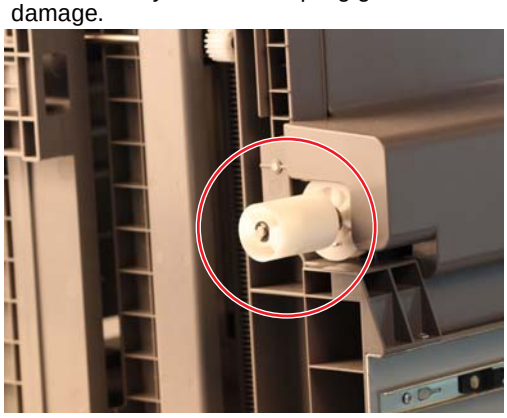
Previous
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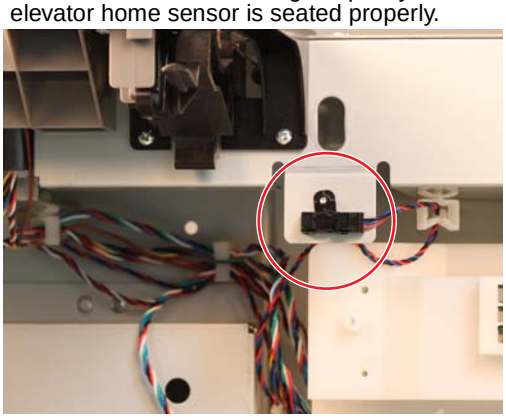
Switch (ADF closed interlock) jam service check

Step	Questions / actions	Yes	No
1	1. Bring the printer up in Diagnostics mode (turn off the printer, press and hold **3** and **6**, turn on the printer, and hold the buttons until the splash screen appears). 2. Select **SCANNER TESTS**. 3. Select **Sensor Test**. 4. Observe the line item “Sensor (ADF closed interlock”. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	The sensor is working properly.	Go to step 2.
2	Check the above sensor for proper connection. **Is the above sensor connected properly?**	Replace the sensor (ADF closed interlock). Go to **“Switch (ADF closed interlock) removal” on page 4-200**.	Replace the connection.

Tray empty (2000-sheet input option) service check

Step	Questions / actions	Yes	No
1	Check if the paper level flag on the 2000-sheet high-capacity feeder pick assembly can freely move.  **Can the paper level flag freely moved?**	Go to step 2.	Replace the 2000-sheet high-capacity feeder pick assembly. See **“2000-sheet high-capacity feeder pick assembly removal” on page 4-285**.

Step	Questions / actions	Yes	No
2	Check if the elevator plate moves up when you close the 2000-sheet high-capacity feeder media tray. 1. Open the jam clearance cover. 2. Close the 2000-sheet high-capacity feeder media tray. 3. Check if the elevator plate moves up. **Does the elevator tray moves up?**	Go to step 5.	Go to step 3.
3	Check the tray elevator coupling gear for damage.  **Is the tray elevator coupling gear damaged?**	Replace the 2000-sheet high-capacity feeder media tray. See **"2000-sheet high-capacity feeder media tray assembly removal" on page 4-282**.	Go to step 4.
4	Check if the lift drive coupling gear is damaged.  **Is the lift drive coupling gear damaged?**	Replace the 2000-sheet high-capacity feeder lift drive motor assembly. See **"2000-sheet high-capacity feeder lift drive motor assembly removal" on page 4-279**.	Go to step 5.

Step	Questions / actions	Yes	No
5	Check if the 2000-sheet high-capacity feeder elevator home sensor is seated properly.  **Is the elevator home sensor seated properly?**	Go to step 6.	Reseat the elevator home sensor.
6	Replace the 2000-sheet high-capacity feeder controller card assembly. See **“2000-sheet high-capacity feeder controller card assembly removal” on page 4-250**. **Does the problem persists?**	Replace the 2000-sheet high-capacity feeder input option.	Problem solved.

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Tray jam indicator (550-sheet/2000-sheet input option) service check

Step	Questions / actions	Yes	No
1	1. POR the machine. 2. Simulate a paper jam by obstructing the pass thru sensor. 3. Turn on machine. **Does the problem persists?**	Go to step 2.	Problem solved.
2	Be sure that JM LD (Jam clearance cover LED) and Tray LD (tray LED) are connected properly in the controller card. **Are the connectors connected properly on the controller card?**	Go to step 3.	Properly connect all connectors.
3	For 550-sheet input option: Replace the controller card assembly. See **"550-sheet tray controller card assembly removal" on page 4-231**. For 2000-sheet input option: Replace the controller card assembly. See **"2000-sheet high-capacity feeder controller card assembly removal" on page 4-250**. **Does the problem persists?**	For 550-sheet input option: Replace the drawer assembly. See **"550-sheet drawer assembly removal" on page 4-229**. For 2000-sheet input option: Replace the drawer assembly.	Problem solved.

Tray linking service check

Tray linking is useful for large print jobs or multiple copies. When one linked tray is empty, paper feeds from the next linked tray. When the Paper size and Paper Type settings are the same for any trays, the trays are automatically linked.

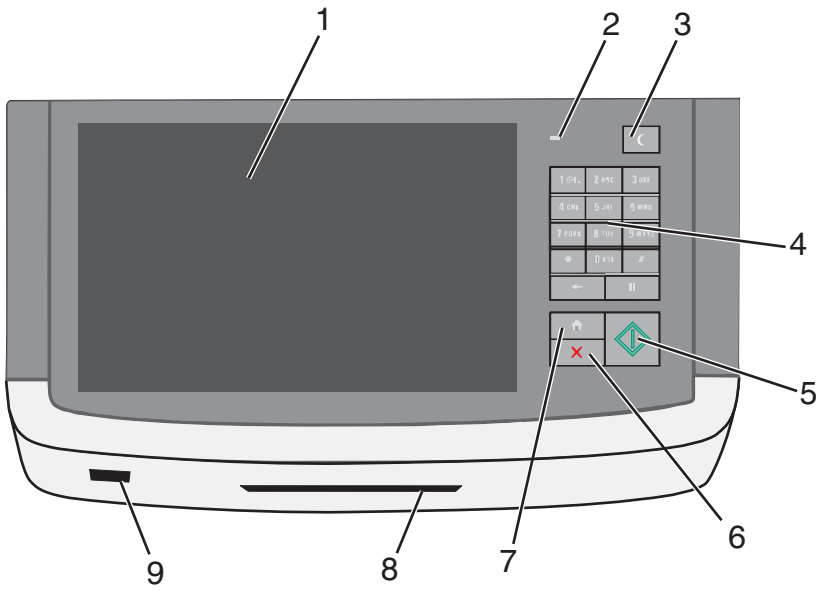
Step	Questions / actions	Yes	No
1	Load the same size and type of paper in each tray. Move the paper guides to the correct positions for the paper size loaded in each tray. **Does tray linking work properly?**	Problem solved.	Go to step 2.
2	Print a menu settings page from the Admin Menu, and compare the settings for each tray. **Are the settings for each tray to be linked the same for paper type and paper size?**	Problem solved.	In the Admin menus, set the same settings for paper size and paper type in each tray.

3. Diagnostic aids

This chapter provides basic information to help you navigate the printer menus and explains the tests and procedures used to identify printer failures and verify repairs have corrected the problem.

Understanding the operator panel and menus

Operator panel



Item		Description
1	Display	Shows the status of the printer
2	Indicator light	**Off**—The printer is off. **Blinking green**—The printer is warming up, processing data, or printing. **Solid green**—The printer is on but idle. **Solid red**—Operator intervention is required.
3	Sleep	Enables Sleep Mode or Hibernate Mode The following actions wake the printer from Sleep Mode: • Touching the screen or any hard buttons • Opening an input tray, cover, or door • Sending a print job from a computer • Performing a Power-on Reset (POR)
4	Keypad	Lets you enter numbers, letters, or symbols
5	Submit	Saves settings changes
6	Stop/Cancel	Stops all printer activity **Note:** A list of options appears once `Stopped` appears on the display.
7	Home	Returns to the home screen
8	Common Access Card reader	An option that limits access to certain functions to authenticated users only. A Common Access Card is required for use.
9	Host USB port	Lets you insert a USB flash drive to send data or save scanned images

Understanding the home screen

Buttons appearing on the home screen may vary depending on home screen customization settings.



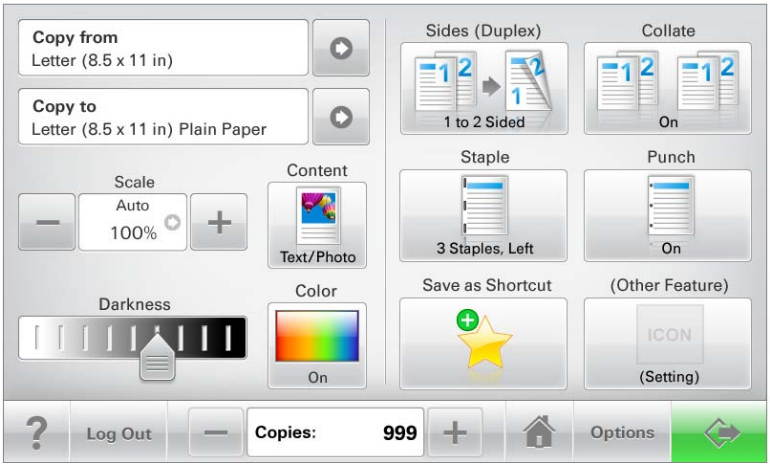
Possible buttons and icons on the home screen

Item	Description
Copy	Opens the Copy menu
E-mail	Opens the E-mail menu
Scan	Opens the Scan menu
Fax	Opens the Fax menu
Menus	Opens the administrative menus when `Ready` appears on the display
FTP	Opens the FTP menu **Note:** This option must be set up by a system administrator before it appears on the display.
Status message bar	Shows the current printer status such as Ready or Busy **Note:** Make sure Ready appears before performing any printer task. • Shows printer conditions such as `Toner Low` or `Cartridge Low` • Shows intervention messages and gives instructions for the printer to continue processing
Status/Supplies	Displays a warning or error message whenever the printer requires intervention to continue processing Touch this to access the messages screen for more information on the message, and how to clear it.
Tips	Opens context-sensitive Help information on the touch screen **Note:** All menus have a Tips button.
USB	Displays files on a flash drive
Bookmarks	Allows you to create, organize, and save a set of bookmarks (URLs) into a tree view of folders and file links
Held Jobs	Displays all held jobs
Change Language (not pictured)	Allows you to change the primary language and reports on the display, and will remain in effect until changed
Release Held Fax (not pictured)	If this button is shown, then there are held faxes with a scheduled hold time previously set. To access the list of held faxes, touch this button.
Lock Device (not pictured)	This button appears when the printer is unlocked and the Printer Lockout Personal Identification Number (PIN) has been set. Touching this button opens a PIN entry screen. Enter the correct PIN to lock the operator panel.

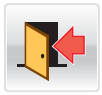
Item	Description
Unlock Device (not pictured)	This button appears when the printer is locked. The operator panel buttons and shortcuts cannot be used while this appears. Touching this button opens a PIN entry screen. Enter the correct PIN to unlock the printer control panel.
Cancel Jobs (not pictured)	Opens the Cancel Jobs screen. The following items are available under the Print, Fax, and Network headings: • Print job • Copy job • Fax profile • FTP • E-mail send Each heading shows up to three jobs per screen. If more than three jobs exist in a column, then an arrow appears enabling you to scroll through the jobs. Select a job to cancel it.

Using the touch screen

Sample touch screen



Button	Function
Submit	Saves settings changes
Sample copy Sample Copy	Prints a sample of a document or image
Right arrow	Opens the menu or options list beside it

Button	Function
Right scroll increase 	Increases a value
Left scroll decrease	Decreases a value
Home 	Returns to the home screen
Exit 	Exits from the current screen to the home screen
Tips 	Opens context-sensitive Help on the touch screen

Other touch-screen buttons

Icon	Function
Accept 	Confirms selections and moves to the next screen
Stop/Cancel 	• Cancels an action or selection • Cancels out of a screen and return the previous screen
Return 	Navigates back to the previous screen
Unselected radio button 	Indicates that an item is not selected

Icon	Function
Selected radio button 	Indicates a selection
Index 	Displays information about the key functions of the printer, including instructions on how to operate it
Search 	Lets you search for files and menus
Warning 	Indicates a warning or error condition

Administrative menus

Some menu items may not be available based on the printer model or the options installed.

Supplies Menu

Replace Supply
Cyan Cartridge
Magenta Cartridge
Yellow Cartridge
Black Cartridge
Separator Roll and Pick Assembly
Waste Toner Box
Fuser
Transfer Module
Staple Cartridge
Hole Punch Box

Paper Menu

Default Source
Paper Size/Type
Configure MP
Substitute Size
Paper Texture
Paper Weight
Paper Loading
Custom Types
Custom Names
Custom Scan Sizes
Custom Bin Names
Universal Setup
Bin Setup

Reports

Menu Settings Page
Device Statistics
Network Setup Page
Network <x> Setup Page
Shortcut List
Fax Job Log
Fax Call Log
Copy Shortcuts
E-mail Shortcuts
Fax Shortcuts
FTP Shortcuts
Profiles List
Print Fonts
Print Directory
Asset Report

Settings

General Settings
Copy Settings
Fax Settings
E-mail Settings
FTP Settings
Flash Drive Menu
Print Settings

Security

Edit Security Setups
Miscellaneous Security Settings
Confidential Print
Disk Wiping
Security Audit Log
Set Date and Time

Network/Ports

Active NIC
Standard Network[1]
Standard USB
Parallel <x>
Serial <x>
SMPT Setup

Help

Print All Guides
Copy Guide
Fax Guide
E-mail Guide
FTP Guide
Menu Map
Print Defects Guide
Information Guide
Supplies Guide

Manage Shortcuts

Fax Shortcuts
E-mail Shortcuts
FTP Shortcuts
Copy Shortcuts
Profile Shortcuts

Option Card Menu

A list of installed DLEs (download emulators) appears[2]

[1] Depending on the printer setup, this menu item appears as Standard Network, Wireless Network, or Network <*x*>.

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

Accessing service menus

There are different test menus that can be accessed during POR to identify problems with the printer.

Diagnostics menu	1. Turn off the printer. 2. Press and hold **3** and **6**.  3. Turn on the printer. 4. Release the buttons when the splash screen appears.	The Diagnostics menu group contains the settings and operations used while manufacturing and servicing the printer. For more information, see **“Diagnostics mode” on page 3-8**.
Configuration menu	1. Turn off the printer. 2. Press and hold **2** and **6**.  3. Turn on the printer. 4. Release the buttons when the splash screen appears.	The Configuration menu group contains a set of menus, settings, and operations which are infrequently required by a user. Generally, the options made available in this menu group are used to configure a printer for operation. See **“Configuration Menu” on page 3-29** for more information.
Network SE menu	While in Network/Ports Menu, press and hold **9**, **7**, and **6**.  	
SE menu	From a browser, add “/se” to the device IP address (for example: http://158.183.3.2/se)	

Diagnostics mode

To run the printer diagnostic tests described in this chapter, enter Diagnostics mode.

1. Turn off the printer.
2. Press and hold **3** and **6**.



3. Turn on the printer.
4. Hold the buttons until the splash screen appears.

Diagnostics menus

Dual Diode Adjust	See **“DUAL DIODE ADJUST” on page 3-10**.
Black	
Cyan	
Magenta	
Yellow	
Diode Alignment Page	
REGISTRATION	See **“REGISTRATION” on page 3-11**.
Top Margin	
Bottom Margin	
Left Margin	
Right Margin	
Quick Test	See **“Quick Test” on page 3-11**.
Alignment Menu	See **“Alignment Menu” on page 3-12**.
Cyan	
Yellow	
Magenta	
Factory Scanner	
Factory Manual	
Drift Sensors	See **“Drift Sensors” on page 3-13**.
SCANNER CALIBRATION	See **“SCANNER CALIBRATION” on page 3-14**.
Copy Quick Test	
Adjust Calibration Values	
Reset Calibration Values	
MISC TESTS	
Toggle ITU	See **“Toggle ITU” on page 3-14**.
Printhead Inst	See **“Printhead Inst” on page 3-14**.
Auto Detect	See **“Auto Detect” on page 3-14**.
PRINT TESTS	See **“PRINT TESTS” on page 3-15**.
Tray 1	

Tray 2 (if installed)	
Tray 3 (if installed)	
Tray 4 (if installed)	
Tray 5 (if installed)	
Multi-Purpose Feeder	
Print Quality Pages	See **“Print Quality Pages” on page 3-15**.
HARDWARE TESTS	
Panel Test	See **“Panel Test” on page 3-15**.
Button Test	See **“Button Test” on page 3-16**.
DRAM Test	See **“DRAM Test” on page 3-16**.
Serial 1 Wrap (if installed)	See **“Serial Wrap Test” on page 3-16**.
USB HS Test Mode	See **“USB HS Test Mode” on page 3-17**.
Beacons Test	See **“Beacons Test” on page 3-17**.
DUPLEX TESTS (if installed)	
Quick Test	See **“Duplex Quick Test” on page 3-18**.
Top Margin	See **“Duplex Top Margin Offset” on page 3-18**.
INPUT TRAY TESTS	
Feed Tests	See **“Feed Test” on page 3-18**.
Sensor Tests	See **“Sensor Test” on page 3-19**.
OUTPUT BIN TESTS	
Feed Tests	See **“Feed Test” on page 3-20**.
Feed To All Bins	See **“Feed to All Bins” on page 3-20**.
Sensor Test	See **“Sensor Test” on page 3-20**.
Diverter Test	See **“Diverter Test” on page 3-21**.
Mechanical Test	See **“Mechanical Test” on page 3-21**.
FINISHER TESTS	
Staple Test	See **“Staple Test” on page 3-21**.
Hole Punch Test	See **“Hole Punch Test” on page 3-21**.
Feed Test	See **“Finisher Feed Test” on page 3-22**.
Sensor Test	See **“Finisher Sensor Test” on page 3-22**.
Mechanical Test	See **“Mechanical Test” on page 3-21**.
BASE SENSOR TEST	See **“BASE SENSOR TEST” on page 3-23**.
DEVICE TESTS (if installed)	
Quick Disk Test	See **“Quick Disk Test” on page 3-23**.
Disk Test/Clean	See **“Disk Test/Clean” on page 3-24**.
Flash Test	See **“Flash Test” on page 3-24**.
PRINTER SETUP	
Defaults	See **“Defaults” on page 3-25**.
Prt Color Pg Count	See **“PAGE COUNTS” on page 3-25**.
Prt Mono Pg Count	
Perm Page Count	
Serial Number	See **“Serial Number” on page 3-25**.
Engine Setting 1-4	See **“Engine Setting x” on page 3-25**.

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Model Name	See **“Model Name” on page 3-25**.
Configuration ID	See **“Configuration ID” on page 3-25**.
Reset Color Cal	See **“Reset Color Calibration” on page 3-26**.
Edge to Edge	See **“Edge to Edge” on page 3-26**.
Cal Ref Adj	See **“Cal Ref Adj” on page 3-26**.
Enable Edge to Edge Copy	See **“Enable Edge to Edge Copy” on page 3-26**.
Par 1 Strobe Adj (if installed)	See **“Par 1 Strobe Adj” on page 3-26**.
EP SETUP	
EP Defaults	See **“EP Defaults” on page 3-26**.
Fuser Temp	See **“Fuser Temp” on page 3-27**.
DC Charge Adjust	See **“DC Charge Adjustment” on page 3-27**.
Dev Bias Adj	See **“Dev Bias Adj” on page 3-27**.
Transfer Adjust	See **“Transfer Adjust” on page 3-27**.
Op Point Boost	See **“Op Point Boost” on page 3-27**.
REPORTS	
Menu Settings Page	
EVENT LOG	
Display Log	See **“Display Log” on page 3-27**.
Print Log	See **“Print Log” on page 3-27**.
Clear Log	See **“Clear Log” on page 3-27**.
SCANNER TESTS	
Scanner Calibration Reset	See **“Scanner Calibration Reset” on page 3-28**.
ASIC Test	See **“ASIC Test” on page 3-28**.
Feed Test	See **“Feed Test” on page 3-28**.
Sensor Test	See **“Sensor Test” on page 3-28**.
ADF Magnification	See **“ADF Magnification” on page 3-28**.
EXIT DIAGS	

Exiting the Diagnostics mode

Select **EXIT DIAGS** to exit the Diagnostics mode and return to the printer home screen.

DUAL DIODE ADJUST

Adjust the dual diode alignment before adjusting the Registration or Alignment settings.

1. From the Diagnostics menu, navigate to:
   DUAL DIODE ADJUST > **Diode Alignment Page**
   An alignment page prints.
2. Follow the instructions on the alignment page and use the touch screen to adjust the dual diode alignment for Black, Cyan, Magenta, and Yellow.
3. Reprint the alignment page and adjust the settings as needed.

REGISTRATION

Note: Before adjusting the Registration or Alignment settings, you must adjust the dual diode alignment. See **"DUAL DIODE ADJUST" on page 3-10**.

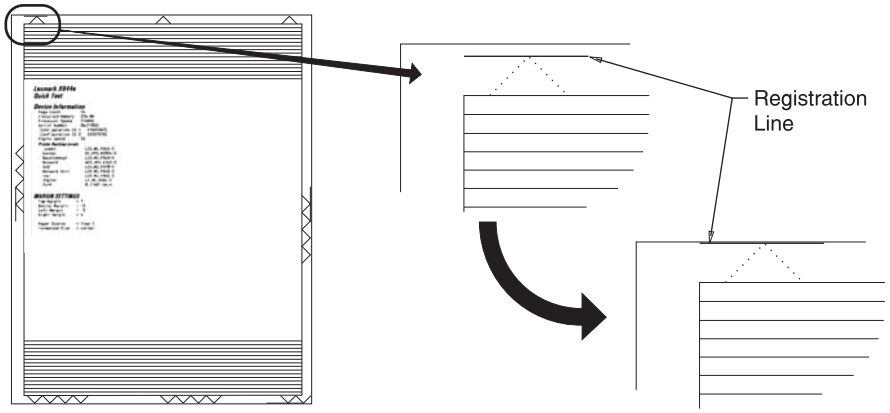
Use REGISTRATION to align the black image on the page. Use Alignment to align the individual colors. The black image should be aligned before the individual colors are aligned.

To set Registration:

1. Print the Quick Test page:
   a. From the Diagnostics menu, navigate to:

      REGISTRATION > **Quick Test**

   Retain this page to determine the changes you need to make to the margins settings. The diamonds in the margins should touch the margins of the page.



2. To change the value of any of the margin settings:
   a. Select the margin you want to change.
   b. Touch (**-**) to decrease the value or (**+**) to increase the value.

Top Margin	-50 to +50	Increasing the value moves the image down the page. Always adjust the top before the bottom margin.
Bottom Margin	-50 to +50	Increasing the value moves the image toward the top of the page.
Left Margin	-40 to +40	Increasing the value moves the image toward the right margin. Always adjust the left before the right margin.
Right Margin	-40 to +40	Increasing the value moves the image toward the right on the page.

   c. Touch **Submit** to save the change, or touch **Back** to cancel and return to the Diagnostics menu.
   d. Touch **Submit** to save all changed values.

Quick Test

See **"REGISTRATION" on page 3-11** for information on using the Quick Test page to set registration. See **"Quick Test Page" on appendix page A-6** for a sample printout.

Current margin settings are listed on the printout. The page includes:

- Arrow points (diamonds) are shown in the margins to determine page registration.
- General printer information, including current page count, installed memory
- Specific information including serial number, code level, and print registration settings

The Quick Test is printed from the default paper source, unless the default paper source contains envelopes. In that case, it prints from tray 1. It should be printed on A4 or letter paper.

Alignment Menu

Aligns the image on the page for the individual colors: cyan, yellow, and magenta. The black image should be aligned using REGISTRATION before the individual colors are aligned.

Warning: Read the instructions for the alignment carefully.

Setting alignment for color

1. From the Diagnostics menu, touch **Alignment Menu**.
2. Select **CYAN**, **YELLOW**, or **MAGENTA**.
3. Touch **Quick Test**. You may need to scroll to the next page.
   A two-page instruction sheet prints. See **"Printhead mechanical alignment test page" on appendix page A-7** for a full page sample.
   The printer prints the test page from the default paper source, however if the default source only supports envelopes, then the page prints from Tray 1. Print on A4 or letter paper for best results.
4. Determine which settings to change and follow the instructions on the printed sheets to determine the adjustment.

Description	Range
Top Margin	-128 to +127
Left Margin	-2500 to +2500 (-1000 to +1000 for Yellow)
Right Margin	-2500 to +2500 (-1000 to +1000 for Yellow)
Linearity	Linearity has a separate Quick Test sheet and adjustment instructions. See **"Adjusting Linearity" on page 3-12**.

5. Touch (**-**) to decrease the value or (**+**) to increase the value. Once the value appears, touch **Submit** to save the value or **Back** to cancel.
6. Reprint the Quick Test to evaluate the changes. Continue until each adjustment is correct.
7. Repeat steps 4 through 6 if required.
8. Continue until all three colors are aligned. A separate Quick Test prints for each color.

Touch **Back** to exit the Alignment Menu.

Adjusting Linearity

Adjusting Linearity physically adjusts the placement of the laser beam as it scans across the PC drum. Each color plane has three correction settings to compensate for any linearity errors relative to the black plane.

1. From the Diagnostics menu, touch **Alignment Menu**.
2. Select **CYAN**, **YELLOW**, or **MAGENTA**.
3. Navigate to:
   Linearity > **Quick Test**
   A two page instruction sheet prints. See **"Printhead mechanical alignment test page" on appendix page A-7** for a full page sample.
   The printer prints the test page from the default paper source, however if the default source only supports envelopes, then the page prints from Tray 1. Print on A4 or letter paper for best results.
4. Determine which settings to change and follow the instructions on the printed sheets to determine the adjustment.

Description:	Range:
Left Adjustment	-32 to +32
Center Adjustment	-32 to +32
Right Adjustment	-32 to +32

5. Touch (**-**) to decrease the value or (**+**) to increase the value. Once the value appears, touch ✔ to save the value or **Back** to cancel.
6. Reprint the Quick Test to evaluate the changes. Continue until each adjustment is correct.
7. Repeat steps 4 through 6 if required.
8. Continue until all three colors are aligned. A separate Quick Test prints for each color.

Touch **Back** to exit the Linearity menu.

Drift Sensors

This check is used to display the status of the thermal system used to compensate for printhead drift.

To perform the test:

1. From the Diagnostics menu, navigate to:
   Alignment Menu > **Drift Sensors**
2. Select a color to test.

Test results:

Value:	Description:
OK	Communication is good
Error	RIP to A/D communication error
Open	Open thermistor error
Short	Short thermistor error
Range	Range error
Number	Detected temperature in Celsius of last reading. Indicates the system is functioning properly.

- If `Error` appears, replace the system board. See **"System board removal" on page 4-142**.
- If a number, Open, or Short appears, check the following:
  a. Check the cable of the appropriate thermistor (cyan, magenta, yellow, or black) to make sure it is installed correctly to the system board and to the thermistor board. If correct, go to step b.
  b. Check the continuity of the appropriate cable. Replace the cable if there is no continuity. If continuity is correct, go to step c.
  c. Replace the appropriate thermistor assembly. If this does not fix the problem, replace the system board.

Press **Stop** (X) to return to the Alignment Menu.

SCANNER CALIBRATION

Adjust Calibration Values

This menu is used to manually adjust the scanner black levels to optimize printed text and images from scanned or copied originals. Use this menu to adjust the levels after you replace any of the following parts:

- Flatbed scanner assembly
- ADF unit assembly
- Flatbed scanner CCD assembly
- ADF duplex CCD assembly

For more information, see **“Calibrating the scanner black levels” on page 3-67**.

Reset Calibration Values

This resets the scanner black levels to factory default settings. These values must be reset after you replace any of the following parts:

- Flatbed scanner assembly
- ADF unit assembly
- Flatbed scanner CCD assembly
- ADF duplex CCD assembly

MISC TESTS

Toggle ITU

The test is used to verify that ITU belt retraction, BOR, hardware is functioning properly. Two options are available: Raise Belt and Lower Belt. If the belt is already in the requested position, no action occurs. Otherwise the belt will move to the requested position.

1. From the Diagnostics menu, navigate to:
   MISC TESTS > **Toggle ITU**
2. Select **Raise Belt** or **Lower Belt** from the menu.
   `Raise ITU Testing...` or `Lower ITU Testing...` appears.
3. The results appear on the display. For example: `Lower ITU Test Passed`. To exit the test, press any button.

If this test fails, replace the ITU.

Printhead Inst

This test prints a page that aids in the mechanical alignment of the printhead. This test should not be used independently of the printhead coarse alignment. See **“Installing and coarse aligning the printhead” on page 4-119**.

Auto Detect

This test initiates an automatic component detect process. Auto Detect should be used after you replace the system board.

PRINT TESTS

Print Tests (input sources)

This test determines if the printer can print on media from any of the paper input sources. Each of the installed sources is available within the Print Tests menu.

The content of the test page varies depending on the media installed in the selected input source.

- If a source is selected that contains paper, then a page similar to the Quick Test Page is printed and does not contain the Print Registration diamonds.
- If a source is selected which contains envelopes, then an Envelope Print Test pattern is printed. This pattern contains only text, which consists of continuous prints of each character in the selected symbol set.
- If **Continuous** is selected, then the same page prints continuously from the selected source until you press **Stop** (X). If Continuous is selected from a source which contains envelopes, then the envelope print test pattern is printed on the first envelope, and the rest are blank.

The Print Test page always prints single-sided, regardless of the Duplex setting or the presence of the Duplex option.

To run the Print Test:

1. From the Diagnostics menu, touch **PRINT TESTS**.
2. Select the paper source.
3. Select either **Single** or **Continuous**.
   Note: If **Single** is selected, no buttons are active while the Print Test Page is printing. If **Continuous** is selected, **Stop** (X) can be pressed to cancel the test.
4. At the end of the test, the printer returns to the PRINT TESTS menu.

Print Quality Pages

The print quality test consists of five pages. Pages one and two contain a mixture of graphics and text. The remainder of the pages only contain graphics. See **“Print tests” on appendix page A-1** for samples of the Print Quality Pages.

This test may be printed from either Configuration menu or the Diagnostics menu. To run the print quality pages from the Diagnostics menu, select **PRINT TESTS** and **Print Quality Pages** from the menu. Once the test is started it cannot be canceled. After the test pages print, the printer returns to the **PRINT TESTS** menu.

HARDWARE TESTS

Note: If the test fails, replace the failing part.

Panel Test

This test verifies the operator panel display function.

To run the Panel Test:

1. From the Diagnostics menu, navigate to:
   HARDWARE TESTS > **LCD Test**
   The Panel test continually executes.
2. Press **Stop** (X) to cancel the test.

Button Test

This test verifies the operator panel button function.

To run the Button Test:

1. From the Diagnostics menu, navigate to:
   HARDWARE TESTS > **Button Test**
2. With no buttons pressed, a pattern matching the operator panel buttons is displayed. Press each operator panel button one at a time, and an “X” displays in the box that represents the button.
3. Press **Stop** (X) or touch **Back** to exit the test.

DRAM Test

This test checks the validity of DRAM, both standard and optional. The test repeatedly writes patterns of data to DRAM to verify that each bit in memory can be set and read correctly.

To run the DRAM Test:

From the Diagnostics menu, navigate to:
HARDWARE TESTS > **DRAM Test**

`DRAM Test Testing`... appears on the screen, followed by `Reseting the Printer`.

After the printer resets, the results of the test appear: `DRAM Test (x)MB P:###### F:######`.

(x) represents the size of the installed DRAM.

P:###### represents the number of times the memory test has passed and finished successfully, with the maximum pass count being 999,999.

F:##### represents the number of times the memory test has failed and finished with errors, with the maximum fail count being 999,999.

Once the maximum pass count or fail count is reached, or once all the DRAM has been tested, the test stops and the final results appear.

Serial Wrap Test

Use this test to check the operation of the Serial Port Hardware using a wrap plug. Each signal is tested. If the test fails, replace the system board.

To run the Serial Wrap Test:

1. Disconnect the serial interface cable, and install the wrap plug.
2. From the Diagnostics menu, navigate to:
   HARDWARE TESTS > **Serial Wrap Test**

Select the appropriate **Serial Wrap Test** from the list. Values may include **Serial Wrap**, **Serial 1 Wrap**, **Serial 2 Wrap,** or **Serial 3 Wrap**. Each time the test finishes, the screen updates with the result. P and F represent the same numbers for DRAM. If the test passes, the Pass Count increases by 1. However, if the test fails, one of the following failure messages appears for approximately three seconds, and the Fail Count increases by 1:

Receive Status Interrupt Error
Status Error
Receive Data Interrupt Error
Transmit Data Interrupt Error
Transmit Empty Error
Threshold Error
Receive Data Ready Error

Break Interrupt Error
Framing Error
Parity Error
Overrun Error
Data Error
Data 232 Error
Data 422 Error
FIFO Error
DSR Error
DSR PIO Error
DSR Interrupt Error
CTS Error
CTS PIO Error
CTS Interrupt Error

Once the maximum count is reached or a failure occurs, the test stops.

Press **Stop** (X) to cancel the test.

USB HS Test Mode

If the test fails, replace the failing USB cable.

1. From the Diagnostics menu, navigate to:
   HARDWARE TESTS > **USB HS Test Mode**
2. Select the desired Port.
3. Select the desired Test.

Ports	Tests
Port 0	Test J
Port 1	Test K
Port 2	Test SEO NAK
Port 3	Test Packet
	Test Force Enable

To cancel the test, turn the printer off.

Beacons Test

Select **On** to turn on all printer beacons. The beacons remain on until you select **Off**.

DUPLEX TESTS

Duplex Quick Test

This test verifies if the Duplex Option Top Margin is set correctly. This test prints a duplexed version of the Quick Test Page that can be used to adjust the Top Margin for the back of the duplexed page. You can run one duplexed page (**Single**) or continue printing duplexed pages (**Continuous**) until **Stop** (X) is pressed.

You must use either Letter or A4 paper.

1. From the Diagnostics menu, navigate to:
   DUPLEX TESTS > **Duplex Quick Test**
2. Select **Single** or **Continuous**.
   - The single test cannot be canceled.
   - The printer attempts to print the Quick Test Page from the default paper source. If the default paper source supports only envelopes, then the page is printed from Tray 1.
   - Check the Quick Test Page for the correct offset between the placement of the first scan line on the front and back side of a duplexed sheet.
   - If adjustment is necessary, the Top Margin in the Registration menu must be adjusted first. The Duplex Top Margin Offset may be adjusted next.
   - A positive offset moves the text down the page and widens the top margin, while a negative offset moves the text up the page and narrows the top margin.
3. Press **Stop** (X) to cancel the test.

Duplex Top Margin Offset

Modification of this setting controls the offset between the placement of the first scan line on the front and back side of a duplex sheet.

Changing the value by 1 unit moves the margin by 1/100 inches. A positive value moves the text down the page and widens the top margin. A negative value moves the text up the page and narrows the top margin.

Touch **Back** to return to the DUPLEX TESTS menu.

INPUT TRAY TESTS

Feed Test

This test feeds blank pages through the paper path.

Note: This test can run using any of the paper or envelope sizes supported by the printer. The pages are placed in the default output bin; however, the Feed Test menu lets you select the input source.

1. From the Diagnostics menu, navigate to:
   INPUT TRAY TESTS > **Feed Test**
2. Select the input source. All installed sources appear.
3. Select either **Single** (feeds one sheet of media from the selected source) or **Continuous** (continues to feed from the selected source until **Stop** (X) is pressed).
4. Press **Stop** (X) to exit the test.

Sensor Test

Use this test to determine if the input tray sensors are working correctly.

To run the Sensor Test:

1. From the Diagnostics menu, navigate to:
   INPUT TRAY TESTS > **Sensor Test**
2. Select the input source. All installed sources appear.
   Not all sensors appear for all trays. The following table indicates which tray sensors are available for each input source:

Input source	**Empty sensor**	**Low sensor**	**PassThru sensor**	**Tray Level sensor[1]**	**Side Cover sensor**
Standard tray	✓	✓			
Optional 550-sheet drawer OR 2000-sheet drawer	✓	✓	✓	✓	✓
Multipurpose feeder	✓				
[1] This sensor registers the following states: `Empty`, `Low`, `Mid`, and `Full`.					

3. Manually actuate each sensor. The tray empty sensor can be actuated by hand; however, a sheet of paper can be used to cover the pass-through sensor. When the sensor is closed, `Closed` appears. When the sensor is open, `Open` appears.
4. Touch **Back** or press **Stop** (X) to exit the test.

OUTPUT BIN TESTS

Feed Test

Note: If the “Configure Bins” printer setting is link rather than mailbox, the printer selects its own internal bin linking regardless of which output bin is selected for the feed test.

This test verifies that media can be fed to a specific output bin. No information is printed on the media because the printhead is not turned on during this test.

To run the Output Bin Feed Test:

1. From the Diagnostics menu, navigate to:
   OUTPUT BIN TESTS > **Feed Test**
2. Select the output bin you want the paper to exit into. All installed output bins appear.
3. Select either **Single** (one sheet of media feeds to the selected output bin) or **Continuous** (media continues feeding to the selected output bin) until **Stop** (X) is pressed.
4. Press **Stop** (X) to exit the test.

Feed to All Bins

One page is fed to every bin, including the finisher, if available. The test runs continuously until **Stop** (X) is pressed.

Sensor Test

This test verifies that the output bin sensors are working correctly.

To run the Output Bin Sensor Test:

1. From the Diagnostics menu, navigate to:
   OUTPUT BIN TESTS > **Sensor Test**
2. Select the bin you want to test.
   Not all sensors appear for each output bin. The following table indicates which tray sensors are available for each output bin:

Sensor	Standard output bin	Horizontal Transport Unit (HTU)	High Capacity Output Stacker	5-bin Mailbox
Bin Empty[1]	✓	✓	✓	
Bin Near Full sensor[2]		✓	✓	
Bin Full[3]		✓	✓	
PassThru 1 sensor[4]		✓	✓[3]	✓
PassThru 2 sensor[4]		✓		✓
Cover[5]		✓		
Option Dock[6]		✓		
Chad Bin Present[7]		✓		
Chad Bin Full[3]		✓		

Sensor	Standard output bin	Horizontal Transport Unit (HTU)	High Capacity Output Stacker	5-bin Mailbox
Media In Puncher[8]		✓		
Top Position			✓	
Mailbox Empty[9]				✓

[1] This sensor toggles between `empty` and `not empty`.
[2] This sensor toggles between `near full` and `not near full`.
[3] This sensor toggles between `full` and `not full`.
[4] This sensor toggles between `covered` and `not covered`.
[5] This sensor toggles between `open` and `closed`.
[6] This sensor toggles between `docked` and `not docked`.
[7] This sensor toggles between `present` and `not present`.
[8] This sensor toggles between `media present` and `media not present`.
[9] This sensor registers the following levels: `empty`, `normal`, `near full`, and `full`.

3. Once the selection appears, you can manually actuate the sensor you want to test. If the wrong message appears, or if the message does not change, then the sensor is malfunctioning.
4. To exit the test, press **Stop** (X).

Diverter Test

This test checks the operation of each mailbox output diverter. Also if more than one 5-Bin mailbox option is installed, the test checks all the diverters installed on the printer.

This is a single test and ends upon completion. If the test fails, replace the failing diverter solenoid.

Mechanical Test

This menu appears under Output Option Tests only if the Horizontal Transport Unit (HTU) is installed. It appears under Finisher Tests only if the finisher is installed. This test checks the selected bin and returns either `Pass` or `Fail`.

FINISHER TESTS

Staple Test

This test verifies the operation of the staple mechanism in the finisher. The printer feeds eight pieces of media to the finisher and accumulates all eight pieces in the finisher. After the last sheets are accumulated, the pack is stapled.

To exit the test, press **Stop** (X).

Hole Punch Test

This test verifies that media can be fed to the finisher output bin and then hole punched. The printer feeds eight pieces of blank media to the finisher and then hole punches them.

This is a single test, and it ends upon completion.

Finisher Feed Test

This test verifies that media can be fed from the default source to a finisher output bin. Any size paper that is supported can be used.

The printer feeds a single blank sheet of media from the default source to a default finisher output bin.You can also specify which bin to test by using the Output Bin feed tests (see **“Feed Test” on page 3-20**).

This test cannot be canceled or terminated once the test has begun. When the test is complete, the printer returns to the original screen.

Finisher Sensor Test

This test determines if the finisher sensors are working correctly. The sensors that are tested are:

- Bin Level
  - Bin Empty
  - Bin Full
  - Bin Near Full
- Cover and Door
  - Top Cover
  - Side Door
- Pass and Media
  - Passthru
  - Media
- Staple Sensors
  - Cartridge Presence
  - Staple Low
  - Self-priming
  - Home Signal

To run the Finisher Sensor Test, select **Finisher Sensor Test** from FINISHER TESTS in the Diagnostics menu.

- When you select a Sensor group, such as **Bin Level,** from the menu, `Bin Level Testing…` appears and the sensors in that group are polled.
- Once the sensors are polled, you can manually actuate each of the sensors. When the sensor is closed, `Closed` appears; when the sensor is open, `Open` appears.
- To exit the sensor test, press **Stop** (X) or touch **Back**.

BASE SENSOR TEST

Use the Base Sensor Test to determine that the sensors located inside the printer are operating correctly. The following sensors can be checked using this test:

Nearly Narrow Media
Input–S1
Fuser Exit
NarrowMedia
K TMC Sensor (black)
M TMC Sensor (magenta)
C TMC Sensor (cyan)
Y TMC Sensor (yellow)
Input–D0
Input–D1
Input–D2
Fuser Bubble
Redrive Bubble
Input–S2



CAUTION

These sensors are near high voltage terminals to the print cartridge. Use a nonconducting item to toggle these switches and not your hand.

To run the Base Sensor Test.

1. From the Diagnostics menu, select **BASE SENSOR TEST.**
   A list of the sensors appears, with the status of each sensor after the sensor name.
2. Manually toggle the sensors to verify that each sensor switches from open to closed.

DEVICE TESTS

Quick Disk Test

This test performs a non-destructive read/write on one block per track on the disk. The test reads one block on each track, saves the data, and proceeds to write and read four test patterns to the bytes in the block. If the block is good, the saved data is written back to the disk.

1. From the Diagnostics menu, navigate to:
   DEVICE TESTS > **Quick Disk Test**
   - The power indicator *blinks* while the test is in progress.
   - `Quick Disk Test/Test Passed` appears if the test passes.
   - `Quick Disk Test/Test Failed` appears if the test fails.
2. Press **Stop** (X) to return to the Device Tests menu.

Disk Test/Clean

Warning: This test destroys all data on the disk and should not be attempted on a good disk. This test may run approximately 1½ hours depending on the disk size.

1. From the Diagnostics menu, navigate to:
   DEVICE TESTS > **Disk Test/Clean**
   A `Contents will be lost` warning appears.
2. To exit the test immediately and return to DEVICE TESTS, select **No** and touch **Submit**. To continue with the test, select **Yes** and touch **Submit**.
   When the test starts, a progress bar appears. The test cannot be stopped or canceled once it has begun.
3. Once the test is complete, the power indicator turns on solid and a message appears indicating whether the test passed or failed. Press **Stop** (X) to return to DEVICE TESTS.

Flash Test

This test causes the file system to write and read data on the flash to test the flash.

Warning: This test destroys all data on the flash because the flash is reformatted at the end of the test.

1. Select **Flash Test** from DEVICE TESTS From the Diagnostics menu, navigate to:
   DEVICE TESTS > **Flash Test**
   A `Contents will be lost` warning appears.
2. To exit the test immediately and return to DEVICE TESTS, select **No** and touch **Submit**. To continue with the test, select **Yes** and touch **Submit**.
   When the test starts, a progress bar appears. The test cannot be stopped or canceled once it has begun.
3. Once the test is complete, the power indicator turns on solid and a message appears indicating whether the test passed or failed. Press **Stop** (X) to return to DEVICE TESTS.

PRINTER SETUP

Defaults

This setting is used by the printer to determine whether US or non-US factory defaults should be selected. The following printer settings have different US and non-US values:

Printer default values	US value	Non-US value
Paper Sizes setting in the General Settings menu	U.S.	Metric
Default Paper Size (paper feeding sources which do not have hardware size sensing capabilities)	Letter	A4
Default Envelope Size (envelope feeding sources which do not have hardware size sensing capability)	10 Envelope	DL Envelope
Fax media size	Letter	A4
PCL Symbol Set	PC-8	PC-850
PPDS Code Page	437	850
Universal Units of Measure	Inches	Millimeters

Warning: Modification of the printer setting Defaults causes the NVRAM space to be restored to the printer's factory settings.

PAGE COUNTS

This menu lets you view the total page counts of the printer or the page counts broken down into color and mono pages printed. Unlike in previous printers, none of these values can be changed.

Touch **Back** to return to the Diagnostics menu.

Serial Number

You can view the serial number.

Engine Setting *x*

Warning: The engine setting should not be changed without specific instructions from the next level of support.

Model Name

You can view the model name.

Configuration ID

Note: Use this only when directed by the next level of support.

The two configuration IDs are used to communicate information about certain areas of the printer that cannot be determined using hardware sensors. The configuration IDs are originally set at the factory when the printer is manufactured. However, you may need to reset Configuration ID 1 or Configuration ID 2 whenever you replace the system board. The IDs consist of eight hexadecimal characters, including 0 through 9 and A through F.

Note: When the printer detects a Configuration ID that is not defined or invalid, the following occurs:

- The default standard model Configuration ID is used instead.
- Configuration ID is the only function available in DIAGNOSTICS.
- Unless the menu is in DIAGNOSTICS, `Check Config ID` appears.

To set the configuration ID:

1. From the Diagnostics menu, navigate to:
   Printer Setup > **Configuration ID**
2. Enter the Configuration ID 1.
3. Touch the Configuration ID 2 value to select it, and then enter the new Configuration ID 2.
4. Touch **Submit** to save and validate the new IDs.
   If either ID is invalid, then the printer discards the changes and returns to the original IDs.
   If both IDs are valid, then the printer returns to the Diagnostics menu.

Reset Color Calibration

Note: Use this when the color calibration is not correct.

Reset Color Cal resets the alignment of the color planes to factory default settings.

No buttons can be pressed while the printer is resetting the color calibration. The printer automatically returns to the Diagnostics menu once the reset is complete.

Edge to Edge

When Edge to Edge is set to On, all margins shift to the physical edges of the page.

Note: PPDS interpreters ignore this setting.

Cal Ref Adj

Warning: This setting should not be changed without specific instructions from the next level of support.

Cal Ref Adj adjusts the printer's toner density and alignment setting.

Enable Edge to Edge Copy

This setting determines if the printer honors the ADF or flatbed edge erase value when copying. If Enable Edge to Edge Copy is set to On, then all copies are scanned edge to edge. If this value is set to Off, then the printer checks the "Scan edge to edge" setting in the Copy Settings menu to determine whether to scan edge to edge or apply the standard border to the copy.

Par 1 Strobe Adj

Parallel Strobe Adjustment enables you to change the amount of time the strobe is sampled in order to determine if data is available on the parallel port. Increasing the value increases the amount of time by 50 ns per increment. Decreasing the value decreases the sample time by 50 ns per increment.

Touch **Back** to return to the Diagnostics menu.

EP SETUP

EP Defaults

The EP Defaults is used to restore each of the printer settings contained in the EP Setup menu to their factory default value.

To restore the EP Setup settings to factory defaults, select **Restore**. To exit the menu without restoring the settings to the factory defaults, touch **Back**.

Fuser Temp

Warning: This setting should not be changed without specific instructions from the next level of support.

DC Charge Adjustment

Warning: This setting should not be changed without specific instructions from the next level of support.

Dev Bias Adj

Warning: This setting should not be changed without specific instructions from the next level of support.

Transfer Adjust

Warning: This setting should not be changed without specific instructions from the next level of support.

Op Point Boost

Warning: This setting should not be changed without specific instructions from the next level of support.

EVENT LOG

Display Log

Display Log shows the message that appeared on the operator panel for each event in the log, starting with the most recent. Use the touch-screen arrows to scroll through the log entries. To see more in-depth information about each event, print the event log using the Print Log menu item.

Touch **Back** to return to the EVENT LOG menu.

Print Log

The Print Log menu item prints a detailed report of each event in the log. The first page of the event log contains a Printer Information section similar to what is printed on a Menu Setting Page. Printed at the top of each page is the model name and serial number to assist in tracking each page of a report to a specific printer. The printout of the log contains the following information for each error in the log:

- Page count when the error occurred (except for 900 service RIP software errors).
- Code versions of all packages when error occurred.
- Panel message when error occurred (except for 900 service RIP software errors).
- Debug information and secondary error codes, depending on the error.

The Clear Log operation clears out the errors that print in this report. The errors listed in the Display Log operation do not necessarily match in number nor in order with the errors from the printer log.

Note: This log can be printed from the Configuration Menu, but the debug and secondary error codes are not printed on this log.

Clear Log

This menu item deletes the event log. Once the event log is deleted, the only item remaining on the log is the “Clear Log” event.

Touch **Back** to return to the EVENT LOG menu.

SCANNER TESTS

Scanner Calibration Reset

This option resets the scanner calibration values to factory default settings. This should be done after you replace the flatbed scanner unit.

Note: Be sure the scanner glass and backing material are clean before performing this test.

ASIC Test

This test initiates a scan of the scanner ASIC memory. This is a pass/fail test.

Press **Stop** (X) to clear the results message from the screen.

Feed Test

This test performs a continuous feed test of either the flatbed scanner or ADF without producing any printed output or incrementing any of the scanner-related counters.

For an ADF test, select a paper size. The ADF then performs a duplex scan using the chosen paper size settings. For a flatbed test, the scanner traverses the entire length of the flatbed.

Press **Stop** (X) to end the test.

Sensor Test

This test checks each scanner-related sensor and returns “Closed” or “Open” for each.

Sensor (ADF document set)—”Closed” means paper is not present in the ADF.
Sensor (ADF closed interlock)—“Closed” means the scanner lid is closed.
Sensor (FB scanner HP)—”Closed” means the carriage is not positioned over the home sensor.
Sensor (ADF sheet through)—“Closed” means paper is not positioned over the home sensor.
Sensor (ADF top door interlock)—“Closed” means the ADF top door is closed.
Sensor (ADF media exit sensor)—“Closed” means paper is not positioned over the exit sensor.
Sensor (ADF lower door interlock)—“Closed” means the lower door interlock is operating.
Sensor (ADF 1st scan)—“Closed” means paper is not present above this sensor.
Sensor (ADF 2nd scan)—“Closed” means paper is not present above this sensor.
Sensor (FB length 1)—“Closed” means Executive or longer paper is not present on the flatbed.
Sensor (FB length 2)—”Closed” means Letter paper is not on the flatbed, or the scanner lid is open.
Sensor (FB length 3)—“Closed” means Legal paper is not on the flatbed, or the scanner lid is open.
Sensor (ADF long media)—”Closed” means paper is not in the ADF or not over the bin sensor.
Sensor (ADF Width 1)—”Closed” means paper is not in the ADF, or the edge guide is set to Executive.
Sensor (ADF Width 2)—”Closed” means paper is not in the ADF, or the edge guide is set to Executive.
Sensor (ADF Width 3)—“Closed” means paper is not in the ADF, or the edge guide is set to Statement.
Sensor (ADF Width 4)—“Closed” means paper is not in the ADF, or the edge guide is set to Statement

ADF Magnification

Use this menu to adjust the ADF magnification from -99 to 100. The default setting is 0.

EXIT DIAGS

Select **EXIT DIAGS** to exit the Diagnostics menu and return to normal mode.

Configuration Menu

The Configuration Menu contains a set of menus, settings, and operations which are infrequently used by a user. Generally, the options made available in this menu are used to configure a printer for operation.

Note: An asterisk (*) in the value list in the following menus indicates the default value.

Entering the Configuration Menu

1. Turn off the printer.
2. Press and hold **2** and **6**.



3. Turn on the printer.
4. Hold the buttons until the splash screen appears.

The following menus and settings are available from the Configuration Menu:

Configuration Menu

Reset Separator Roll and Pick Assembly Counter	See **“Reset Separator Roll and Pick Assembly Counter” on page 3-30**.
USB Scan to Local	See **“USB Scan to Local” on page 3-30**.
Black Only Mode	See **“Black Only Mode” on page 3-30**.
Print Quality Pages	See **“Print Quality Pages” on page 3-30**.
Reports	See **“Reports” on page 3-31**.
Color Trapping	See **“Color Trapping” on page 3-31**.
Tray Insert Msg	See **“Tray Insert Msg” on page 3-31**.
SIZE SENSING	See **“SIZE SENSING” on page 3-31**.
Panel Menus	See **“Panel Menus” on page 3-31**.
PPDS Emulation	See **“PPDS Emulation” on page 3-31**.
Download Emuls	See **“Download Emuls” on page 3-31**.
Factory Defaults	See **“Factory Defaults” on page 3-31**.
Energy Conserve	See **“Energy Conserve” on page 3-32**.
Fax Low Power Support	See **“Fax Low Power Support” on page 3-32**.
Min Copy Memory	See **“Min Copy Memory” on page 3-32**.
NumPad Job Assist	See **“NumPad Job Assist” on page 3-32**.
Format Fax Storage	See **“Format Fax Storage” on page 3-32**.
Fax Storage Location	See **“Fax Storage Location” on page 3-32**.
Color Adjustment	See **“Color Adjustment” on page 3-32**.
Auto Align Adj	See **“Auto Align Adj” on page 3-33**.
Color Alignment	See **“Color Alignment” on page 3-33**.
Motor Calibration	See **“Motor Calibration” on page 3-33**.

Configuration Menu

ADF Edge Erase	See **“ADF Edge Erase” on page 3-33**.
FB Edge Erase	See **“FB Edge Erase” on page 3-33**.
Scanner Manual Registration	See **“Scanner Manual Registration” on page 3-33**.
Disable Scanner	See **“Disable Scanner” on page 3-33**.
Paper Prompts	See **“Paper Prompts” on page 3-33**.
Envelope Prompts	See **“Envelope Prompts” on page 3-34**.
Action for Prompts	See **“Action for Prompts” on page 3-34**.
Jobs On Disk	See **“Jobs On Disk” on page 3-34**.
Disk Encryption	See **“Disk Encryption” on page 3-34**.
Wipe Disk	See **“Wipe Disk” on page 3-34**.
Font Sharpening	See **“Font Sharpening” on page 3-34**.
Require Standby	See **“Require Standby” on page 3-34**.
UI Automation	See **“UI Automation” on page 3-35**.
Key Repeat Initial Delay	See **“Key Repeat Initial Delay” on page 3-35**.
Key Repeat Rate	See **“Key Repeat Rate” on page 3-35**.
Clear Custom Status	See **“Clear Custom Status” on page 3-35**.
USB Speed	See **“USB Speed” on page 3-35**.
Exit Config Menu	

Exiting the Configuration Menu

Select **EXIT Config Menu** to exit the Configuration Menu and return to normal mode.

Reset Separator Roll and Pick Assembly Counter

Use this setting to reset the value of the separator roll and pick assembly maintenance counter to zero (0) after you replace them.

USB Scan to Local

When set to Off, this setting tells the USB device driver to enumerate as a USB Simple device. When this is set to on, USB device driver enumerates as a USB Composite device (multiple interfaces).

Black Only Mode

When this setting is set to On the printer prints only grayscale printing. The default is Off. The result is similar to setting Print Mode to Black Only.

Note: This setting appears only when the PJL Password Environment variable is set to 0.

Print Quality Pages

The Print Quality Test consists of five pages. Pages one and two contain a mixture of graphics and text. The remainder of the pages only contain graphics. Use this test to identify print quality problems. The Test Pages must be printed on A4, Legal, or Letter paper.

Go to **“Print tests” on appendix page A-1** for representative samples of the pages.

Reports

From this menu you can print the Menu Settings Page or the Event Log.

Color Trapping

Color trapping is an aid to graphics and text. When text or graphics appear over other colors, a misalignment may allow white paper to show through at the borders of the colors. Color trapping increases the amount of color under the upper image so a slight misalignment does not show. This affects PCL 5e, PCL XL, PDF, and PostScript printing.

Increasing the value increases the amount of color remaining beneath the black content, in increments of 1/600 of an inch.

1. Select **Color Trapping** from the Configuration menu.
2. Select the value or **Off**. The range is 1 to 5, and the default value is 2.
   Press (+) to increase the value.

Tray Insert Msg

This setting controls how long, in seconds, the tray insert message appears when a tray is inserted.

The values are **Disabled** and 1 to 90. The default value is 5.

SIZE SENSING

Automatic size sensing can be disabled or enabled in this menu. Only paper sources that support Auto Size Sensing are displayed.

1. Select **SIZE SENSING** from the Configuration menu.
2. Select a tray. Only those trays with size sensing appear. Select **Auto** to turn size sensing on for that tray, or select **Off** to disable size sensing.
3. Touch **Back** to exit.

Panel Menus

Disabling Panel Menus prohibits users from modifying any setting or executing any operation available in the Ready Menu group.

PPDS Emulation

This appears only if the PPDS interpreter is available.

Download Emuls

Warning: This setting should not be changed without specific instructions from the next level of support.

This setting temporarily disables downloaded emulators for troubleshooting purposes. All downloaded emulators are re-enabled automatically after two PORs.

Factory Defaults

The customer can restore either the network settings or the base printer settings to their factory default values. When Restore Base is selected, non-critical base printer NVRAM settings are restored. When Restore STD Net is selected, all network NVRAM settings are restored to their factory default settings. This option is available only

on models with an integrated network adapter. When Restore LES is selected, all non-standard applications are removed and all framework and standard application settings are reset to factory default settings.

Energy Conserve

When Energy Conserve is on, the customer does not have access to disable the Sleep function. When Energy Conserve is off, Disable appears as an additional menu item in the Sleep menu. This setting only affects the values that are displayed in the Sleep menu.

Fax Low Power Support

This menu has the following settings:

Auto—The printer checks the Caller ID Pattern setting to determine if the fax chip should enter low power mode.
Permit Sleep—The fax chip enters low power mode when needed, regardless of the Caller ID Patter setting.
Disable Sleep—The fax chip never enters low power mode.

Min Copy Memory

This menu lets you select the amount of memory dedicated to storing copy jobs. The values may be 25 MB, 35 MB, 50 MB, 80 MB, and 100 MB. The default is 80 MB. Values will be displayed only if the amount of installed DRAM is at least twice the amount of the value. For example, at least 200 MB of installed DRAM is required to display the 100 MB selection.

NumPad Job Assist

When this setting is set to On, a user can initiate scanner-related jobs, and enter values for a limited number of settings related to those jobs, using the keypad.

Touch **Back** to exit without changing the setting.

Format Fax Storage

This setting enables you to format the non-volatile storage used for storing faxes.

Note: If an advanced password has been established, you must enter this password in order to change the setting.

Fax Storage Location

This menu allows you to select either NAND or the printer hard disk (Disk) as the fax storage location. If the printer hard disk is removed, then this menu no longer appears.

Color Adjustment

This is used to allow the printer to do automatic color adjustments on files to be printer. Color Adjustment enables you to select the amount of color adjustments the printer makes. You can select from the following:

- Disabled
- Fewest color adjustments
- Fewer color adjustments
- Normal (default setting)
- Better color accuracy
- Best color accuracy

Auto Align Adj

The printer automatically runs a Toner Patch Sensing (TPS) diagnostic after certain key events. If necessary, the printer will automatically adjust the alignment.

If Auto Align Adj is set to Off, then the diagnostic still runs, but the printer will not use the resulting data to automatically adjust alignment. This could eventually lead to the user having to adjust alignment manually. Therefore, Auto Align Adj should not be set to Off during normal printer usage.

Color Alignment

When you select Color Alignment, the printer generates several alignment pages. Follow the instructions on the pages to fine tune the color alignment of the printhead.

Motor Calibration

This test synchronizes the aligner and fuser motor speeds with the transfer belt. Eight blank pages feed during the test, and all buttons are disabled until the test finishes.

Note: Motor Calibration must be performed using 600 dpi resolution and with duplex disabled.

ADF Edge Erase

The ADF Edge Erase setting specifies, in millimeters, the size of a border around the scanned image that will be erased. For copies, the printed page will always have a at least a 2-mm no-print border. The larger of the 2-mm no-print border and the Edge Erase setting will be used in this situation.

FB Edge Erase

The FB Edge Erase setting specifies, in millimeters, the size of a border around the scanned image that will be erased. For copies, the printed page will always have a at least a 2-mm no-print border. The larger of the 2-mm no-print border and the Edge Erase setting will be used in this situation.

Scanner Manual Registration

Use this menu to adjust the scanner margins after you replace any of the following parts:

- Flatbed scanner assembly
- ADF unit assembly
- Flatbed scanner CCD assembly
- ADF duplex CCD assembly

For more information, see **“Adjusting scanner registration” on page 3-60**.

Note: The Scanner Manual Registration menu does not appear if Disable Scanner is set to Auto Disabled.

Disable Scanner

Use this setting to enable or disable the flatbed scanner and ADF.

Note: Auto Disabled can only be saved by the printer in response to failed scanner operation. Users cannot save this setting.

Paper Prompts

Setting Paper Prompts controls which tray a change prompt is directed to when paper is sensed to be the wrong size.

Envelope Prompts

Env Prompts controls which tray a change prompt is directed to when the envelopes are sensed to be the wrong size.

Action for Prompts

This setting enables users to have the printer resolve media change prompt situations automatically. Such prompts occur when the selected media for the job is not available when the job prints. This setting applies only to jobs that cannot be parked.

- Prompt user (default setting)—The user must respond to the prompt and choose one of the following options each time.
- Continue—The job prints on the closest available media, and the printer preserves the requested size and type specifications (e.g., Bond or Transparency). If the available media is smaller than the requested size, the printer crops the print image as needed.
- Use Current—The job prints on the media currently available and uses the size and type specifications of the available media instead of the original job. If the media is smaller than the requested size, the printer crops the print image as needed.

Jobs On Disk

This setting appears only if a hard disk is installed. Jobs can be deleted from the hard disk. Settings are Delete and Do Not Delete (default). The Delete setting does not affect Print and Hold or parked jobs.

Disk Encryption

This setting appears only if a hard disk is installed and Disk Encryption is enabled.

Warning: When the settings are changed, all data on the hard disk is deleted.

Wipe Disk

This setting performs a wipe of the printer hard disk, erasing all data.

Warning: Wipe Disk deletes all data on the printer hard disk, including downloaded fonts, macros, and held jobs. Do not initiate a disk wipe if you have information on the printer that you want to save.

- Wipe disk (fast)—This is a single-pass wipe that overwrites all data and the file system. This wipe is faster but less secure since it is possible to retrieve the deleted data with forensic data retrieval techniques.
- Wipe disk (secure)—This multiple-pass wipe overwrites all data without rewriting the file system. This wipe is DoD 5220.22-M compliant since the deleted data is irretrievable.

Font Sharpening

Font Sharpening allows the user to adjust the value of the high frequency screens used for font data. For example, if the value is 24, all fonts 24 points and less use the high frequency screens. The default value is 24.

This feature works only in PostScript emulation.

Require Standby

If set to Off, this setting disables Standby Mode in the General Settings menu.

UI Automation

Once enabled, this setting creates an “ENABLE_UI_AUTOMATION” file in the shared directory. As long as this file exists, the printer permits external developers to test the stability of their applications against the printer to ensure that their applications have an appropriate level of stability. Disabling this setting deletes the file.

Key Repeat Initial Delay

This setting determines the length of delay before a repeating key starts repeating. The default setting is 1 second. You can adjust the setting by .25 second increments.

Key Repeat Rate

This setting indicates the number of presses per second for repeating keys. The default setting is 15 presses per second.

Clear Custom Status

This setting erases any custom messages the user has created for the Default or Alternate custom messages.

USB Speed

This setting determines the speed at which the USB port reads and writes data from flash drives. Auto is the default setting. Setting the USB Speed to Full disables the high-speed capabilities of the port.

Exit Config Menu

Press **Select** to exit the Configuration menu and reboot the printer.

Theory of operation

Paper path, transport components

In order for an image to be printed, the paper or specialty media has to be moved from an input source (such as a tray) into the printer and eventually exit into an output source.

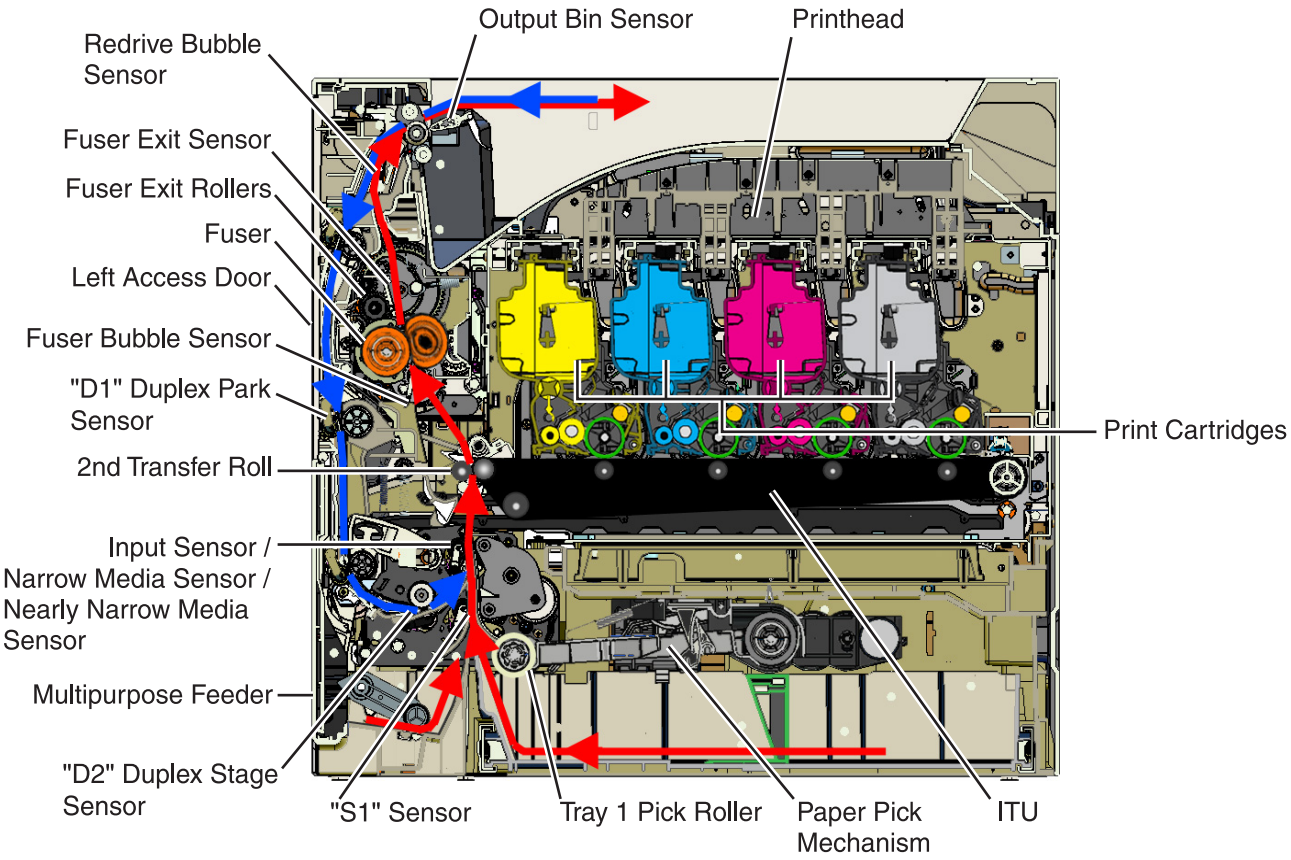
The most important component in this process is this paper itself. Old, damaged, or out-of-specification paper can and will cause feed and transport problems. If you encounter problems, you should always check the paper first **“Media guidelines” on page 1-8**. In addition, it is always good practice to check the printer and driver settings to see if the paper being used matches the user’s settings. It is not uncommon to find a user printing on cardstock with the printer programmed to print on a plain paper setting.

The printer’s feed and transport components can fail and cause paper jams or other feed and transport problems. These components should be examined for damage or wear and replaced if necessary.

Paper path Information

The printer has a simple “C”-shaped paper path (see the picture below). The paper paths are shown in red while the paper paths for duplex are shown in blue. Paper is fed from the bottom of the printer from the paper tray, or multipurpose feeder, and travels upward along the left side of the printer.

There is a duplex unit on this printer. The duplex unit is attached to the inside of the left access door. Duplexing is described later.



Transport components

The paper is fed from the tray into the printer by a pick roll and sent to two sets of feed rollers which time the paper to enter the Electrophotographic Process (EP Process) at just the right moment. The feed rollers push the paper to the transfer roll (ITU) where the image is transferred to the page.

The transfer roller moves the paper to the fuser where heat and pressure are applied to the page. The fuser rollers push the paper toward the exit bin and past the exit sensor. The exit rollers guide the paper into the output bin.

Note: If the printer posts a paper jam message but no paper is found, paper dust or paper particles may have fallen into one of the sensor eyes. Use a can of compressed air to gently clean the sensor.

Bubble sensors

The printer uses two bubble sensors to adjust the speed of the fuser motor to better avoid image smearing and paper jams.

The fuser bubble sensor, located before the fuser in the paper path, senses the bubble, or amount of curve in the paper, when it hits the fuser rollers. If the curve is too great, the fuser motor speeds up to avoid causing a paper jam. If the curve is too small, the motor slows to avoid smearing the image.

The redrive bubble sensor, located after the fuser exit rollers in the paper path, senses the bubble in the paper as it exits the fuser. It then adjusts the fuser motor speed as necessary to avoid jams and smearing on the trailing edge of the paper.

Duplexing (models with duplex support only)

Printers with duplex support use a secondary paper path to print on the second side of a sheet of paper. The following steps summarize the duplexing process:

After the first side of the paper is printed and the trailing edge of the paper clears the fuser exit sensor, the redrive motor engages to reverse the paper direction and feed it into the duplex unit.

Note: While the sheet is being transported through the duplex unit, it is the only piece of paper being processed by the print engine. A user should not attempt to insert a piece of paper into the manual paper feed while a duplex job is being processed. This would cause a paper jam error.

After the D1 sensor in the duplex unit is triggered by the leading edge of the paper, the speed of the paper is adjusted on its way to the D2 sensor to accommodate the speed of the transfer belt, ensuring the proper registration of the image on the paper. The paper then re-enters the primary paper path to travel to the ITU, and the second image is transferred to the reverse side of the paper.

Once the imaged is transferred, the paper returns to the fuser, the fuser exit rolls, and the output bin.

Print engine theory

Electrophotographic Process (EP Process)

The method that all laser and LED printers use to print is called the electrophotographic process. These machines use differences in charge to manipulate and move toner from the print cartridge to the printed page.

Even though the basic EP Process is the same for every laser and LED printer, the specifics for each printer are different.

Electrophotographic Process basics

This printer is a single-laser printer that use four print cartridges (cyan, yellow, magenta, and black) to create text and images on paper.

The printer has four photoconductors (sometimes called a photodeveloper cartridge or PC unit) built into the print cartridges and an image transfer unit (ITU). Each color toner is painted to its respective photoconductor at the same time. The transfer belt passes under the four photoconductors and the four-color image is produced and transferred to the paper in one pass.

During the printing process, the printer follows the six basic EP Process steps to create its output to the page. These six steps are:

1. Charge the photoconductor.
2. Expose the photoconductor with the laser.
3. Develop toner on the photoconductor.
4. First transfer to the ITU, and second transfer to the paper.
5. Fuse the toner to the paper.
6. Clean/erase the photoconductor and the ITU.

In summary, the printer's controller board receives print data and the command to print. The controller board then initiates the print process. The controller board is the command center for the EP process and coordinates the various motors and signals.

The high-voltage power supply (HVPS) sends charge to various components in the EP process. The laser fires on the photoconductors and alters the surface charge relative to the planed image for each photoconductor. Each photoconductor rotates past its respective developer roll, and toner is developed on the surface of each photoconductor. The four separate color images are then transferred to the transfer belt on the ITU as it passes under the photoconductors. After the image is transferred to the transfer belt, the photoconductors are cleaned and recharged.

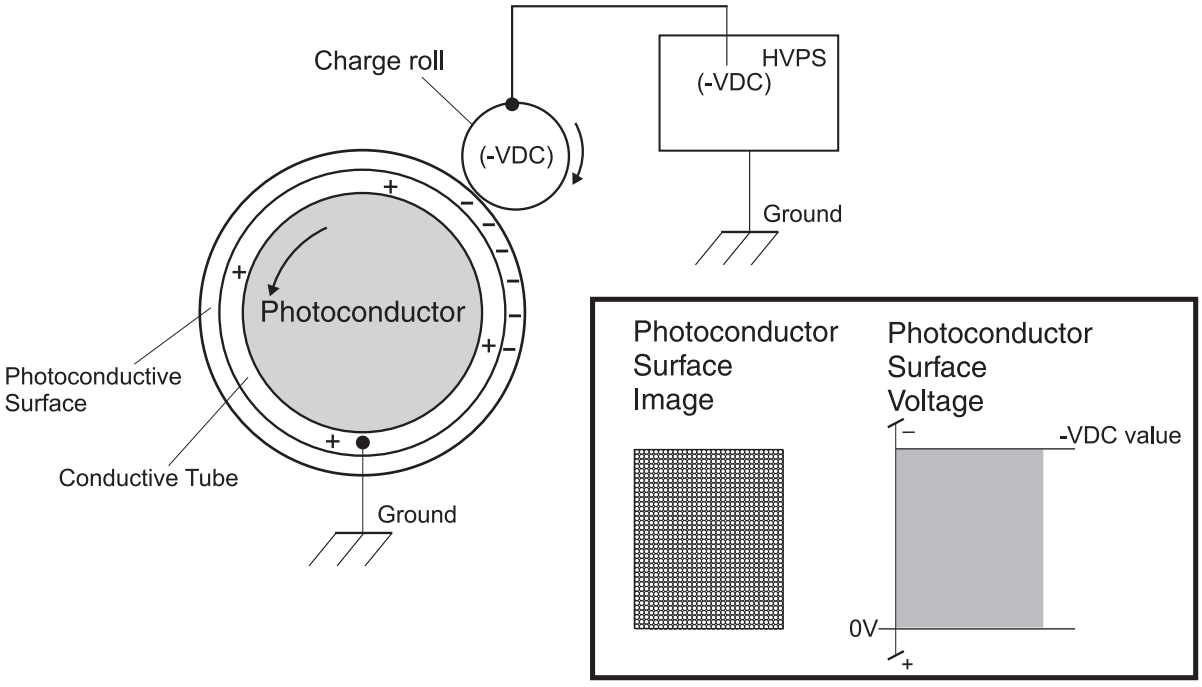
The transfer belt carries the four-colored image towards the transfer rolls. Paper is picked up from the tray and carried to the transfer roll where the image is transferred from the transfer belt to the paper. The timing of the paper pick is determined by the speed of the transfer belt.

The paper is carried to the fuser rollers where heat and pressure are applied to the page to permanently bond the toner to the page. The fuser rollers push the paper into the output bin. The transfer unit is cleaned and the process begins again for the next page.

Step 1: Charge

During the charge step, voltage is sent from the HVPS to the charge roller beside each of the four photoconductors. In this printer, the charge roll is part of the photoconductor unit in the print cartridges.

The charge roller puts a uniform negative charge over the entire surface of the photoconductor to prepare it for the laser beam.



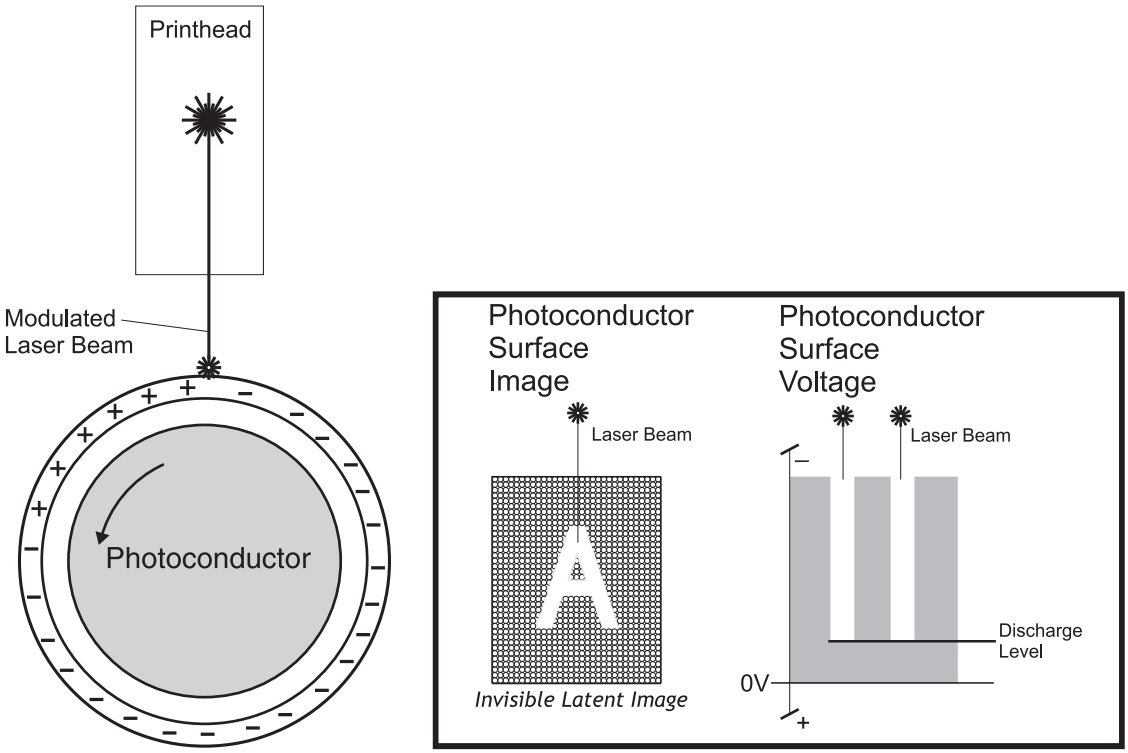
Service tips

- If the surface of the charge roller is damaged (such as a nick or pit), it will cause the charge on the photoconductor to be uneven. This will cause a repeating mark on the printed page. Check the service manual for the repeating marks table.
- If the charge roller is severely damaged, the surface of the photoconductor will not be properly charged and heavy amounts of toner will be deposited on the photoconductor. This will cause the printed page to be saturated with 100% of each color. The imaging basket will need to be replaced sooner.

Step 2: Expose

During the expose step, the laser fires a focused beam of light at the surface of each photoconductor and writes an invisible image, called a latent image or electrostatic image, for each color.

The laser beam only discharges the surface where the beam hits the photoconductor. This creates a difference in charge potential between the exposed area and the rest of the photoconductor surface.



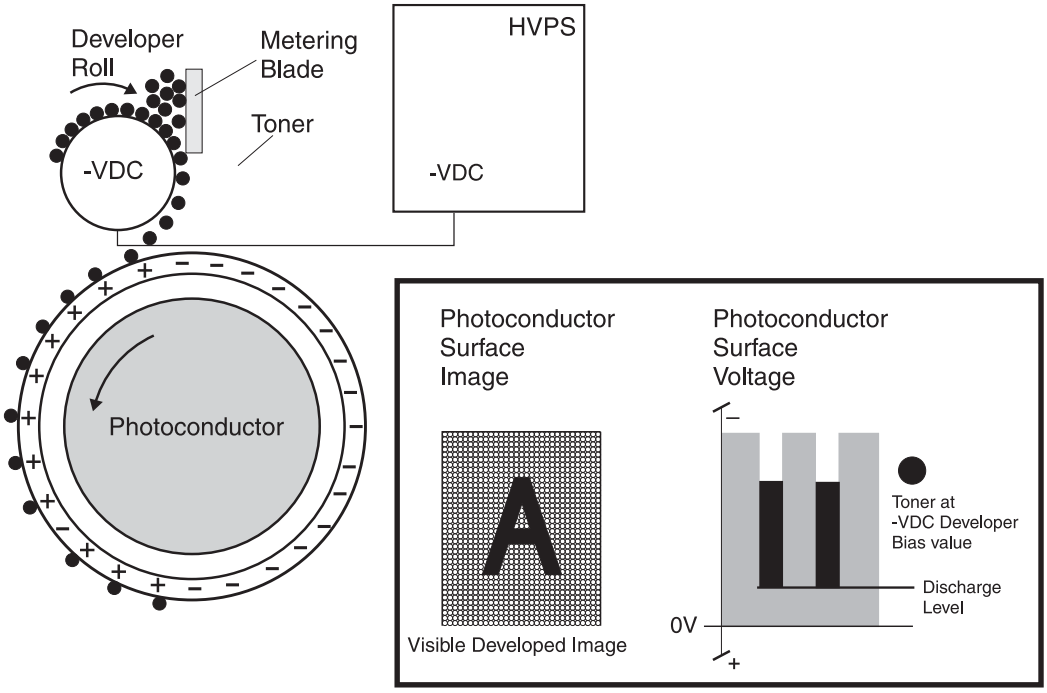
Service tips

- The laser beam passes through a glass lens as it exits the laser unit. If this lens gets contaminated with toner or other debris, it will cause vertical streaking of white/lightness on the page. Cleaning the lens will solve the problem.
- Never touch the surface of the photoconductor with your bare hand. The oil from your skin may cause a charge differential on the surface, and toner will not properly stick. The result would be repeating blotches of voids/light print on a page. Then the photoconductor will have to be replaced.
- The surface of the photoconductor is coated with an organic substance that makes it sensitive to light. Be sure to cover the photoconductor when you are working on the printer so you don't "burn" it. If exposed to light for too long, it will cause light/dark print quality problems and will have to be replaced.

Step 3: Develop

Once the laser exposes the photoconductor, the HVPS sends charge to the developer roll. For each color, the print cartridge engages the photoconductor so it is in contact with the surface. Because of the charge difference between the toner on the developer roller and the electrostatic image created by the laser, the toner is attracted to areas of the photoconductor surface exposed by the laser.

This process would be similar to using glue to write on a can and then rolling it over glitter. The glitter sticks to the glue but won't stick to the rest of the can.



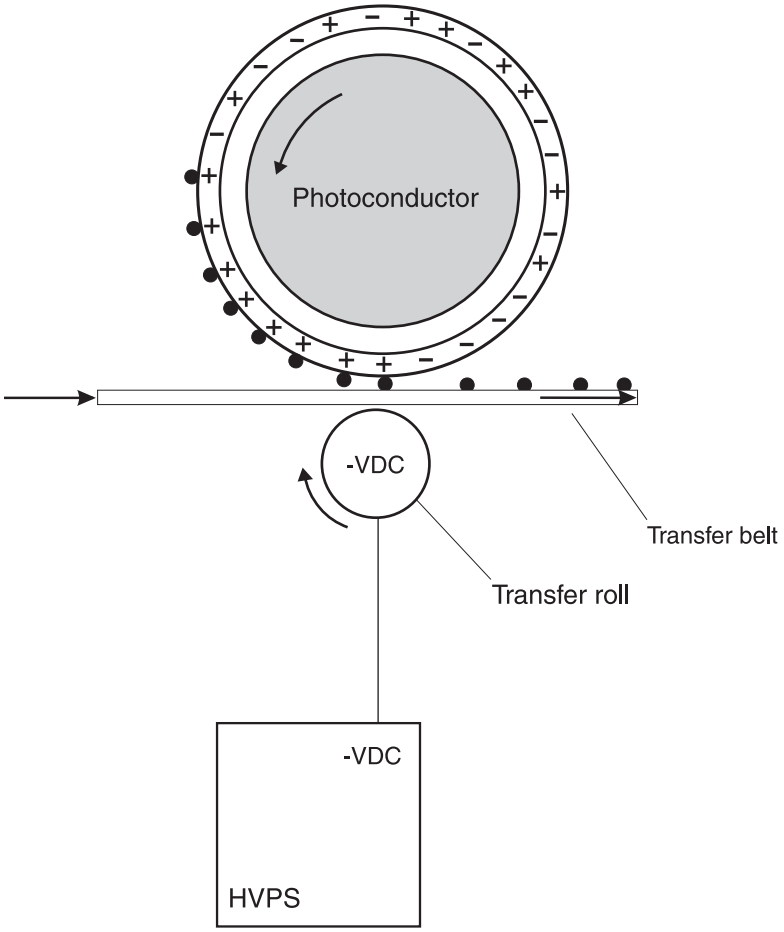
Service tips

- Never touch the surface of the developer roller with your bare hand. The oil from your skin may cause a charge differential on the surface, and toner will not stick properly. The result would be repeating blotches of voids/light print on a page. Then the affected cartridge will have to be replaced.
- If the developer roller is damaged, it will not contact the surface of the photoconductor properly. The result could be repeating marks, thin vertical voids, or thin vertical lines of color on the printed page. Check the surface of the developer for damage.

Step 4a: First transfer

When the latent images are developed on each Photoconductor, the HVPS sends voltage to the 1st Transfer Rollers inside the ITU.

The charge difference between the developed toner image on the Photoconductor surface and the 1st Transfer Roller causes the images to transfer to the surface of the ITU belt for each color. This takes place by a direct surface-to-surface contact between the Photoconductors and the ITU transfer belt.



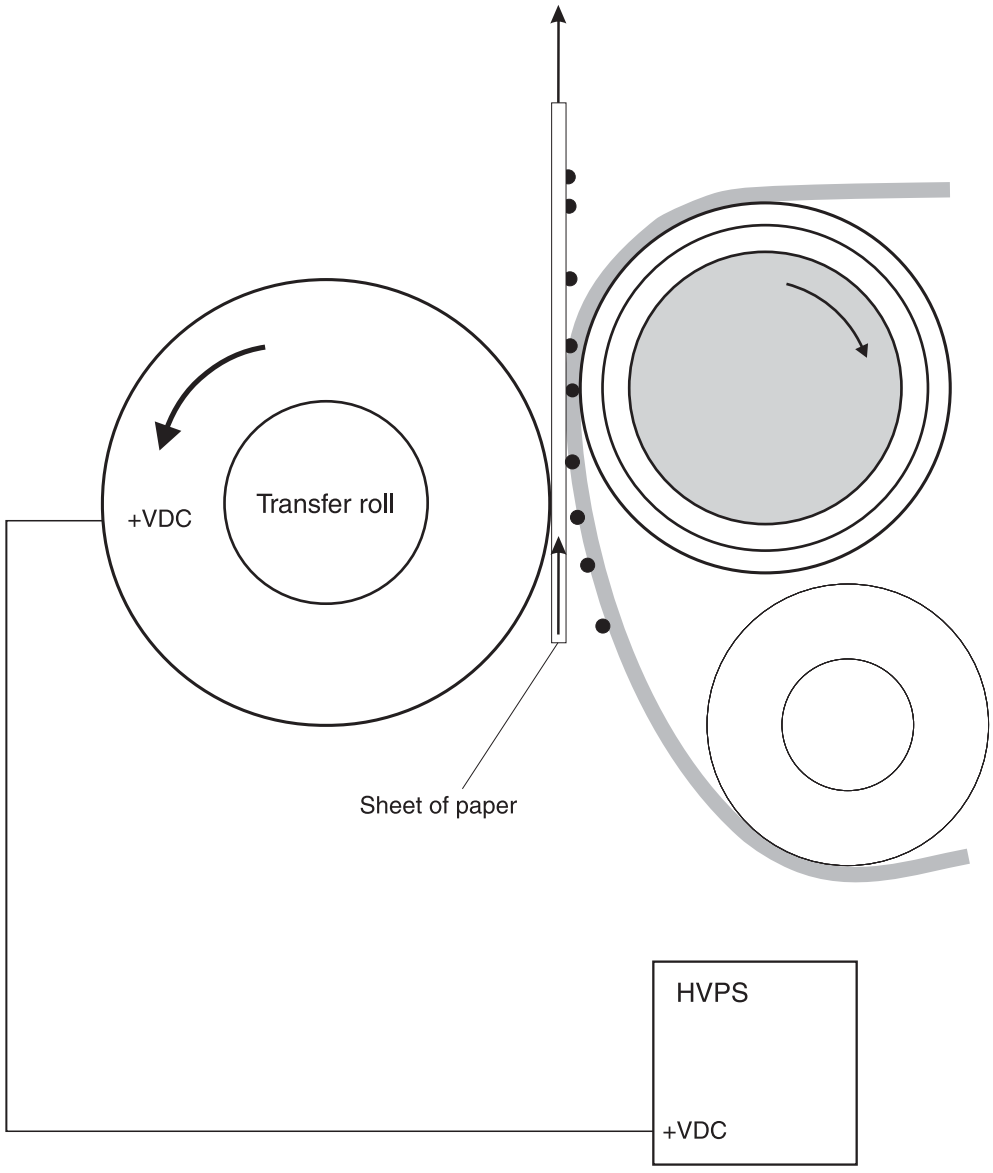
Service tips

- Never touch the surface of the ITU belt with your bare hand. The oil from your skin will cause a charge differential on the surface, and toner will not stick properly. The result would be repeating blotches of voids/light print on a page. Then the ITU belt will have to be replaced.
- Do not use solvents or other cleaners to clean the ITU belt surface. No matter how careful you are, the surface will be compromised, causing scratches or a charge differential that will produce voids or light blotches on the printed page. Then the ITU belt will need to be replaced.

Step 4b: Second transfer

Once the four planes of color are transferred to the transfer belt from the photoconductors, the image is carried toward the transfer roll, which is also part of the ITU. Based on the speed of the transfer belt, the proper time to send the signal to pick the paper from an input source is determined. The pick is timed so that the paper passes between the transfer belt and transfer roll when the image on the belt reaches the second transfer area.

The HVPS sends voltage to the transfer roll to create a positive charge. Once the image on the transfer belt reaches the transfer roll, the negatively charged toner clings to the paper and the entire image is transferred from the transfer belt to the paper.



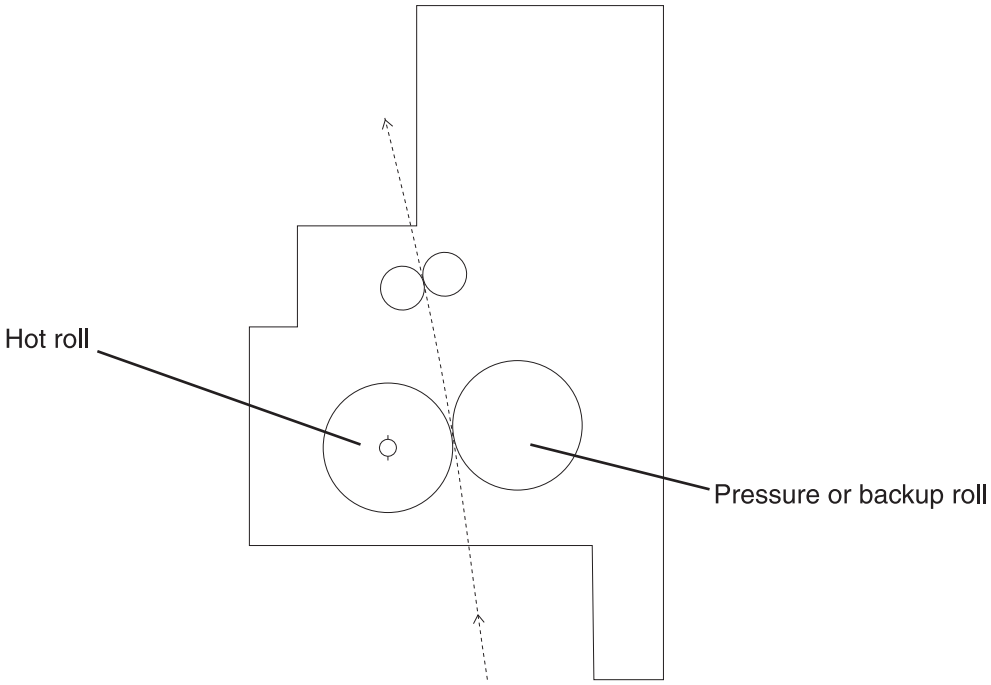
Service tips

- If the transfer roller has nicks, pits, or flat spots on it, the surface doesn't properly come into contact with the paper and transfer unit. This will cause voids or light spots on the page or repeating voids/ light areas.
- If the transfer roller does not engage the transfer unit, or does not have voltage coming from the HVPS, the toner will not fully transfer from the transfer unit; the entire page will be very light or blank. Any toner that does transfer will be due to a "contact" transfer instead of a "charge" transfer. Check the HVPS contacts to the transfer roller.

Step 5: Fuse

Once the image has been fully transferred to the paper, the transfer roll helps move the paper into the fuser area.

The fuser applies heat and pressure to the page to melt the toner particles and bond them permanently to the paper. The fuser moves the paper to the redrive rolls which move the paper to the output bin.



Service tips

- If the fuser rollers are damaged, they can cause toner to be pulled off the page or cause paper jams.
- Toner that rubs off a printed page can be a sign of a malfunctioning fuser or an improper paper setting. Always check the paper type setting before replacing the fuser. A common mistake is to print on heavier media (such as cardstock) with the paper type set to plain paper.
- When removing paper jams from the fuser, be sure to use the fuser release tabs to relieve the pressure on the page. In addition, never pull unfused toner through the fuser if you can help it; try to back the jammed page out of the fuser in the opposite direction it was travelling.

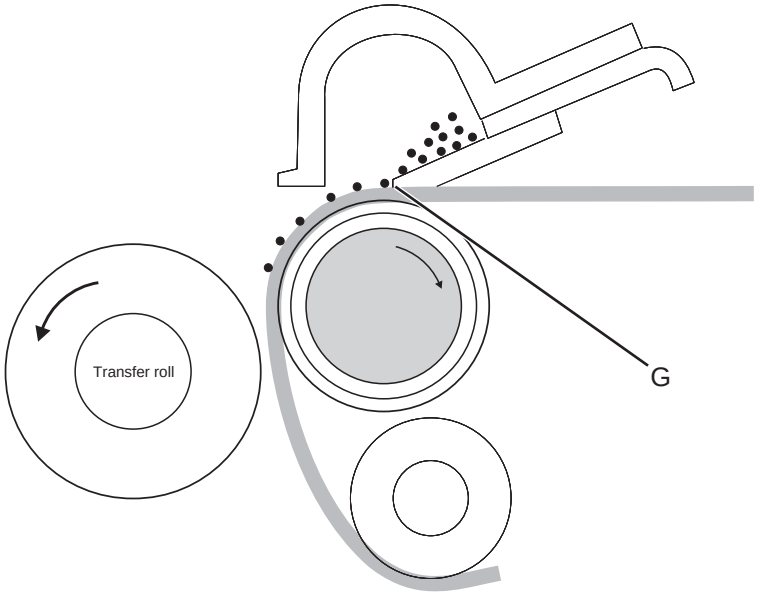
Step 6: Clean/Erase

There are two main cleaning processes that take place during the EP Process. One process cleans the transfer belt, and the other cleans the photoconductors.

Transfer Unit Clean

Once the toner image on the transfer belt has been transferred to the page, the transfer belt rotates around and is cleaned by the cleaning blade (G). This occurs for every page that is printed.

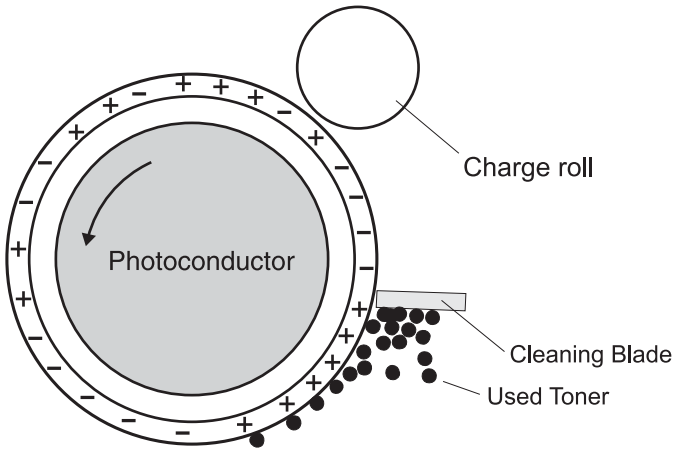
After the toner is moved to the cleaning blade, the toner is moved to the waste toner area using an auger system.



Photoconductor Clean/Erase

After each plane of color has been transferred to the transfer belt from the photoconductors, a cleaning blade (H) scrapes the remaining toner from the surface of each photoconductor. This is the clean/erase process.

Now the photoconductor surface is prepared to begin the EP Process once again. This cleaning/erasing cycle happens after each plane of color is transferred to the transfer belt.



Scanner theory

A document sheet set in the document tray assembly is fed through the ADF feed roll, ADF pick roll, and ADF separation roll assembly. The document image is scanned at the scan position, and the document sheet is ejected through the ADF feed-out roll assembly and the ADF exit roll assembly. For a duplex document sheet, the image on side 1 and the image on side 2 are scanned at the same time in the same pass.

Described below is the overview of the steps before document scanning and that of simplex and duplex document scanning modes.

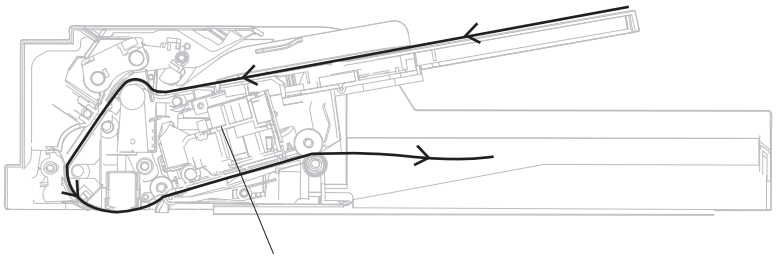
Setting a document

When a document is set on the document tray assembly and the lead edge is pushed into the tray until it stops, the ADF document set actuator moves to place the sensor (ADF document set) in the unshielded (unblocked) state. Then the machine recognizes that the document has been set properly, turning on the document set LED.

Preparation for feed

1. Pressing the start button with the document set in the document tray will start feeding the document.
2. The pick roll moves down and presses the document on the document tray to enable document feed.
3. The pick roll moves down with the normal rotation of the ADF feed drive motor assembly and it moves up with the reverse rotation of the ADF feed drive motor assembly.
4. Upon completion of document feed, the pick roll returns to the normal (raised) position.

Shown below is the document feed path from the ADF.



Simplex and duplex document feed

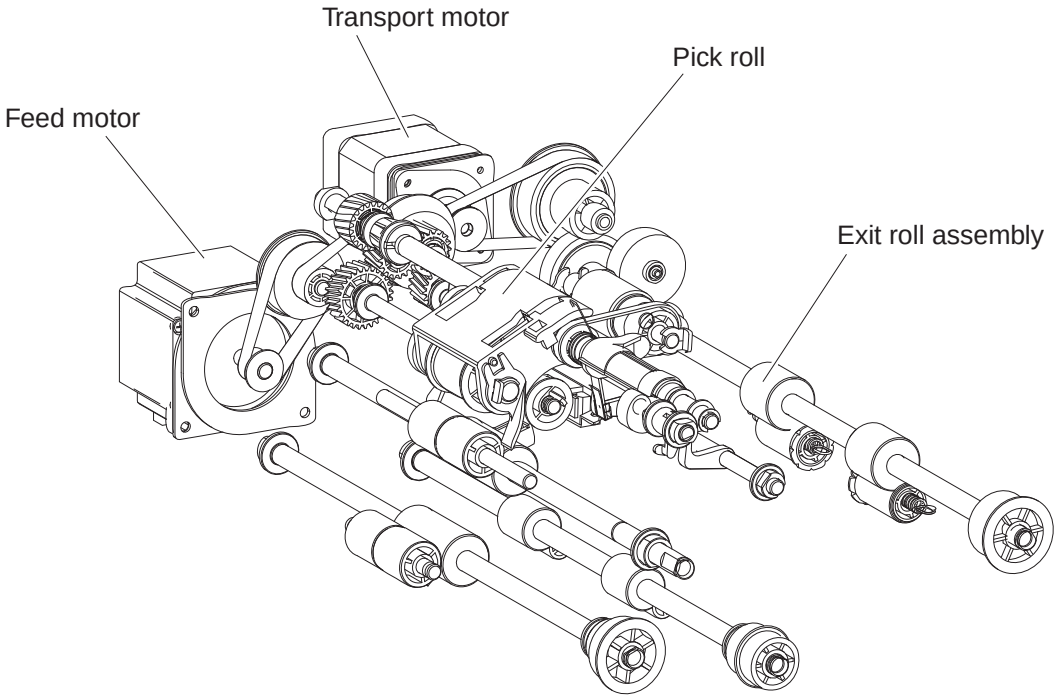
For two simplex document sheets, feed is performed in the following sequence:

1. The first document sheet is fed to the ADF transport roll assembly.
2. The document is fed to the ADF registration roll assembly, and then fed to the scan feed reference position.
3. The document sheet is fed at the feed speed corresponding to the selected magnification, and the image on it is scanned with the exposure lamp at the scan position.
4. As the image is scanned, the document sheet is fed and ejected by the ADF feed-out roll assembly and ADF exit roll assembly that are driven by the ADF transport motor.
5. When the trail edge of the first document sheet has passed through the sensor (sheet through), the feed of the second document sheet starts.

Duplex document

For duplex document sheets, feed is performed in the following sequence:

1. The first document sheet is fed to the ADF transport roll assembly.
2. The document is fed to the ADF registration roll assembly, and then fed to the scan feed reference position.
3. The document sheet is fed at the feed speed corresponding to the selected magnification, and the image on it is scanned with the exposure lamp at the scan position.
4. As the image is scanned on both sides, the document sheet is fed and ejected by the ADF feed-out roll assembly and ADF exit roll assembly that are driven by the ADF transport motor.



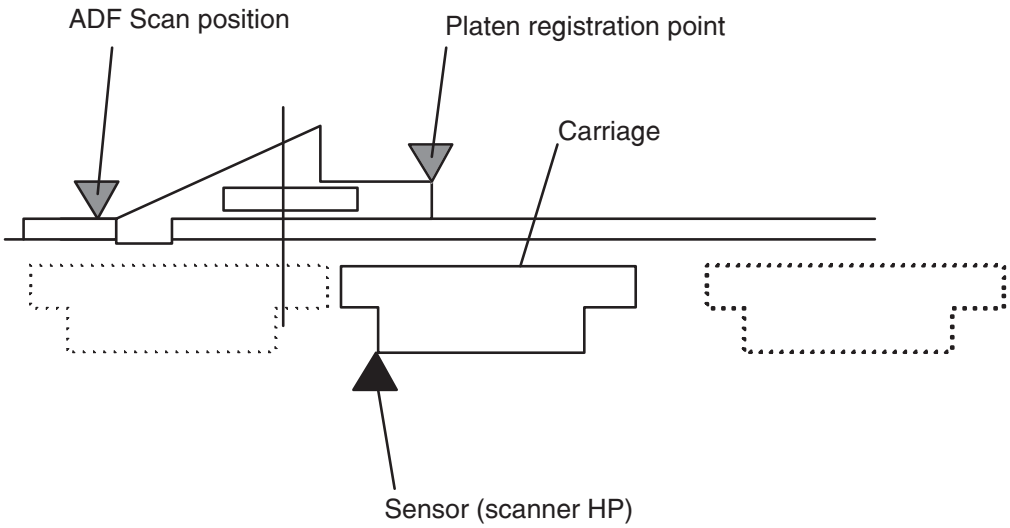
Document scanning at ADF

The document scanning section of this machine consists of a scanner that reads a single-sheet document placed on the platen glass and a document feeder that can transport a multiple-sheet document for one or two-sided scanning.

Document scanning at platen

Shown below is the operational overview of document scanning at the platen:

1. The scanner CCD assembly travels to read the document.
2. The exposure lamp is installed on the scanner CCD assembly. As the scanner CCD assembly travels, the document on the platen glass is scanned and exposed with the exposure lamp.
3. The image data is read with the scanner CCD image sensor assembly.



Names and functions of components

The sections below describe the functions of main components of the scanner.

Scanner unit assembly

Sensor (FB length APS 1), Sensor (FB length APS 2), Sensor (FB length APS 3)

The document length in the slow scanning direction is detected by a combination of the three reflector sensors.

Switch (ADF closed interlock)

A switch that detects whether the ADF is open and determines the timing of platen document size detection.

Scanner drive motor assembly

A stepping motor that drives the scanner CCD assembly.

Sensor (FB scanner HP)

A sensor that detects the HP position of the flatbed scanner CCD assembly.

Scanner exposure lamp

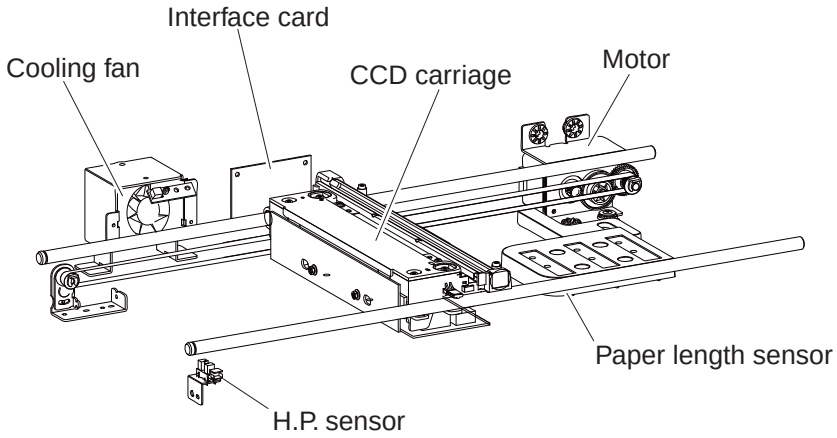
A Xenon lamp to which the document is exposed.

Scanner controller card assembly

A card that controls the scanner section.

Scanner cooling fan

A fan that prevents overheating of the scanner controller card assembly and exposure lamp.



ADF

Sensor (ADF long media)

The document length in the slow scanning direction is detected by this sensor.

Sensor (ADF width 1), Sensor (ADF width 2), Sensor (ADF width 3), Sensor (ADF width 3)

The document length in the fast scanning direction is detected by the combination of these three sensors detecting the position of the tray on which the document is set.

Sensor (ADF document set)

A sensor that detects the presence or absence of a document on the ADF document tray.

ADF Document Set LED

An LED that illuminates when a document is set on the ADF Document Tray.

Switch (ADF top door interlock)

A switch that detects whether the ADF top door assembly is open.

ADF controller card assembly

A card that controls the ADF unit assembly. The ADF controller card assembly is connected to and controlled by the Scanner controller card assembly.

Sensor (ADF sheet through)

The ADF sensor (ADF sheet through) is installed immediately downstream from the Feed/pick roll assembly to detect completion of document feed.

Sensor (ADF 1st scan)

The ADF sensor (ADF 1st scan) is installed just upstream of the scanning surface and is used to for scanning timing operations.

Sensor (2nd scan)

The ADF sensor (ADF 1st scan) is installed just down stream of the scanning surface and is used to for scanning timing operations.

Sensor (ADF media exit)

The sensor (ADF media exit) is used to detect when scanned media has exited the ADF.

ADF feed motor assembly

The feed motor assembly is a stepping motor that rotates the pick roll and feed roll in the reverse direction (CCW direction) and rotates the ADF transport roll assembly in the normal direction (CW direction).

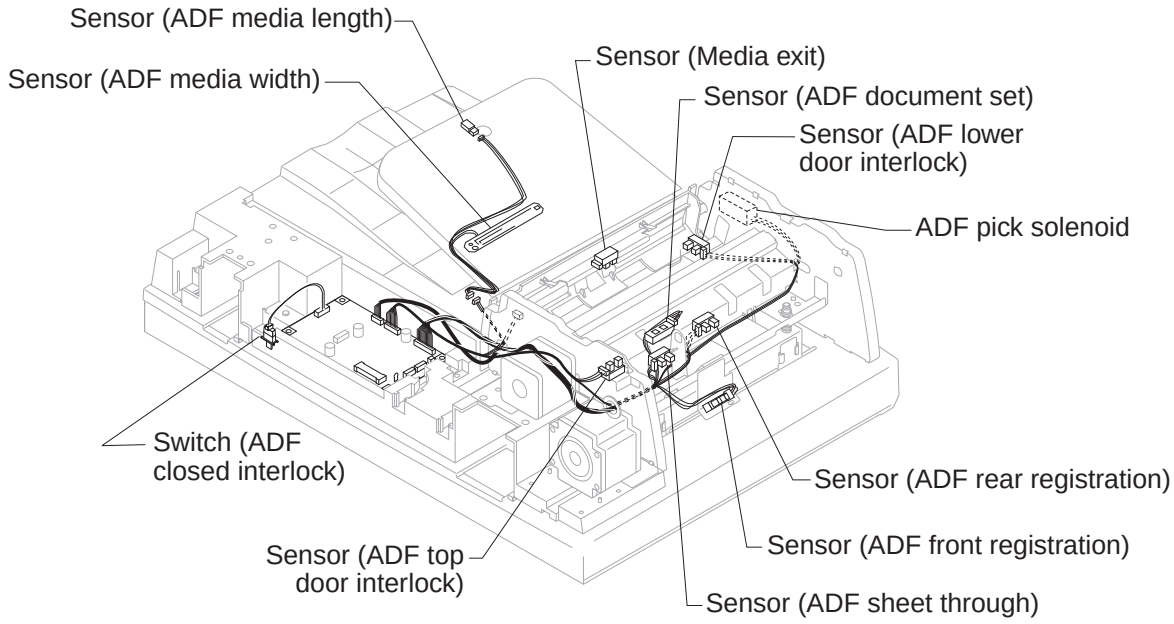
When this motor rotates in the reverse direction, the ADF transport roll assembly stops.

ADF transport motor

The ADF transport motor is a stepping motor that rotates the ADF registration roll assembly, ADF feed-out roll assembly, and ADF exit roll assembly.

ADF pick solenoid assembly

This solenoid causes the ADF pick roll to be raised and lowered in order to properly pick the media.



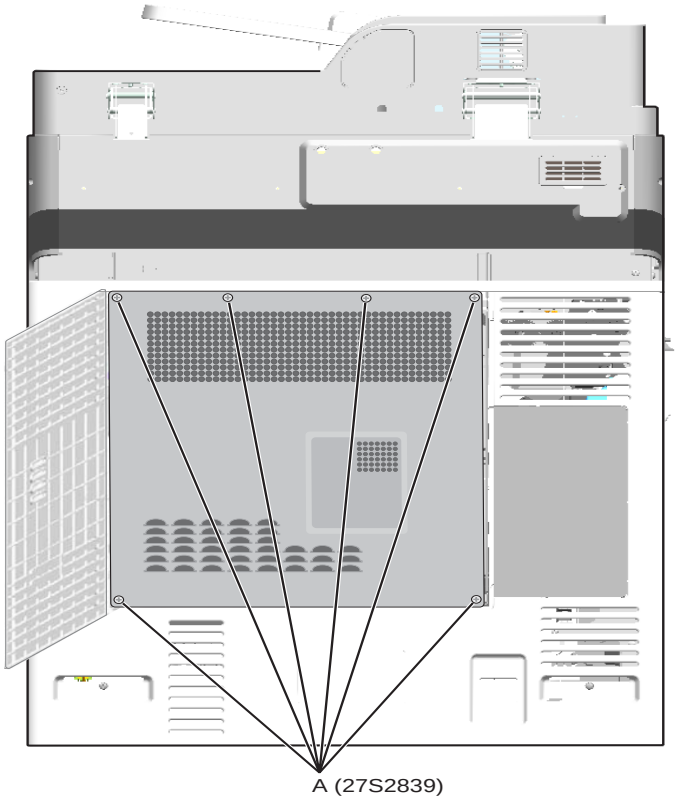
Printhead verification

You can verify that the printhead is the failing FRU by following this procedure:

1. Turn the printer off, and remove the power cord from the outlet. Remove all cords and cables from the printer before beginning.
2. Place the printer on a corner of a work area so the front and back can be accessed.

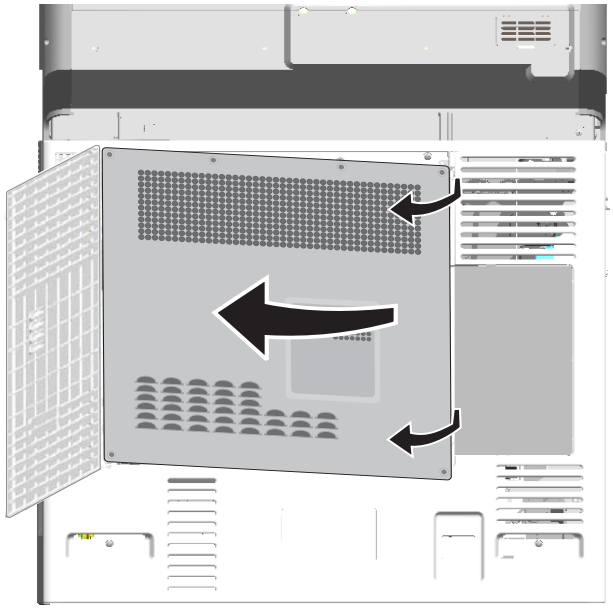
	**CAUTION—POTENTIAL INJURY:** The printer weight is greater than 32 kg (70 lb) and requires three or more trained personnel to move it safely.

3. Remove the system board shield.
   a. Open the system board shield door, and remove the six screws (A) on the system board shield.



A (27S2839)

b. Swing the shield open about an inch, and then slide the shield to the left to remove it.

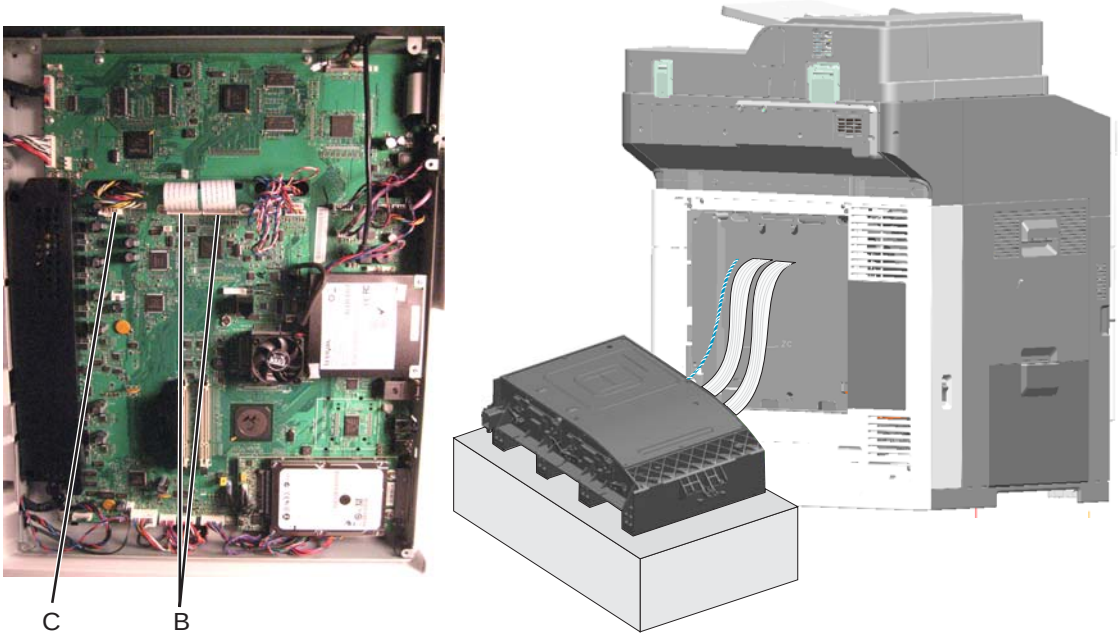


4. Carefully unplug the printhead video cables (B) and the printhead motor cable (C) from the system board, and carefully connect the printhead video and motor cables from the new printhead to the system board.
Note: Use the packaging that came with the printhead FRU to prop up the printhead.



CAUTION—Possible eye damage.

Do not look at the printhead laser while it is turned on. Always point the printhead laser down into the packaging as shown. The laser can cause damage to your eyesight or the eyesight of others.



5. Connect the power cord to the outlet and to the printer. Reconnect any cords.
6. Turn on the printer, and check for the error message:

- If the error still appears, replace the system board. See **"System board removal" on page 4-142**.
- If the error no longer appears, replace the printhead. See **"Printhead removal, installation, and alignment" on page 4-117**.

Adjustments

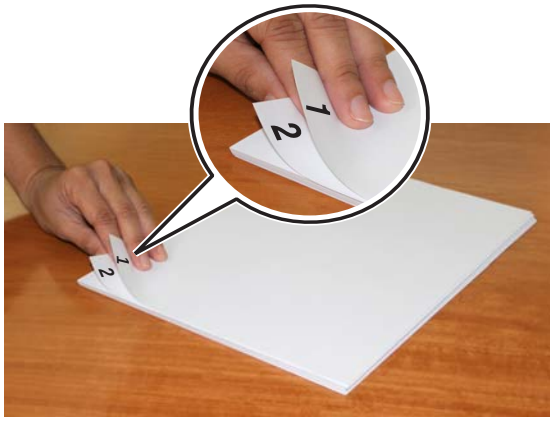
Adjusting skew

Finding the source of the skew

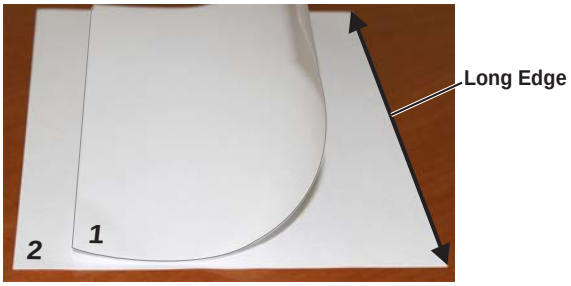
Making sure the paper is square

This test is critical when cut paper is being used to align the ADF skew during reworks. Pallets of quality paper may be found with more than 2 mm of skew.

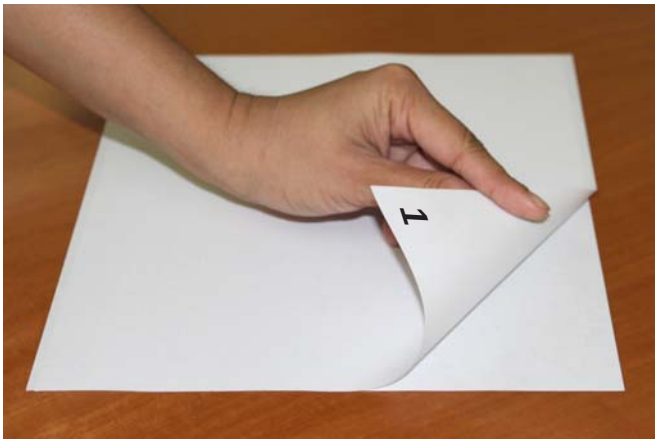
1. Remove two consecutive pieces of paper from the ream.



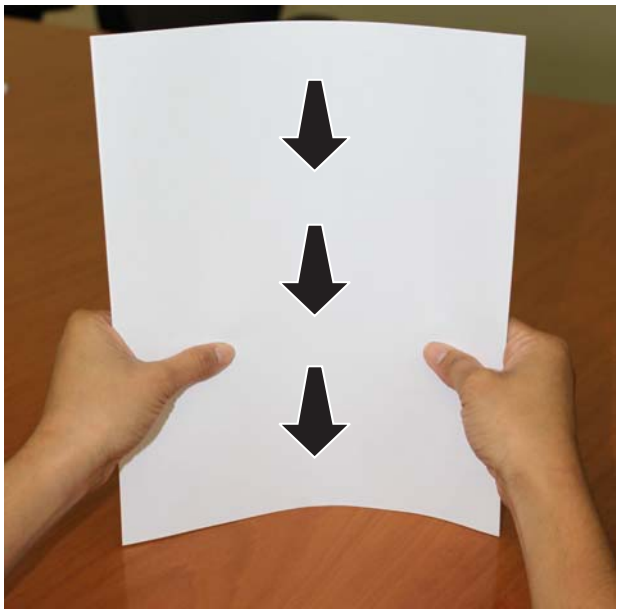
2. Flip one of the pages over in the direction shown below.



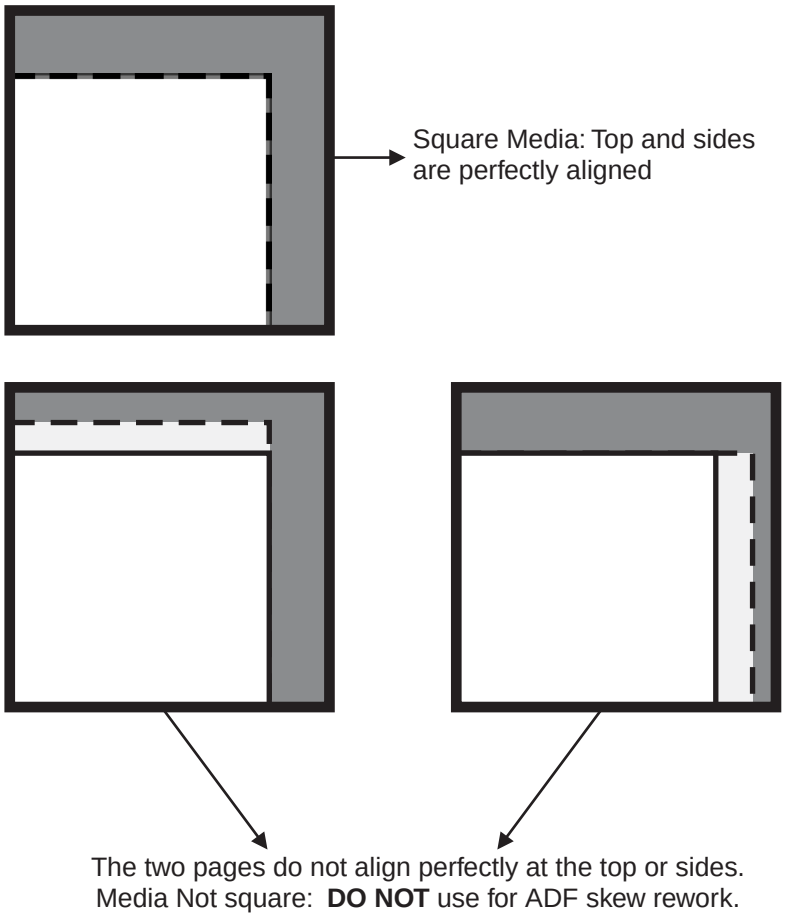
3. This shows the final position of the two pages.



4. Tap the two pages on a flat surface until the bottom edge is aligned.



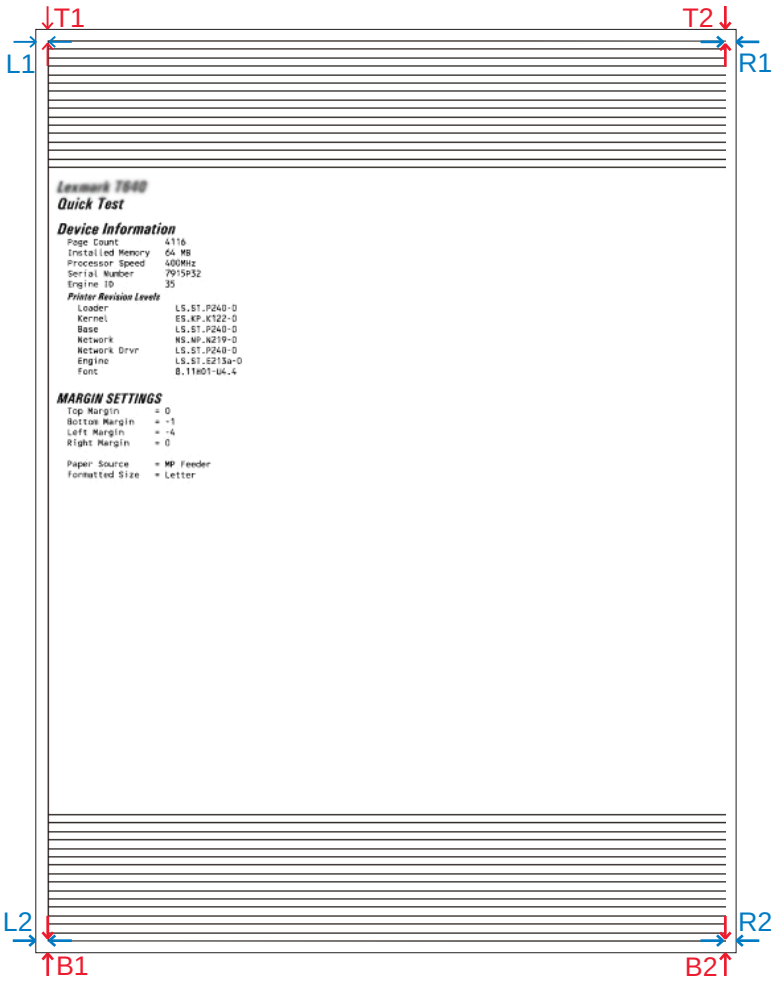
5. Look closely at the top edge of the media to see if the sheets are aligned.



Checking the base printer skew

1. Enter the Diagnostics menu: turn off the printer, press and hold **3** and **6**, turn on the printer, and then release the buttons when the splash screen appears.
2. Navigate to:

   REGISTRATION > **Quick Test**
3. Measure from the edge of the paper to the black line to find L1, L2, T1, T2, R1, R2, B1, and B2 as shown below.



4. Determine the following calculations:

   Note: Each number is an absolute value.

   - L2-L1 = ___
   - R2-R1 = ___
   - T2-T1 = ___
   - B2-B1 = ___

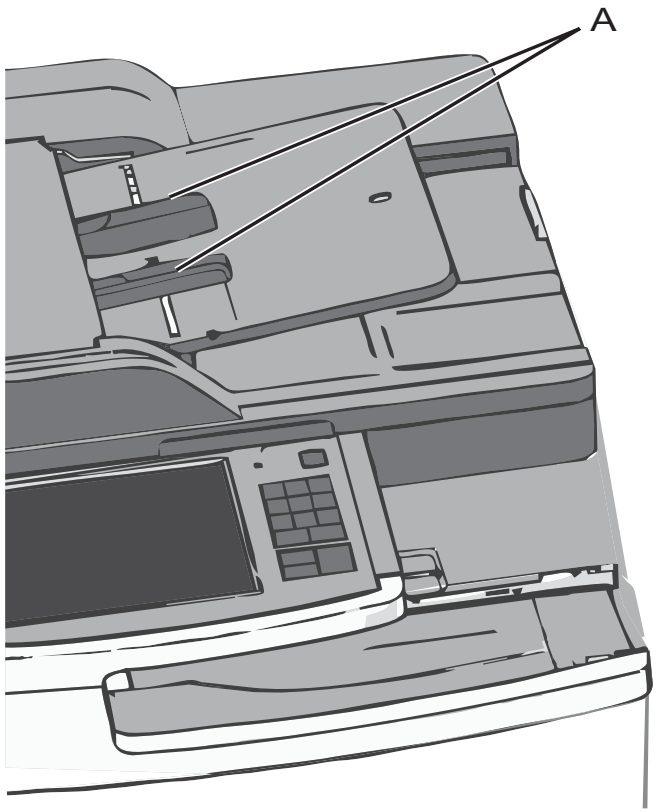
5. Determine if the printer meets the skew specifications based on the values listed on the table.

Skew Specification				
	(L2-L1)	(R2-R1)	(T2-T1)	(B2-B1)
Letter	≤1.4 mm	≤1.4 mm	≤1 mm	≤1 mm
A4	≤1.5 mm	≤1.5 mm		
Legal	≤1.8 mm	≤1.8 mm		

6. If the printer does not meet the skew specifications, then go to **“REGISTRATION” on page 3-11** to adjust the base printer registration.
7. If the printer meets the skew specifications, then measure the scanner skew and determine if it meets the skew specifications.

Scanner paper tray guides

In the scanner, the only parts that align the paper are the tray guides (A). The media is free to skew if the guides are too tight or too loose.



Disabling the ADF Skew Fix feature

The ADF Skew Fix feature automatically adjusts pages that are not fed into the ADF straight. Disable this feature in the Copy menu to prevent it from interfering with your mechanical adjustments.

1. From the home screen, navigate to:
   Menus > **Copy Settings** > **ADF Skew Fix** > **Off** > **Submit**
2. Turn the feature off, and save the setting.
   Note: When you finish adjusting the scanner, return ADF Skew Fix to its original setting.

Checking the copy skew

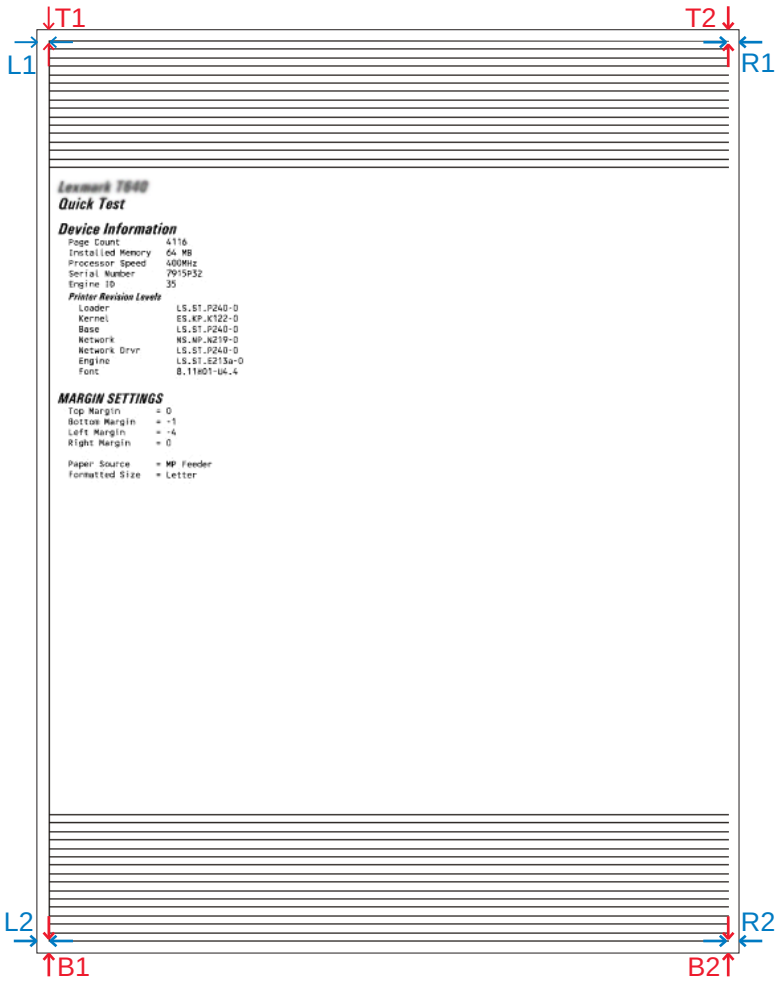
1. Enter the Diagnostics menu: turn off the printer, press and hold **3** and **6**, turn on the printer, and then release the buttons when the splash screen appears.
2. Navigate to:
   REGISTRATION > **Quick Test**
3. Use the Quick Test page to make the following copies:

   Flatbed Copy
   - Make sure to properly align the page with the upper left corner of the scanner glass.

   Front Side ADF Copy
   - This copy is made using the flatbed CCD module.
   - Make sure the tray guides are snug against the sides of the page.

   Back Side ADF Copy
   - This copy is made using the ADF CCD module.
   - Make sure the tray guides are snug against the sides of the page. One of the two pages will print out blank.

4. For each copy, measure from the edge of the paper to the border to find L1, L2, T1, T2, R1, R2, B1, and B2 as shown below.



5. Determine the following calculations:

Note: Each number is an absolute value.

- L2-L1 = ___
- R2-R1 = ___
- T2-T1 = ___
- B2-B1 = ___

6. Determine if the printer meets the skew specifications based on the values listed on the table.

Copy Skew Specification	
(L2-L1)	≤2.1 mm
(R2-R1)	≤2.1 mm
(T2-T1)	≤1.6 mm
(B2-B1)	≤1.6 mm

7. Adjust the copy skew based on the type of adjustment to use listed on the table.

Copy Type	Adjustment
Flatbed Copy	Go to **"Flatbed scanner skew adjustment" on page 3-61**.
Front Side ADF Copy	Go to **"Flatbed scanner skew adjustment" on page 3-61** and **"ADF skew adjustment (ADF document tray)" on page 3-64**.
Back Side ADF Copy	Go to **"ADF skew adjustment (ADF document tray)" on page 3-64** and **"ADF skew adjustment (duplex CCD assembly)" on page 3-63**.

Adjusting scanner registration

Before adjusting skew, be sure the scanner registration is within acceptable parameters.

Note: If the printer menus do not match the following instructions, then contact your next level of support.

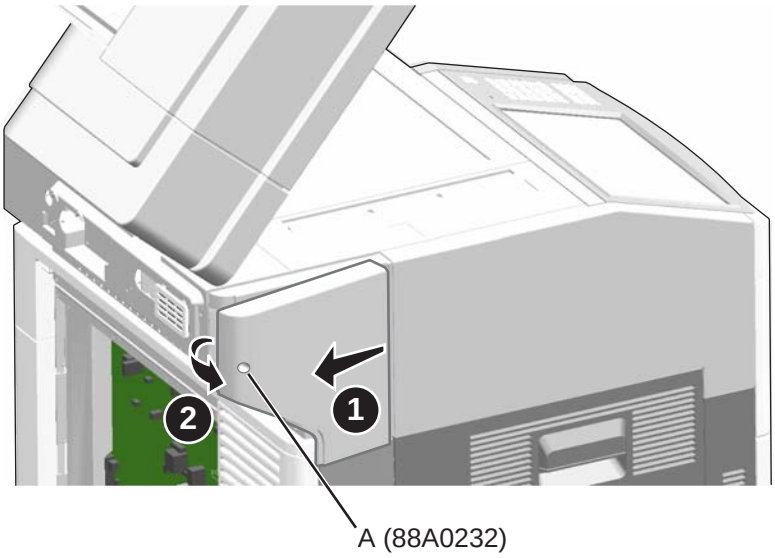
1. Enter the Configuration menu: press and hold **2** and **6**, turn on the printer, and release the buttons when the splash screen appears.
2. Navigate to:
   Scanner Manual Registration > **Print Quick Test**
3. Adjust the flatbed:
   a. Place the printed test page facedown on the flatbed scanner glass, and select **Copy Quick Test**.
   b. Compare the copy to the original test page.
   c. Select **Flatbed**, and adjust the left and top margins as needed.
   d. Touch **Submit** to save your changes.
   e. To check the changes, reload the original test page, and then repeat the Copy Quick Test. Repeat the steps as needed.
4. Adjust the ADF Front:
   a. Place the latest test page faceup in the ADF, and select **Copy Quick Test**.
   b. Compare the copy to the original test page.
   c. Select **ADF Front**, and adjust the horizontal adjust and top margins as needed.
   d. Touch **Submit** to save your changes.
   e. To check the changes, reload the original test page, and then repeat the Copy Quick Test. Repeat the steps as needed.
5. Adjust the ADF Back:
   a. Place the latest test page facedown in the ADF, and select **Copy Quick Test**.
   b. Compare the copy to the original test page.
   c. Select **ADF Back**, and adjust the horizontal adjust and top margins as needed.
   d. Touch **Submit** to save your changes.
   e. To check the changes, reload the original test page, and then repeat the Copy Quick Test. Repeat the steps as needed.
6. Touch **Back** to return to the Configuration Menu.

Choosing which assembly to adjust

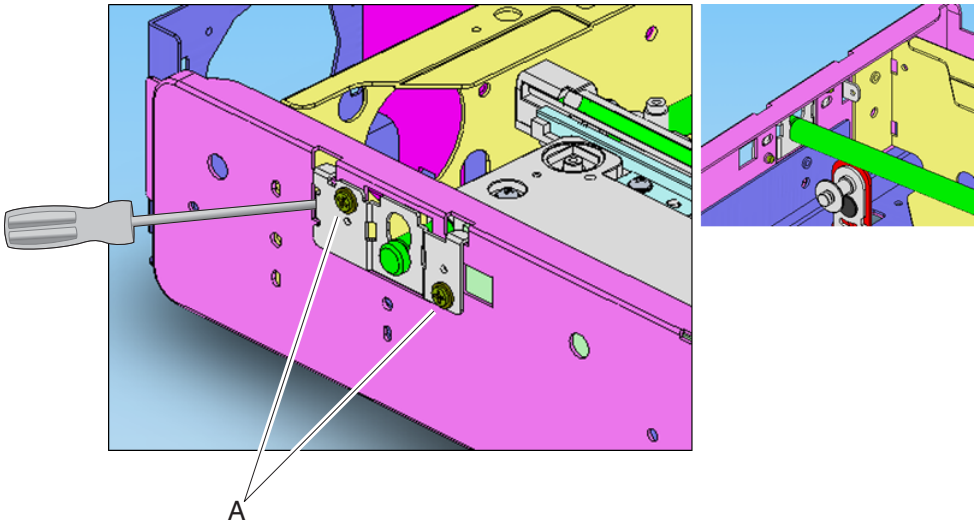
FRU replaced	Adjust the ADF via the duplex CCD	Adjust the ADF via the document tray	Adjust the Flatbed scanner
ADF duplex CCD assembly	Yes	No	No
ADF unit assembly	Yes	Yes	No
Flatbed scanner assembly	No	No	Yes
Flatbed scanner CCD assembly	Yes	Yes	Yes

Flatbed scanner skew adjustment

1. Remove the scanner left side rear cover:
   a. Remove the screw (A).
   b. Slide the cover back, and then pull the cover toward you to remove it.



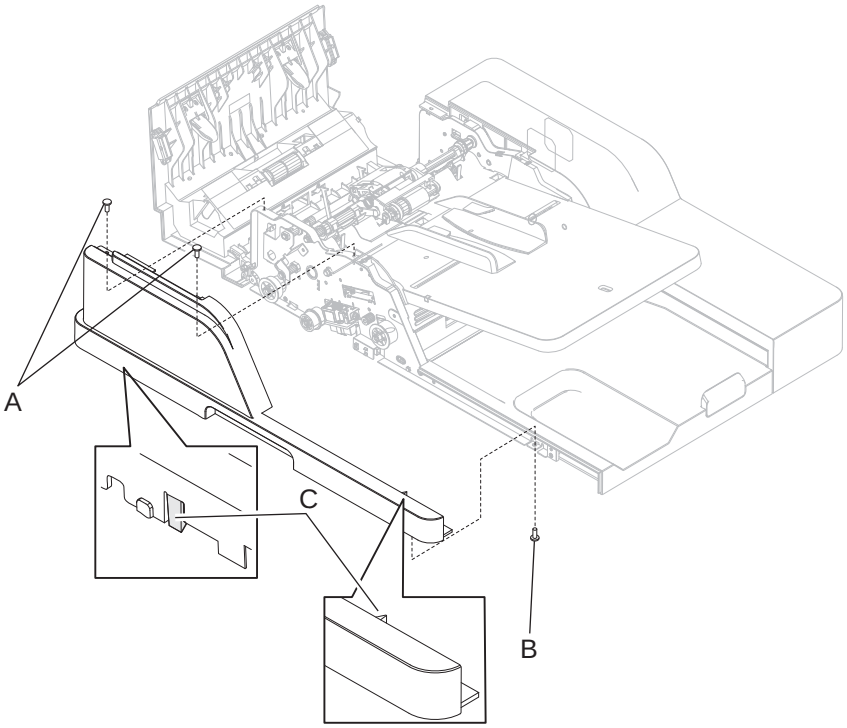
2. Insert a screwdriver into the slot to the left of the plate to hold the plate in position, and then loosen the screws (A).



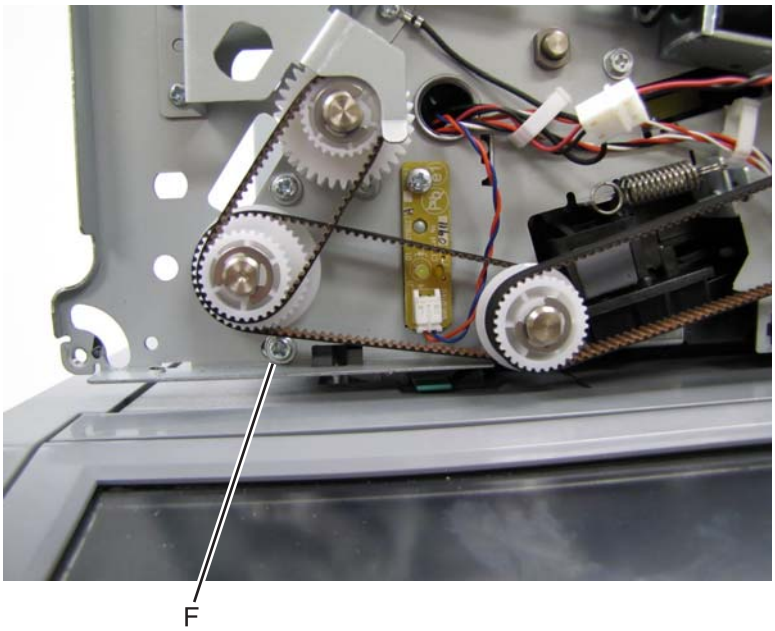
3. Slide the scanner rod mounting plate left or right accordingly—to the right to correct negative skew and to the left to correct positive skew—and then tighten the screws.
4. Make a copy to check the skew, and then repeat the steps as needed.
5. Tighten the screws firmly, and replace the scanner cover.

ADF skew adjustment (duplex CCD assembly)

1. Open the ADF top door.
2. Remove two screws (A) from the top of the front ADF cover.
3. Lift the ADF unit assembly, and remove one screw (B) from the bottom of the cover.
4. Release the bottom tabs (C) to remove the cover.

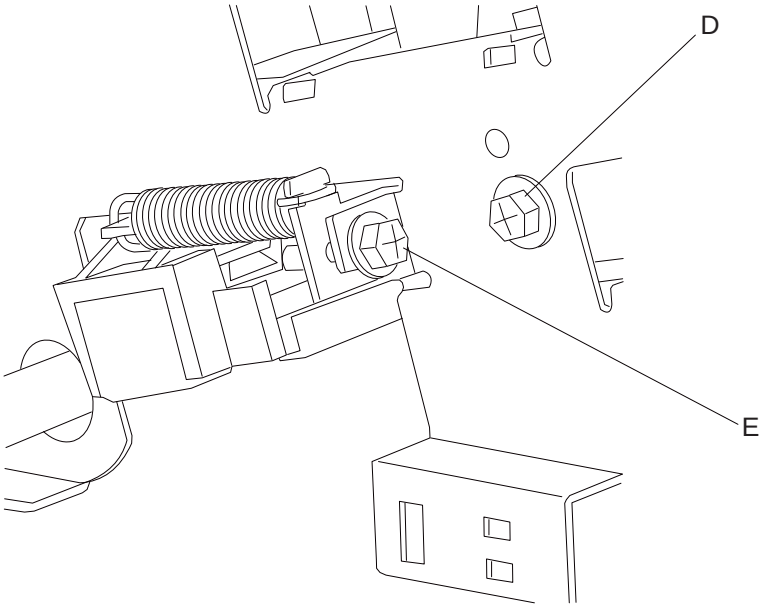


5. Close the ADF, and adjust skew for the ADF front:
   a. Loosen the screw (F), and slide it slightly to the left.



   b. Reinstall the ADF cover, and make a copy to check the skew. Repeat the steps as needed.

6. Adjust the skew for the ADF back:
   a. Loosen the M4 screw (D).
   b. Turn the skew adjustment screw (E) appropriately—clockwise for negative skew and counterclockwise for positive skew.
      Note: Each full turn of the adjustment screw yields 0.5 mm of skew correction.



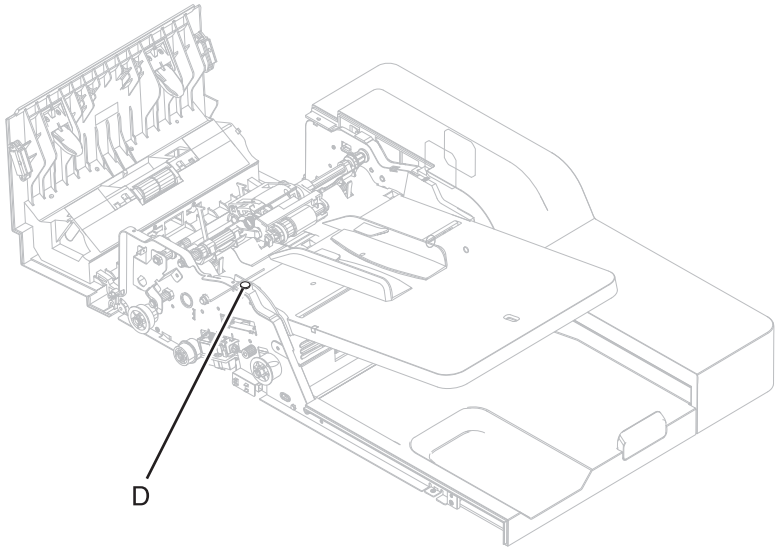
   c. After skew has been corrected, tighten the M4 screw (D) above, and then reinstall the ADF cover.
   d. Make a copy to check the skew, and then repeat the steps as needed.

ADF skew adjustment (ADF document tray)

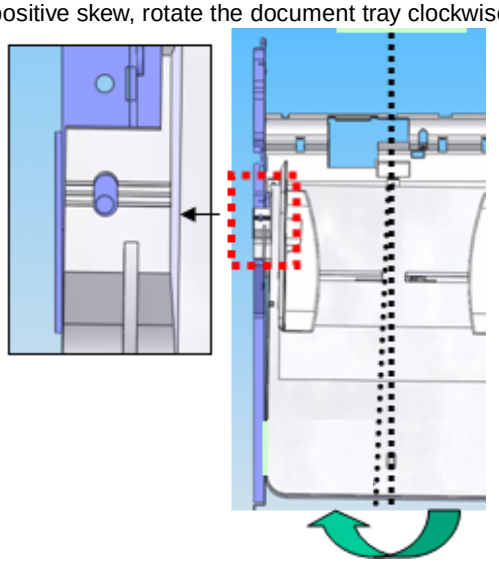
1. Remove the front ADF cover. See steps 1 through 4 of **"ADF skew adjustment (duplex CCD assembly)" on page 3-63**.

Note: Do not remove the ADF rear cover and adjust the screw holding the rear side of the tray. Doing so could prevent the ADF rear cover from fitting properly.

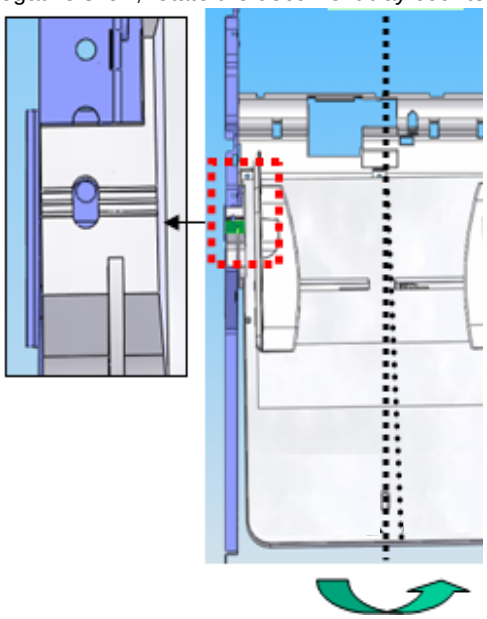
2. Loosen the screw (D) securing the front side of the ADF document tray.



3. Rotate the document tray to correct the skew:
   - To correct positive skew, rotate the document tray clockwise.



   - To correct negative skew, rotate the document tray counterclockwise.



4. Tighten the document tray screws, and then reinstall the ADF cover.
5. Make a copy to check the skew, and then repeat the steps as needed.
6. Check the registration of the scanner. See **“Adjusting scanner registration” on page 3-60**.

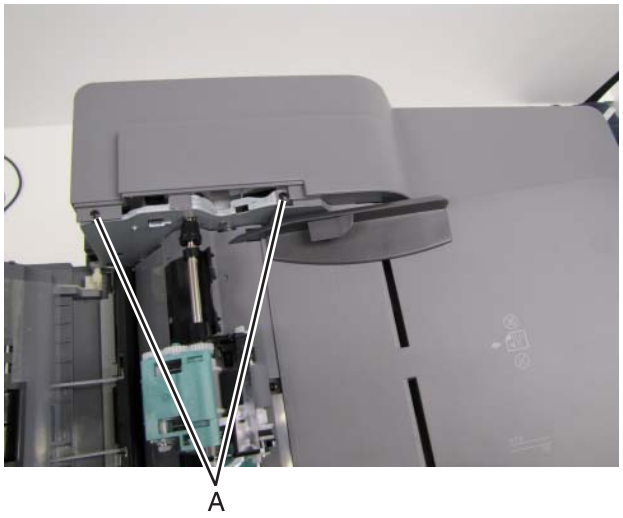
ADF magnification adjustment

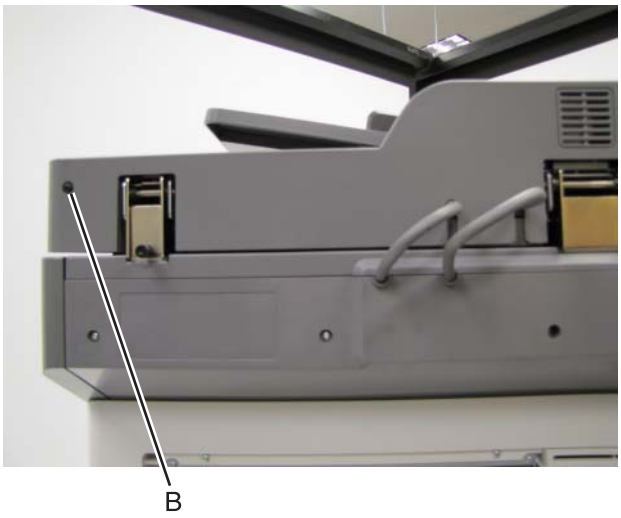
1. Enter the Diagnostic menu: press and hold **3** and **6**, turn on the printer, and release the buttons when the splash screen appears.
2. To print a test page from the Diagnostic menu, navigate to:
   REGISTRATION > **Quick Test**
3. To copy the test page from the Diagnostic menu, navigate to:
   SCANNER CALIBRATION > **Copy Quick Test**.
4. Navigate to:
   SCANNER TESTS > **ADF Magnification**.
5. Compare the copy to the original test page, and then adjust the value of the ADF Magnification setting as needed. If the bottom margin is too small, decrease the value. If the bottom margin is too large, increase the value.
6. Touch **Submit** to save your changes.
7. To check the changes, reload the original test page, and then repeat the Copy Quick Test. Repeat the steps as needed.
8. Once the margins look correct, check the registration of the ADF. See **"Adjusting scanner registration" on page 3-60**.
9. Perform the Copy Quick Test, and then repeat the process if needed.

ADF hinge adjustment

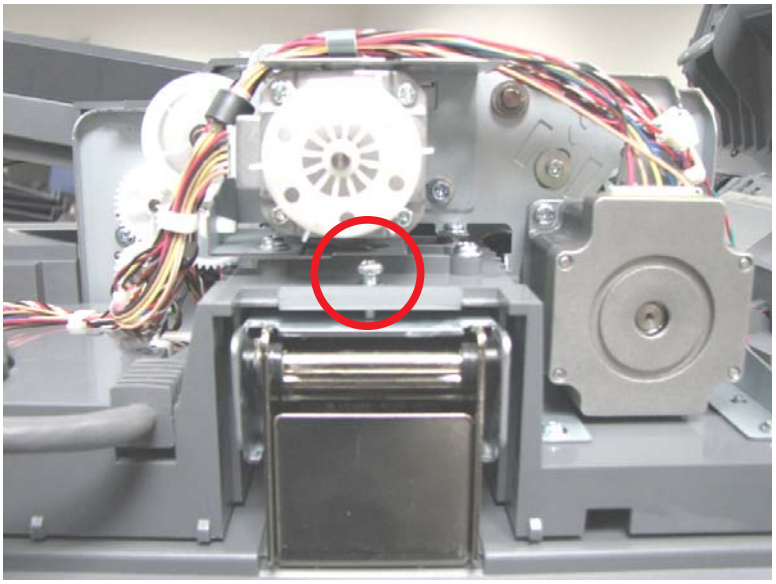
If the ADF is not parallel to the flatbed, ADF copies could be skewed on the leading edge and not parallel. Adjust the left ADF hinge to make the gap between the ADF and the flatbed 2.0 mm.

1. Remove the ADF rear cover:
   a. Open the ADF top door, and remove the two screws (A) from the top of the ADF rear cover.
   b. Remove one screw (B) from the back, and lift the cover to remove it.





2. Adjust the screw in the left hinge to make the gap between the ADF and flatbed 2.0 mm. Tighten the screw to raise the ADF; loosen it to lower the ADF.



3. Reinstall the ADF rear cover.

Calibrating the scanner

After replacing any of the following components, you must reset the scanner calibration values and check the black levels of the scanner:

- Flatbed scanner assembly
- ADF unit assembly
- Flatbed scanner CCD assembly
- ADF duplex CCD assembly

Resetting the calibration values

Note: If the printer menus do not match the following instructions, then contact your next level of support.

1. Enter the Diagnostic mode: press and hold **3** and **6**, turn on the printer, and release the buttons when the splash screen appears.
2. From the Diagnostics menu, navigate to:
   SCANNER CALIBRATION > (select an assembly) > **Reset Calibration Values**

Calibrating the scanner black levels

Note: If the printer menus do not match the following instructions, then contact your next level of support.

1. From the Diagnostic menu, navigate to:
   PRINT TESTS > **Print Quality Pages**
   Multiple test pages print. Use the first printed page to test the scanner black levels.

- Adjust the ADF Front:
  a. Load the printed test page faceup into the ADF.
  b. From the Diagnostics menu, navigate to:
     SCANNER CALIBRATION > **Copy Quick Test**.
  c. Compare the copy to the original test page, and then navigate to:
     Adjust Calibration Values > **ADF Front Black**
  d. Adjust the values, and then touch **Submit** to save your changes. Increasing the value makes the black level darker.

e. To check the changes, reload the original test page, and then repeat the Copy Quick Test. Repeat the steps as needed until you are satisfied with the ADF Front settings.

- Adjust the ADF Back:
  a. Place the original test page facedown into the ADF, and select **Copy Quick Test**.
  b. Compare the copy to the original test page, and then navigate to:
  Adjust Calibration Values > **ADF Back Black**
  c. Adjust the values, and then touch **Submit** to save your changes.
  d. To check the changes, reload the original test page, and then repeat the Copy Quick Test. Repeat the steps as needed.
- Adjust the Flatbed:
  a. Remove all pages from the ADF, and then load the original test page onto the flatbed scanner.
  b. Select **Copy Quick Test**.
  c. Compare the copy to the original test page, and then navigate to:
  Adjust Calibration Values > **Flatbed Black**
  d. Adjust the values, and then touch **Submit** to save your changes.

To check the changes, reload the original test page, and then repeat the Copy Quick Test. Repeat the steps as needed.

4. Repair information

Warning: Read the following before handling electronic parts.

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, use the following instructions in addition to all the usual precautions, such as turning off power before removing logic boards:

- Keep the ESD-sensitive part in its original shipping container (a special “ESD bag”) until you are ready to install the part into the machine.
- 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 discharges any static electricity in your body to the machine.
- Hold the ESD-sensitive part by its edge connector shroud (cover); do not touch its pins. If you are removing a pluggable module, use the correct tool.
- Do not place the ESD-sensitive part on the machine cover or on a metal table; if you need to put down the ESD-sensitive part for any reason, first put it into its special bag.
- Machine covers and metal tables are electrical grounds. They increase the risk of damage because they make a discharge path from your body through the ESD-sensitive part. (Large metal objects can be discharge paths without being grounded.)
- Prevent ESD-sensitive parts from being accidentally touched by other personnel. Install machine covers when you are not working on the machine, and do not put unprotected ESD-sensitive parts on a table.
- If possible, keep all ESD-sensitive parts in a grounded metal cabinet (case).
- Be extra careful in working with ESD-sensitive parts when cold-weather heating is used because low humidity increases static electricity.

Removal procedures



CAUTION

For personal safety and to prevent damage to the printer, remove the power cord from the electrical outlet before you connect or disconnect any cable or electronic board or assembly. Disconnect any connections between the printer and PCs/peripherals.



CAUTION

The printer weight is greater than 32 kg (70 lb) and requires three or more trained personnel to move it safely.

Cable ties

Note: Some removal procedures require removing cable ties. You must replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.

Cable and thermistor removals

For a complete list of the printer cable and thermistor FRUs and links to the removal procedures used to access them, see **“Cable and thermistor location table” on page 7-56**.

Screws and fasteners

Screw and fastener part numbers appear with the graphic callouts. See **“Screw and retainer identification table” on page 7-60** for descriptions and actual-size illustrations of the screws.

Arrangement of removals in this chapter

The removals in this chapter are arranged by area of the printer:

“Base printer cover removals” on page 4-3

“Base printer removals” on page 4-33

“ADF cover removals” on page 4-160

“ADF removals” on page 4-163

“Scanner cover removals” on page 4-201

“Scanner removals” on page 4-207

“Input option removals” on page 4-229

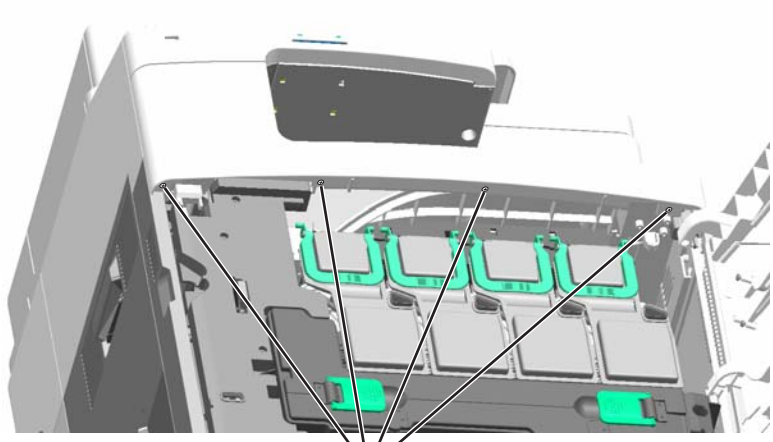
“Output option removals” on page 4-300

Base printer cover removals

AIO front lower cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Open the front access door.
2. Remove the four screws (A) to remove the cover.

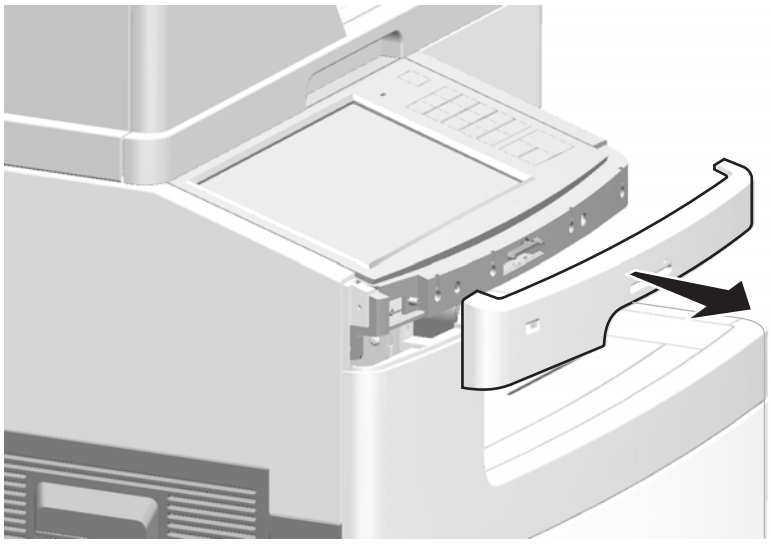


A (88A0323)

AIO front upper cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

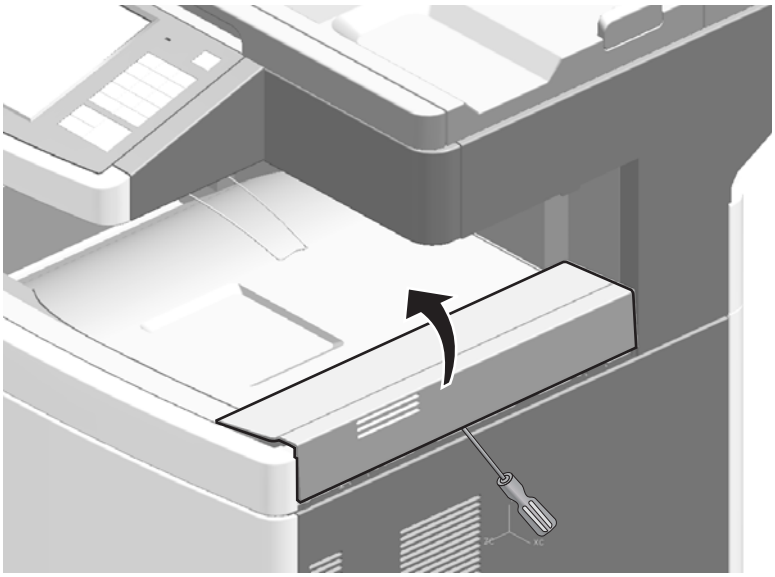
Pull to remove the AIO front upper cover.



AIO option cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Use a screwdriver to pry up the bottom of the AIO option cover.

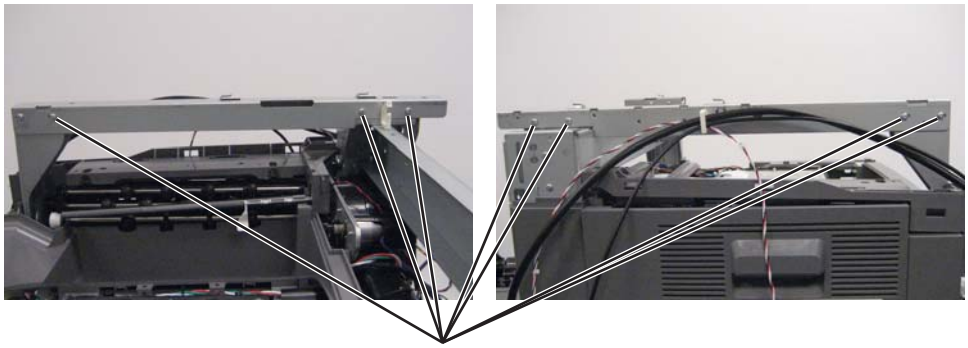


2. Lift to remove the cover.

AIO top cover removal

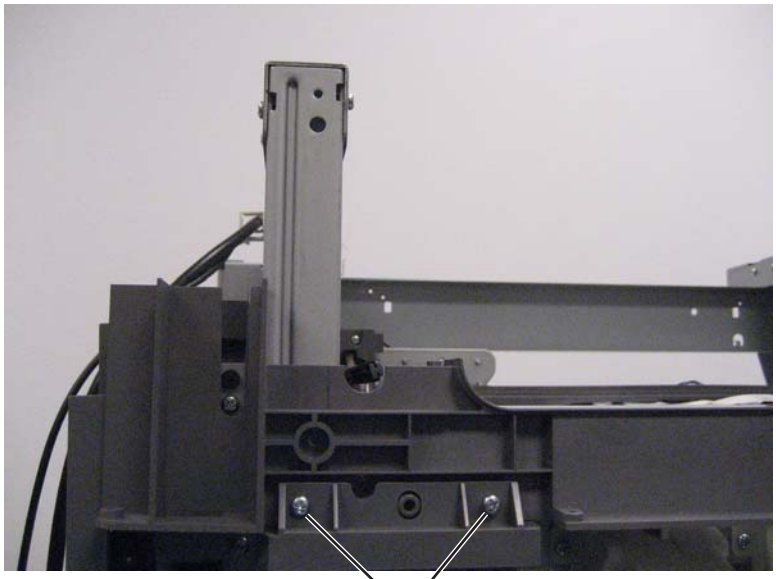
See **“Front, right, and top covers” on page 7-3** for the part number.

1. Remove the lower scanner cover. See **“AIO lower scanner cover removal” on page 4-202**.
2. Remove the printhead access cover. See **“Printhead access cover removal” on page 4-22**.
3. Remove the front access door assembly. See **“Front access door assembly removal” on page 4-9**.
4. Remove seven screws (A), and then remove the frame arm.



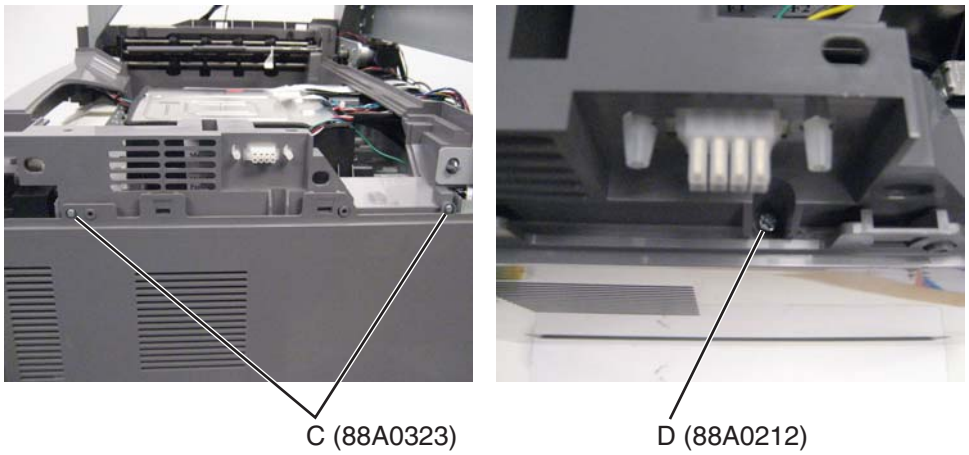
A (88A0212)

5. Remove two screws (B) from the front.

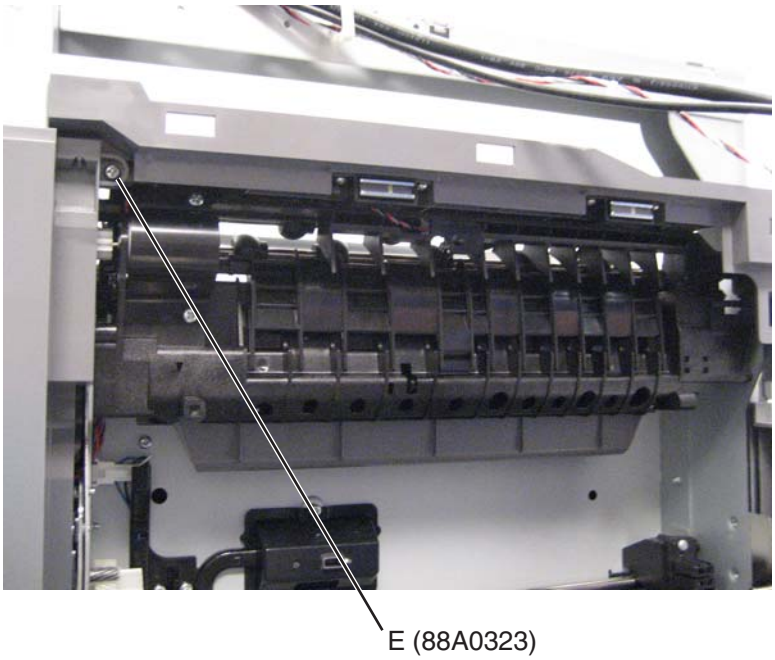


B (88A0323)

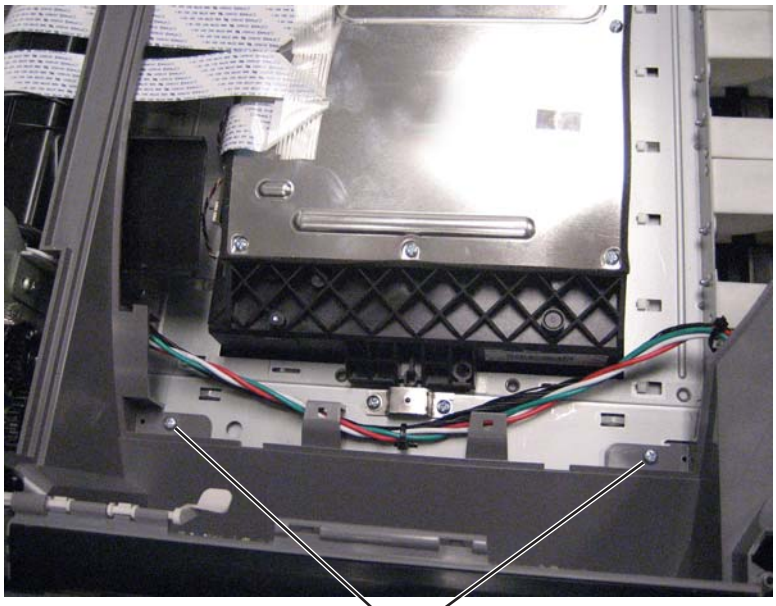
6. Remove two screws (C) and one screw (D) from the right side.



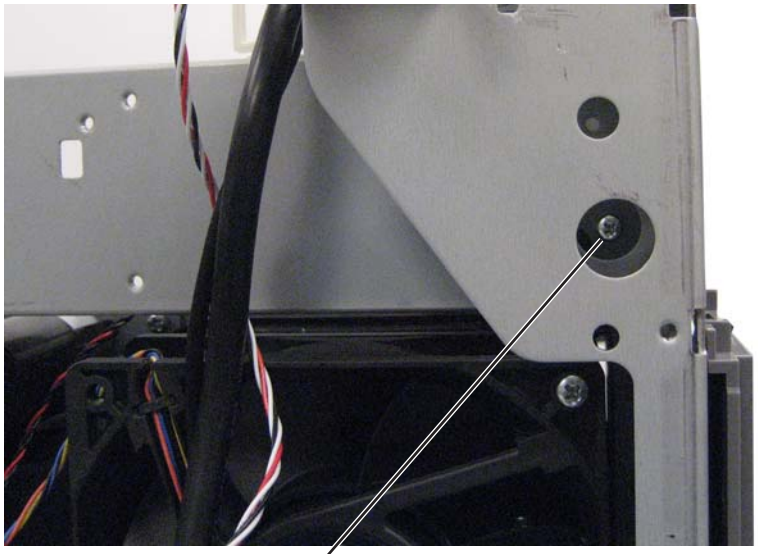
7. Open the left access door, and remove one screw (E).



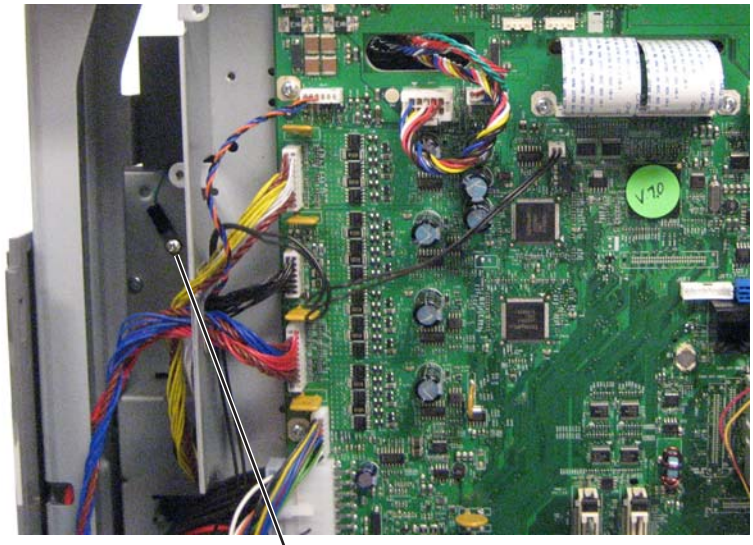
8. Remove two screws (F) from the top.



9. Remove one screw from the back (G).



10. From the back, remove the screw (H), and remove the ground wire from the frame.



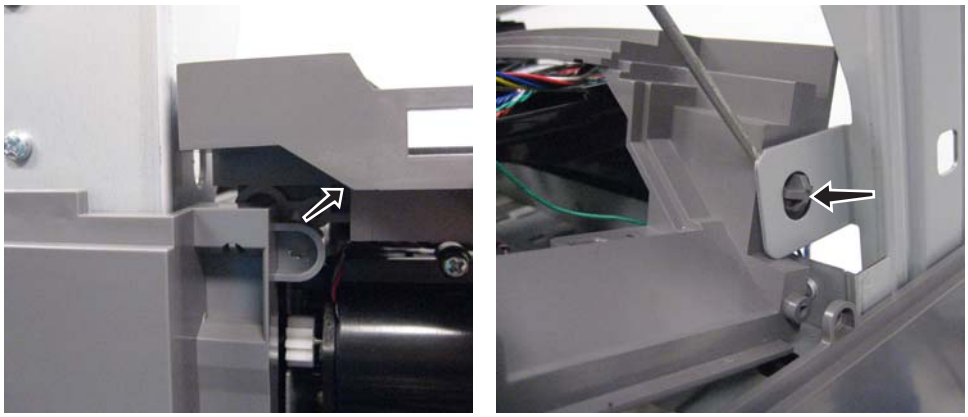
H (88A0212)

11. Disconnect the cable (I) from the system board, and disconnect the beacon cable (J).



I J

12. Pull forward and up to disengage the pin on the left, and then pry out the pin on the right.



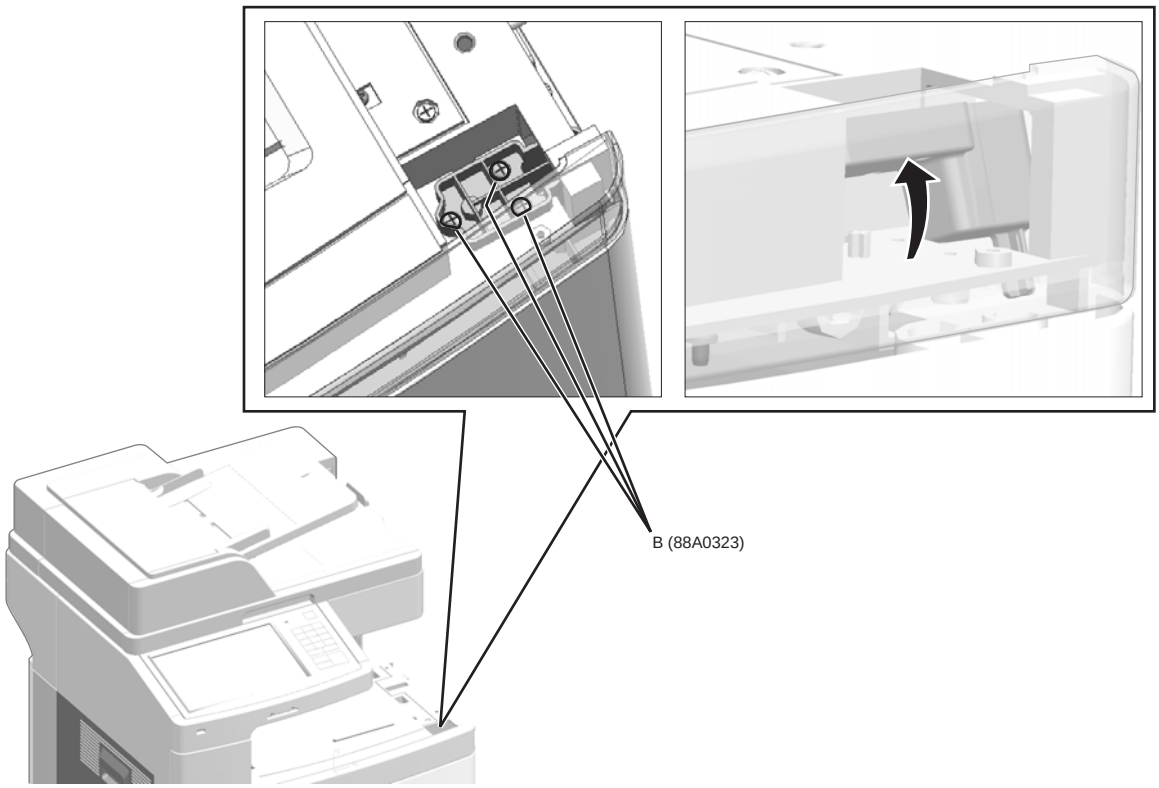
13. Lift to remove the cover.

Front access door assembly removal

See **"Front, right, and top covers" on page 7-3** for the part number.

1. Remove the AIO option cover. See **"AIO option cover removal" on page 4-4**.
   Note: If you have any output options installed, then the option cover is already removed. Remove the output options and HTU redrive unit instead.

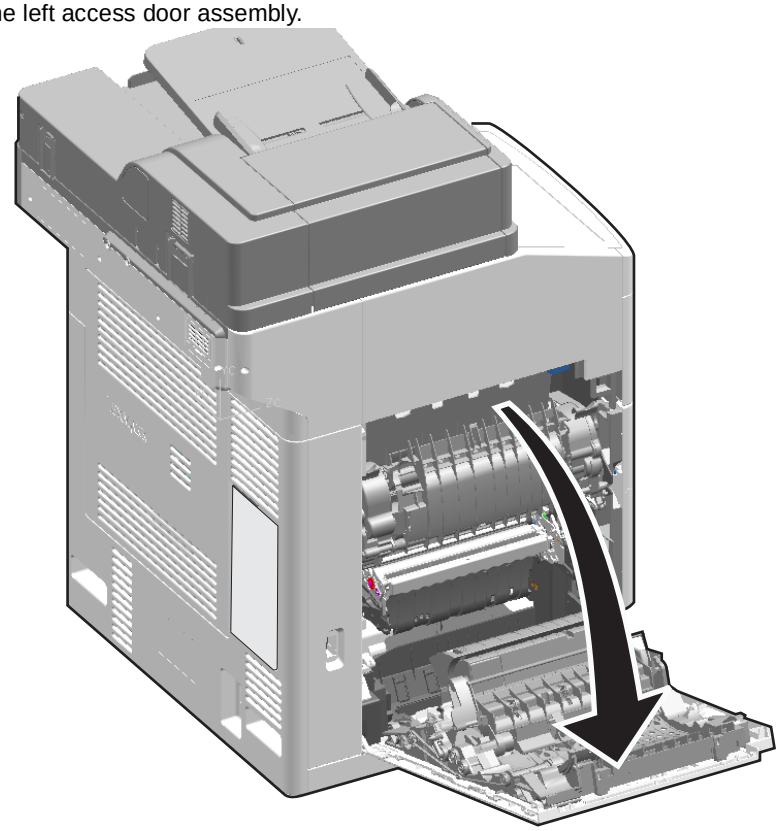
2. Remove three screws (B), and then remove the front access door pivot to remove the front access door assembly.



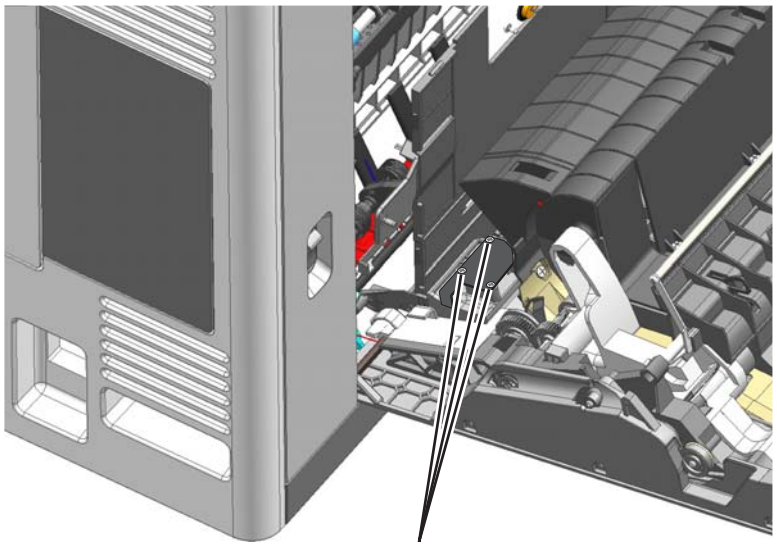
Left access door assembly removal

See **“Left and rear covers” on page 7-5** for the part number.

1. Open the left access door assembly.

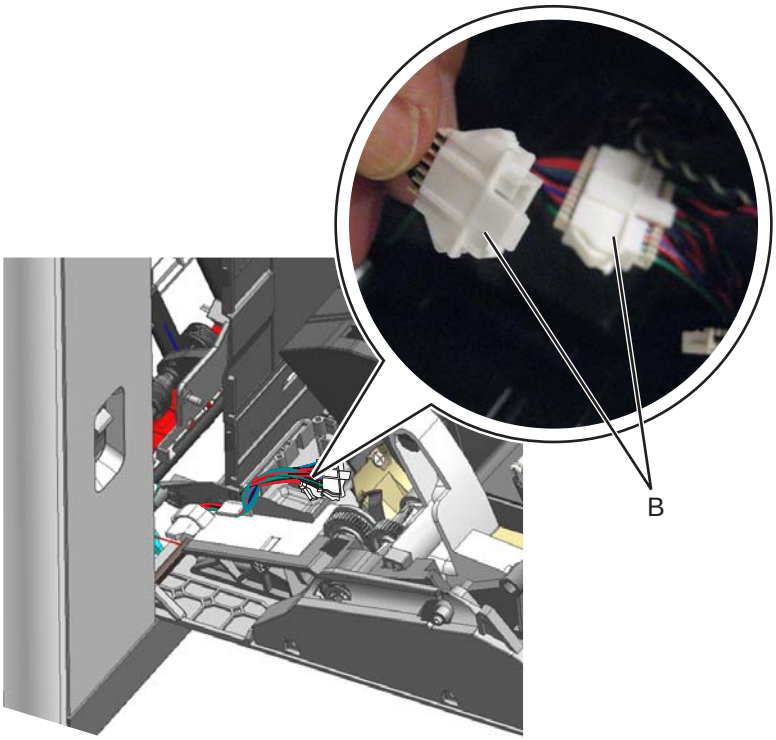


2. Remove the three screws (A) from the cable cover, and remove the cable cover.

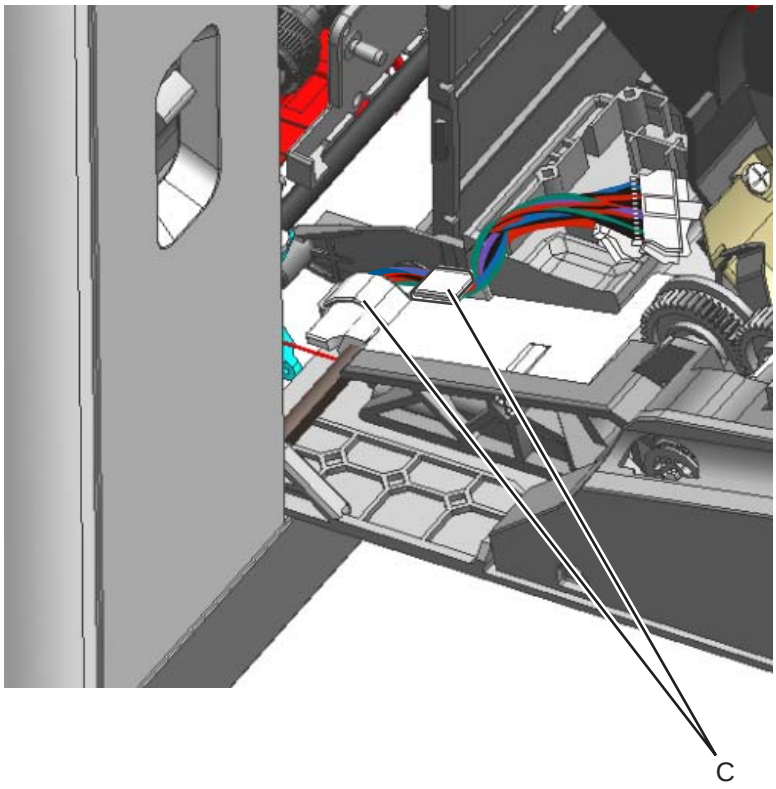


A (88A0323)

3. Lift the locking tabs (B) on the connectors to disconnect the two cables.

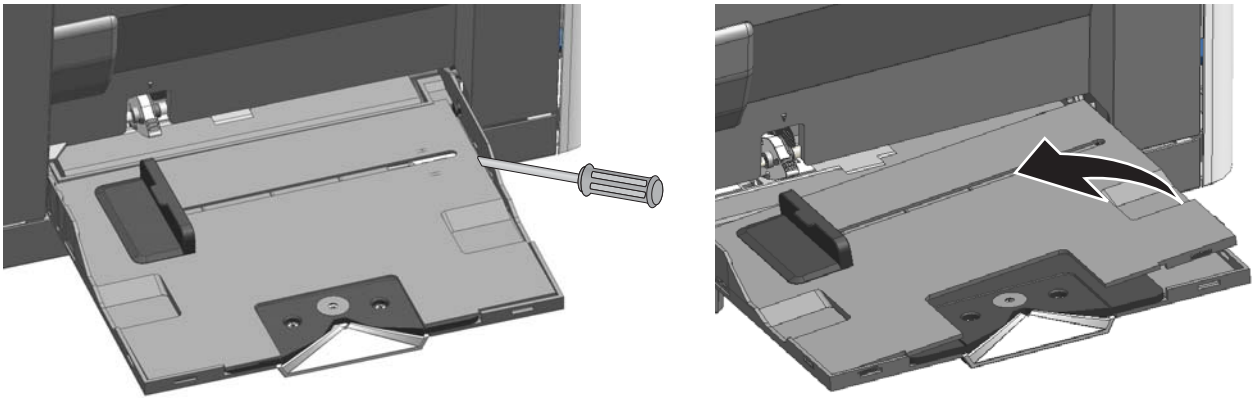


4. Remove the cables from the cable retainers (C).

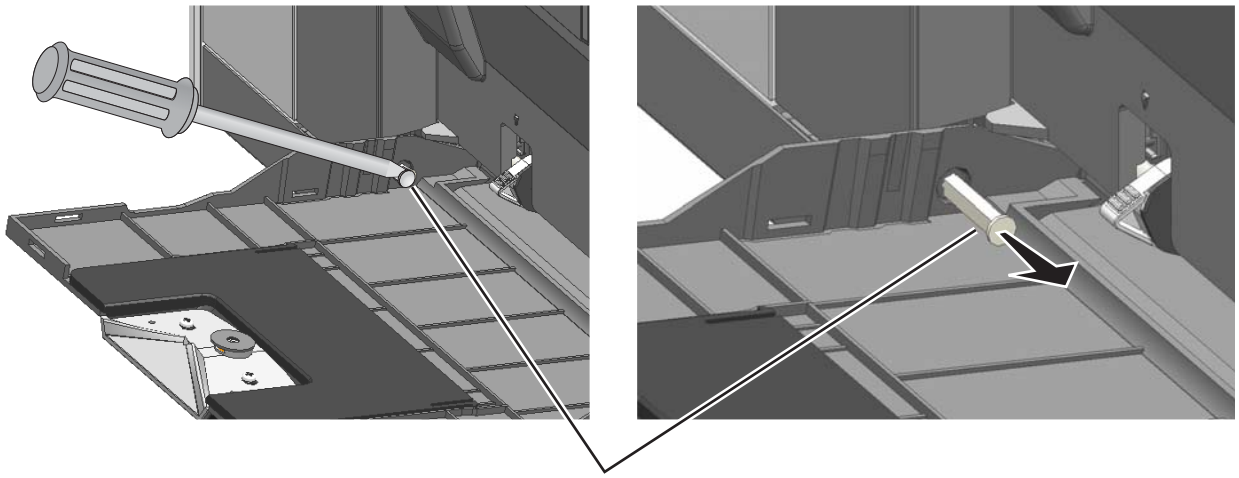


5. Close the left access door.

6. Open the multipurpose feeder.
7. Slide the paper guide all the way to the left. Carefully use a flat-blade screwdriver to lift the multipurpose feeder inner cover, and remove.
   Note: Be careful not to scratch or mar the cover.

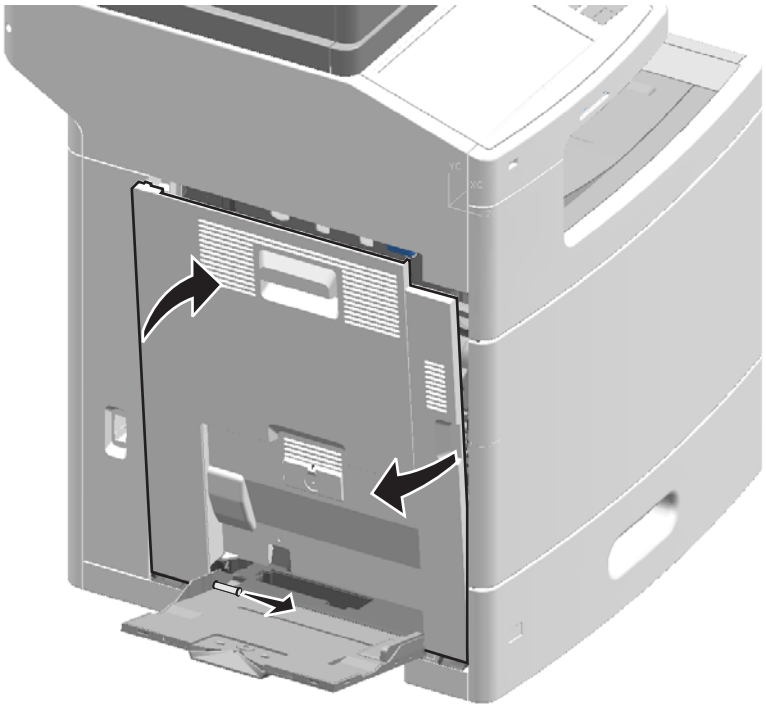


Note: Using a flat-blade screwdriver, pry out the back pin (D) far enough to be able to grasp the ends.

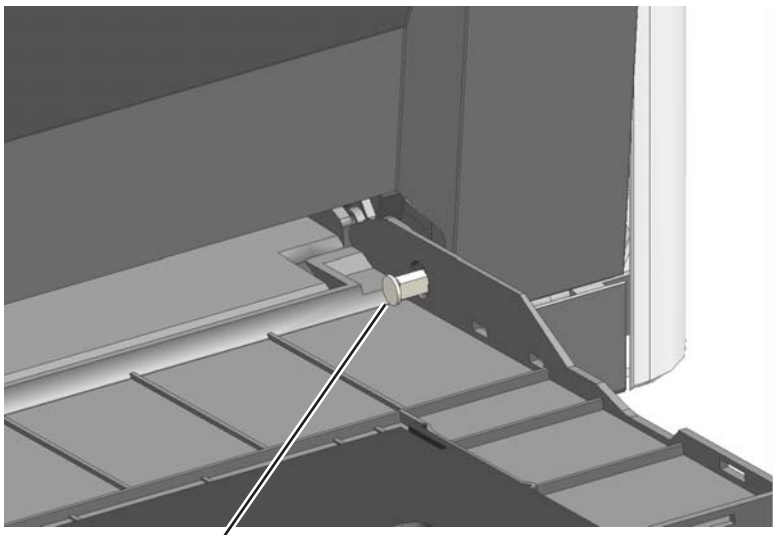


D (10J2832)

8. Open the left access cover slightly, grasp one of the pins, and move the left access door back and forth gently while pulling the pin out.
This aligns the holes, so the pins come out easily.

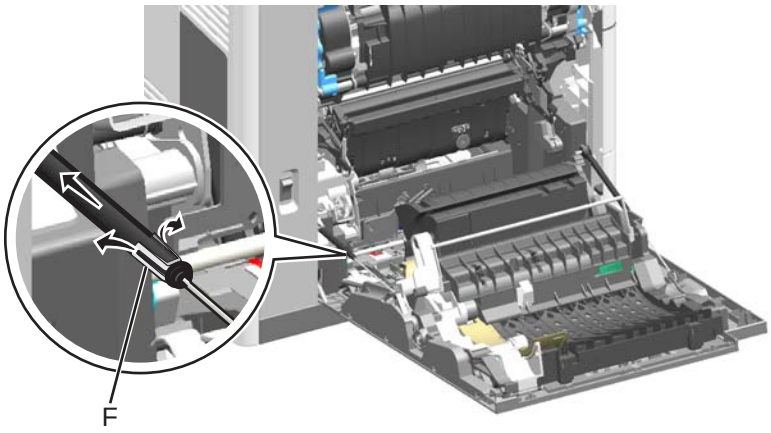


9. Remove the other pin (E) in the same manner. See steps **7** and **8**.



E (10J2831)

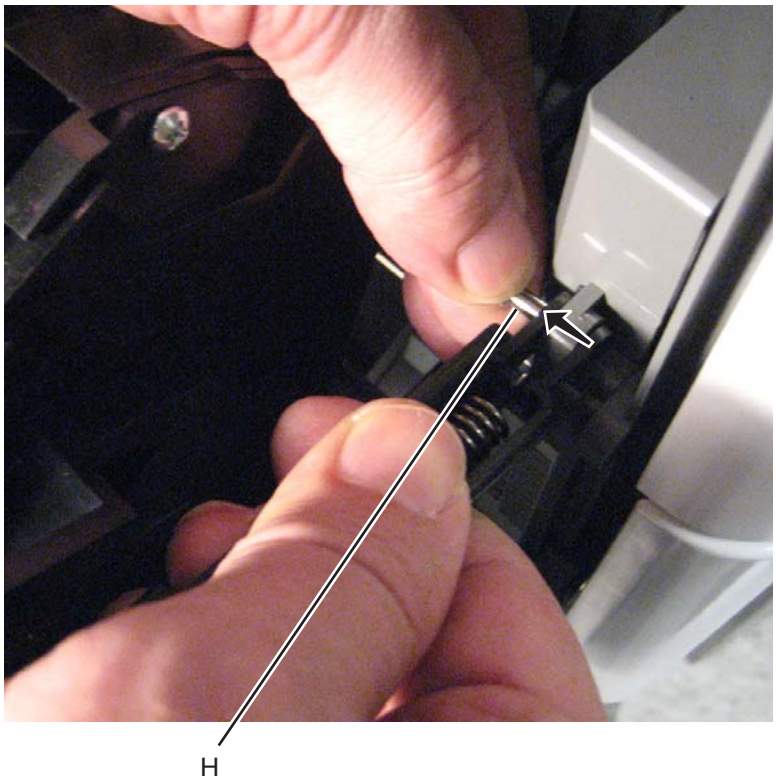
10. Open the left access door all the way, and disconnect the rear piston by pulling apart the clamps (F) from the tabs.



11. Remove the E-clip (G) from the front piston.



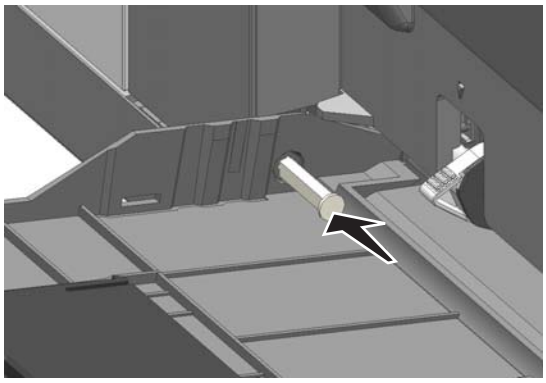
12. While holding the front piston, pull out the pin (H) to disconnect the piston from the printer.
Note: The piston is under pressure from the spring. Hold the piston firmly as you remove the post.

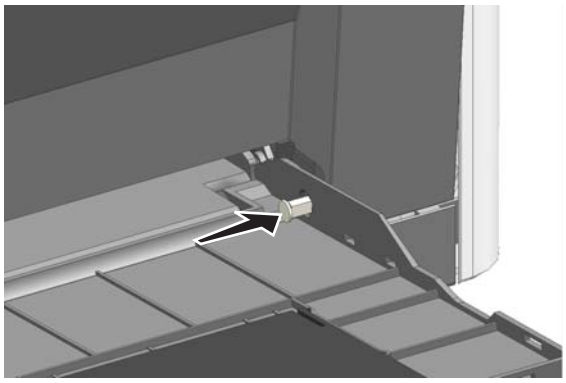


13. Lift the door up slightly and out to remove it.

Installation:

1. Place the MPF cover on the bottom of the left cover, and hold it in place while you put the assembly into place.
2. Replace the pins, making sure the flat side of each pin faces away from the printer.





3. Reconnect the rear piston, and then reconnect the front piston.
4. Close the left access door, open the MPF, and replace the inner cover of the MFP.
5. Close the MPF, open the left access door, and reconnect the cables.
6. Replace the three screws in the cable cover.
7. Close the left access door.

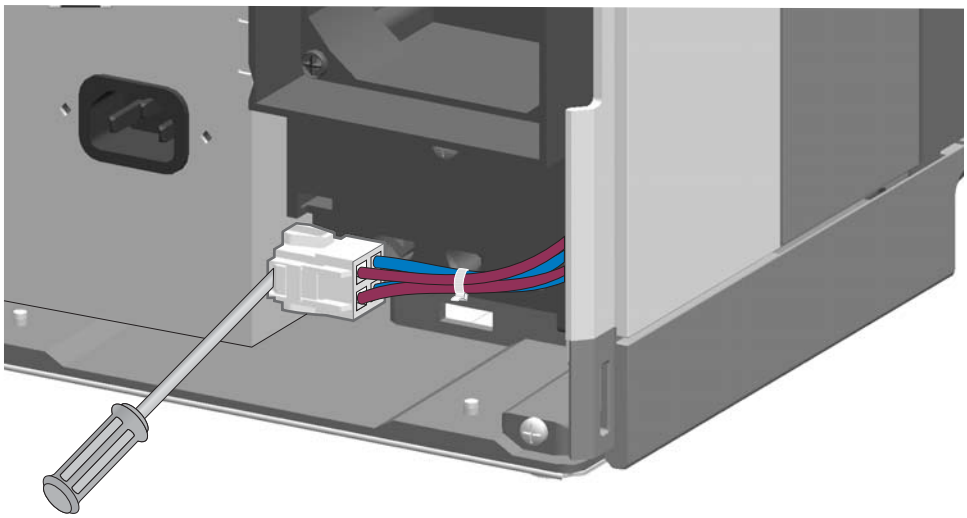
Left cover removal

AND

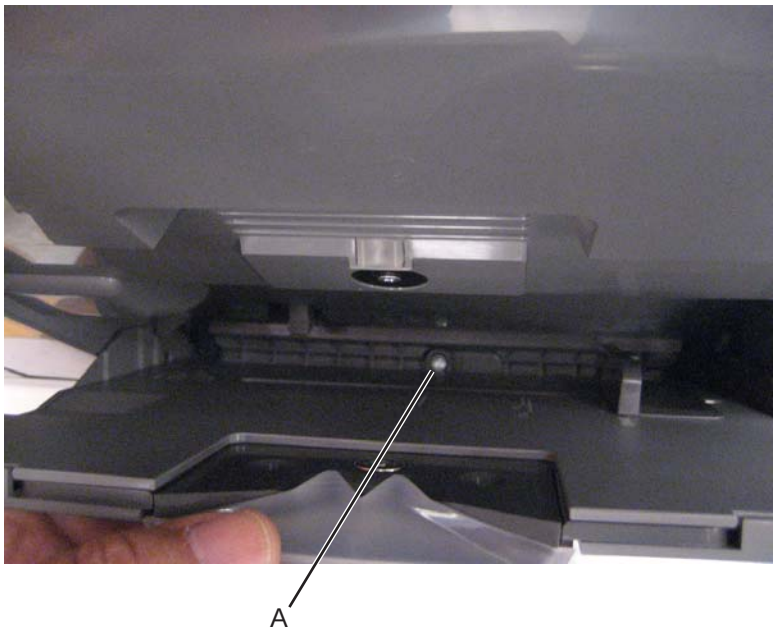
Lower left cover removal

See **“Left and rear covers” on page 7-5** for the part numbers.

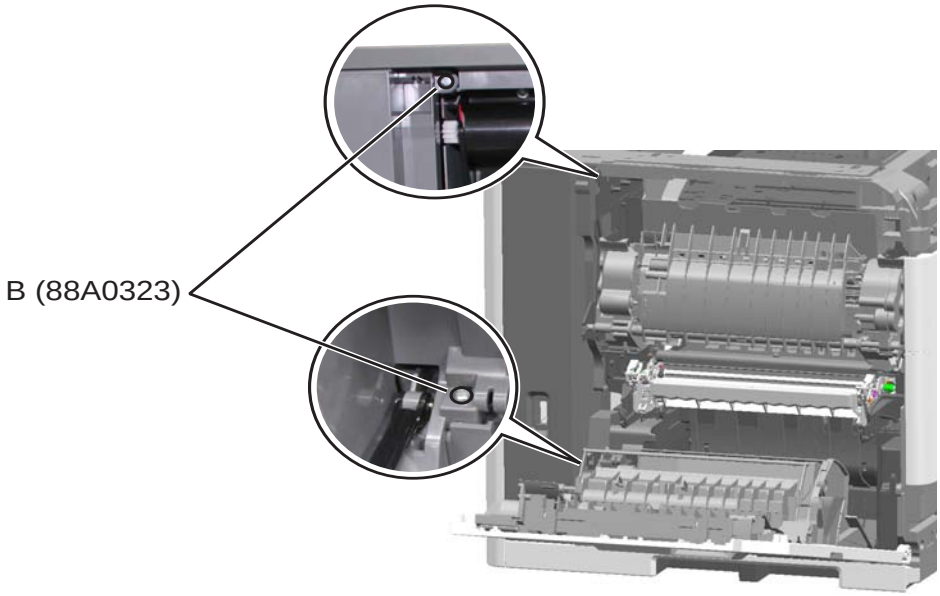
1. Remove the scanner left side rear cover. See **“Scanner left side rear cover removal” on page 4-204**.
2. Remove the rear cover. See **“Rear cover removal” on page 4-23**.
3. Use a flat-blade screwdriver to disconnect the cable from the low-voltage power supply.



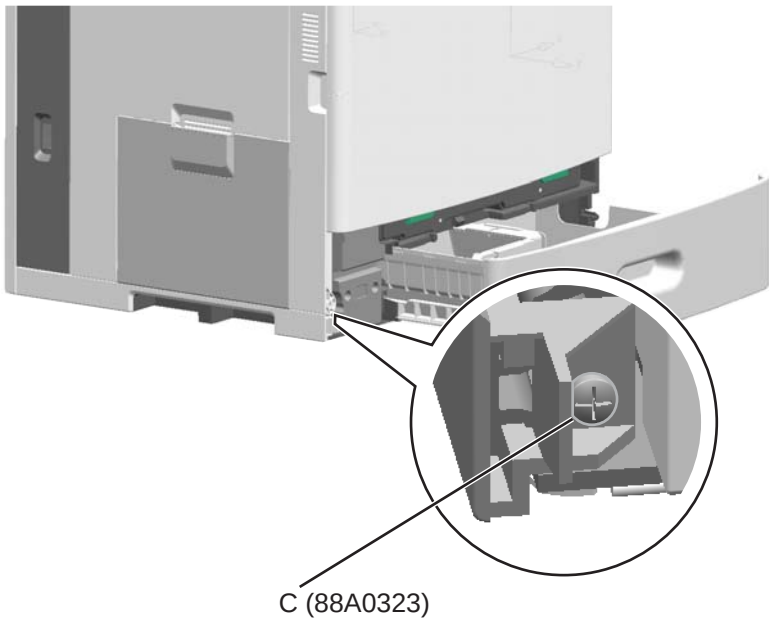
4. Open the MPF door enough to remove the screw (A) from the lower left cover under it.



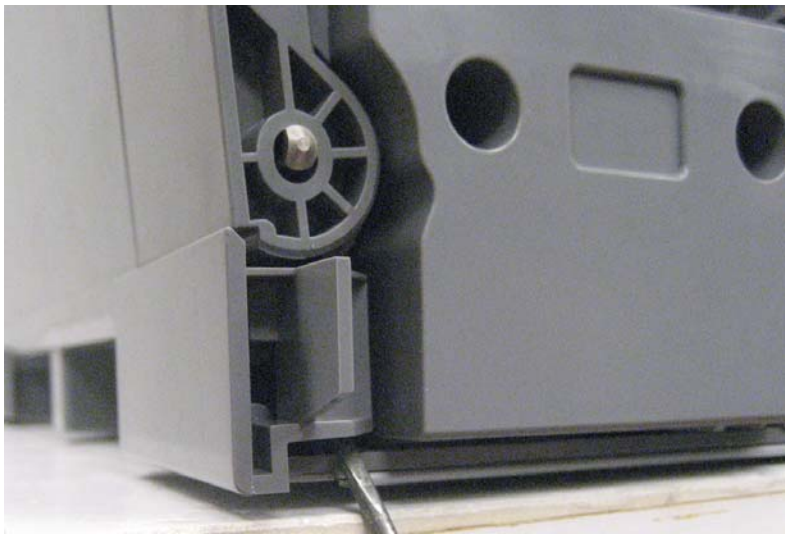
5. Remove two screws (B) from the top and middle of the left cover.



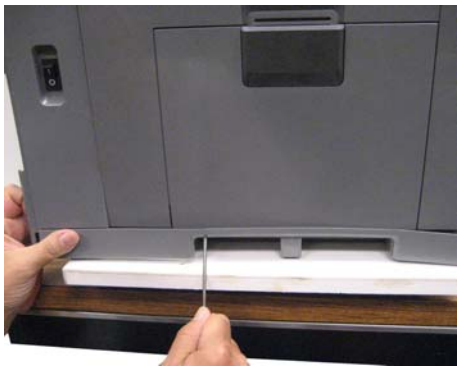
6. Open the standard media tray, and remove the screw (C) from the front of the printer.



7. Close the left access door, and use a flat-blade screwdriver to pop out the front of the lower left cover.

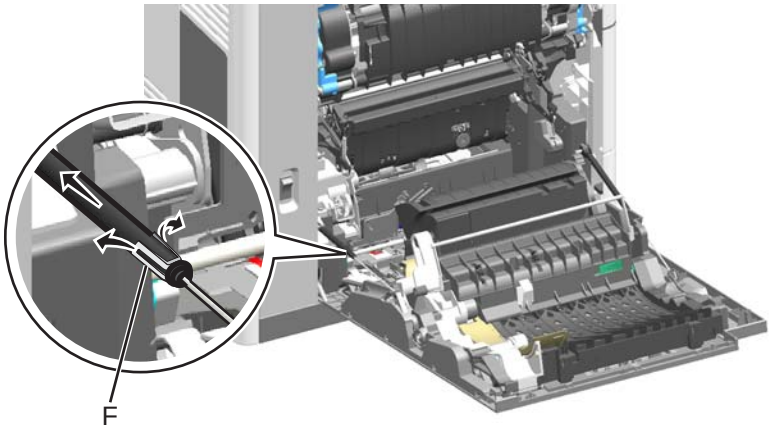


8. Use a flat-blade screwdriver to free the latches in the middle of the cover.





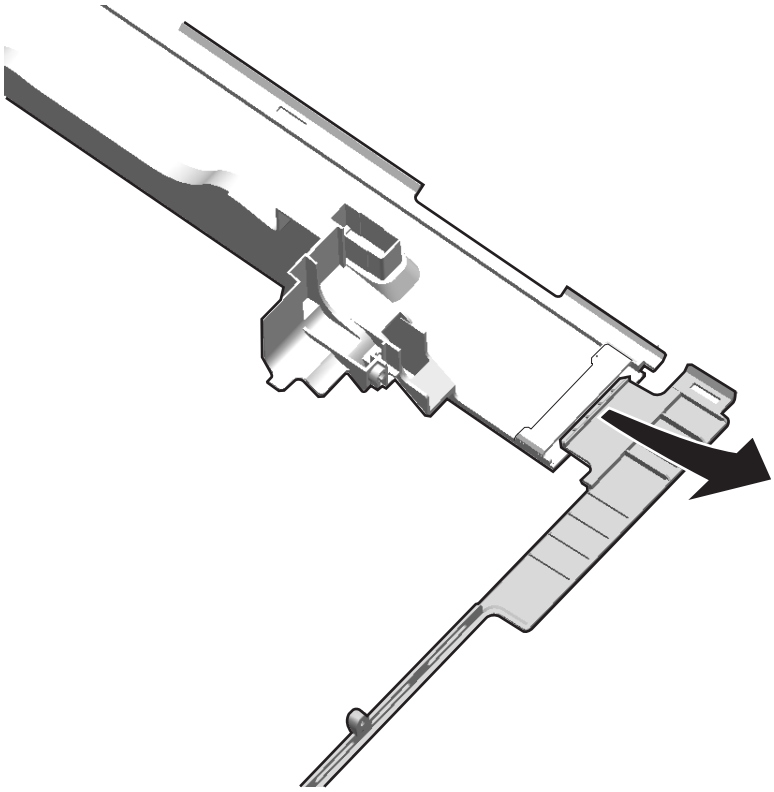
9. Open the left access door, and disconnect the rear piston by pulling apart the clamps (F) from the tabs.



10. Slide the left cover over the piston arm to remove the left cover and lower left cover together.

Note: If you are removing the left cover to access another part, then leave the left cover attached to the lower left cover. If you need to replace the left cover FRU or the lower left cover FRU, then continue with the next step to separate them.

11. Slide the lower left cover down to remove it from the left cover.

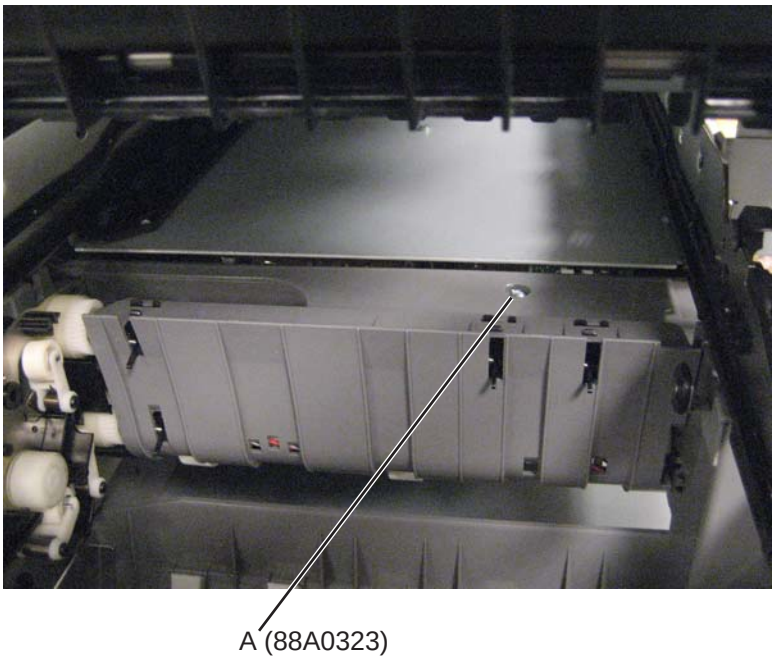


Lower frame cable cover removal

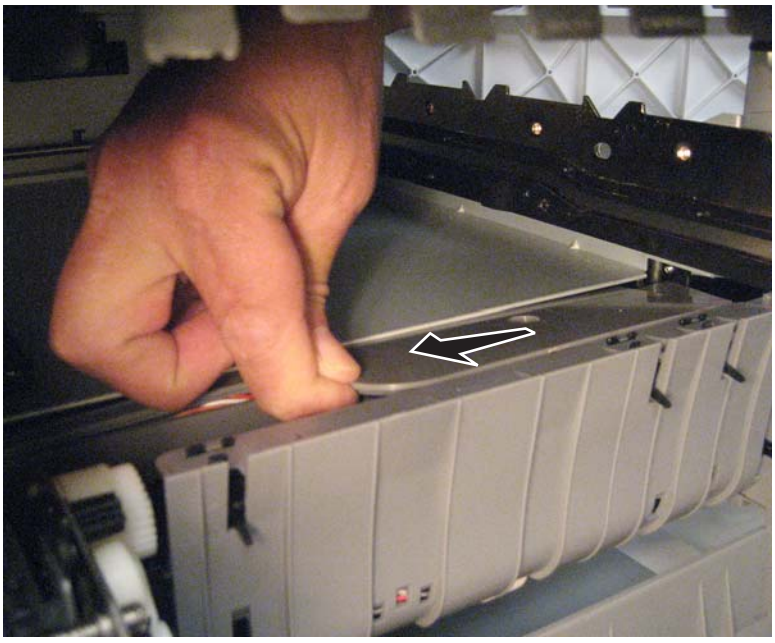
Previous
Next
Go Back

See **“Left” on page 7-11** for the part number.

1. Remove the ITU assembly. See **“ITU assembly removal” on page 4-68**.
2. Remove the screw (A).



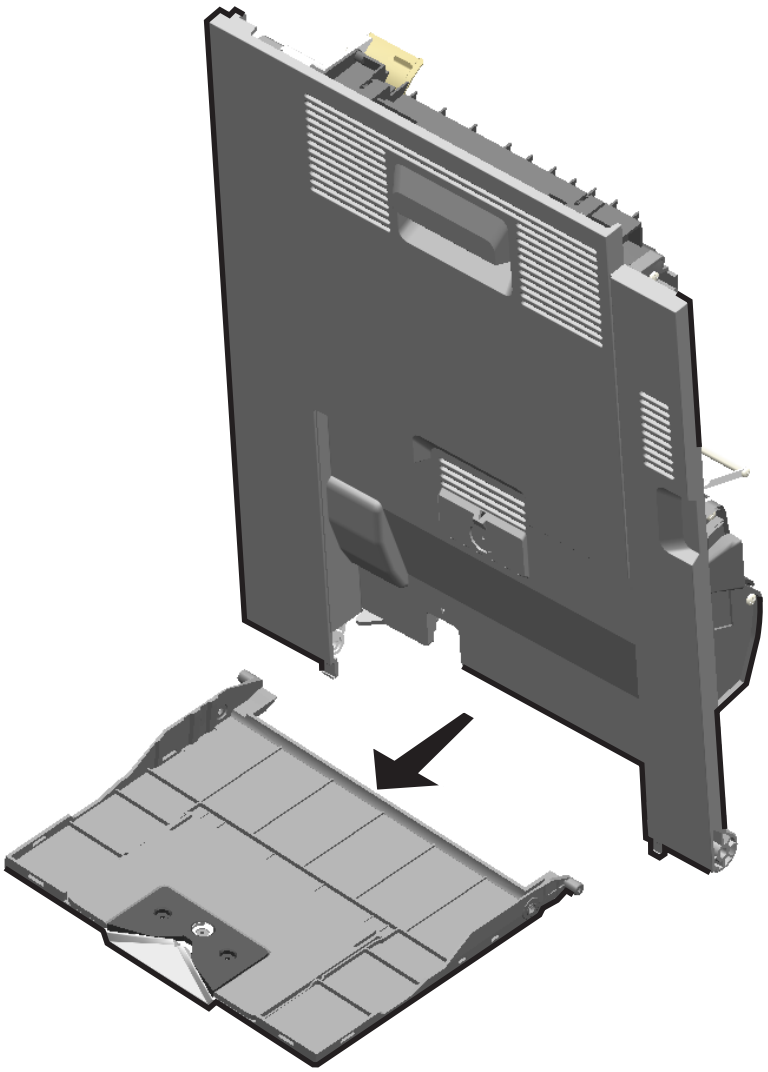
3. Slide the cover toward the rear of the printer, and lift to remove it.



Multipurpose feeder (MPF) cover removal

See **“Left and rear covers” on page 7-5** for the part number.

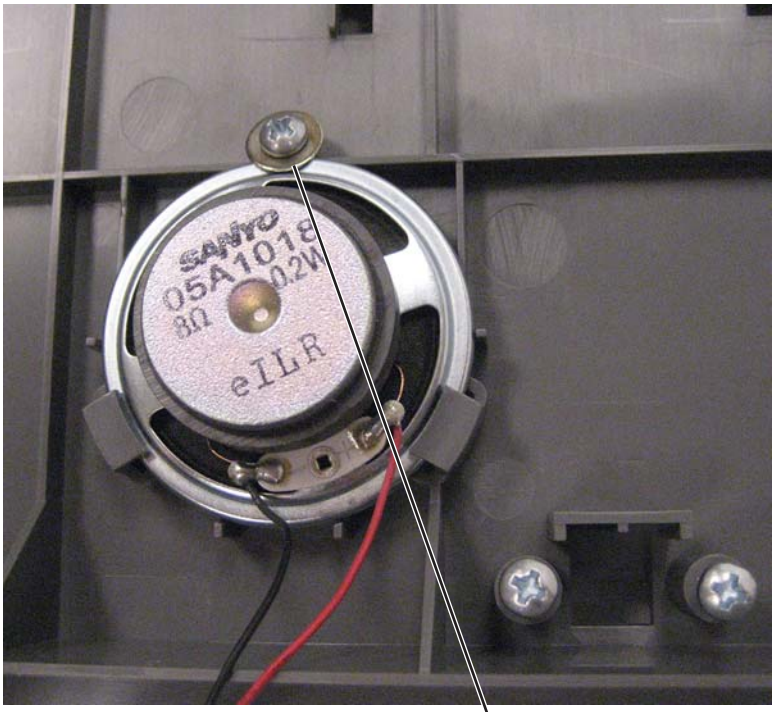
1. Remove the left access door assembly. See **“Left access door assembly removal” on page 4-10**.
2. Separate the MPF from the left access door assembly.



OP panel bottom cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

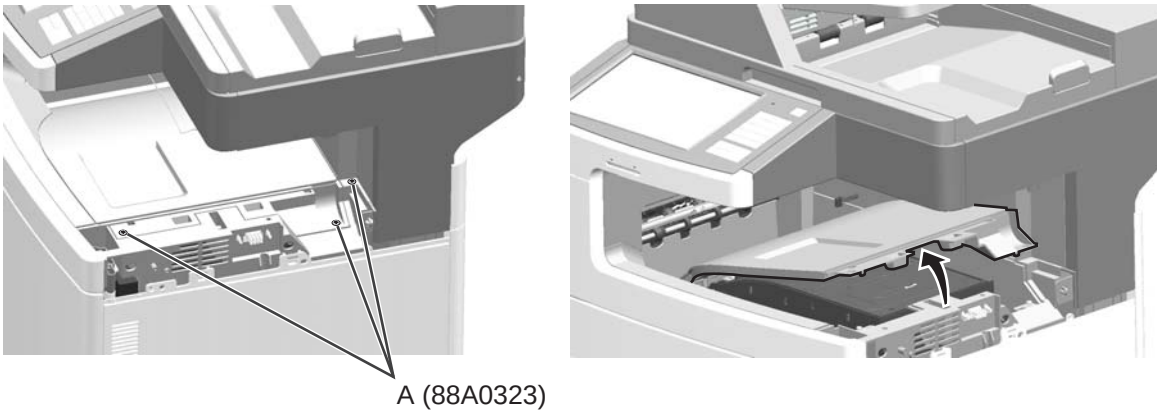
1. Remove the operator panel assembly. See **“Operator (OP) panel assembly removal” on page 4-103**.
2. Remove one screw (A), and remove the speaker.



Printhead access cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

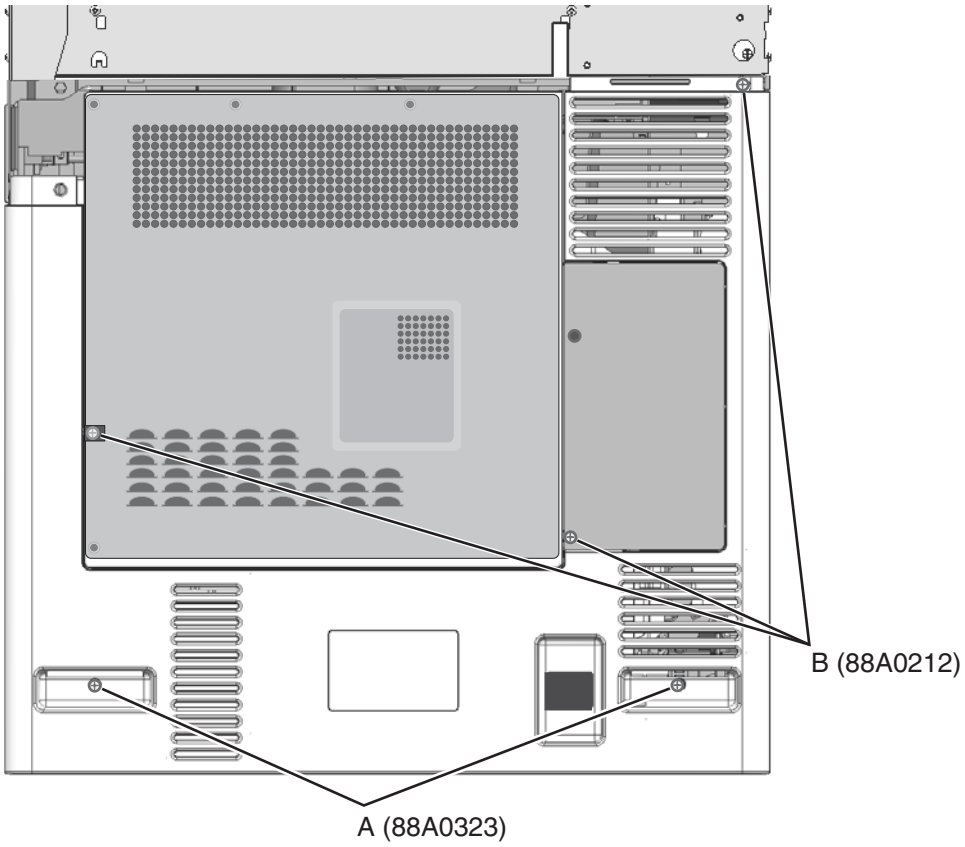
1. Remove the AIO option cover. See **“AIO option cover removal” on page 4-4**.
   Note: If you have any output options installed, then the option cover is already removed. Remove the output options and redrive unit instead.
2. Remove three screws (A), and lift to remove the cover.



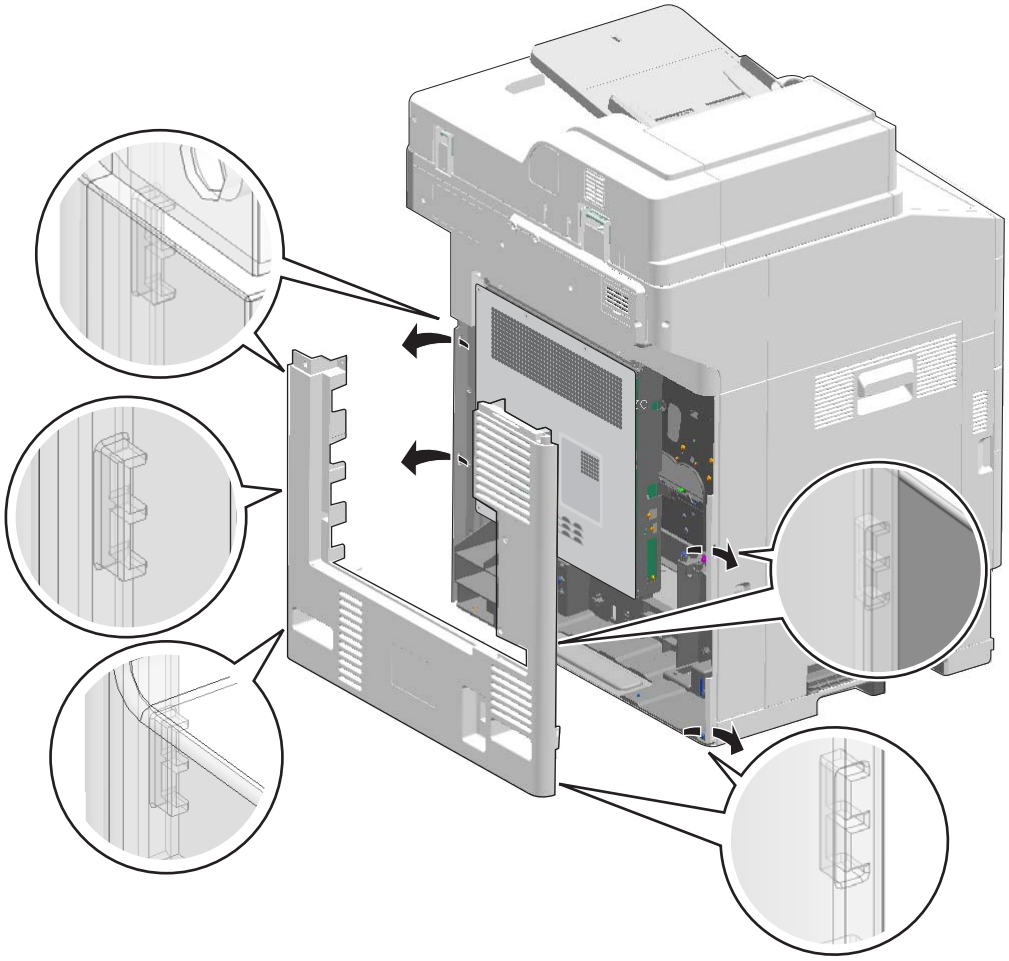
Rear cover removal

See **“Left and rear covers” on page 7-5** for the part number.

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-25**.
2. Remove the system board shield. See **“System board shield removal” on page 4-29**.
3. Remove the three screws (A) and the two screws (B).



4. Push in the indicated areas of the right side and left side covers, and pull out the rear cover tabs.



Note: On the right cover side, start with the top tab. On the left cover side, start with the bottom tab.

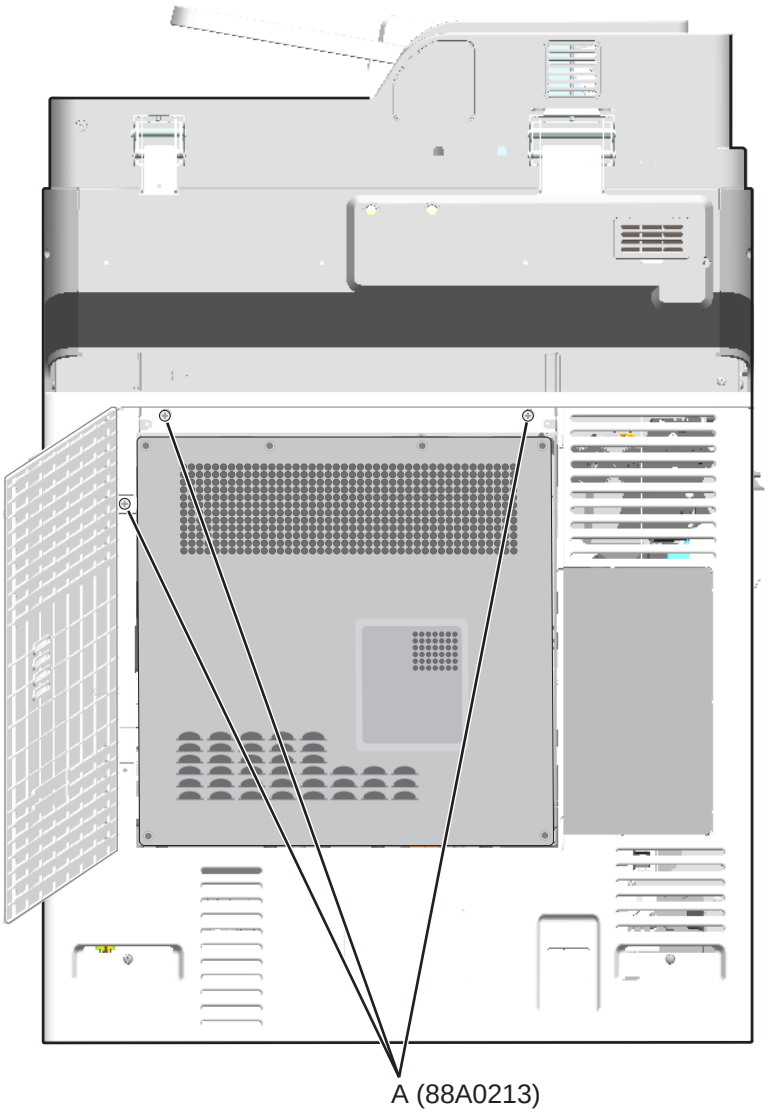


5. Remove the rear cover.

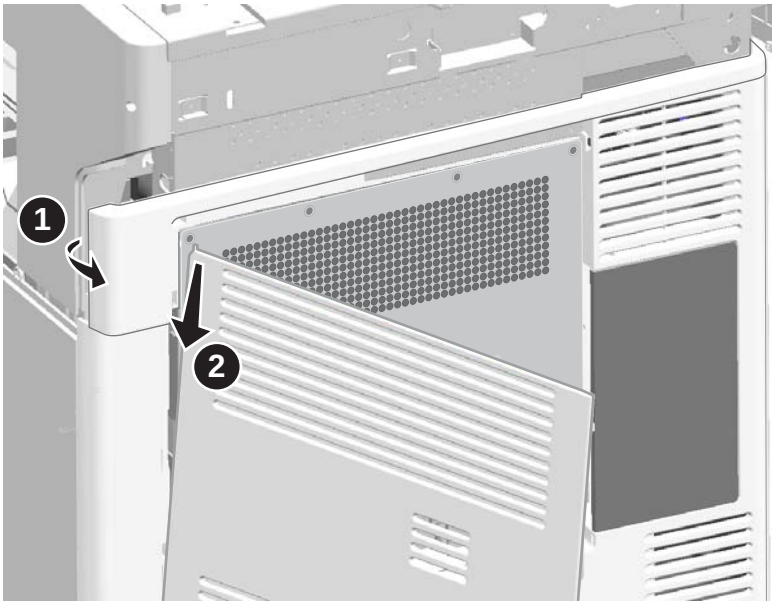
Rear upper cover removal

See **“Left and rear covers” on page 7-5** for the part number.

1. Open the system board shield door, and remove the three screws (A).



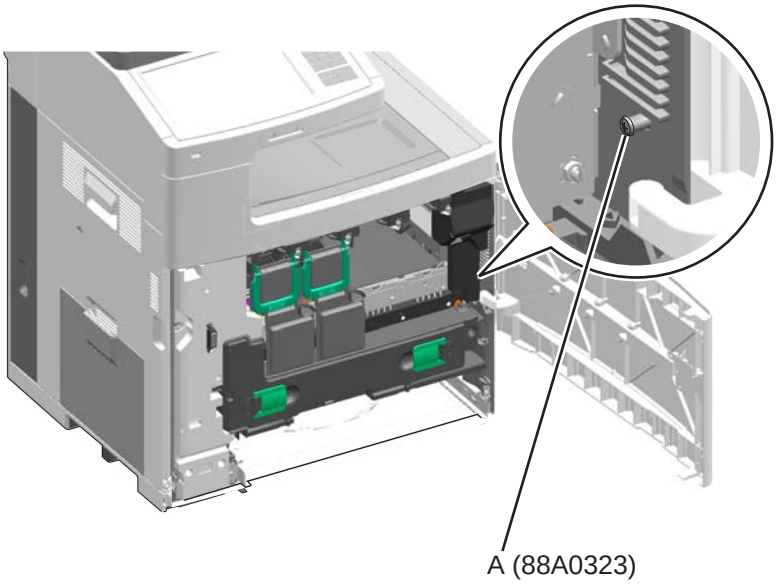
2. Pull the left side out, and then remove the system board shield door to remove the rear upper cover.



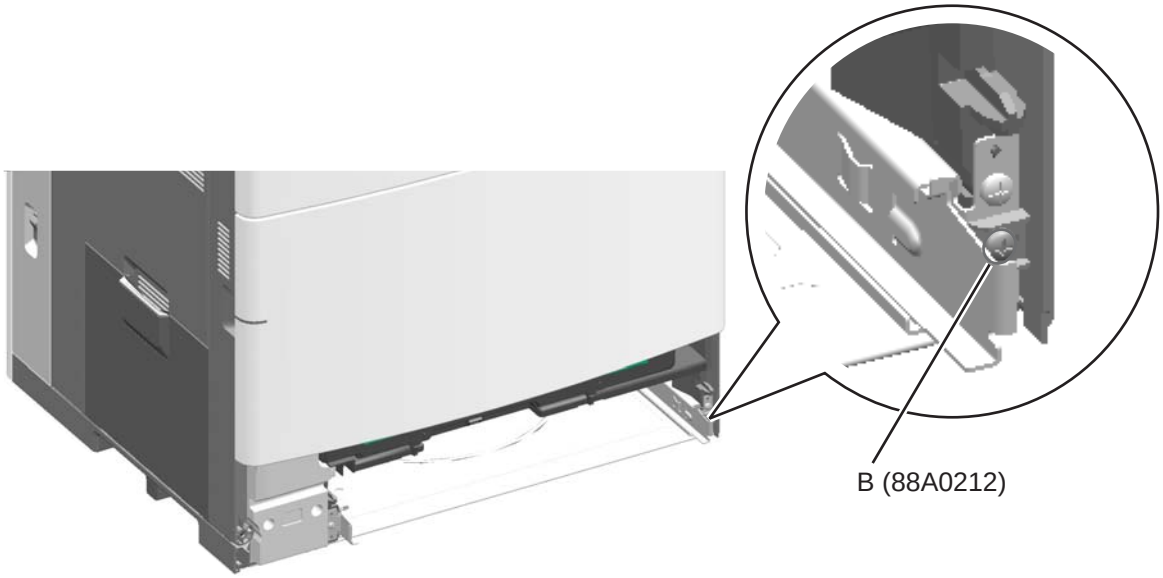
Right cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

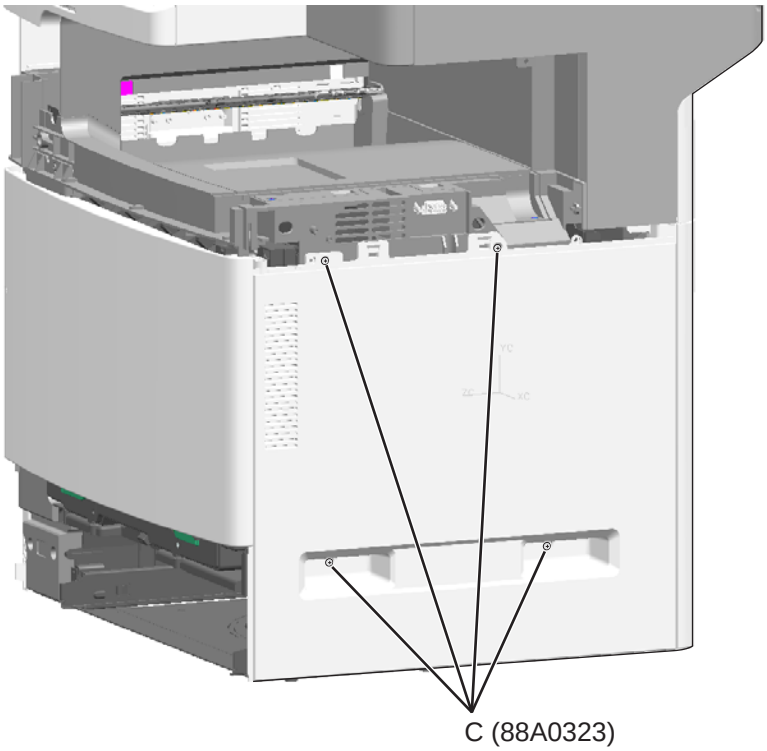
1. Remove the rear cover. See **“Rear cover removal” on page 4-23**.
2. Remove the AIO option cover. See **“AIO option cover removal” on page 4-4**.
   Note: If you have any output options installed, then the top cap cover is already removed. Remove the output options and HTU redrive unit instead.
3. Remove the standard media tray. See **“Standard media tray removal” on page 4-141**.
4. Open the front access door, and remove the black and magenta cartridges.
5. Remove the screw (A).



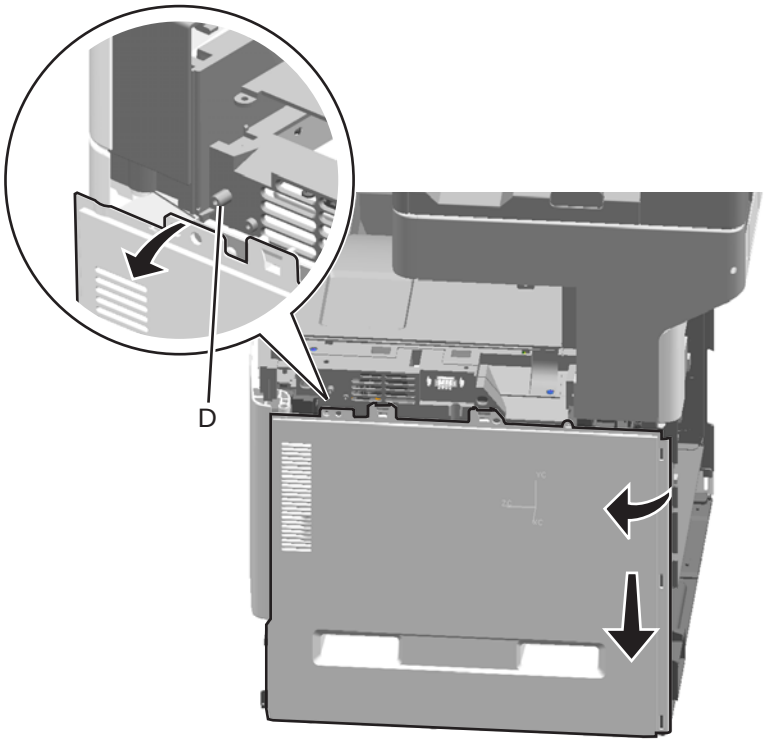
6. Remove the screw (B).



7. Remove the four screws (C).



8. Pull the tabs (D) away from the pins, and then pull out and down on the rear of the right cover to remove it.

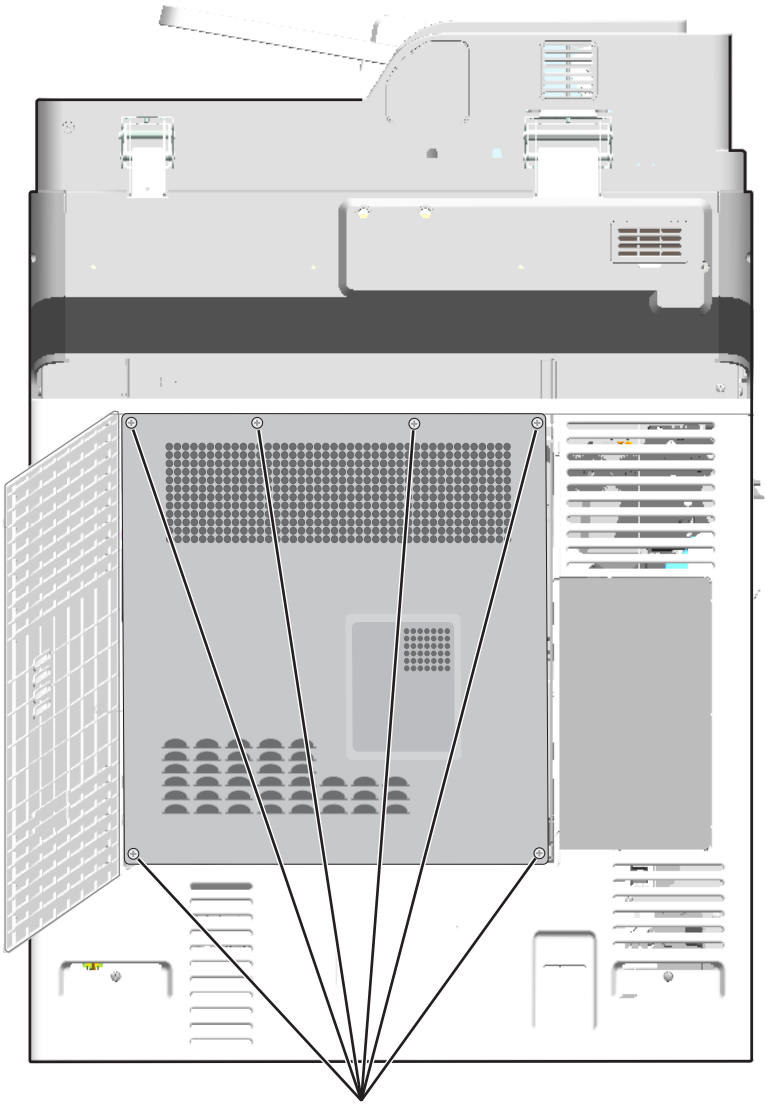


System board shield door removal

To remove the system board shield door, remove the rear upper cover. See **“Rear upper cover removal” on page 4-25**.

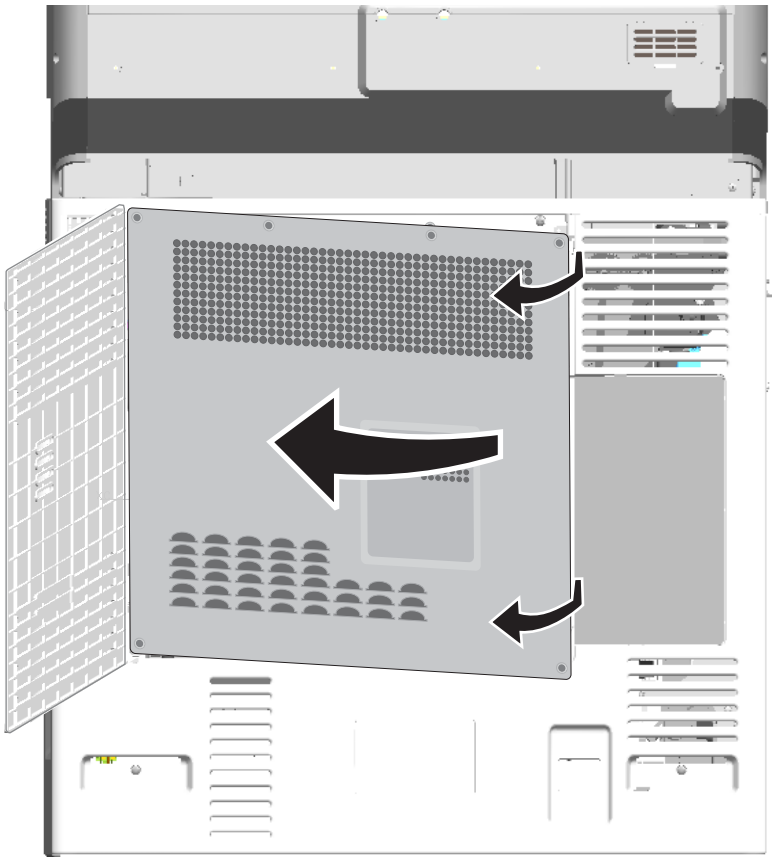
System board shield removal

1. Open the system board door, and remove the six screws (A) on the system board shield.



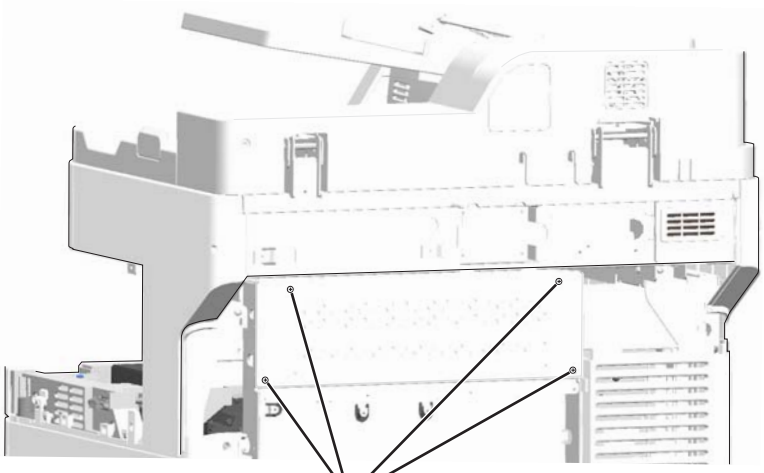
A (27S2839)

2. Swing the shield open about an inch, and slide the shield to the left to remove it.



System board upper shield removal

1. Remove the scanner rear cover. See **"Scanner rear cover removal" on page 4-205**.
2. Remove the system board shield. See **"System board shield removal" on page 4-29**.
3. Remove four screws (B) to remove the system board upper shield.

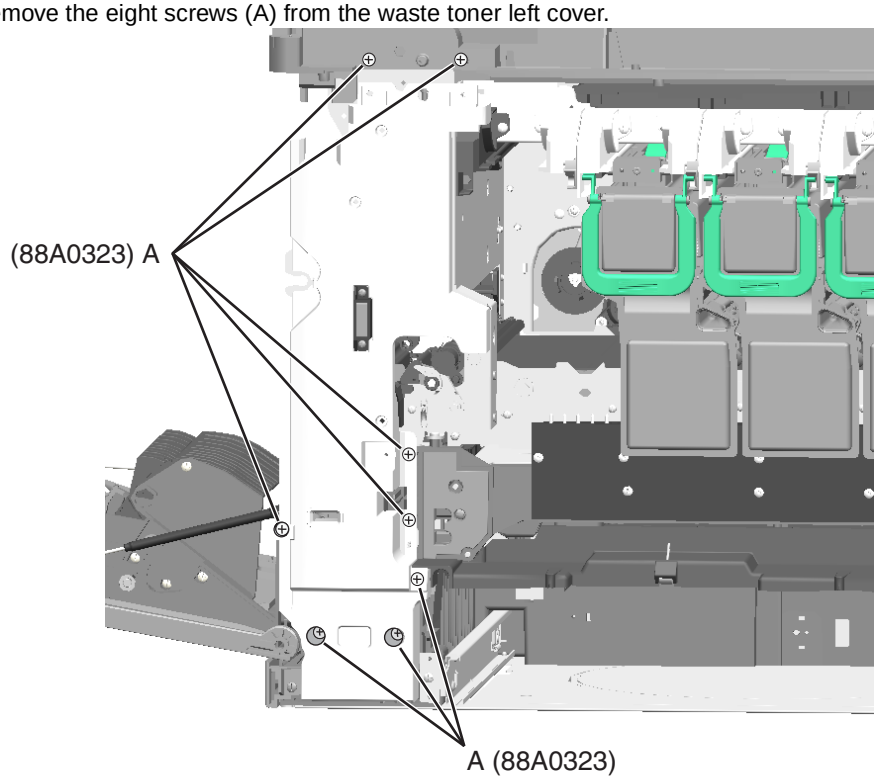


B (88A0232)

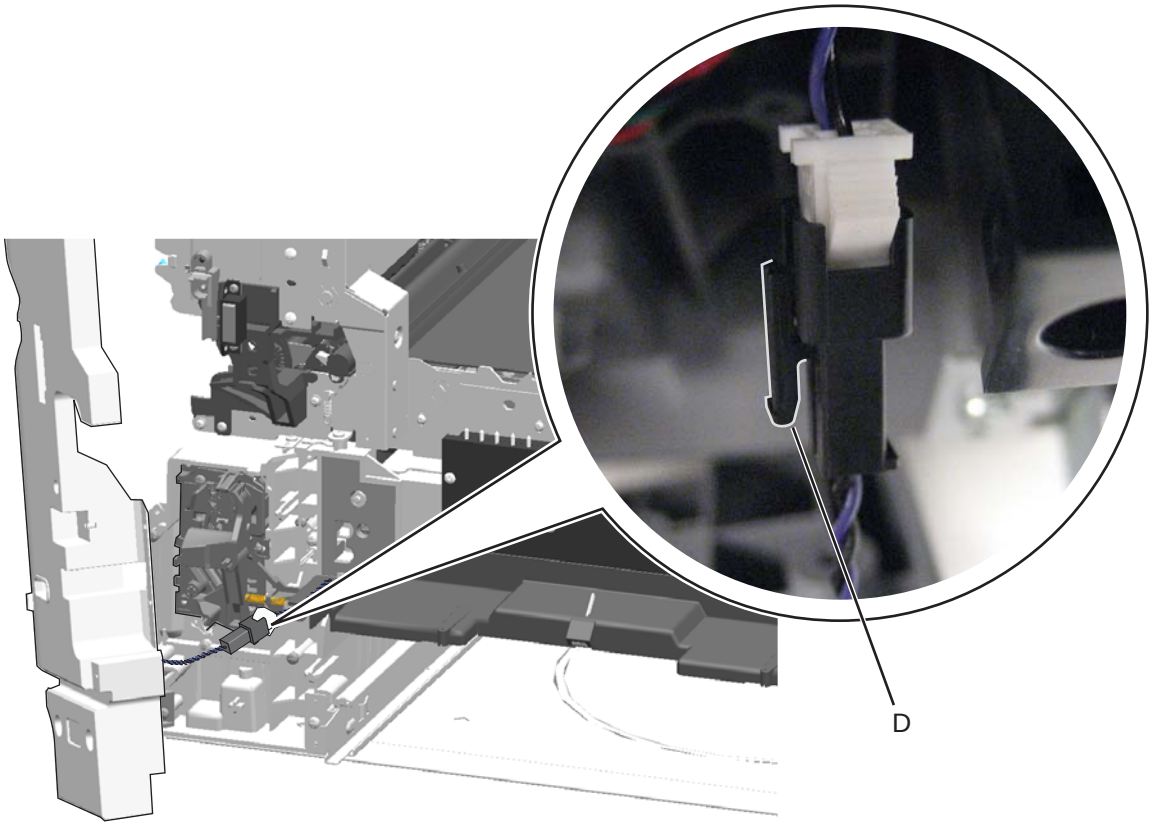
Waste toner left cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Remove the standard media tray. See **“Standard media tray removal” on page 4-141**.
2. Remove the AIO front lower cover. See **“AIO front lower cover removal” on page 4-3**.
3. Remove the yellow toner cartridge.
4. Remove the eight screws (A) from the waste toner left cover.

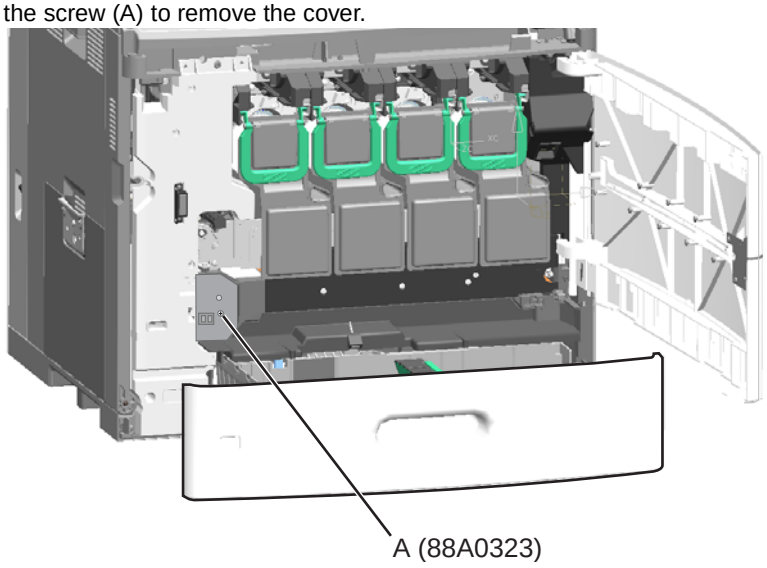


5. Pinch the release tab (D) and disconnect the beacon cable.



Waste toner sensor cover removal

1. Remove the waste toner container. See **"Waste toner container removal" on page 4-153**.
2. Remove the screw (A) to remove the cover.



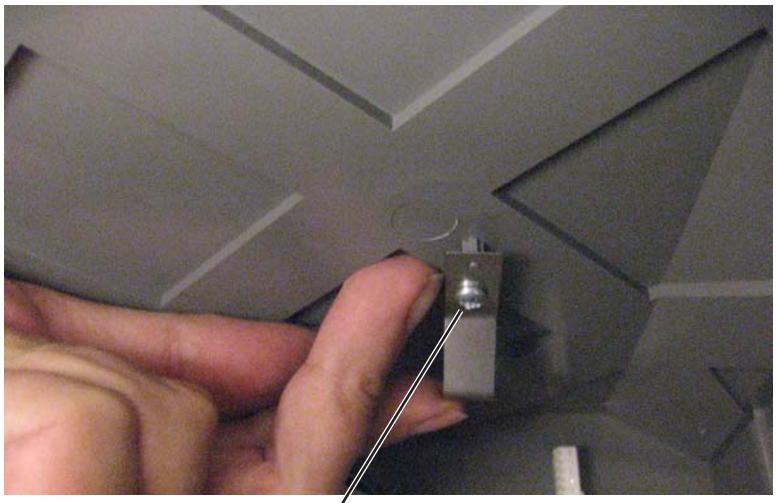
Base printer removals

For the base printer covers, see **“Base printer cover removals” on page 4-3**.

ACM bias spring removal

See **“Left” on page 7-11** for the part number.

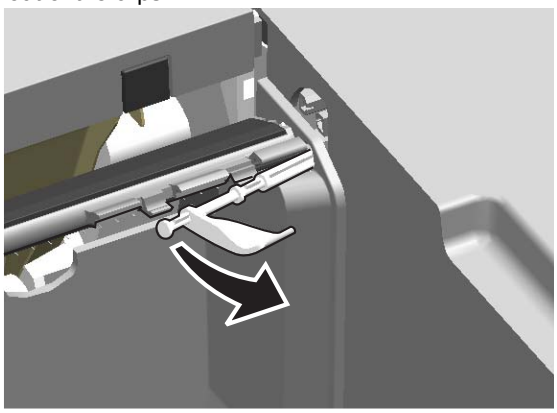
1. Remove the paper pick mechanism assembly. See **“Paper pick mechanism assembly removal” on page 4-114**.
2. Remove the screw (A) to remove the spring.



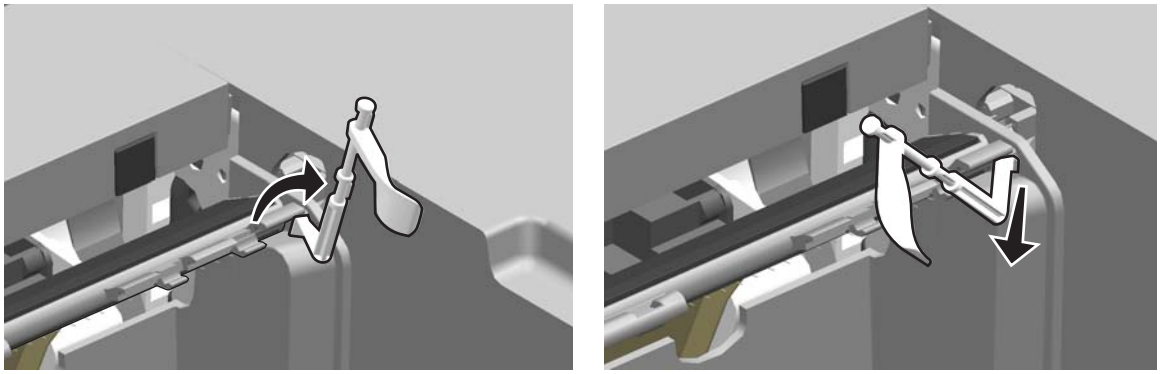
Bin-full flag removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Pull the flag forward out of the clips.



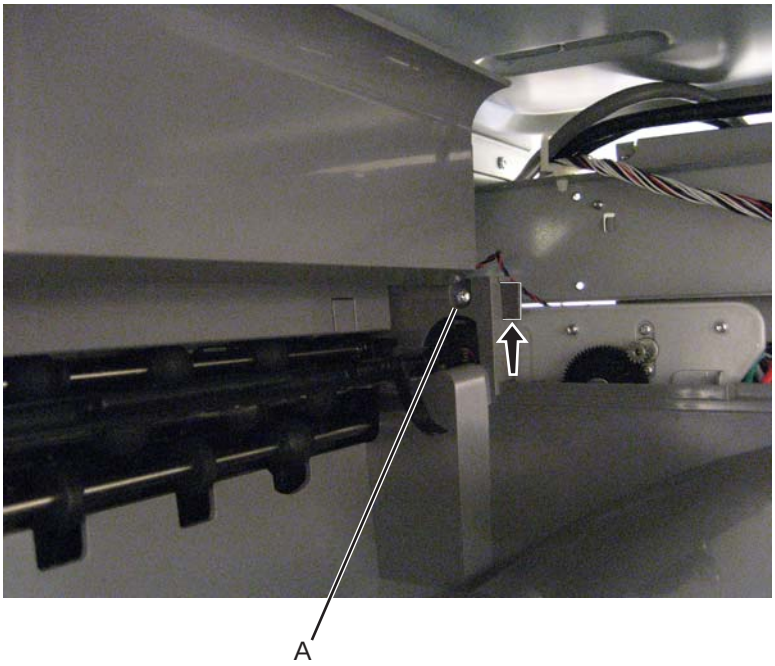
2. Rotate the flag, and pull to remove it.



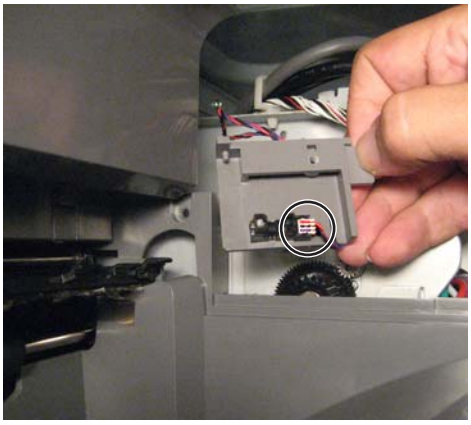
Bin-full sensor removal

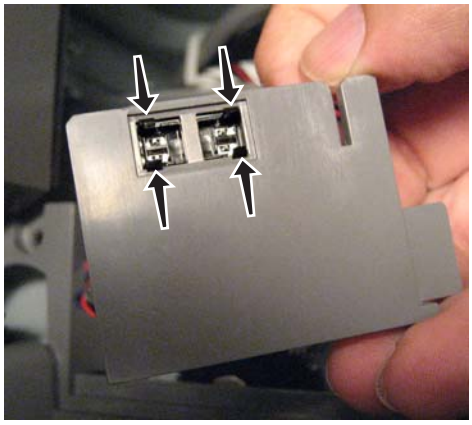
See **“Bin-full sensor removal” on page 4-34** for the part number.

1. Remove the AIO rear scanner cover. See **“AIO rear scanner cover removal” on page 4-201**.
2. Remove the bin-full flag. See **“Bin-full flag removal” on page 4-33**.
3. Remove the screw (A), and pull up to remove the plate holding the sensor.



4. Disconnect the cable, and then press in the tabs to remove the sensor from the bracket.

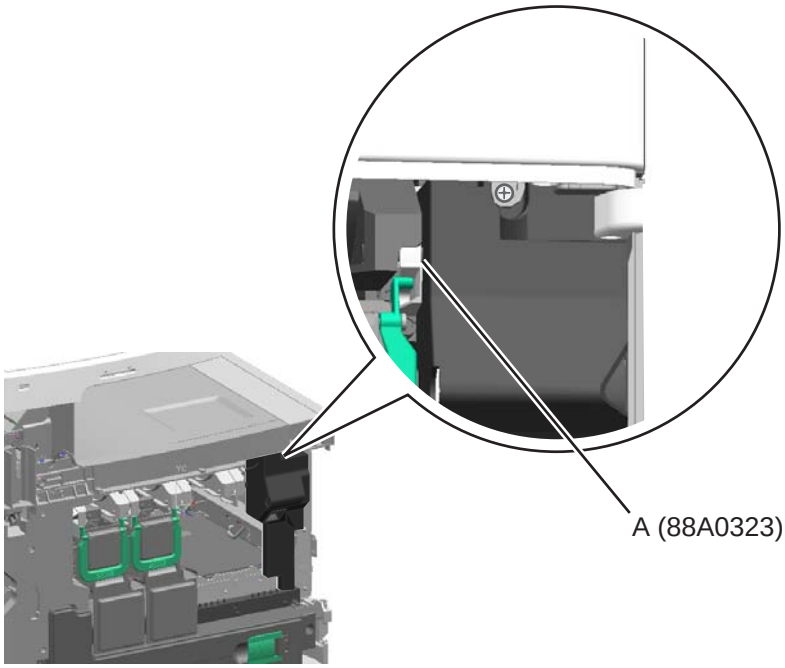




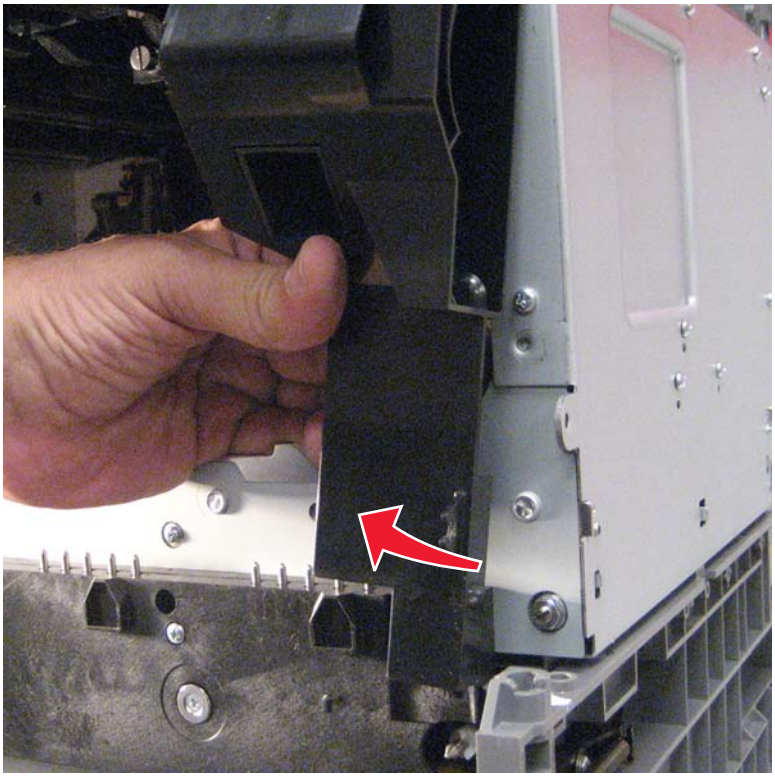
Cartridge blower assembly removal

See **“Front” on page 7-7** for the part number.

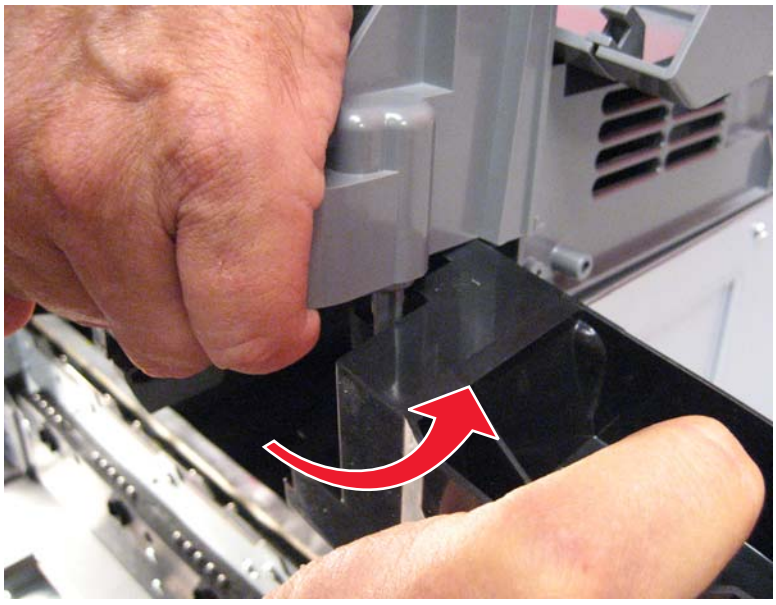
1. Remove the right cover. See **“Right cover removal” on page 4-26**.
2. Remove the front access door. See **“Front access door assembly removal” on page 4-9**.
3. Remove the screw (A) in the top cover.



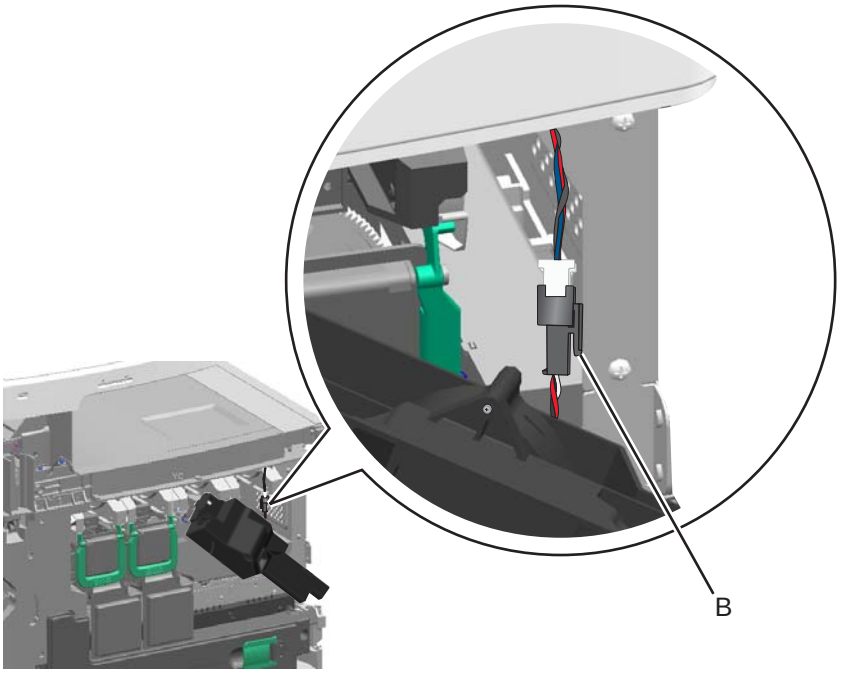
4. Lift the blower assembly slightly up and to the left to free the bottom.



5. Flex the top cover up, and rotate the blower assembly to the right to free the hook at the top.



6. Press the release tab (B) to disconnect the cable from the assembly.

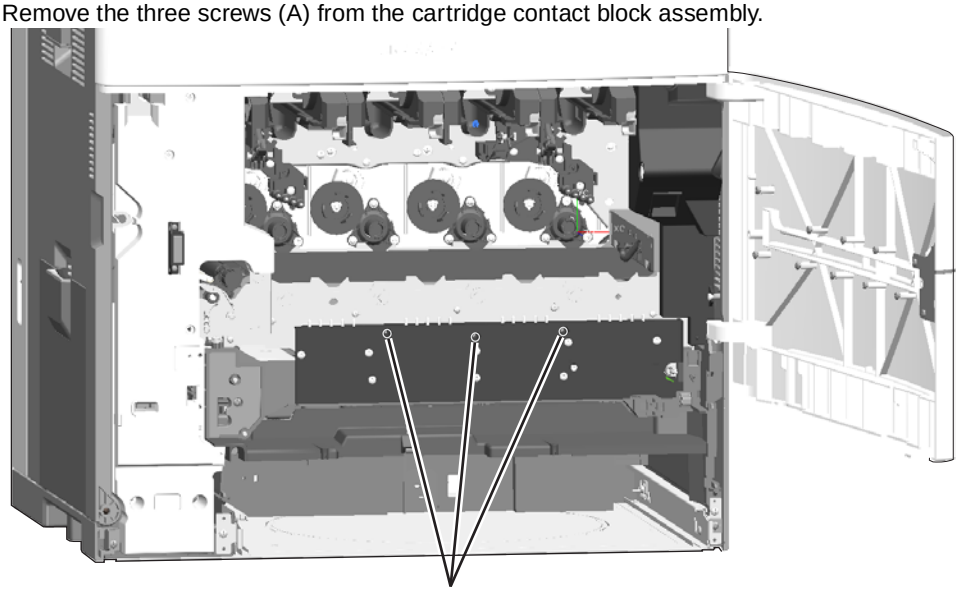


Cartridge contact block assembly removal

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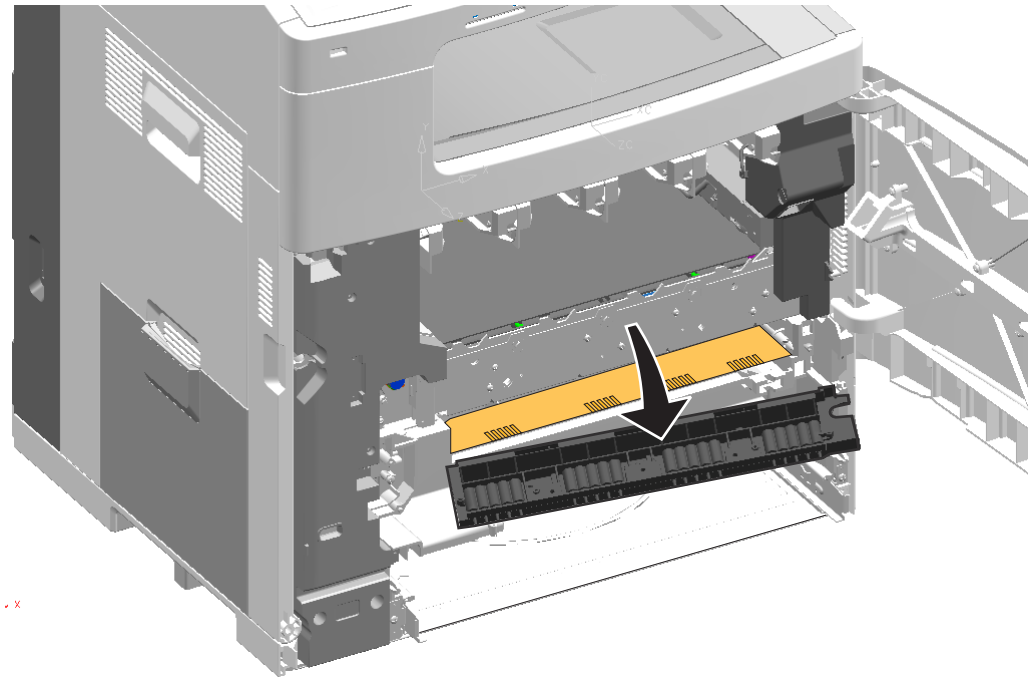
See **“Front” on page 7-7** for the part number.

1. Remove the waste toner container. See **“Waste toner container removal” on page 4-153**.
2. Remove the toner cartridges.
3. Remove the three screws (A) from the cartridge contact block assembly.

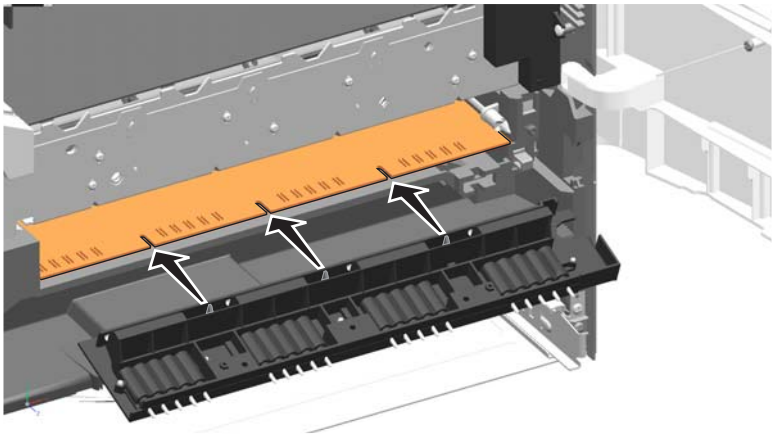


A (88A0212)

4. Remove the assembly.



Installation note: Be sure to line up the notches in the HVPS board with the ridges on the cartridge contact block assembly.

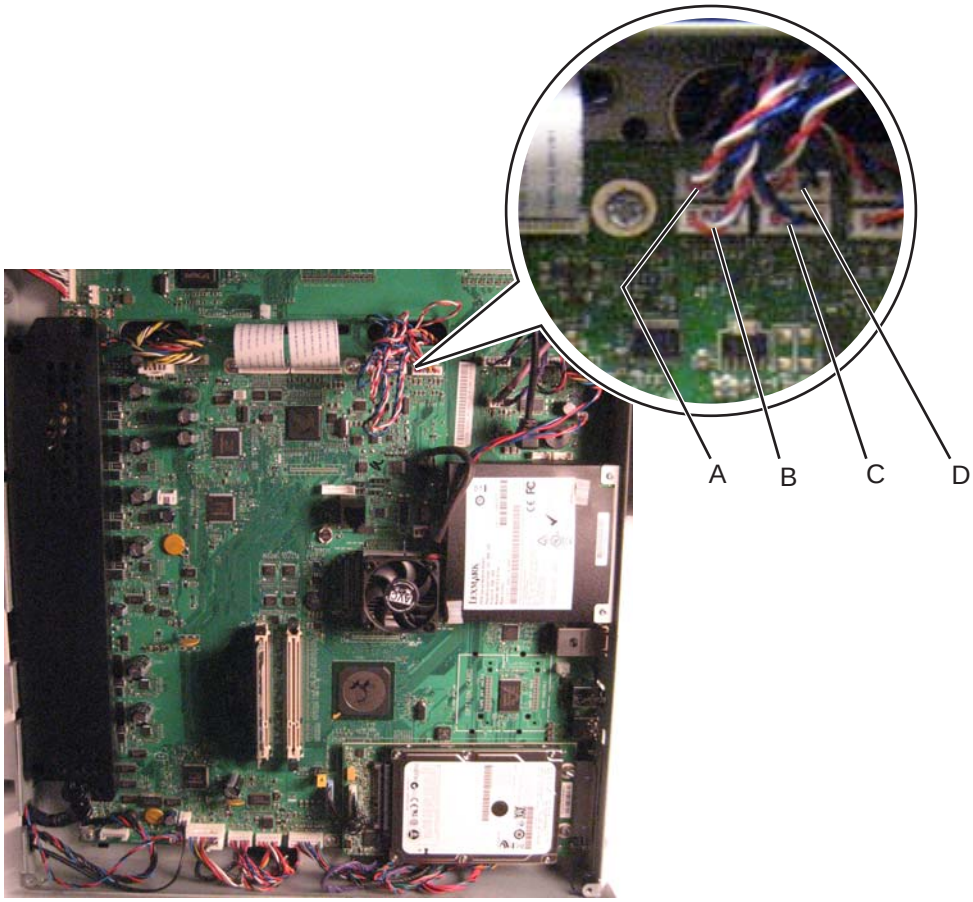


Cartridge memory block removal

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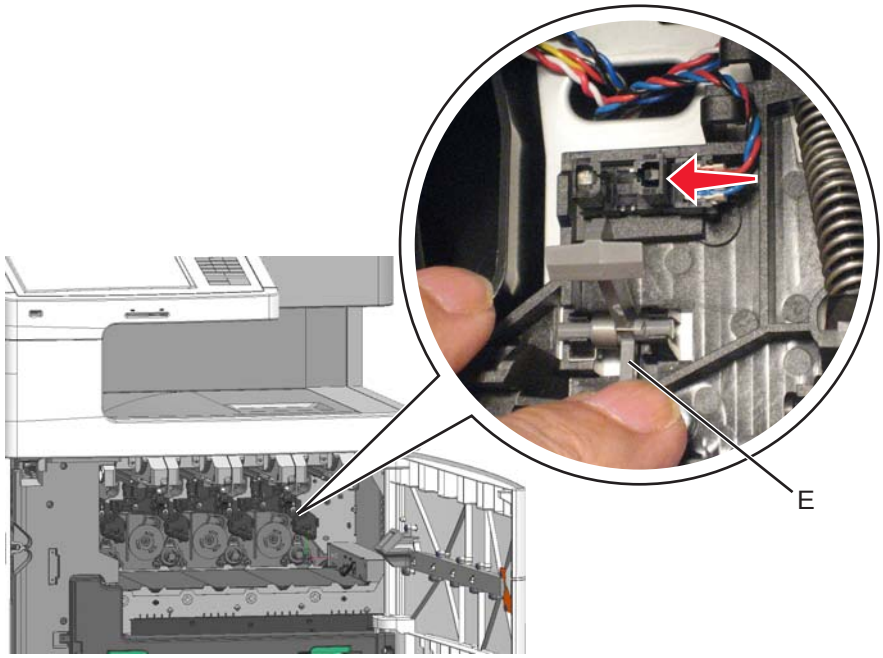
See **“Front” on page 7-7** for the part number.

1. Remove the ITU assembly. See **“ITU assembly removal” on page 4-68**.
2. Remove the system board shield. See **“System board shield removal” on page 4-29**.
3. Disconnect the cable (A, B, C, or D) for the memory block you want to remove. The terminals are interchangeable, so trace the cable back from the memory block to locate the correct connector.

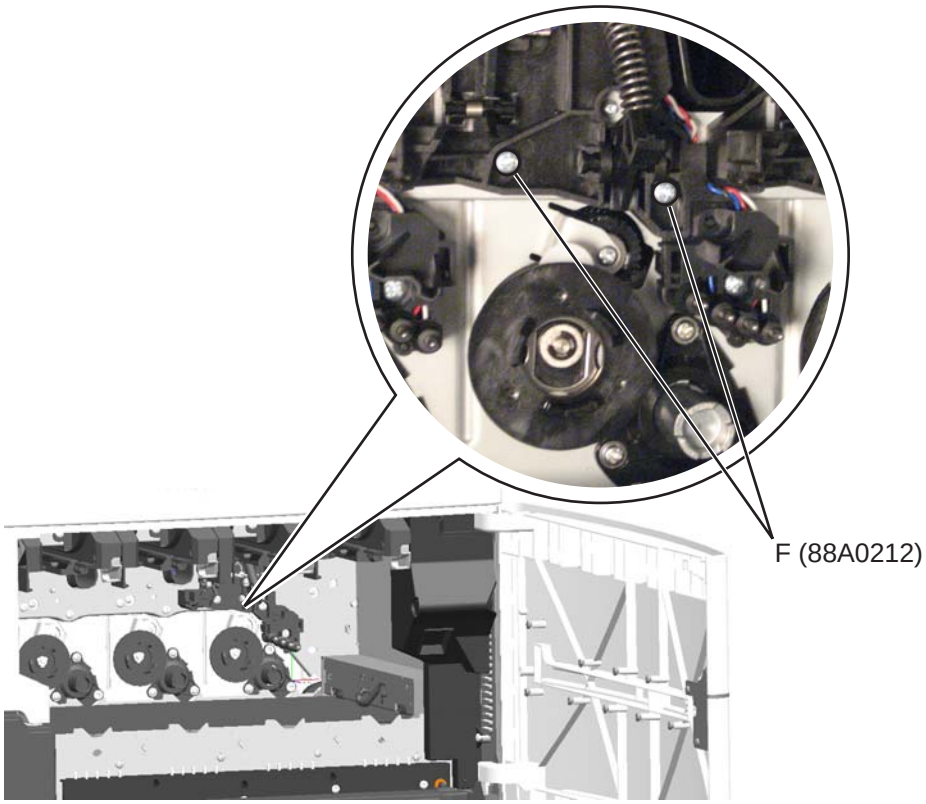


Note: To easily route the new cable to the system board, tie a string (at least twelve inches long) to the end of the cable you disconnect from the system board. When you pull the cable through the printer, be careful to leave the other end of the string on the system board side, and then untie the string from the cable.

4. From the memory block you are removing, press on the right side of the sensor to remove the sensor, and then disconnect the sensor cable (E).



5. Remove the two screws (F), and pull to remove the memory block. As you pull the cable through, be sure to leave the string in the path from the memory block to the system board.



Installation notes:

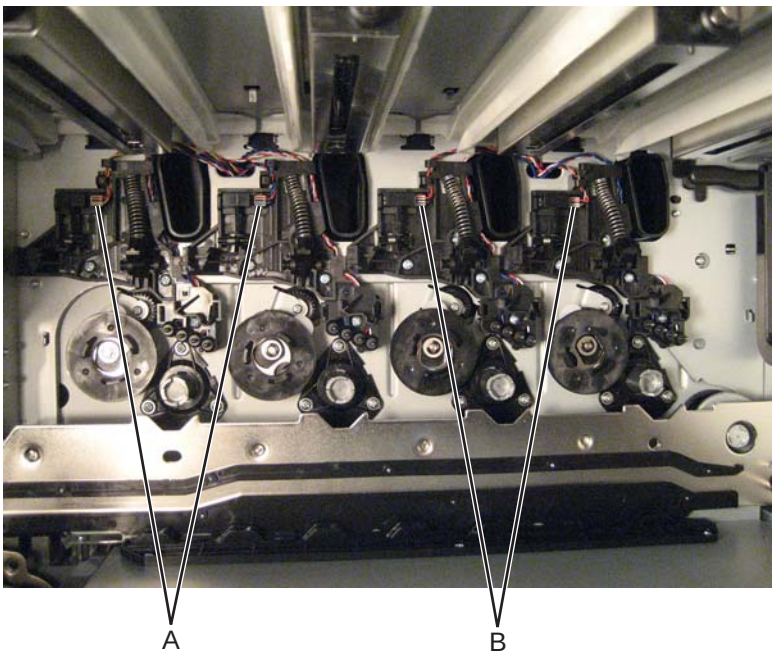
1. Attach the memory block and tie the string to its cable.
2. Connect the sensor cable to the sensor, and then attach the sensor to the memory block.
3. From the rear of the printer, pull the string to feed the memory block cable through the frame to the system board.

Warning: Make sure to pull the cable into the system board cage area as far as possible. Failure to do may damage the cables.

Cartridge metering cable removal

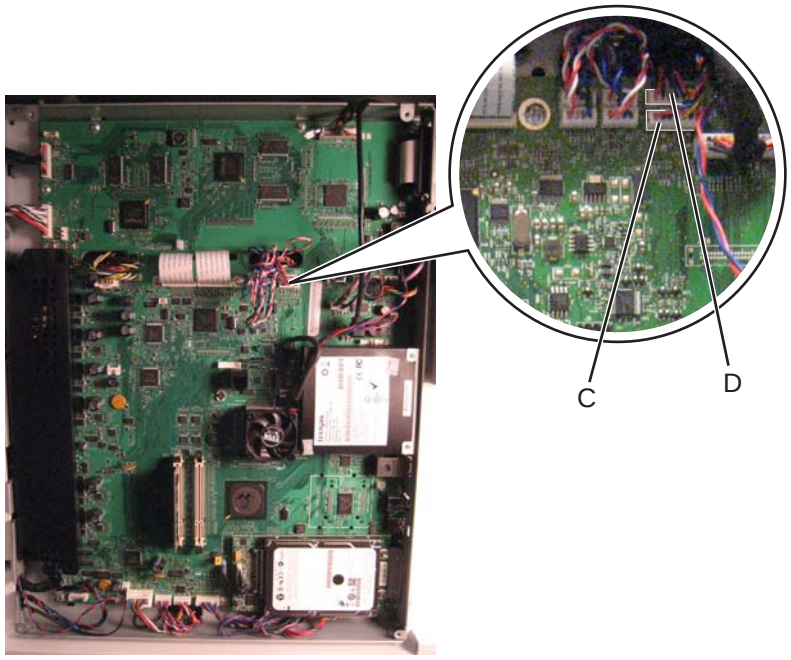
See **"M+K cartridge metering cable" on page 7-56** and **"C+Y cartridge metering cable" on page 7-56** for the part number.

1. Remove the system board shield. See **"System board shield removal" on page 4-29**.
2. Remove the ITU assembly. See **"ITU assembly removal" on page 4-68**.
3. Disconnect the cyan & yellow cables (A) or the black & magenta cables (B) from the sensors.



Note: To easily route the new cable to the system board, tie a string (at least twelve inches long) to the end of each sensor cable you disconnect. When you pull the cables through the printer, be careful to leave one end of each string inside the printer and the other end on the system board.

4. Disconnect the cyan & yellow cable (C) or the black & magenta cable (D) from the system board, and then pull the cable out of the printer.



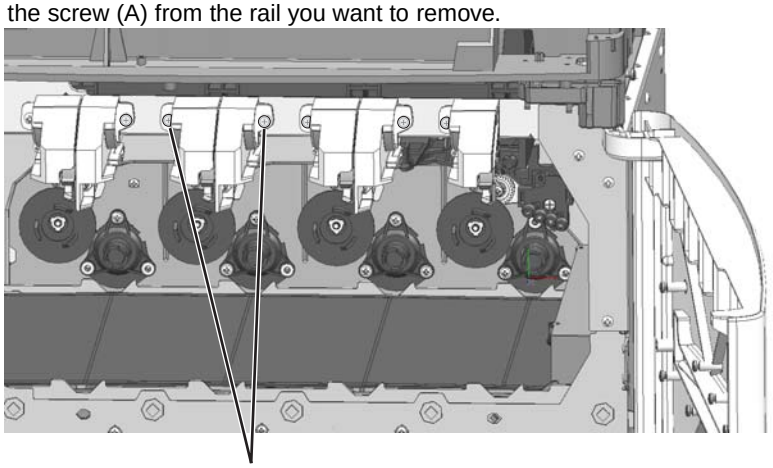
Installation notes:

1. Connect the cable to the system board.
2. Tie the correct strings to the sensor ends of the cable.
3. From the inside of the printer, pull the strings to feed the sensor cables through to the memory blocks.
4. Connect the sensor cables to the sensors.

Cartridge rail removal

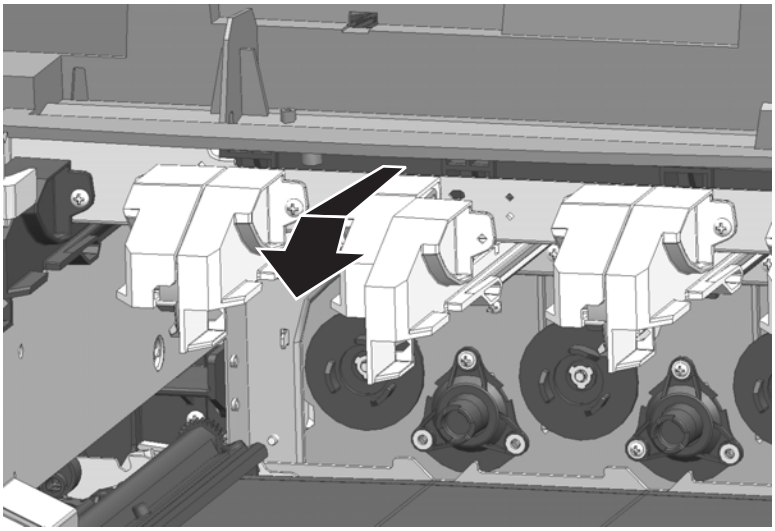
See **“Front” on page 7-7** for the part number.

1. Remove the toner cartridges.
2. Remove the screw (A) from the rail you want to remove.



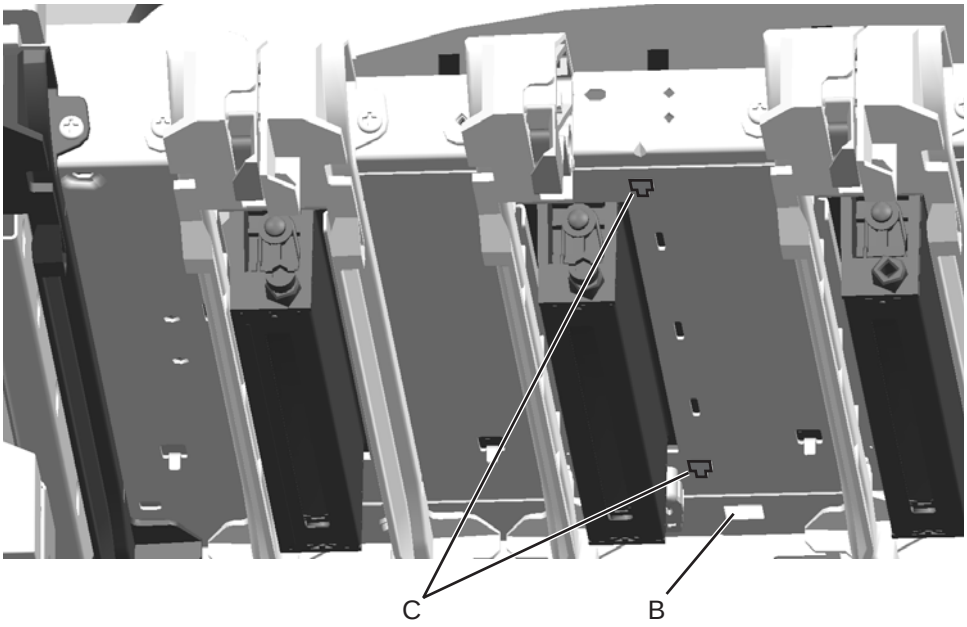
A (88A0212)

3. Slide the rail forward and drop it down to remove it.

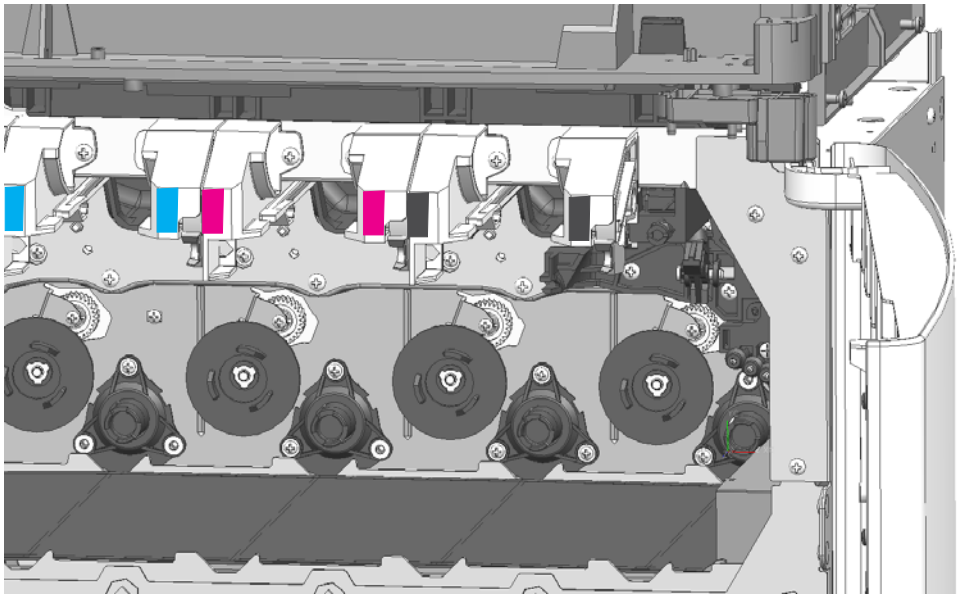


Installation notes:

1. Insert the tab on the rail into the slot (B) in the back, and then lift and slide the rail into the notches (C) on the top.



2. Apply the correct color label to new rail.



Datum bell crank removal

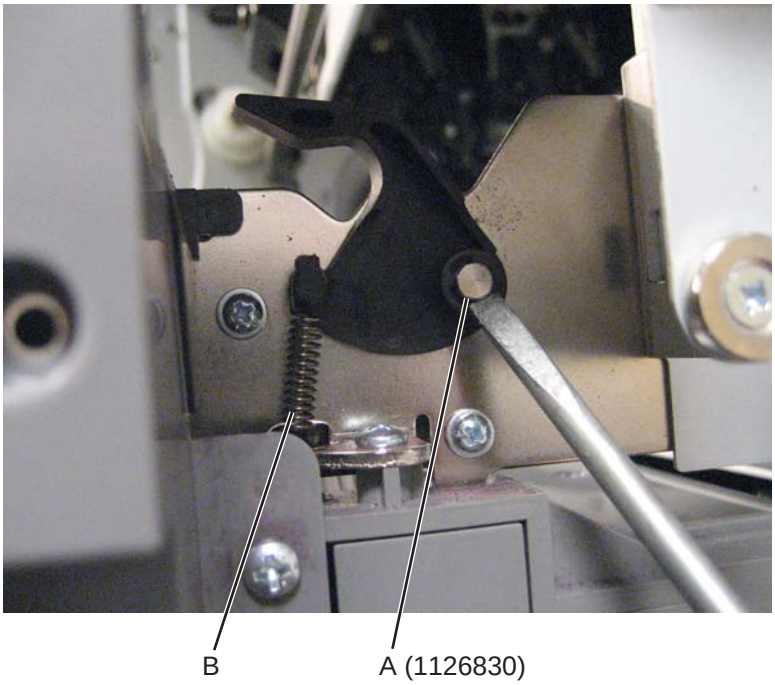
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See **“Left” on page 7-11** for the part number.

1. Remove the ITU assembly. See **“ITU assembly removal” on page 4-68**.
2. Remove the fuser. See **“Fuser assembly removal” on page 4-56**.

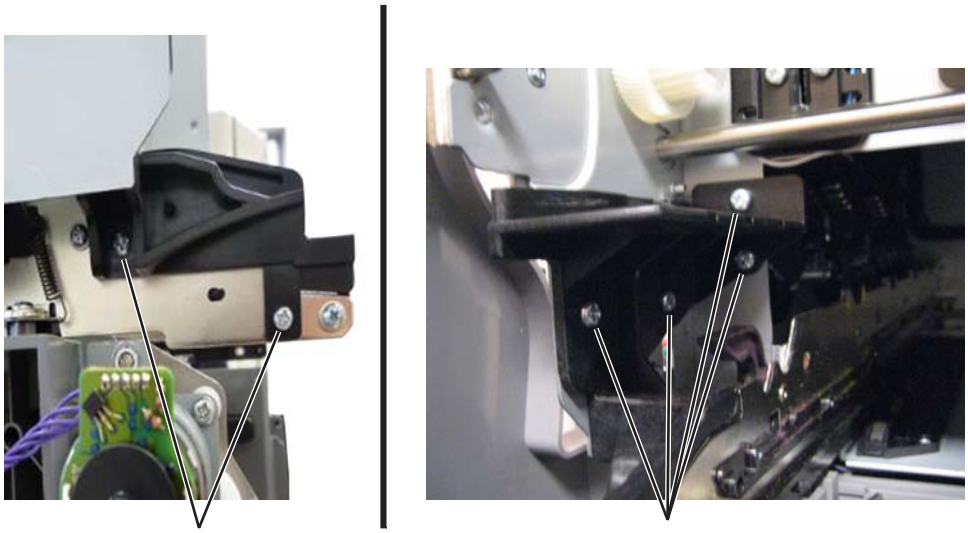
Front crank

a. Remove the waste toner left cover. See **“Waste toner left cover removal” on page 4-31**.
b. Remove the E-clip (A).
c. Unhook the spring (B), and pull to remove the bell crank.

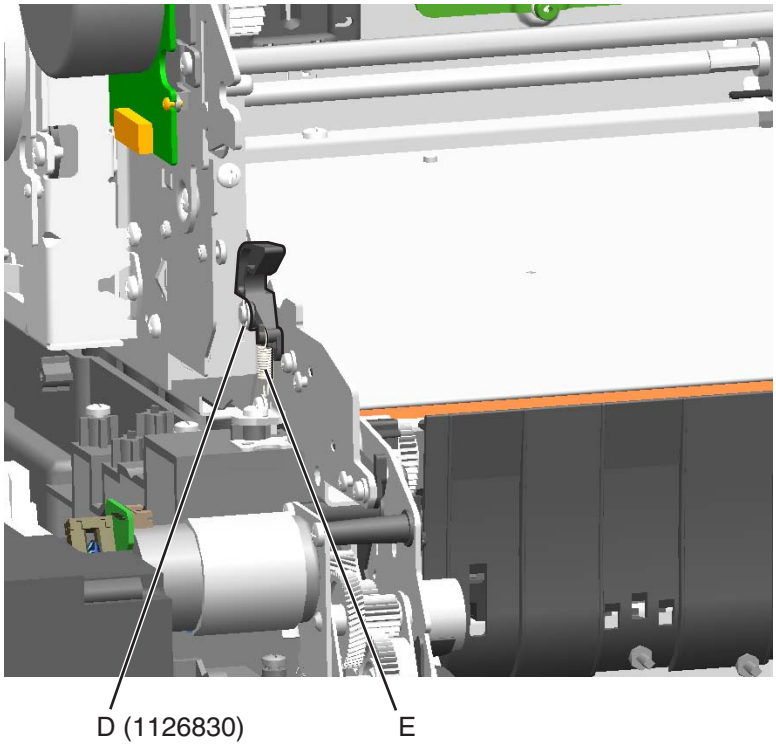


Rear crank

a. Remove the left cover. See **“Left cover removal” on page 4-16**.
b. Remove two screws (B) and the four screws (C) to remove the rear fuser guide.



c. Remove the E-clip (D).
d. Unhook the spring (E), and pull to remove the bell crank.

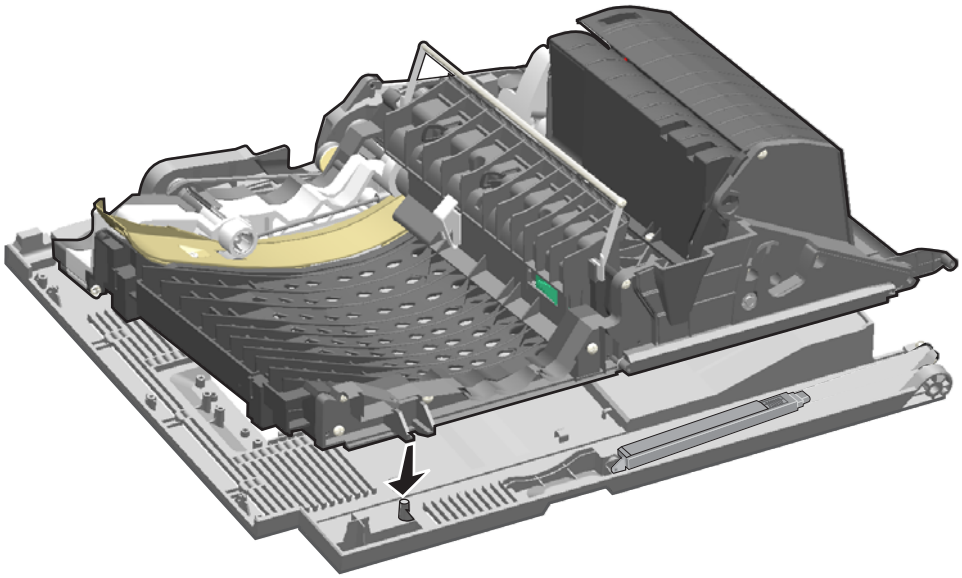


Duplex assembly removal

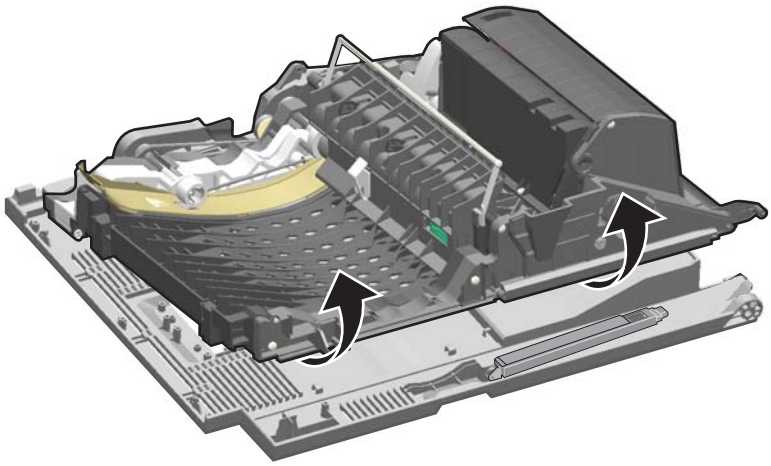
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See **“Left and rear covers” on page 7-5** for the part number.

1. Remove the left access door assembly. See **“Left access door assembly removal” on page 4-10**.
2. Remove the screw (A) that secures the duplex assembly to the left access cover.

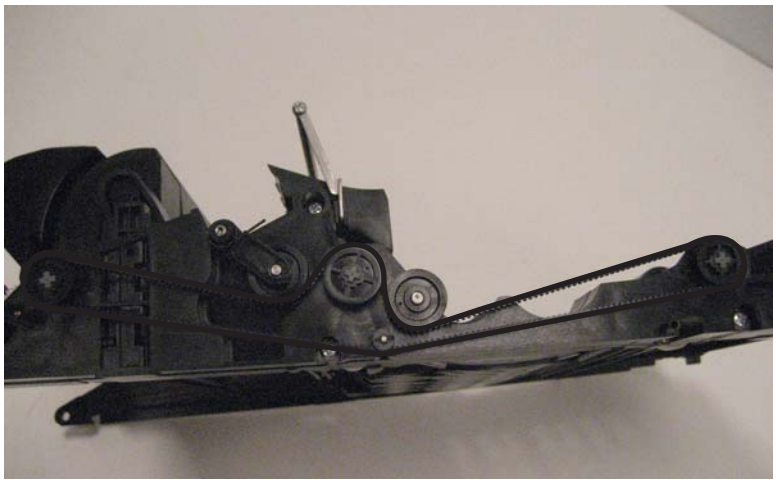


3. Lift the duplex assembly from the left access door.

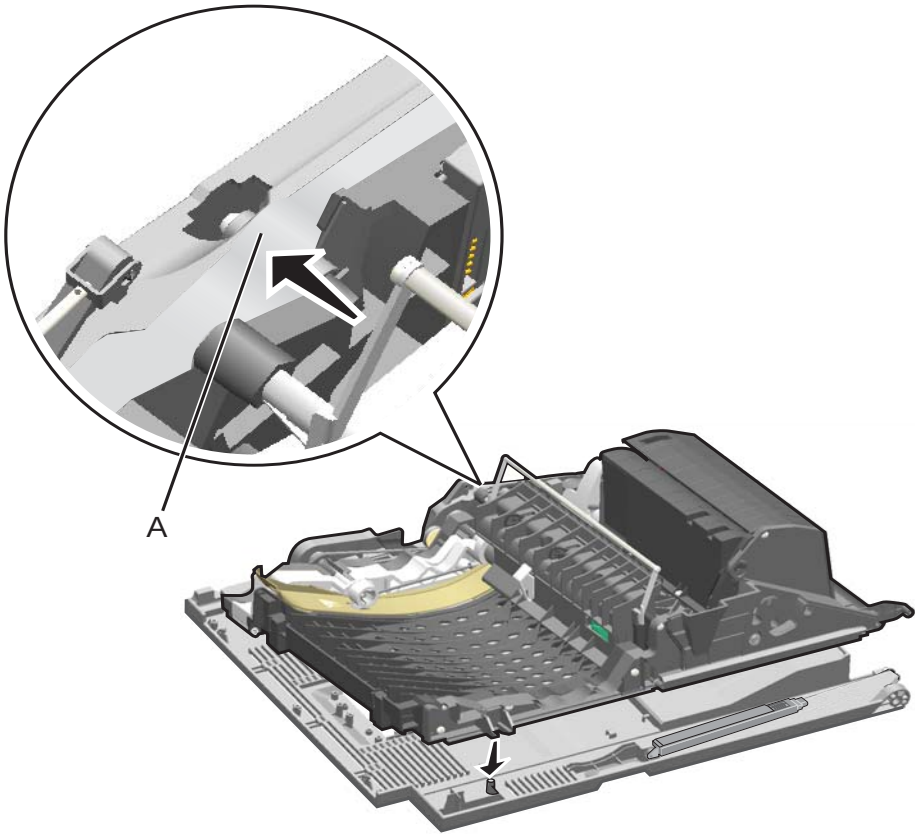


Installation notes:

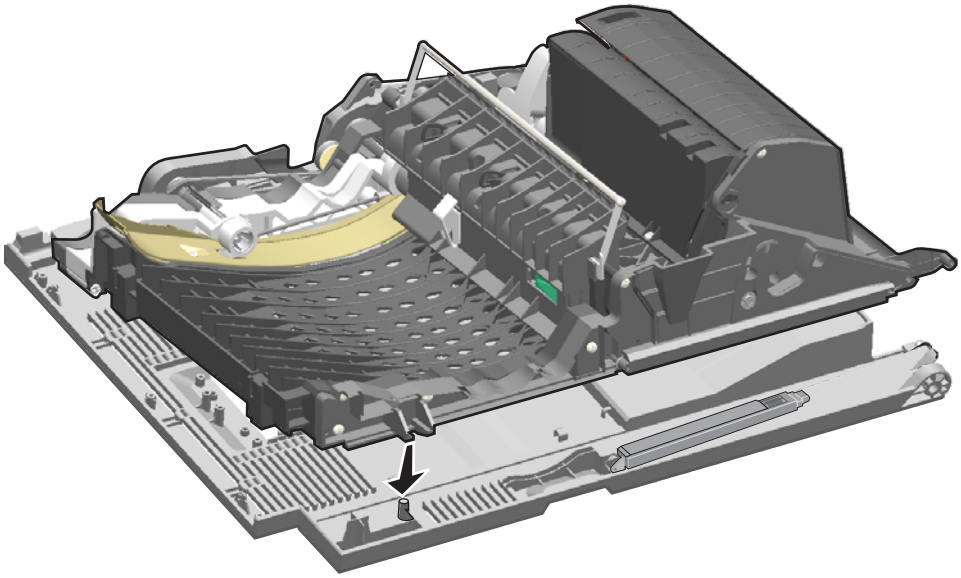
1. If you are replacing the duplex drive belt, then carefully check the routing as you install the new belt.



2. Align the edge (A) of the duplex assembly under the back edge of the left access door assembly.



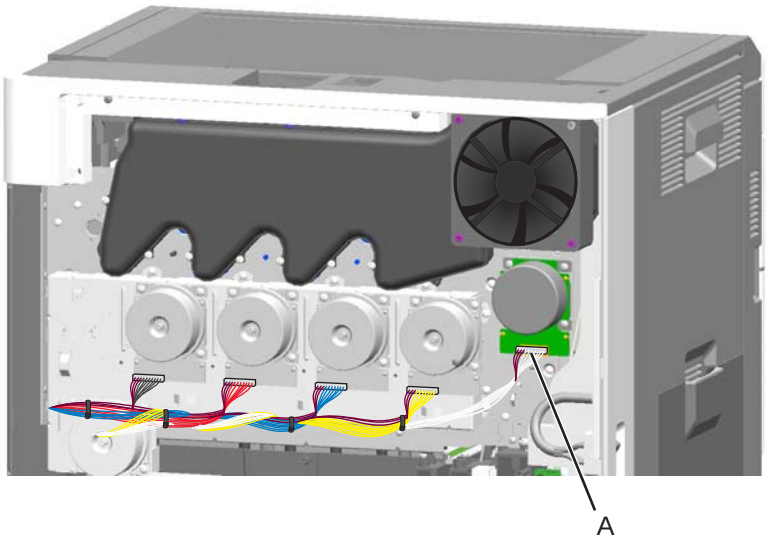
3. Align the top edge of the duplex assembly with the post, and then replace the screw.



EP drive assembly removal

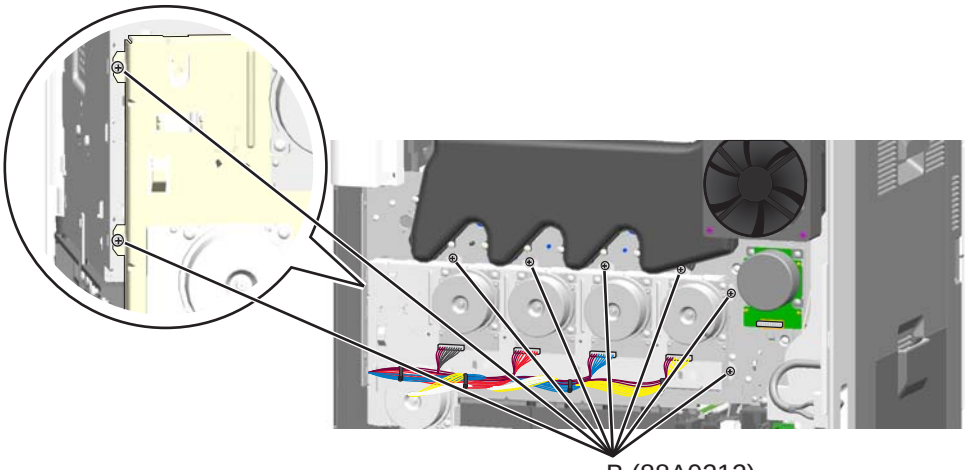
See **“Rear” on page 7-15** for the part number.

1. Remove the system board cage with board. See **“System board cage with board removal” on page 4-148**.
2. Disconnect the cable (A) from the fuser motor.

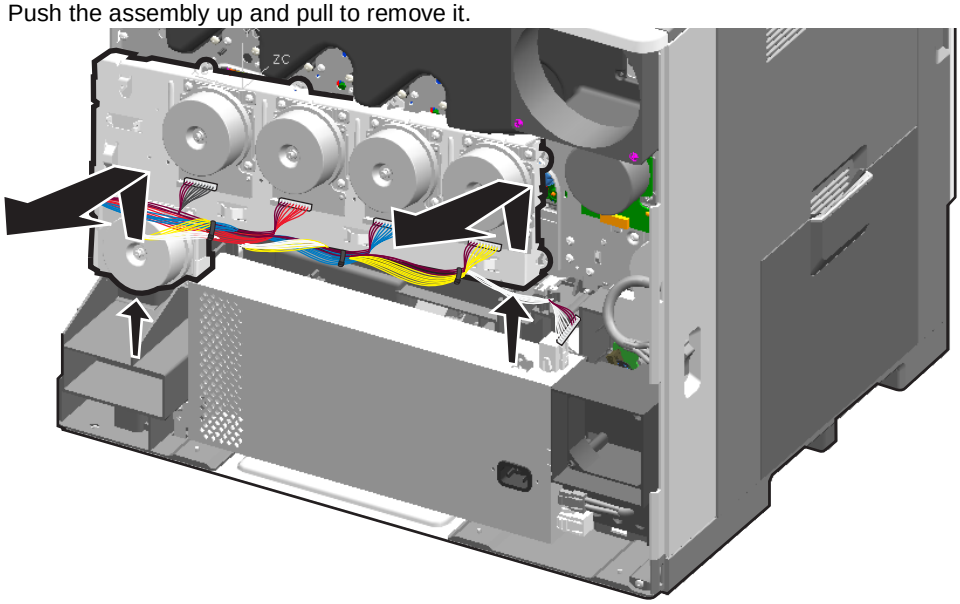


Note: If you are replacing the cables, remove the toroids from the old cables and use cable ties to attach the toroids to the new cables.

3. Remove the eight screws (B).



4. Push the assembly up and pull to remove it.

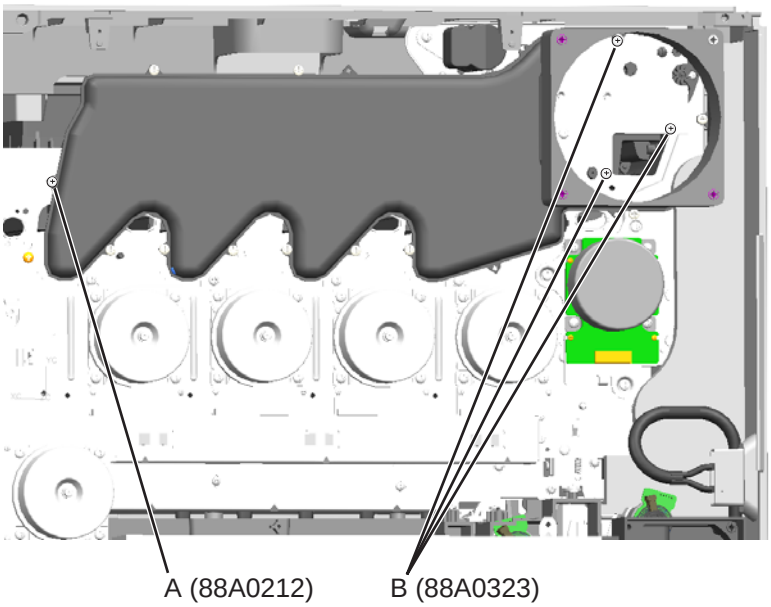


Exit cooling duct removal

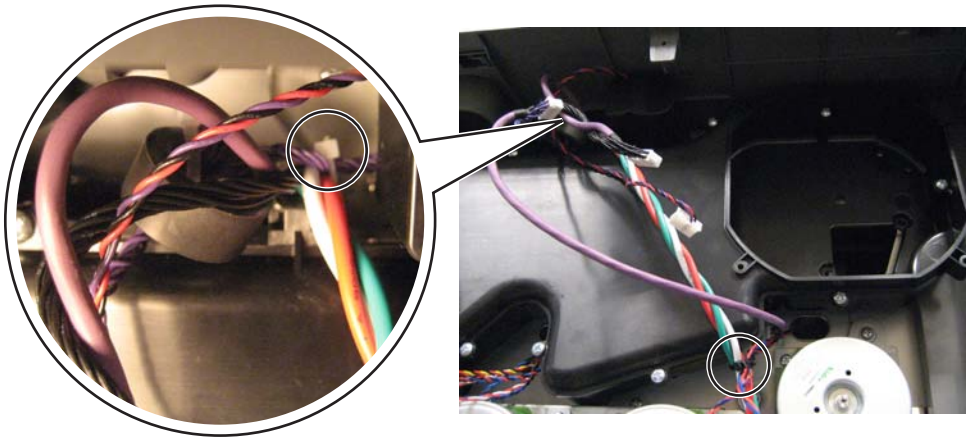
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See **“Rear” on page 7-15** for the part number.

1. Remove the system board cage with board. See **“System board cage with board removal” on page 4-148**.
2. Remove the main fan. See **“Main fan removal” on page 4-84**.
3. Remove one screw (A) and three screws (B).



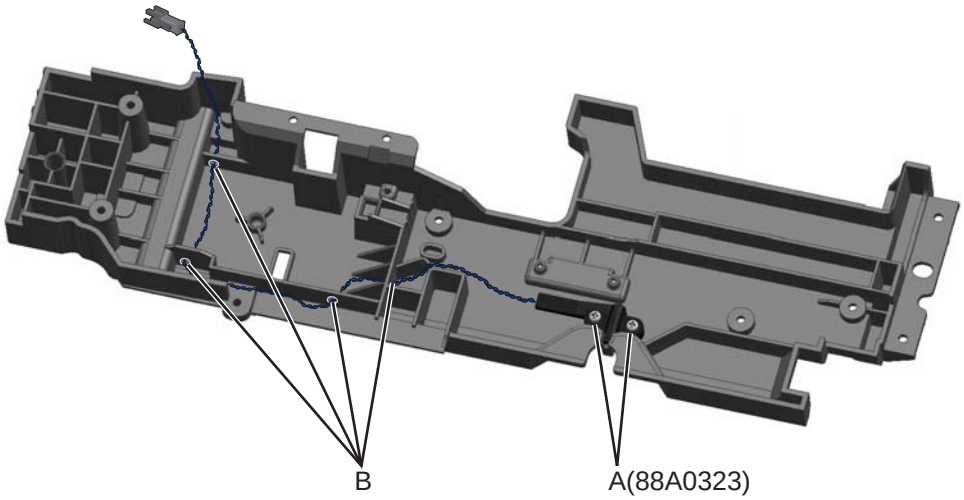
4. Clip two cable ties and pull enough slack in the cables to remove the duct.



Front access door beacon removal

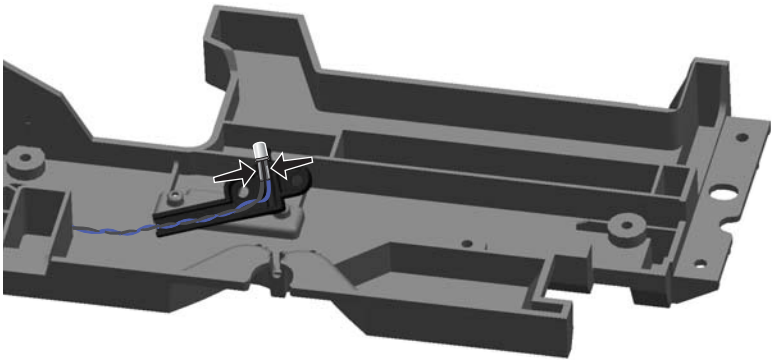
See **“Waste toner left cover” on page 7-3** for the part number.

1. Remove the waste toner left cover. See **“Waste toner left cover removal” on page 4-31**.
2. Remove the two screws (A) from the beacon cover, and then lift off the cover.
3. Carefully pull the cable through the holes (B) to remove it.

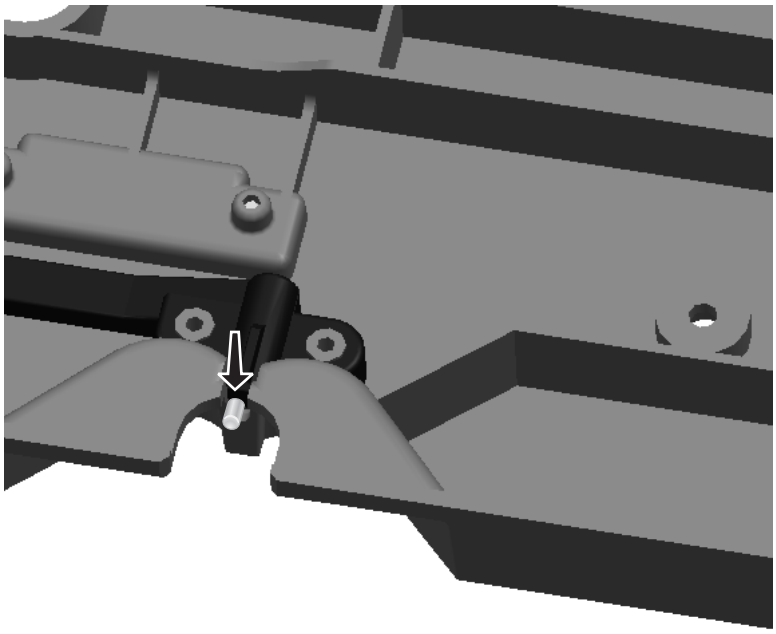


Installation notes:

- Feed the cable through the holes with the beacon-LED end first.
- Place the beacon LED into the beacon cover so that the LED extends from the end.

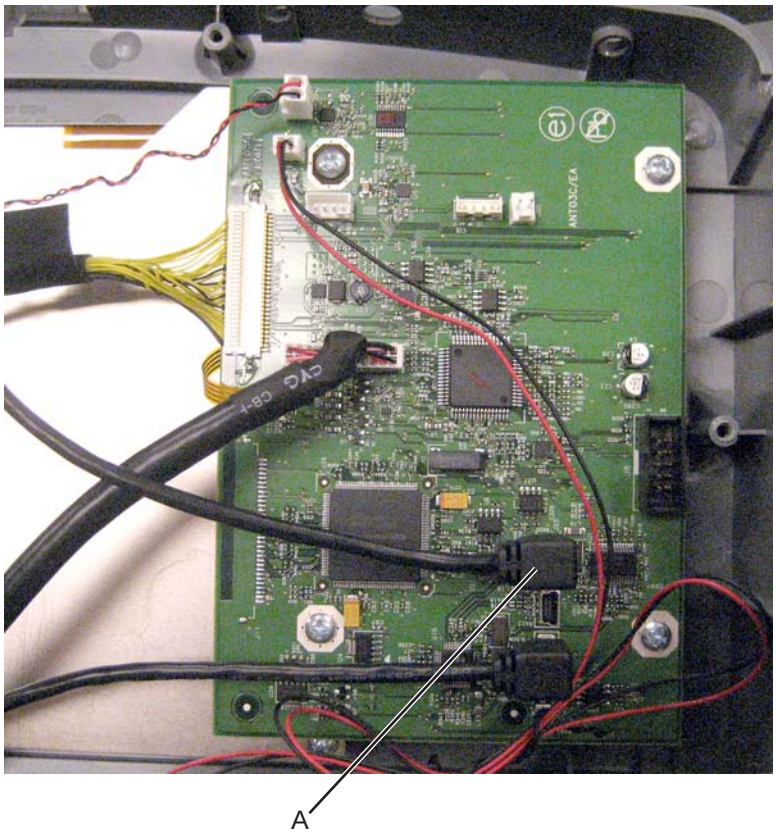


- Be sure the beacon LED extends through the opening in the waste toner left cover before attaching the beacon cover screws.

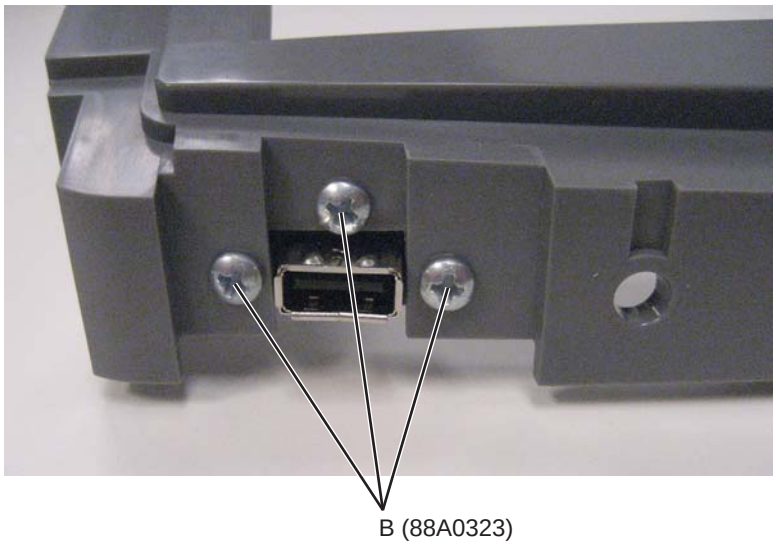


Front USB cable removal

1. Remove the operator panel assembly. See **“Operator (OP) panel assembly removal” on page 4-103**.
2. Disconnect the USB cable (A) from the UICC card.



3. Remove three screws (B), and remove the USB cable.

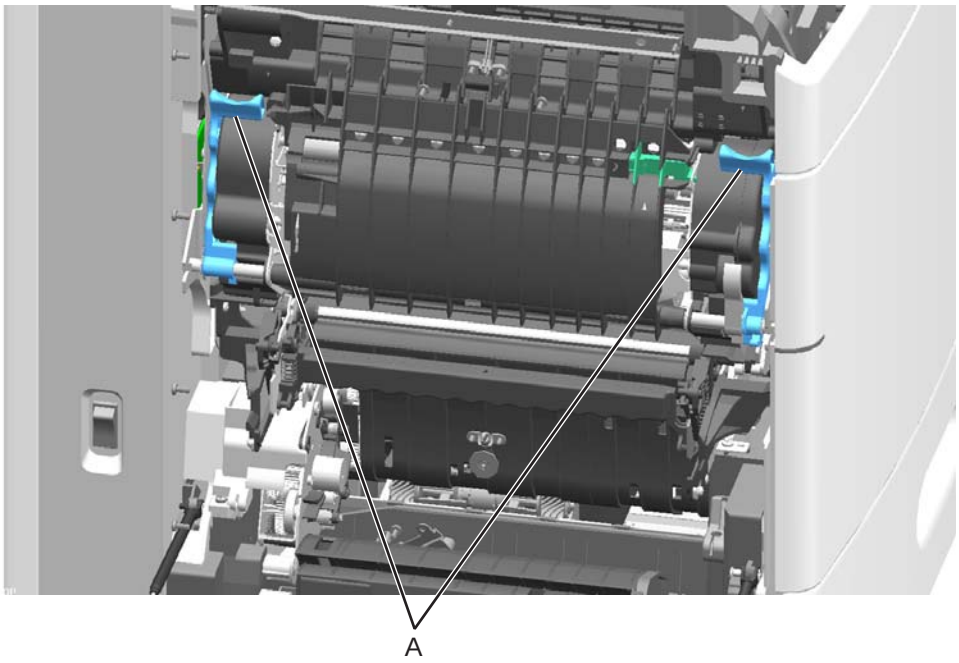


Fuser assembly removal

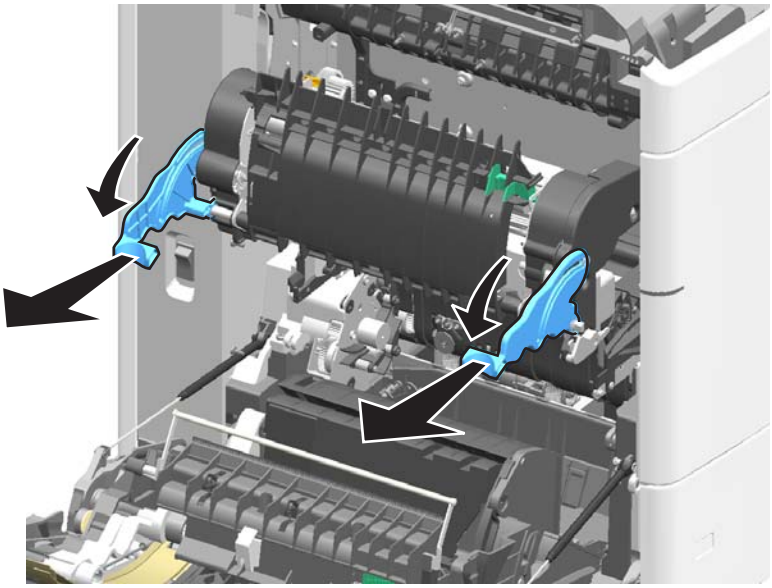
	**CAUTION** Be sure the fuser assembly has cooled before you remove it.

See **“Left” on page 7-11** for the part numbers.

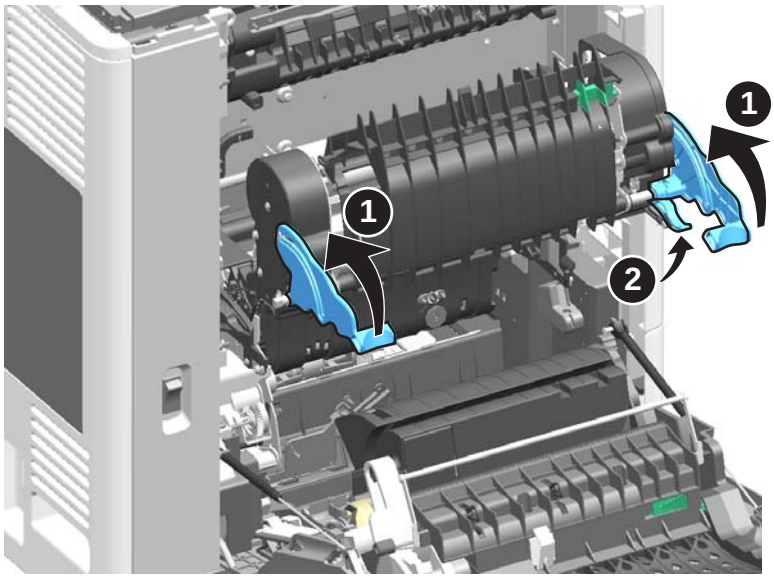
1. Open the left access door assembly.
2. Pull down the two fuser latches (A).



3. Pull to remove the fuser assembly.



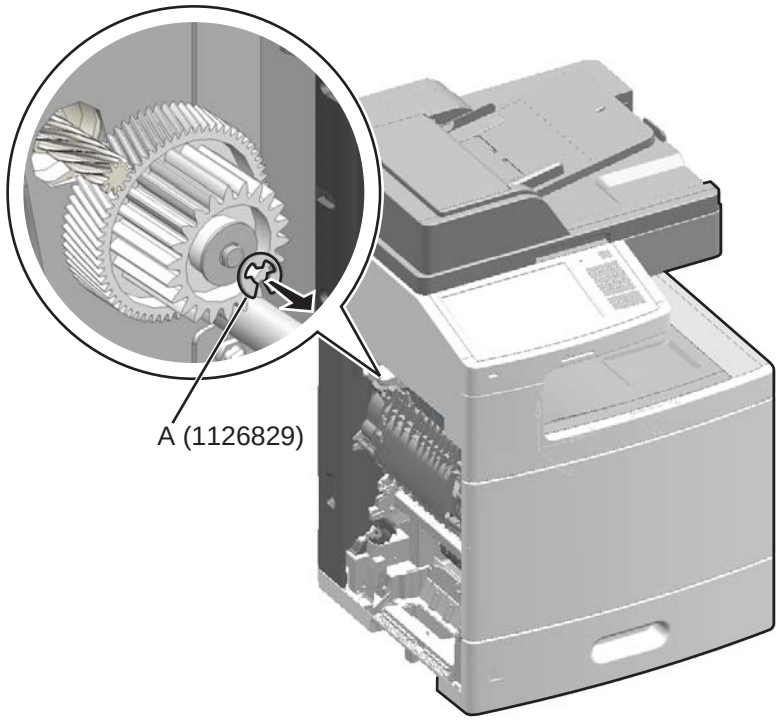
Installation note: After inserting the fuser assembly, push up the handles and then push up the tab under the right handle.



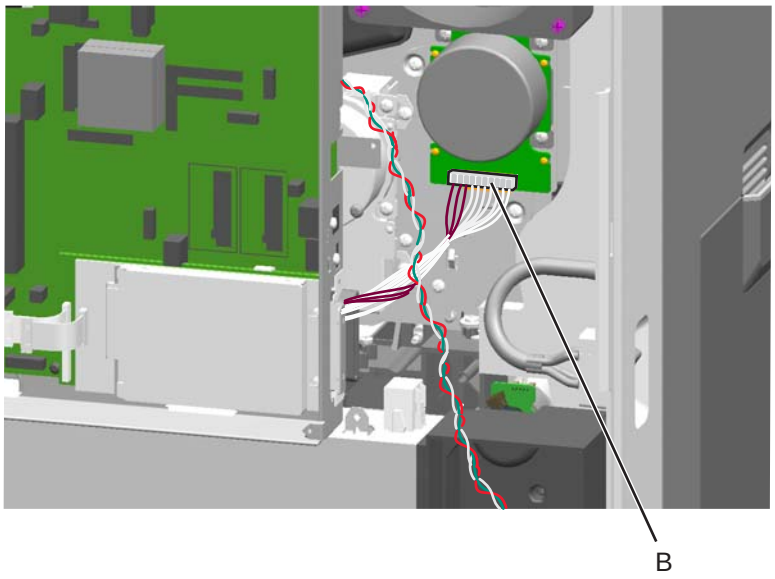
Fuser drive assembly removal

See **“Rear” on page 7-15** for the part number.

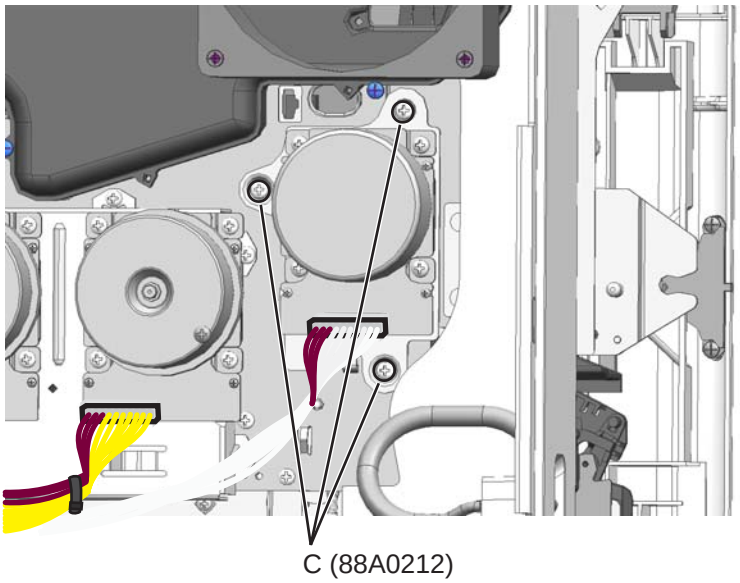
1. Remove the rear cover. See **“Rear cover removal” on page 4-23**.
2. Remove the fuser assembly. See **“Fuser assembly removal” on page 4-56**.
3. Remove the E-clip (A) and the washer under it from the fuser gears, and then slide the gears off the post.



4. Disconnect the cable (B) from the fuser motor.



5. Remove the three screws (C).



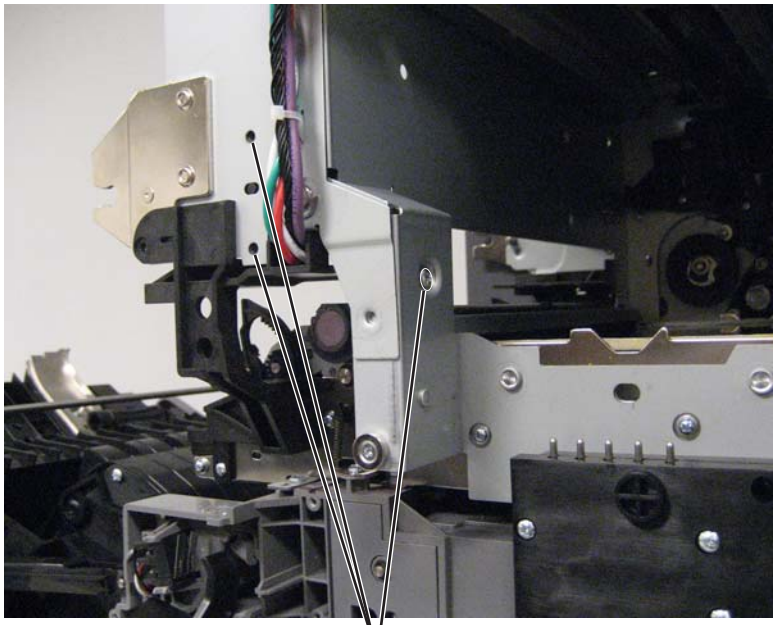
6. Remove the fuser drive assembly.

Installation note: Be sure to apply grease to the gear and post using the instruction sheet and two kinds of grease that came with the fuser drive assembly.

Fuser system card and LVPS cable removal

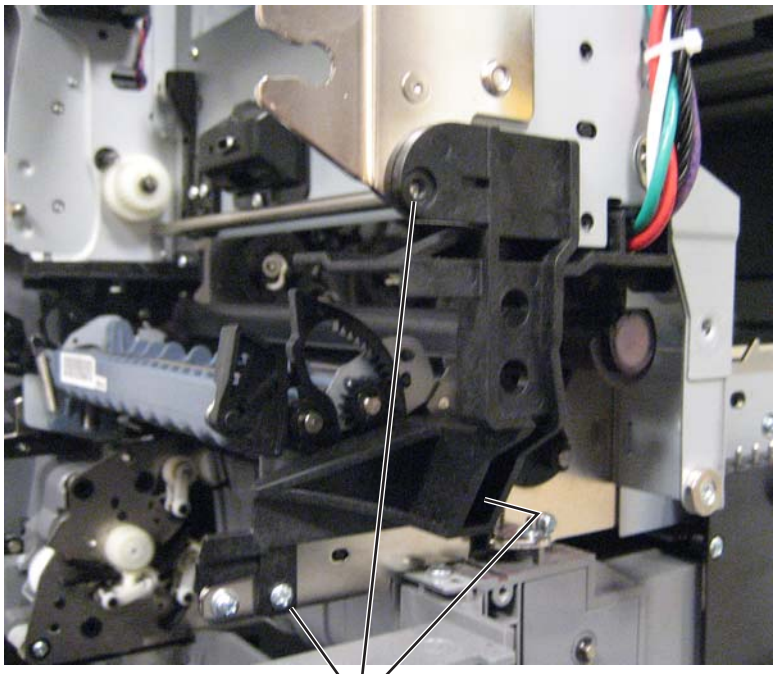
See **“Left” on page 7-11** for the part number.

1. Remove the ITU. See **“ITU assembly removal” on page 4-68**.
2. Remove the fuser. See **“Fuser assembly removal” on page 4-56**.
3. Remove the waste toner left cover. See **“Waste toner left cover removal” on page 4-31**.
4. Remove three screws (A),



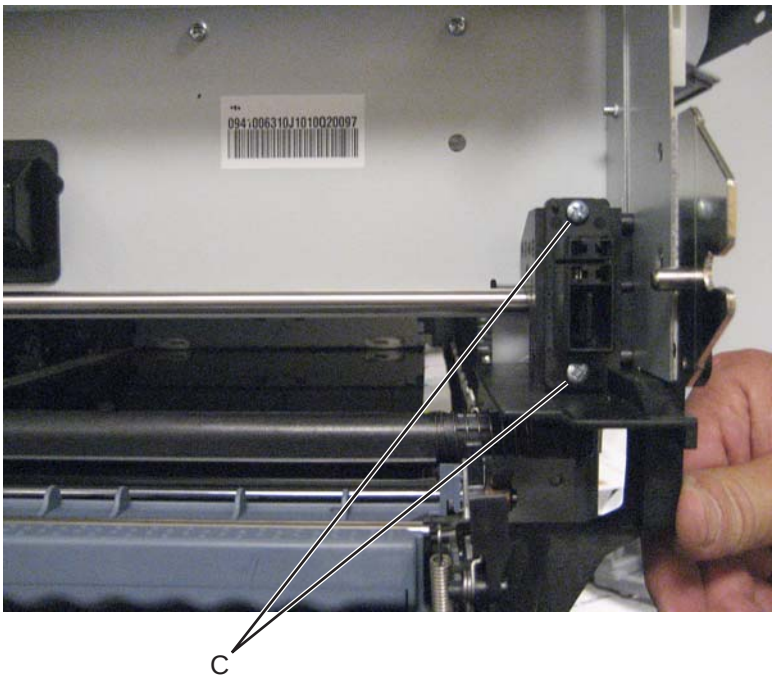
A (88A0323)

5. Remove three screws (B).



B (10J1046)

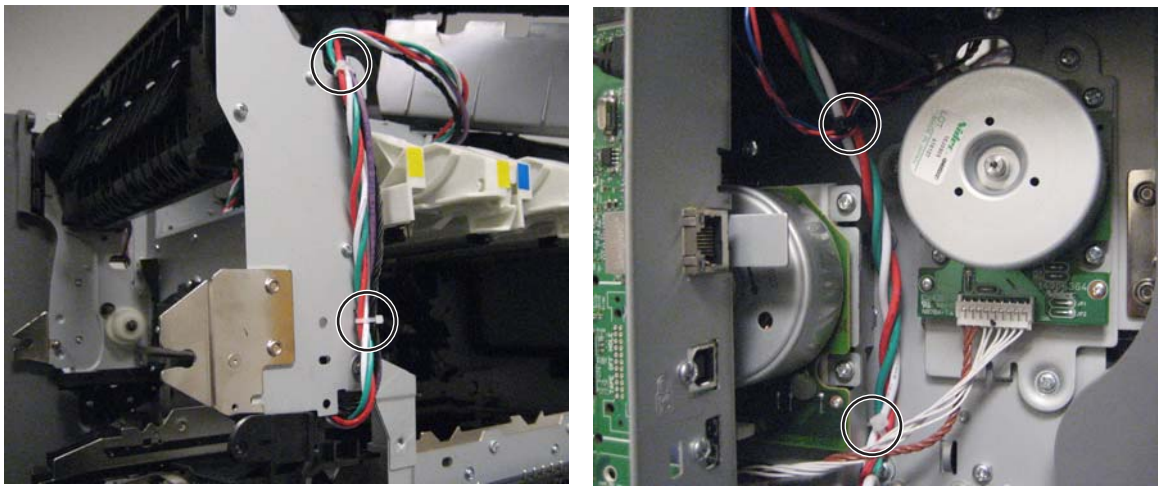
6. Remove two screws (C), and then remove the cable end and support guide from the frame.

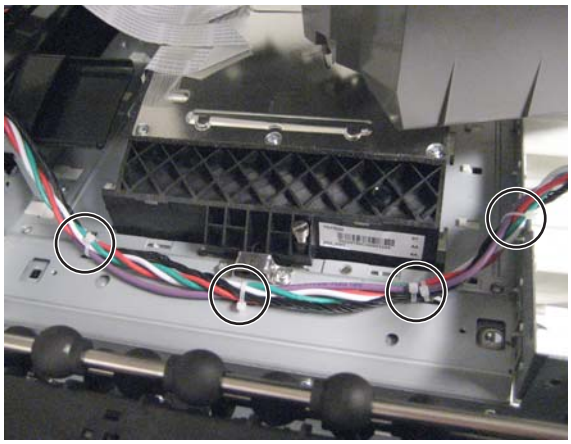


Note: If you are just testing the cable as part of a service check, then stop here.

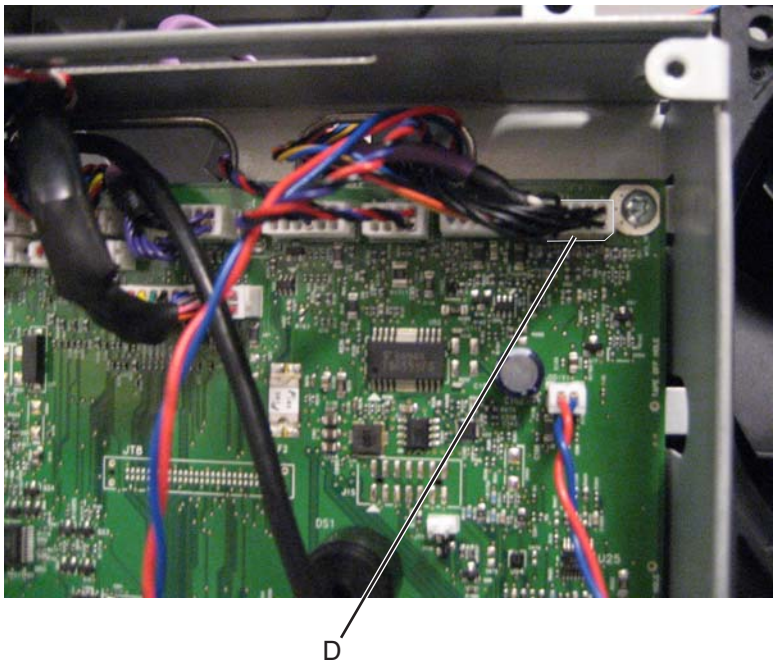
7. Remove the OP panel. See **"Operator (OP) panel assembly removal" on page 4-103**.

8. Clip all cable ties securing the cable.

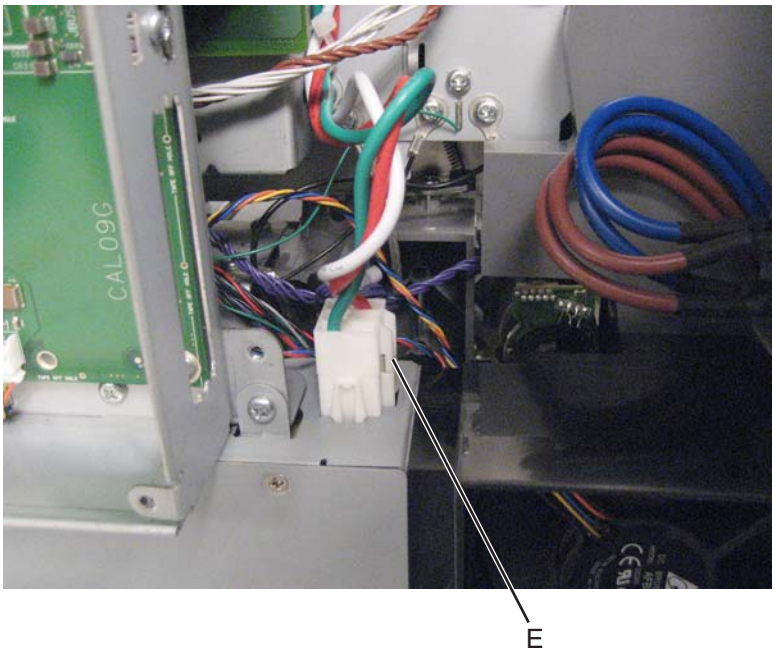




9. Remove the system board shield. See **“System board shield removal” on page 4-29**.
10. Disconnect the fuser system card cable (D) from the system board.



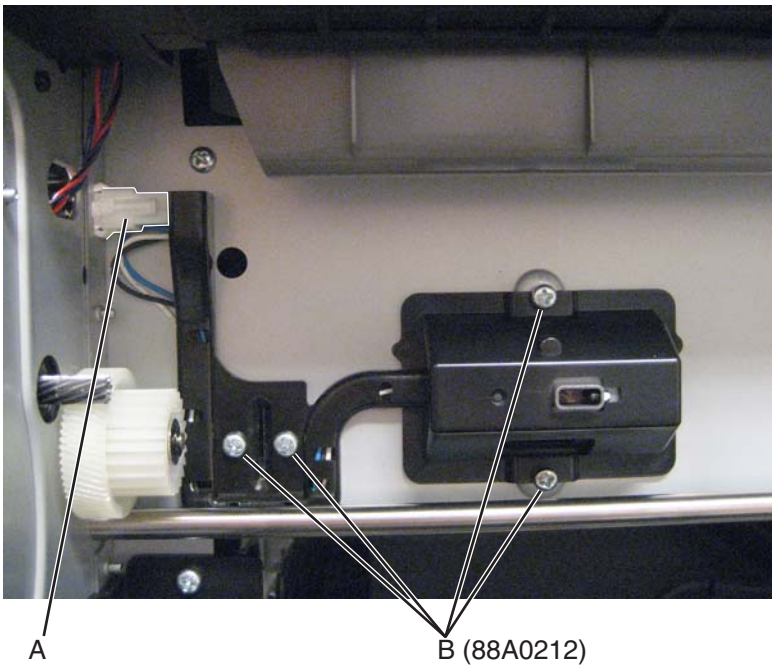
11. Push in the tab (E) to disconnect the cable from the LVPS, and remove the cable.



Fuser thermistor removal

See **"Fuser thermal guide assembly" on page 7-59** for the part number.

1. Remove the fuser. See **"Fuser assembly removal" on page 4-56**.
2. Disconnect the cable (A).
3. Remove four screws (B) to remove the thermistor.



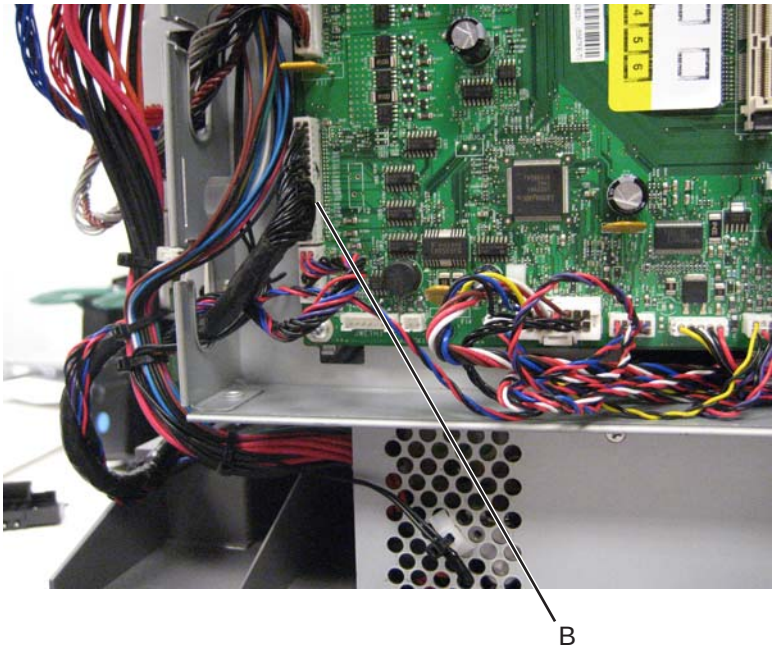
High-voltage power supply (HVPS) board removal

See **“Front” on page 7-7** for the part number.

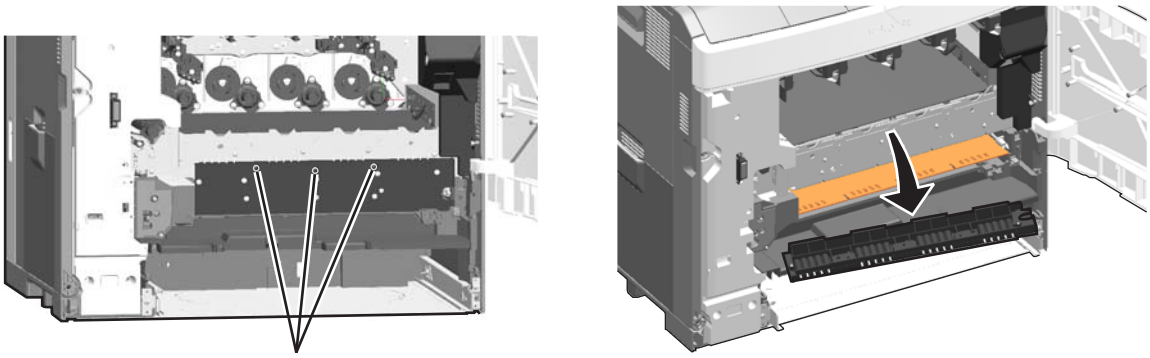
1. Remove the ITU block assembly. See **“ITU block assembly removal” on page 4-71**.
2. Remove the rear cover. See **“Rear cover removal” on page 4-23**.
3. Remove the two screws (A) to remove the RIP card shield from the system board.



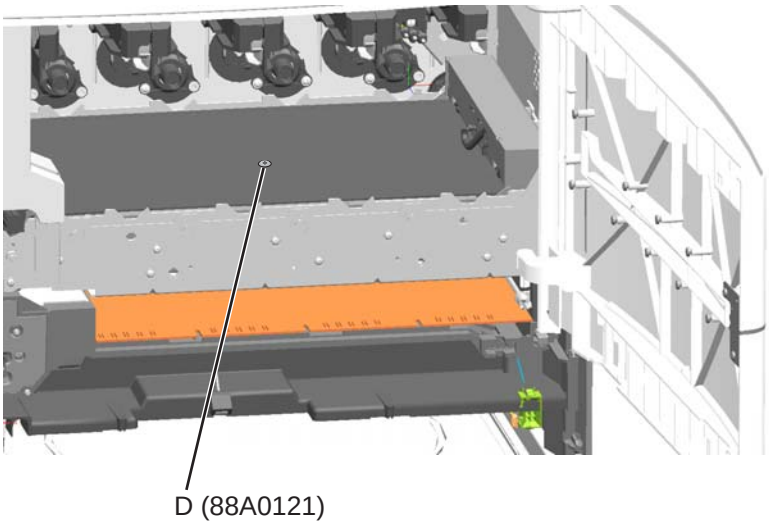
4. Disconnect the HVPS cable (B) from the system board.



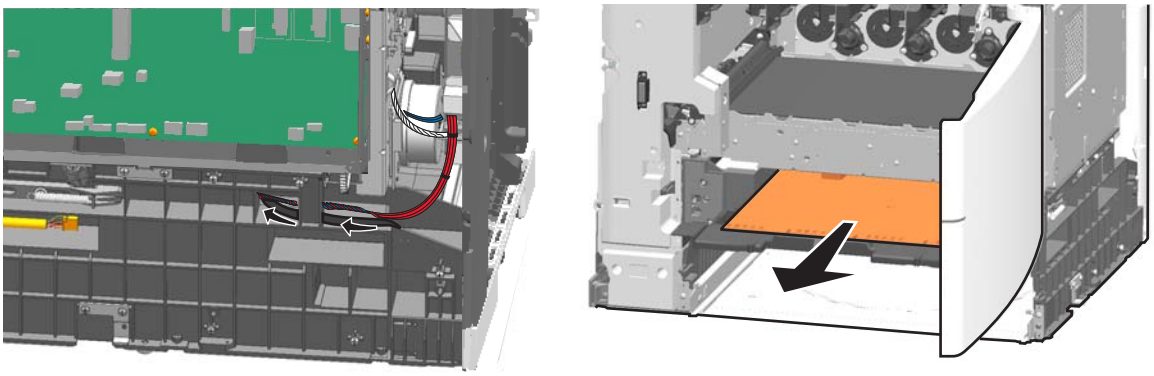
5. Remove three screws (C), and then pull out the cartridge contact block assembly.



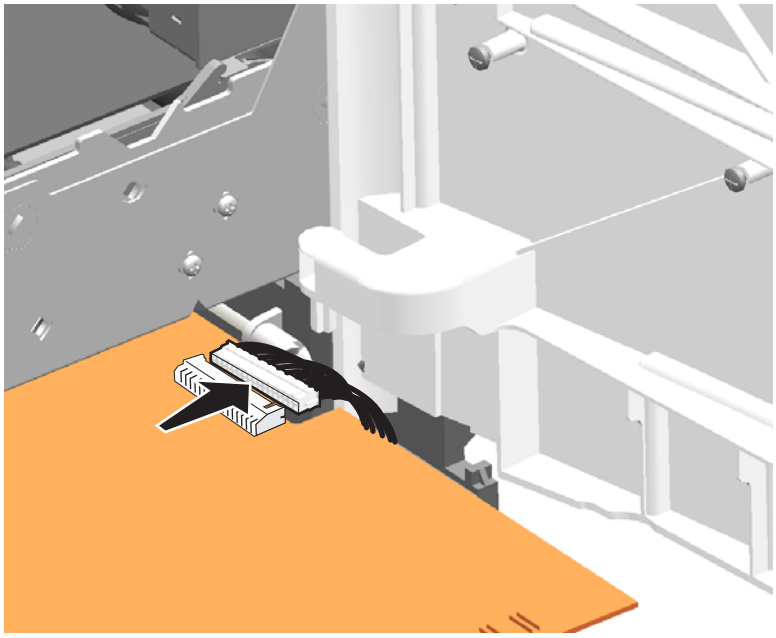
6. Remove the screw (D) from the center of the plate over the HVPS.



7. Pull the HVPS board forward.



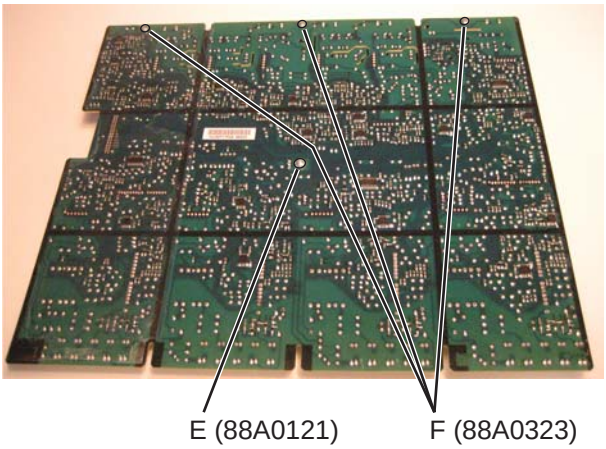
8. Disconnect the cable from the HVPS board.

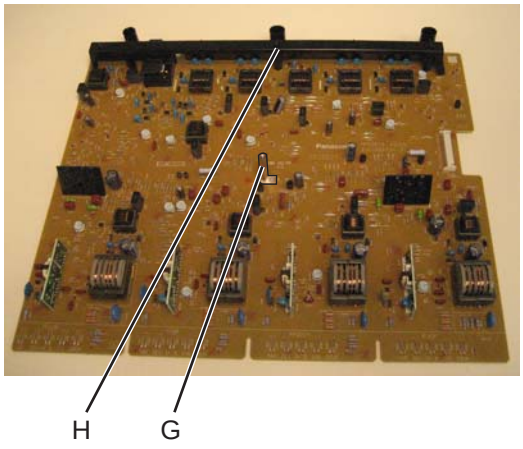


9. Pull the board all the way out of the printer.

Note: If you are replacing only the HVPS cable, then stop here.

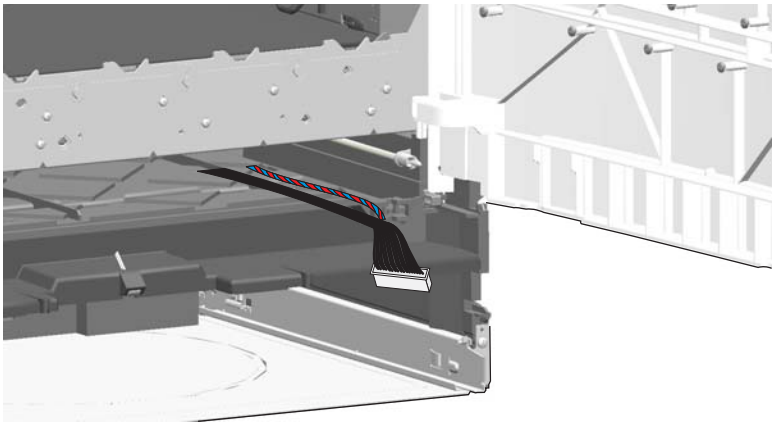
10. Remove the screw (E) and three screws (F) from the bottom of the board to remove the metal post (G) and the plastic contact bracket (H).



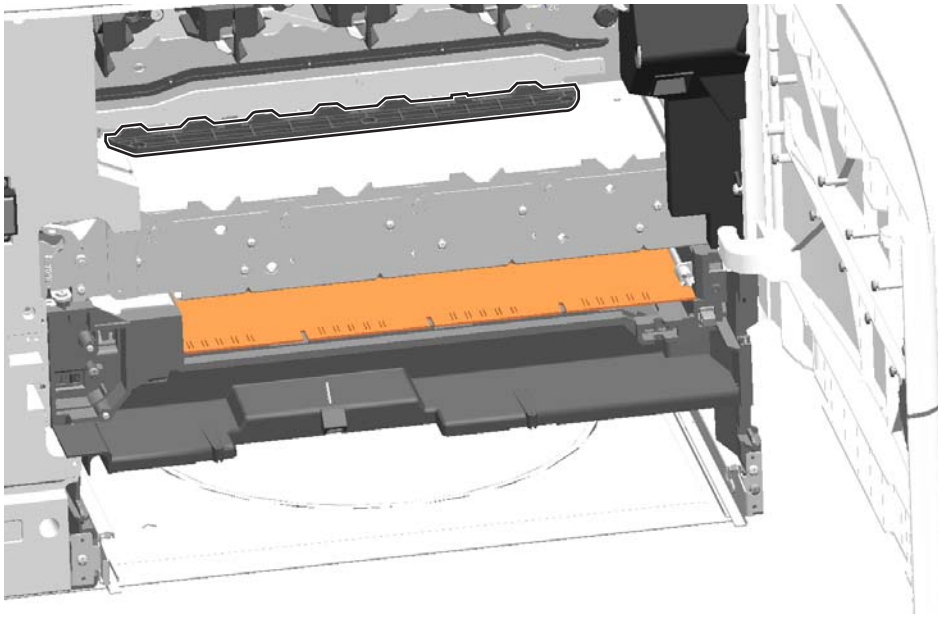


Installation notes:

- Be sure the HVPS cable sits in the groove under the HVPS board.



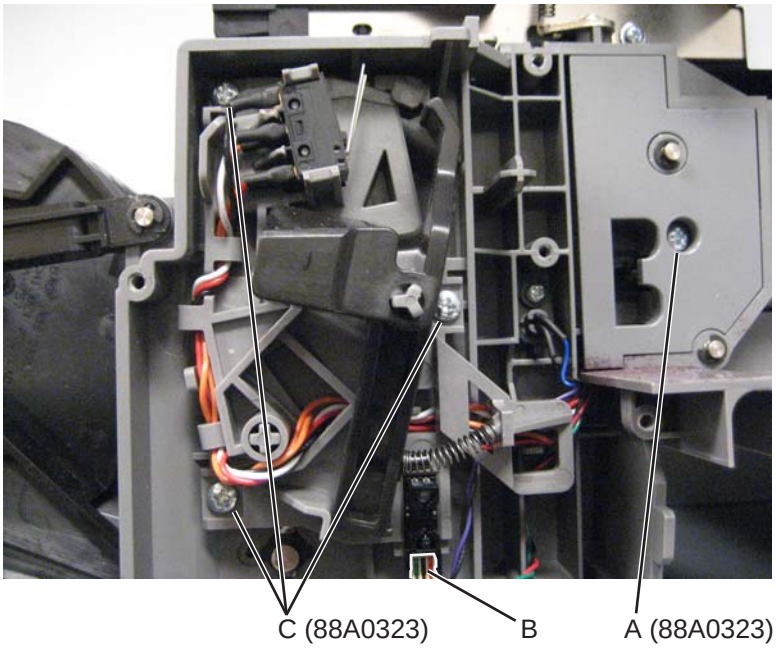
- Be sure the ITU block assembly sits flat before attaching the three screws to reinstall it.



Housing interlock assembly removal

See **"Front" on page 7-7** for the part number.

1. Remove the LVPS. See **"Low-voltage power supply (LVPS) removal" on page 4-77**.
2. Remove the lower frame cable cover. See **"Lower frame cable cover removal" on page 4-20**.
3. Remove the waste toner left cover. See **"Waste toner left cover removal" on page 4-31**.
4. Remove one screw (A), and remove the waste toner sensor cover.
5. Disconnect the cable (B) from the sensor, and remove three screws (C).



6. Disconnect the cable from the system board (JCVR1).
7. Route the cable through the printer to remove the assembly. Clip and remove cable ties as needed.
   Note: Observe the cable routing for reinstallation.





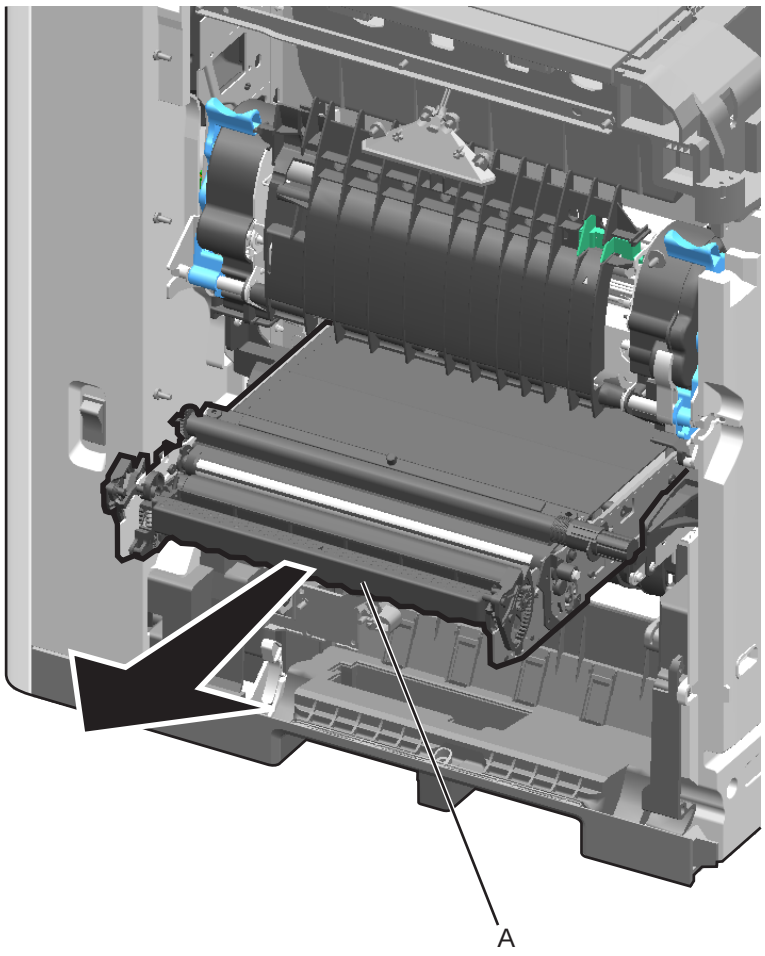
ITU assembly removal

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See **“Left” on page 7-11** for the part number.

1. Remove the waste toner container. See **“Waste toner container removal” on page 4-153**.
2. Remove the toner cartridges.
3. Open the left access door assembly all the way.
4. Grasp the ITU handle (A), and carefully slide the ITU assembly from the printer.

Warning: Be careful to support the ITU as you remove it to avoid damaging the components on the left access door.



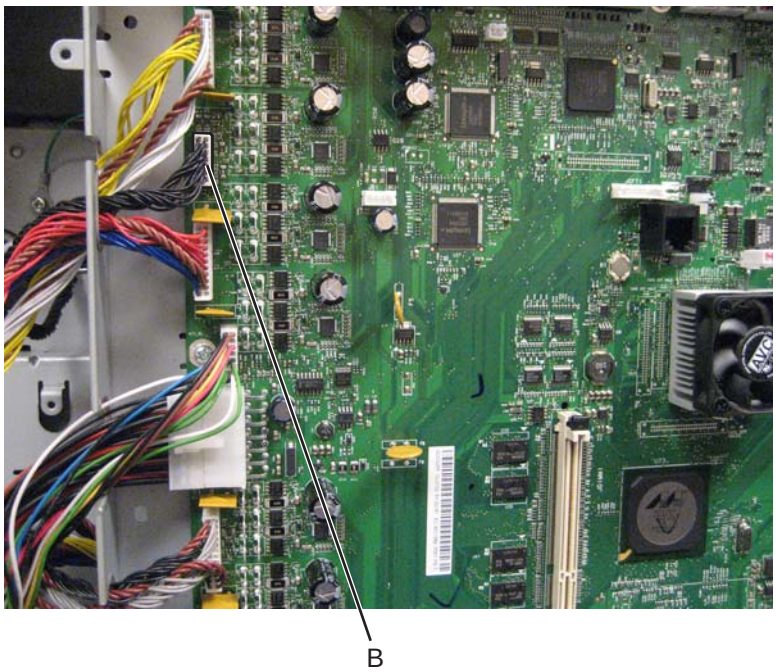
ITU autoconnect removal

See **"Left" on page 7-11** for the part number.

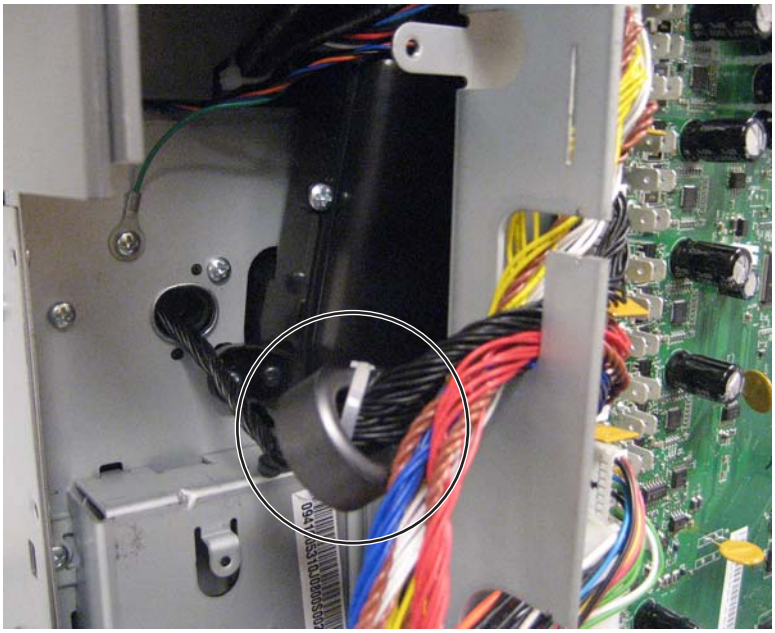
1. Remove the rear cover. See **"Rear cover removal" on page 4-23**.
2. Remove the right cover. See **"Right cover removal" on page 4-26**.
3. Remove the ITU assembly. See **"ITU assembly removal" on page 4-68**.
4. Remove two screws (A) to remove the RIP card shield from the system board.



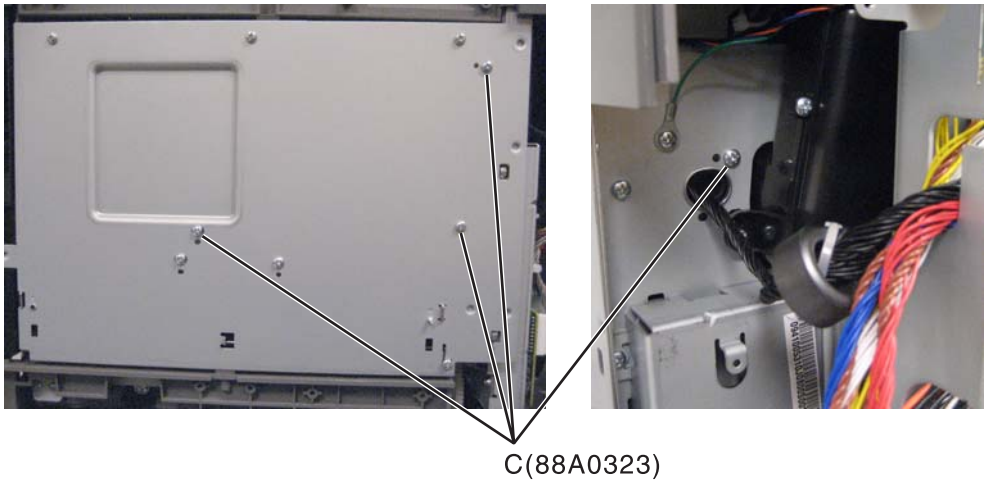
5. Disconnect the cable (B) from connector JITM1.



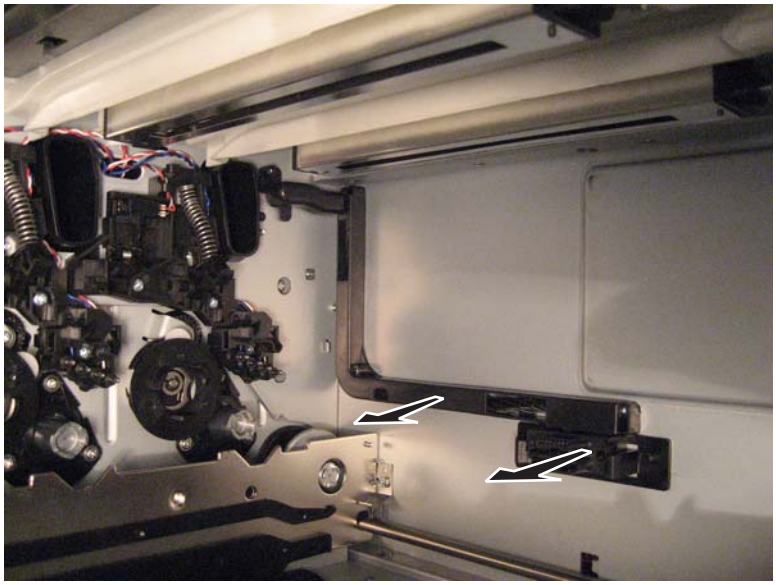
6. Clip the cable tie and remove the toroid.
Note: Be sure to replace the toroid during reinstallation.



7. From the right side and back of the printer, remove four screws (C).



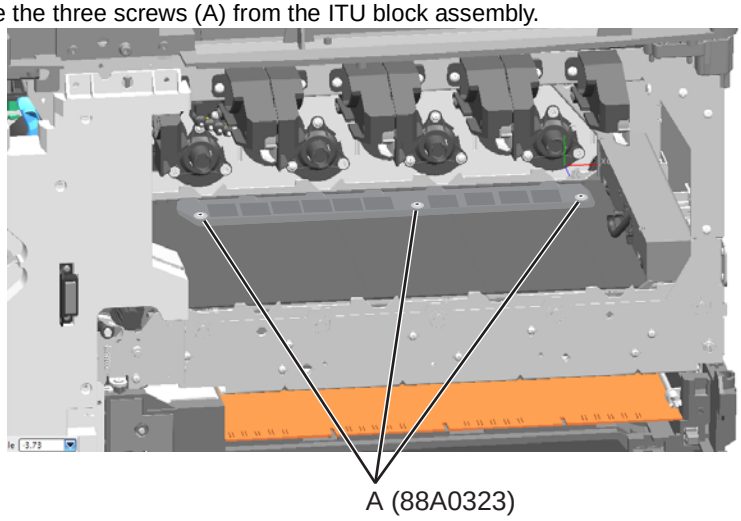
8. Pull to remove the autoconnect.



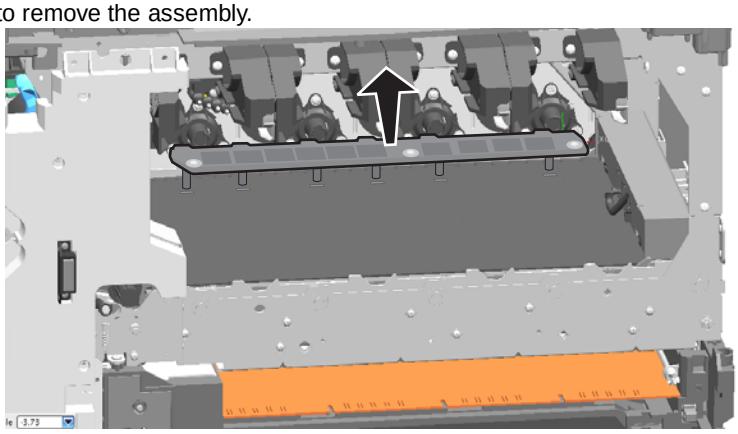
ITU block assembly removal

See **“Front” on page 7-7** for the part number.

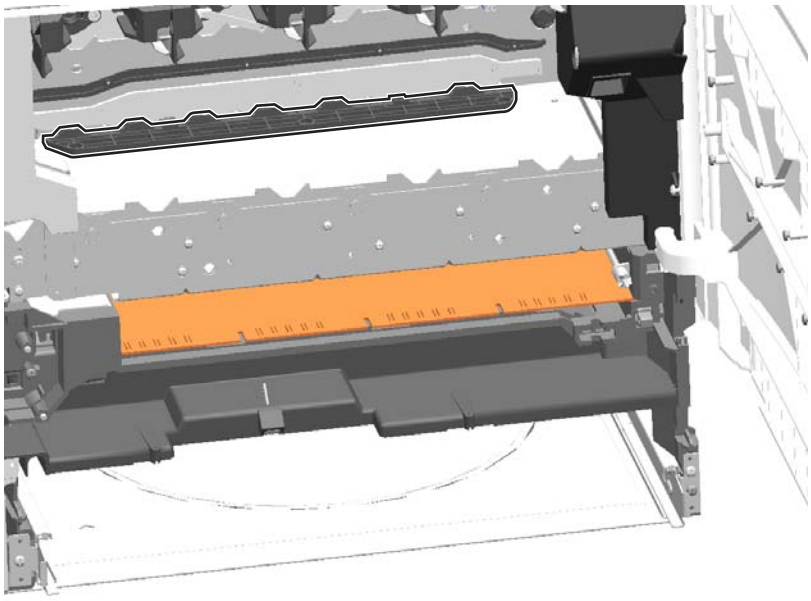
1. Remove the ITU assembly. See **“ITU assembly removal” on page 4-68**.
2. Remove the three screws (A) from the ITU block assembly.



3. Pull up to remove the assembly.



Installation note: Be sure the ITU block assembly sits flat before attaching the three screws to reinstall it.



Left access door piston removal

See **“Left” on page 7-11** for the part number.

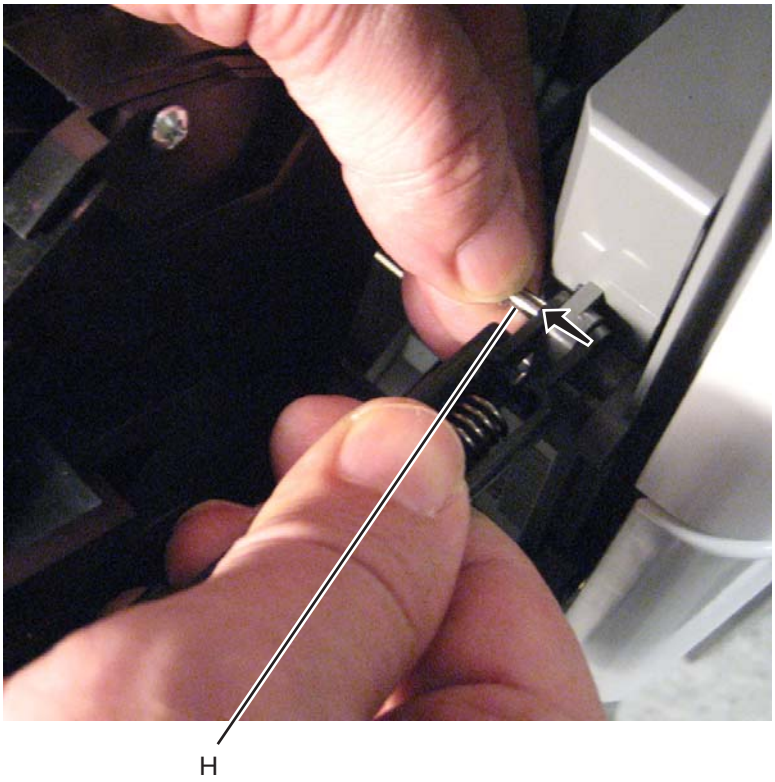
1. Open the left access door assembly.

Front piston

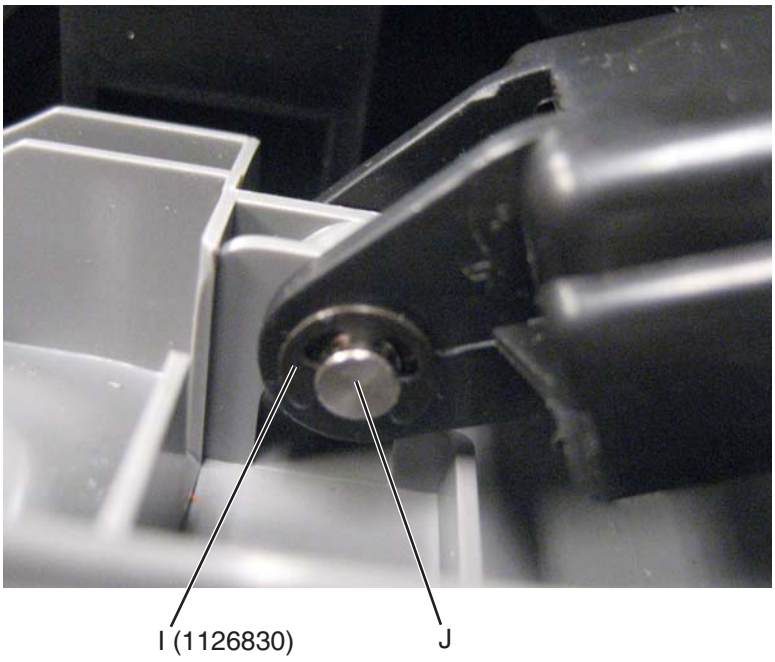
a. Remove the E-clip (G) from the front piston.



b. Remove the post (H) from the piston where it attaches to the printer.
Note: The piston is under pressure from the spring. Hold the piston firmly as you remove the post.

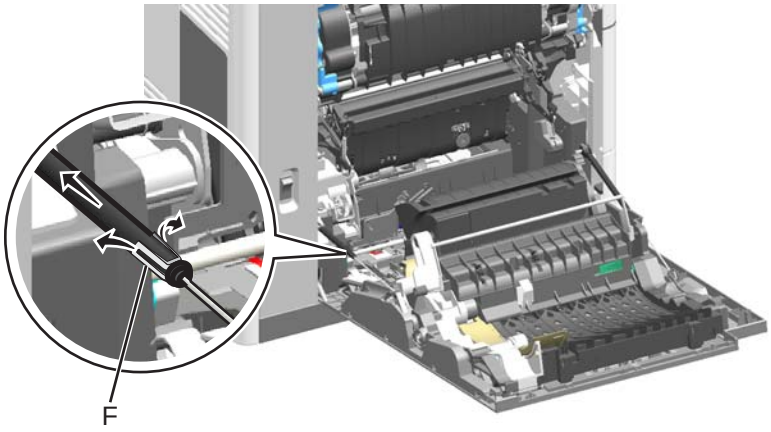


c. Remove the E-clip (I) and post (J) from the other end to remove the piston.

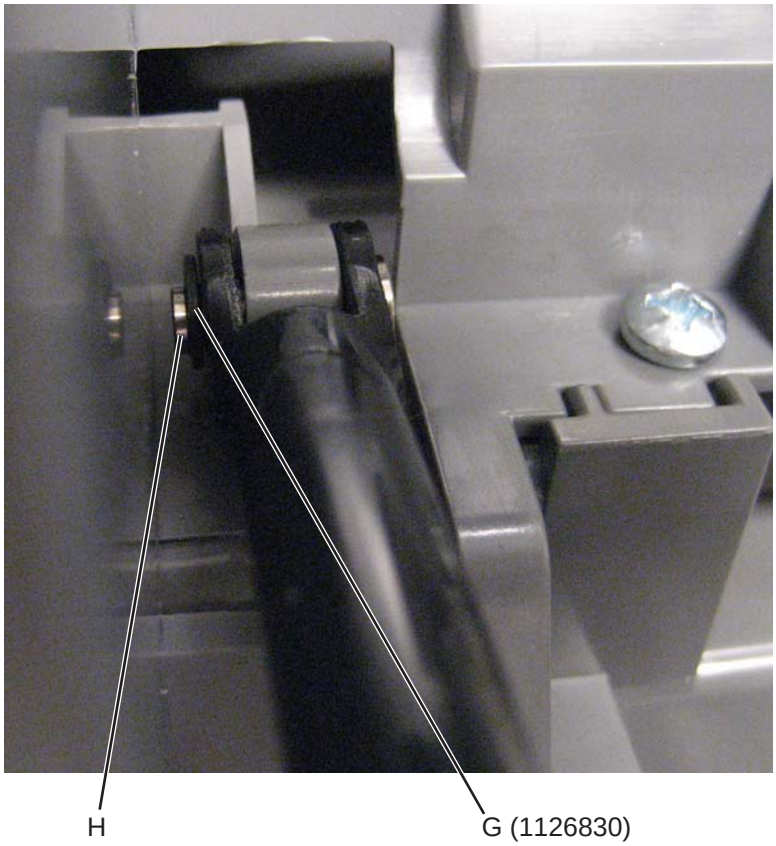


Rear piston

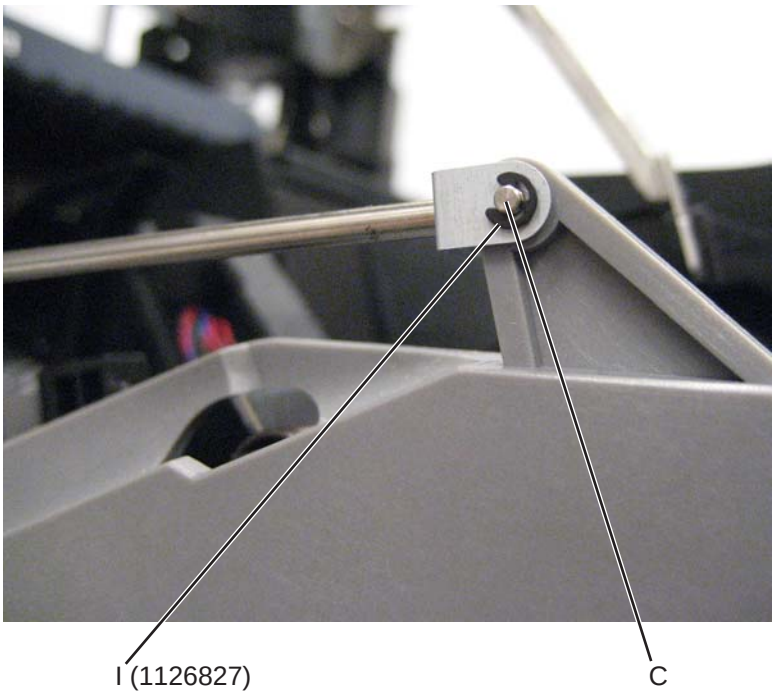
a. Disconnect the piston by pulling apart the clamps (F) from the tabs.



b. Remove the E-clip (G) and post (H) from the piston where it attaches to the printer.



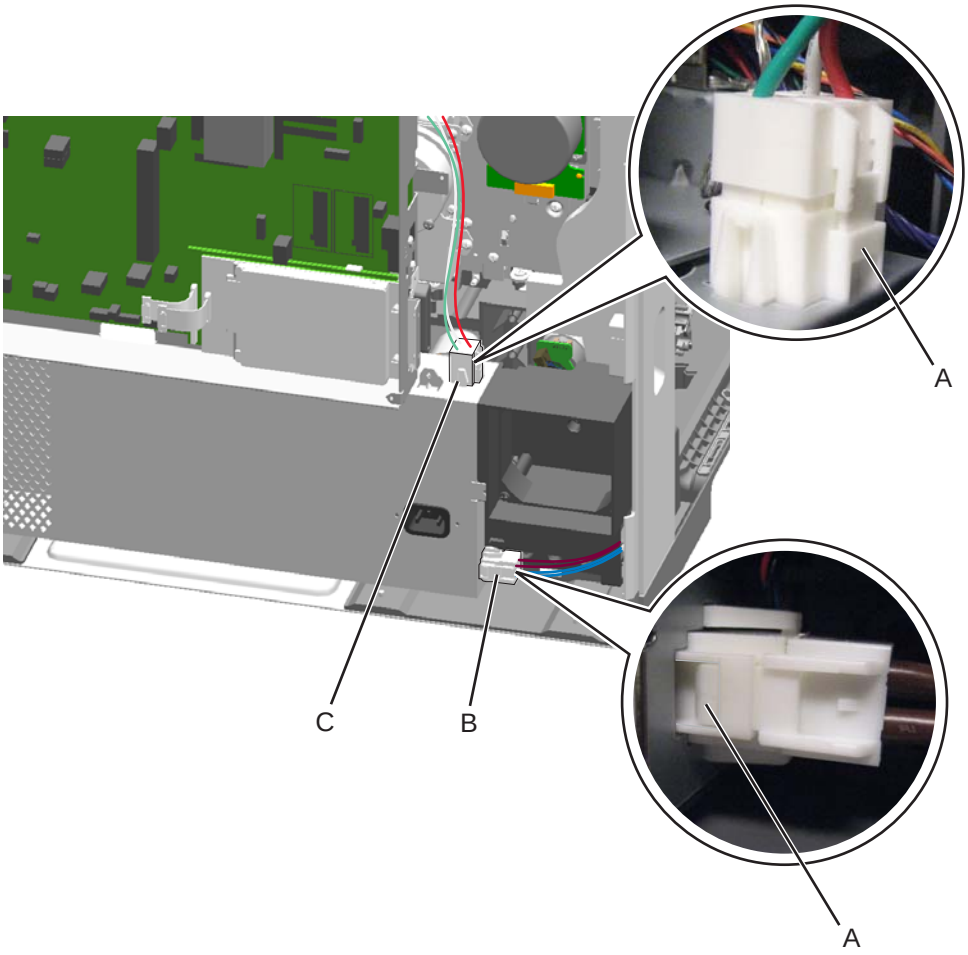
c. Remove the E-clip (I) and post (J) from the other end to remove the piston.



Low-voltage power supply (LVPS) removal

See **“Rear” on page 7-15** for the part number.

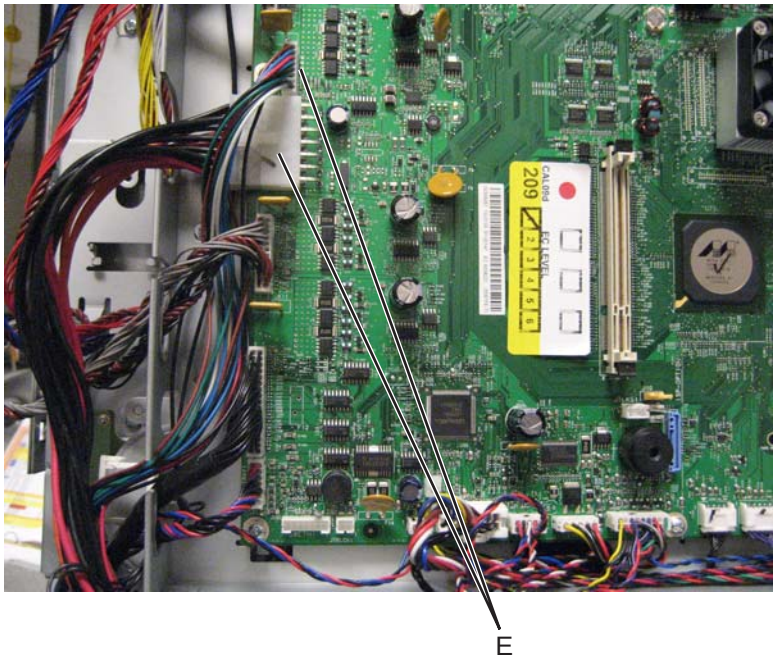
1. Remove the rear cover. See **“Rear cover removal” on page 4-23**.
2. Push the release (A) to disconnect the power cable (B) and the fuser cable (C).



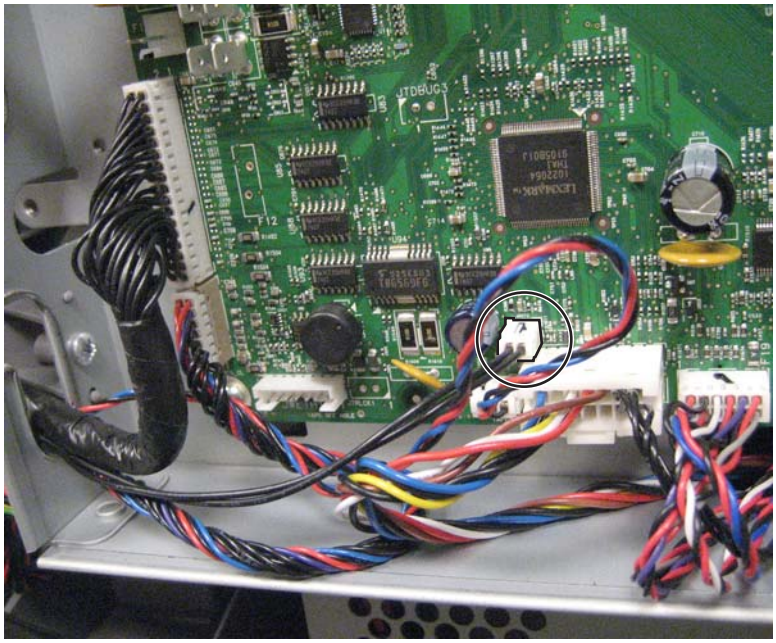
3. Remove two screws (D) to remove the RIP card shield from the system board.



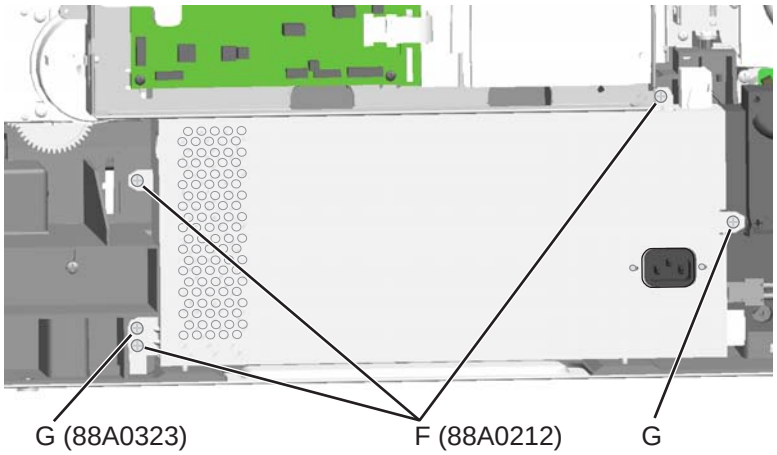
4. Disconnect the LVPS cables (E) from the system board.



5. Disconnect the thermistor cable from the system board.

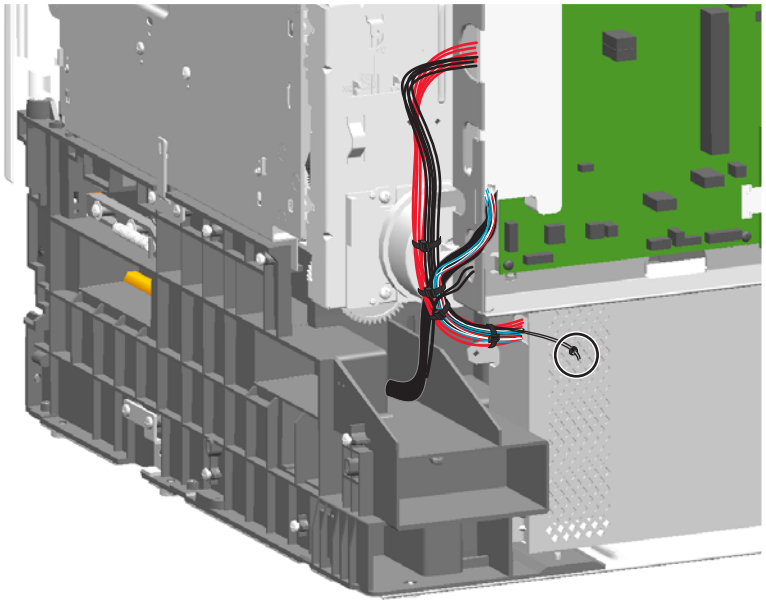


6. Remove the three screws (F) and the two screws (G).



7. Remove the LVPS.

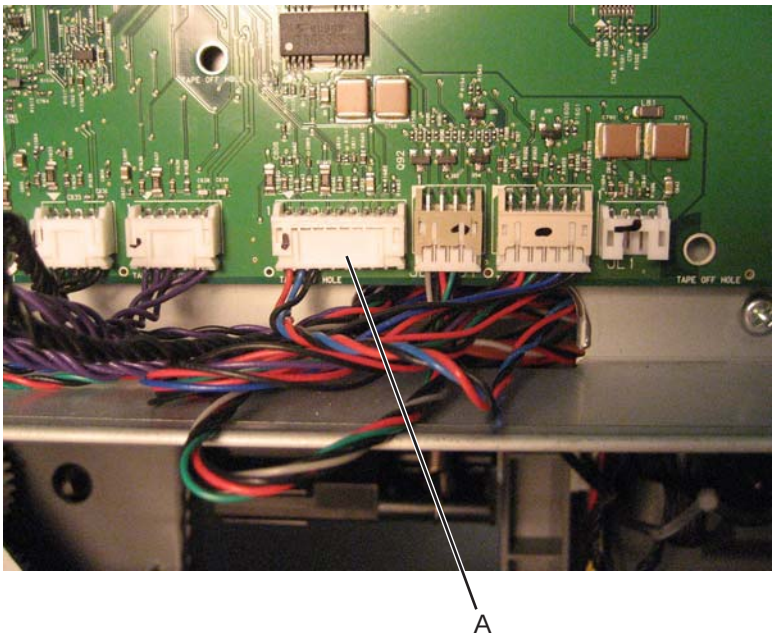
Installation note: If you are replacing the LVPS FRU, then clip the cable tie to remove the thermistor from the old LVPS, and then attach the thermistor to the replacement LVPS with a new cable tie (10B1648).



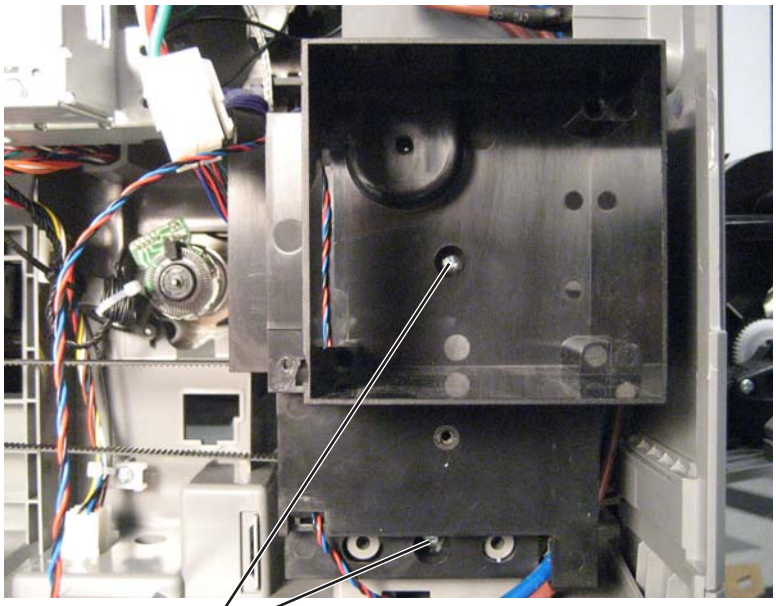
LVPS exit duct removal

See **“Rear” on page 7-15** for the part number.

1. Remove the LVPS. See **“Low-voltage power supply (LVPS) removal” on page 4-77**.
2. Remove the LVPS fan. See **“LVPS fan removal” on page 4-81**.
3. Disconnect the MPF sensor cable (A) from JMFP1 on the system board.



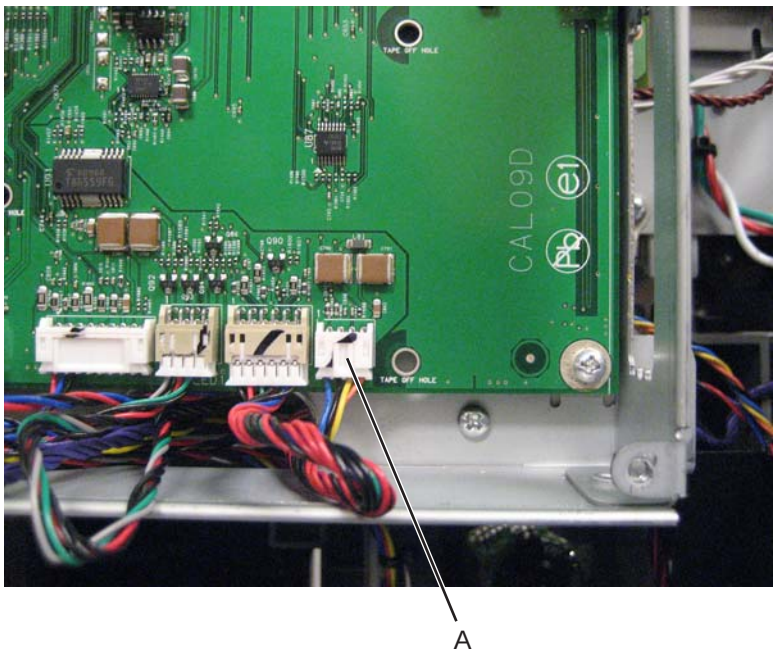
4. Remove two screws (B).



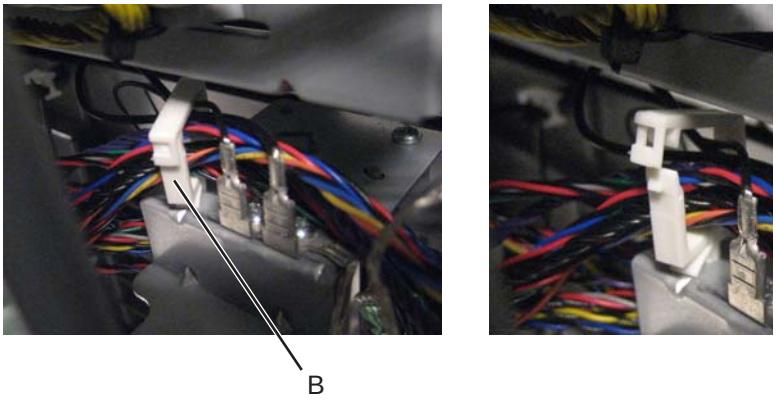
LVPS fan removal

See **“Rear” on page 7-15** for the part number.

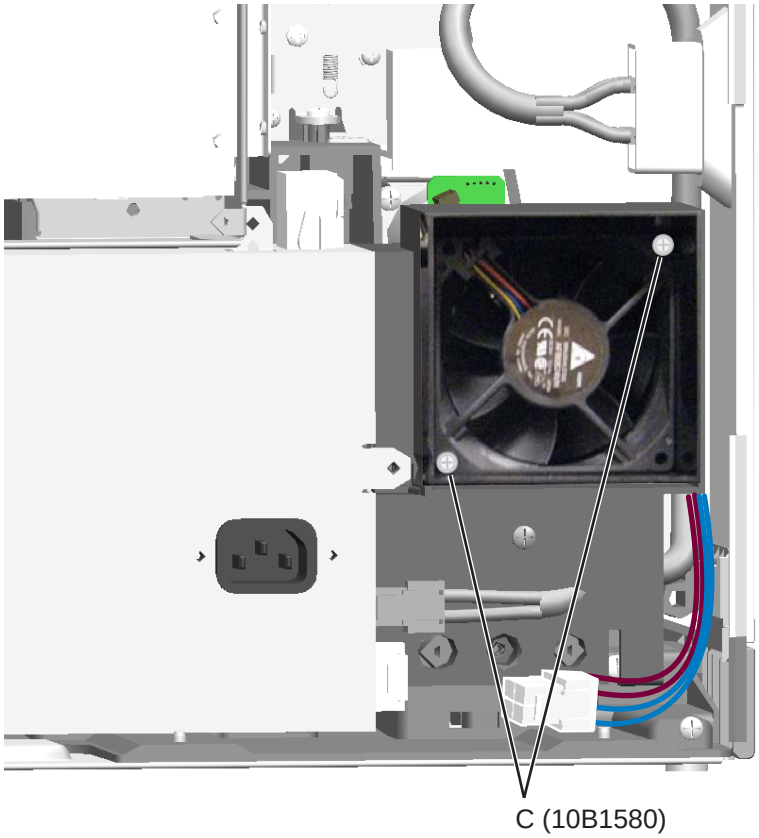
1. Remove the rear cover. See **“Rear cover removal” on page 4-23**.
2. Disconnect the fan cable (A) from the system board.



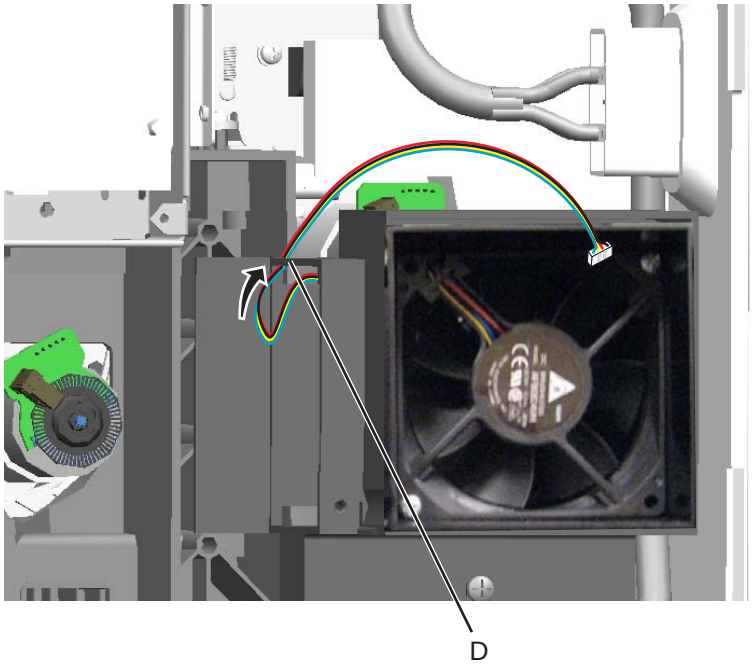
3. Push in to open the cable clip (B) behind the system board shield.



4. Feed the cable through the slot in the system board cage and the clip.
5. Remove the two screws (C).



6. Feed the cable through the slot in the fan housing (D) as you remove the fan.

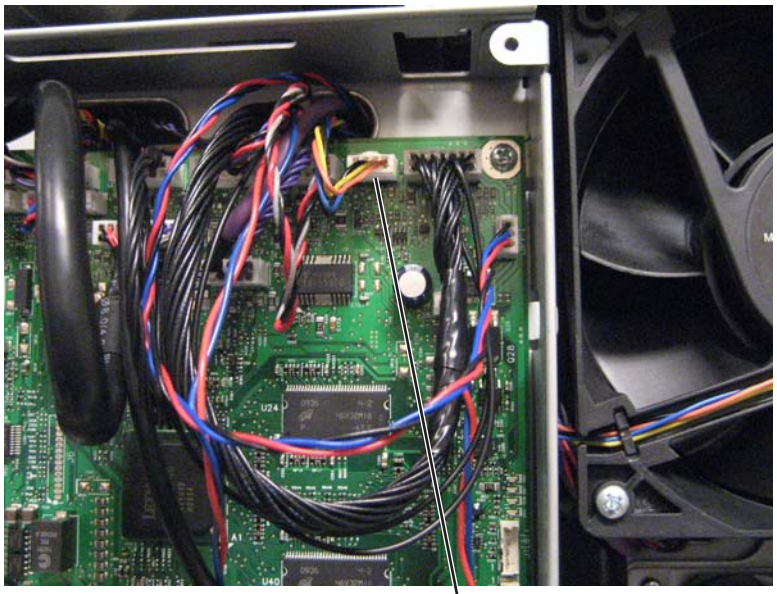


Main fan removal

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See **“Rear” on page 7-15** for the part number.

1. Remove the rear cover. See **“Rear cover removal” on page 4-23**.
2. Disconnect the fan cable (A) from the system board at JM1.



3. Remove the screws (B).



4. Feed the cable through the slot in the system board cage, and remove the fan.

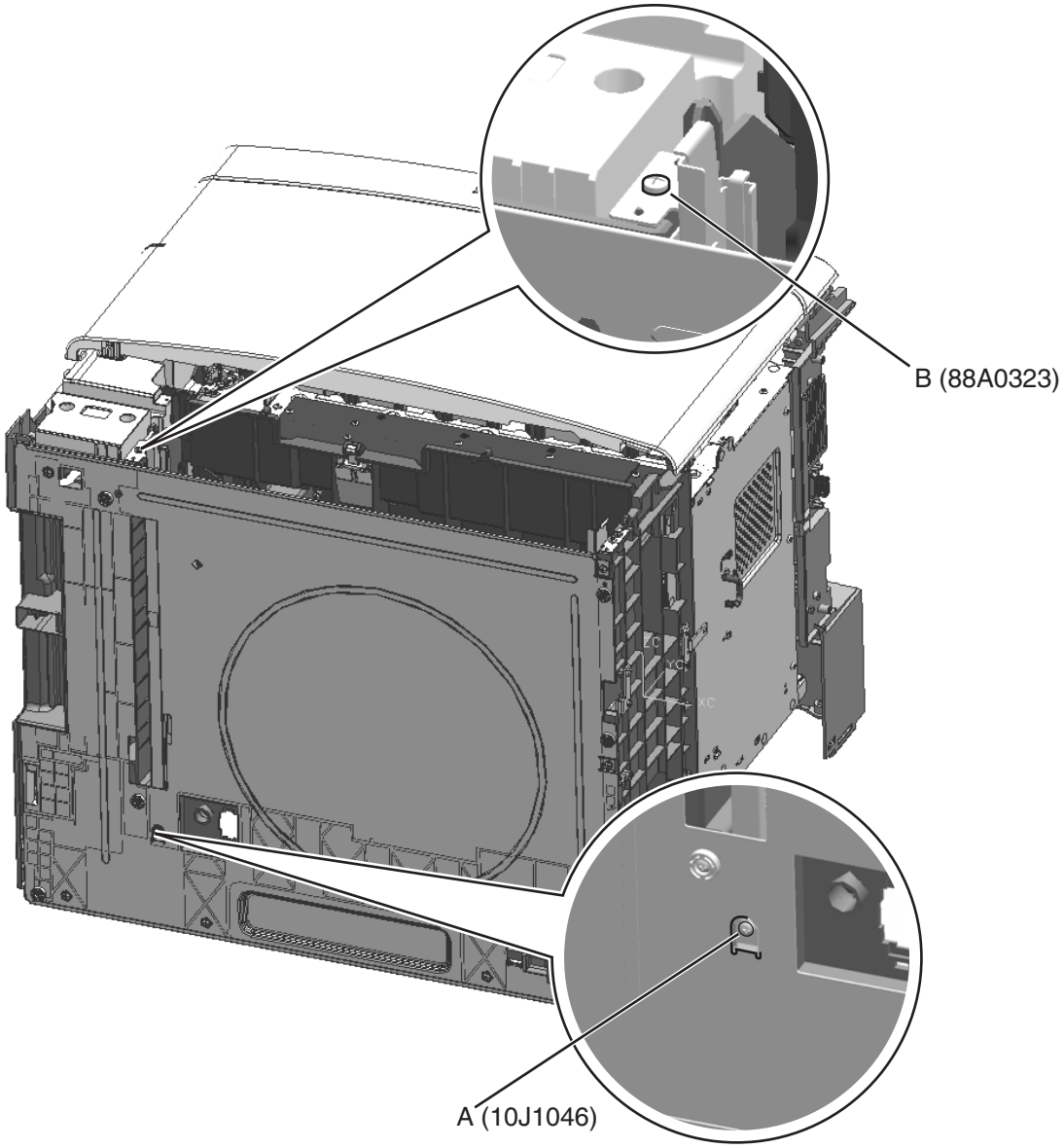
Media tray rail removal

See **“Front” on page 7-7** for the part number.

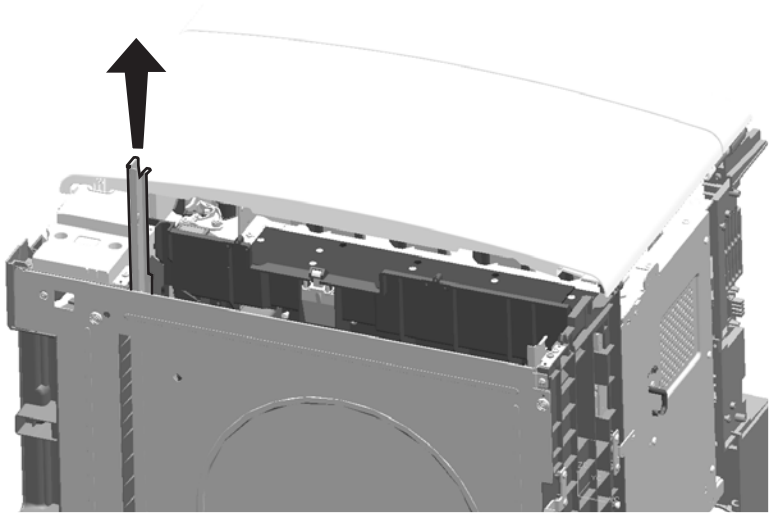
1. Remove the standard media tray. See **“Standard media tray removal” on page 4-141**.
2. Remove the waste toner container. See **“Waste toner container removal” on page 4-153**.
3. Remove the toner cartridges.
4. Remove the rail.

Left rail

a. Shut the front access door.
b. Gently lay the printer on its back.
c. Remove the screw (A) on the bottom of the printer and the screw (B) on the front.

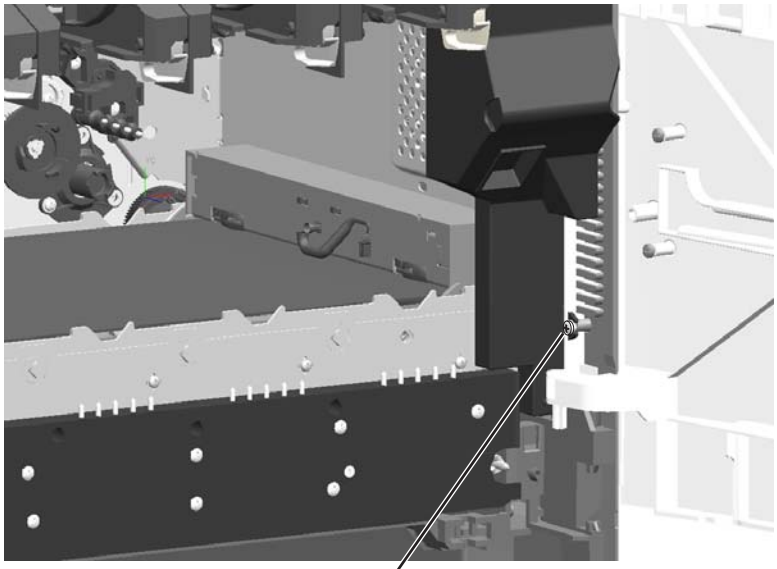


d. Lift the rail out of the printer.



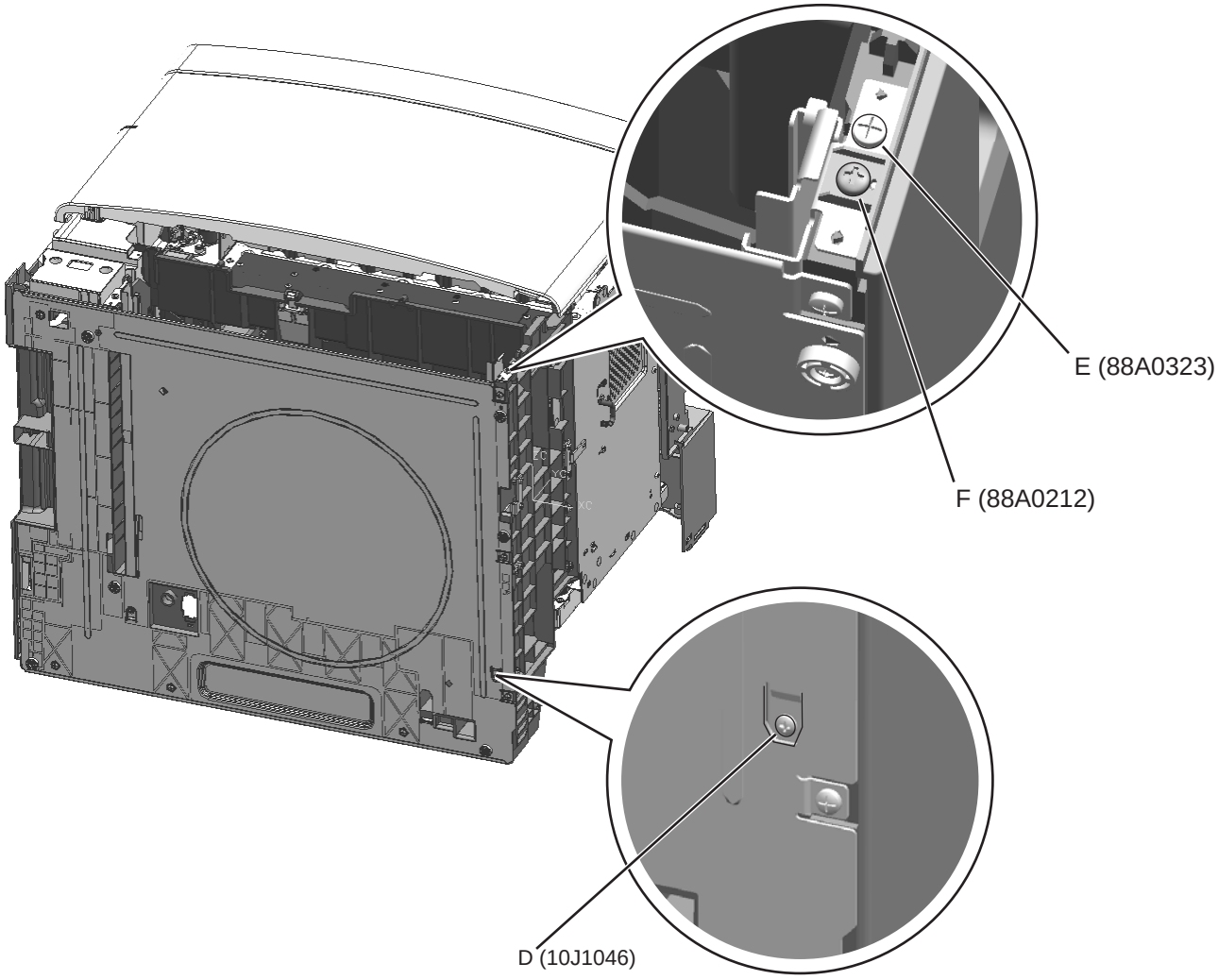
Right rail

a. Remove the screw (C) to release the tension on the right side cover.

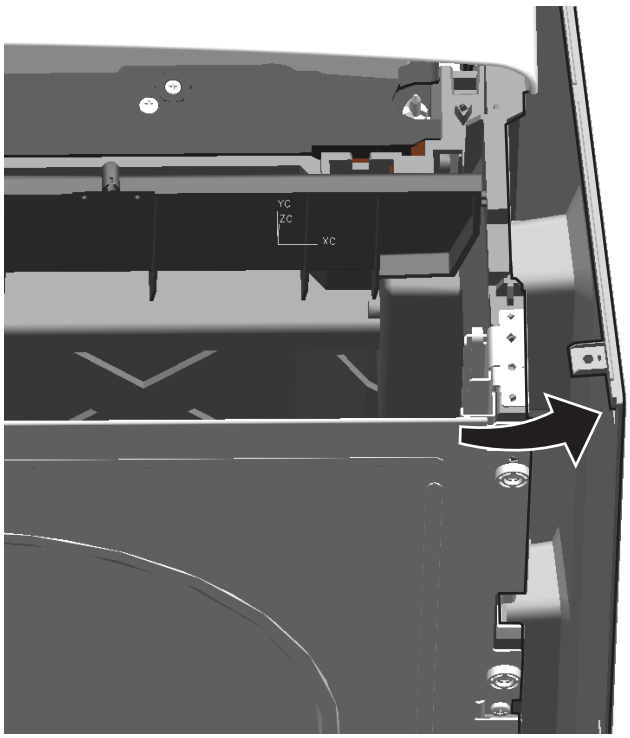


b. Shut the front access door.
c. Gently lay the printer on its back.

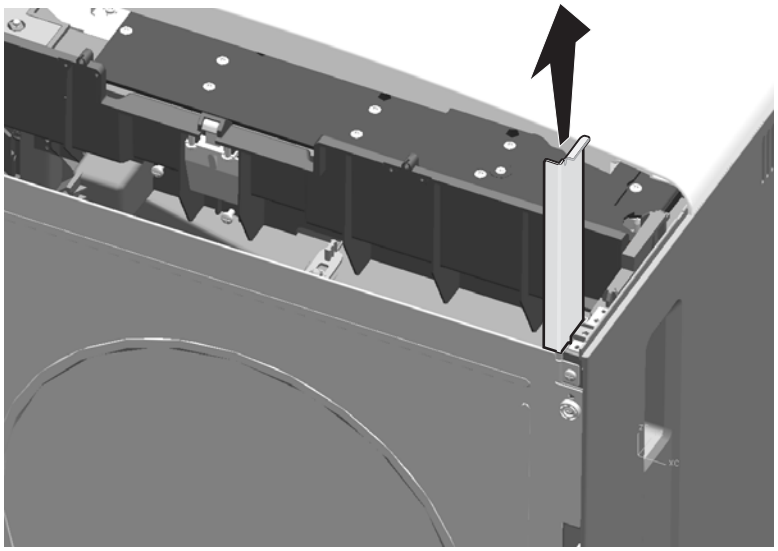
d. Remove the screw (D) on the bottom of the printer, and the screw (E) and screw (F) on the front of the printer.



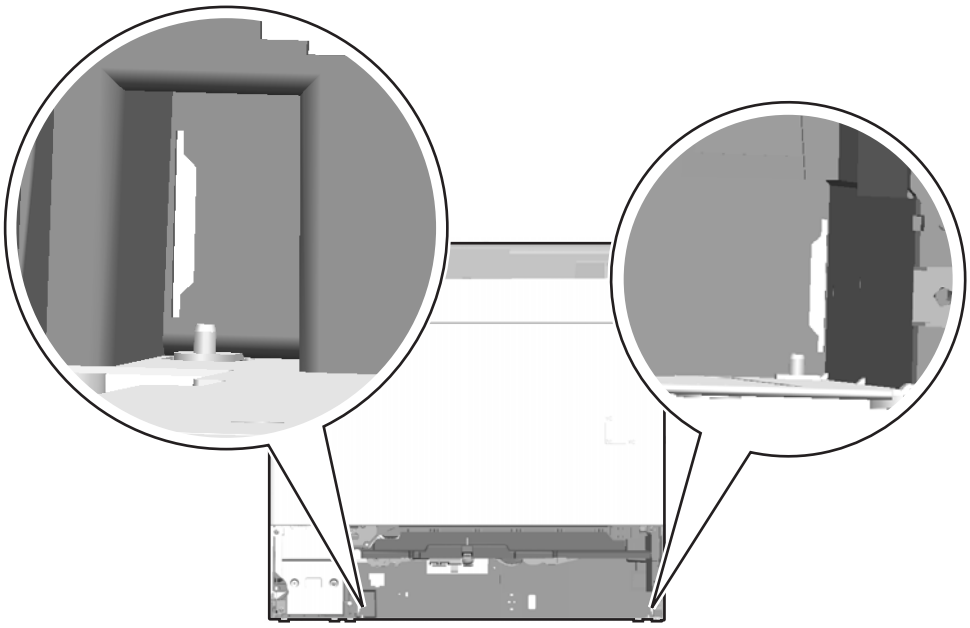
e. Pull aside the right side cover.



f. Pull up and to the left to remove the rail from the printer.



Installation note: Be sure to align the rails with the slots in the back of the printer to slide them into place, and then fit them over the pins on the front of the printer.



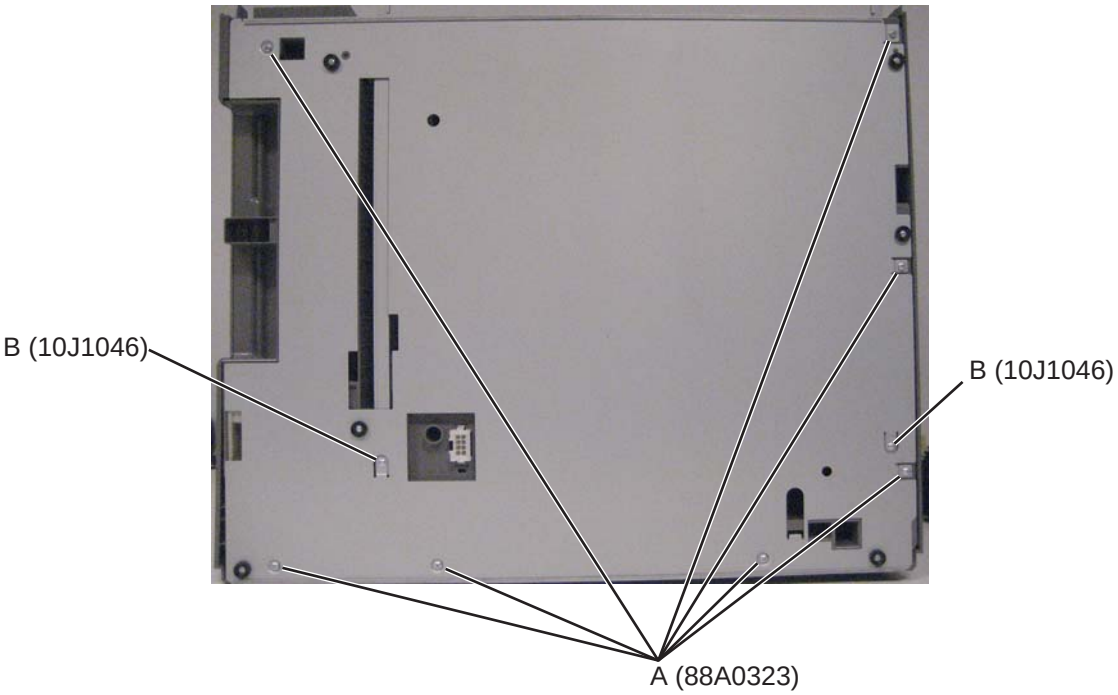
MPF breakaway assemblies removal

See **"Left" on page 7-11** for the part numbers.

1. Remove the rear cover. See **"Rear cover removal" on page 4-23**.
2. Remove the standard media tray. See **"Standard media tray removal" on page 4-141**.
3. Gently lay the printer on its back.
4. Remove the screw (88A0212) from the LVPS.



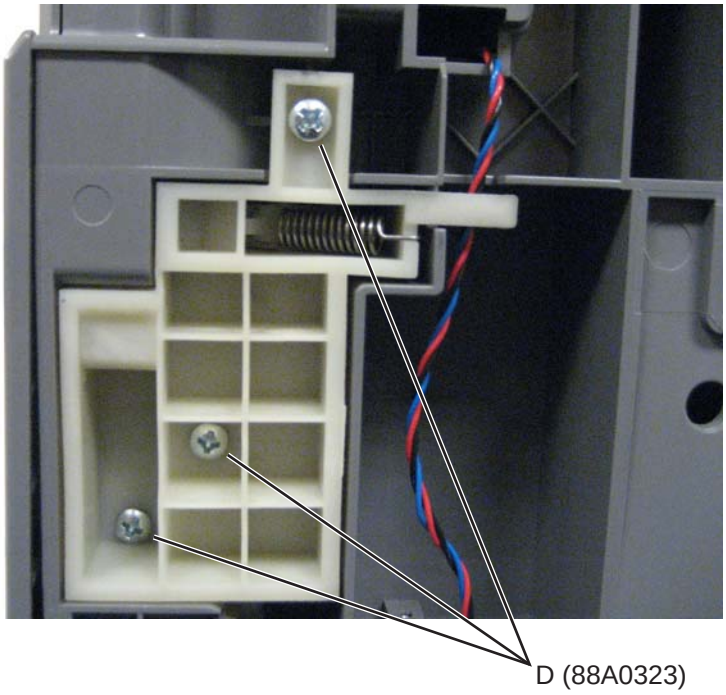
5. Remove seven screws (A) and two screws (B), and remove the bottom plate.



Note: If you are replacing the input option cable, then push it up through the frame, and then stand the printer back up to remove the cable.

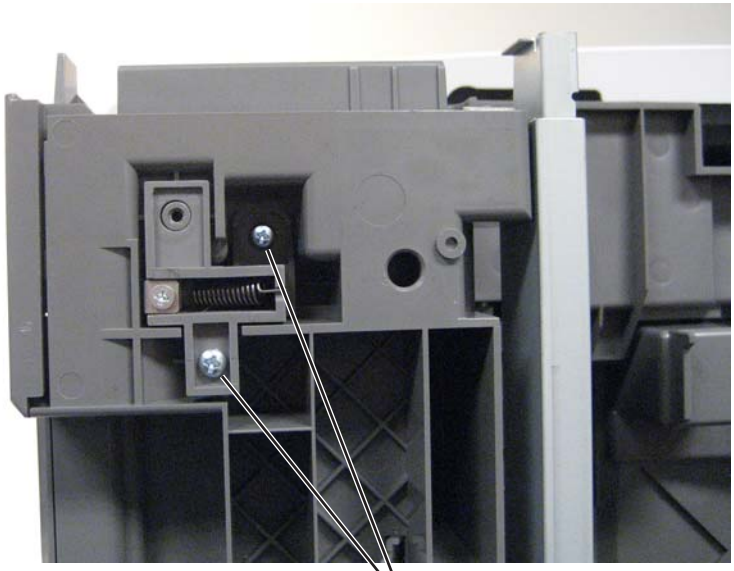
Rear breakaway assembly

a. Remove three screws (D).
b. Pull to remove the assembly.

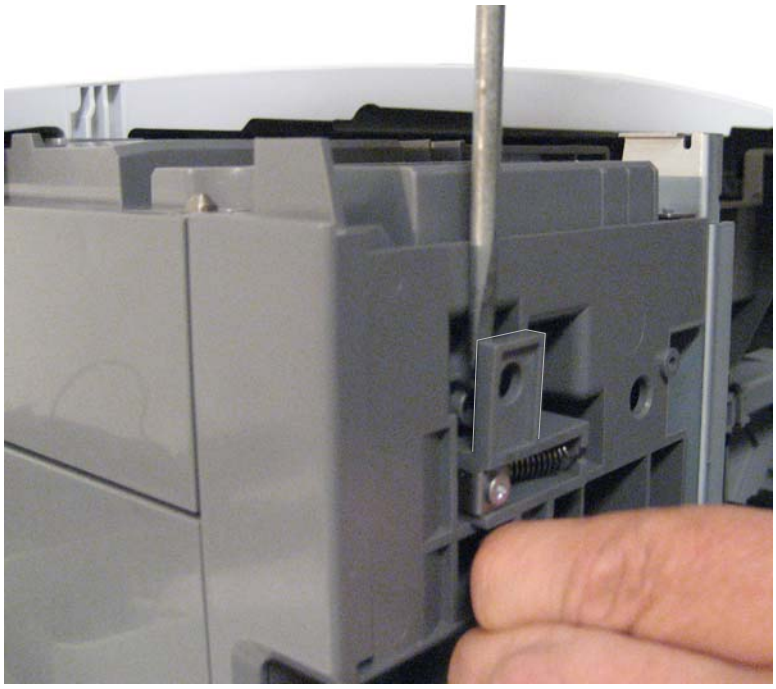


Front breakaway assembly

a. Remove two screws (E).



b. Using a flat-blade screwdriver, pry out the top, and then pull to remove the assembly.

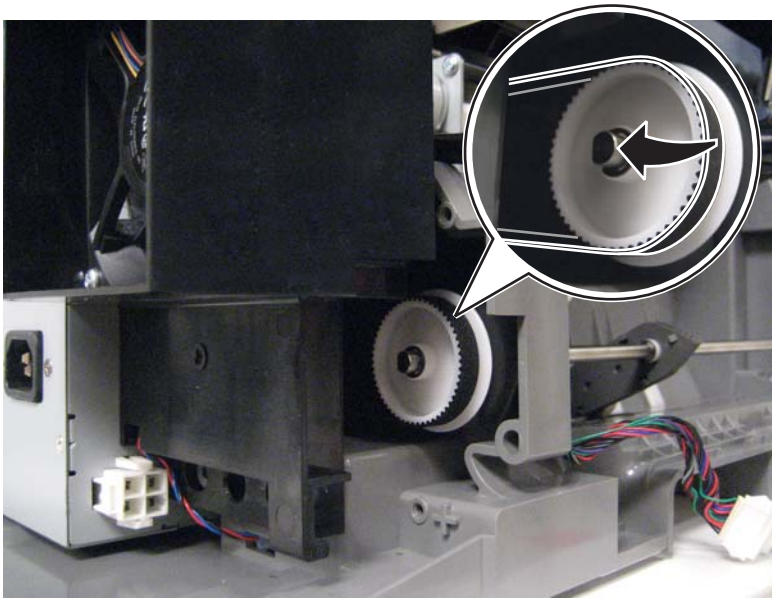


MPF paper pick assembly removal (including the MPF ratchet collar and MPF drive pulley)

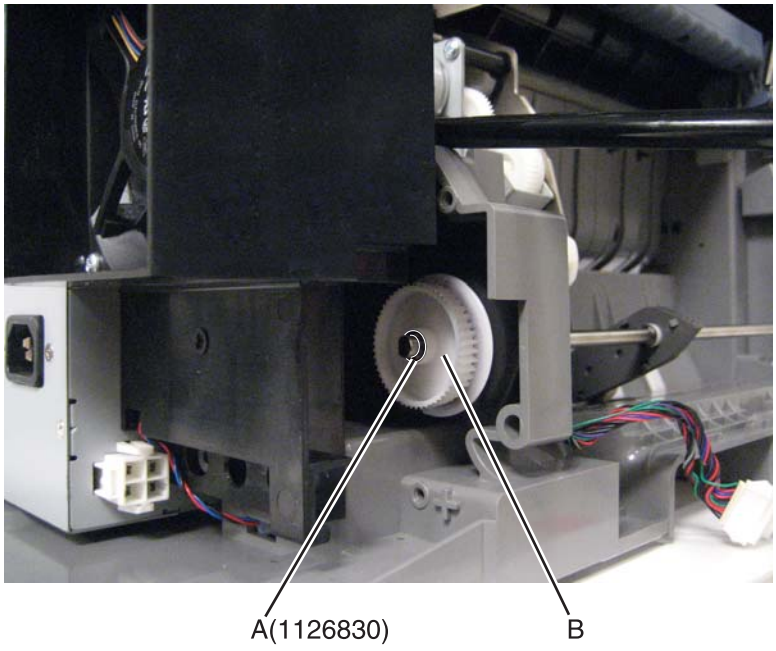
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See **"Left and rear covers" on page 7-5** for the part numbers.

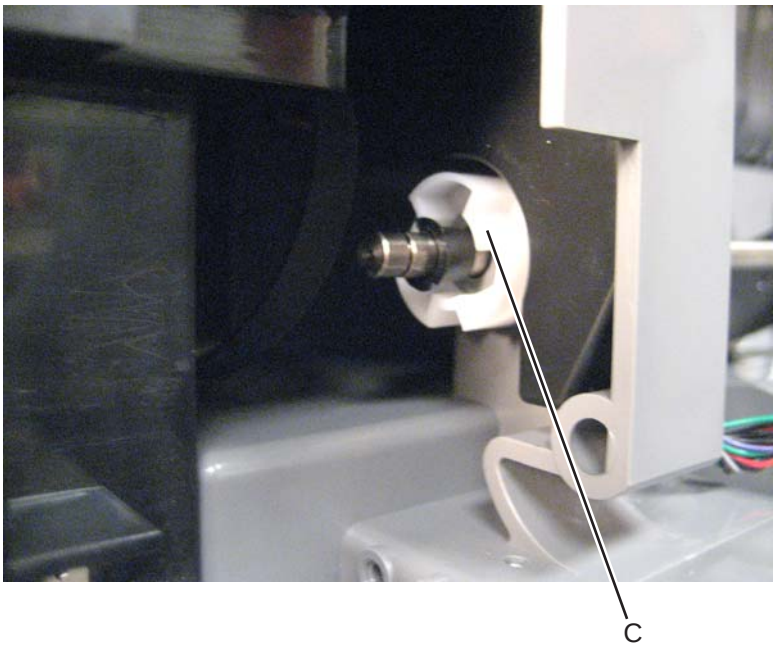
1. Remove the left cover. See **"Left cover removal" on page 4-16**.
2. Remove the waste toner left cover. See **"Waste toner left cover removal" on page 4-31**.
3. Carefully pull the MPF drive belt from the MPF drive pulley.



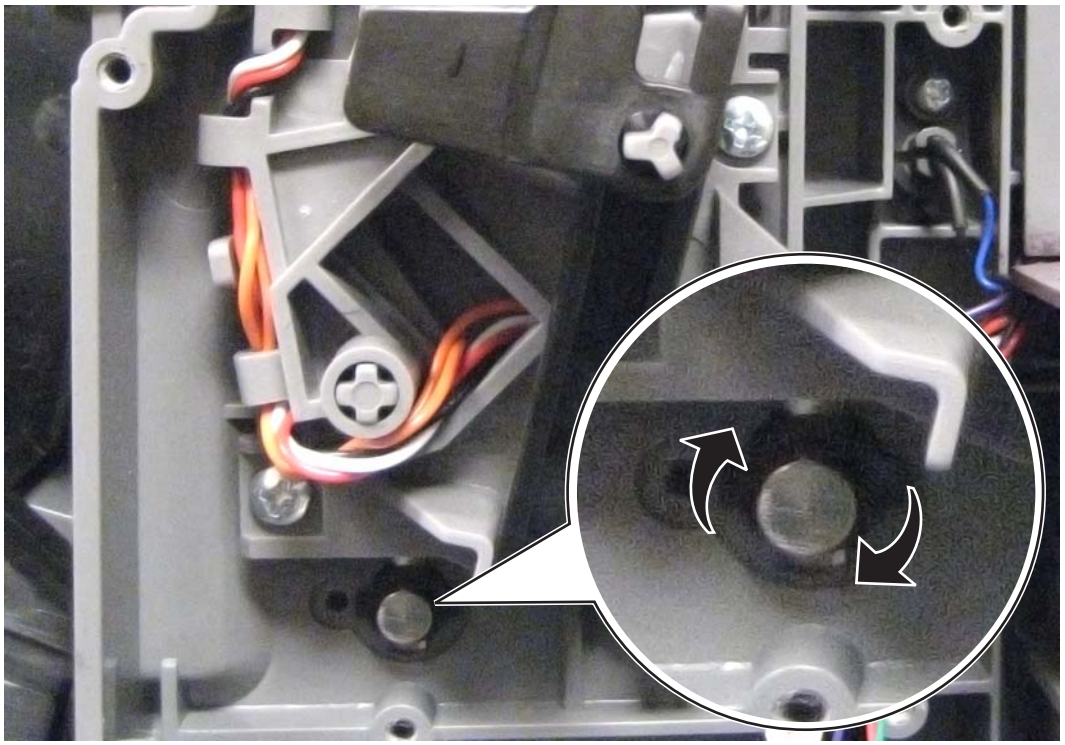
4. Remove the E-clip (A), and then remove the pulley (B).



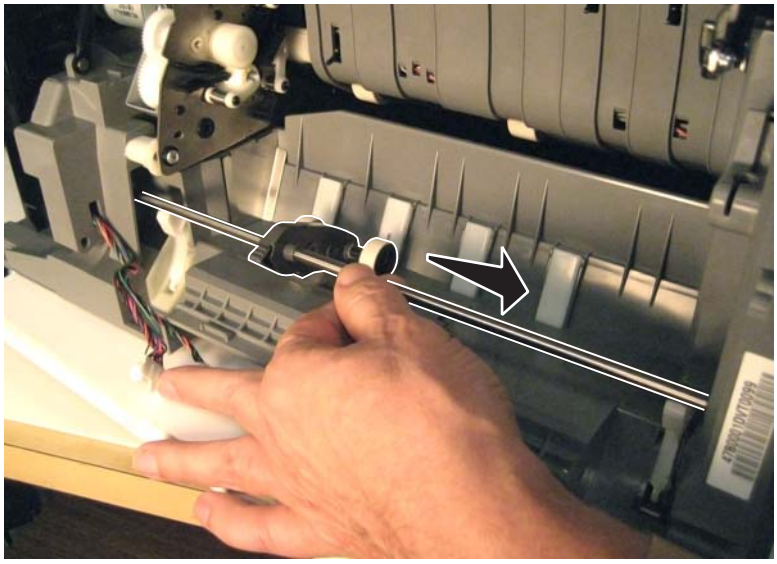
5. Remove the ratchet collar (C), and remove the bushing under it.



6. From the front of the printer, rotate the front bushing so the tabs line up with the slots in the frame.



7. Slide the rod toward the front of the printer to free the rear side.



Installation note: Be sure to replace the thrust washer in the ratchet collar before installing the MPF drive pulley.

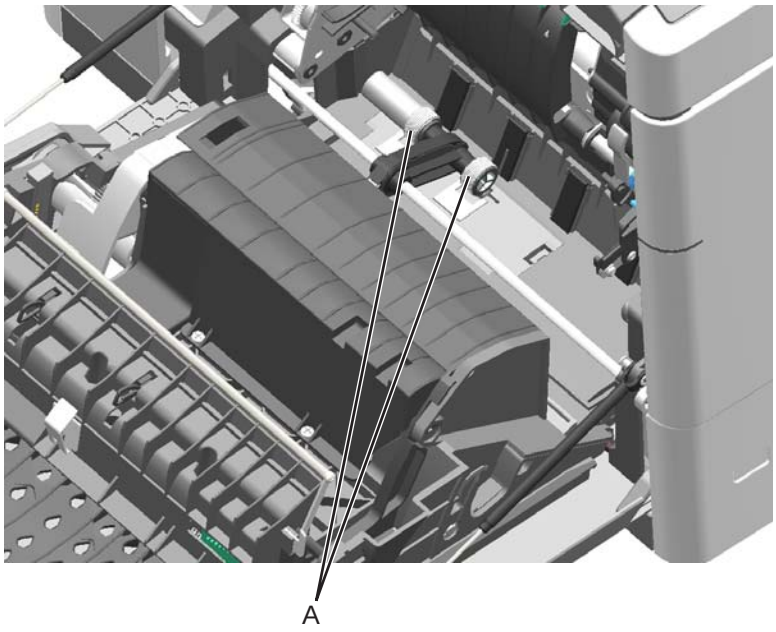


MPF pick rolls and special wear strip removal

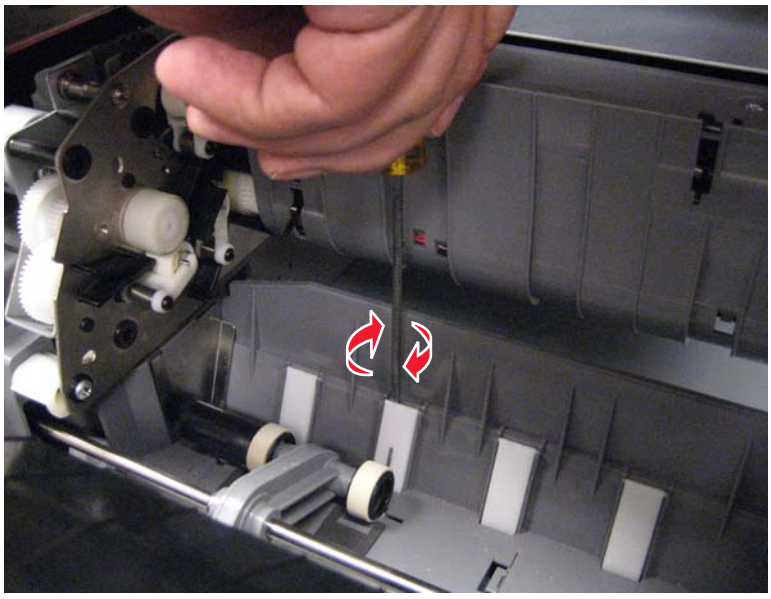
See **“Left and rear covers” on page 7-5** for the part number.

Always replace both pick rolls and the special wear strip at the same time.

1. Open the left access door.
2. Remove the rubber rolls (A) from the hubs. The hubs stay on the printer.

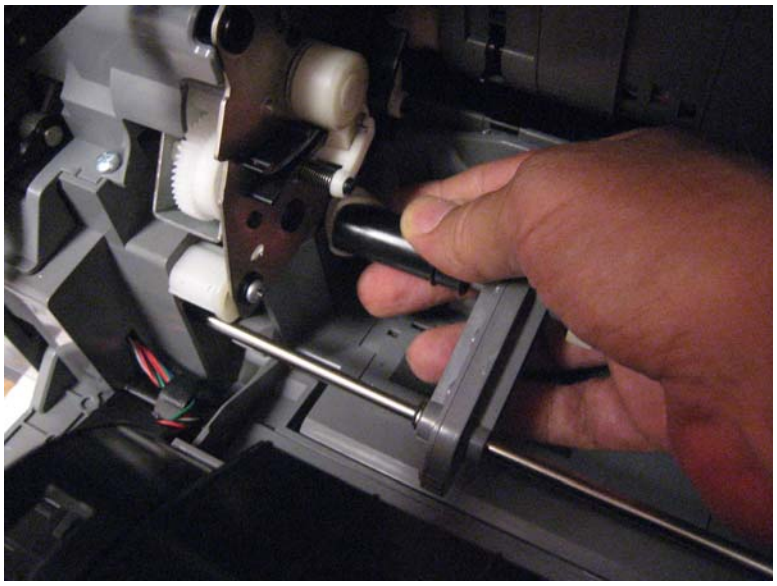


3. Insert a flat-blade screwdriver behind the top of the special wear strip, and then twist the screwdriver to pop out the strip.

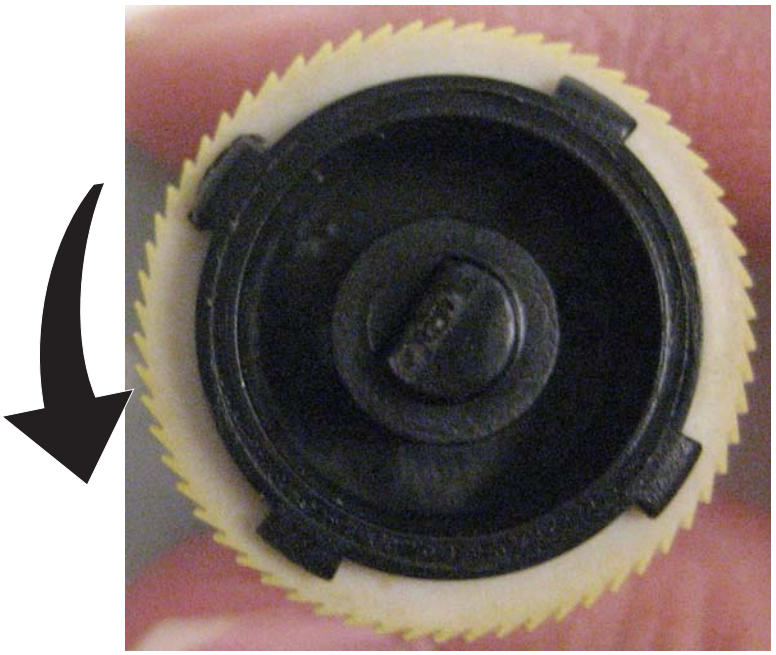


Installation notes:

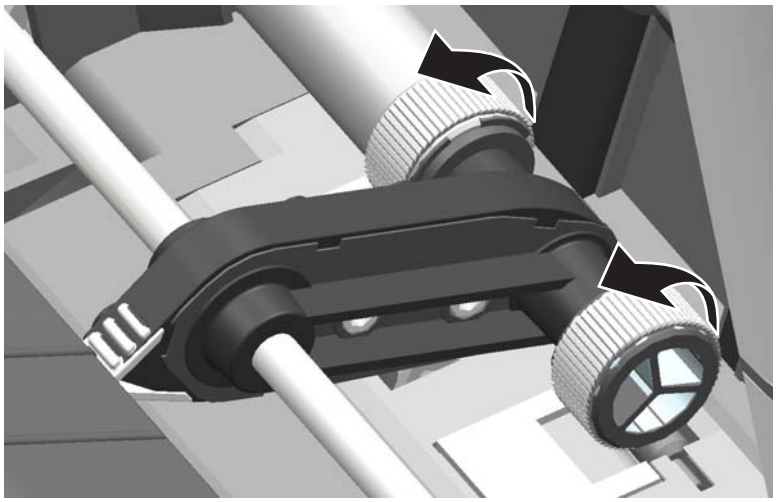
- Slide the edge of a pick tire between the rear hub extension and the printer frame, and then slide the roll down to the hub.



- Be sure the flaps on the pick rolls slant away from the direction the rolls turn.



- Verify the rolls turn freely.

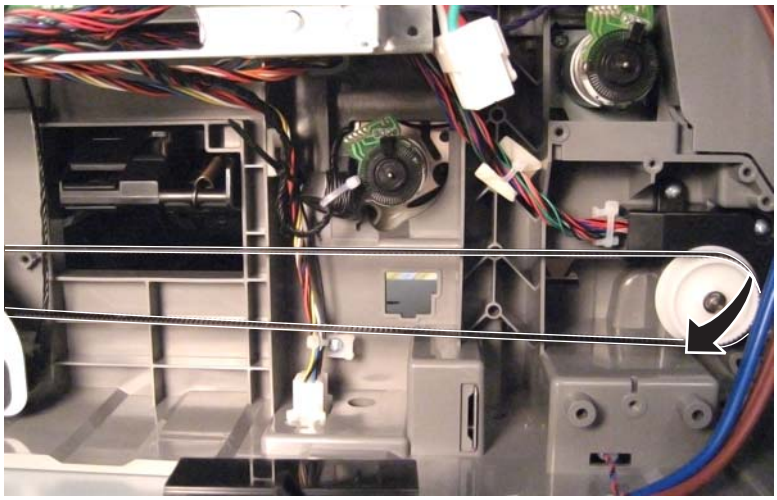


MPF drive assembly removal

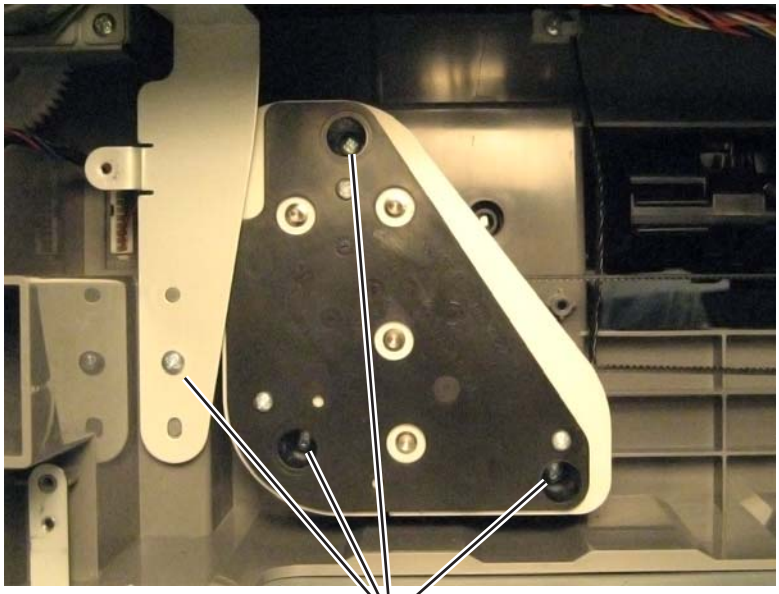
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See **“Left” on page 7-11** for the part number.

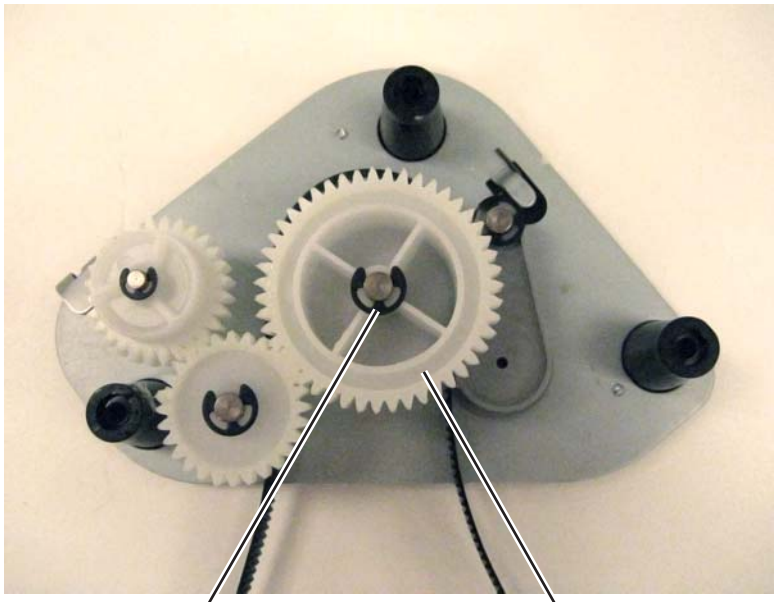
1. Remove the LVPS exit duct. See **“LVPS exit duct removal” on page 4-80**.
2. Slide the belt off the MPF redrive pulley.



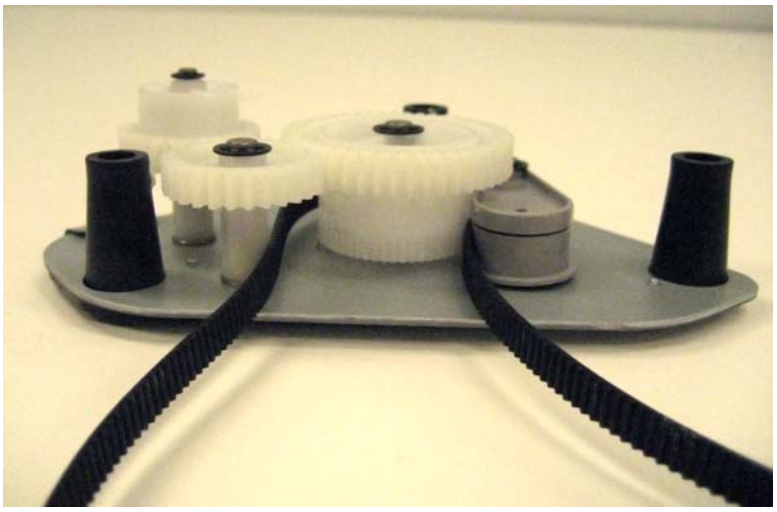
3. Remove four screws (A), and remove the assembly.



4. Remove the E-clip (B) and the gear (C) to remove the belt from the assembly.



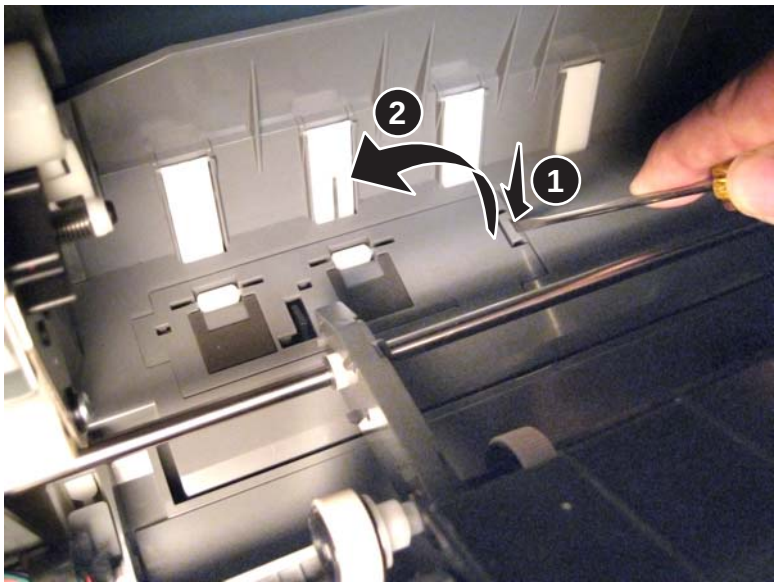
Installation note: When reinstalling the belt, be sure the belt sits on the teeth at the base of the gear.



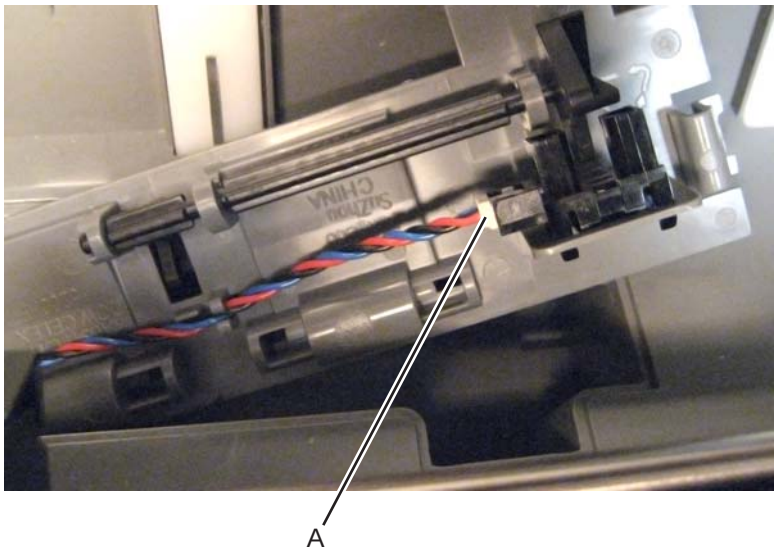
MPF sensor plate assembly removal

See **“Left and rear covers” on page 7-5** for the part number.

1. Open the left access door assembly.
2. Use a flat-blade screwdriver to push in the tab, and lift to remove the assembly.



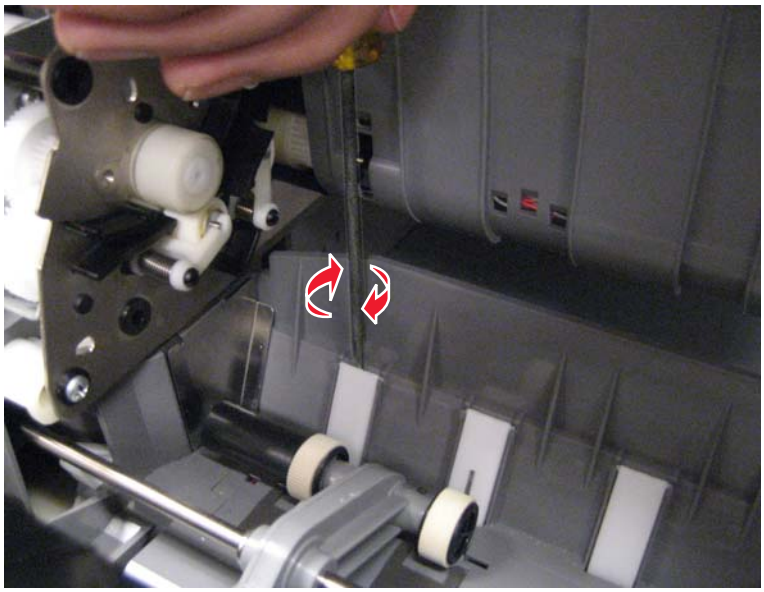
3. Disconnect the sensor cable (A), and remove the assembly.



MPF wear strips removal

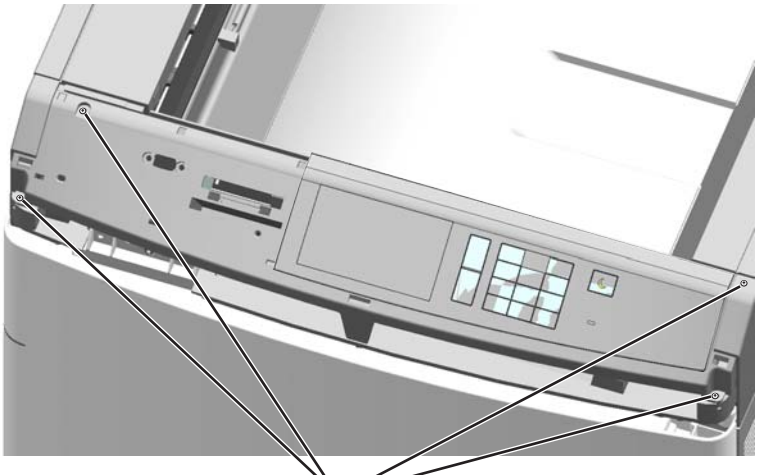
See **“Left and rear covers” on page 7-5** for the part numbers.

1. Open the left access door assembly.
2. Insert a flat-blade screwdriver behind the top of the strip, and then twist the screwdriver to pop out the strip.



Operator (OP) panel assembly removal

1. Remove the scanner top cover. See **“Scanner top cover removal” on page 4-206**.
2. Remove the AIO front upper cover. See **“AIO front upper cover removal” on page 4-3**.
3. Remove the AIO front lower cover. See **“AIO front lower cover removal” on page 4-3**.
4. Remove the scanner left side front cover. See **“Scanner left side front cover removal” on page 4-204**.
5. Remove three screws (A) from the top.

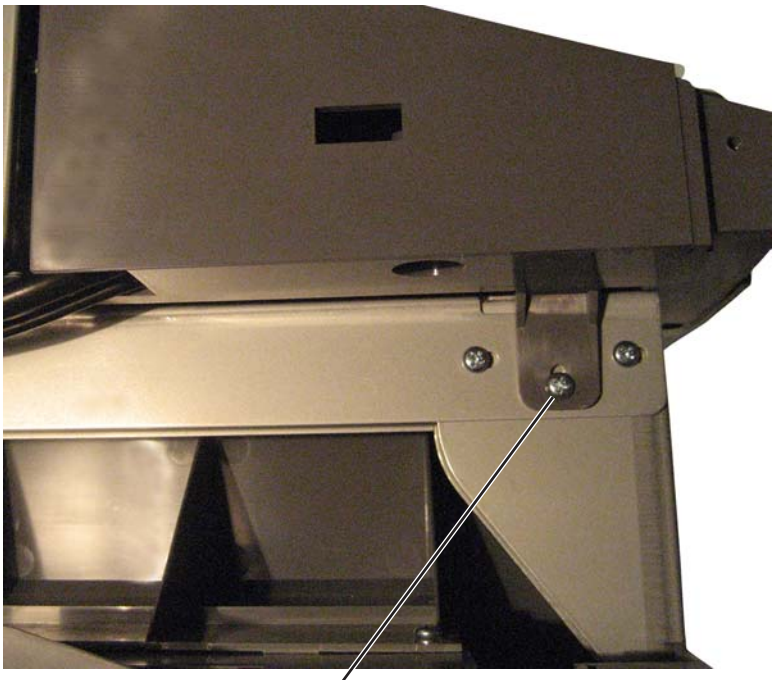


A (88A0323)

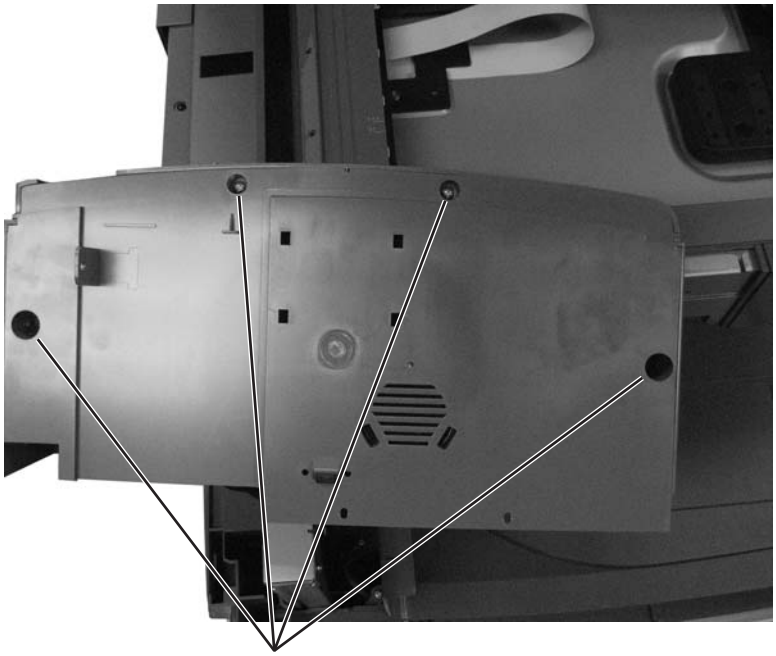
6. Remove two screws (B) from the bottom.



7. Remove one screw (C) from the left side.



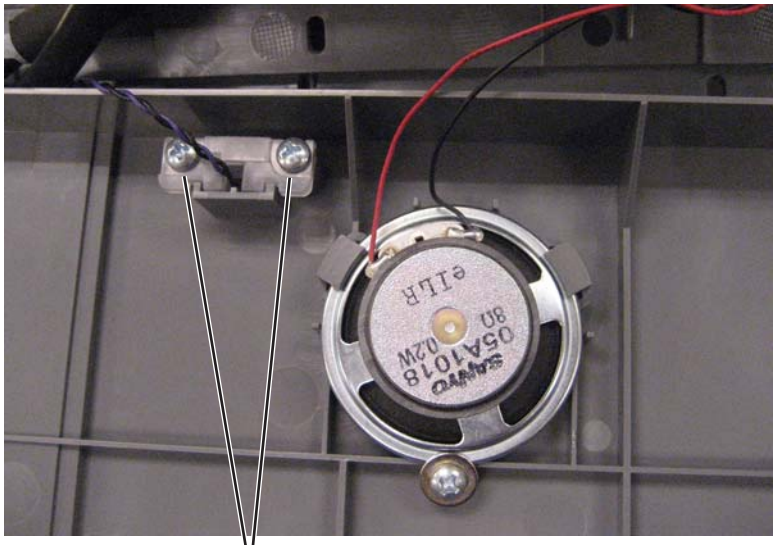
8. Lift the operator panel assembly and turn it over.
9. Remove four screws (D) from the bottom, and remove the operator panel bottom cover.



D (88A0323)

Note: If you are removing the operator panel assembly to replace the OP panel speaker, then stop here and go to step **2** of **"OP panel bottom cover removal" on page 4-22**.

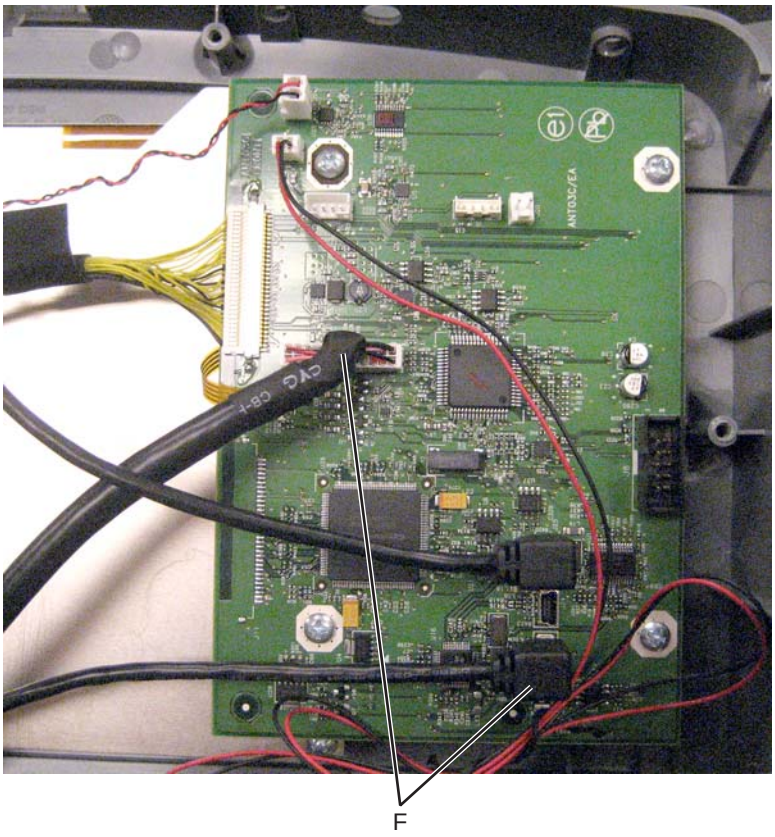
10. Remove two screws (E), and remove the cave light from the OP panel bottom cover.



E (88A0323)

Note: If you are removing the operator panel assembly to replace the OP panel bottom cover, then stop here and go to step **2** of **"OP panel bottom cover removal" on page 4-22**.

11. Disconnect the two cables (F) connecting the UICC card to the printer, and remove the OP panel assembly. Place the assembly upside down on a cloth to protect the touch screen.



OP panel cables removal

See **“Cable and thermistor location table” on page 7-56** for the part numbers.

1. Remove the OP panel assembly. See **“Operator (OP) panel assembly removal” on page 4-103**.
2. Remove the system board upper shield. See **“System board upper shield removal” on page 4-30**.
3. If you are removing the AIO cavelight cable, then remove the scanner left side front cover. See **“Scanner left side front cover removal” on page 4-204**.
4. Disconnect the cable you want to replace:

Cable	Connected to
Front host USB cable	OP panel UICC card
Panel USB Hub - H cable	System board: JFMUSB
AIO cavelight cable	Connector under the scanner left side front cover
24-pin UICC cable	System board: J1
30-pin UICC LCD cable	OP panel UICC card and OP panel display

5. Remove the cable.

OP panel display removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Remove the UICC card. See **“OP panel UICC card removal” on page 4-109**.
2. Disconnect the cable (A).
3. Remove seven screws (B), and remove the display bracket from the operator panel housing.

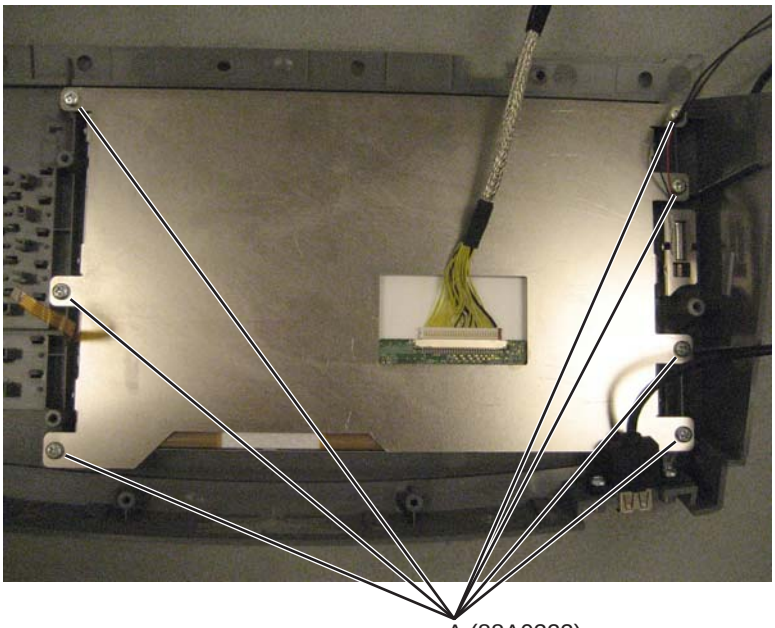


OP panel housing removal

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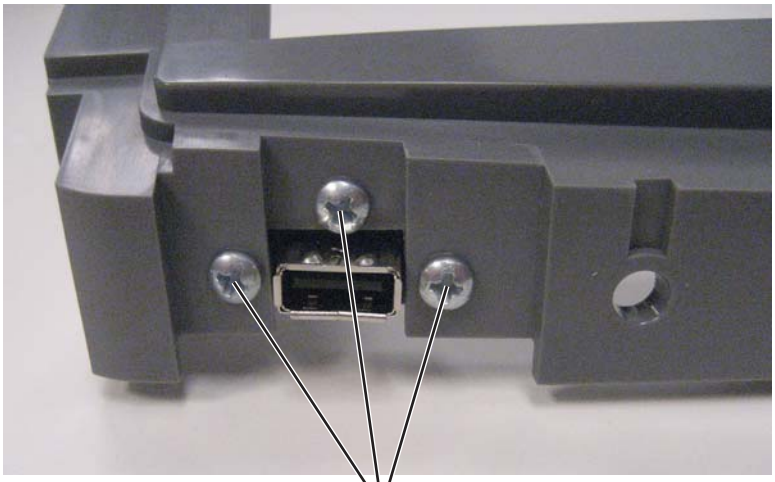
See **“Front, right, and top covers” on page 7-3** for the part number.

1. Remove the UICC card. See **“OP panel UICC card removal” on page 4-109**.
2. Remove seven screws (A), and remove the operator panel display with bracket.



A (88A0323)

3. Remove three screws (B), and remove the front USB cable.



B (88A0323)

OP panel speaker removal

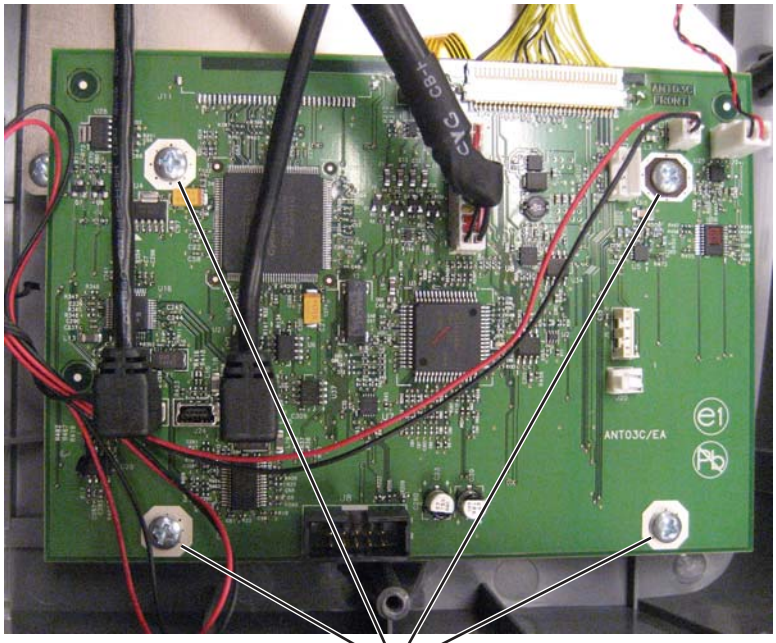
See **“Front, right, and top covers” on page 7-3** for the part number.

For the removal procedure, see **“OP panel bottom cover removal” on page 4-22**.

OP panel UICC card removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Remove the OP panel assembly. See **“Operator (OP) panel assembly removal” on page 4-103**.
2. Disconnect all the cables from the UICC card, and remove the four screws (A) to remove the card.



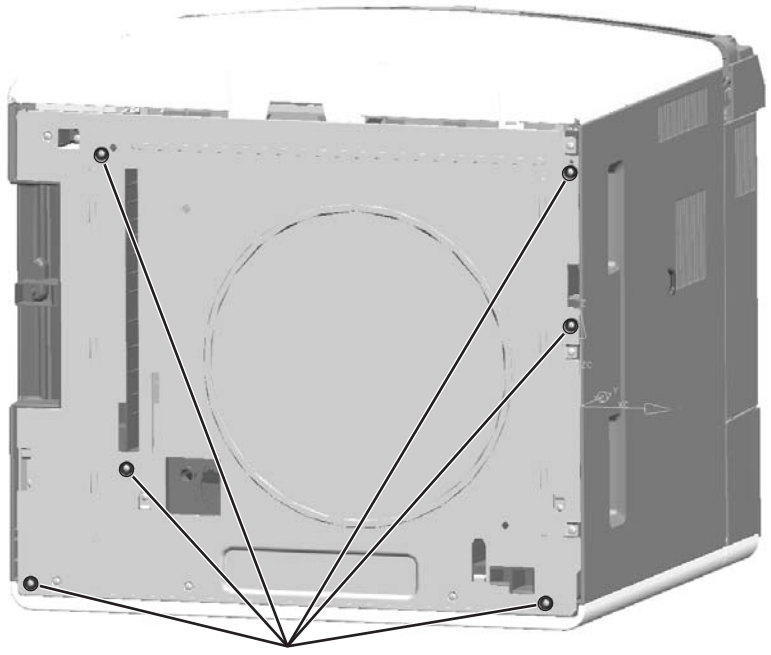
A (88A0323)

Pad removal

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See **“Left and rear covers” on page 7-5** for the part number.

1. Remove the standard media tray. See **“Standard media tray removal” on page 4-141**.
2. Remove the waste toner container. See **“Waste toner container removal” on page 4-153**.
3. Remove the toner cartridges.
4. Shut the front access door.
5. Gently lay the printer on its back.
6. Remove the screw (A) from the pad you want to remove.

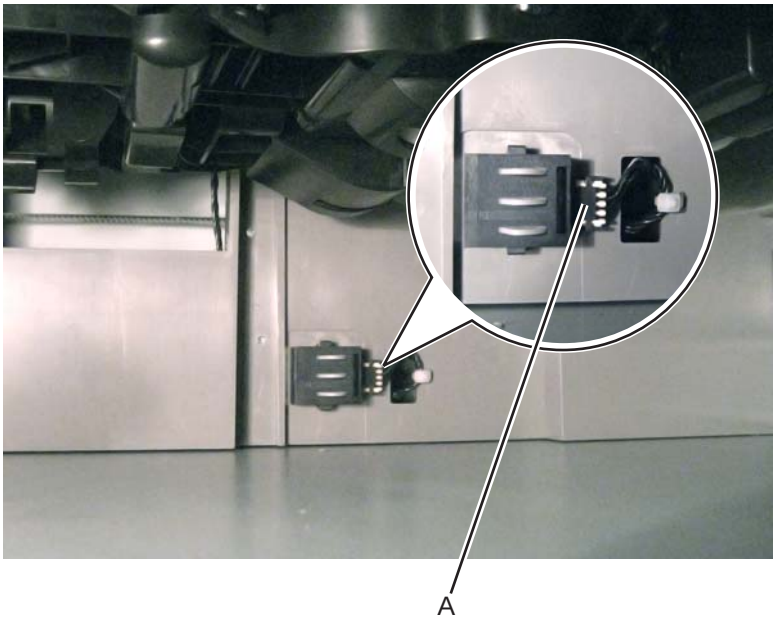


A (10J1046)

Paper auto-size sensor removal

See **“Front” on page 7-7** for the part number.

1. Remove the standard media tray. See **“Standard media tray removal” on page 4-141**.
2. Push down on the sensor to remove it from the rear frame, and then disconnect the cable (A).

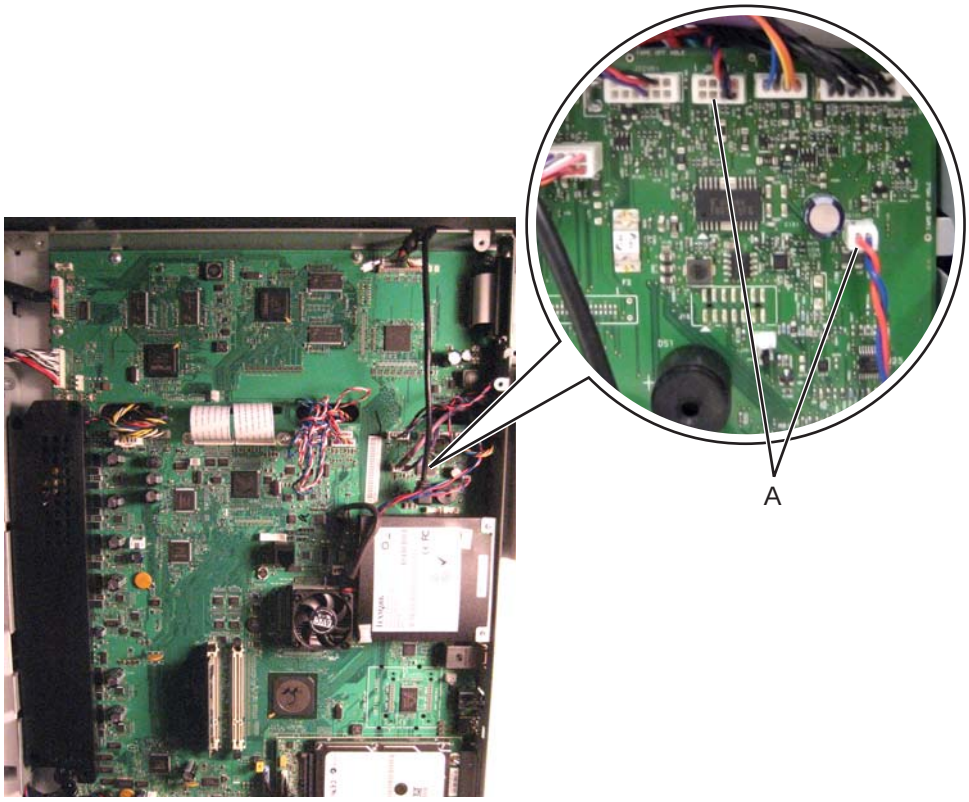


Paper path redrive assembly with sensors removal

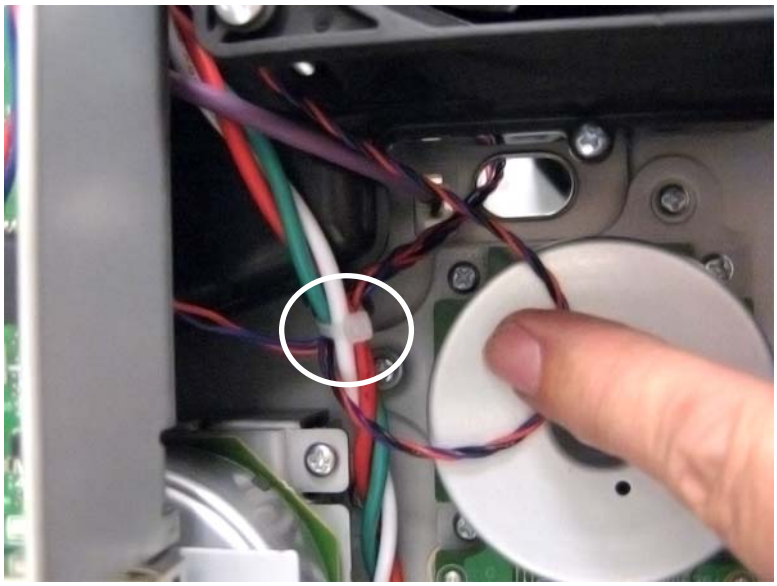
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See **“Left” on page 7-11** for the part number.

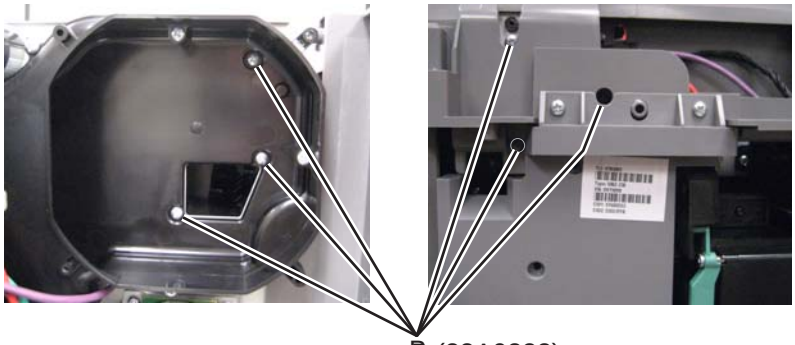
1. Remove the AIO front lower cover. See **“AIO front lower cover removal” on page 4-3**.
2. Remove the main fan. See **“Main fan removal” on page 4-84**.
3. Remove the fuser. See **“Fuser assembly removal” on page 4-56**.
4. Disconnect the sensor cables (A).



5. Clip the cable tie, and route the cables through the frame.

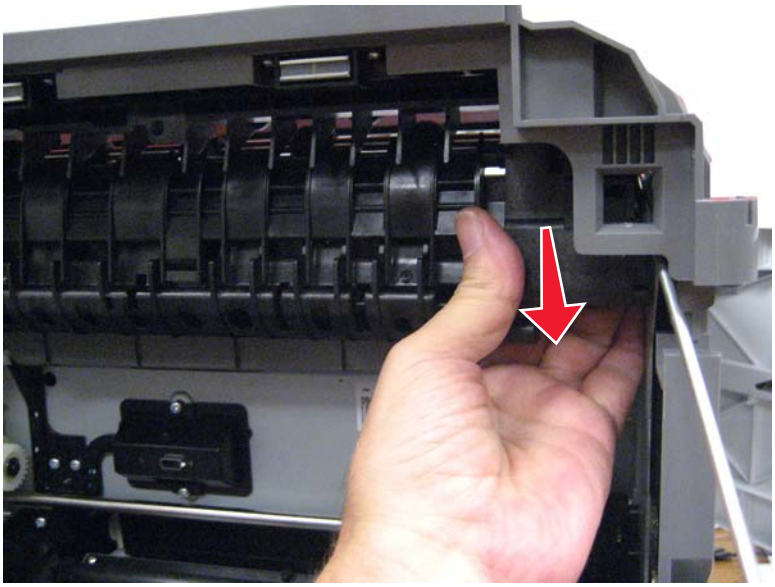


6. Remove six screws (B), three from the rear and three from the front.



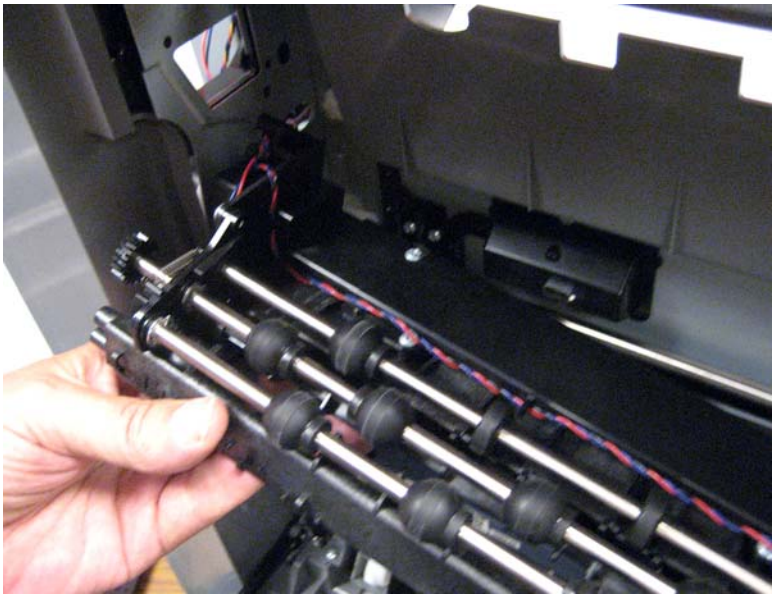
B (88A0323)

7. Insert a flat-blade screwdriver toward the top of the front side of the assembly, and deflect the front plate enough to drop down the front end of the assembly.



8. Pull the sensor cables through the frame to remove the assembly.

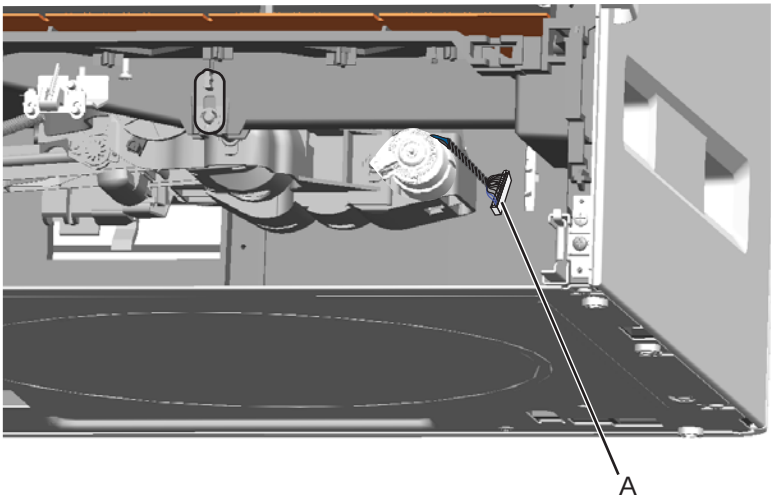
Installation note: Be sure the sensor cables are routed as shown before you reinstall the assembly.



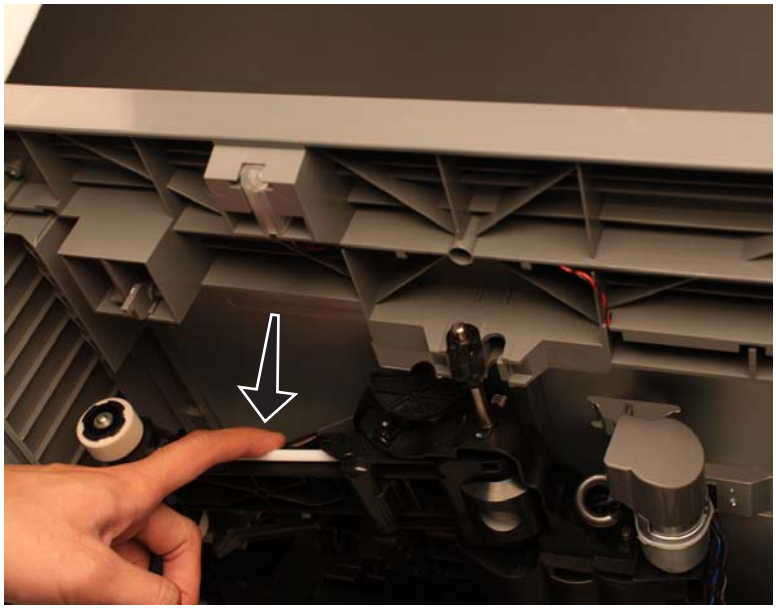
Paper pick mechanism assembly removal

See **"Front" on page 7-7** for the part number.

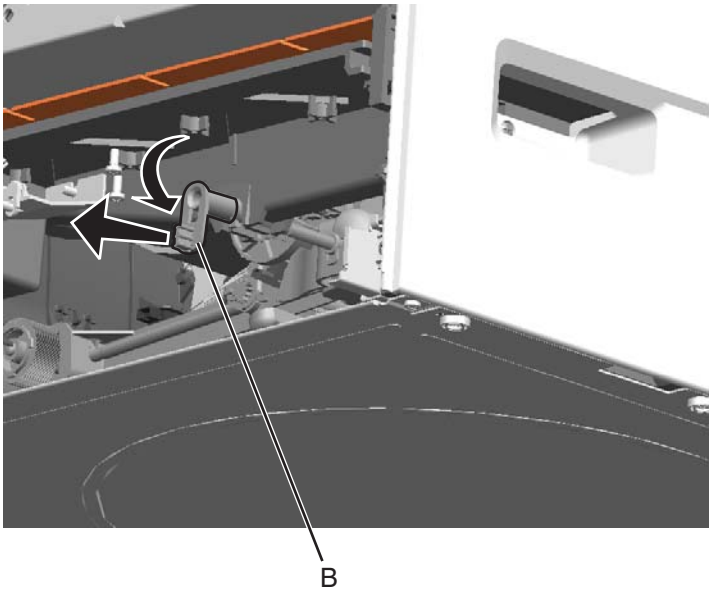
1. Remove the standard media tray. See **"Standard media tray removal" on page 4-141**.
2. Disconnect the cable (A) from the connector.



3. Lower the pick arm all the way.



4. Rotate the release lever (B), pull it toward you, and then lower the assembly to remove it from the printer.



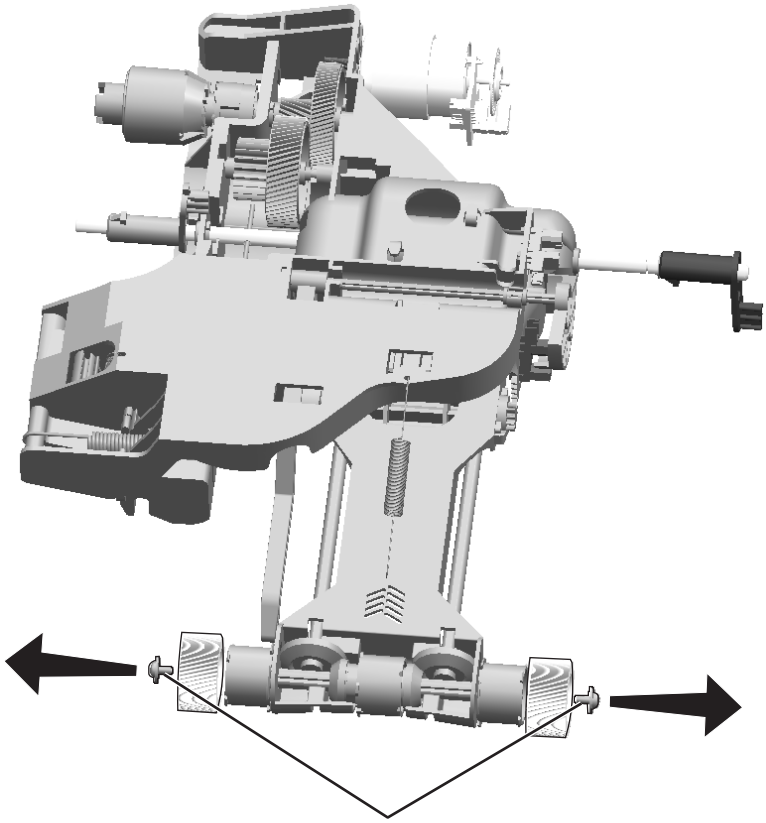
Pick rolls removal

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See **“Front” on page 7-7** for the part number.

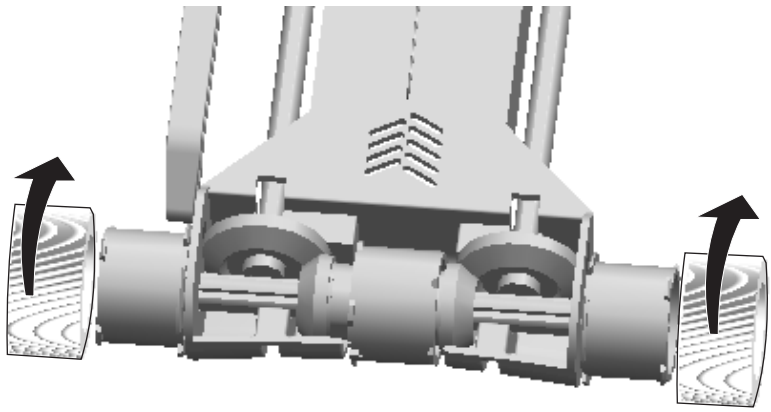
Note: Replace both rolls at the same time.

1. Remove the paper pick mechanism assembly. See **“Paper pick mechanism assembly removal” on page 4-114**.
2. Remove the screws (A) from both sides to release the pick roll hubs.



3. Remove the pick rolls.

Installation note: Verify the rolls turn freely.

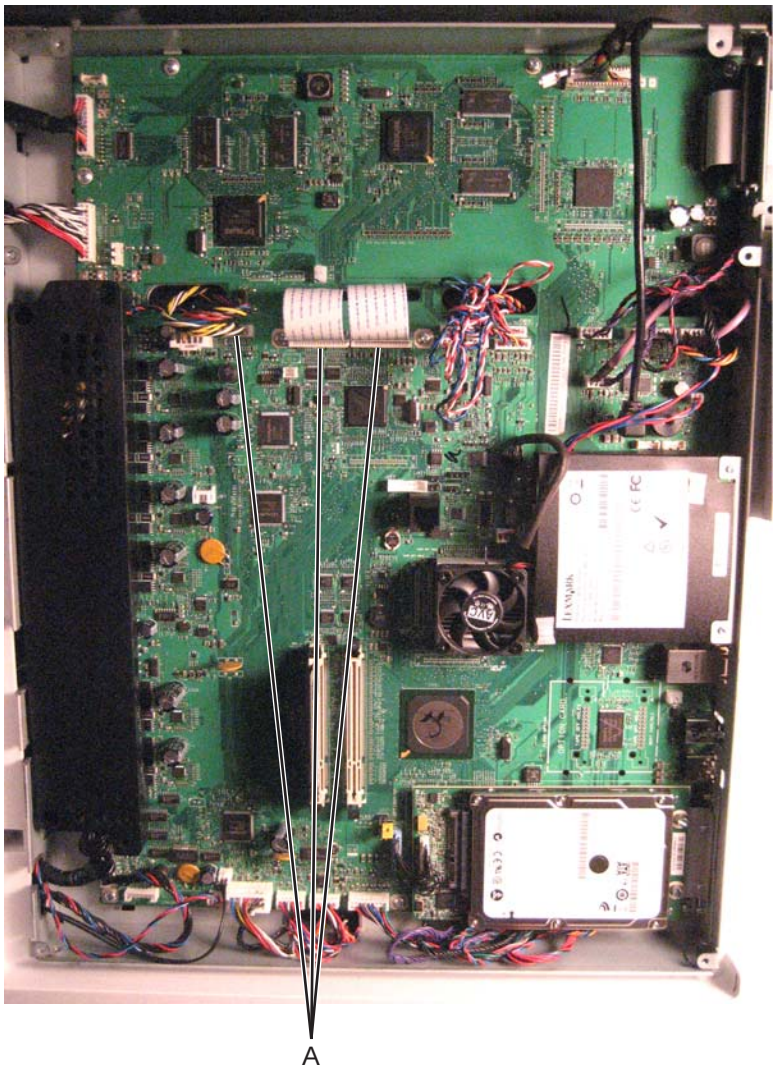


Printhead removal, installation, and alignment

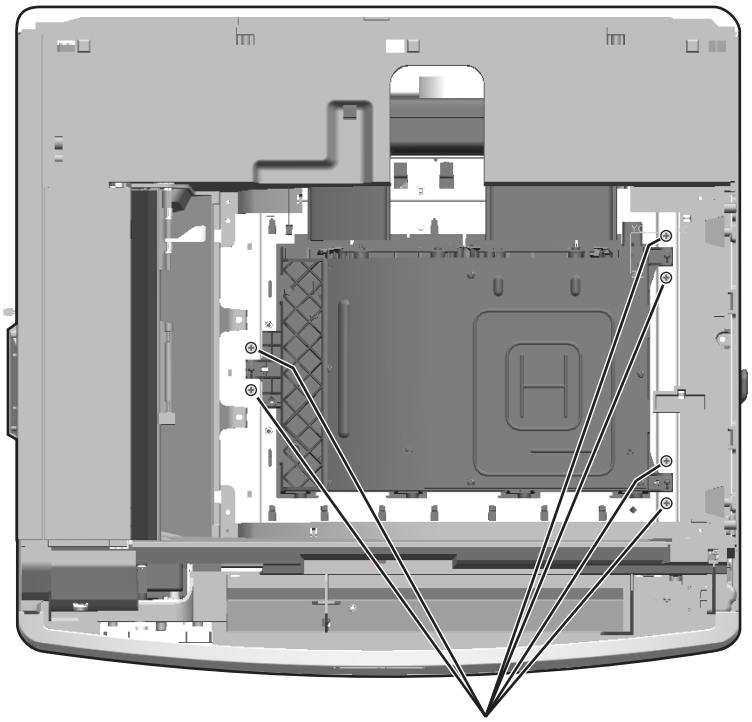
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See **“Front, right, and top covers” on page 7-3** for the part number.

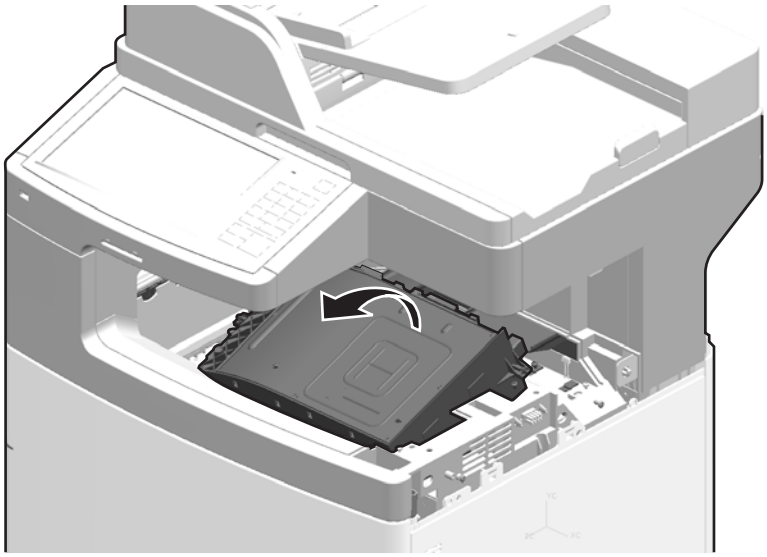
1. Remove the system board upper shield. See **“System board upper shield removal” on page 4-30**.
2. Remove the printhead access cover. See **“Printhead access cover removal” on page 4-22**.
3. Remove the AIO rear scanner cover. See **“AIO rear scanner cover removal” on page 4-201**.
4. Disconnect the three printhead cables (A) from the system board and feed them through the frame.



5. Remove six screws (B) from the mounting brackets.

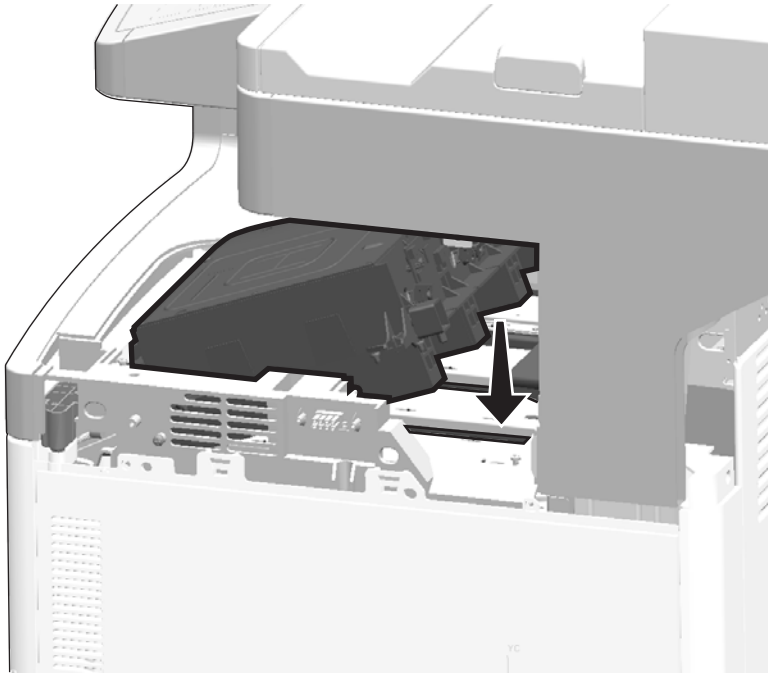


6. Tilt the printhead forward, and lift to remove it.

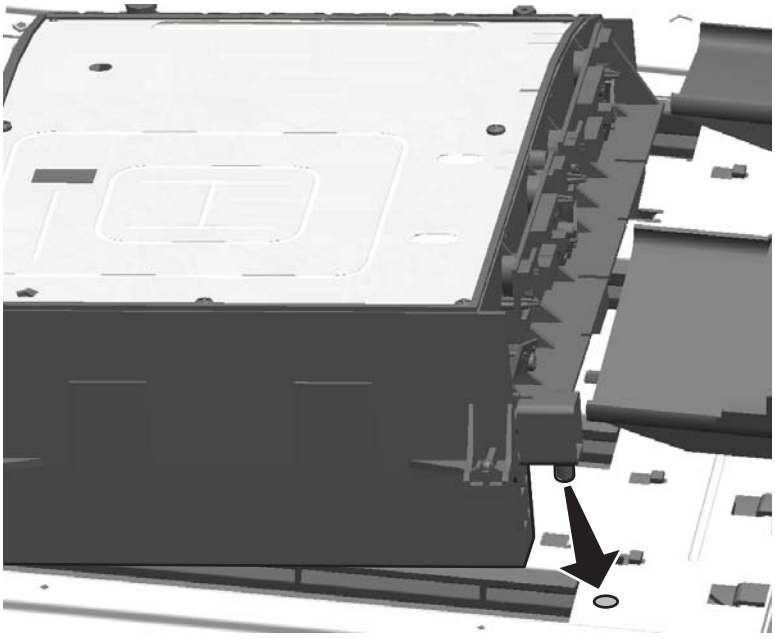


Installing and coarse aligning the printhead

1. Place the printhead into the printer angled forward, sliding the adjustment screws into the slots in the printer frame.

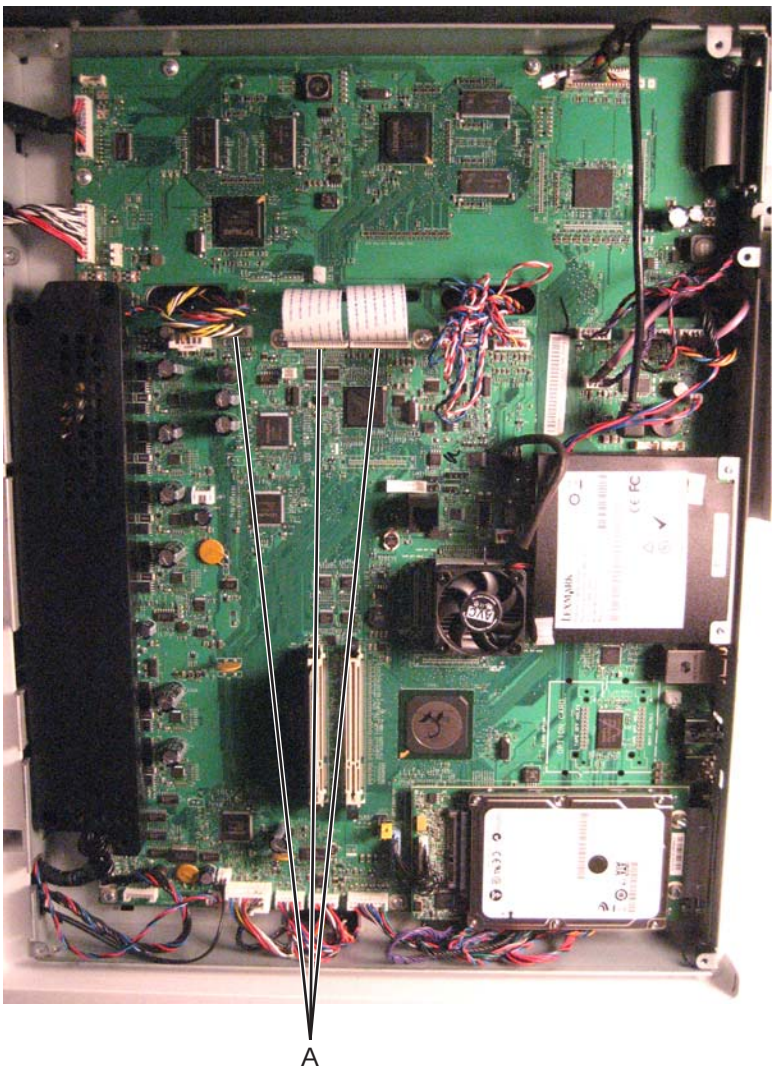


2. Lower the back of the printhead until the post on the back right corner drops into the hole in the printer frame.

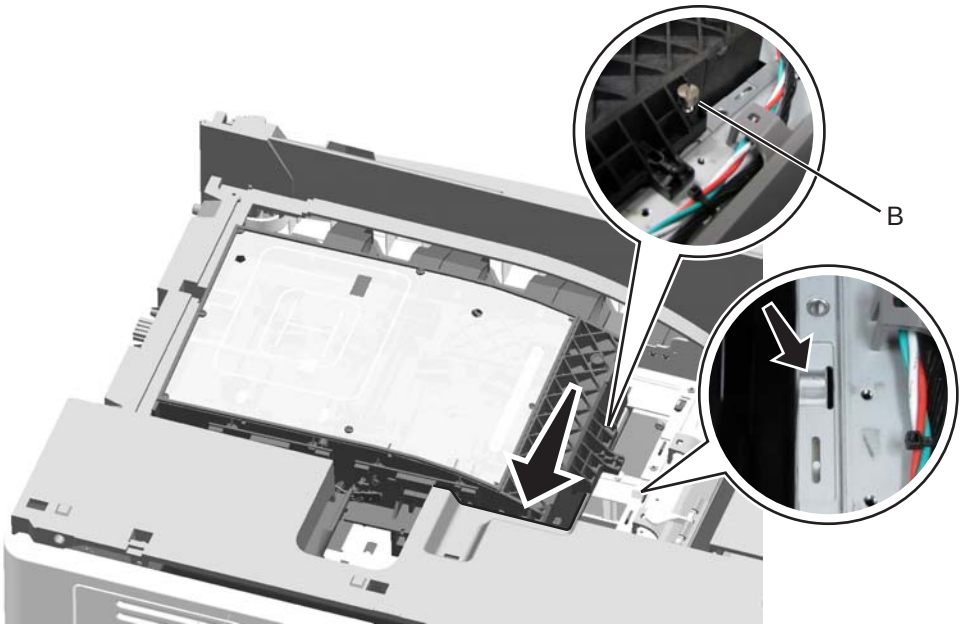


3. Route the three printhead cables (A) through the frame, and then connect them to the system board.

Warning: Be careful reconnecting the printhead ribbon cables. Flat ribbon cables can easily be damaged and should be connected gently by hand.

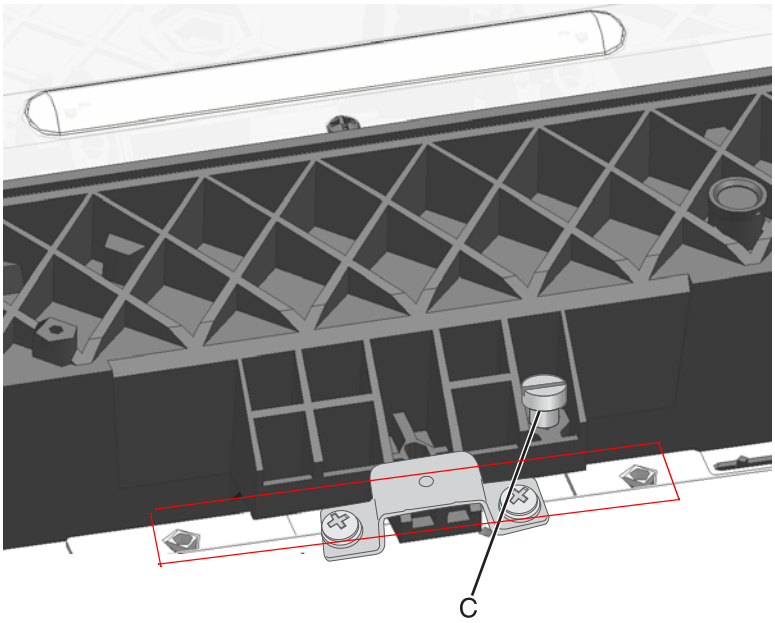


4. Slide the left side of the printhead toward the back of the printer until the bottom of the coarse alignment screw (B) stops against the ridge in the printer frame.

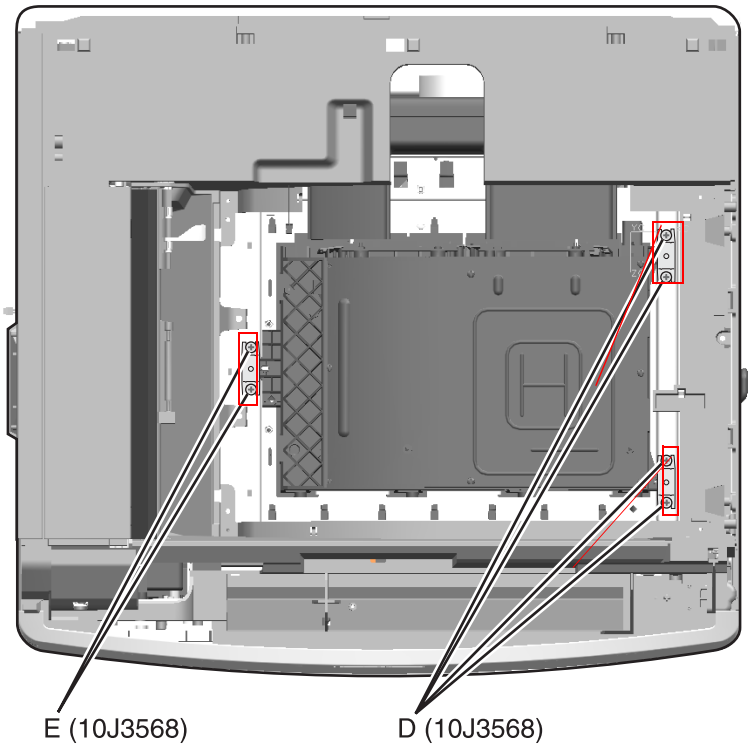


5. Attach the three mounting brackets loosely to the printhead.
   Note: Do not tighten the six screws in the mounting brackets yet. The printhead needs to be able to move as you align it.
6. Align the printhead to the printer frame until the gaps between the printhead and the four slots in the frame are as equal as possible.
7. Enter the Diagnostic menu (press and hold **3** and **6**, turn on the printer, and release the buttons when the splash screen appears).
8. From the Diagnostic menu, navigate to:
   REGISTRATION > **Quick Test**
   An alignment page prints.
   Note: If you cannot see the triangles on the top of the test page, go to **"Top Margin" on page 4-124**, and adjust the top margin until the triangles are visible.

9. Use a flat-blade screwdriver to adjust the coarse alignment screw (C) until the triangles on the sheet are parallel to the edges of the paper. Turning the screw clockwise moves the left triangles lower and the right triangles higher (tilts the printed image to the left on the page).



10. Reprint the alignment page and continue adjusting the screw until the black plane is aligned.
11. Once the black plane is aligned, tighten the screws in the right two printhead brackets (D), and then turn the coarse alignment screw a half turn counterclockwise.
12. Attach the front bracket, and tighten the screws (E).



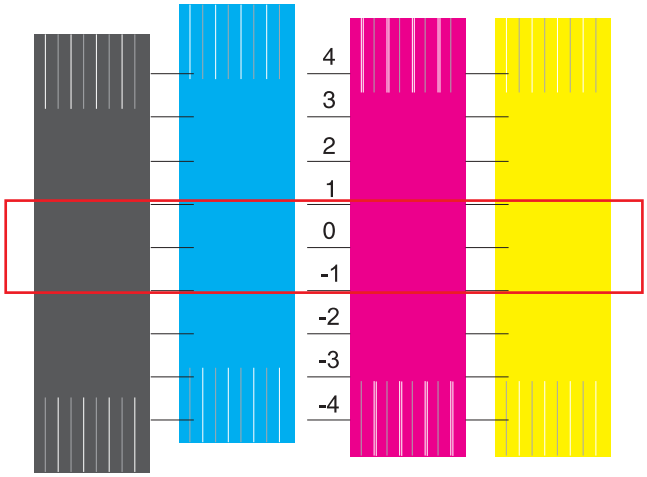
13. Reprint the alignment page and adjust the screw if necessary.

Aligning the printhead

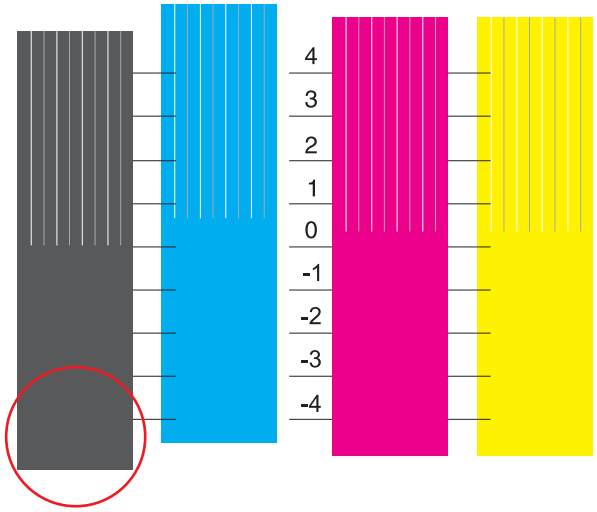
There is one printhead that houses the four color planes. The black plane is aligned to the printer, and the color planes are aligned to black. After you install the printhead and adjust the coarse alignment with the alignment screws, use the Diagnostic menu to fine tune the alignment.

Dual diode alignment

1. From the Diagnostic menu, navigate to:
   DUAL DIODE ADJUST > **Diode Alignment Page**
   An alignment test page prints.
   If the alignment is correct, the color bars on the page should look solid in the middle (between 1 and -1) with white lines starting to form near the top and bottom of each bar.



2. If the solid color area of a bar is above 1 or below -1, then adjust the Dual Diode value for that color. Enter the number nearest the center of the solid color area to adjust it.
   Example: The solid color area on the following test page is closer to -4 than 0. Enter -4 for the value to adjust the position of the solid color area back toward 0.

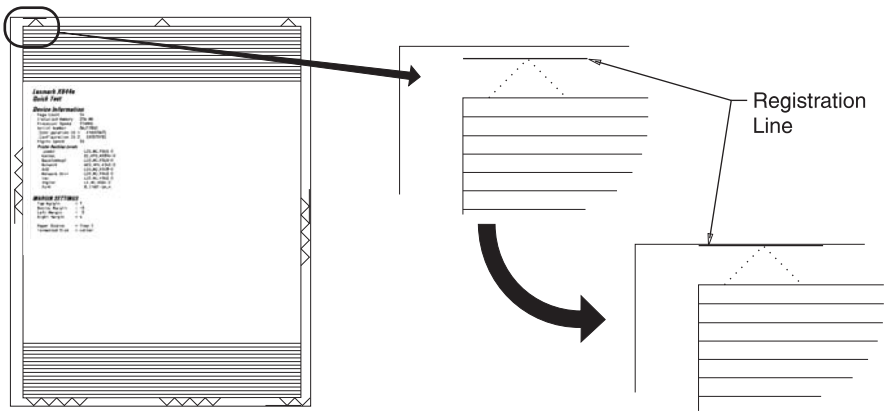


3. Reprint the alignment page and make adjustments as needed until you are satisfied with the alignment.

Registration (black)

Top Margin

1. From the Diagnostic menu, navigate to:
   REGISTRATION > **Quick Test**
   An alignment test page prints.



2. Select **Top Margin.**
3. Adjust the values to move the top alignment marks to the top edge of the page.
   - Increasing the value moves the alignment marks up the page.
   - Decreasing the value moves the alignment marks down the page.
4. Reprint the test page and make adjustments as needed until you are satisfied with the alignment.

Bottom Margin

1. Select **Bottom Margin**.
2. Adjust the bottom margin until the points of the bottom margin alignment marks are visible and touching the edge of the paper.
   - Increasing the value moves the alignment marks down the page.
   - Decreasing the value moves the alignment marks up the page.
3. Reprint the test page and make adjustments as needed until you are satisfied with the alignment.

Left Margin

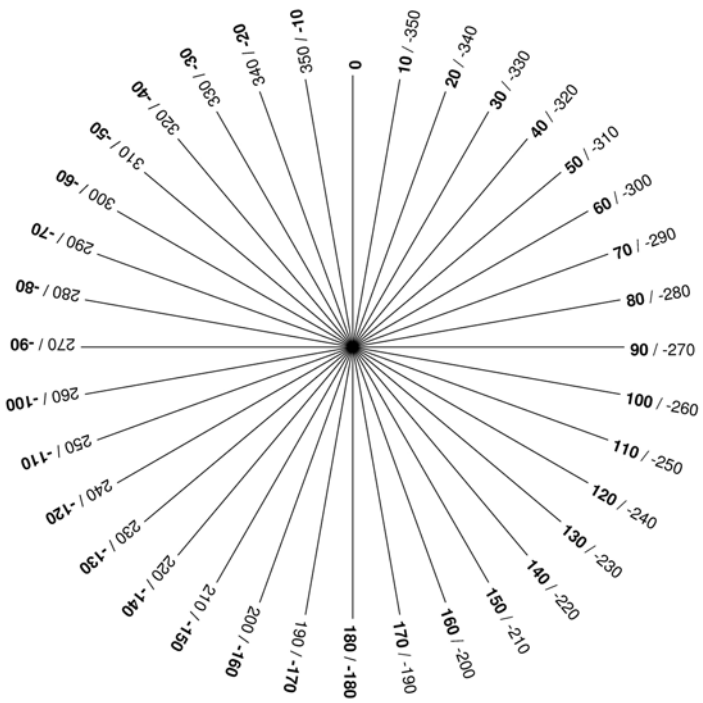
1. Select **Left Margin**.
2. Adjust the left margin until the points of the left alignment marks touch the edge of the page.
   - Increasing the value moves the alignment marks to the left.
   - Decreasing the value moves the alignment marks to the right.
3. Reprint the test page and make adjustments as needed until you are satisfied with the alignment.

Right Margin

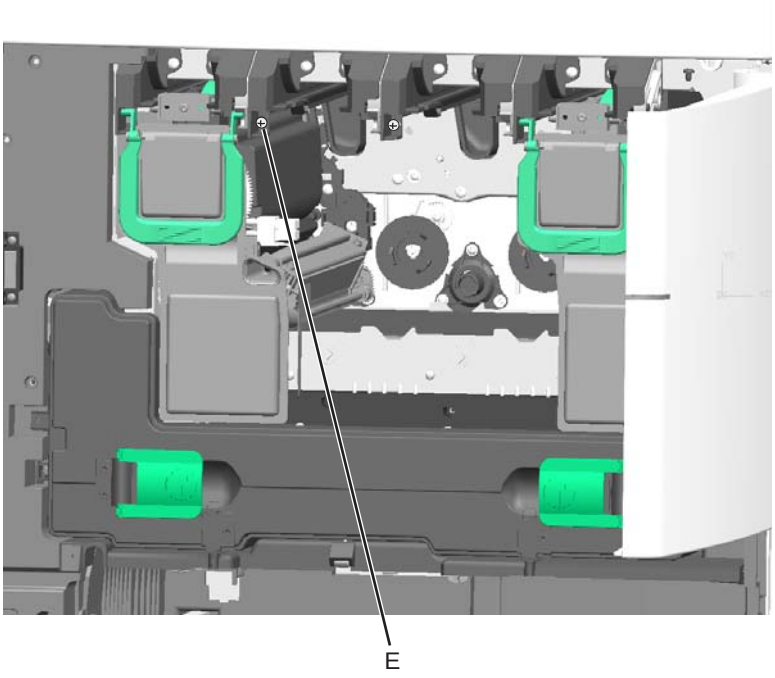
1. Select **Right Margin**.
2. Adjust the right margin until the points of the left alignment marks touch the edge of the page.
   - Increasing the value moves the alignment marks to the right.
   - Decreasing the value moves the alignment marks to the left.
3. Reprint the test page and make adjustments as needed until you are satisfied with the alignment.
4. When the registration is complete, proceed to the color alignment.

Color alignment (cyan, yellow, and magenta)

1. Open the front access door, and remove the cyan and magenta toner cartridges.
2. Locate the “Color skew adjustment tool” page that came with the printhead instructions.
   To use the skew tool, punch a screwdriver through the center of the wheel. Using a mark on the screwdriver handle as a point of reference, turn the paper until 0 lines up with your mark.



3. From the Diagnostic menu, navigate to:
   ALIGNMENT MENU > **Yellow** > **Quick Test**
   Two alignment pages print. The first page is for adjusting the Skew and Top Margin, and the second page is for the Left Margin and Right Margin. For now you just need the Skew instructions on the first page.
4. Holding the skew wheel with the 0 at the mark on your screwdriver, place the screwdriver in the yellow adjustment screw (E), and then turn the screwdriver to the number indicated on the alignment page—clockwise for a positive number, counterclockwise for a negative number.

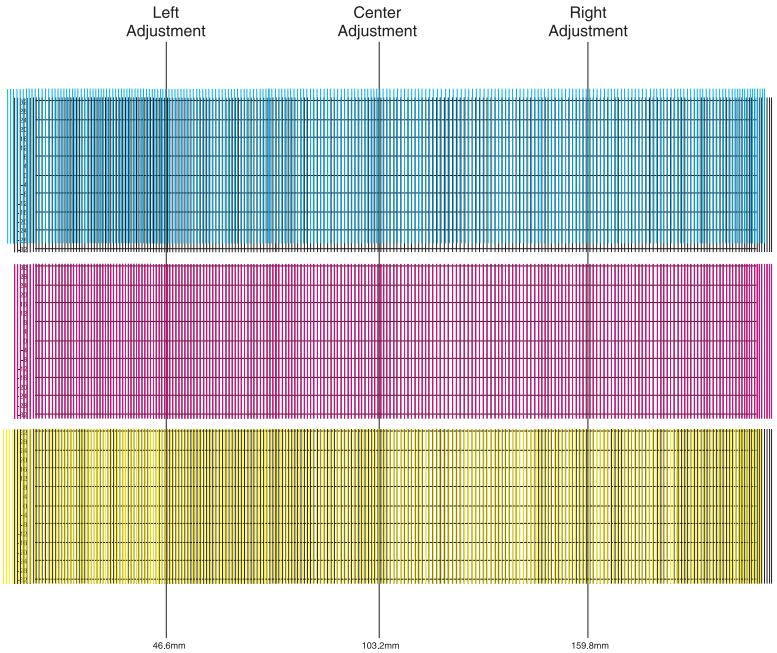


5. Replace all the cartridges, and then reprint the test page and continue adjusting the screw until you are satisfied with the Skew alignment.
6. Repeat steps **3** through **5** to adjust the Skew for cyan and magenta (selecting **Cyan** and **Magenta** from the Alignment menu).
   Note: Do not move on to the Top Margin settings until the Skew A and B values are within +/-1 of 0.
7. From the Diagnostic menu, navigate to:
   ALIGNMENT MENU > **Yellow** > **Top Margin**
8. Set Top Margin to **0**, and save the value.
9. Do the same for **Linearity**.
   It is important to set the values to **0** before continuing.
10. From the Yellow menu, select **Quick Test** to reprint the alignment pages.
    Two pages print. The first page is for adjusting the Skew and Top Margin, and the second page is for the Left Margin and Right Margin.
11. Follow the instructions on the pages to adjust the Top Margin, Left Margin, and Right Margin.
    Reprint the Quick Test pages and make adjustments as needed until you are satisfied with the alignment.

12. From the Yellow menu, navigate to:

Linearity > **Quick Test**

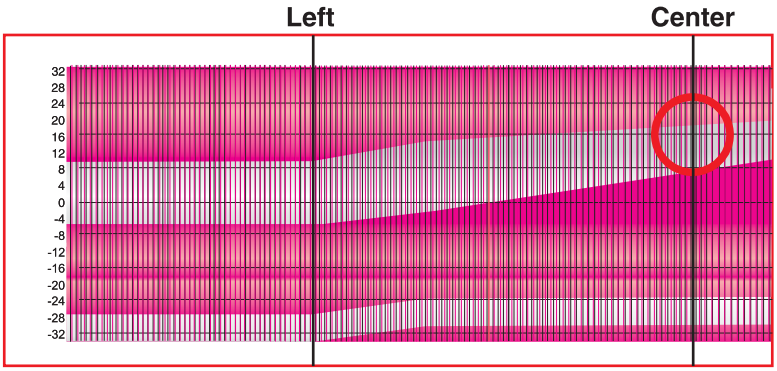
A test page similar to the following prints:



If the Linearity alignment is correct, the gray stripe near the center of each color on the test page should be within the 12 to -12 range.

13. If the gray stripe extends above 12 or below -12 where it crosses the Left, Center, or Right line, then adjust the Left Adjustment, Center Adjustment, or Right Adjustment for that color. Enter the number closest to where the gray stripe crosses the line.

Example: The gray stripe on the following test page extends up to around 16 near the Center line. From the Yellow Linearity menu, enter 16 for the Center Adjustment value to move the gray stripe back toward 0.



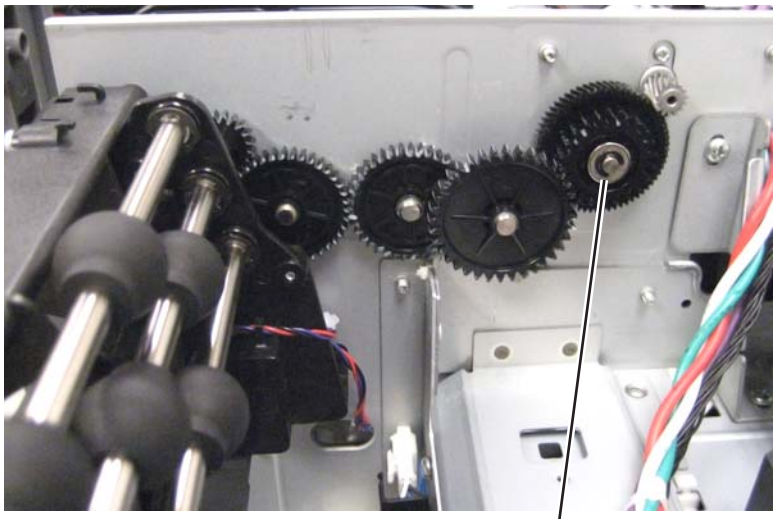
14. Repeat the color alignment process for Cyan and Magenta.

Redrive gears removal

Previous
Next
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See **“Left” on page 7-11** for the part number.

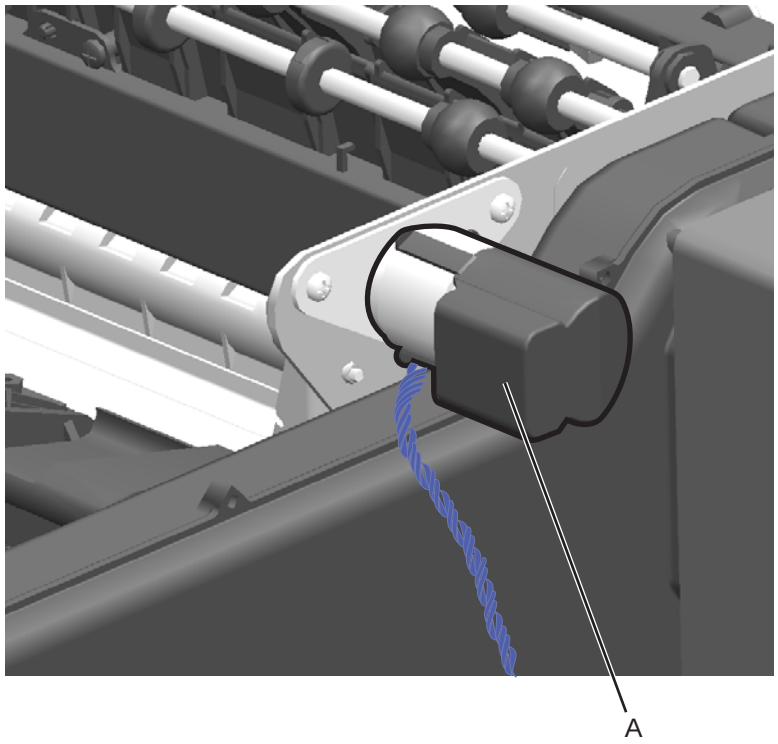
1. Remove the AIO top cover. See **“AIO top cover removal” on page 4-5**.
2. Remove the E-clip (A), and the washer behind it, and then remove the gears.
   Note: You might need to use a flat-blade screwdriver to carefully pry the gears from the posts.



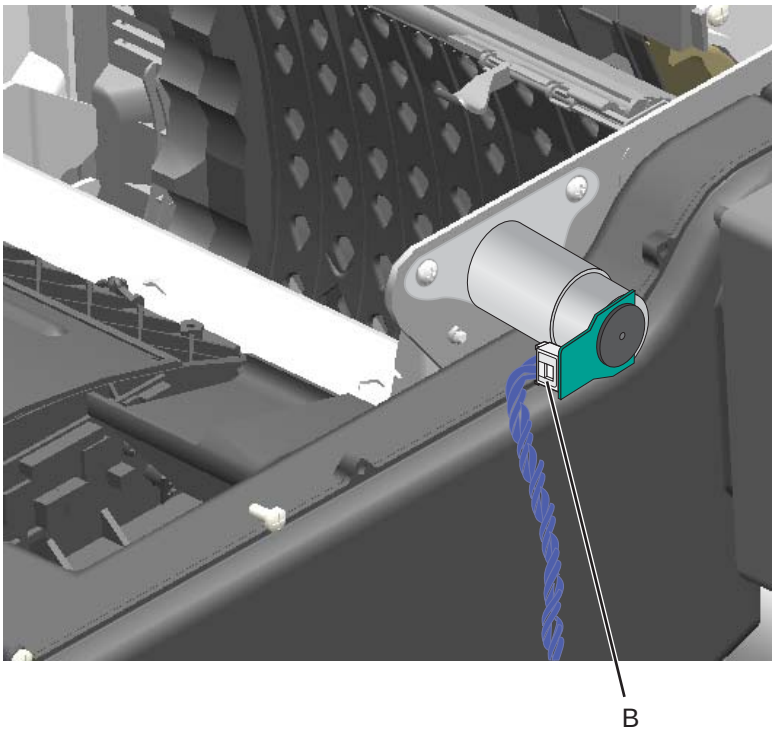
Redrive motor removal

See **“Left” on page 7-11** for the part number.

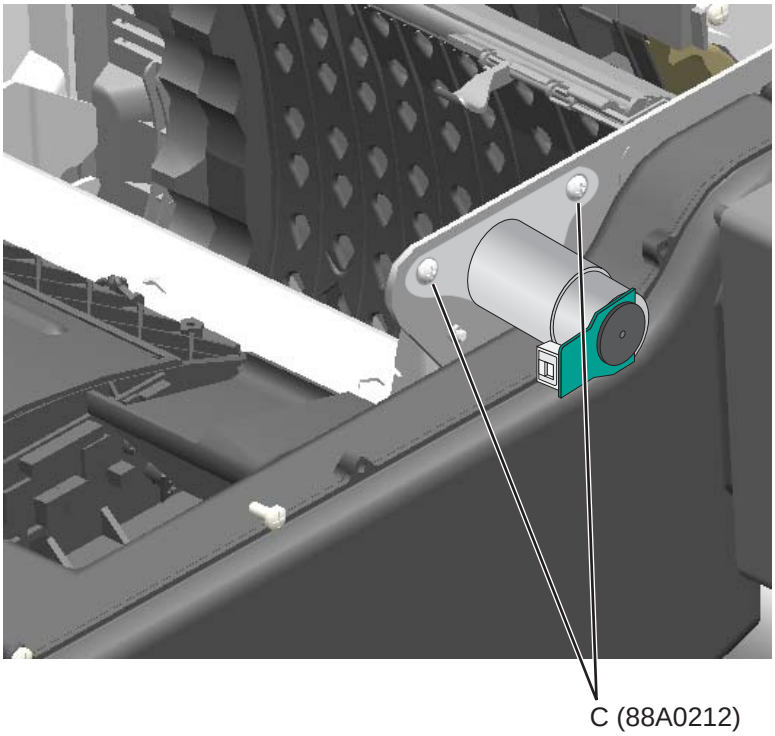
1. Remove the AIO top cover. See **“AIO top cover removal” on page 4-5**.
2. Slide off the cap (A).



3. Disconnect the cable (B) from the motor.

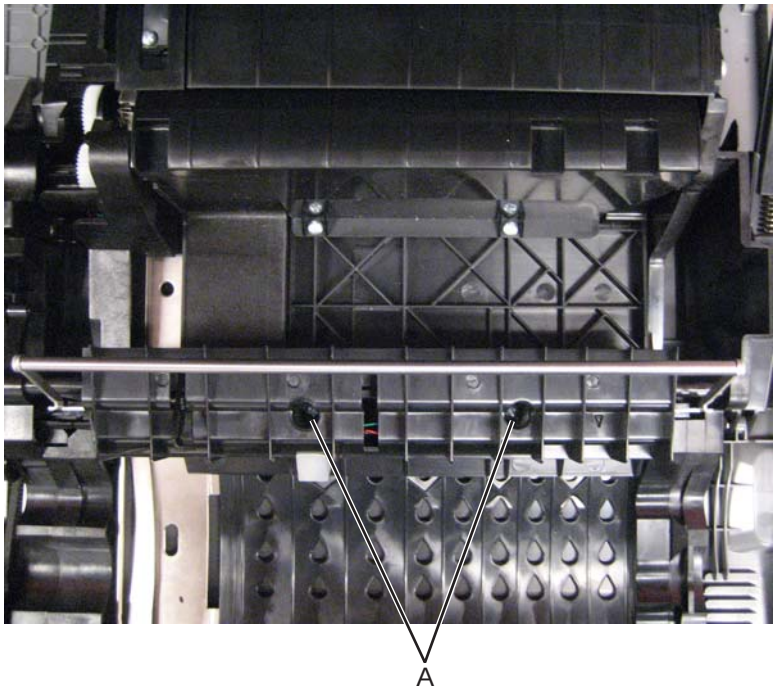


4. Remove the two screws (C) to remove the motor.

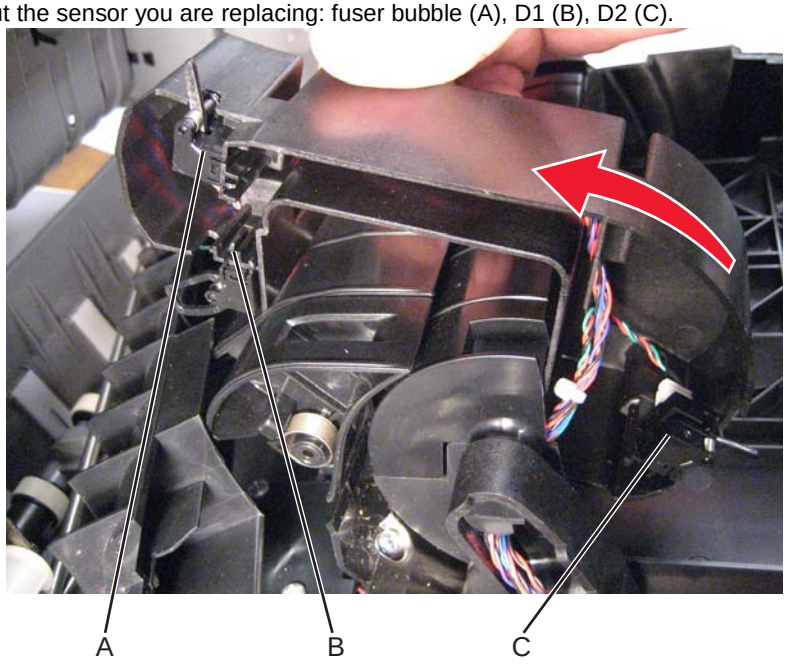


Sensor (D1, D2, and fuser bubble) removal

1. Open the left access door.
2. Remove two screws (A) from the duplex unit, and remove the rail cover.

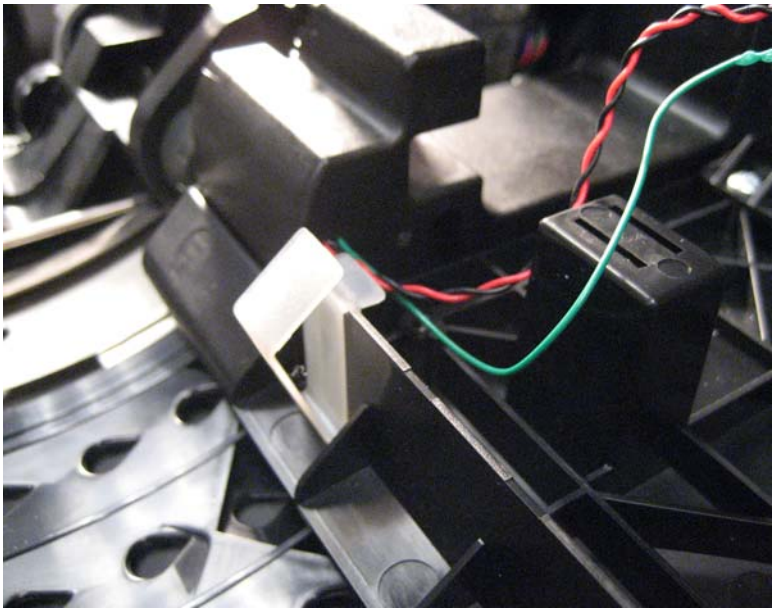


3. Pull out the sensor assembly, and rotate it up.
4. Slide out the sensor you are replacing: fuser bubble (A), D1 (B), D2 (C).



5. Disconnect the cable to remove the sensor.

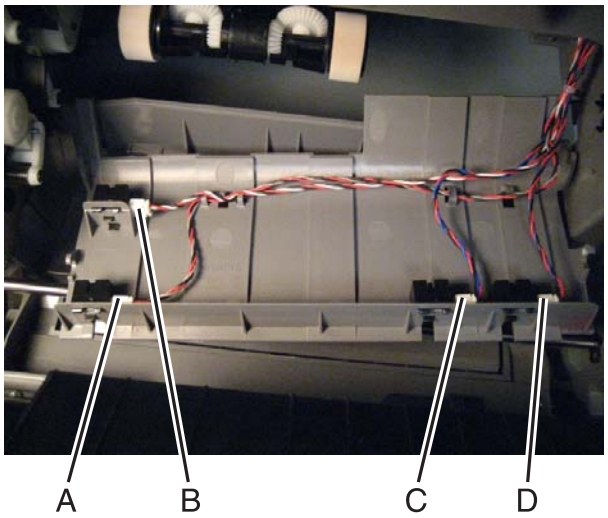
Installation note: Place the plastic clip in the notch in the duplex unit before you reattach the rail cover.



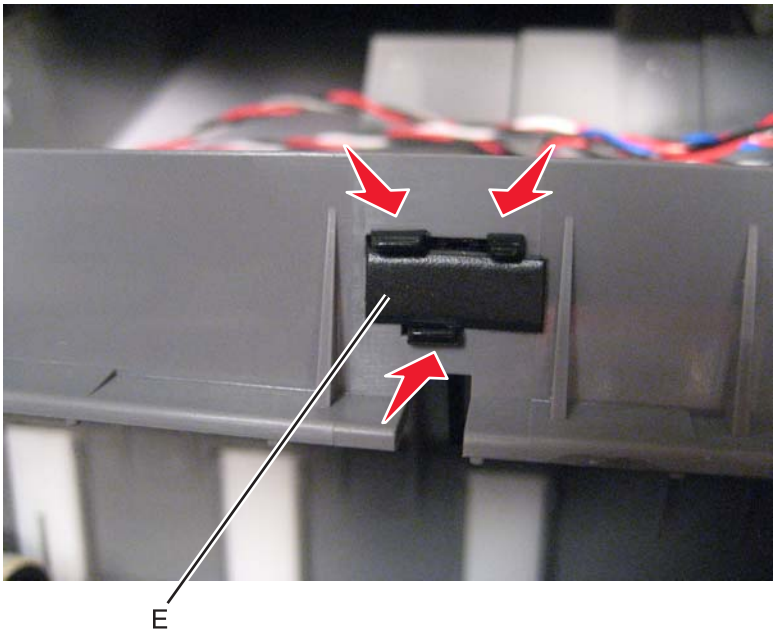
Sensor (input, S1, narrow media, near narrow media) removal

See **“Left” on page 7-10** for the part number.

1. Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**.
2. Locate the sensor you need to replace: input (A), S1 (B), narrow media (C), near narrow media (D).



3. Remove the sensor retainer (E), and then press the tabs to release the sensor.



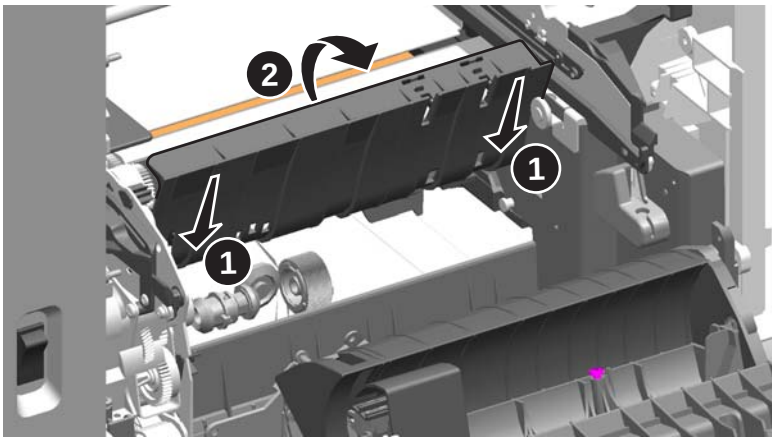
4. Disconnect the sensor cable to remove the sensor.

Installation note: Reinstall a sensor retainer after you attach the new sensor.

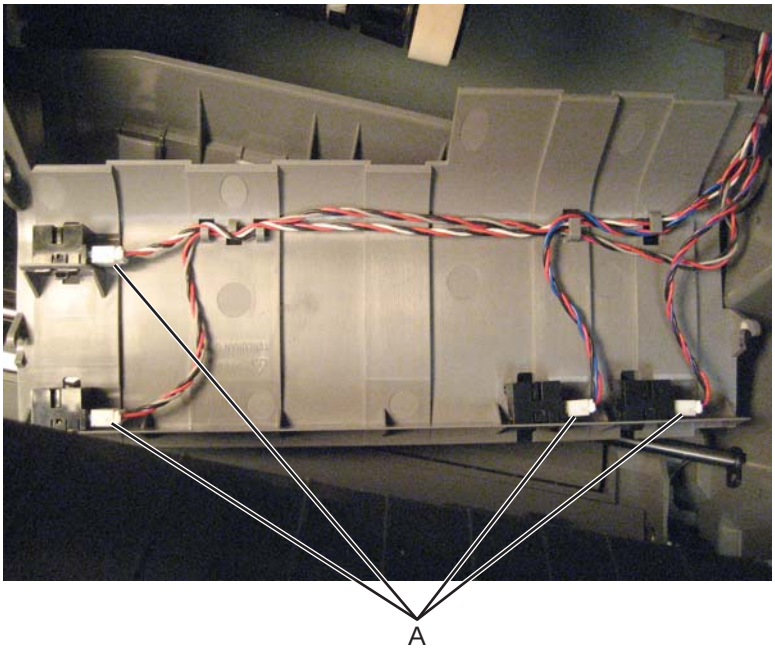
Staging deflector assembly removal

See **“Left” on page 7-11** for the part number.

1. Remove the ITU assembly. See **“ITU assembly removal” on page 4-68**.
2. Push the top of the deflector down and rotate it back to release the upper hooks.

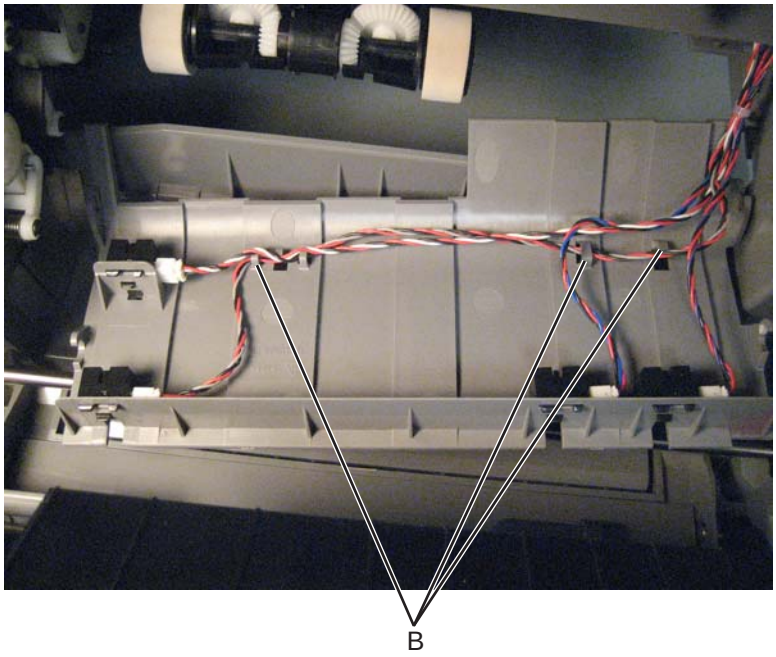


3. Disconnect the cables (A) from the four sensors.

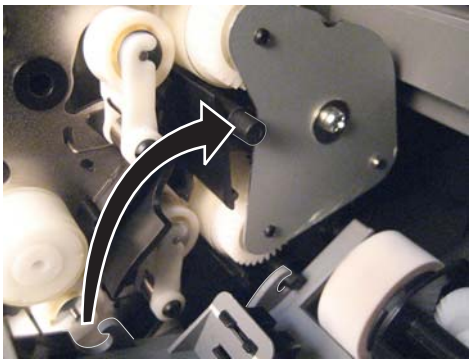


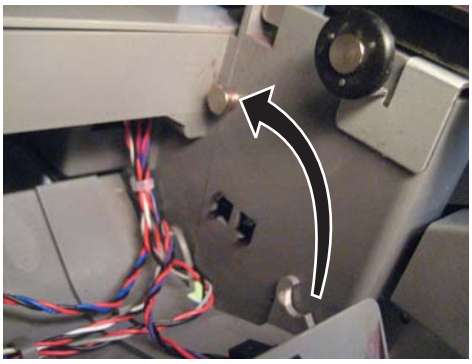
Installation notes:

- Be sure the cables are routed through the cable hooks (B) before you snap the assembly into place. Use the cable lengths as a guide to make sure you connect the correct cable to each sensor.



- Be sure the hooks engage both the bottom and top posts on each side.



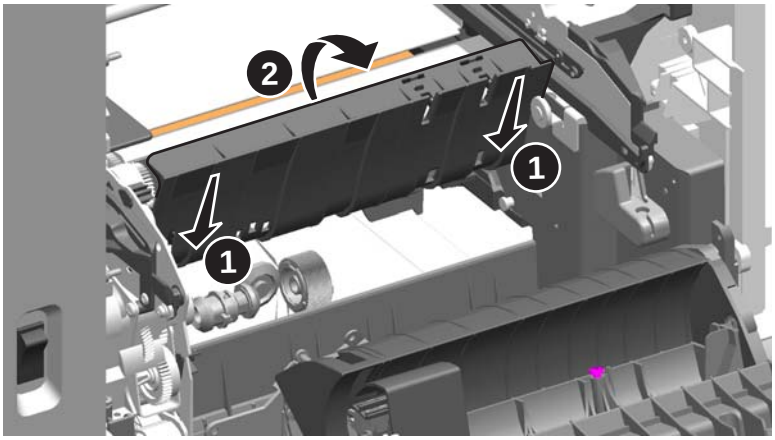


Staging paper path reference edge assembly removal

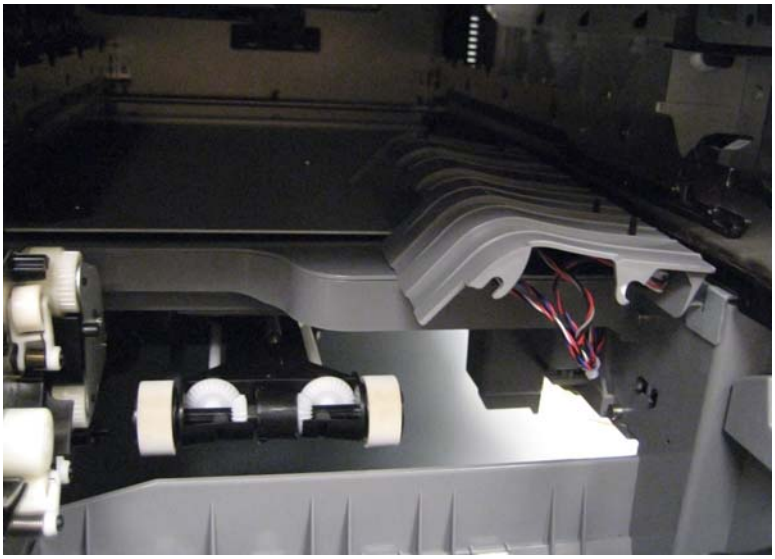
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See **“Front” on page 7-7** for the part number.

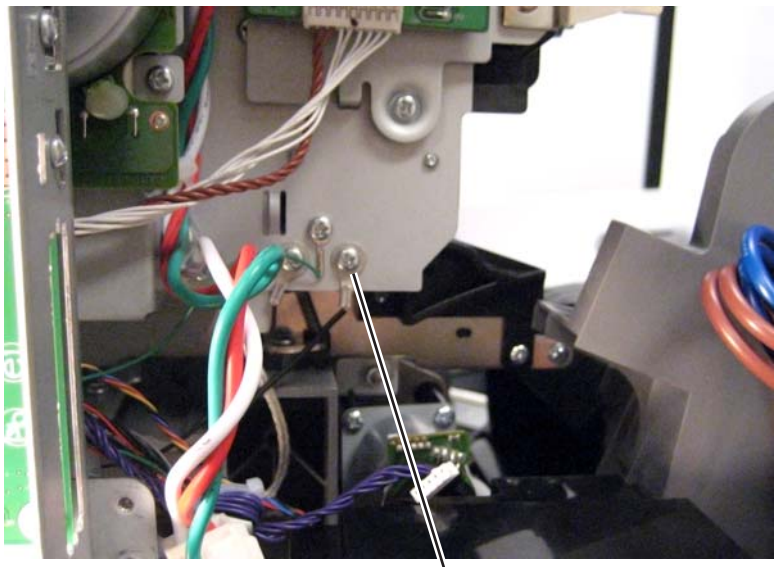
1. Remove the rear cover. See **“Rear cover removal” on page 4-23**.
2. Remove the left cover. See **“Left cover removal” on page 4-16**.
3. Remove the paper pick mechanism. See **“Paper pick mechanism assembly removal” on page 4-114**.
4. Remove the fuser. See **“Fuser assembly removal” on page 4-56**.
5. Remove the ITU assembly. See **“ITU assembly removal” on page 4-68**.
6. Push the top of the deflector assembly down and rotate it back to release the upper hooks.



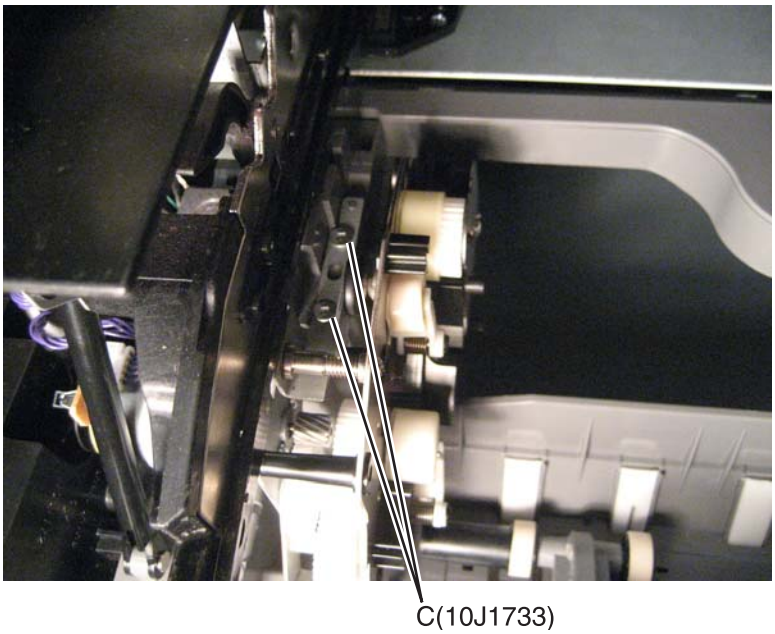
7. Set the deflector assembly out of the way as far as the sensor cables will allow.



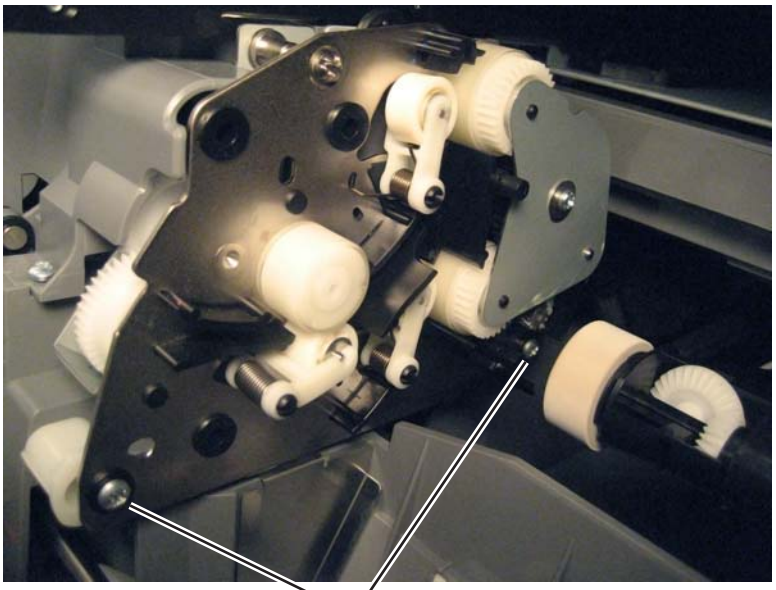
8. Remove the screw (A) to remove the ground cable.



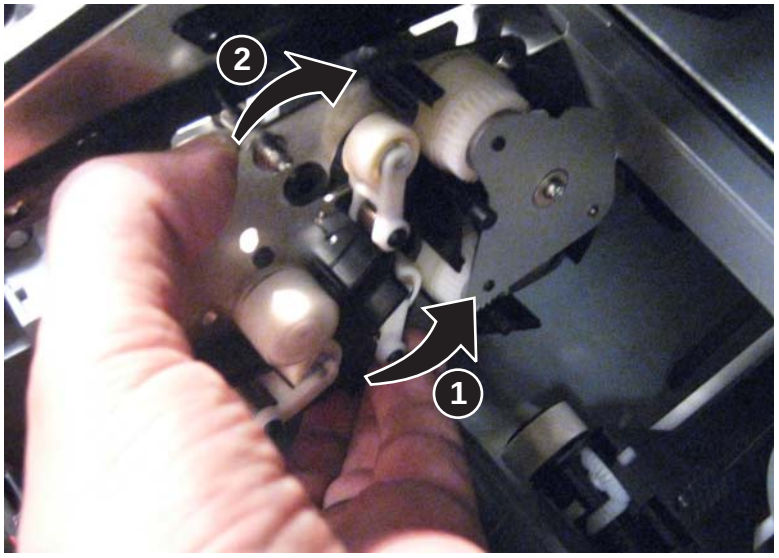
9. Remove two screws (C) from the ITU DS roller plate, and then remove the plate.



10. Remove two screws (D).



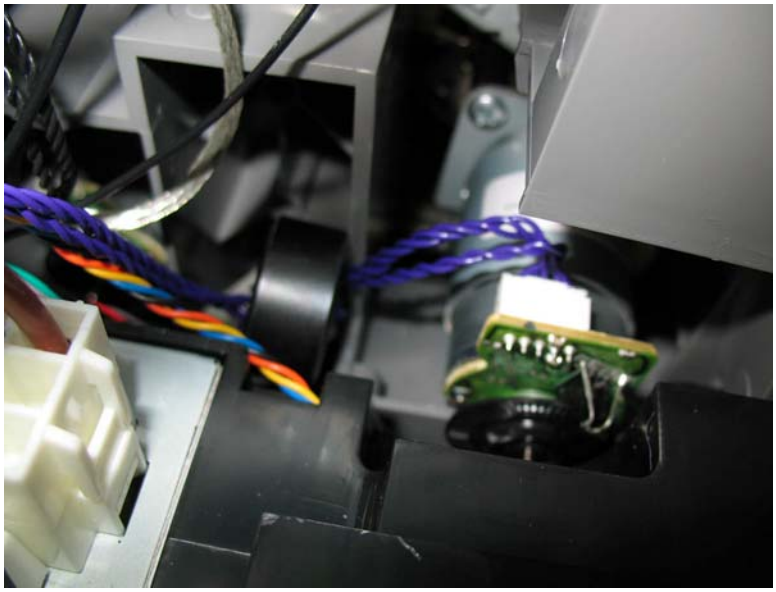
11. Lift the bottom of the staging assembly and rock it back to remove it from the frame.



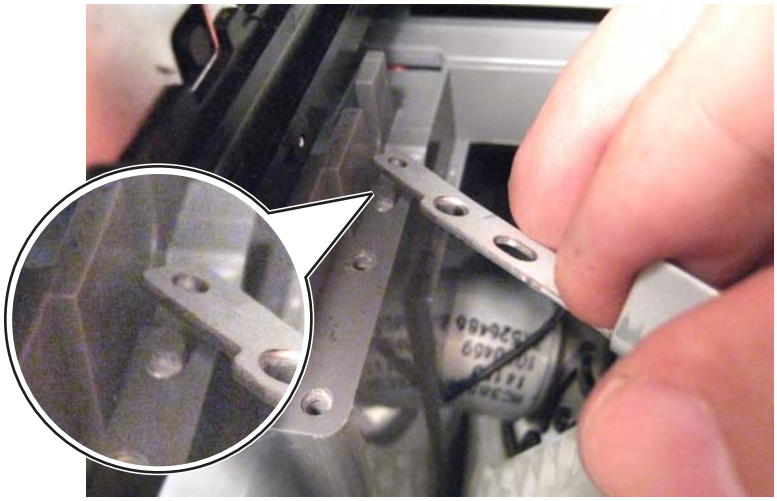
12. Disconnect the cables from the two motors to remove the assembly.

Installation notes:

- Be sure the duplex motor cable is not pinched or bound by the reference edge assembly.



- Place the slot in the ITU DS roller plate over the ridge on the frame, and then swing the plate into place to reattach the two screws.



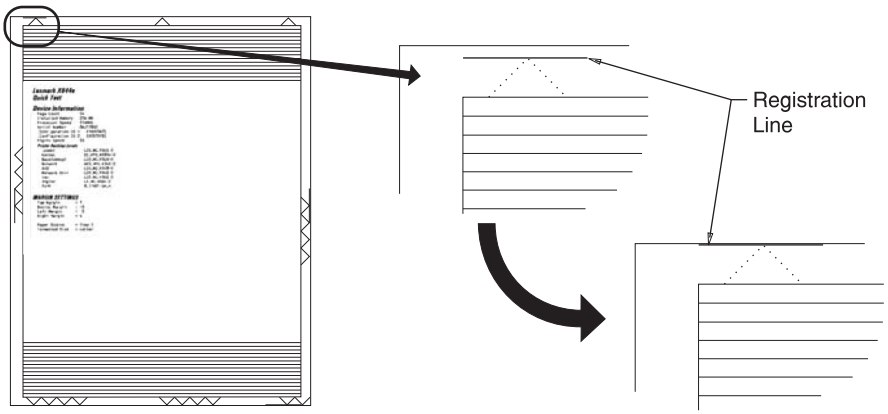
- Check the alignment of the reference edge. See **“Aligning the staging paper path reference edge” on page 4-140**.

Aligning the staging paper path reference edge

1. Enter Diagnostics mode: press and hold **3** and **6**, turn on the printer, and release the buttons when the splash screen appears.
2. From the Diagnostics menu, navigate to:

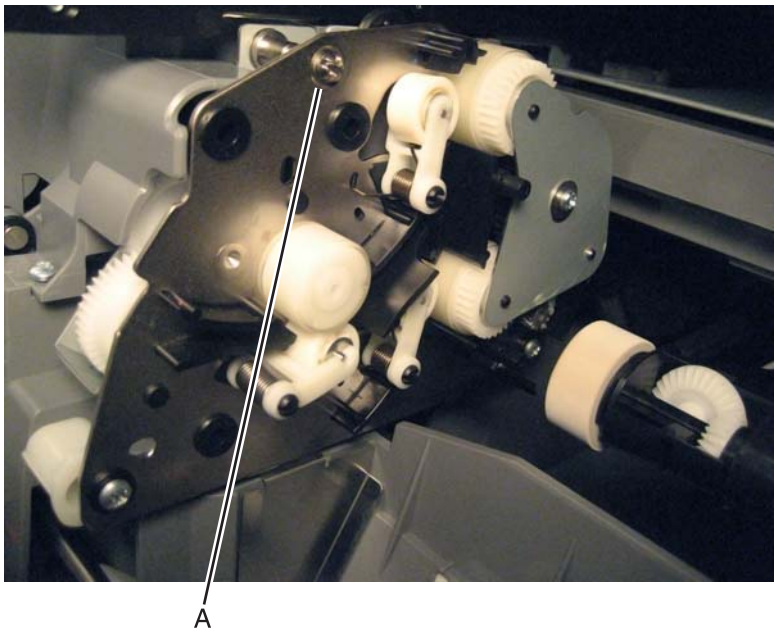
   REGISTRATION > **Quick Test**

   An alignment page prints.



Note: If you cannot see both the right and left alignment marks on the top of the test page, go to **"Aligning the top margin" on page 4-141**, and adjust the top margin until the marks are visible.

3. If the left and right top alignment marks are not parallel with the top edge of the page, then adjust the screw (A) accordingly. Turn the screw clockwise to move the left marks up the page, or turn it counterclockwise to move the right marks up.



4. Reprint the Quick Test page to check the changes, and then continue adjusting the screw as needed.

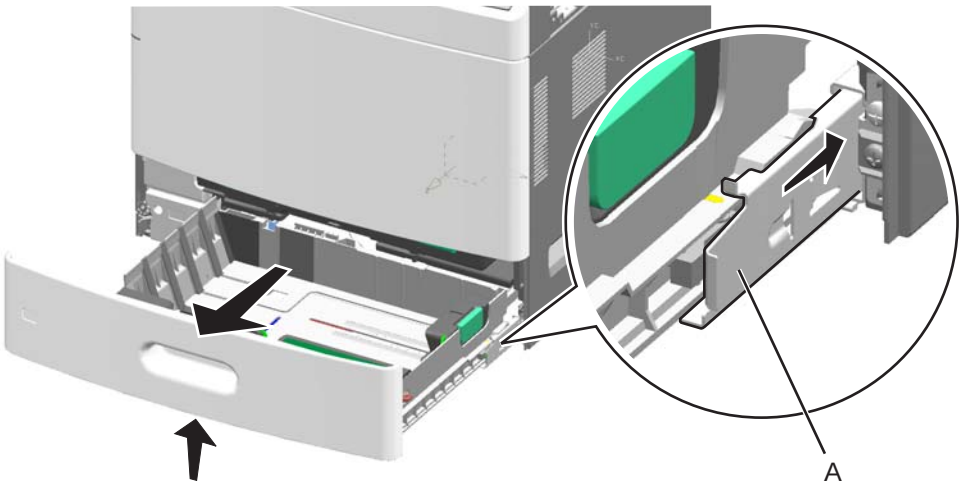
Aligning the top margin

1. From the REGISTRATION menu, select **Top Margin.**
2. Adjust the values to move the top alignment marks to the top edge of the page.
   - Increasing the value moves the alignment marks up the page.
   - Decreasing the value moves the alignment marks down the page.
3. Reprint the test page and make adjustments as needed until you are satisfied with the alignment.

Standard media tray removal

See **“Front, right, and top covers” on page 7-3** for the part number.

Pull the tray out and lift slightly. The tray will lift out of the slides (A), and the slides will retract.



System board removal

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See **“Rear” on page 7-15** for the part number.

Warning: The following components contain mirrored NVRAM. When replacing any of the following components, replace only one component at a time:

- System board
- Flatbed scanner assembly
- Scanner interface card

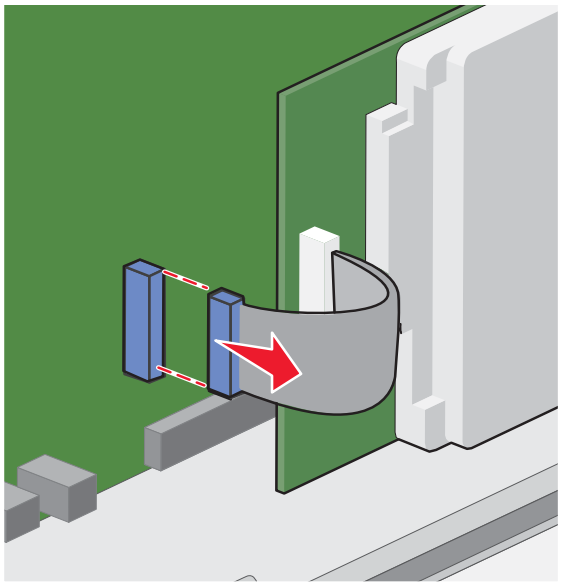
Replace the required component, and then perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one, or the printer will be rendered inoperable.

Warning: Never install and remove components listed above as a method of troubleshooting components. Once you install one of these components in a printer and perform a POR, the component cannot be used in another printer. It must be returned to the manufacturer.

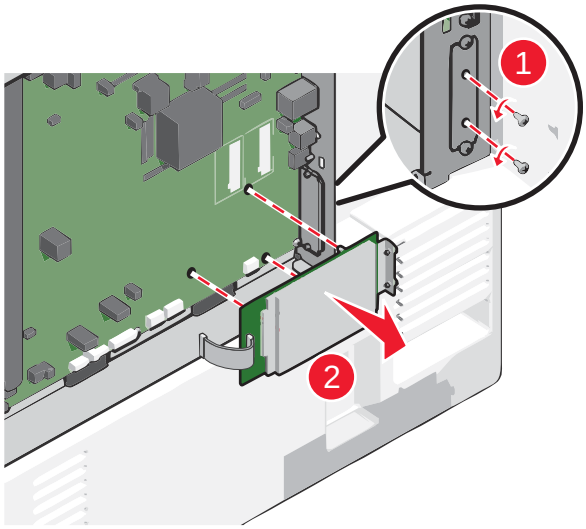
1. Remove the system board upper shield. See **“System board upper shield removal” on page 4-30**.
2. Remove two screws (A) to remove the RIP card shield from the system board.



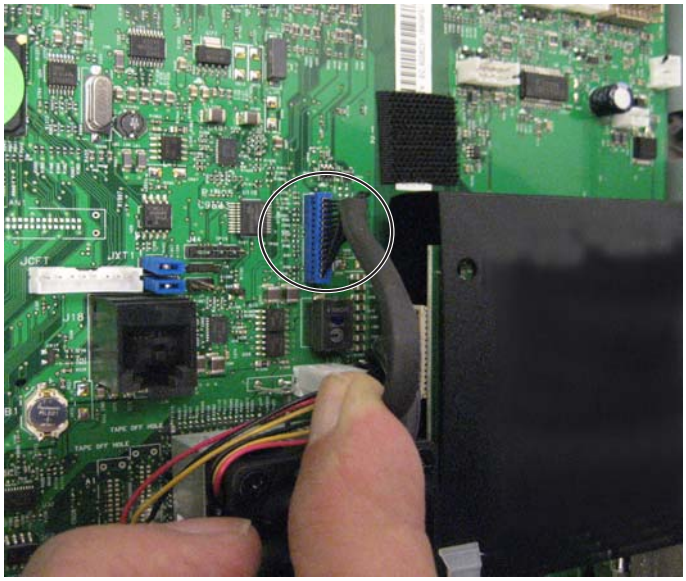
3. Squeeze the tab to disconnect the printer hard drive cable.



4. Remove the two screws, and pull the printer hard drive to remove it.



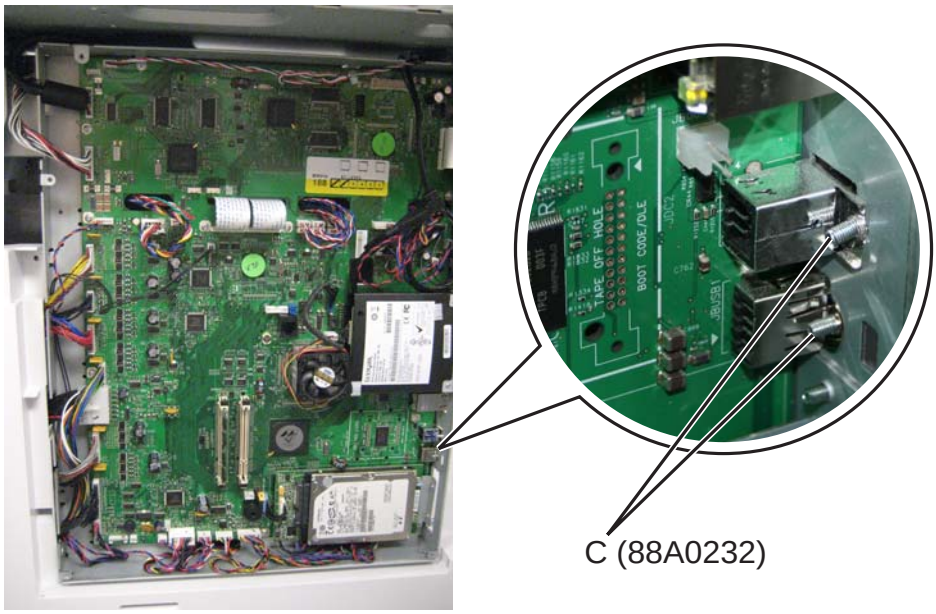
5. Disconnect the modem cable from the system board.



6. Loosen two screws (B), and slide the modem up and to the left to remove it from the shield.

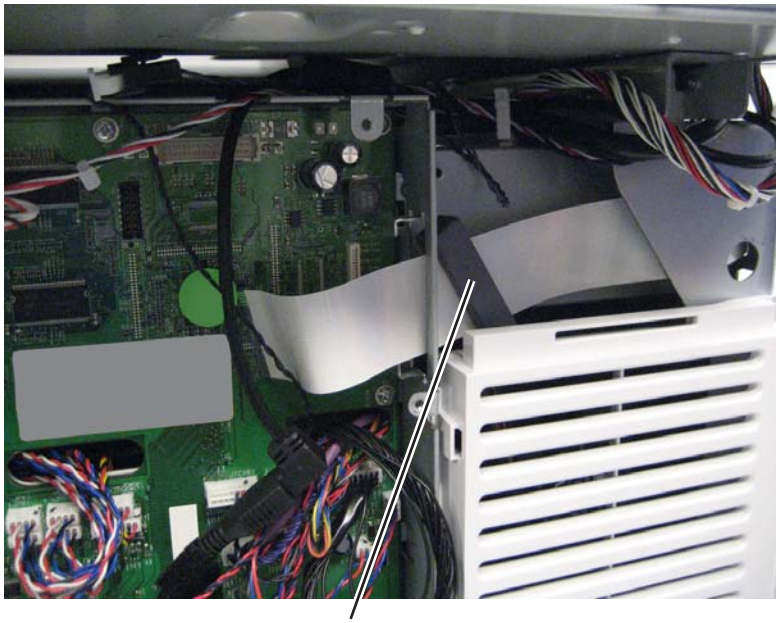


7. Remove two screws (C).

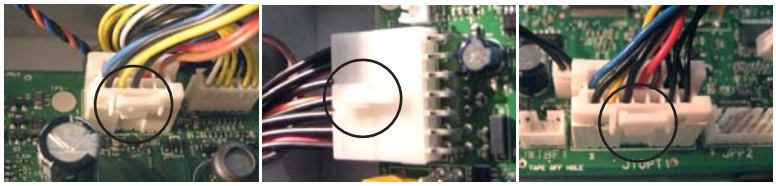


8. Disconnect all cables from the system board.
Note: Remove the ribbon cable from the system board cage, and slide the toroid (D) off the cable.

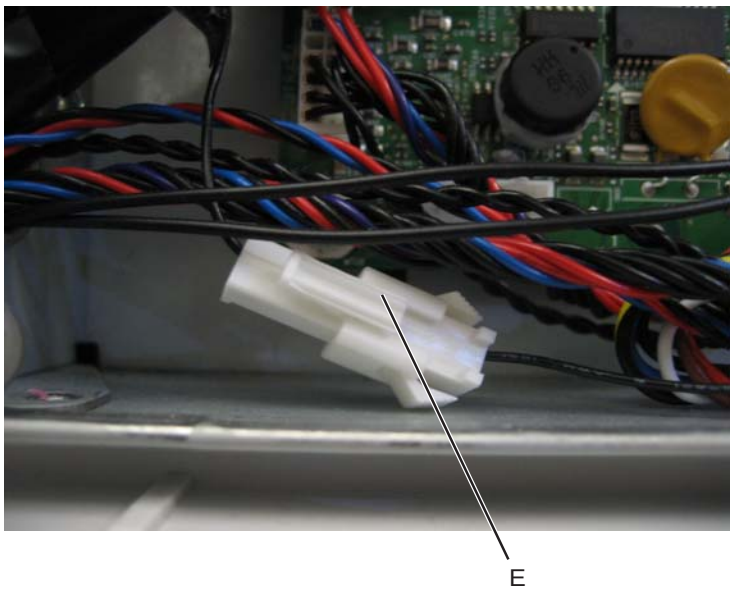
Warning: Be careful in removing the toroid to avoid breaking it.



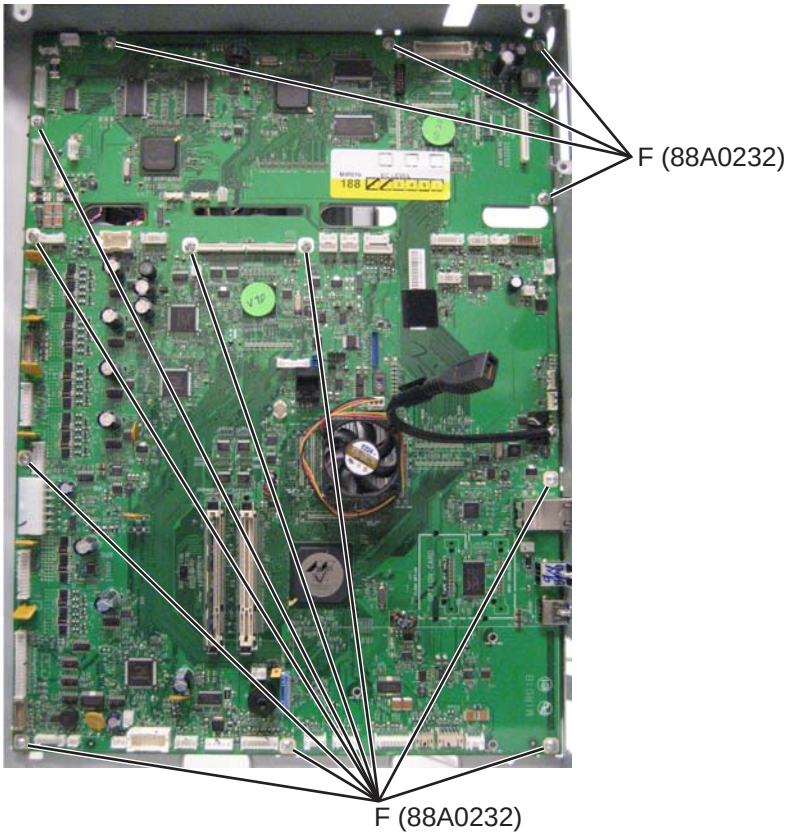
Note: Some cables have special connectors that require you to press in a tab to disconnect the cable.



Note: The cables may or may not include a pigtail connector (E).



9. Remove 13 screws (F), and then remove the system board.

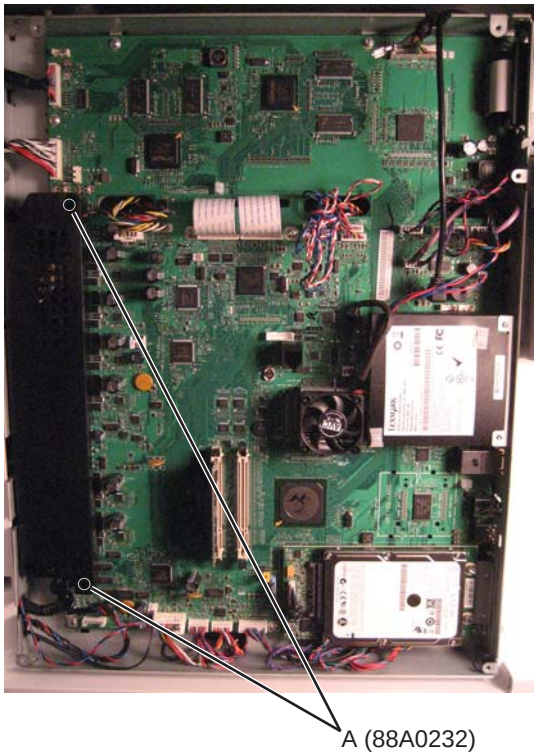


Installation notes:

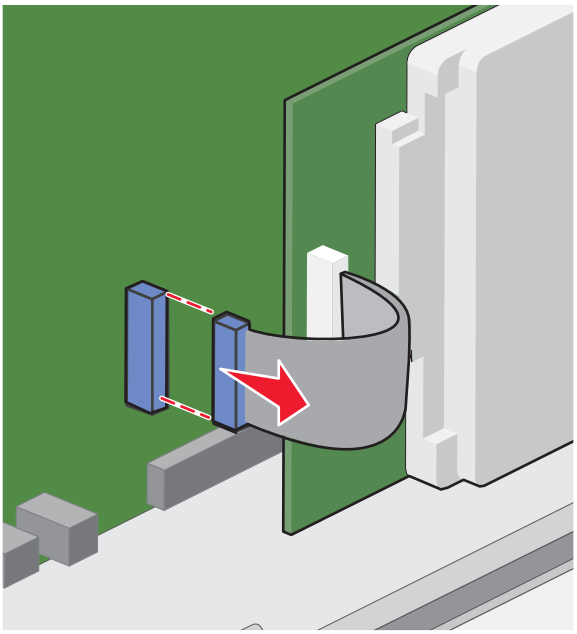
1. Install the new system board, and be sure all cables are securely connected. Be sure to reinstall any toroids you had to remove.
   Note: Some connectors have the same number of pins, so be sure each cable is connected to the correct connector. For diagrams and tables showing where each cable connects, see **"Locations" on page 5-1**.
2. Enter the Diagnostics menu: hold **3** and **6**, turn the printer on, and release the buttons when the splash screen appears.
3. Determine if the problem is resolved. Do not perform a normal POR until you are sure you have resolved the problem.
   - If the problem is **not** resolved, then turn the printer off and reinstall the old part.
   - If the problem is resolved, then turn the printer off and turn it back on without holding any buttons (**perform a normal POR**).
4. Verify that the input sources are recognized:
   a. From the Home screen, navigate to:
      Menus > **Paper Menu** > **Paper Size/Type**
   b. Make sure all installed options are listed.
5. Verify that the output options are recognized:
   a. From the Home screen, navigate to:
      Menus > **Paper Menu** > **Bin Setup** > **Output Bin**
   b. Make sure all installed options are listed.

System board cage with board removal

1. Remove the flatbed scanner assembly. See **“Flatbed scanner assembly removal” on page 4-216**.
2. Remove the LVPS. See **“Low-voltage power supply (LVPS) removal” on page 4-77**.
3. Remove two screws (A) to remove the RIP card shield from the system board.

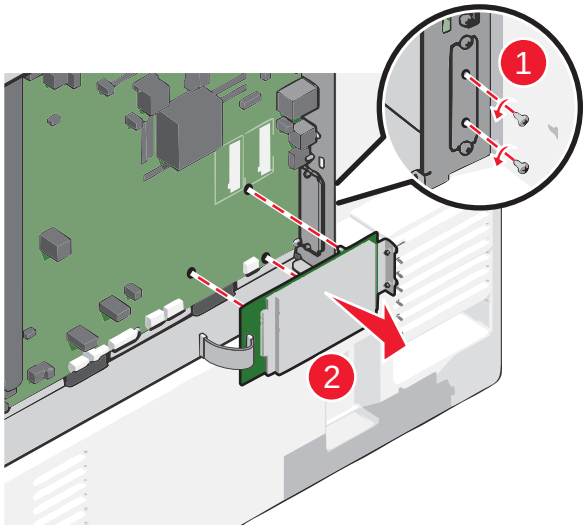


4. Squeeze the tab to disconnect the printer hard drive cable.

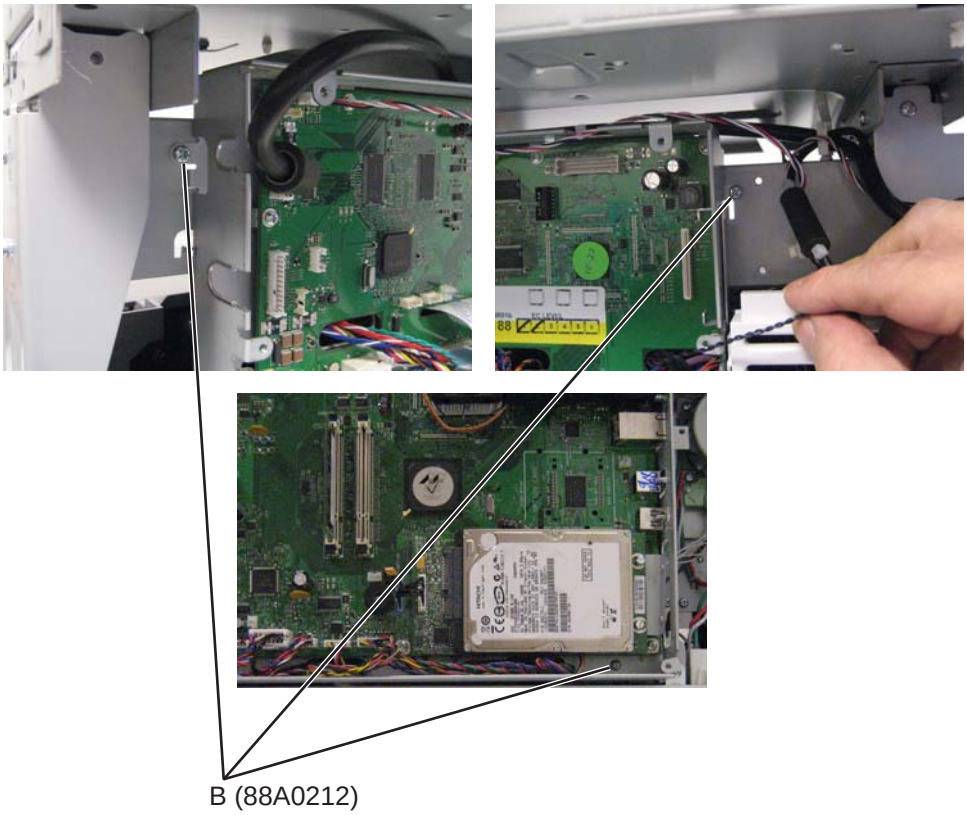


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5. Remove two screws, and then pull to remove the printer hard drive.

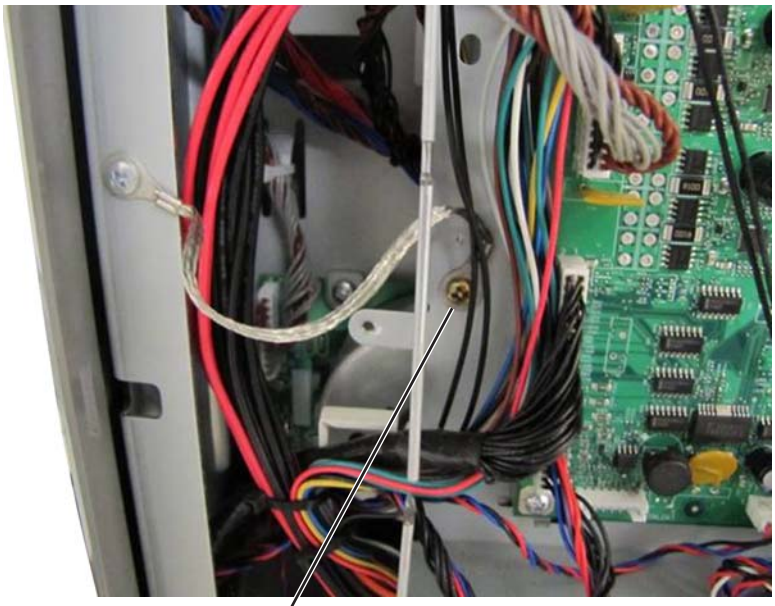


6. Remove three screws (B).



B (88A0212)

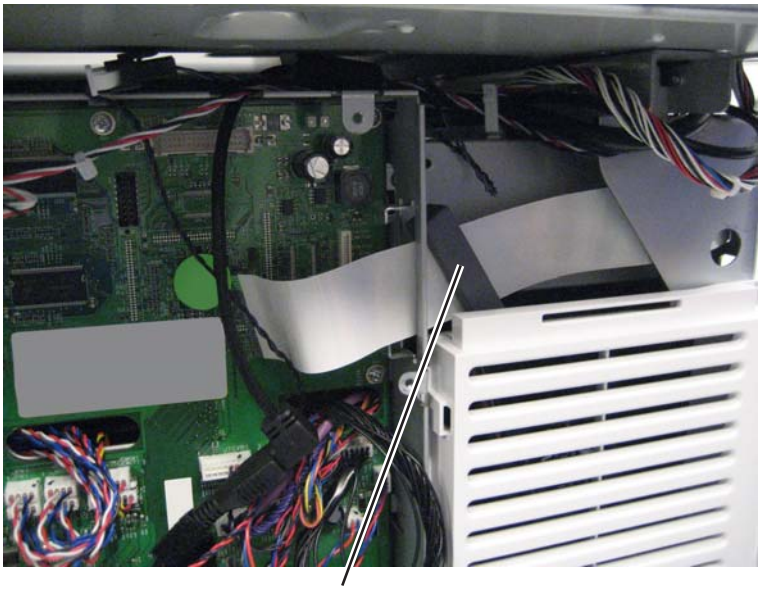
7. Remove the screw (C) to disconnect the ground strap from the cage.



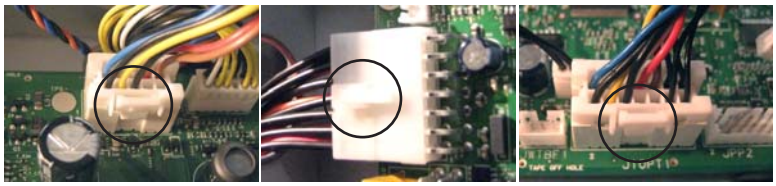
C (88A0212)

8. Disconnect all cables from the system board and feed them through the cage.
Note: Remove the ribbon cable from the system board cage, and slide the toroid (D) off the cable.

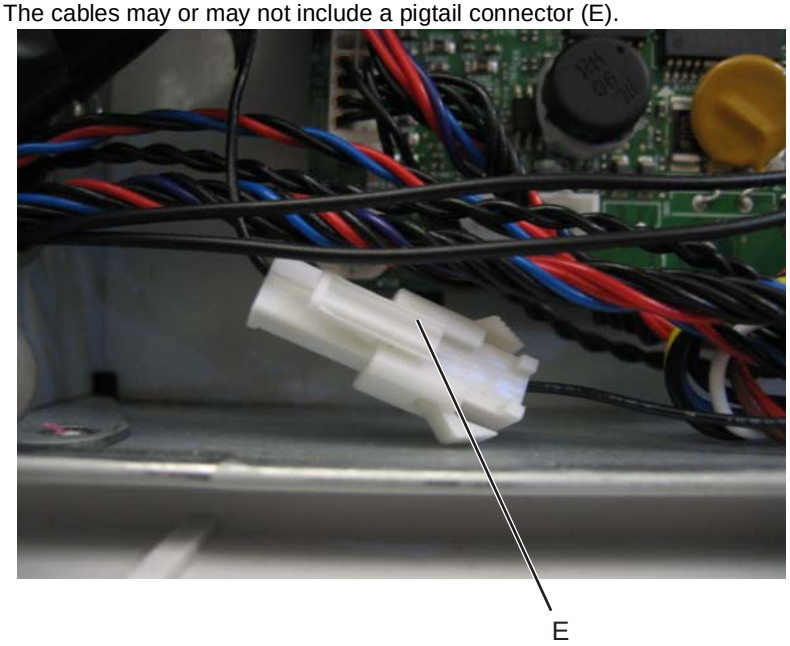
Warning: Be careful in removing the toroid to avoid breaking it.



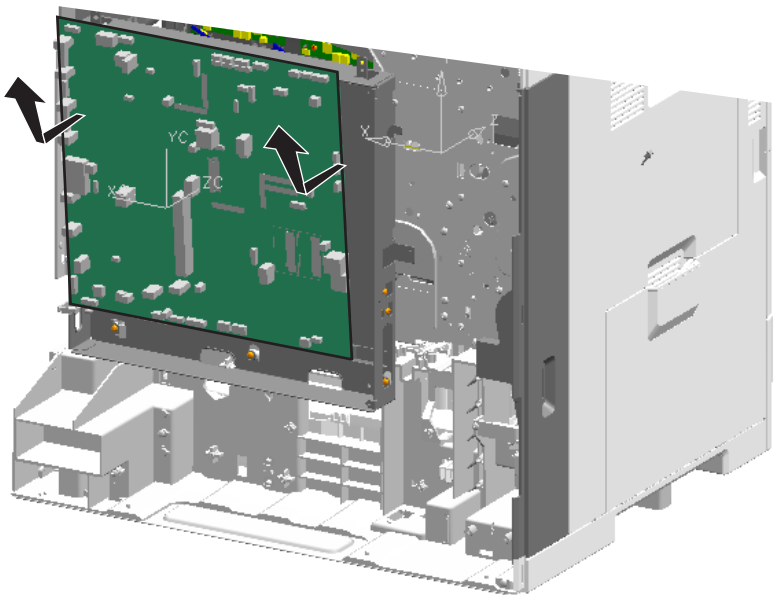
Note: Some connectors require you to press a tab to disconnect the cable.



Note: The cables may or may not include a pigtail connector (E).



9. Tilt the system board cage forward and lift to remove it.

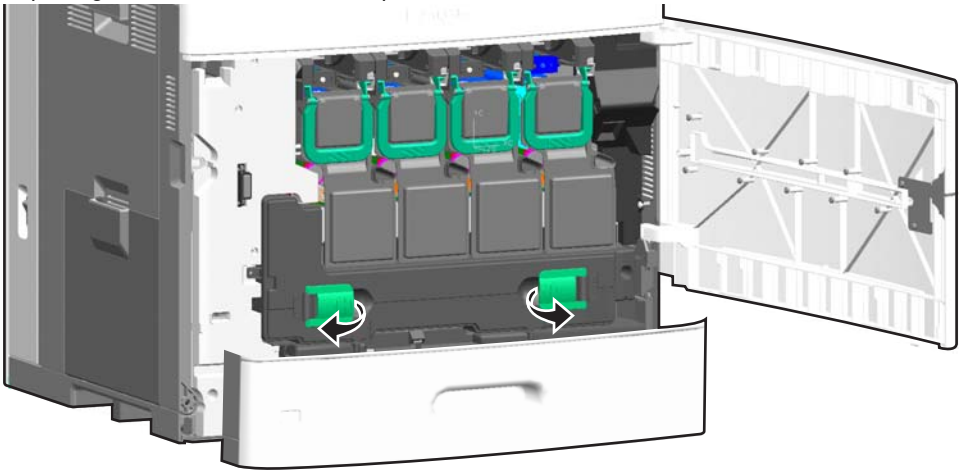


Installation notes:

- Be sure to reinstall any toroids you had to remove.
- Some connectors have the same number of pins, so be sure each cable is connected to the correct connector. For diagrams and tables showing where each cable connects, see **“Locations” on page 5-1**.

Waste toner container removal

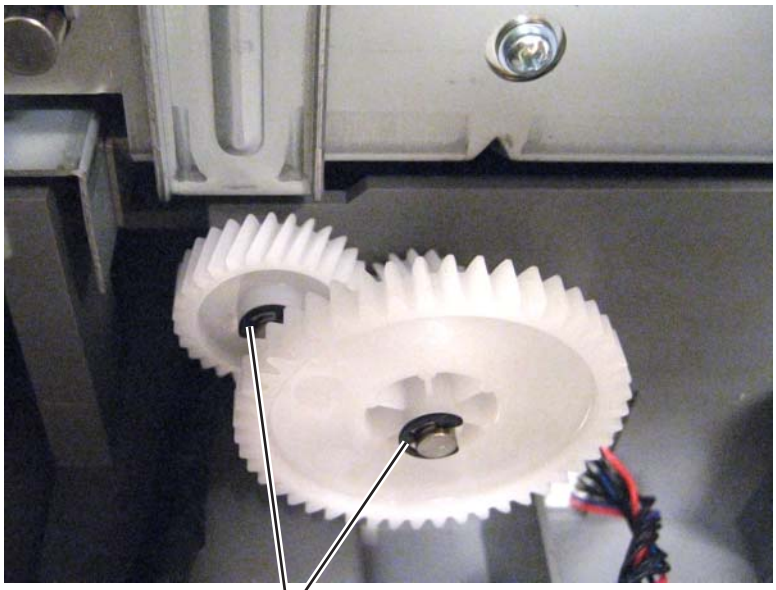
1. Open the front access door.
2. Open the standard media tray.
3. Flip the green handles forward and pull out the waste toner container.



Waste toner gears removal

See **“Rear” on page 7-15** for the part number.

1. Remove the EP drive. See **“EP drive assembly removal” on page 4-50**.
2. Remove the E-clip (A), and remove the larger gear.
3. Remove the E-clip (B), and remove the smaller gear.



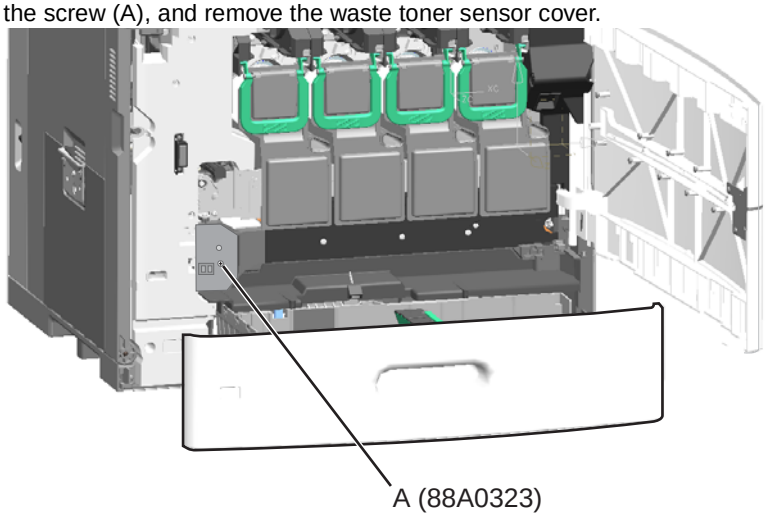
A (1126830)

Waste toner sensor removal

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See **“Front” on page 7-7** for the part number.

1. Remove the waste toner container. See **“Waste toner container removal” on page 4-153**.
2. Remove the screw (A), and remove the waste toner sensor cover.



3. From the left side of the printer, push in the clips, and then pull the sensor out from the front.

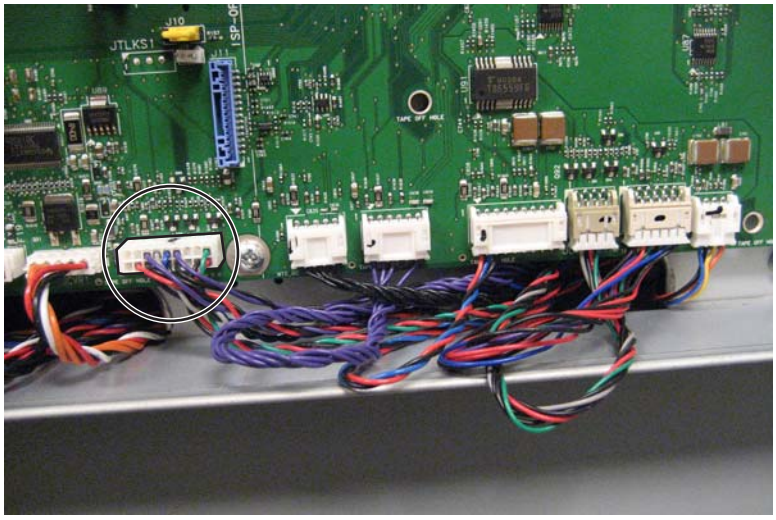


4. Disconnect the cable to remove the sensor.

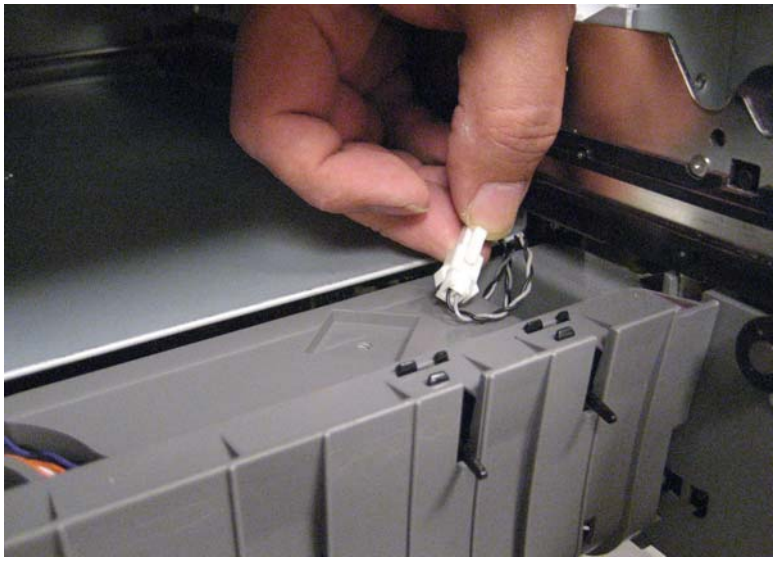
Waste toner cable removal

See **“Waste toner cable” on page 7-58** for the part number.

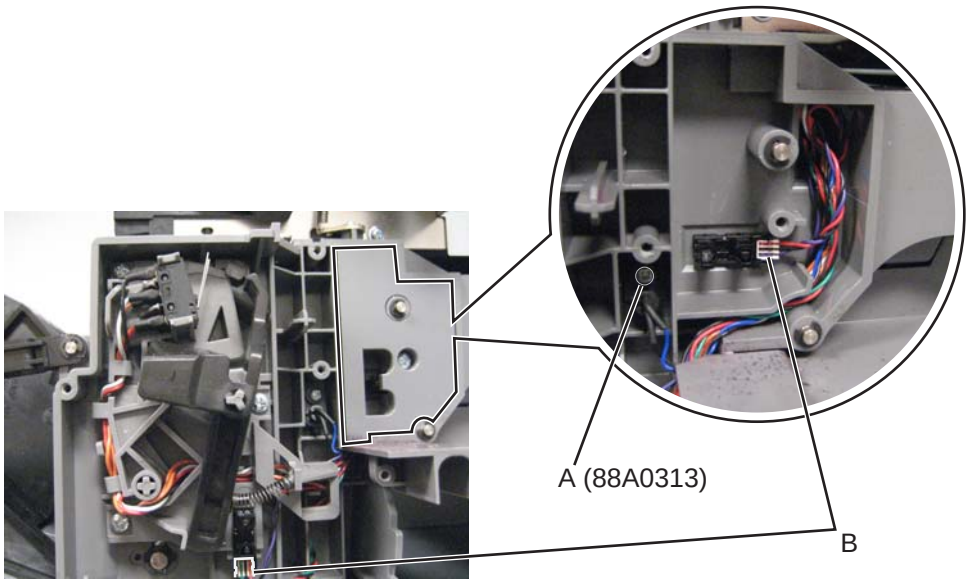
1. Remove the waste toner sensor cover. See **“Waste toner sensor cover removal” on page 4-32**.
2. Remove the waste toner left cover. See **“Waste toner left cover removal” on page 4-31**.
3. Remove the lower frame cable cover. See **“Lower frame cable cover removal” on page 4-20**.
4. Remove the LVPS. See **“Low-voltage power supply (LVPS) removal” on page 4-77**.
5. Disconnect the cable connector from the system board at JWTB1.
   Note: The waste toner cable splits to connect to three beacons and two sensors on the front of the printer. You disconnected the cable from one beacon when you removed the waste toner left cover.



6. From the channel under the lower frame cable cover, disconnect one end of the cable from the standard tray beacon cable.



7. Remove the screw (A) to disconnect the cable from the beacon, and then disconnect the cable from the two sensors (B).

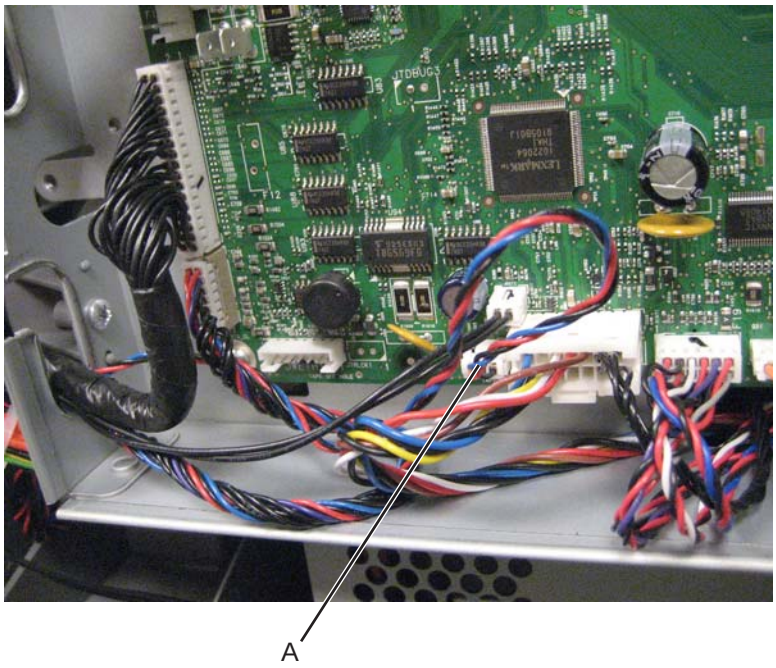


8. Clip any cable ties holding the cable, and then pull the cable through the frame to remove it.

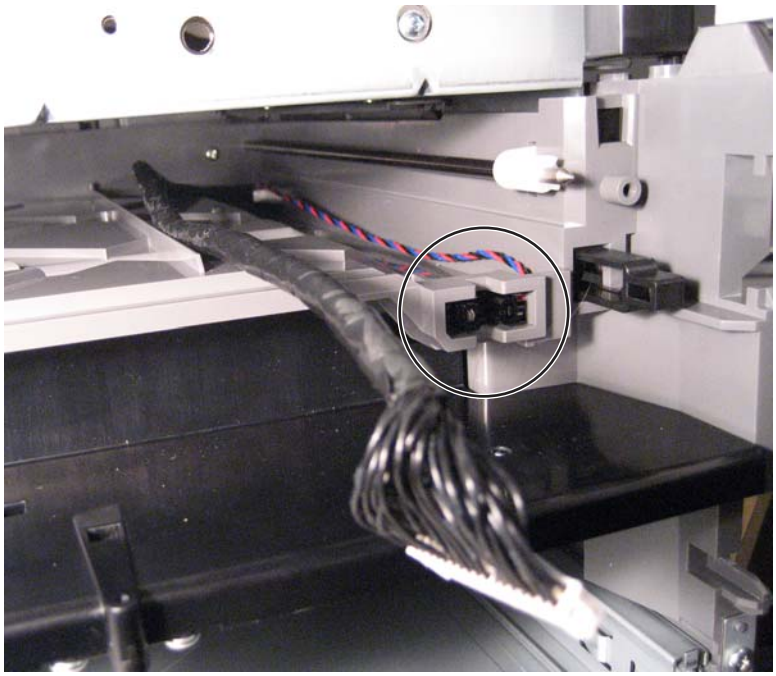
Waste toner full cable removal

See **“Waste toner full cable” on page 7-58** for the part number.

1. Remove the ITU block assembly. See **“ITU block assembly removal” on page 4-71**.
2. Remove the HVPS. See **“High-voltage power supply (HVPS) board removal” on page 4-63**.
3. Disconnect the cable from the system board at JWTBF1 (A).



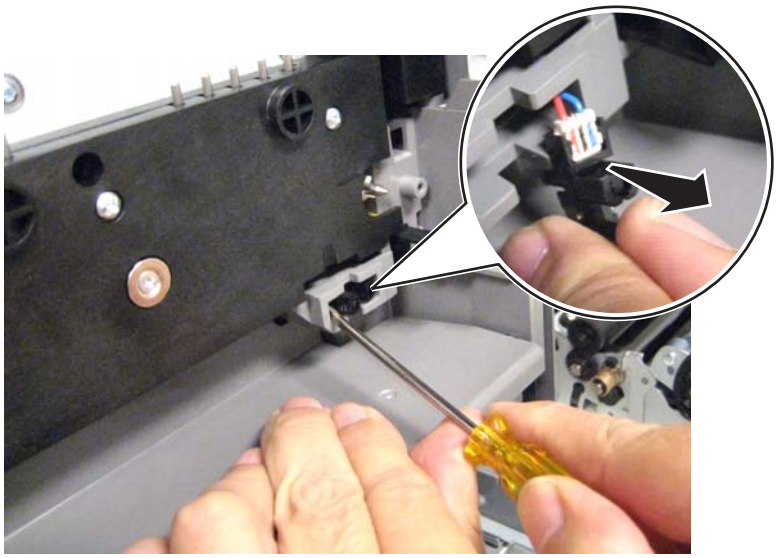
4. Disconnect the cable from the sensor, and pull the cable through the frame.



Waste toner full sensor removal

See **“Front” on page 7-7** for the part number.

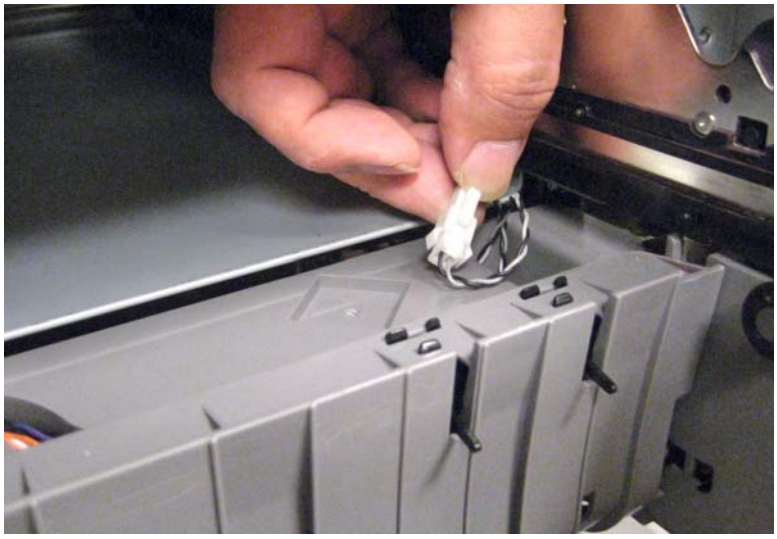
1. Remove the waste toner container. See **“Waste toner container removal” on page 4-153**.
2. Pry out the sensor from the front, and disconnect the cable to remove the sensor.



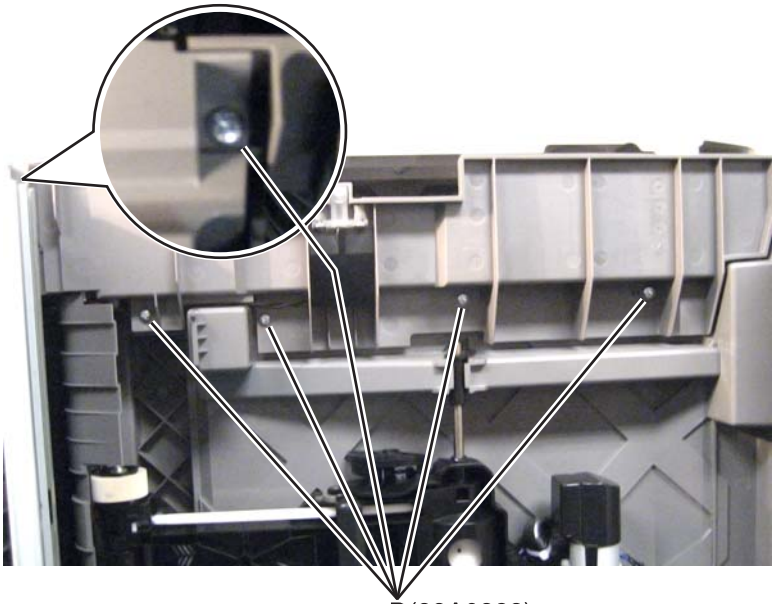
Waste toner tray bracket removal

See **“Front” on page 7-7** for the part number.

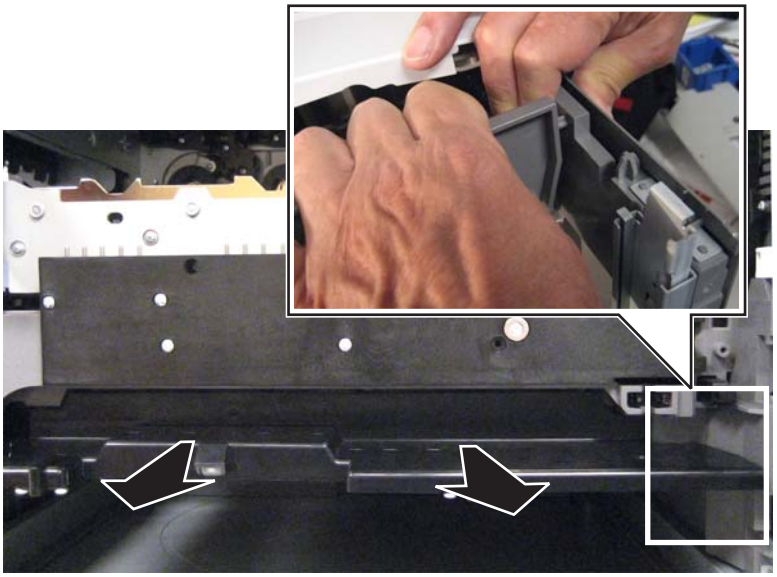
1. Remove the lower frame cable cover. See **“Lower frame cable cover removal” on page 4-20**.
2. Disconnect the cable.



3. Using a short screwdriver, remove five screws (D), four from the bottom of the tray and one from the front.



4. Pull the right frame back to free the side of the tray, and then pull the tray forward to remove it.

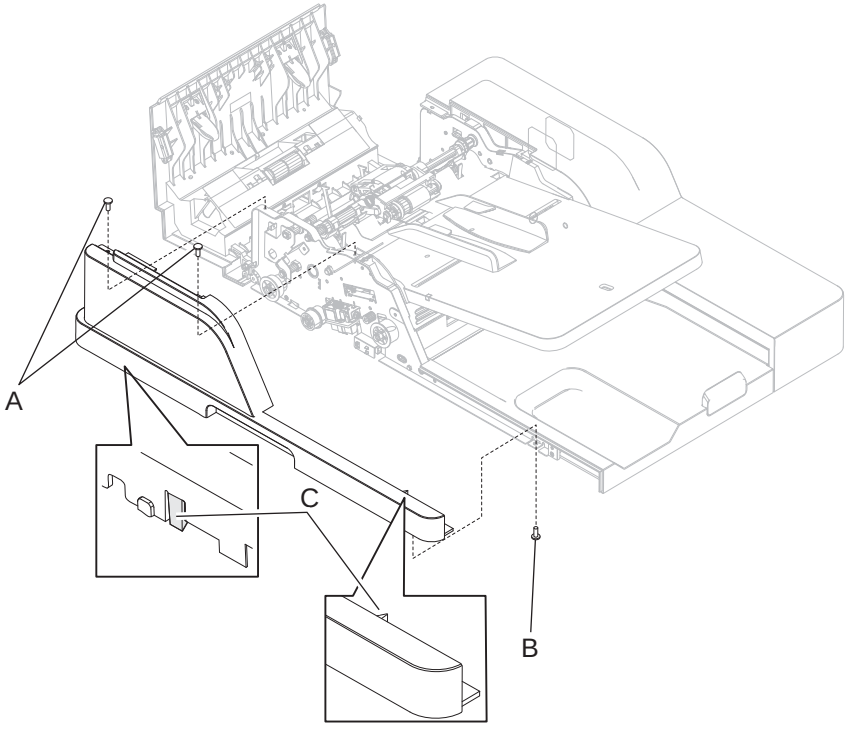


ADF cover removals

ADF front cover removal

See **“ADF covers” on page 7-21** for the part number.

1. Lift the ADF top door assembly.
2. Remove the two screws (A) from top, and remove one screw (B) from the bottom of the cover.
3. Use a screwdriver to release the tabs (C) on the bottom of the cover.

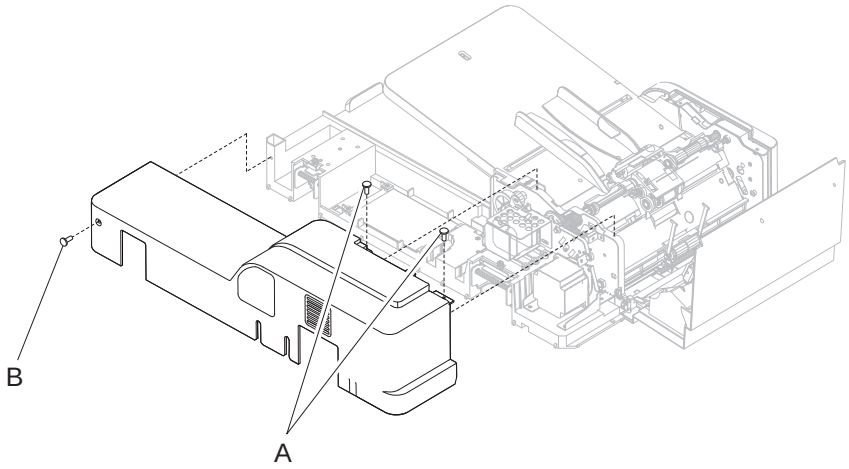


4. Remove the ADF front cover.

ADF rear cover removal

See **“ADF covers” on page 7-21** for the part number.

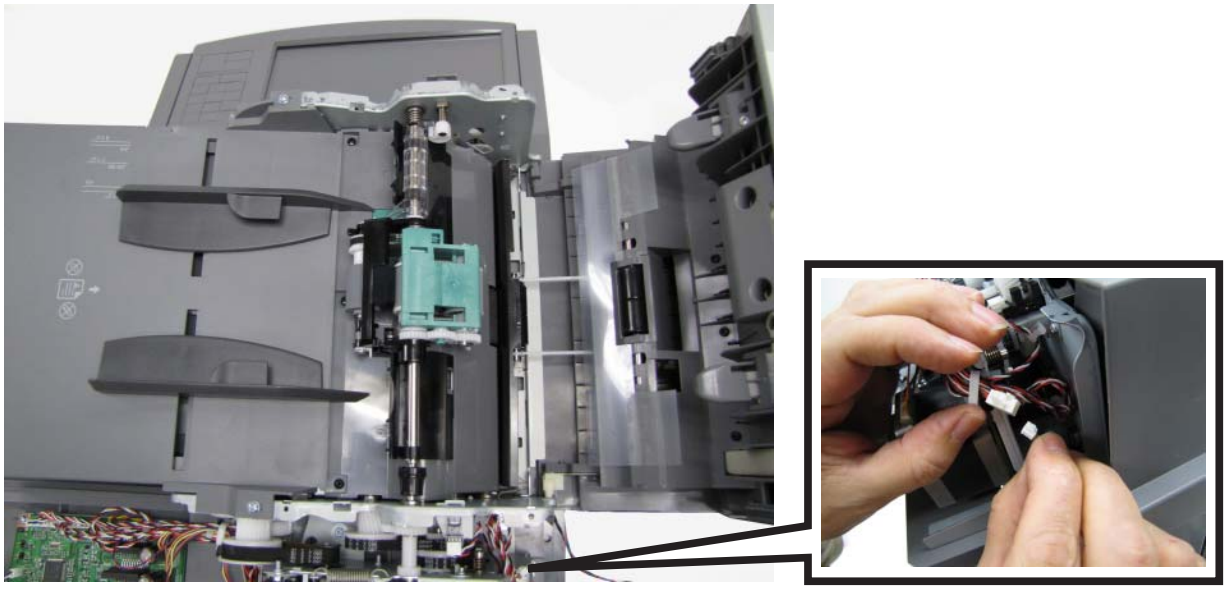
1. Lift the ADF top door assembly.
2. Remove two screws (A) from the top, and remove one screw (B) from the right side of the ADF rear cover.
3. Lift to remove the ADF rear cover.



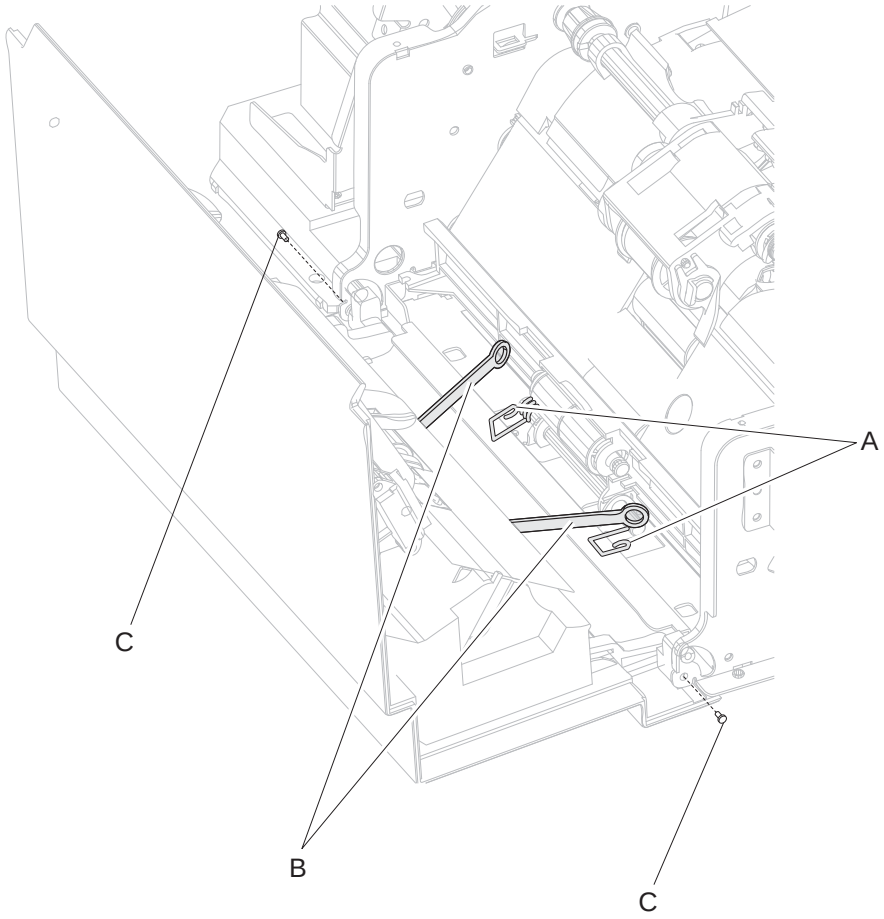
ADF top door assembly removal

See **“ADF covers” on page 7-21** for the part number.

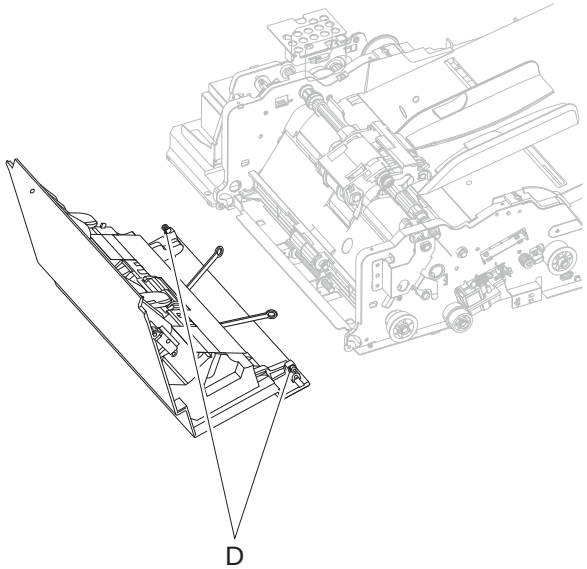
1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-160**.
2. Remove the ADF rear cover. See **“ADF rear cover removal” on page 4-161**.
3. Disconnect the beacon cable.



4. Hold down the spring clips (A), and slide the door links (B) off the posts.
5. Unscrew the two hinge pins (C) on the left and right side.



6. Push the door toward the back of the printer to lift out the front side, and then lift the assembly to free both tabs (D).



7. Feed the beacon cable through the frame, and remove the assembly.

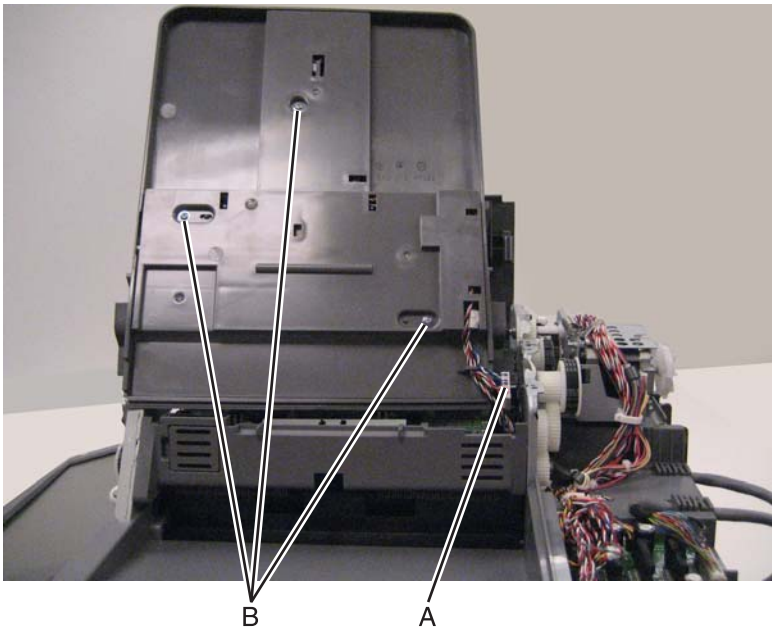
ADF removals

For the ADF covers, see **“ADF cover removals” on page 4-160**.

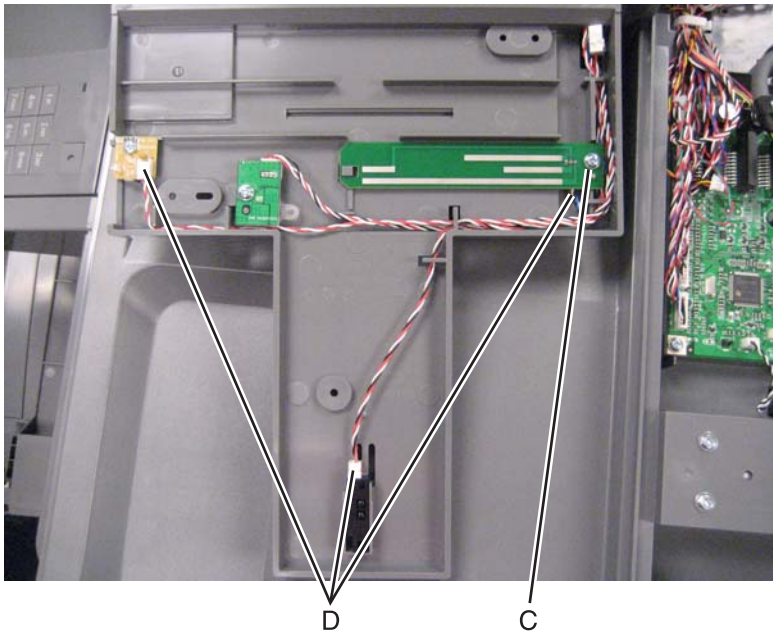
ADF beacon cable removal

See **“ADF electronics” on page 7-25** for the part number.

1. Remove the ADF document tray. See **“ADF document tray assembly removal” on page 4-164**.
2. Disconnect the cable connector (A).
3. Remove three screws (B), and turn over the bottom cover.



4. Remove the screw (C), and turn over the paper size sensor card.
5. Disconnect the cable (D) from beacon card, paper size sensor card, and paper present sensor.

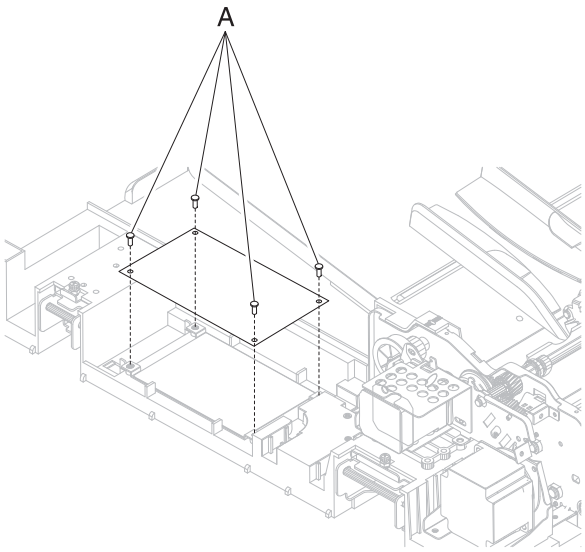


6. Remove the cable.

ADF controller card removal

See **“ADF electronics” on page 7-25** for the part number.

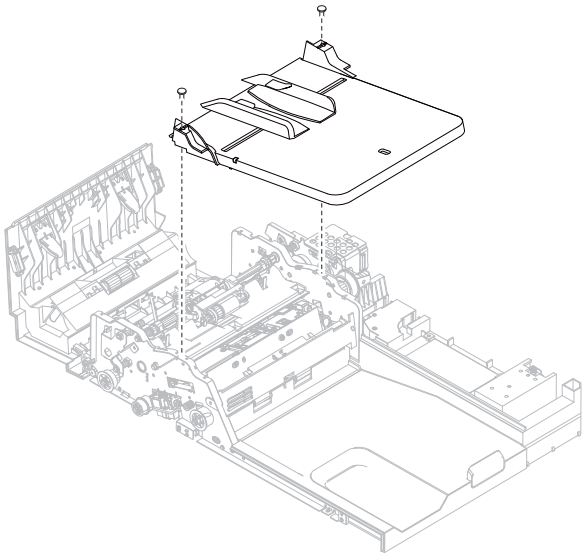
1. Remove the ADF rear cover. See **“ADF rear cover removal” on page 4-161**.
2. Disconnect all cables attached to the controller card.
3. Remove the four screws (A), and remove the ADF controller card.



ADF document tray assembly removal

See **“ADF electronics” on page 7-25** for the part number.

1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-160**.
2. Remove the ADF rear cover. See **“ADF rear cover removal” on page 4-161**.
3. Remove the two screws (A) from the top of the ADF document tray assembly.



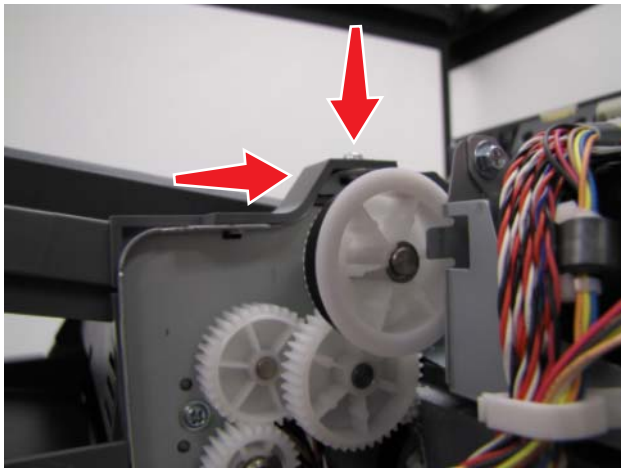
4. Slide the ADF document tray assembly to the right of the printer to access the cables.

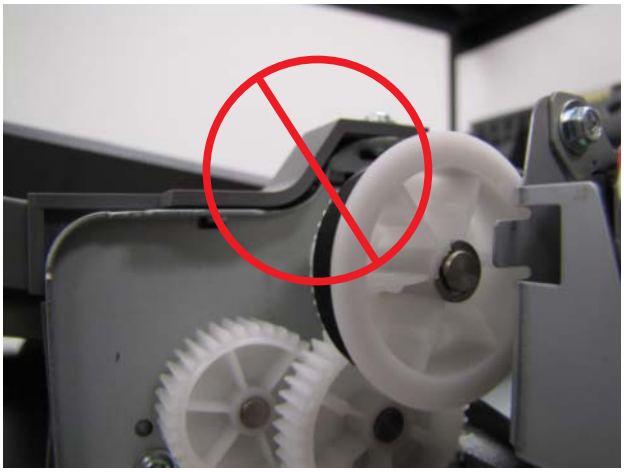
Note: If you are removing the ADF document tray assembly to access another component, then stop here and do not disconnect the cables.

5. Disconnect the two cables connected to the tray to remove the tray assembly.

Installation notes:

- Push the tray in and hold it flush against the frame while tightening the back screw.





- You must adjust the skew after reinstalling the document tray assembly. Go to **“Adjusting skew” on page 3-54**.

ADF document tray extension removal

Pull the extension out until it stops, and then pull again to remove it.

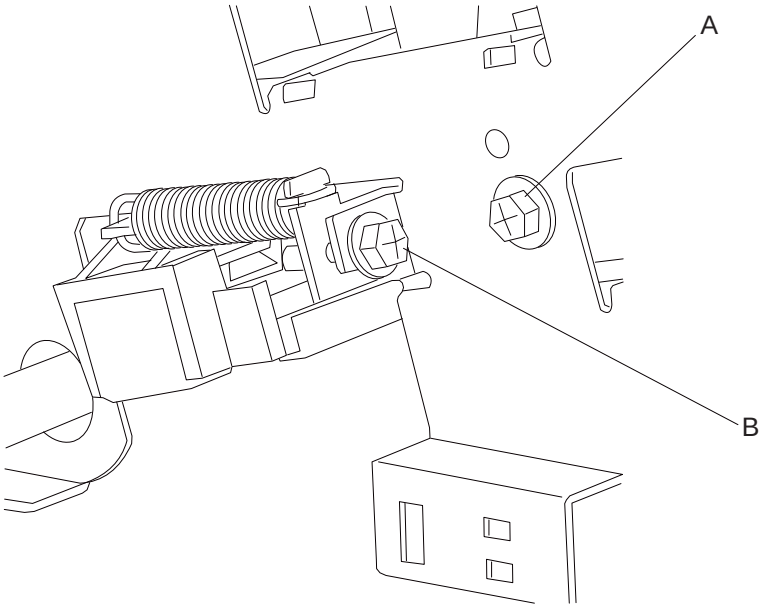


ADF duplex CCD assembly removal

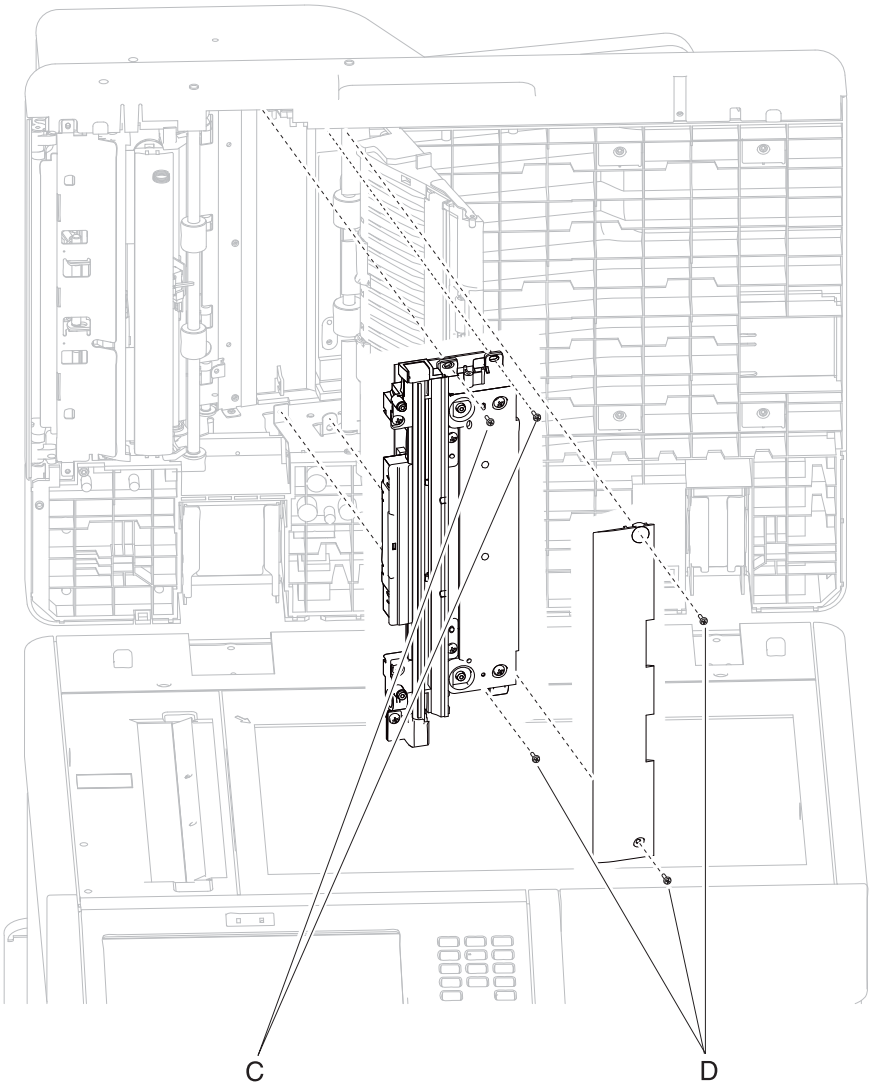
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See **“ADF electronics” on page 7-25** for the part number.

1. Remove the ADF duplex CCD scan glass assembly. See **“ADF duplex CCD scan glass assembly removal” on page 4-169**.
2. From the front of the ADF unit assembly, remove the screw (A), the skew adjustment screw (B), and the spring.

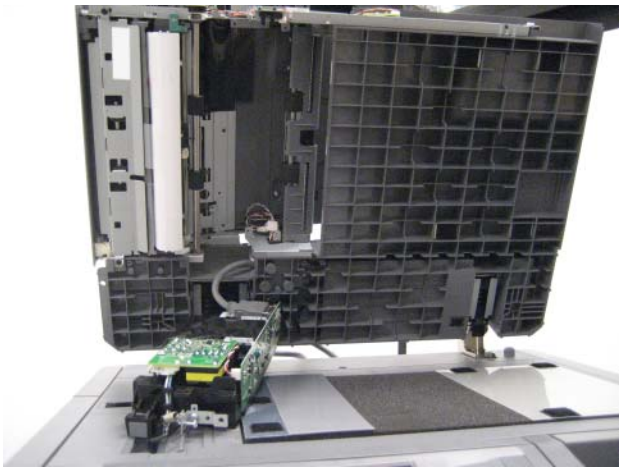


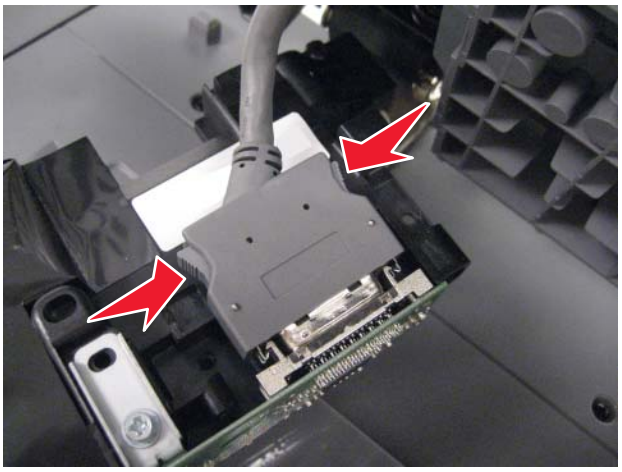
3. From the bottom of the ADF unit assembly, remove the two screws (C), and remove the paper guide.
4. Remove the three screws (D).



5. Carefully remove the ADF duplex CCD assembly, making sure not to touch the lamp.

6. Press in the tabs and pull to disconnect the cable from the assembly.



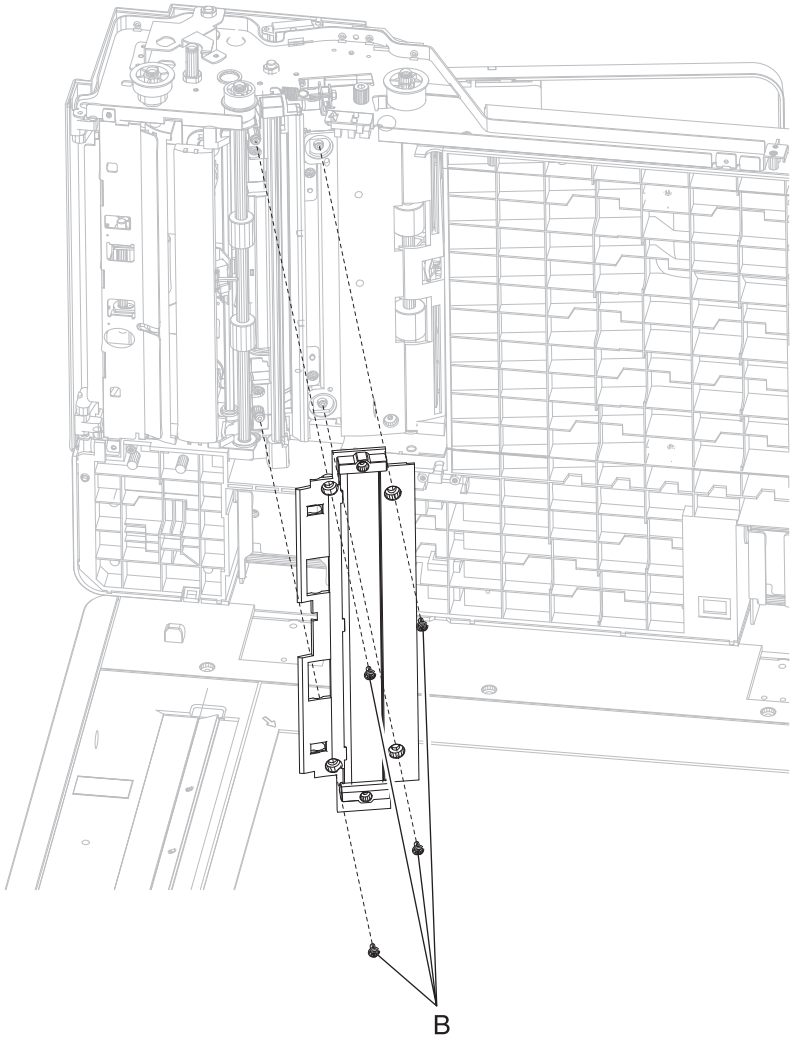


Installation note: After replacing the ADF duplex CCD assembly, you must calibrate the scanner and check for skew. See **“Calibrating the scanner” on page 3-67**, **“Adjusting skew” on page 3-54** and **“ADF magnification adjustment” on page 3-66**.

ADF duplex CCD scan glass assembly removal

See **“ADF electronics” on page 7-25** for the part number.

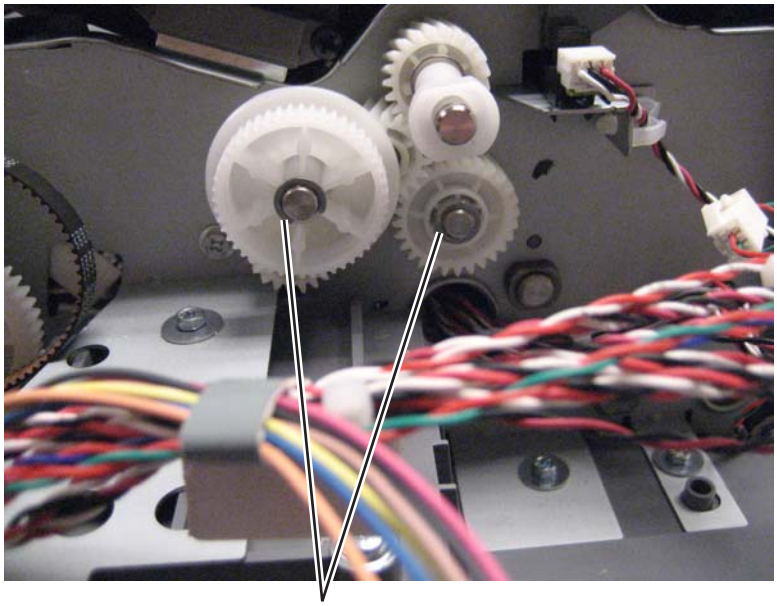
1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-160**.
2. Remove the ADF platen cushion and place it with the velcro side up on the scanner glass. See **“ADF platen cushion removal” on page 4-183**.
3. Press the green tab to open the ADF lower door assembly.
4. Remove four screws (B).
5. Pull straight out to remove the assembly.
   Note: Be sure not to touch the glass.



ADF feed 1-way bearing and gears removal

See **“ADF feed and drive” on page 7-23** for the part number.

1. Remove the ADF feed drive motor assembly. See **“ADF feed drive motor assembly removal” on page 4-170**.
2. Remove the two E-clips (A).



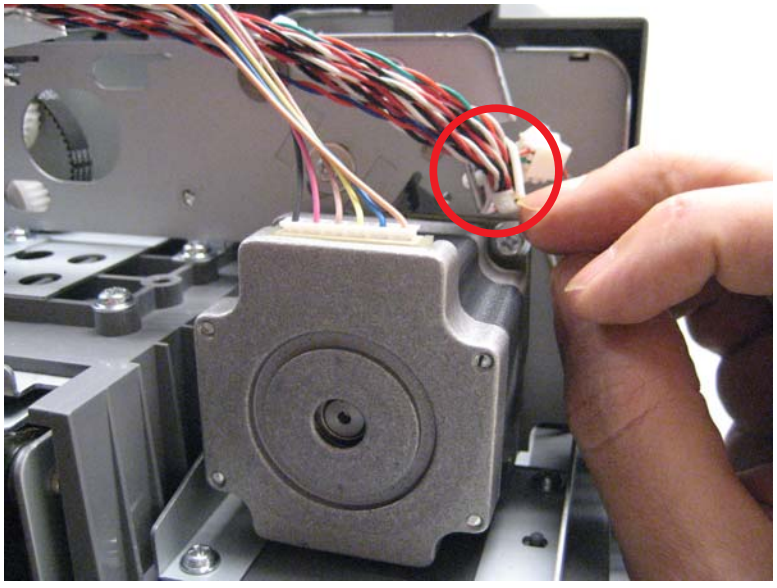
A(1126830)

3. Remove the ADF feed 1-way bearing and gears.

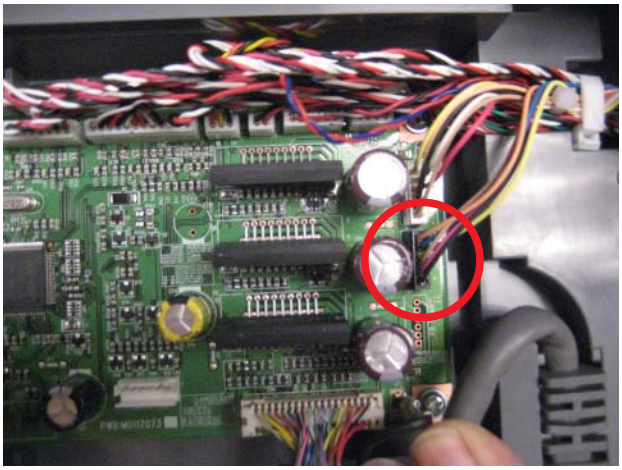
ADF feed drive motor assembly removal

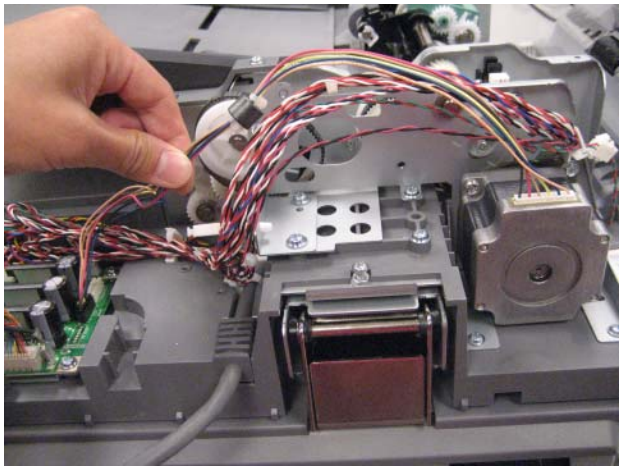
See **“ADF feed and drive” on page 7-23** for the part number.

1. Remove the ADF transport motor bracket assembly with cable. See **“ADF transport drive motor bracket assembly with cable removal” on page 4-190**.
2. Open the clip to release the cables attached to the right side of the assembly.

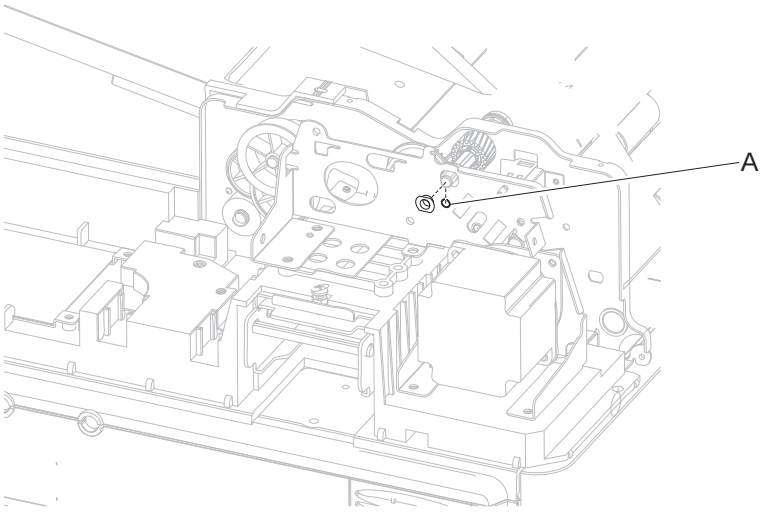


3. Disconnect the ADF feed drive motor cable from the ADF controller card, and remove the cable from the clips.
   Note: Observe the cable routing for reinstallation.

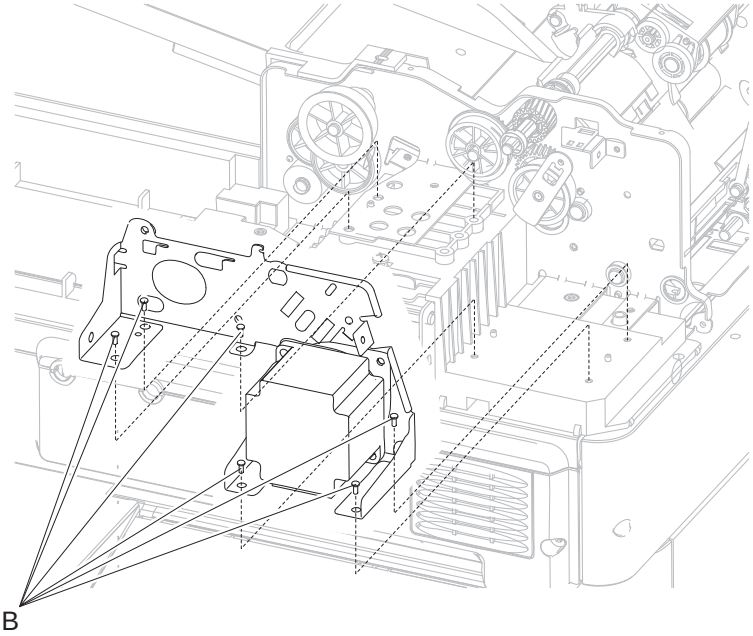




4. Remove the E-clip (A) from the ADF pick roll shaft, and then remove the bushing.



5. Remove the six screws (B).

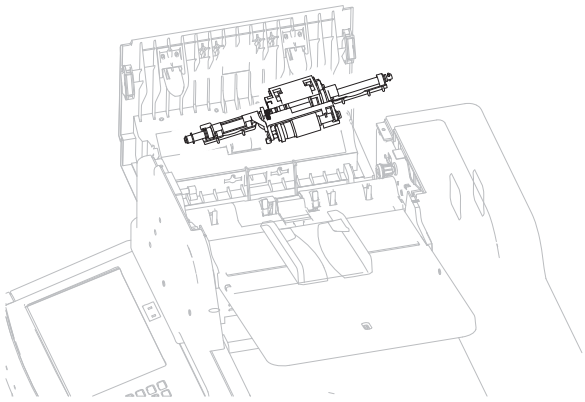


6. Remove the ADF feed motor assembly (including the cable and two belts).

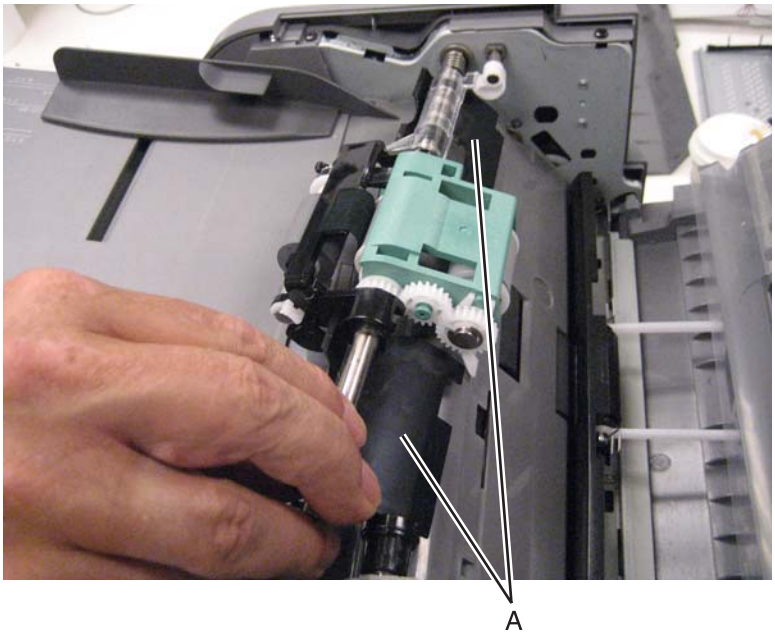
ADF feed/pick roll assembly removal

See **“ADF feed and drive” on page 7-23** for the part number.

1. Lift the ADF top door assembly.
2. Slide the ADF feed/pick roll assembly to the front, and then lift the rear of the assembly.
3. Remove the ADF feed/pick roll assembly.



Installation note: Make sure both black flaps (A) of the ADF feed/pick roll assembly lie flat facing away from the input tray.

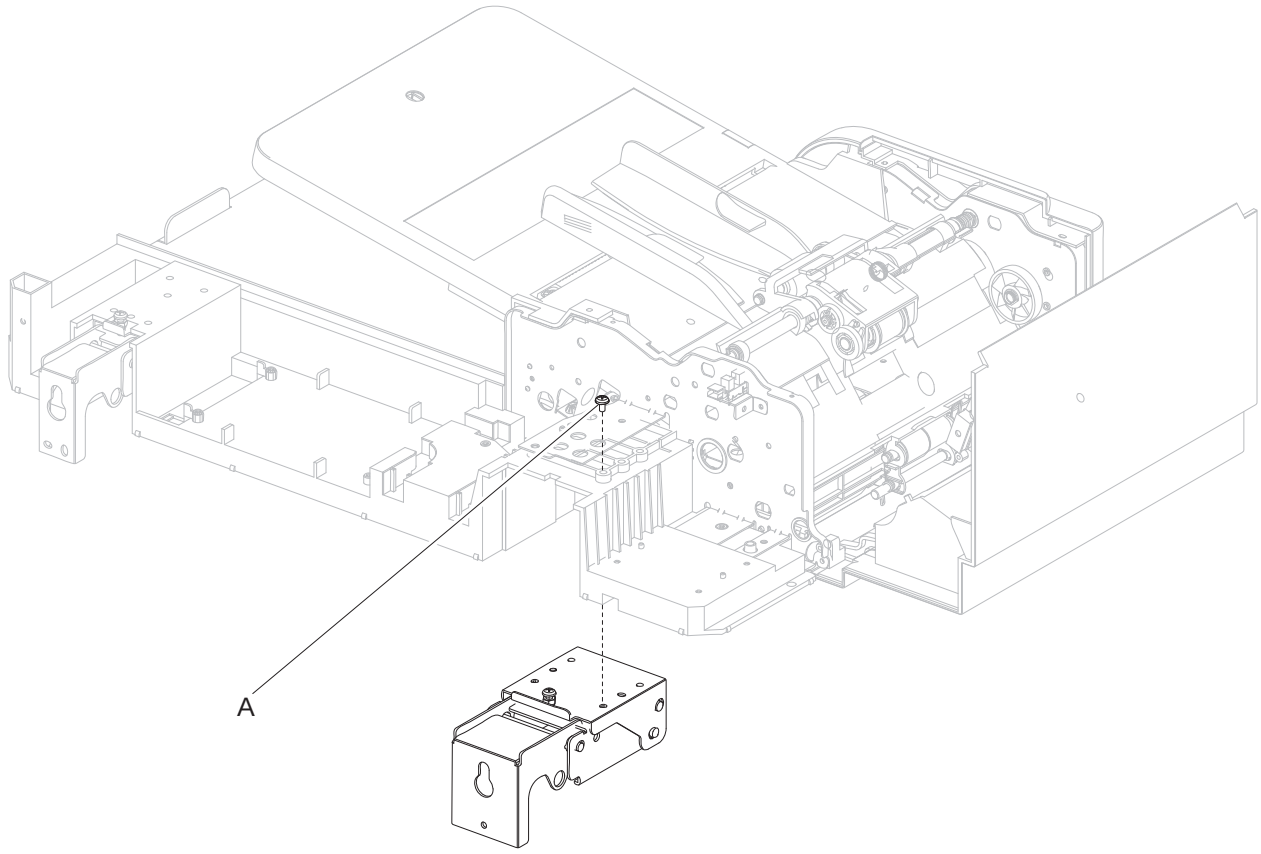


ADF left hinge removal

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See **“ADF covers” on page 7-21** for the part number.

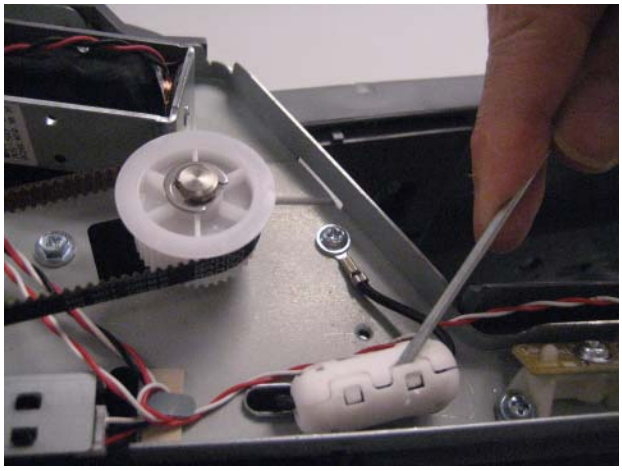
1. Remove the ADF unit. See **“ADF unit assembly removal” on page 4-193**.
2. Remove the ADF feed drive motor assembly. See **“ADF feed drive motor assembly removal” on page 4-170**.
3. Remove one screw (A) to remove the hinge.

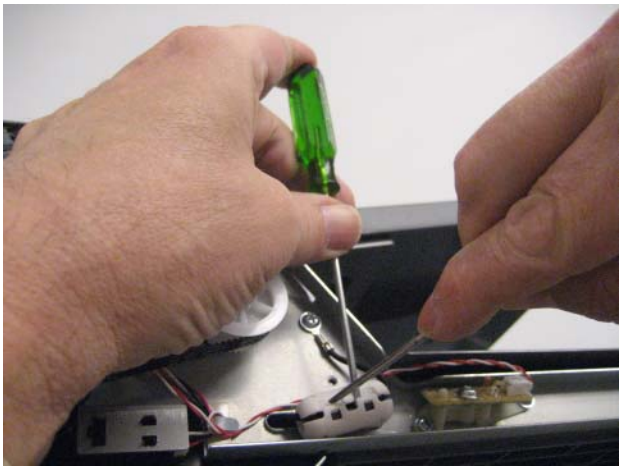


ADF lower door assembly removal

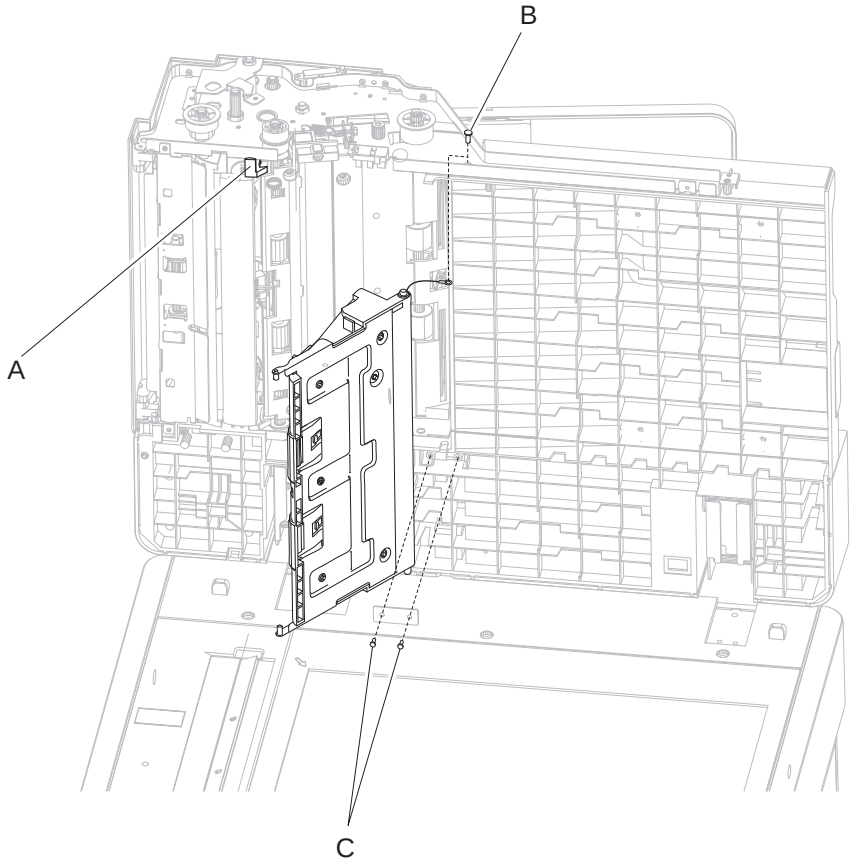
See **“ADF covers” on page 7-21** for the part number.

1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-160**.
2. Remove the ADF platen cushion, and lay it on the scanner glass with the velcro side up. See **“ADF platen cushion removal” on page 4-183**.
3. Remove the toroid from the ground wire.





4. Open the ADF lower door assembly by pressing the green tab (A).
5. Remove the screw (B) securing the ground wire.
6. Remove the two screws (C) securing the hinge plate.



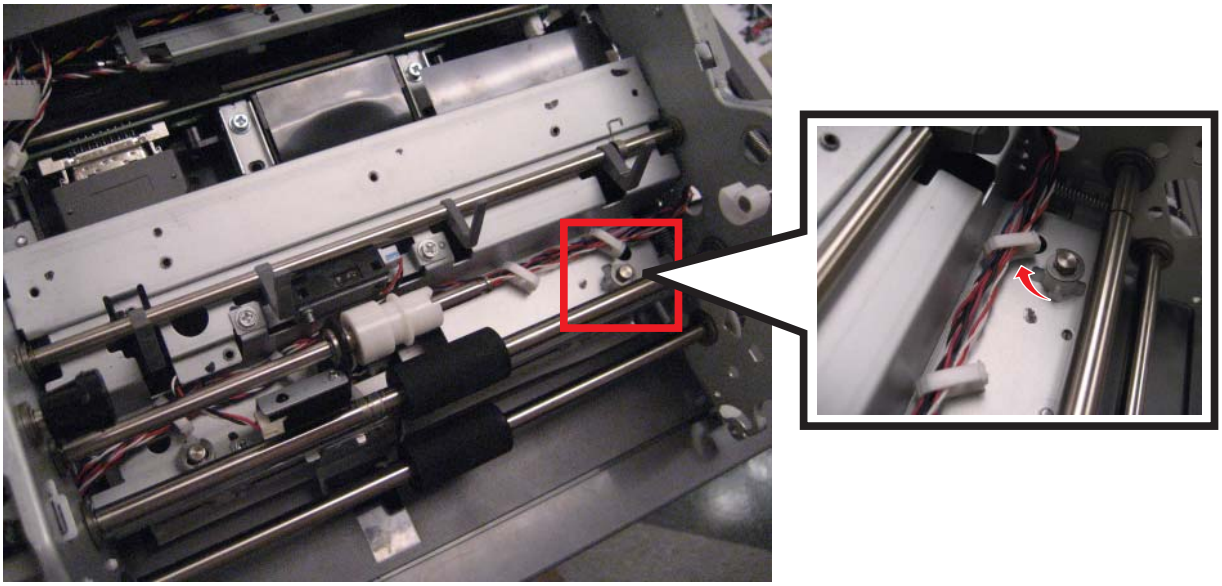
7. Remove the ADF lower door assembly.

ADF media pinch pad assembly removal

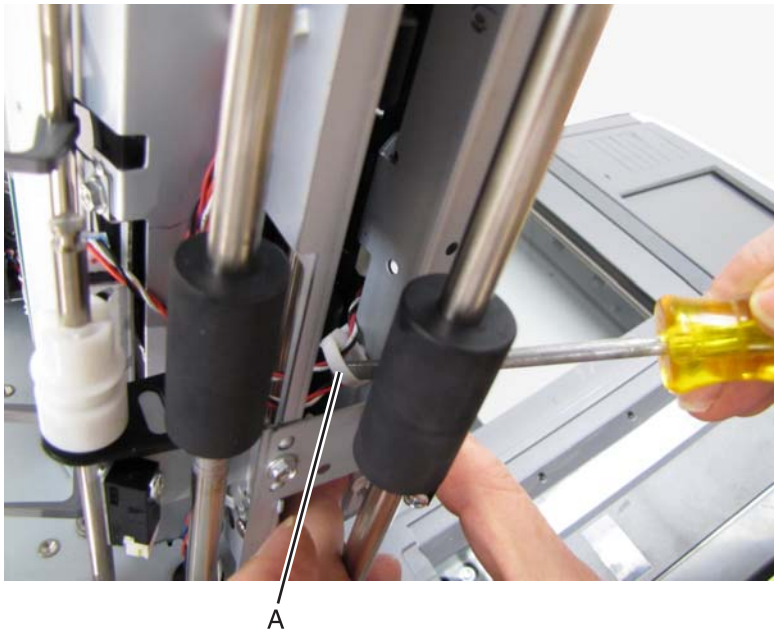
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See **“ADF covers” on page 7-21** for the part number.

1. Remove the ADF document tray assembly. See **“ADF document tray assembly removal” on page 4-164**.
2. Remove the ADF pick pad cover assembly. See **“ADF pick pad cover assembly removal” on page 4-178**.
3. Remove the ADF turn guide. See **“ADF turn guide removal” on page 4-192**.
4. Twist the front spring cap to line up with the opening in the frame.

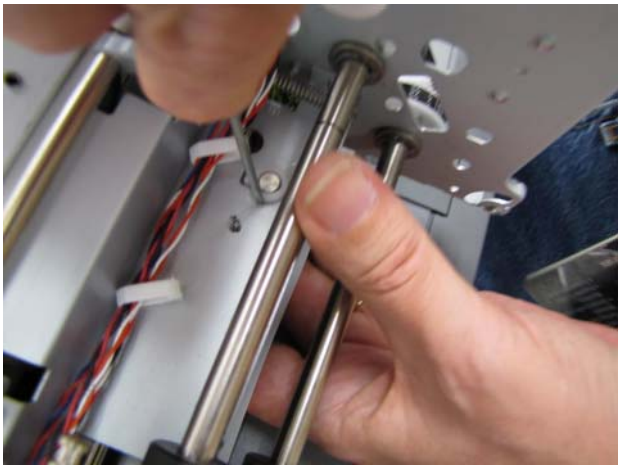


5. Open the cable clip (A) on the top of the ADF media pinch pad assembly.

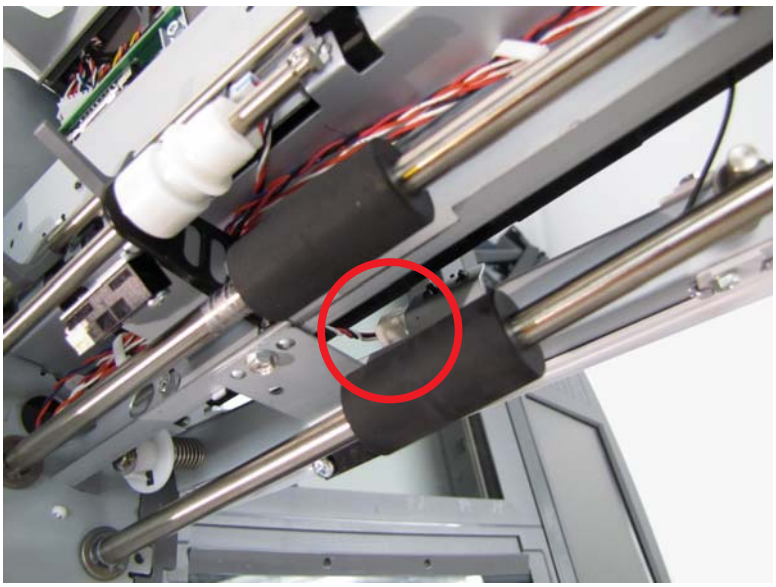


6. Use a screwdriver to push the front and back spring caps through the frame.

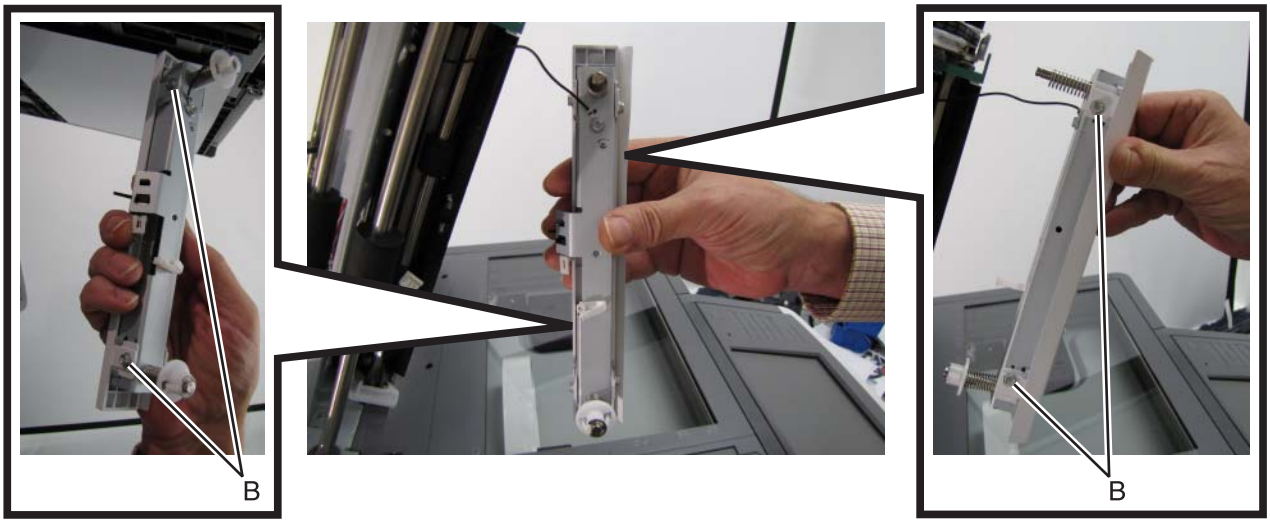




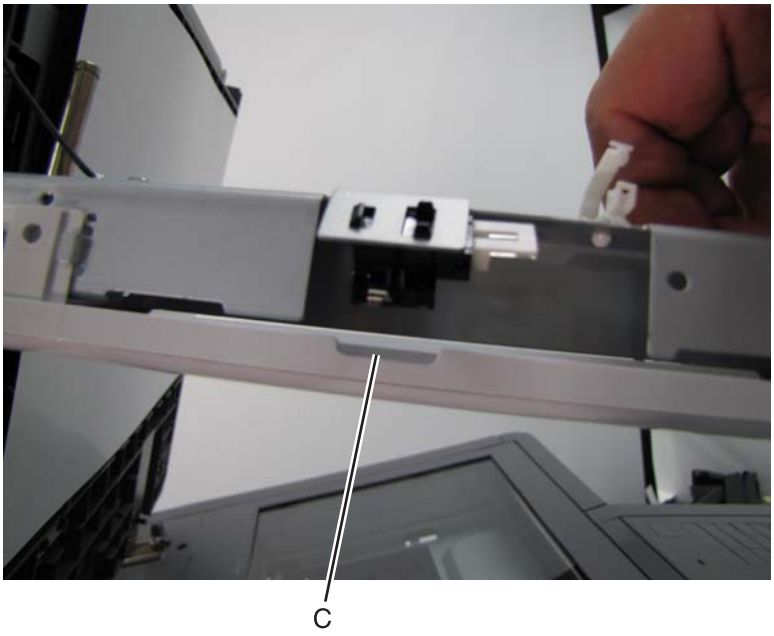
7. From the bottom of the ADF unit assembly, disconnect the cable from the ADF first scan sensor.



8. Remove four screws (B), two on each side, to remove the ADF media pinch pad.



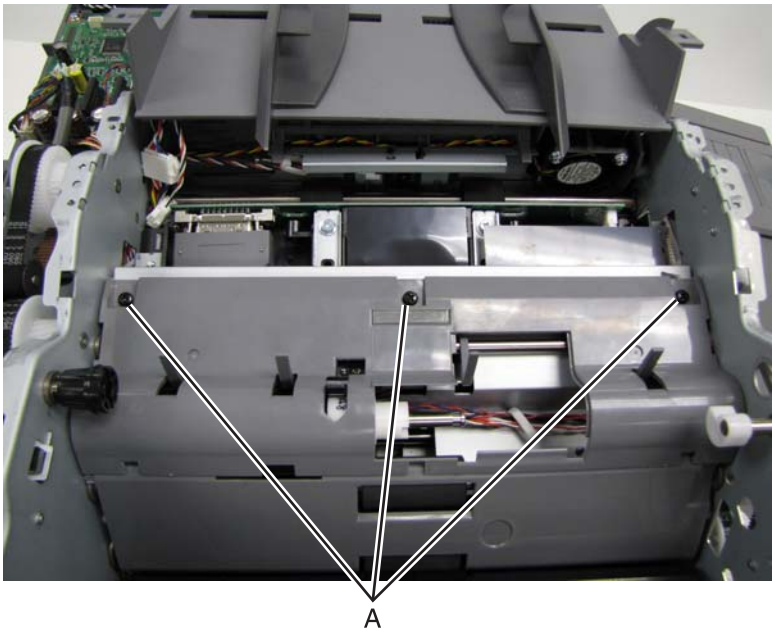
Installation note: Make sure the notch (C) in the ADF media pinch pad fits around the ADF first scan sensor.



ADF pick pad cover assembly removal

See **“ADF covers” on page 7-21** for the part number.

1. Remove the ADF document tray assembly. See **“ADF document tray assembly removal” on page 4-164**.
2. Remove the ADF separator roll. See **“ADF separator roll removal” on page 4-184**.
3. Remove the three screws (A).



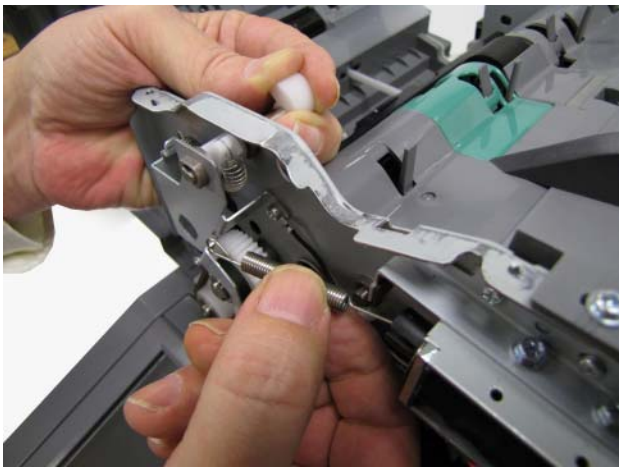
4. Lift to remove the ADF pick pad cover assembly.

ADF pick roll position cam assembly removal

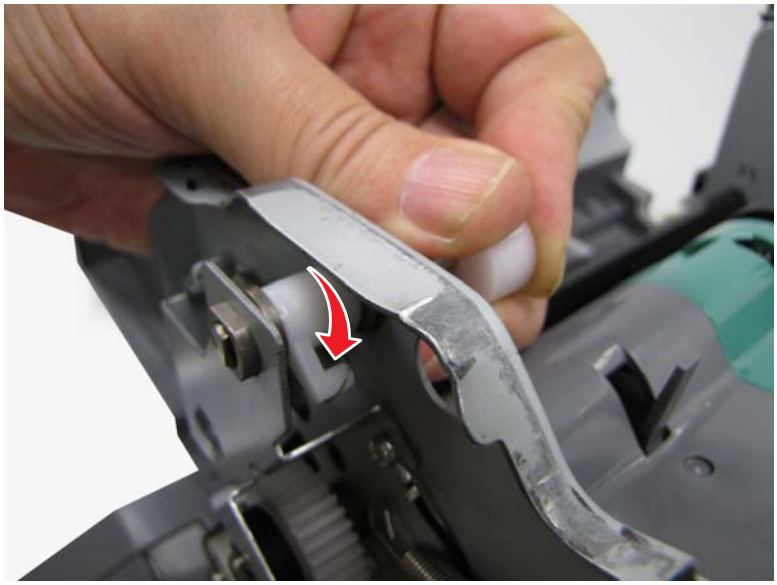
See **“ADF feed and drive” on page 7-23** for the part number.

1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-160**.
2. Remove the ADF feed/pick roll assembly. See **“ADF feed/pick roll assembly removal” on page 4-173**.
3. Rotate the shaft until the end of the front spring can fit over the tab (A), and remove the spring.

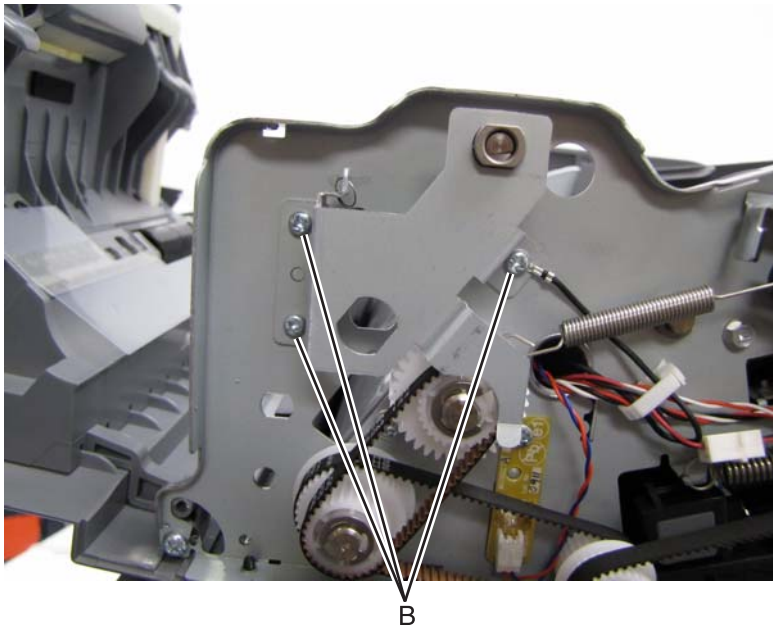




4. Rotate the shaft the other way to remove the back spring.

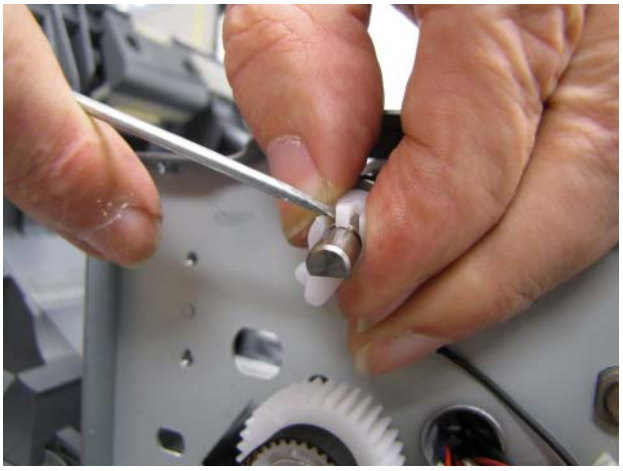


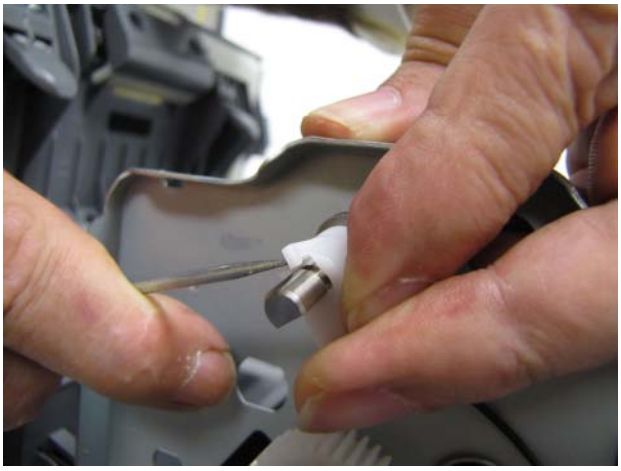
5. Remove the three screws (B) securing the ADF pick roll position cam assembly bracket.



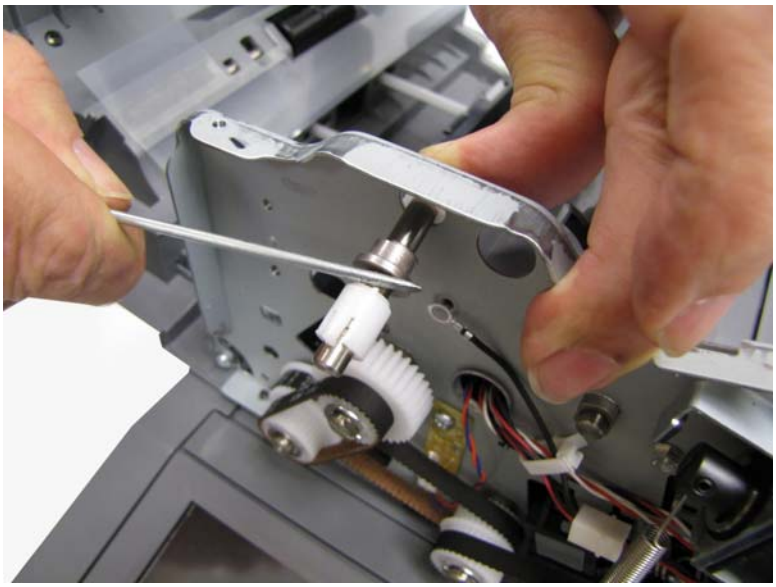
Note: Replace the ground cable on the right bracket screw during reinstallation.

6. Remove the bracket.
7. Disengage the clip securing the shaft arm to the shaft.





8. Use a screwdriver to remove the shaft arm from the shaft.



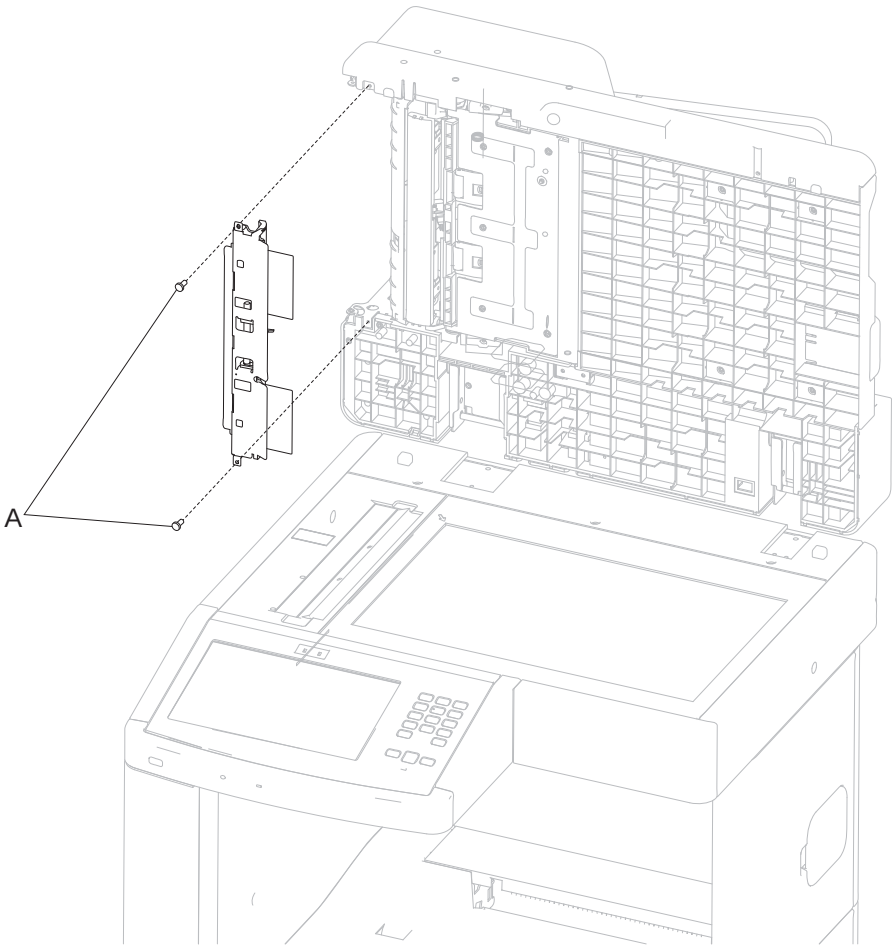
9. Slide the shaft out of the frame to remove the ADF pick roll position cam assembly.

ADF pinch roll assembly removal

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See **“ADF feed and drive” on page 7-23** for the part number.

1. Remove the ADF top door assembly. See **“ADF top door assembly removal” on page 4-161**.
2. Remove the two screws (A) on the sides of the ADF pinch roll assembly.

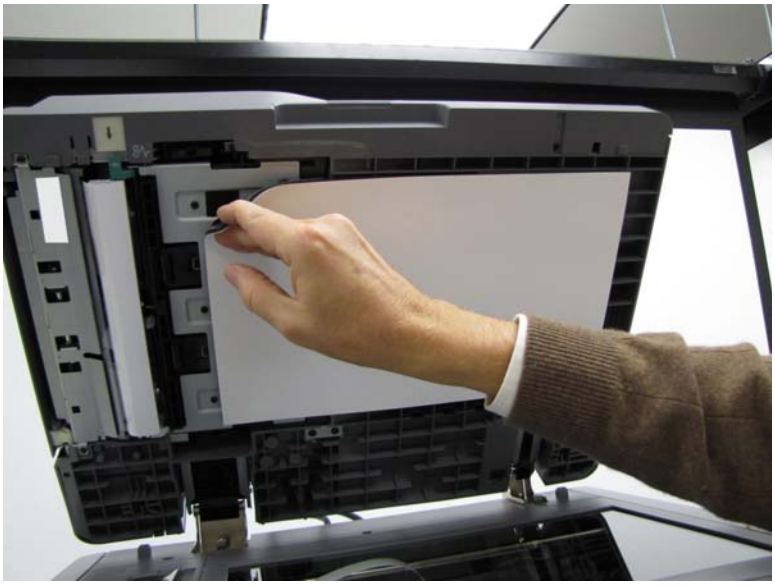


3. Remove the ADF pinch roll assembly.

ADF platen cushion removal

See **“ADF covers” on page 7-21** for the part number.

1. Lift the ADF unit assembly.
2. Unfasten the velcro to remove the cushion.



Note: If you are removing the ADF platen cushion to access another part, then place the cushion on the scanner glass with the velcro side up to protect the glass.

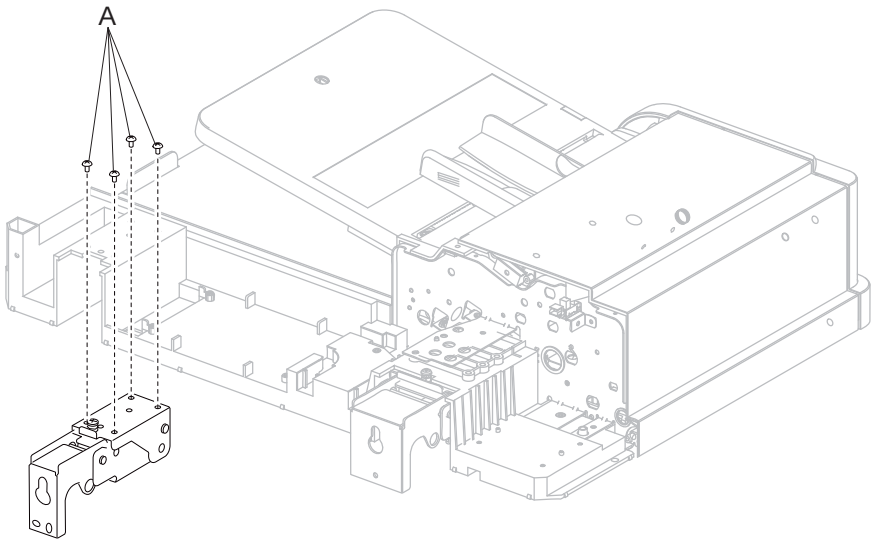
Installation note: Lay the ADF platen cushion on the scanner glass with the velcro side up, and then close the ADF unit assembly.



ADF right hinge removal

See **“ADF covers” on page 7-21** for the part number.

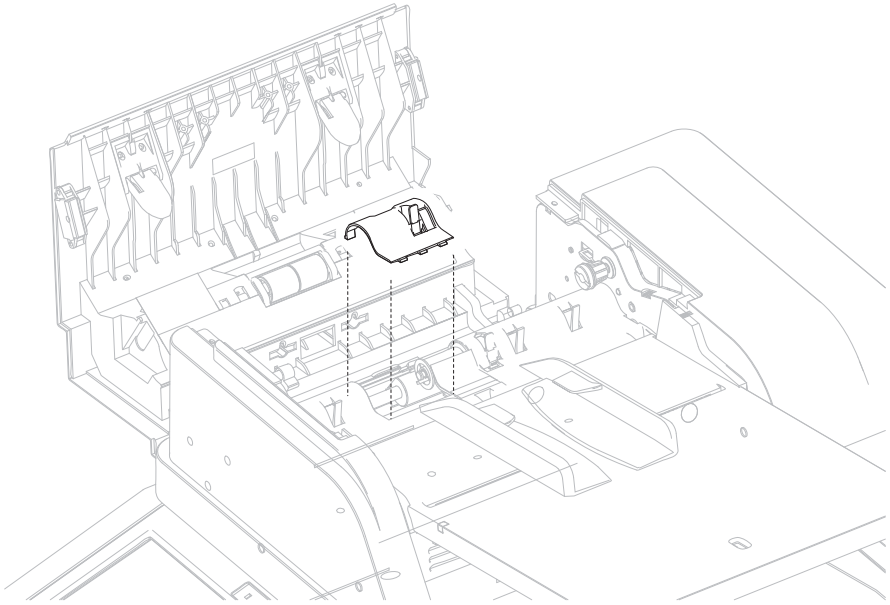
1. Remove the ADF unit. See **“ADF unit assembly removal” on page 4-193**.
2. Remove four screws (A), and remove the hinge.



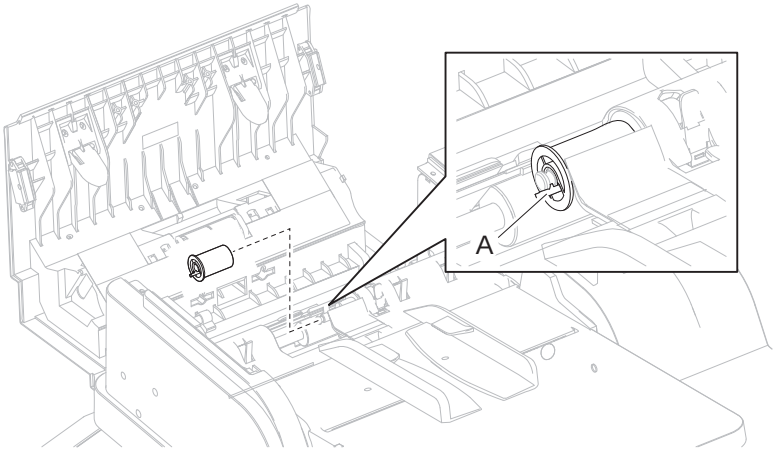
ADF separator roll removal

See **“ADF feed and drive” on page 7-23** for the part number.

1. Remove the ADF feed/pick roll assembly. See **“ADF feed/pick roll assembly removal” on page 4-173**.
2. Pull forward and up to remove the green access cover.



3. Lift the tab (A), and slide the separator roll off the shaft.

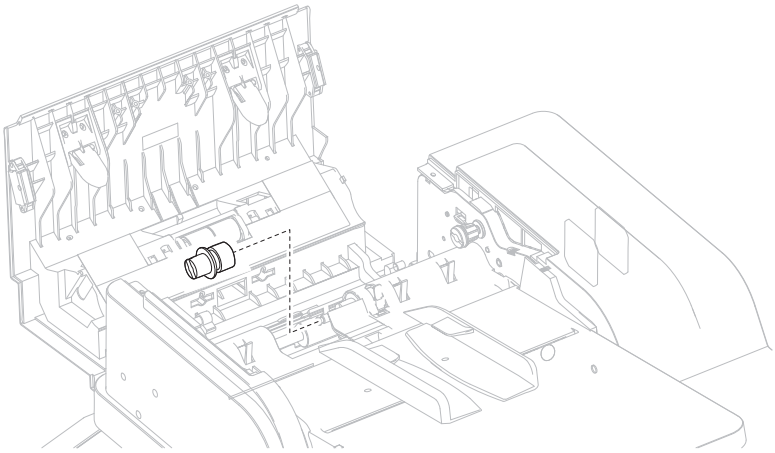


Installation note: After sliding the separator roll onto the shaft, twist it until it fits into the grooves on to the torque limiter.

ADF separator torque limiter assembly removal

See **“ADF feed and drive” on page 7-23** for the part number.

1. Remove the ADF separator roll. See **“ADF separator roll removal” on page 4-184**.
2. Slide the ADF separator torque limiter assembly off the shaft.

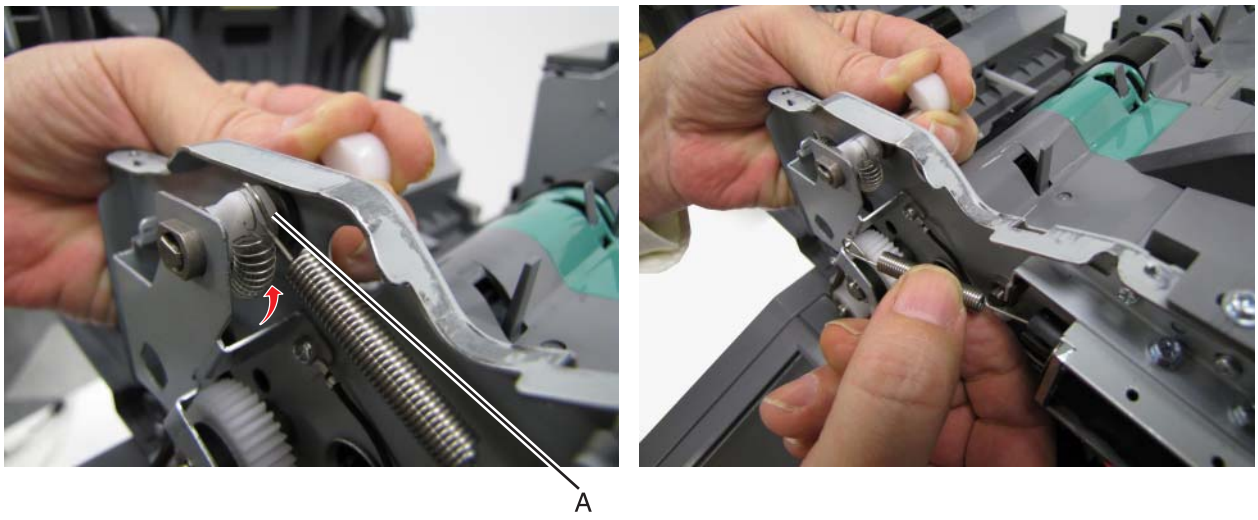


ADF solenoid assembly removal

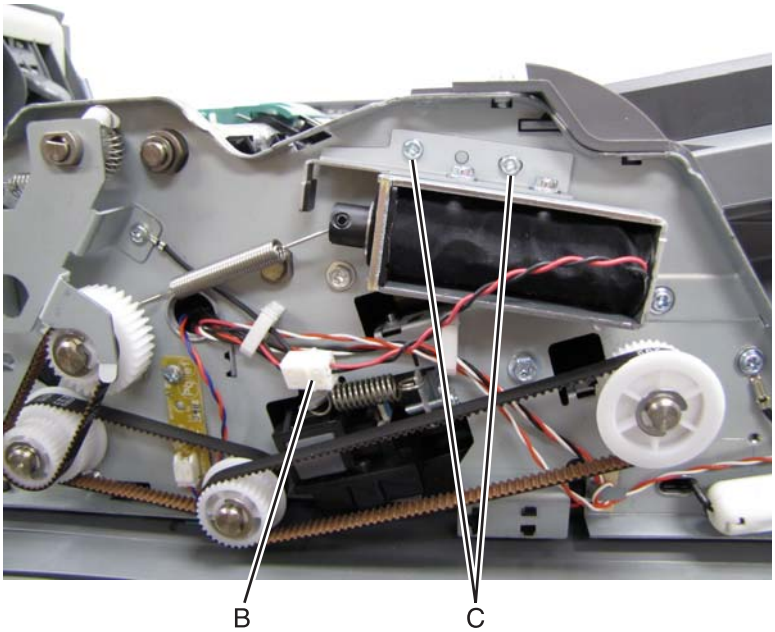
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See **“ADF feed and drive” on page 7-23** for the part number.

1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-160**.
2. Rotate the cam shaft lever until the pick roll position cam assembly spring can fit over the tab (A).



3. Disconnect the solenoid cable (B).
4. Remove the two screws (C).



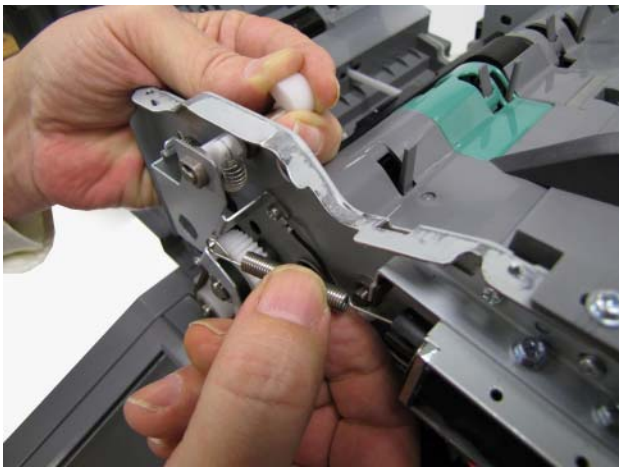
5. Remove the ADF solenoid assembly.

ADF transport drive gears (front) removal

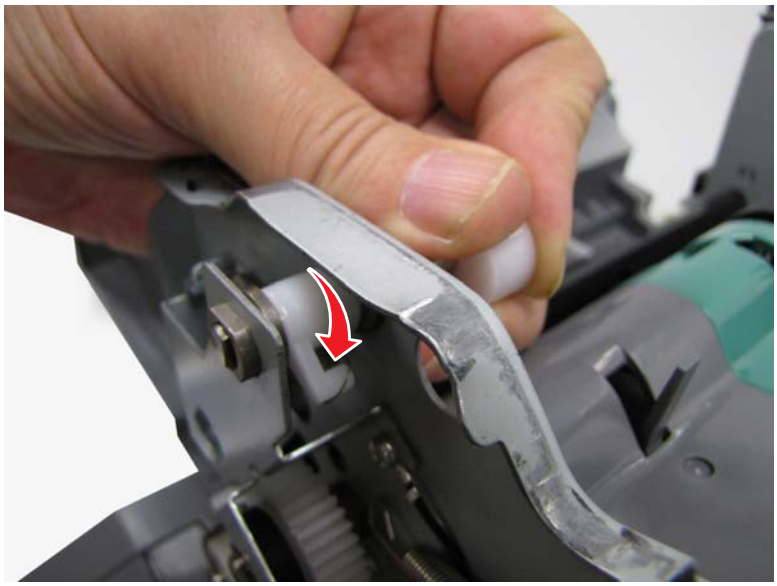
See **“ADF feed and drive” on page 7-23** for the part number.

1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-160**.
2. Rotate the shaft until the end of the front spring can fit over the tab (A), and remove the spring.

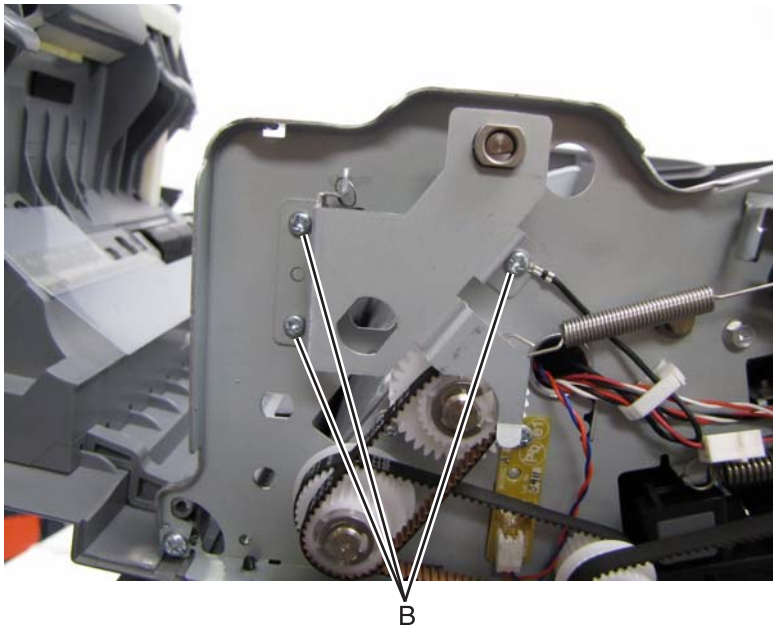




3. Rotate the shaft the other way to remove the back spring.

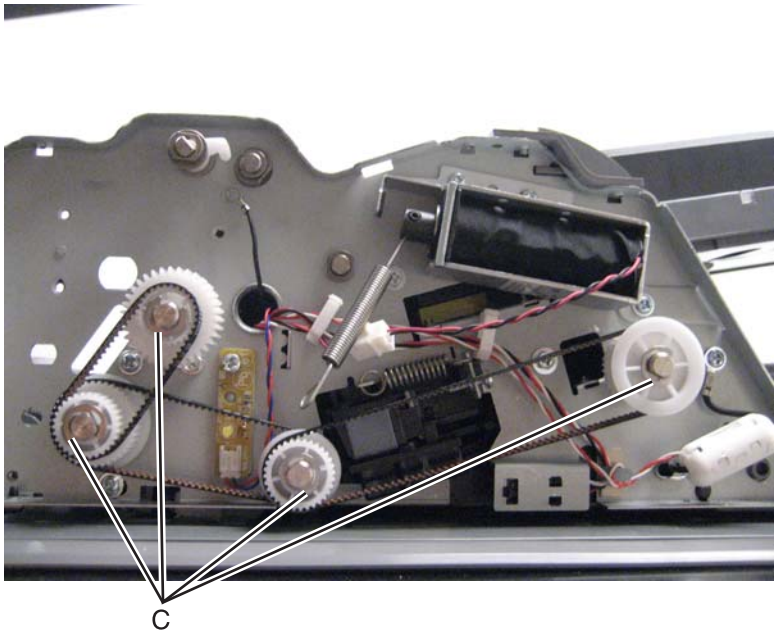


4. Remove the three screws (B) securing the ADF pick roll position cam assembly bracket.



Note: Replace the ground cable on the right bracket screw during reinstallation.

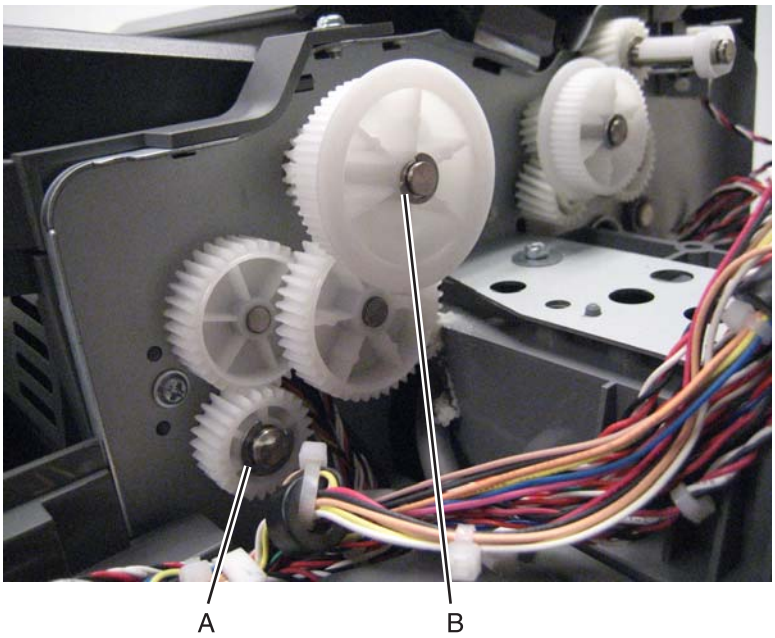
5. Remove the four E-clips (C), and remove the gears.



ADF transport drive gears (rear) and pulley removal

See **“ADF feed and drive” on page 7-23** for the part number.

1. Remove the ADF feed drive motor assembly. See **“ADF feed drive motor assembly removal” on page 4-170**.
2. Remove the E-clips (A) and (B).



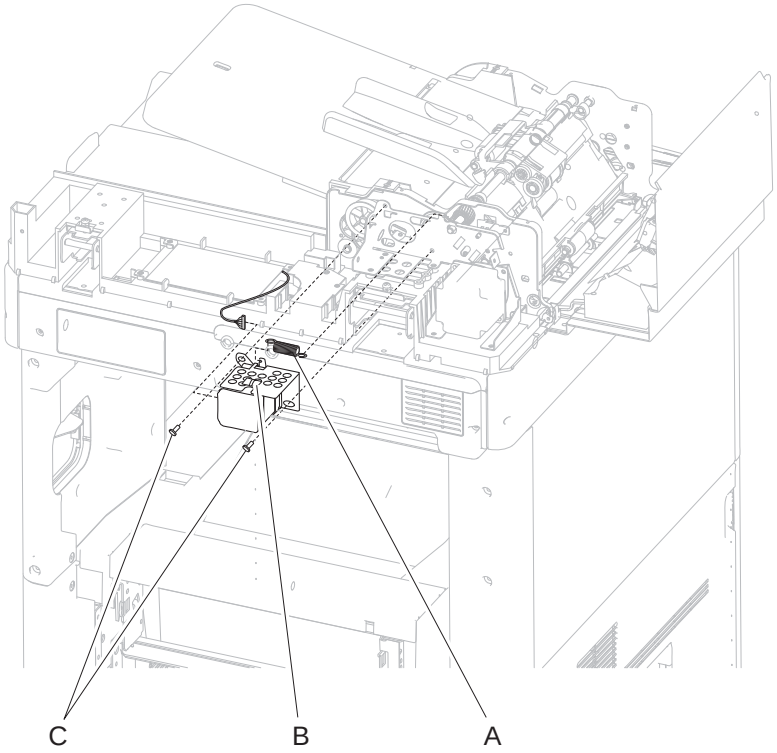
3. Remove the ADF transport gears and pulley.

ADF transport drive motor bracket assembly with cable removal

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See **“ADF feed and drive” on page 7-23** for the part number.

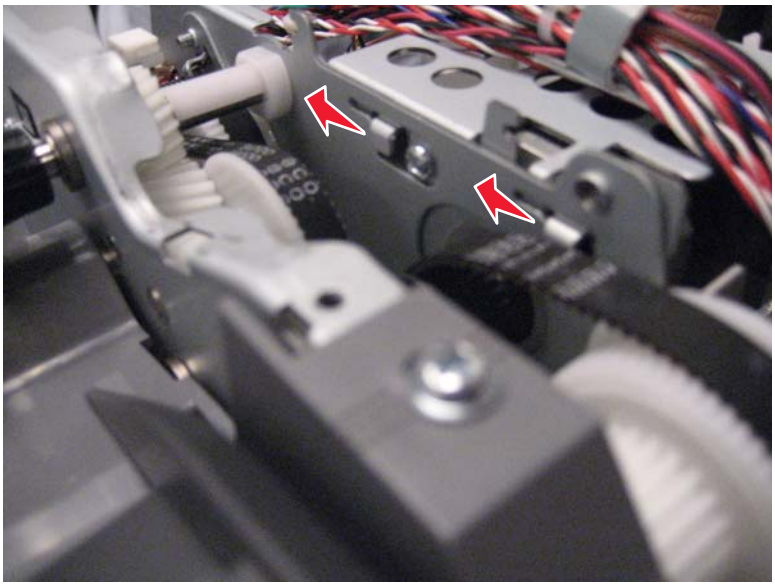
1. Remove the ADF rear cover. See **“ADF rear cover removal” on page 4-161**.
2. Remove the ADF transport drive motor bracket tension spring (A).
3. Bend up the cable clip (B) on top of the bracket, and remove the cables from the clip.
4. Disconnect the cable from the ADF controller card, and remove the cable from the cable clips.
   Note: Note the cable routing for reinstallation.
5. Remove the two screws (C).



6. Slide the ADF transport drive motor bracket to the left to loosen the transport belt.
7. Remove the bracket and cable.

Installation notes:

1. Fit the ears on the bracket into the slots in the ADF unit frame, and slide the bracket to the right.



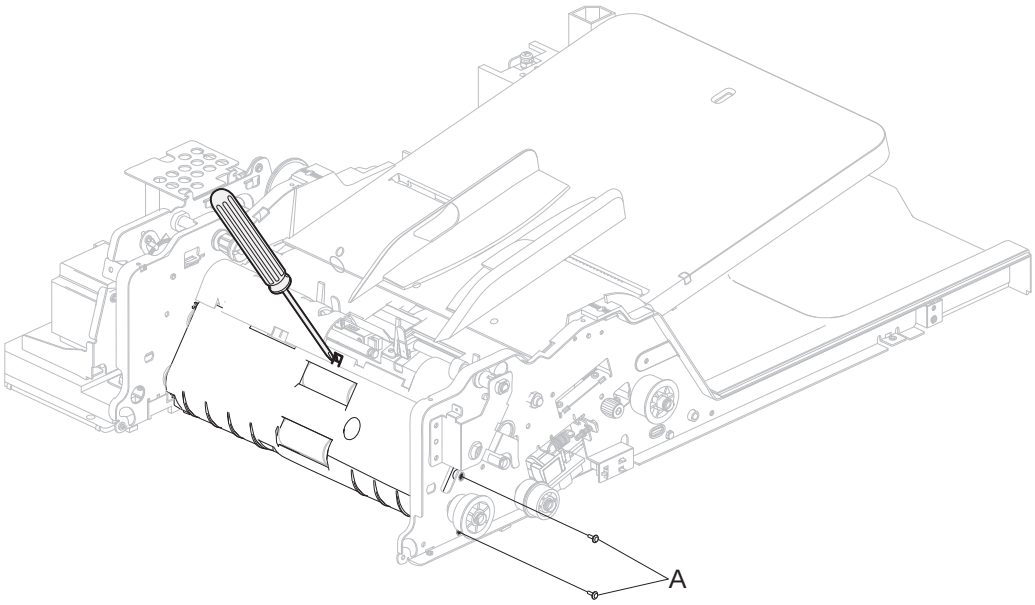
2. Attach the two mounting screws but do not tighten them.
3. Attach the spring.
4. Tighten the screws.

ADF turn guide removal

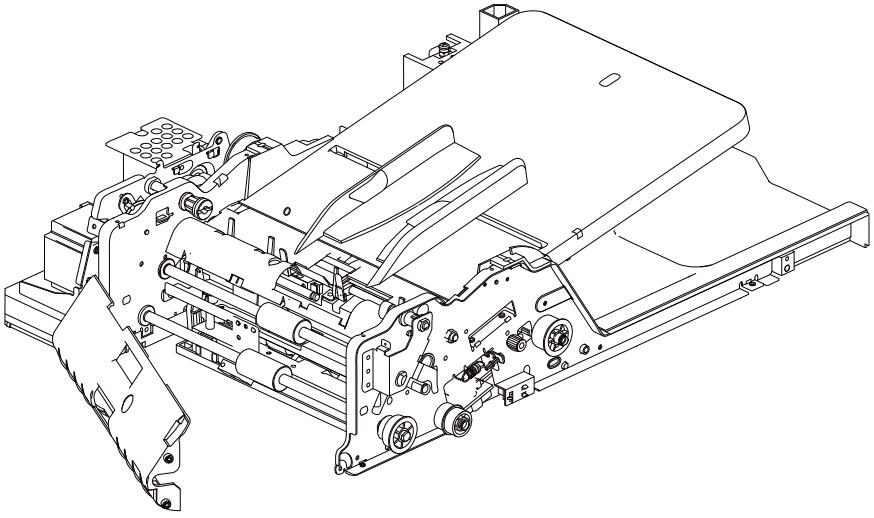
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See **“ADF covers” on page 7-21** for the part number.

1. Remove the ADF pinch roll assembly. See **“ADF pinch roll assembly removal” on page 4-182**.
2. Remove the ADF feed/pick roll assembly. See **“ADF feed/pick roll assembly removal” on page 4-173**.
3. Remove the two screws (A) from the front of the ADF unit assembly.
4. Using a flat-blade screwdriver, unfasten the three hooks securing the separator guide to the turn guide, starting with the center hook.



5. Pivot the turn guide out from the front side, giving room to dislodge the pins from the rear.



6. Remove the ADF turn guide.

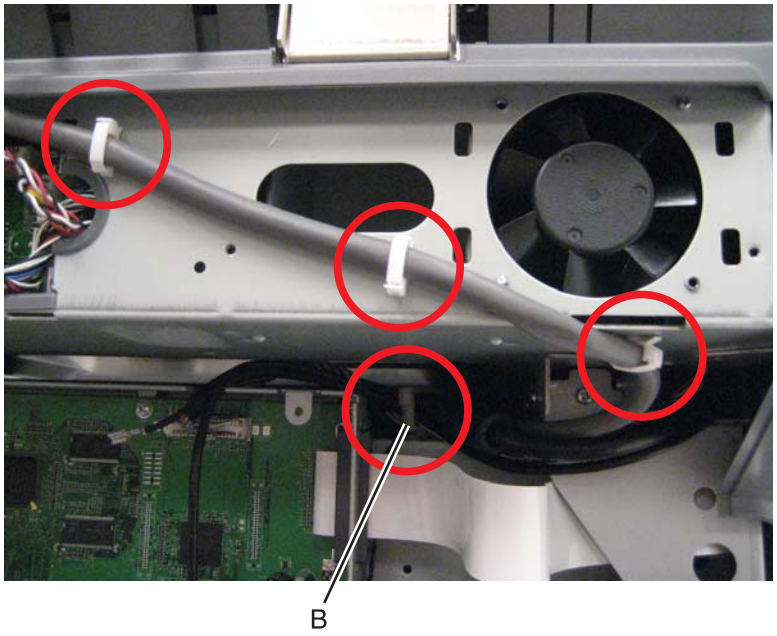
ADF unit assembly removal

See **“ADF unit assembly” on page 7-19** for the part number.

1. Remove the system board upper shield. See **“System board upper shield removal” on page 4-30**.
2. Disconnect the cable (A) from the system board.

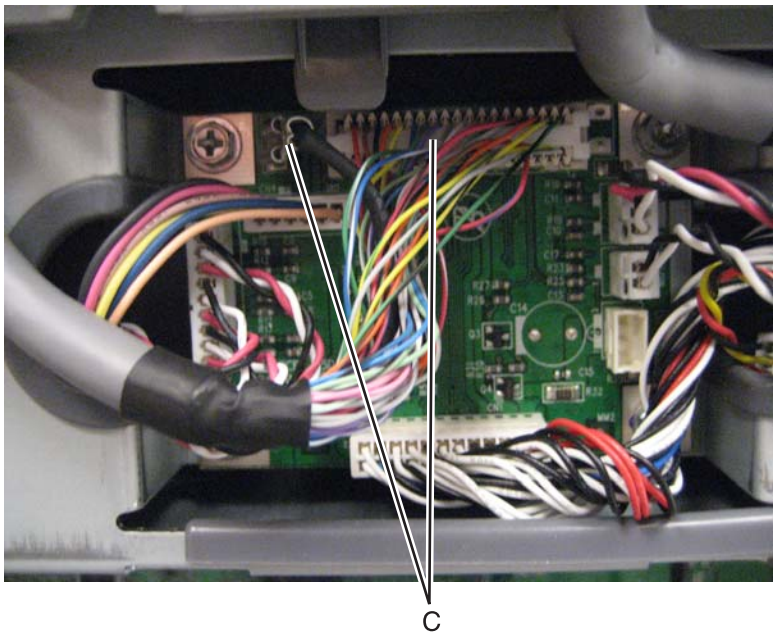


3. Open the four cable clamps, starting with the one above the system board (B).

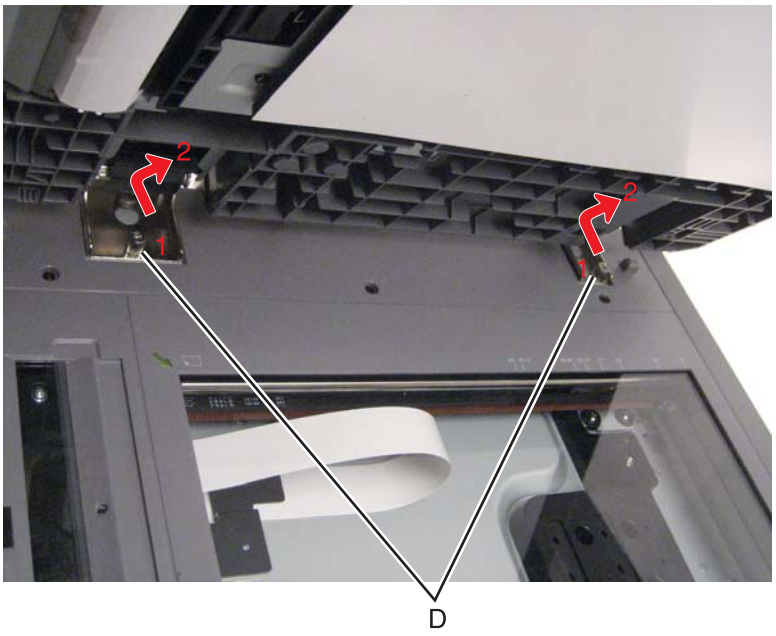


Note: Note the cable routing for reinstallation.

4. Disconnect the cable and ground (C) from the scanner interface card.



5. Lift the ADF unit assembly, and remove the two front thumb screws (D).
6. Slide the ADF unit assembly back, and lift to remove it.

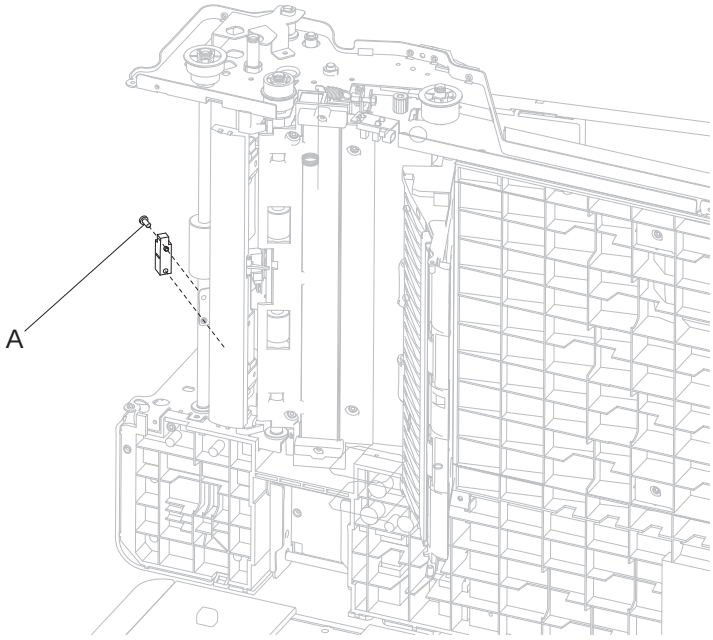


Installation note: After replacing the ADF unit assembly, you must calibrate the scanner and check for skew. See **"Calibrating the scanner" on page 3-67**, **"Adjusting skew" on page 3-54** and **"ADF magnification adjustment" on page 3-66**.

Sensor (ADF 1st scan) removal

See **“ADF electronics” on page 7-25** for the part number.

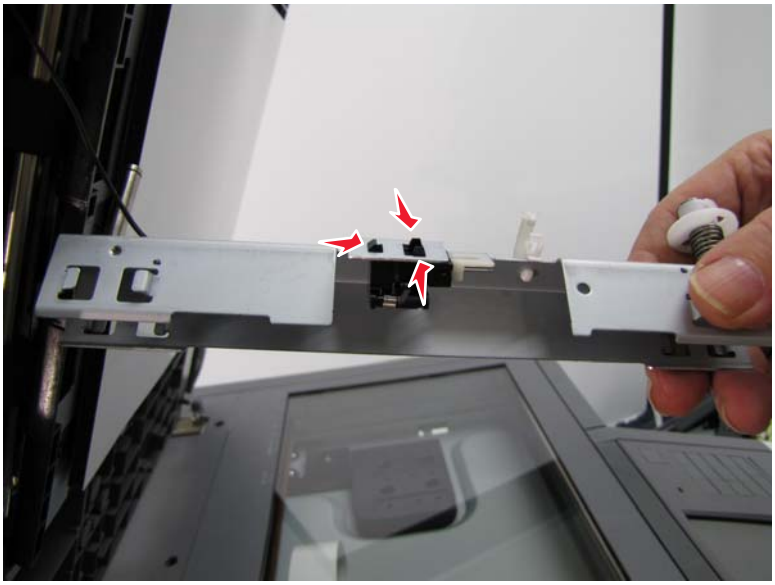
1. Remove the ADF turn guide. See **“ADF turn guide removal” on page 4-192**.
2. Disconnect the cable from the sensor.
3. Remove the screw (A) to remove the mounting bracket.
4. Remove the screw securing the sensor to its bracket.



Sensor (ADF 2nd scan) removal

See **“ADF electronics” on page 7-25** for the part number.

1. Remove the ADF media pinch pad assembly. See **“ADF media pinch pad assembly removal” on page 4-176**.
2. Squeeze the tabs to remove the sensor from the mounting bracket.

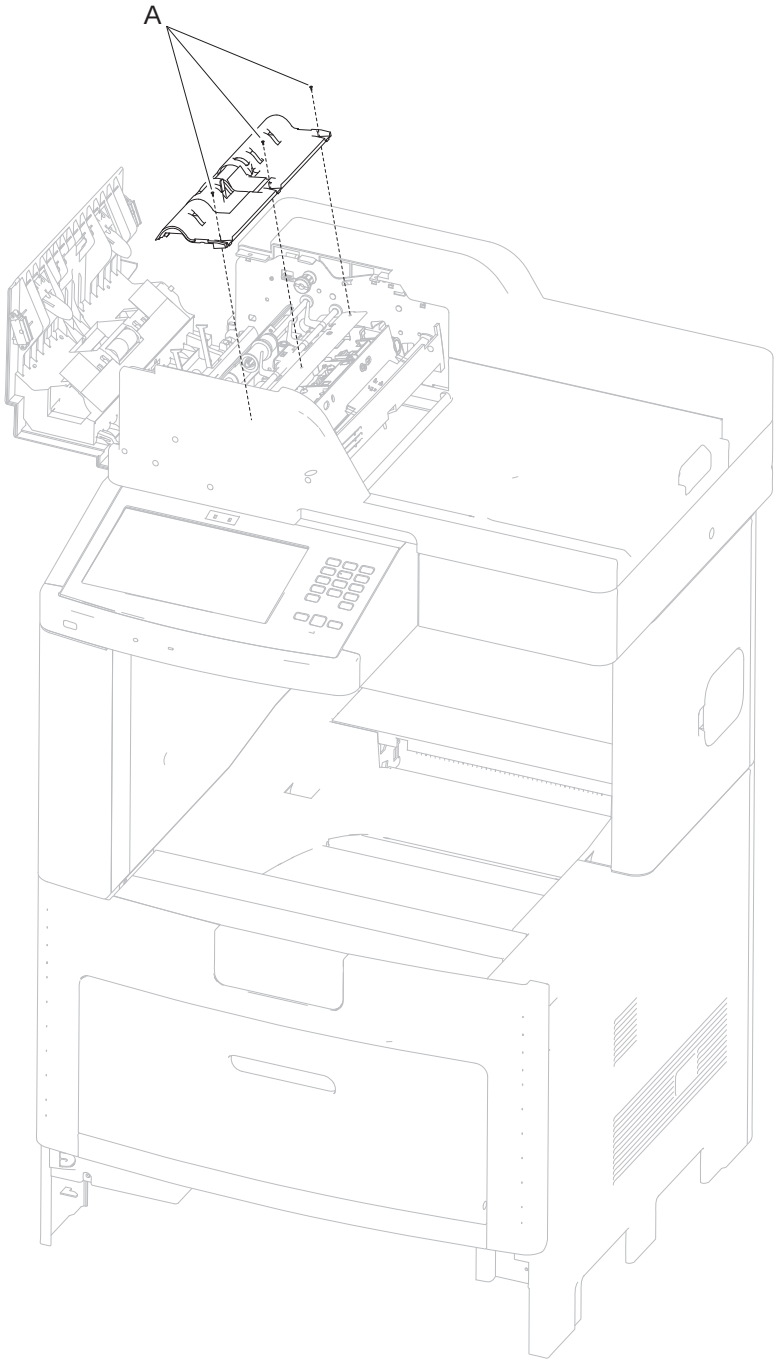


Sensor (ADF document set) removal

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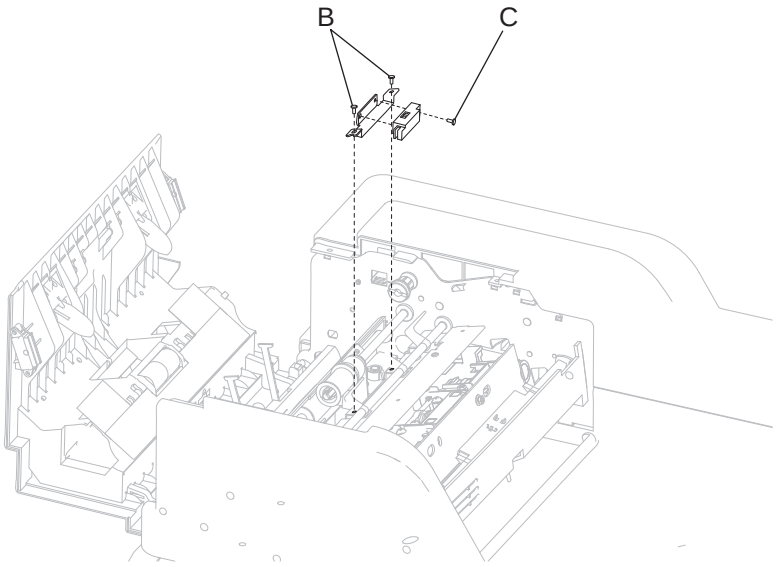
See **“ADF electronics” on page 7-25** for the part number.

1. Remove the ADF document tray assembly. See **“ADF document tray assembly removal” on page 4-164**.
2. Remove the ADF pick pad cover assembly. See **“ADF pick pad cover assembly removal” on page 4-178**.
3. Remove the screws (A), and remove the ADF separator guide.



4. Disconnect the cable from the sensor.

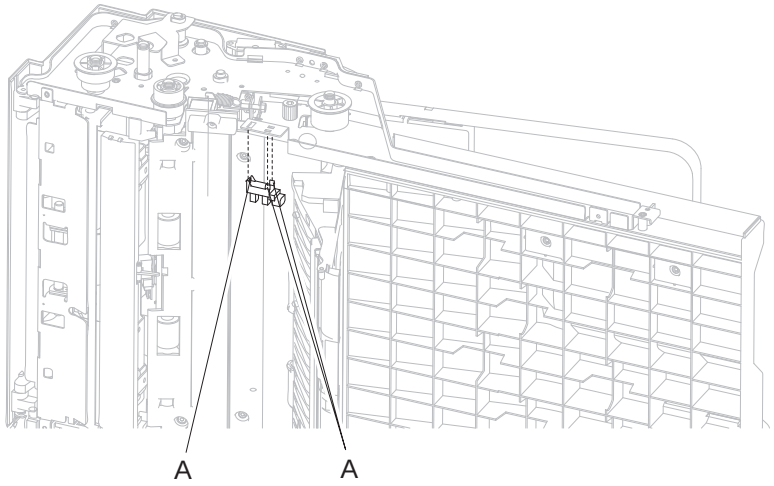
5. Remove the two screws (B) securing the sensor bracket, and remove the bracket.
6. Remove the screw (C) securing the sensor to the bracket.



Sensor (ADF lower door interlock) removal

See **“ADF electronics” on page 7-25** for the part number.

1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-160**.
2. Remove the ADF platen cushion. See **“ADF platen cushion removal” on page 4-183**.
3. Press the green tab to open the ADF lower door assembly.
4. Squeeze the tabs to remove the sensor (A) from the ADF frame.



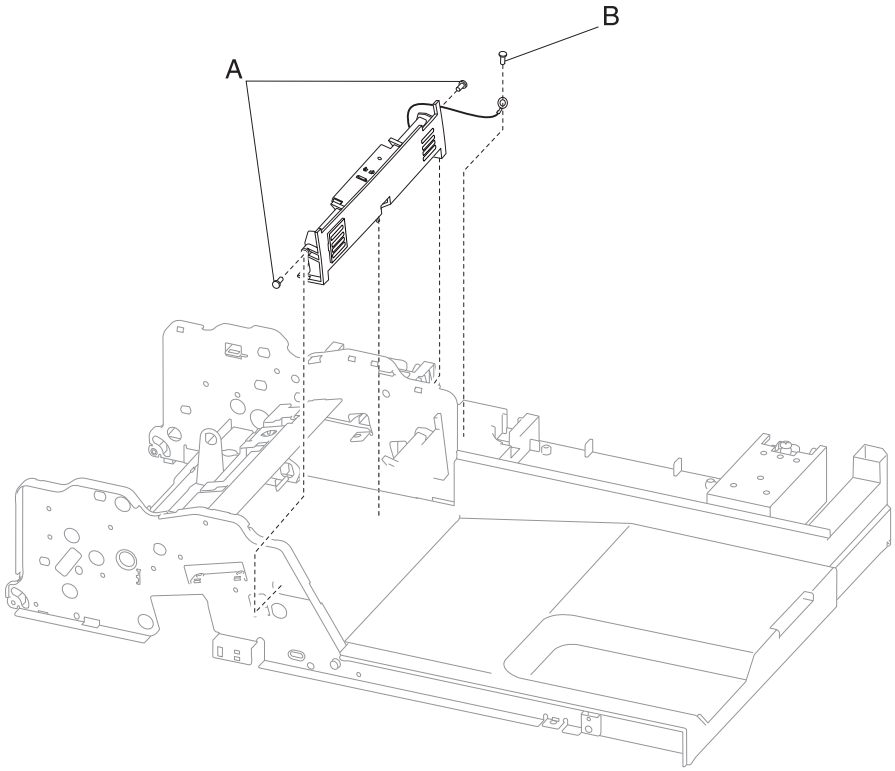
5. Disconnect the cable to remove the sensor.

Sensor (ADF media exit) fan bracket assembly removal

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See **“ADF electronics” on page 7-25** for the part number.

1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-160**.
2. Remove the ADF rear cover. See **“ADF rear cover removal” on page 4-161**.
3. Open the ADF top door assembly.
4. Disconnect the cables from the fan and sensor.
5. Remove the two screws (A) on the front and rear of the sensor (ADF media exit) fan bracket assembly.
6. Remove screw (B) from the ground strap.



7. Remove the sensor (ADF media exit) fan bracket assembly.

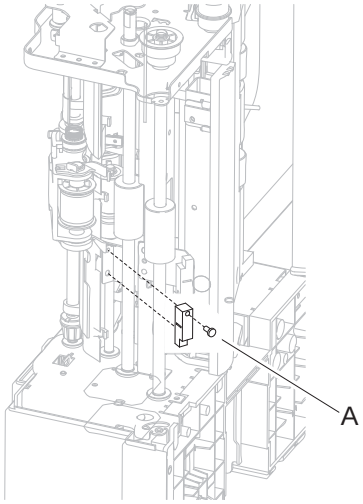
Installation notes:

- Remove the fan filter cover assembly from the used sensor fan bracket assembly, and install on the new assembly.
- Be sure to reinstall the ground strap.

Sensor (ADF sheet through) removal

See **“ADF electronics” on page 7-25** for the part number.

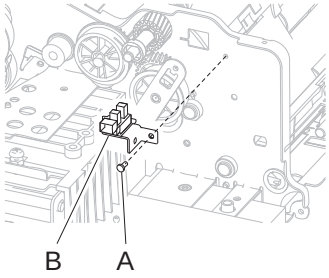
1. Remove the ADF turn guide. See **“ADF turn guide removal” on page 4-192**.
2. Remove the screw (A) holding the sensor bracket.
3. Disconnect the sensor cable.
4. Remove the screw to remove the sensor from the bracket.



Sensor (ADF top door interlock) removal

See **“ADF electronics” on page 7-25** for the part number.

1. Remove the ADF feed drive motor assembly. See **“ADF feed drive motor assembly removal” on page 4-170**.
2. Disconnect the cable from the sensor.
3. Remove the screw (A) if you need to replace the bracket.
4. Press in the tabs under the sensor bracket (B) to remove the sensor.

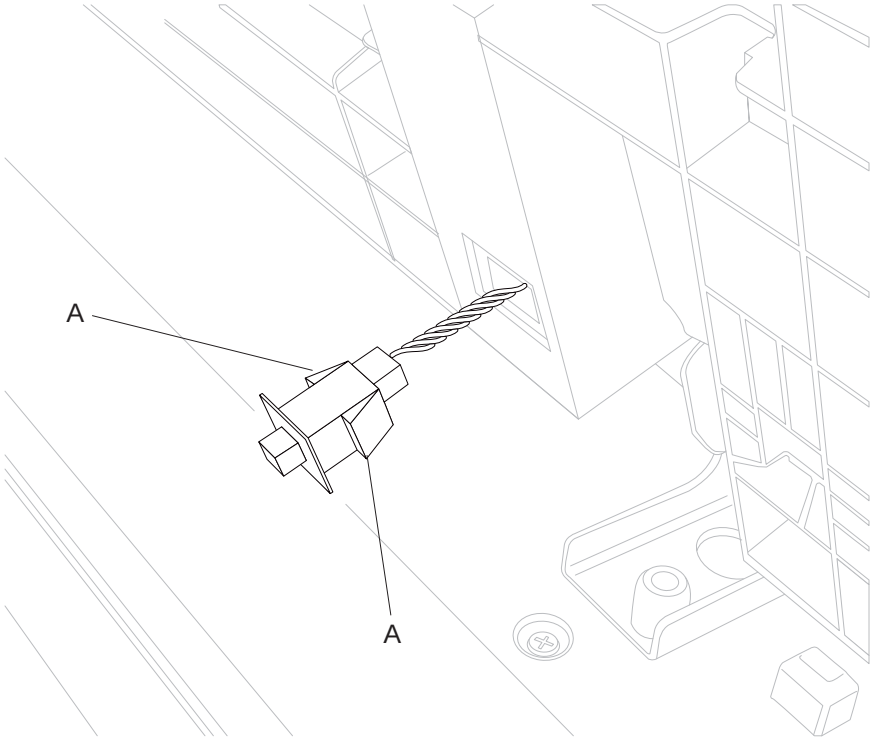


Switch (ADF closed interlock) removal

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See **“ADF electronics” on page 7-25** for the part number.

1. Remove the ADF document tray assembly. See **“ADF document tray assembly removal” on page A-164**.
2. Open the ADF unit assembly.
3. Using a screwdriver, press the tabs (A) on each side of the switch to remove it.



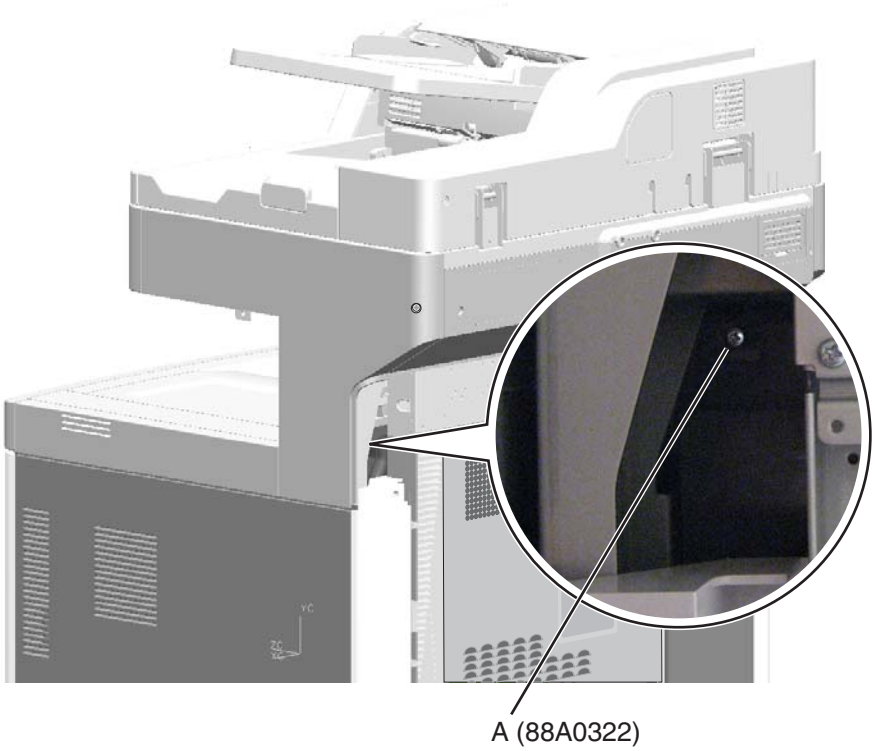
4. Disconnect the cable from the switch to remove the switch.

Scanner cover removals

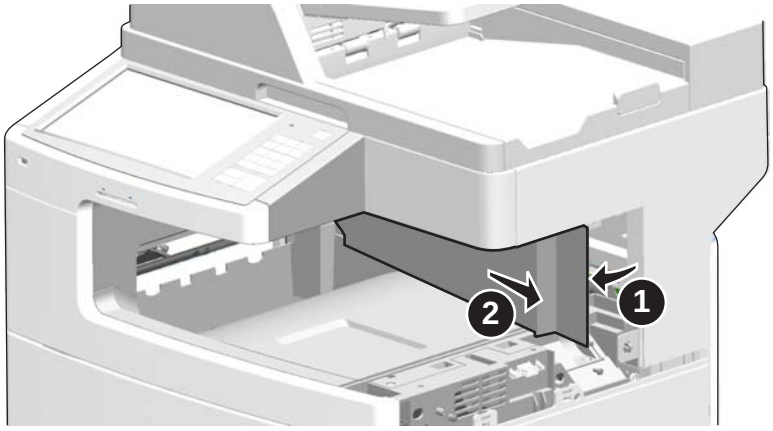
AIO rear scanner cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-25**.
2. Remove the AIO option cover. See **“AIO option cover removal” on page 4-4**.
   Note: If you have any output options installed, then the option cover is already removed. Remove the output options and redrive unit instead.
3. Remove the screw (A) from the rear of the printer.



4. Pivot the AIO rear scanner cover forward, and then slide to remove it.

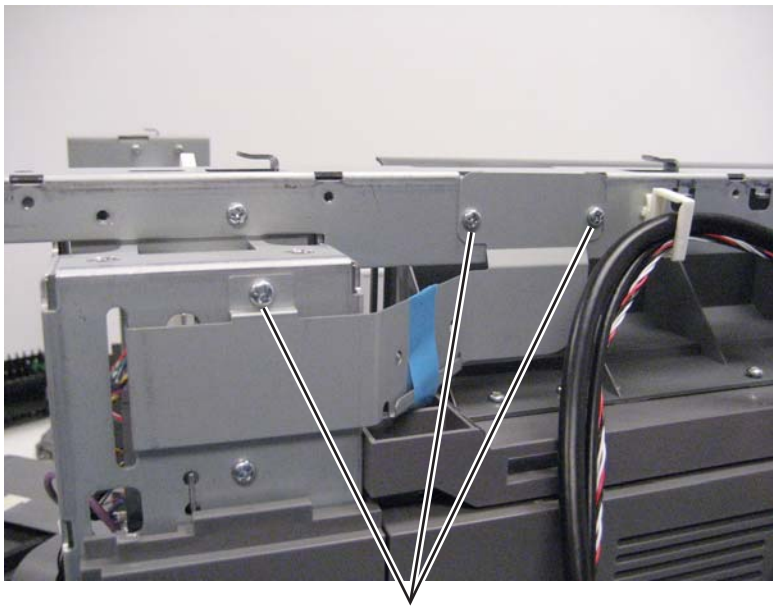


AIO lower scanner cover removal

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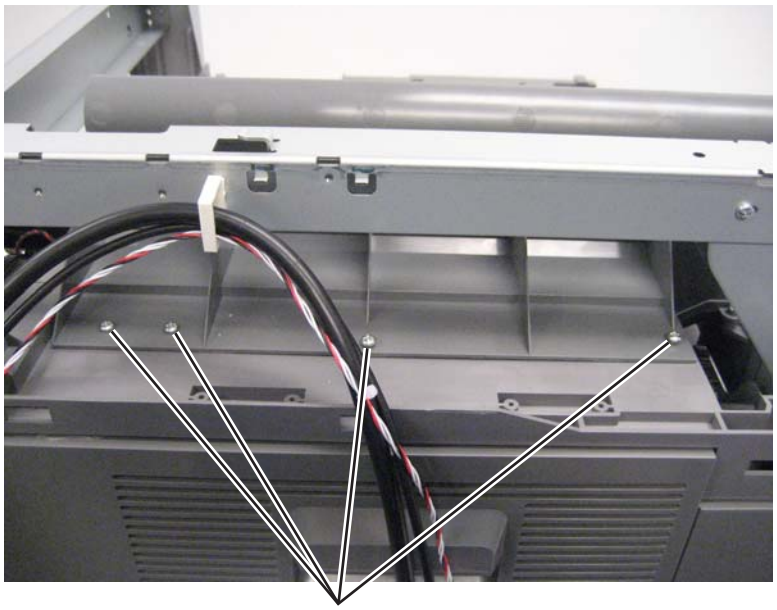
See **“Front, right, and top covers” on page 7-3** for the part number.

1. Remove the flatbed scanner assembly. See **“Flatbed scanner assembly removal” on page 4-216**.
2. Remove the AIO rear scanner cover. See **“AIO rear scanner cover removal” on page 4-201**.
3. Remove three screws (A), and remove the cable shield.



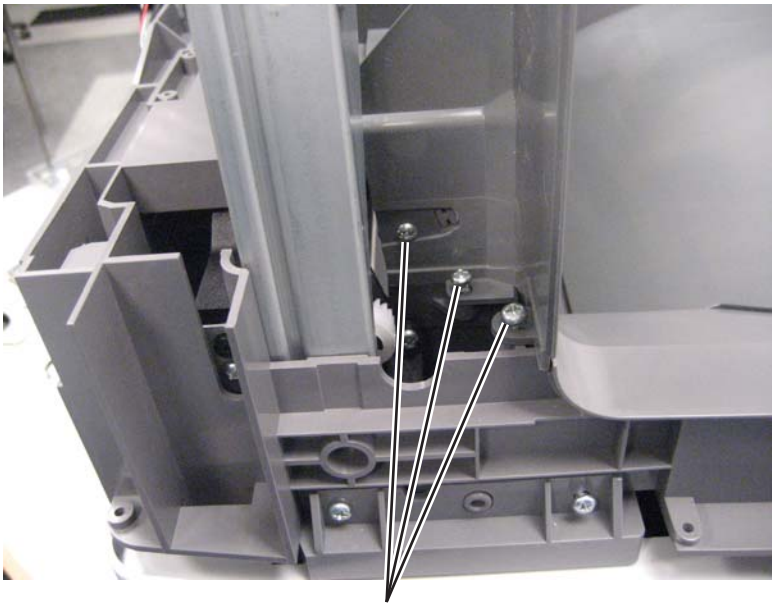
A (88A0212)

4. Remove four screws (B) from the top.



B (88A0323)

5. Remove three screws (C) from the front.



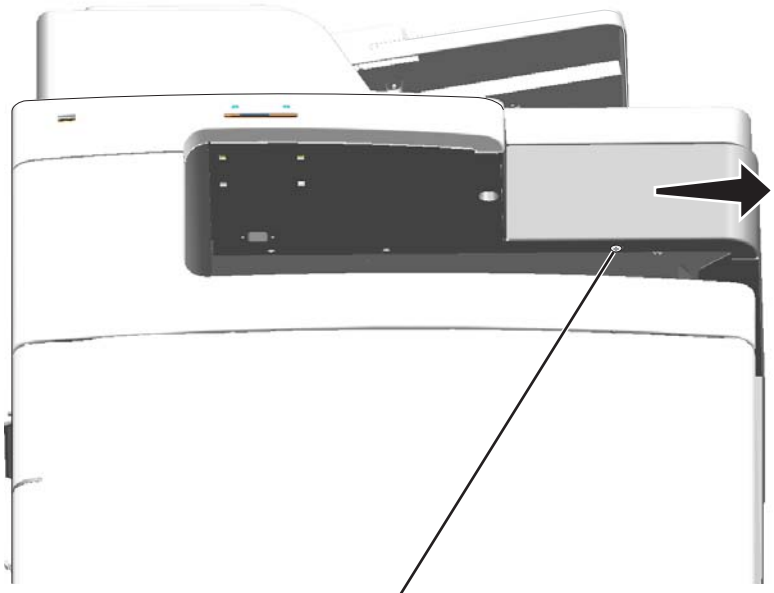
C (88A0323)

6. Lift to remove the lower scanner cover.

Scanner front cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Remove the scanner right side cover. See **“Scanner right side cover removal” on page 4-205**.
2. Remove the screw (A), and slide the cover to the right to remove it.

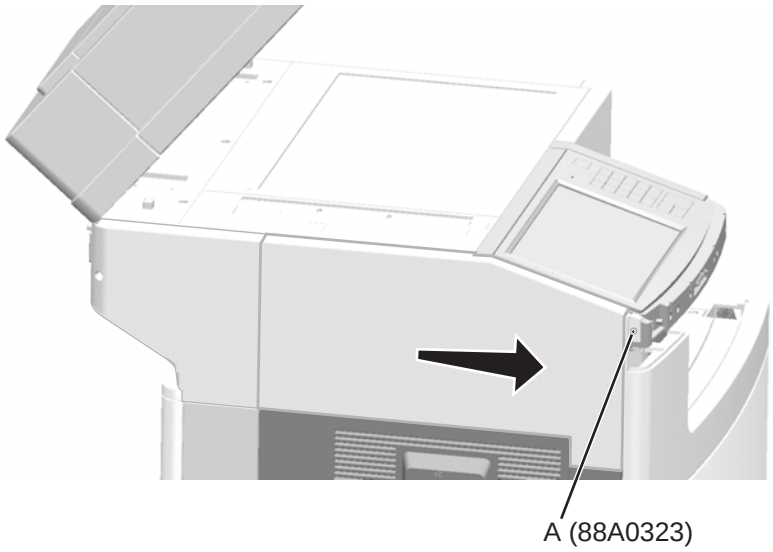


A (88A0232)

Scanner left side front cover removal

See **“Rear” on page 7-15** for the part number.

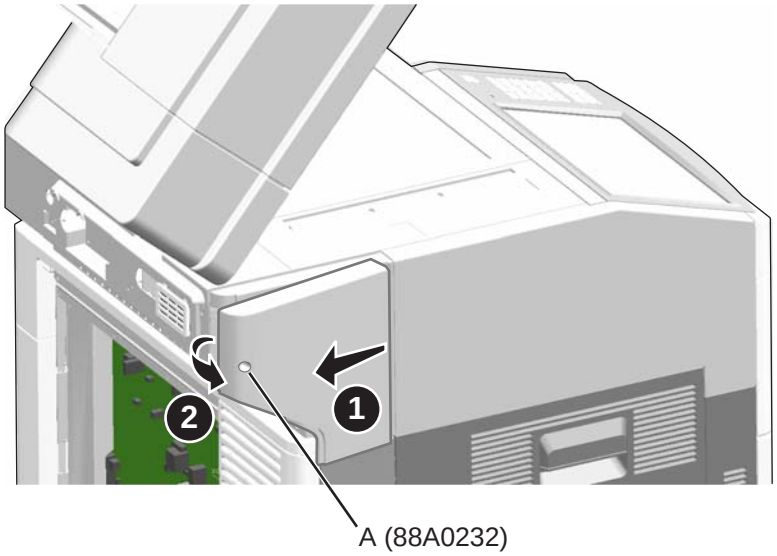
1. Remove the scanner top cover. See **“Scanner top cover removal” on page 4-206**.
2. Remove the AIO front upper cover. See **“AIO front upper cover removal” on page 4-3**.
3. Remove the AIO front lower cover. See **“AIO front lower cover removal” on page 4-3**.
4. Remove the screw (A).
5. Slide the cover to the front of the printer to remove it.



Scanner left side rear cover removal

See **“Rear” on page 7-15** for the part number.

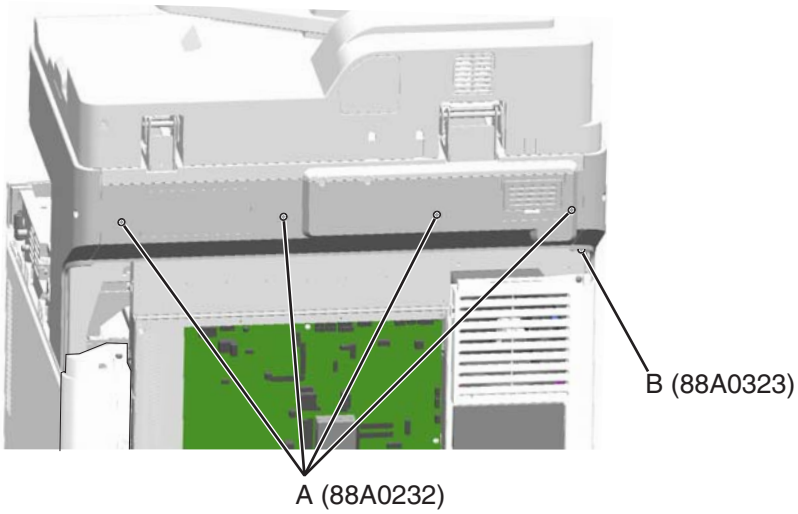
1. Remove the screw (A).
2. Slide the cover back, and then pull it toward you to remove it.



Scanner rear cover removal

See **“Rear” on page 7-15** for the part number.

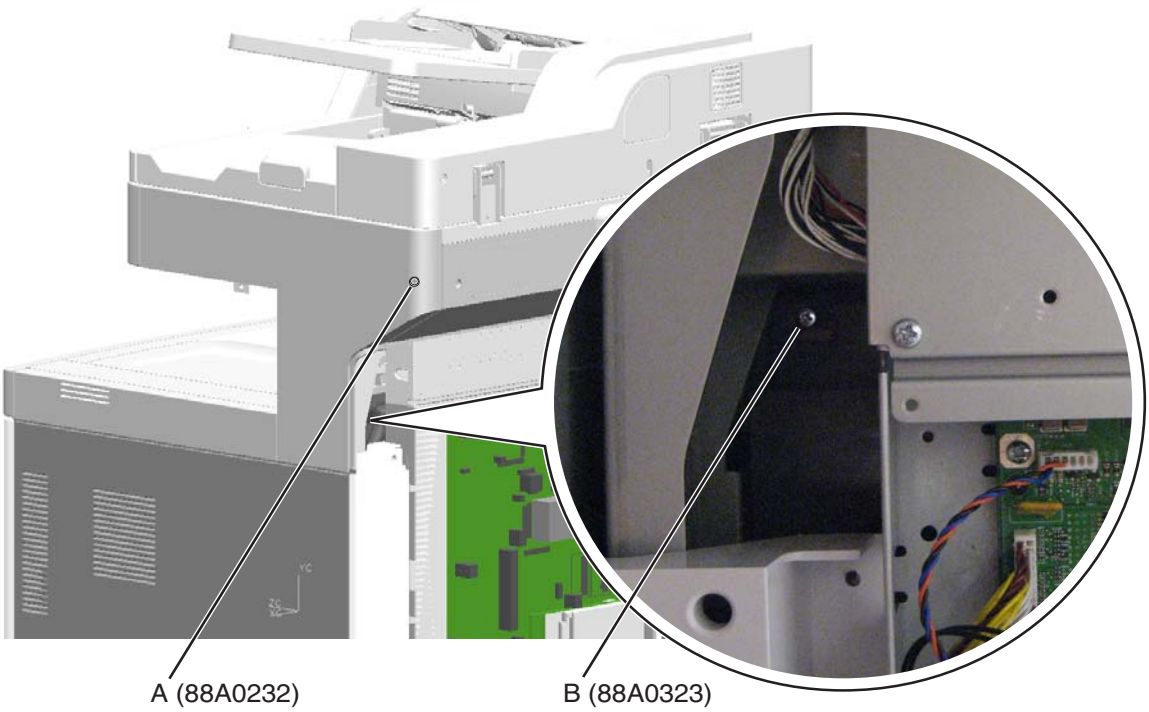
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-25**.
2. Remove the four screws (A) and the one screw (B), and rotate the bottom up to remove the cover.



Scanner right side cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-205**.
2. Remove the screw from the side (A) and the screw from the rear (B).

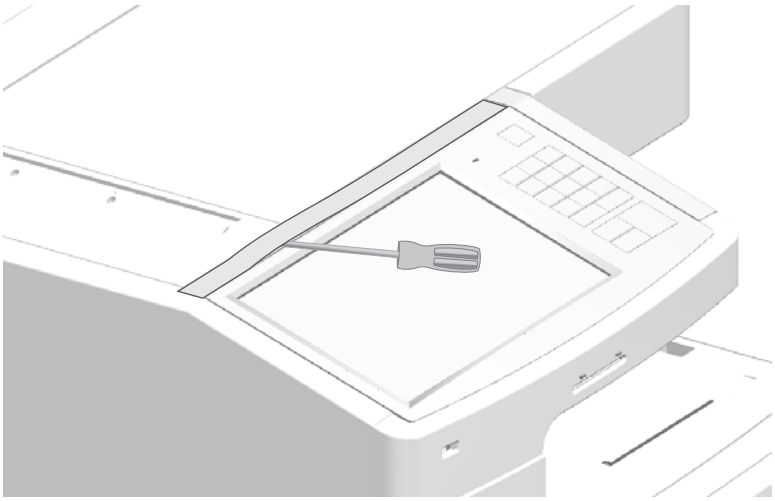


3. Slide the cover toward the rear of the printer and pull to remove it.

Scanner top cover removal

See **“Front, right, and top covers” on page 7-3** for the part number.

1. Lift the ADF unit assembly.
2. Use a flat-blade screwdriver to pry up the cover, and then remove it.



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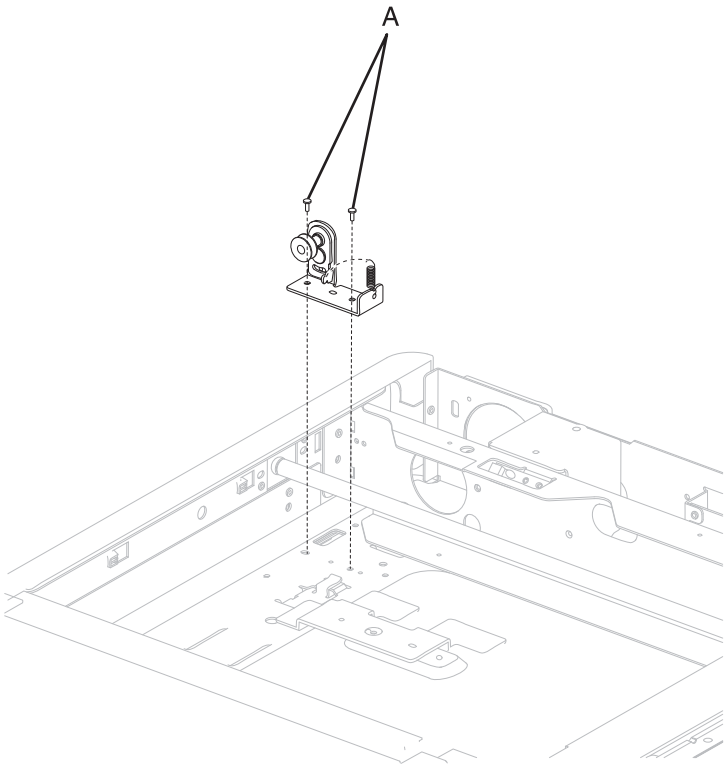
Scanner removals

For the scanner covers, see **“Scanner cover removals” on page 4-201**.

Carriage belt tensioner assembly removal

See **“Flatbed scanner” on page 7-17** for the part number.

1. Remove the scanner platen glass cover. See **“Scanner platen glass cover removal” on page 4-224**.
2. Remove two screws (A) to release the tensioner assembly from the flatbed.



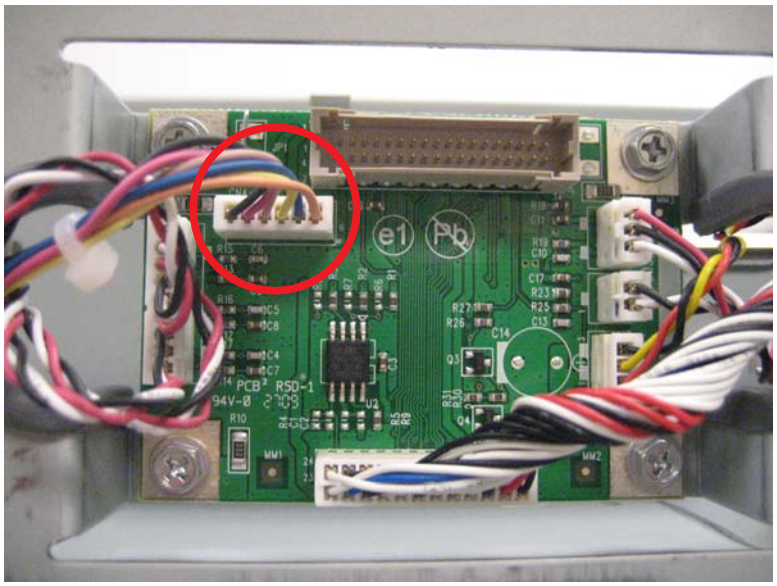
3. Slide the belt off the tensioner to remove the assembly.

Carriage drive motor assembly removal

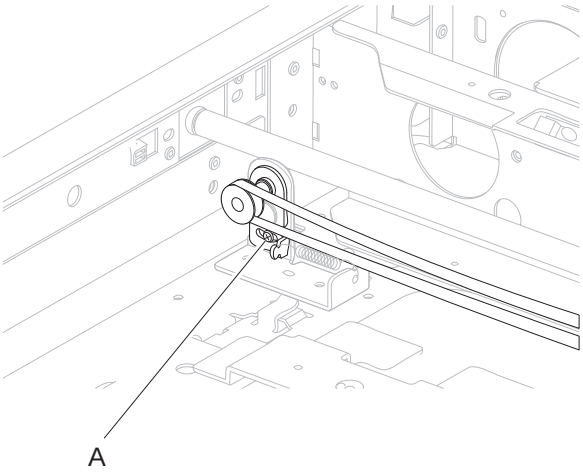
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See **“Flatbed scanner” on page 7-17** for the part number.

1. Remove the scanner platen glass cover. See **“Scanner platen glass cover removal” on page 4-224**.
2. Disconnect the cable (G) from the scanner interface card.

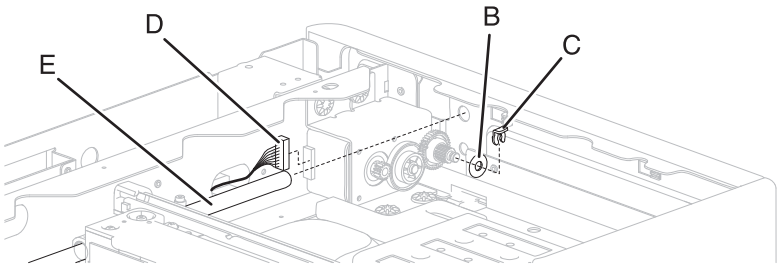


3. Loosen the screw (A) in the tensioner.

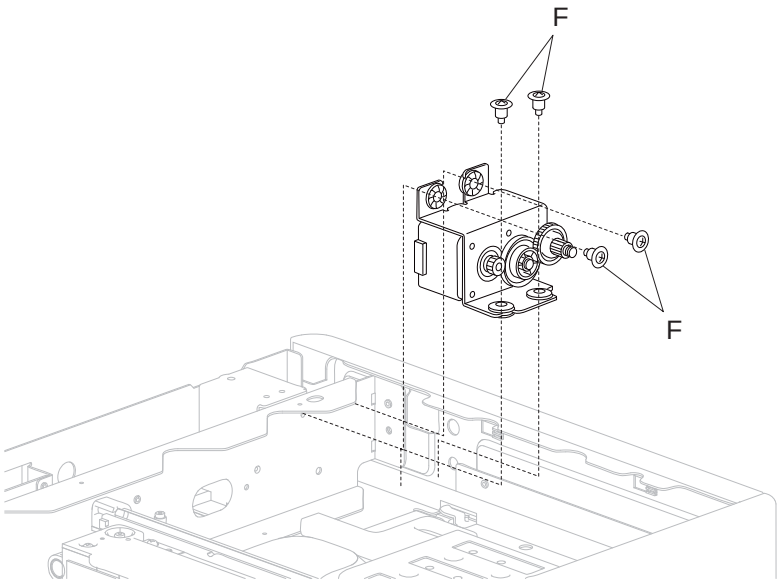


4. Pull the tensioner all the way to the right to put slack in the belt, and then retighten the screw.
5. Slide the belt off the tensioner.

6. From the other end of the belt, remove the clip (B) and the washer (C) under, and then slide the belt off the gear.
7. Leave the cable (D) connected to the motor.
8. From the left side of the printer, lift the rear CCD scanner shaft (E), and slide the shaft out of the flatbed until it clears the motor.



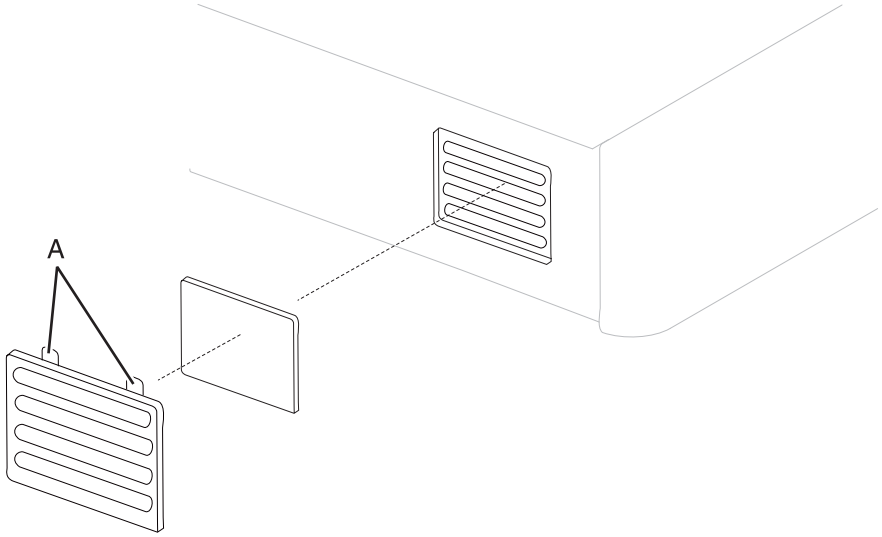
9. Remove four screws (F), and remove the carriage drive motor assembly.



Flatbed scanner cooling fan filter removal

See **“Flatbed scanner” on page 7-17** for the part number.

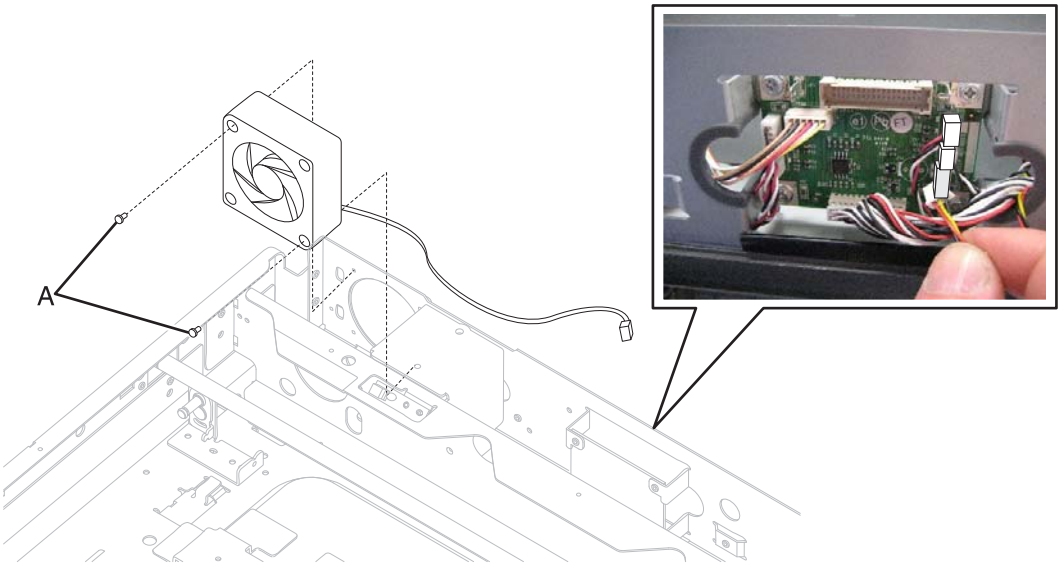
1. Pry out the tabs (A) to remove the filter cover from the frame.
2. Remove the filter.



Flatbed scanner cooling fan removal

See **“Flatbed scanner” on page 7-17** for the part number.

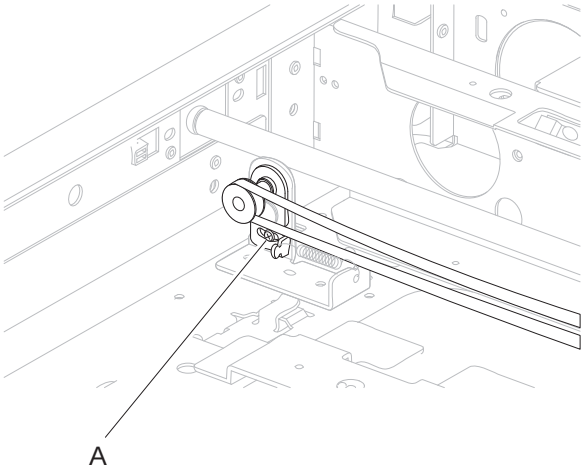
1. Remove the scanner platen glass cover. See **“Scanner platen glass cover removal” on page 4-224**.
2. Disconnect the cable from the scanner interface card.
3. Remove two screws (B), and remove the fan.



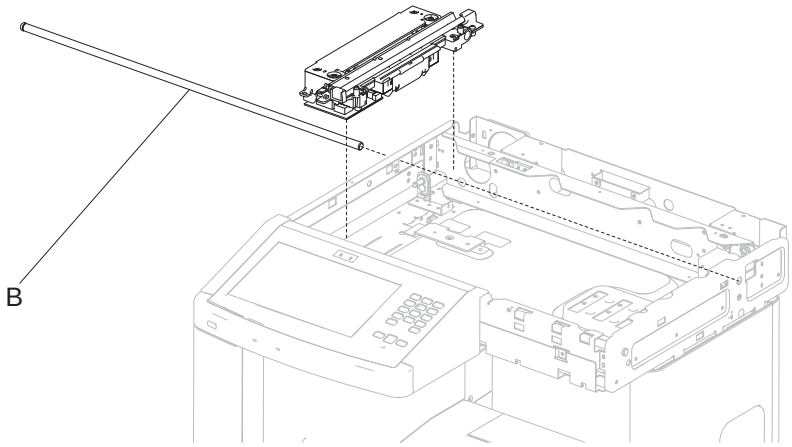
Flatbed scanner CCD assembly removal

See **“Flatbed scanner” on page 7-17** for the part number.

1. Remove the scanner platen glass cover. See **“Scanner platen glass cover removal” on page 4-224**.
2. Loosen the screw (A) in the tensioner.



3. Pull the tensioner all the way to the right to put slack in the belt, and then retighten the screw.
4. Slide the belt off the tensioner.
5. From the left side of the printer, lift the end of the rear CCD scanner shaft (B), and slide it out of the printer.



6. Pull the belt out of the clip on the scanner CCD assembly.
7. Turn the assembly upside down and carefully disconnect the ribbon cable to remove the assembly.

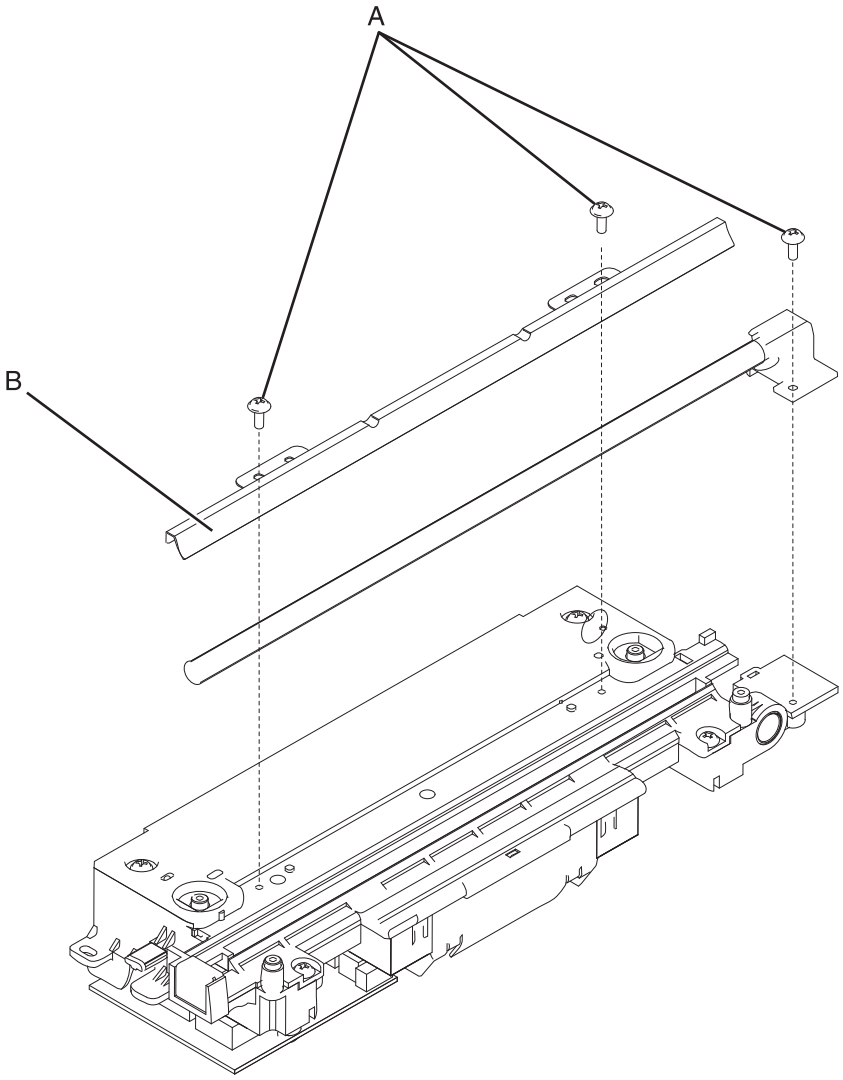
Installation note: After replacing the flatbed scanner CCD assembly, you must calibrate the scanner and check for skew. See **“Calibrating the scanner” on page 3-67**, **“Adjusting skew” on page 3-54**.

Scanner exposure lamp removal

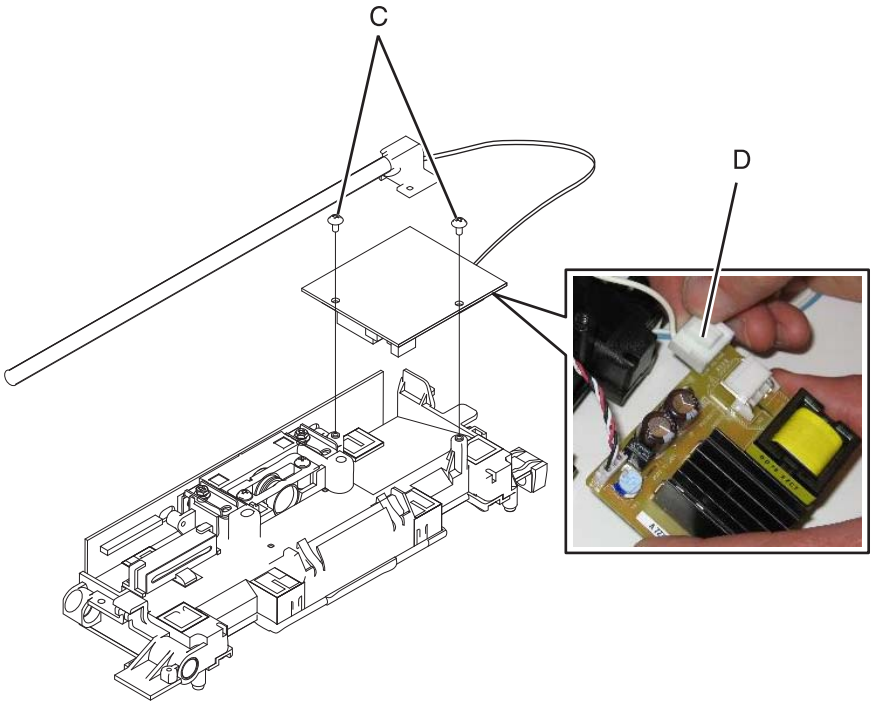
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See **“Flatbed scanner” on page 7-17** for the part number.

1. Remove the correct CCD assembly for the lamp you need to replace. See one of the following:
   “ADF duplex CCD assembly removal” on page 4-166
   “Flatbed scanner CCD assembly removal” on page 4-211
2. Remove the three screws (A) securing the scanner exposure lamp and cable.
3. Remove the lamp reflector (B) from the CCD assembly.

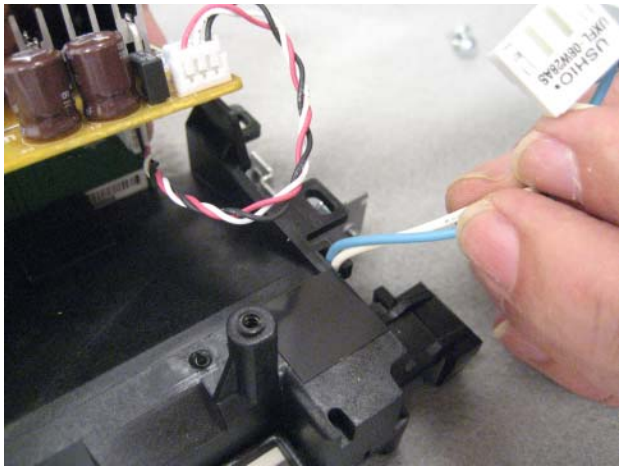


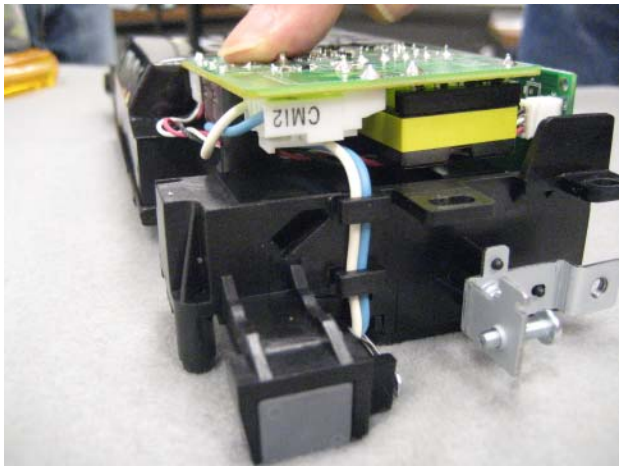
4. Remove the two screws (C) securing the exposure lamp card from the underside of the CCD assembly, and lift the card from the CCD assembly.
5. Pinch the lever (D) to disconnect the cable.



6. Remove the scanner exposure lamp by lifting up on the rear end and pulling the lamp out of the grommet. Be careful not to touch the glass part of the lamp.

Installation note: Make sure to feed the cable through the cable holders before you connect the cable to the board.



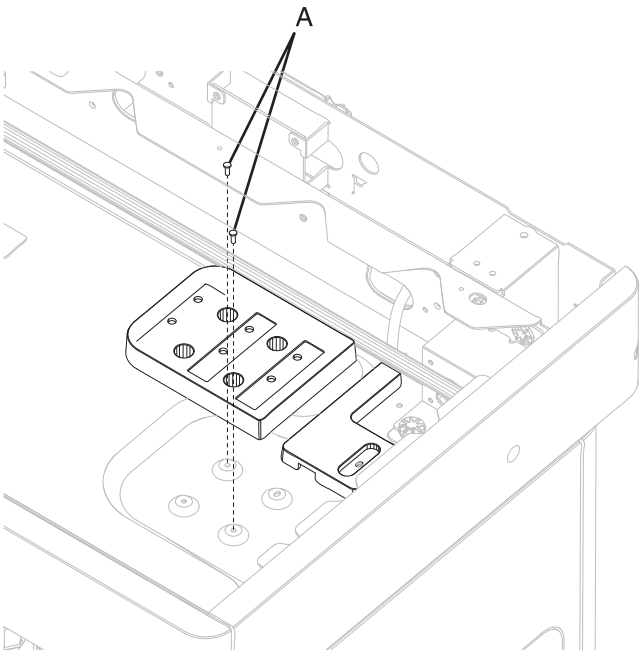


Scanner FB length sensor cable removal

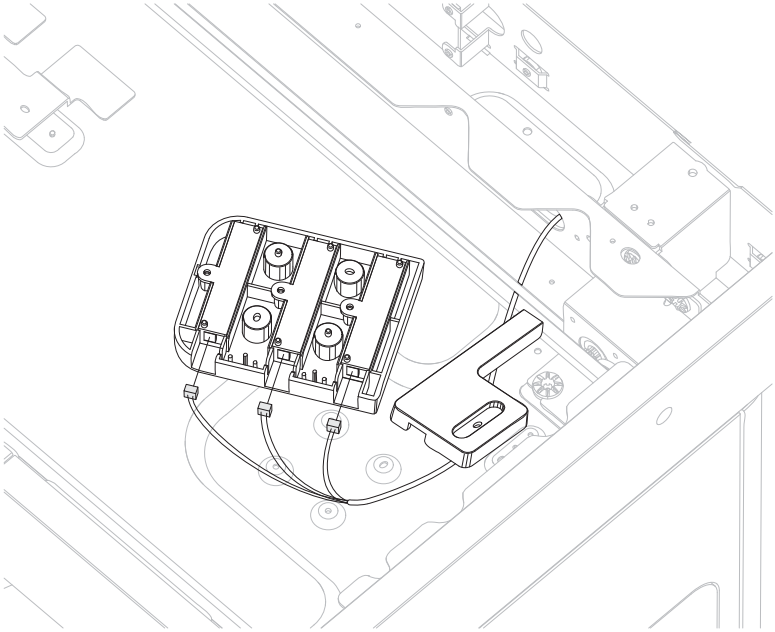
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See **“Flatbed scanner” on page 7-17** for the part number.

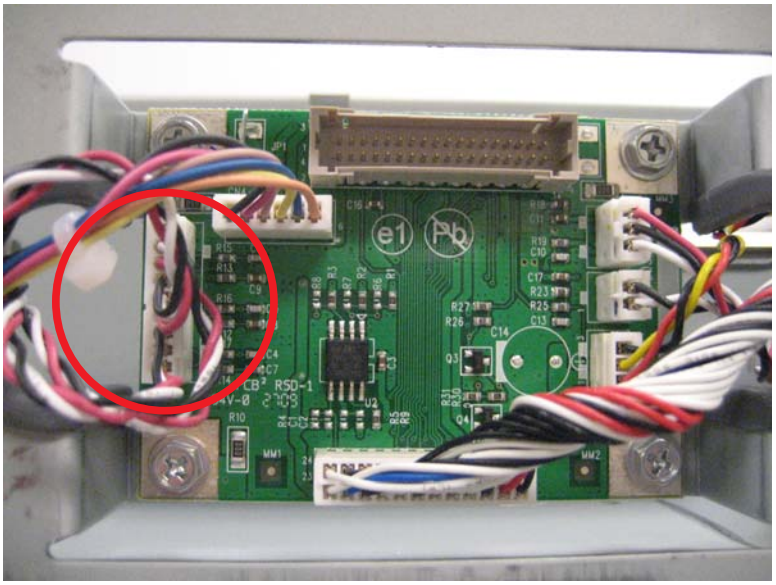
1. Remove the scanner platen glass cover. See **“Scanner platen glass cover removal” on page 4-224**.
2. Remove two screw (A) from the sensor and one screw (B) from the cable cover, and remove the cable cover.



3. Flip the sensor over and disconnect the three cables.



4. Disconnect the cable (C) from the scan interface card, and feed the cable through the frame.



Note: Observe the cable routing for reinstallation.

Flatbed scanner assembly removal

See **“Flatbed scanner” on page 7-17** for the part number.

Warning: The following components contain mirrored NVRAM. When replacing any one of the following components, replace only one component at a time:

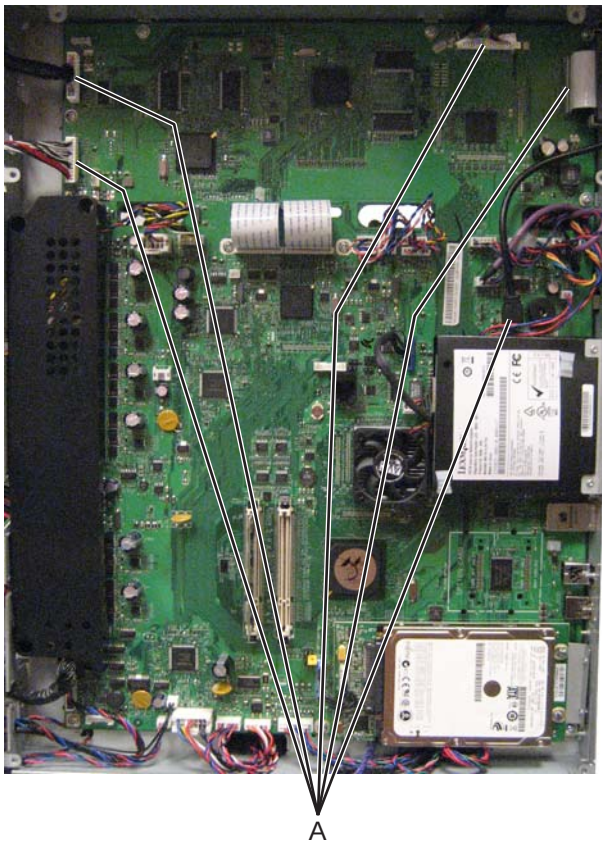
- System board
- Flatbed scanner assembly
- Scanner interface card

Replace the required component, and then perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one, or the printer will be rendered inoperable.

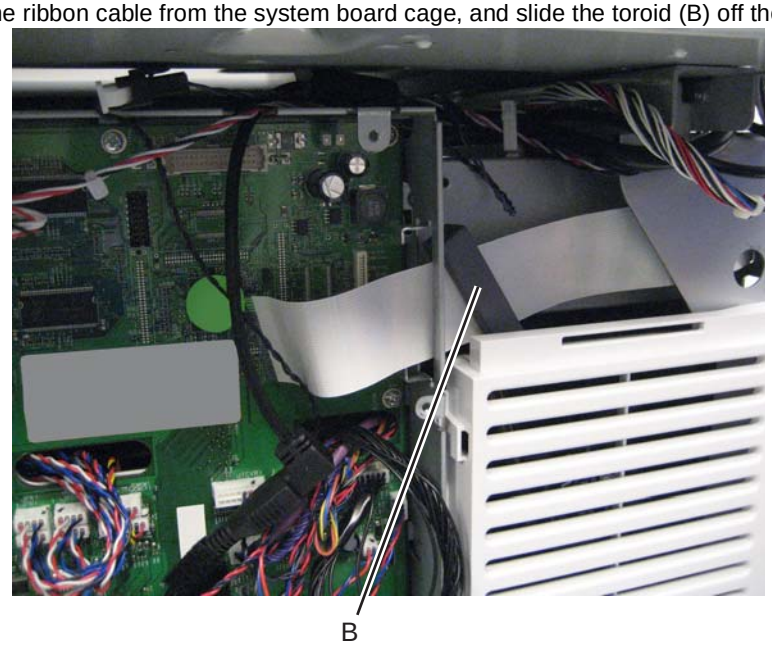
Warning: Never install and remove components listed above as a method of troubleshooting components. Once you install one of these components in a printer and perform a POR, the component cannot be used in another printer. It must be returned to the manufacturer.

Removing the flatbed to access other parts

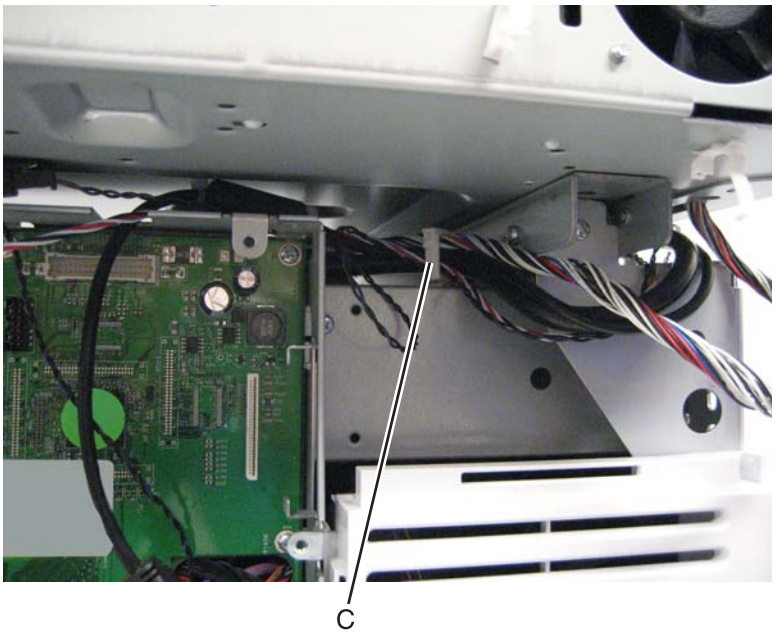
1. Remove the system board upper shield. See **“System board upper shield removal” on page 4-30**.
2. Remove the scanner right side cover. See **“Scanner right side cover removal” on page 4-205**.
3. Remove the scanner left side front cover. See **“Scanner left side front cover removal” on page 4-204**.
4. Remove the scanner left side rear cover. See **“Scanner left side rear cover removal” on page 4-204**.
5. Disconnect the five cables (A) from the system board.



6. Remove the ribbon cable from the system board cage, and slide the toroid (B) off the cable.



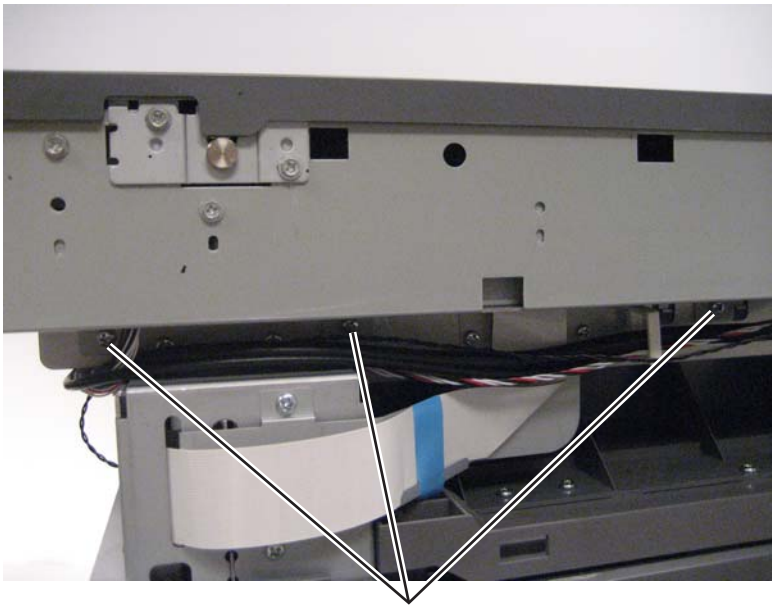
7. Open the cable clamp (C), and then feed the cables out from over the system board.



8. From the left side, disconnect the cave light beacon cable, and remove the front half from the cable clamp.

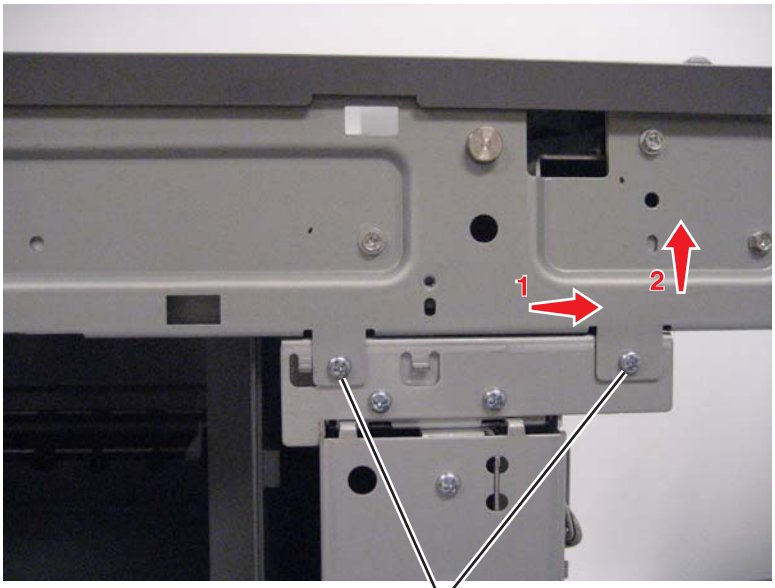


9. Remove three screws (D) from the left side.



D (88A0212)

10. Remove two screws (E) from the right side, and then slide the flatbed assembly back and lift to remove it.

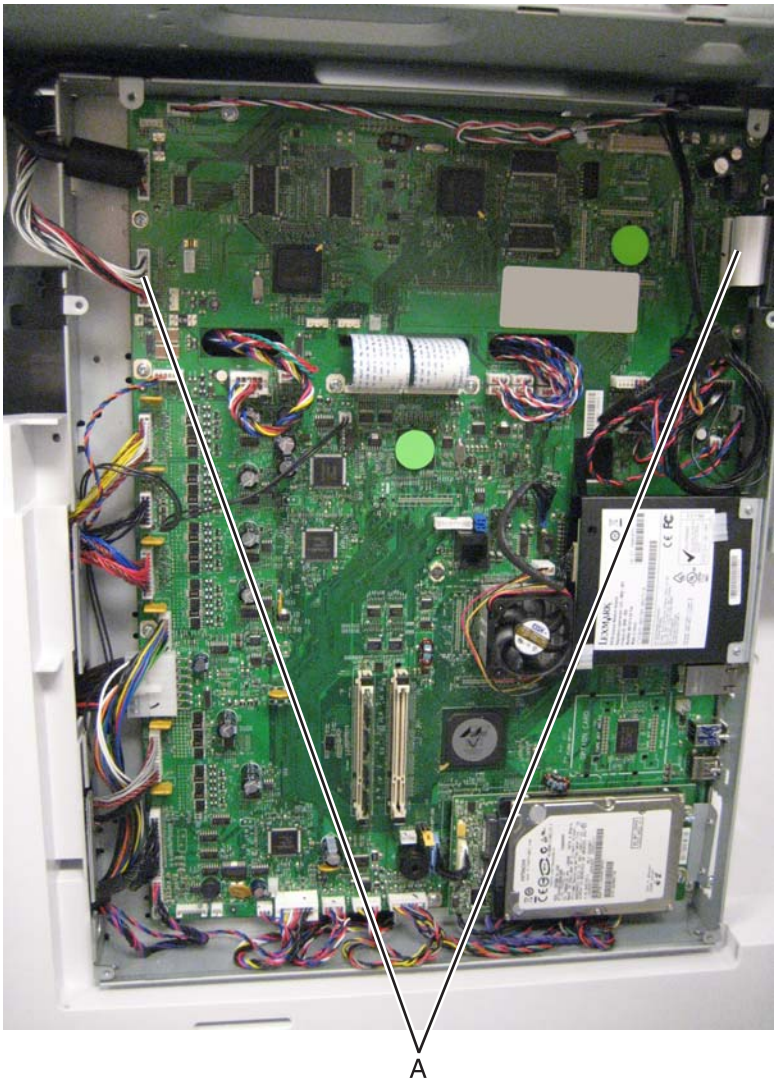


E (88A0212)

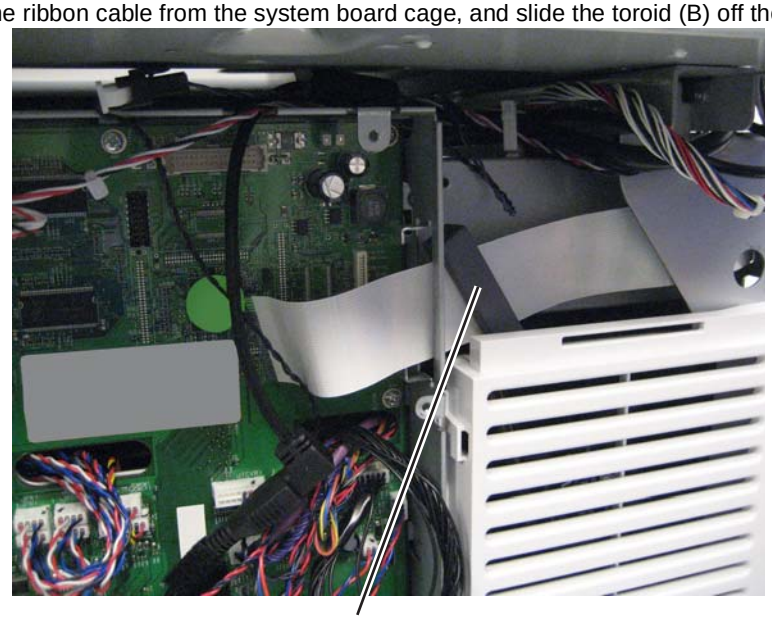
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Removing the flatbed to replace it

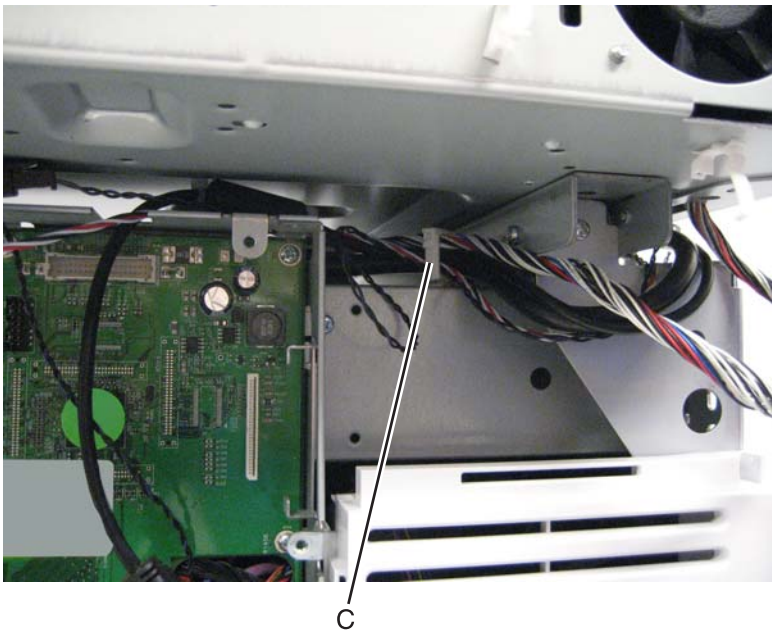
1. Remove the ADF unit assembly. See **“ADF unit assembly removal” on page 4-193**.
2. Remove the operator panel assembly. See **“Operator (OP) panel assembly removal” on page 4-103**.
3. Remove the scanner front cover. See **“Scanner front cover removal” on page 4-203**.
4. Remove the scanner left side rear cover. See **“Scanner left side rear cover removal” on page 4-204**.
5. Disconnect two cables (A) from the system board.



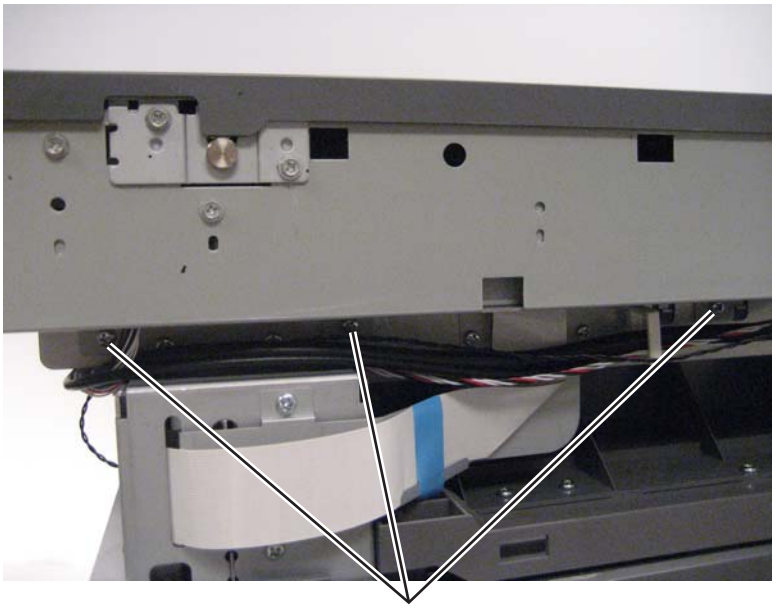
6. Remove the ribbon cable from the system board cage, and slide the toroid (B) off the cable.



7. Remove the cable from the cable clamp (C), and then feed the cable out from behind the system board.

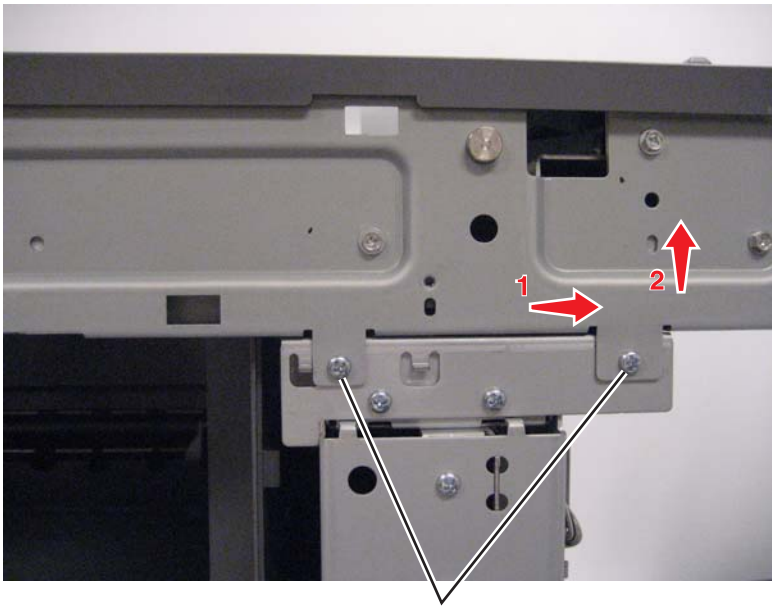


8. Remove three screws (D) from the left side.



D (88A0212)

9. Remove two screws (E) from the right side, and then slide the flatbed assembly back and lift to remove it.



E (88A0212)

Installation note: After replacing the flatbed scanner assembly, you must calibrate the scanner and check for skew. See **"Calibrating the scanner" on page 3-67** and**"Adjusting skew" on page 3-54** and **"ADF magnification adjustment" on page 3-66**.

Scanner interface card removal

See **“Flatbed scanner” on page 7-17** for the part number.

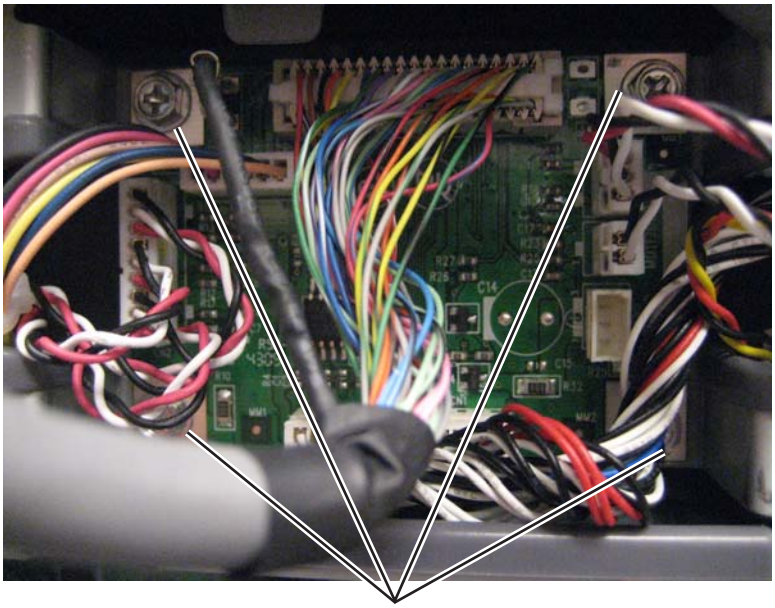
Warning: The following components contain mirrored NVRAM. When replacing any one of the following components, replace only one component at a time:

- System board
- Flatbed scanner assembly
- Scanner interface card

Replace the required component, and then perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one, or the printer will be rendered inoperable.

Warning: Never install and remove components listed above as a method of troubleshooting components. Once you install one of these components in a printer and perform a POR, the component cannot be used in another printer. It must be returned to the manufacturer.

1. Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-205**.
2. Disconnect all cables from the card, and then remove four screws (A) to remove the card.



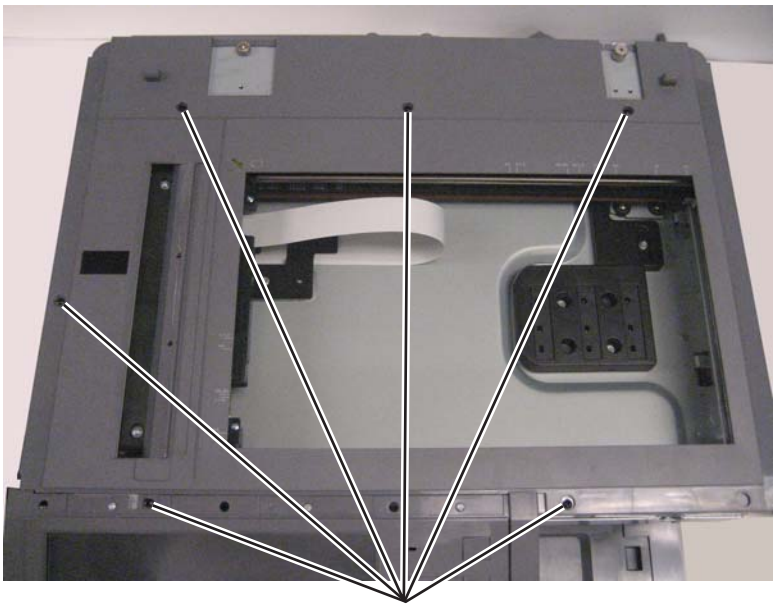
A (3002501)

Scanner platen glass cover removal

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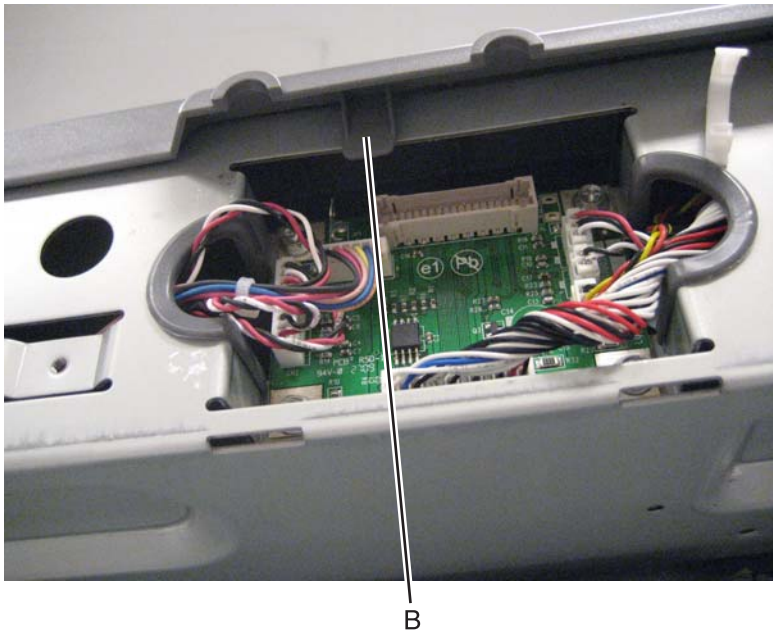
See **“Flatbed scanner” on page 7-17** for the part number.

1. Remove the ADF unit. See **“ADF unit assembly removal” on page 4-193**.
2. Remove the scanner left side rear cover. See **“Scanner left side rear cover removal” on page 4-204**.
3. Remove the scanner left side front cover. See **“Scanner left side front cover removal” on page 4-204**.
4. Remove the scanner front cover. See **“Scanner front cover removal” on page 4-203**.
5. Remove six screws (A).



A (88A0232)

6. Pull back the tab (B) above the scanner interface card, and lift to remove the scanner platen glass cover.

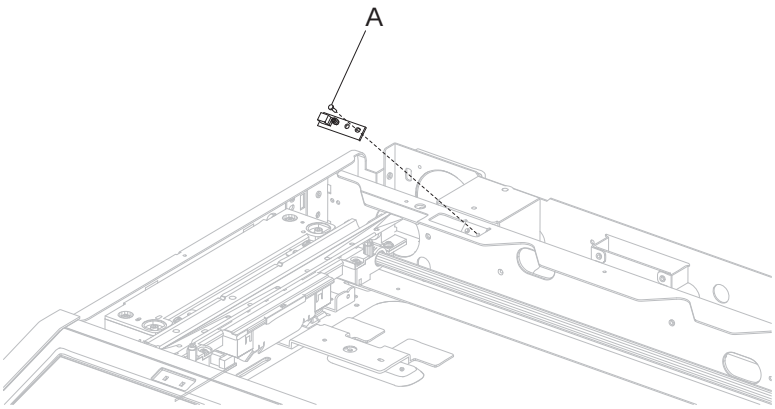


B

Scanner reference LED removal

See **"Flatbed scanner" on page 7-17** for the part number.

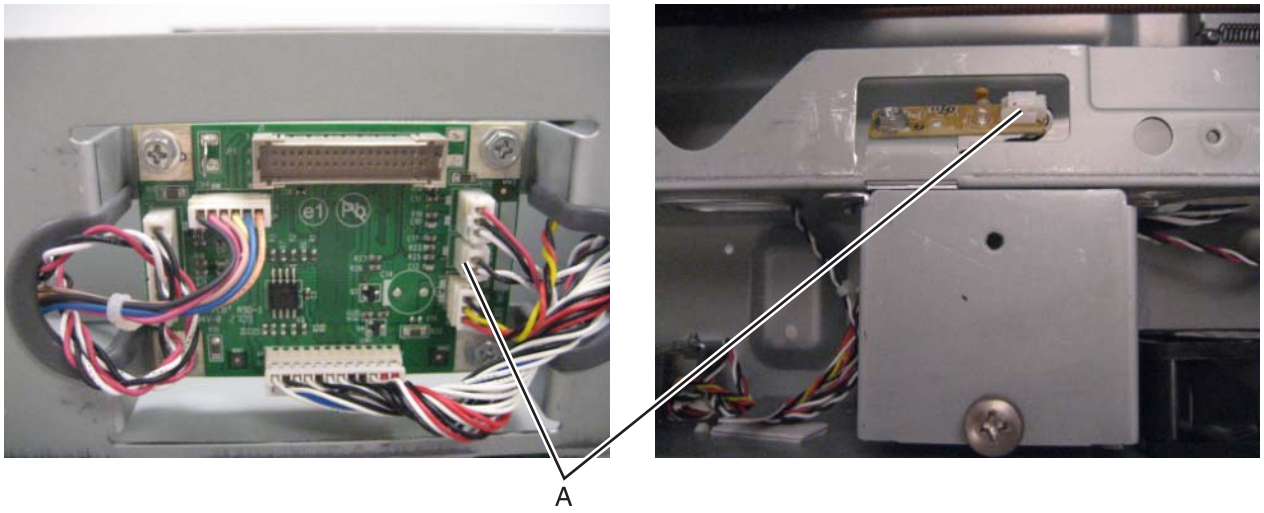
1. Remove the scanner platen glass cover. See **"Scanner platen glass cover removal" on page 4-224**.
2. Disconnect the cable from the sensor.
3. Remove the screw (A) to remove the sensor.



Scanner reference LED sensor cable removal

See **"Flatbed scanner" on page 7-17** for the part number.

1. Remove the scanner platen glass cover. See **"Scanner platen glass cover removal" on page 4-224**.
2. Disconnect the cable (A) from the scanner interface card and from the sensor.



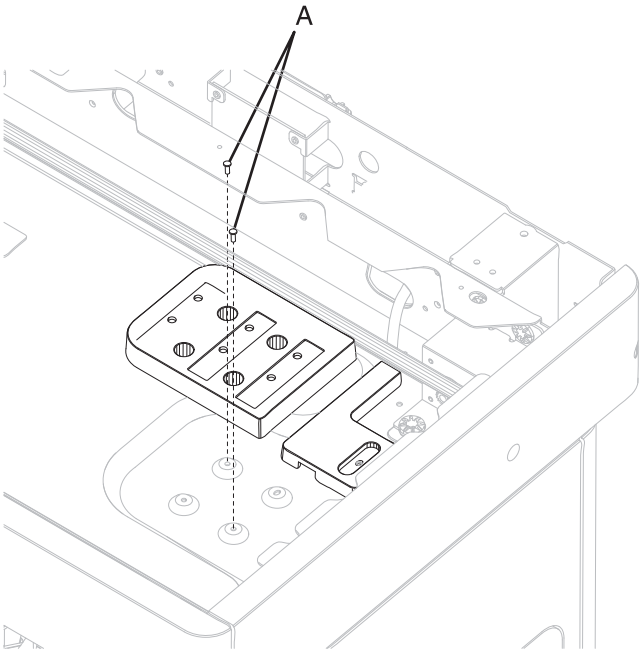
3. Remove the cable from the frame.
   Note: Observe the cable routing for reinstallation.

Sensor (platen glass length) removal

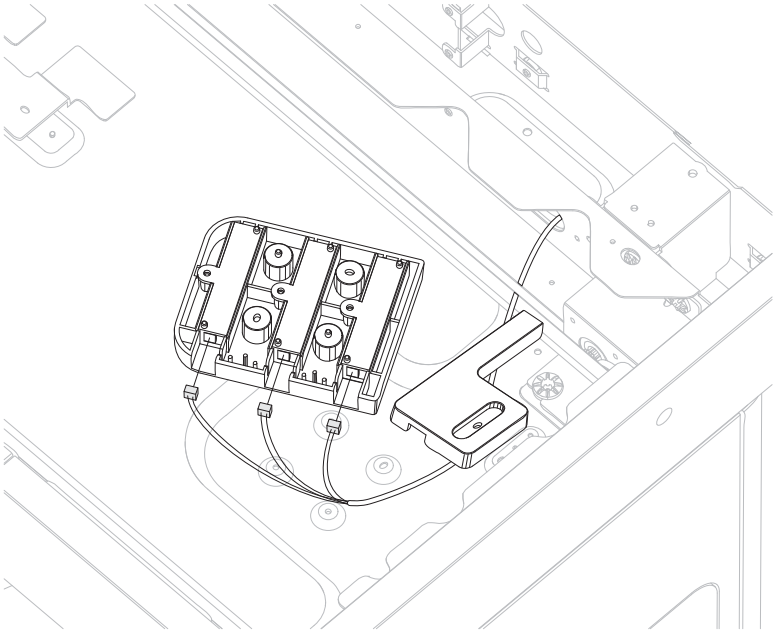
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See **“Flatbed scanner” on page 7-17** for the part number.

1. Remove the scanner platen glass cover. See **“Scanner platen glass cover removal” on page 4-224**.
2. Remove two screws (A).



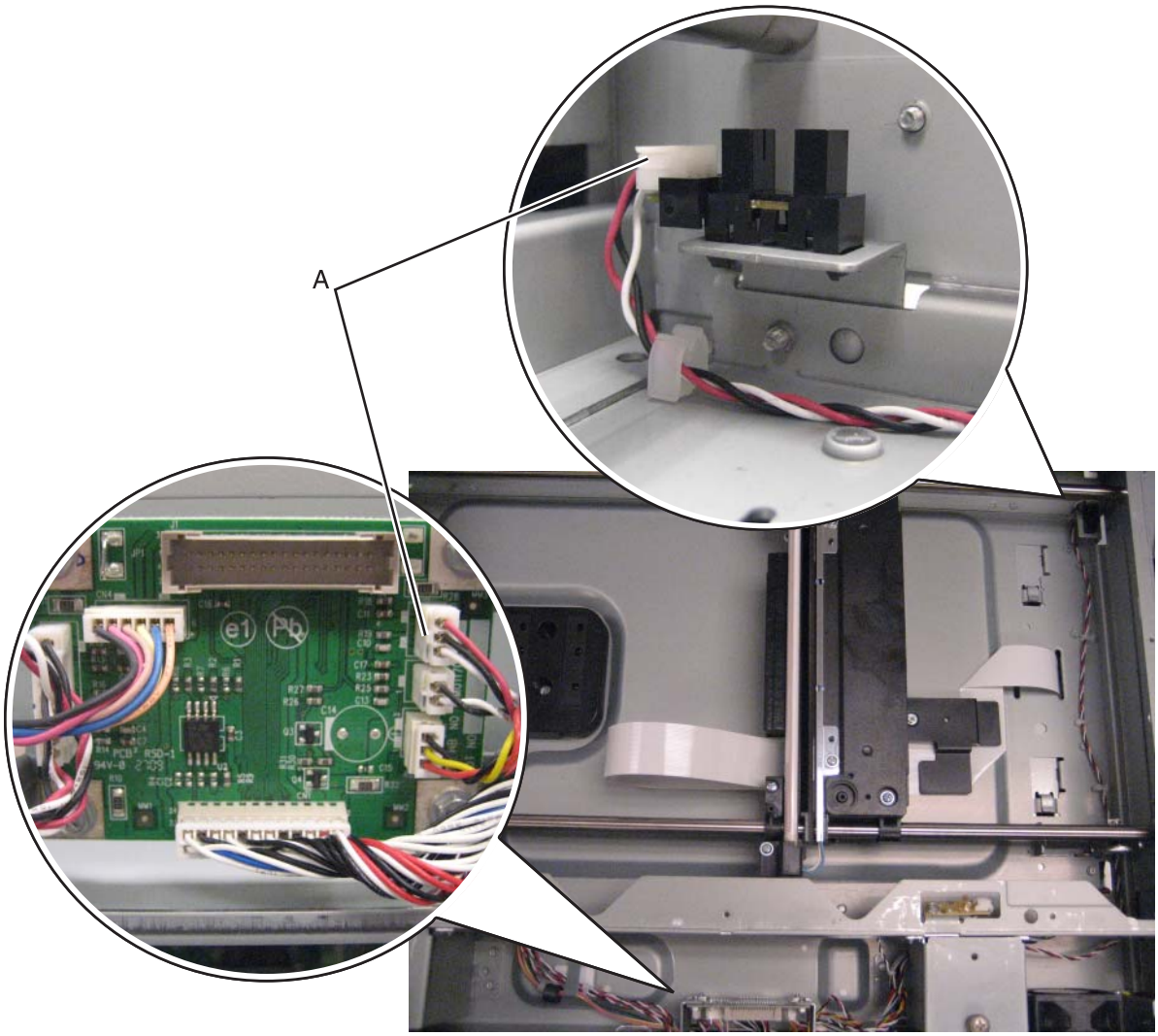
3. Flip the sensor over and disconnect the three connectors to remove the sensor.



Sensor cable (scanner HP) removal

See **"Flatbed scanner" on page 7-17** for the part number.

1. Remove the scanner platen glass cover. See **"Scanner platen glass cover removal" on page 4-224**.
2. Disconnect the cable (A) from the scanner interface card and from the sensor.



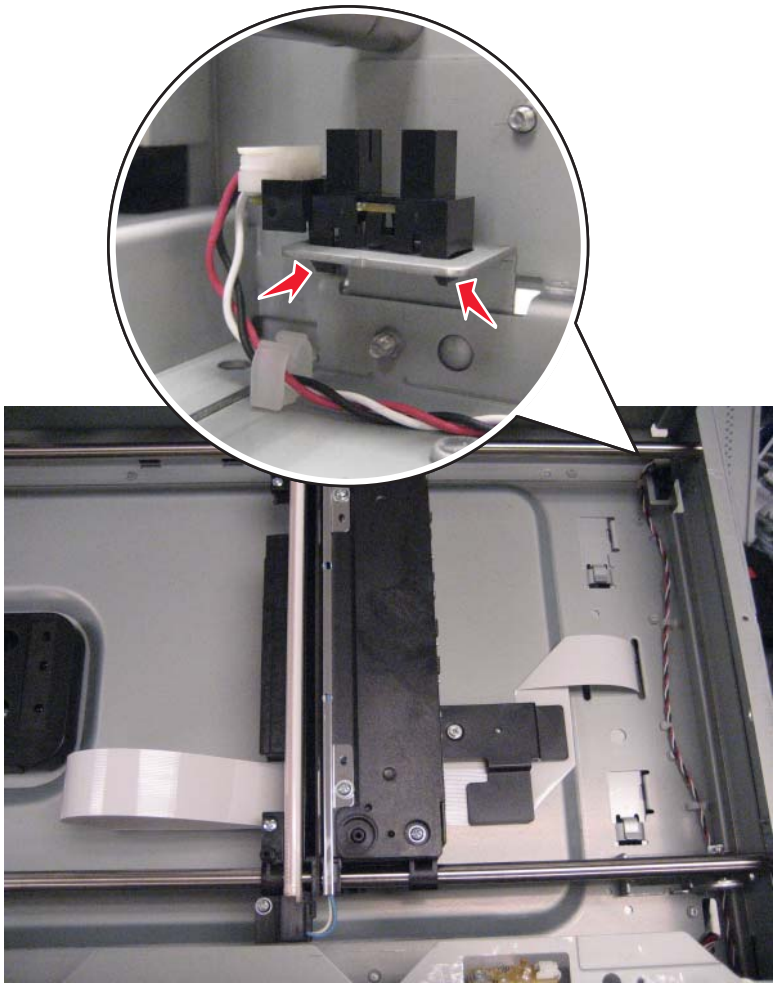
3. Remove the cable from the frame.
   Note: Note the cable routing for reinstallation.

Sensor (scanner HP) removal

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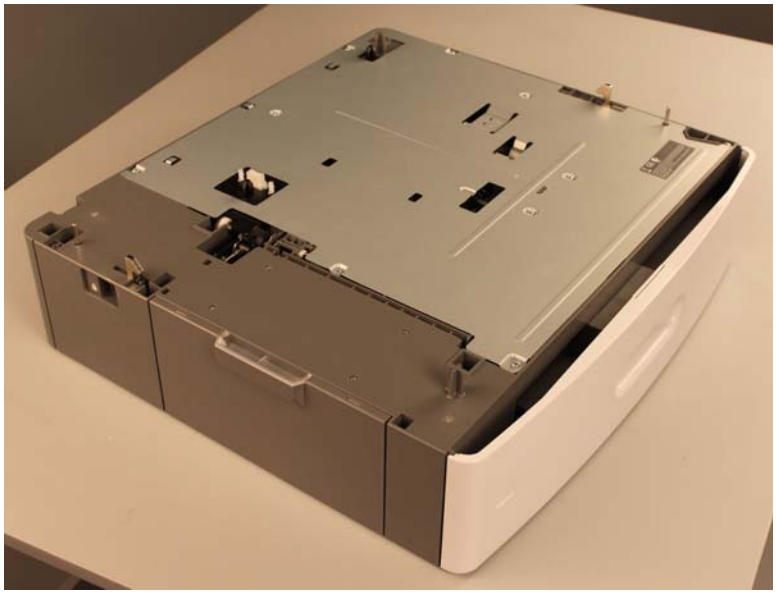
See **“Flatbed scanner” on page 7-17** for the part number.

1. Remove the scanner platen glass cover. See **“Scanner platen glass cover removal” on page 4-224**.
2. Disconnect the cable from the sensor.
3. Squeeze the tabs to remove the sensor from the bracket.



Input option removals

550-sheet tray



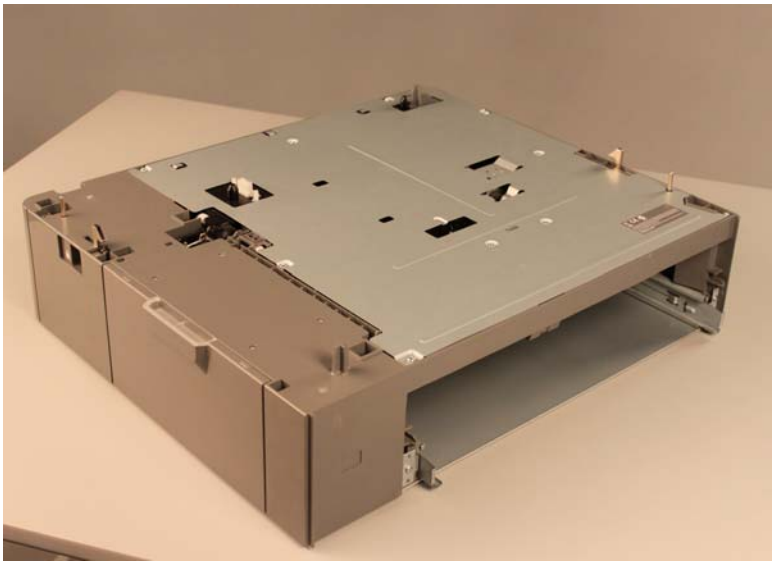
Note: Carefully remove the 550-sheet tray option from the base printer before proceeding.

550-sheet drawer assembly removal

See **“Optional 550-sheet tray” on page 7-27** for the part number.

1. Remove the 550-sheet media tray assembly from the 550-sheet drawer assembly.

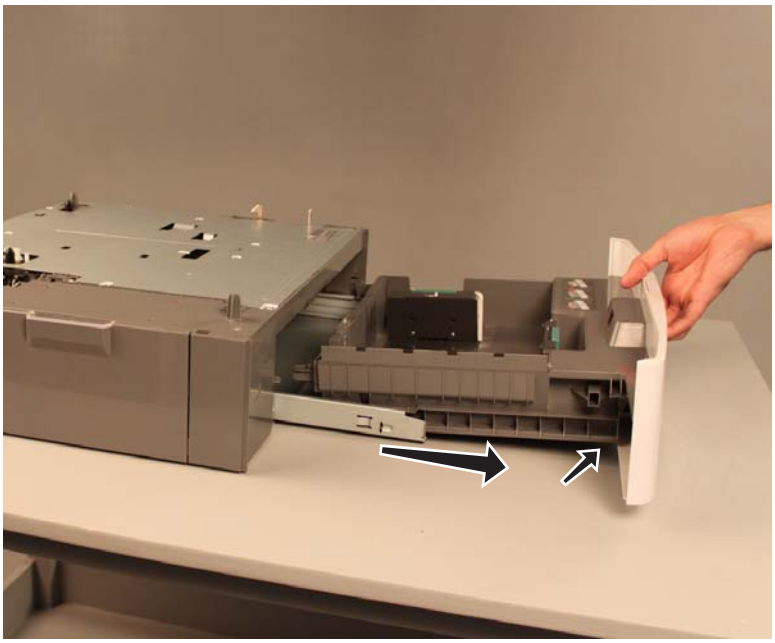
The 550-sheet drawer assembly remains.



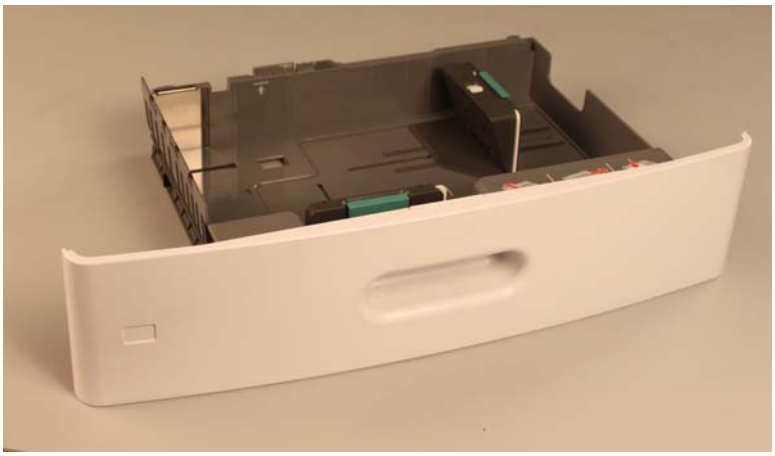
550-sheet media tray assembly removal

See **“Optional 550-sheet tray” on page 7-27** for the part number.

1. Open the media tray assembly until it stops.
2. Slightly lift up the media tray.



3. Slide the 550-sheet media tray assembly out of the drawer.

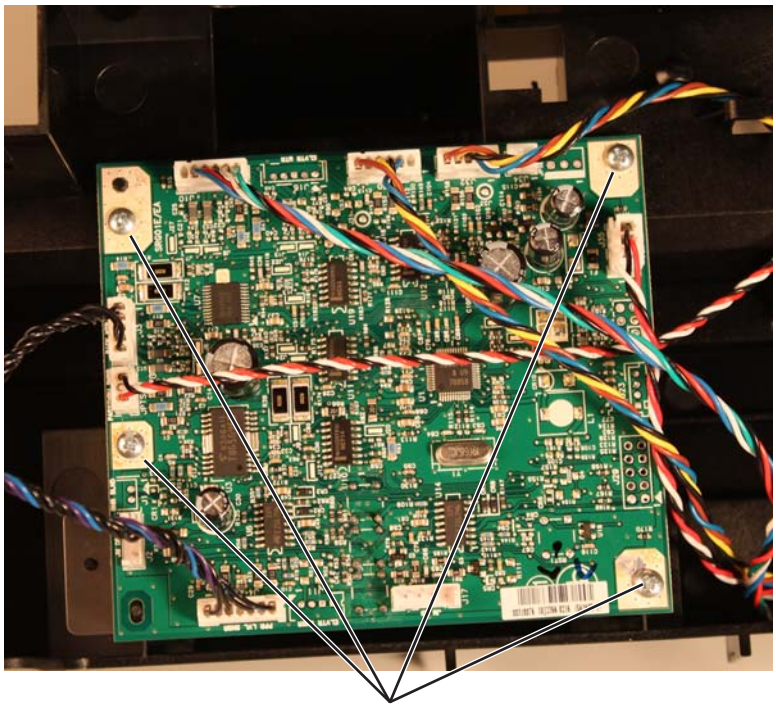


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550-sheet tray controller card assembly removal

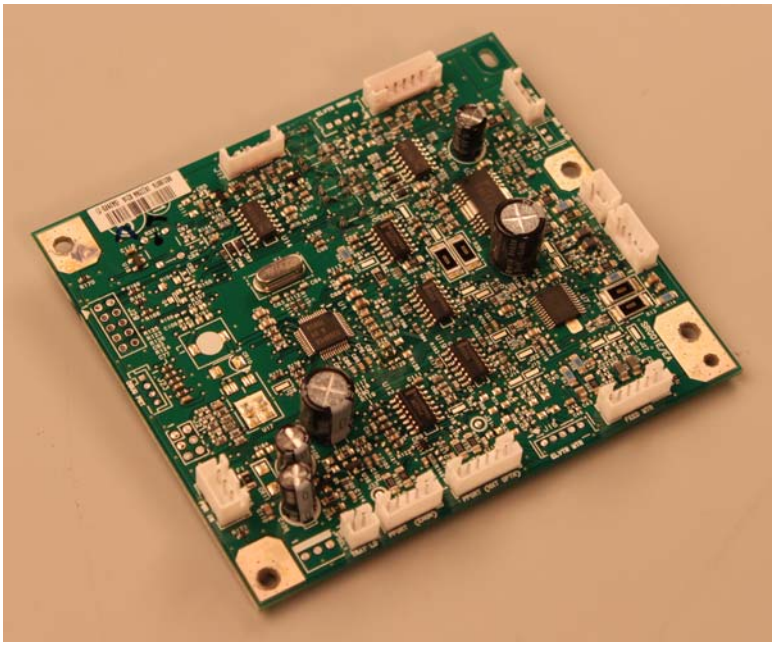
See **“Optional 550-sheet drawer assembly” on page 7-29** for the part number.

1. Remove the media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**.
2. Remove the top metal cover. See **“550-sheet tray top metal cover removal” on page 4-247**.
3. Remove the deflector. See **“550-sheet tray deflector removal” on page 4-233**.
4. Remove the pick assembly. See **“550-sheet tray pick assembly removal” on page 4-240**.
5. Remove the drive assembly. See **“550-sheet tray drive assembly removal ” on page 4-234**.
6. Disconnect all connectors from the controller card assembly.
7. Remove the four screws (A) securing the controller card assembly to the drive assembly.



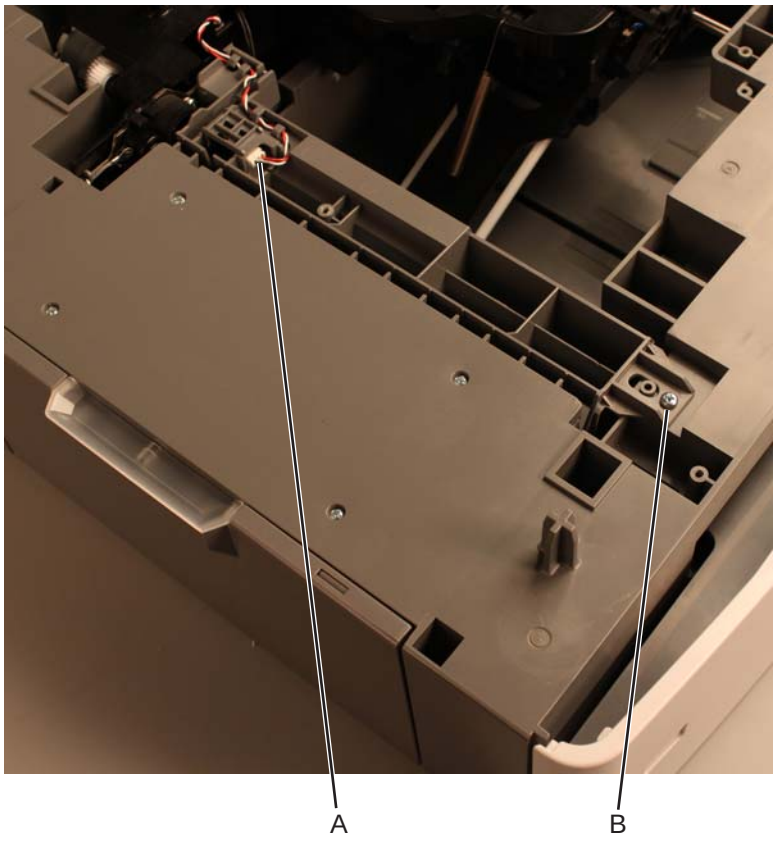
A (88A0312)

8. Remove the 550-sheet tray controller card assembly from the shield.

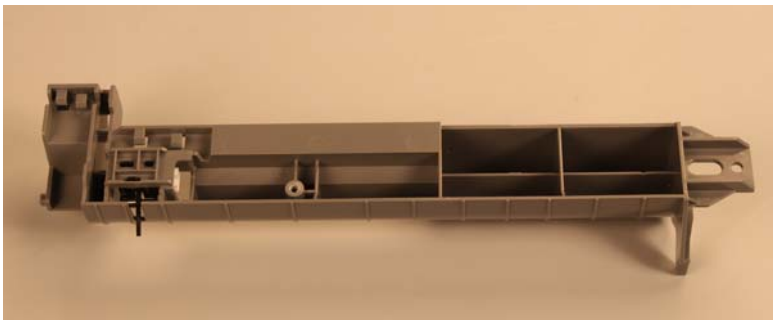


550-sheet tray deflector removal

1. Remove the top metal cover. See **“550-sheet tray top metal cover removal” on page 4-247**.
2. Disconnect the pass thru sensor connector (A) from the pass thru sensor.
3. Remove the pass thru sensor cable.
4. Remove the screw (B) securing the deflector to the drawer.

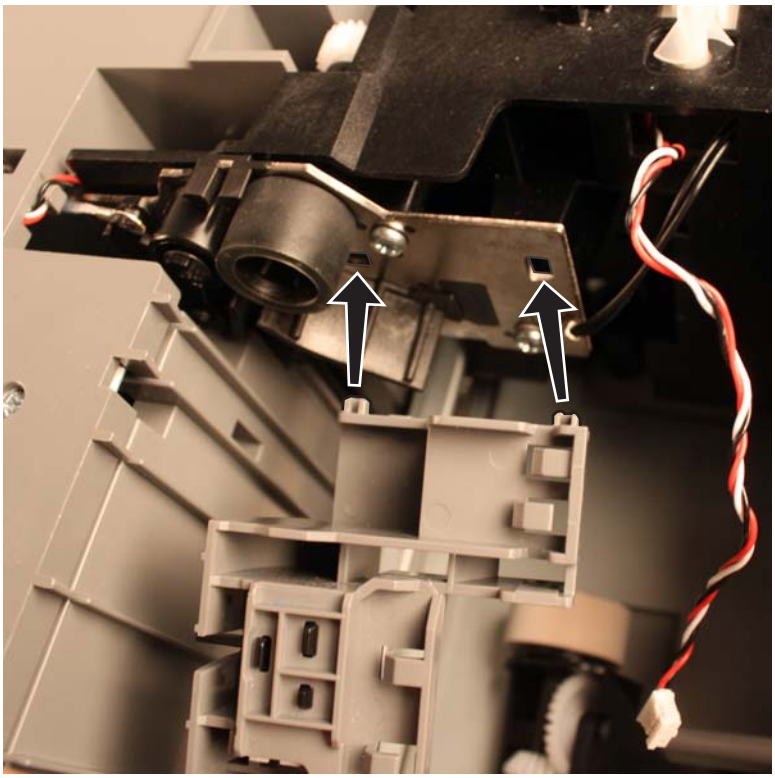


5. Remove the 550-sheet tray deflector.



Installation note:

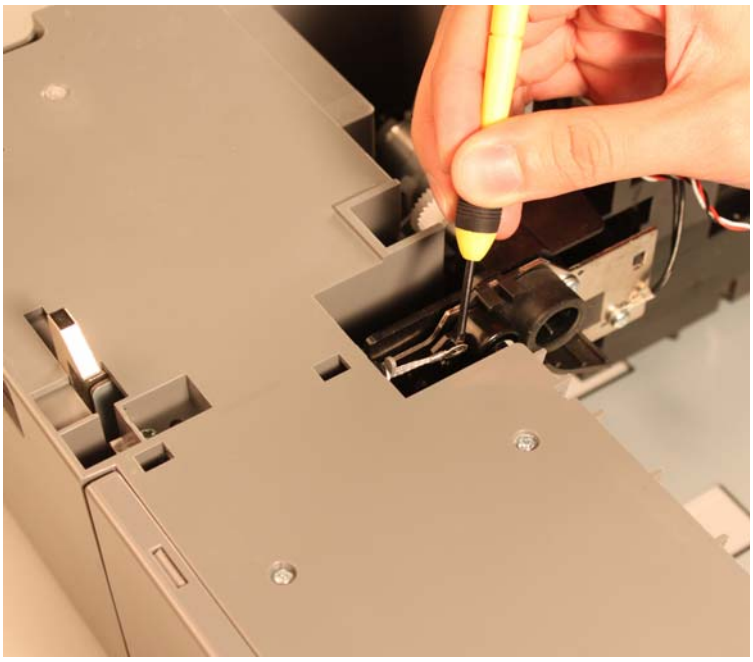
Be sure that the tabs are inserted in their corresponding hole.



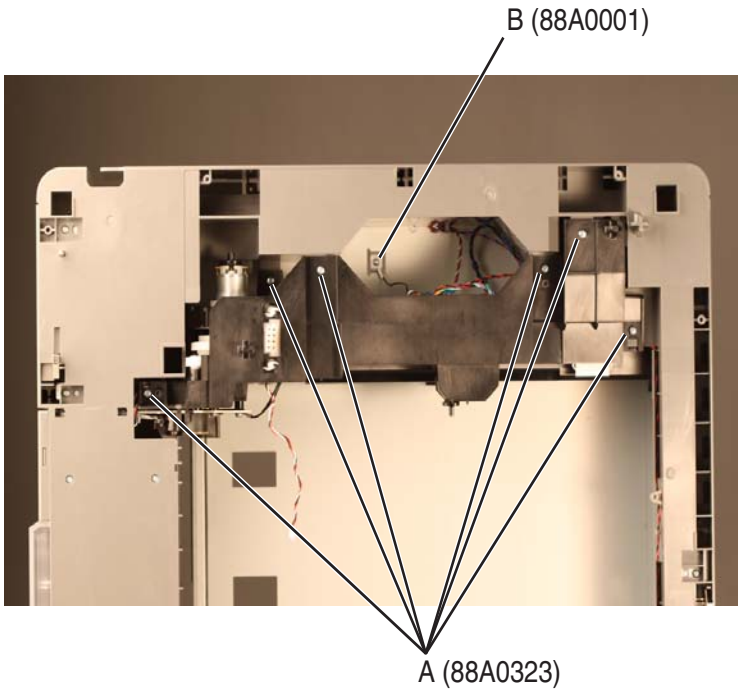
550-sheet tray drive assembly removal

1. Remove the media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**.
2. Remove the top metal cover. See **“550-sheet tray top metal cover removal” on page 4-247**.
3. Remove the deflector. See **“550-sheet tray deflector removal” on page 4-233**.
4. Remove the pick assembly. See **“550-sheet tray pick assembly removal” on page 4-240**.

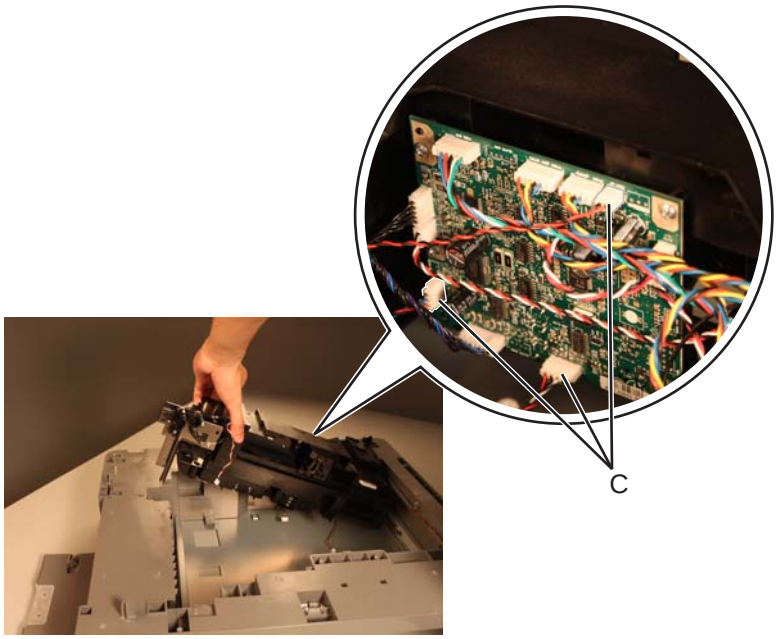
5. Release the cord with a prying tool.



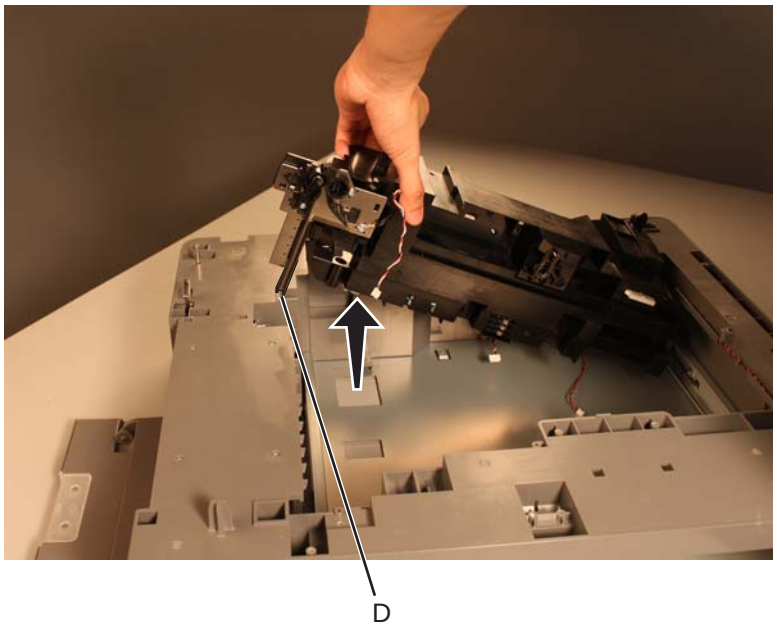
6. Remove the six screws (A) and one screw (B) securing the drive assembly to the drawer.



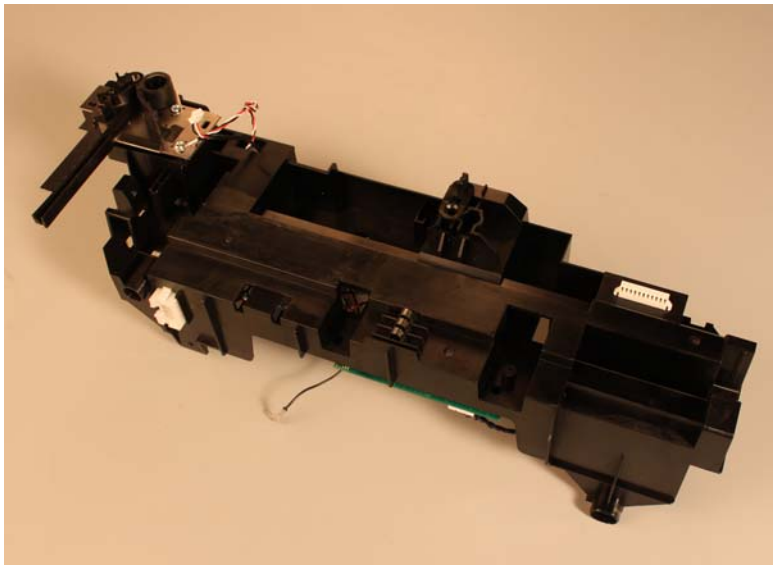
7. Open the jam clearance cover.
8. Lift the left side of the drive assembly to access the controller card assembly.
9. Disconnect the three drive connectors (C) from the controller card assembly.



10. Pull up the left side of the drive assembly until the left tip (D) clears the drawer.



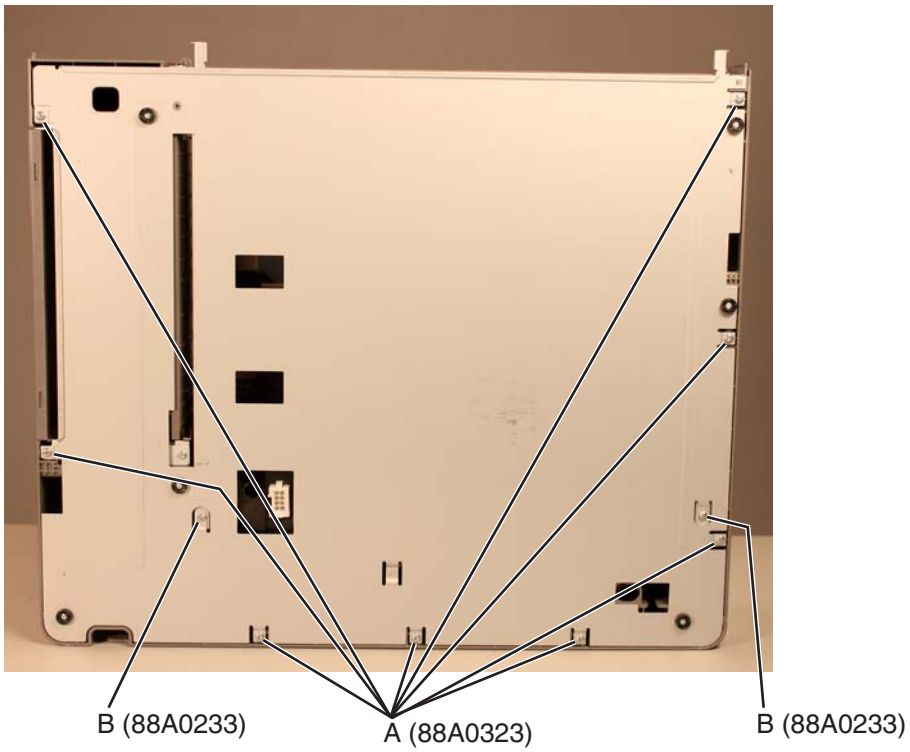
11. Remove the 550-sheet tray drive assembly.



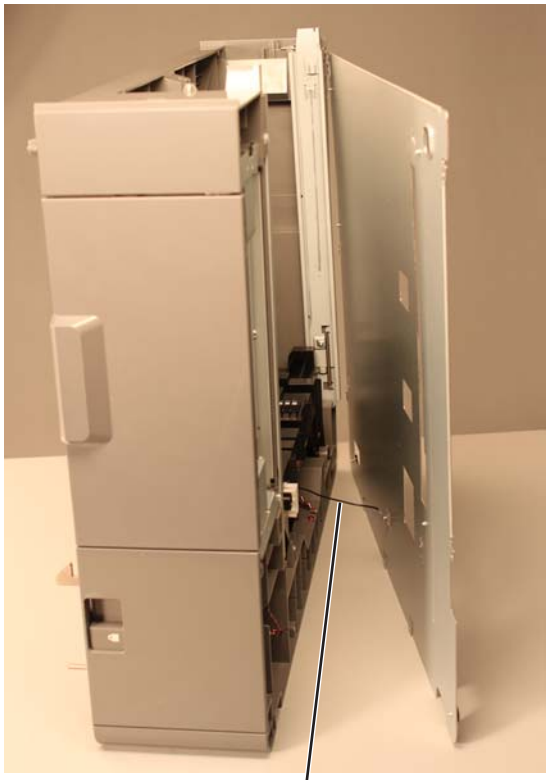
550-sheet tray left anti-tip latch removal

See **“Optional 550-sheet drawer assembly” on page 7-29** for the part number.

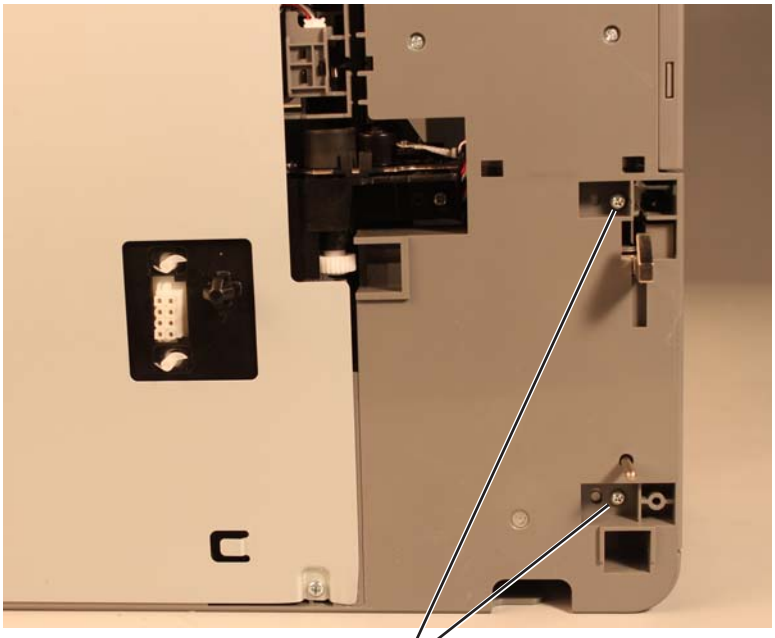
1. Remove the media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**.
2. Place the drawer on a vertical position to have access to the bottom cover screws.
3. Remove the nine screws (A) and the two screws (B) securing the bottom cover to the drawer.



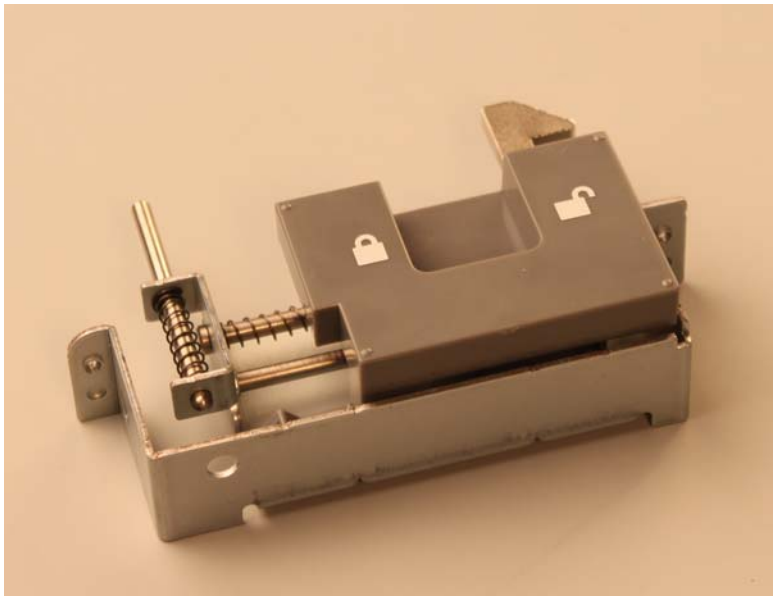
Warning: Do not forcefully separate the bottom cover from the drawer; the ground cable (C) is still attached to it.



4. Remove the two screws (D) securing the left anti-tip latch assembly to the drawer.



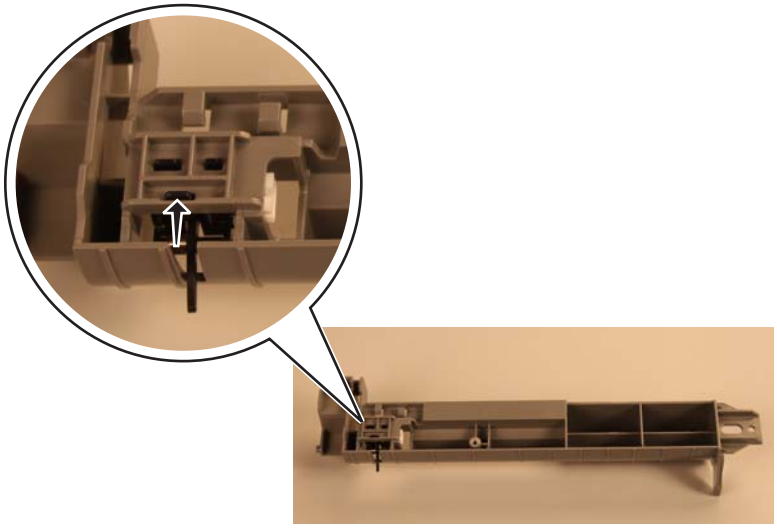
5. Remove the left anti-tip latch assembly.



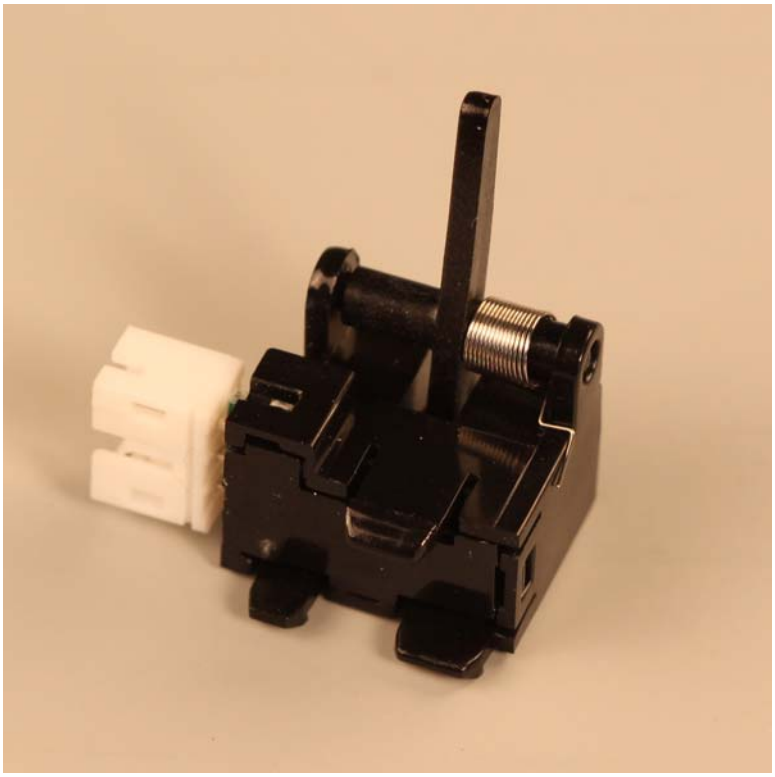
550-sheet tray pass thru sensor removal

See **“Optional 550-sheet drawer assembly” on page 7-29** for the part number.

1. Remove the top metal cover. See **“550-sheet tray top metal cover removal” on page 4-247**.
2. Remove the deflector. See **“550-sheet tray deflector removal” on page 4-233**.
3. Release the latch securing the pass thru sensor to the deflector.



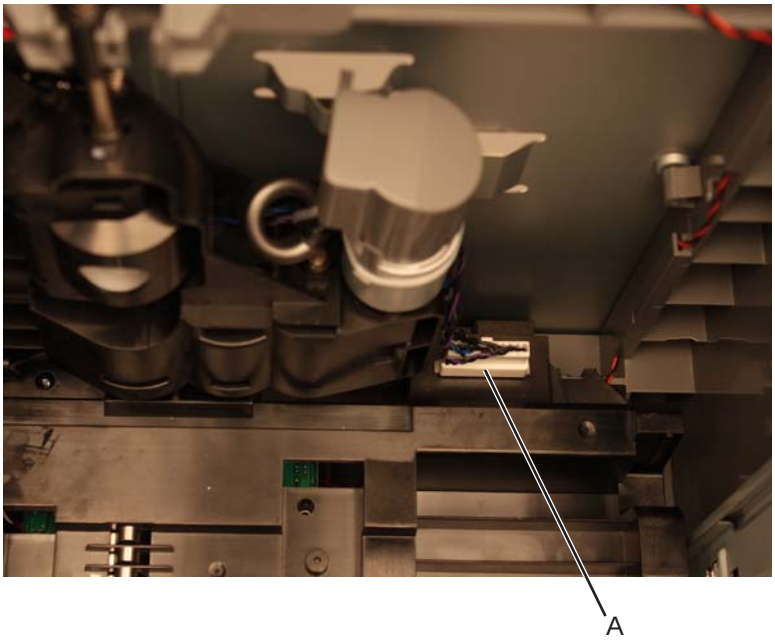
4. Remove the pass thru sensor.



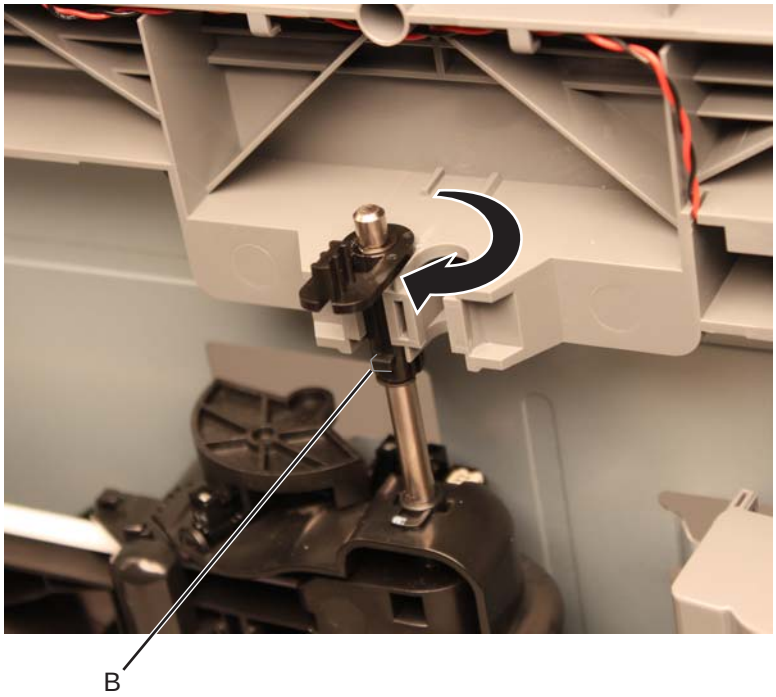
550-sheet tray pick assembly removal

See **“Optional 550-sheet drawer assembly” on page 7-29** for the part number.

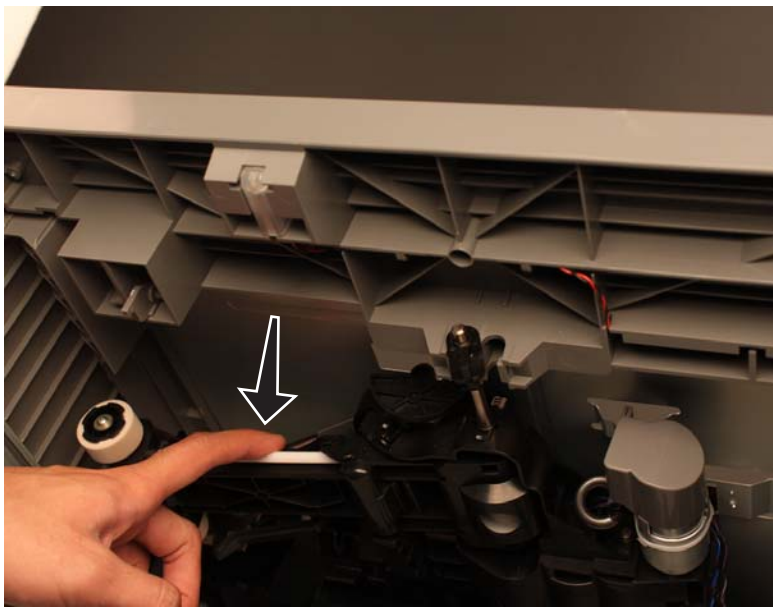
1. Remove the media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**.
2. Disconnect the pick assembly connector (A) from the drive assembly.



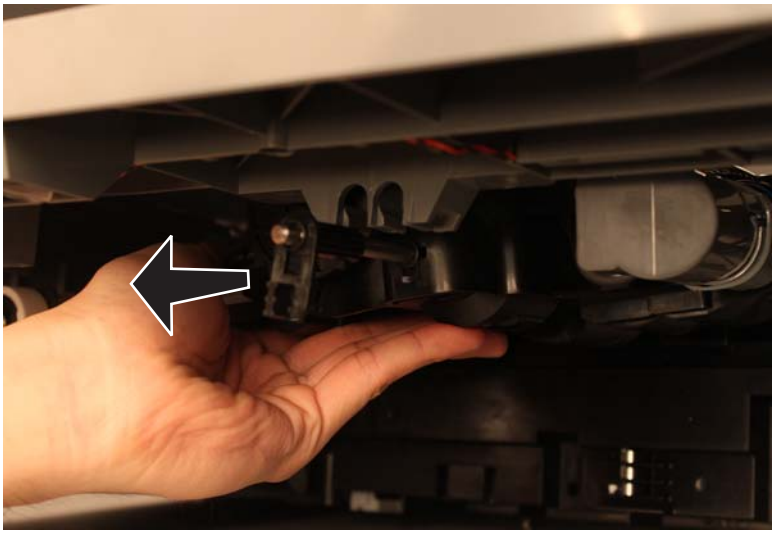
3. Turn the shaft clockwise until the tab (B) aligns with the opening.



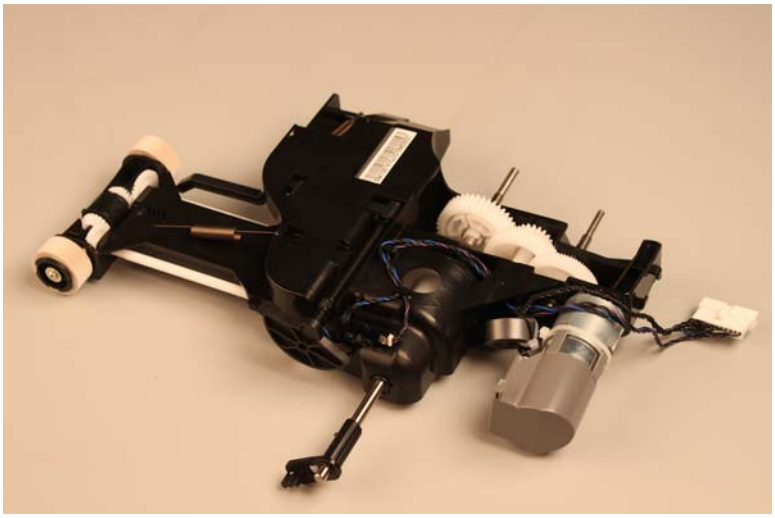
4. Pull down the pick arm to release the pick assembly.



5. Pull out the pick assembly.



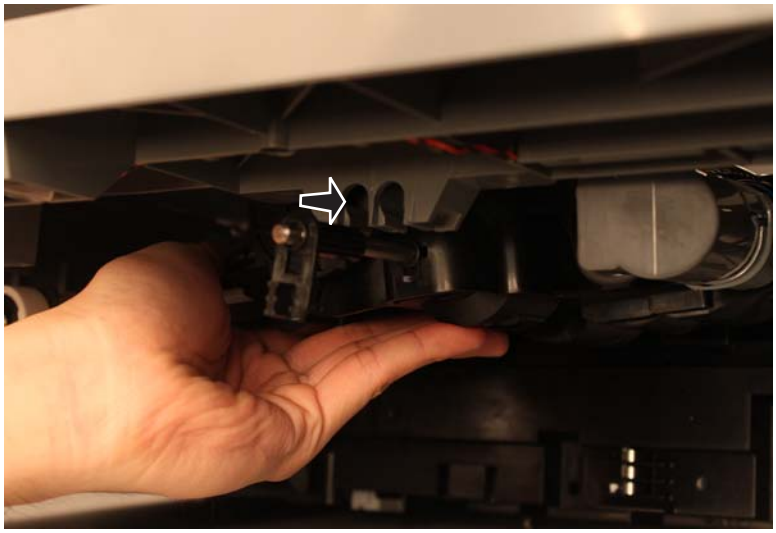
6. Remove the 550-sheet tray pick assembly.



Warning: Do not change the location of the spring.

Installation notes:

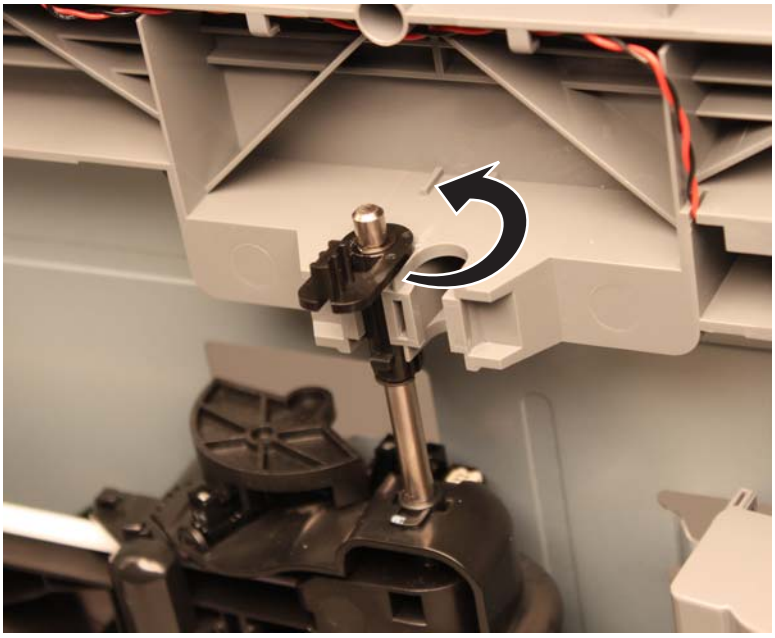
1. Align the shaft to the left hole of the drive assembly.



2. Insert the shaft into the hole.



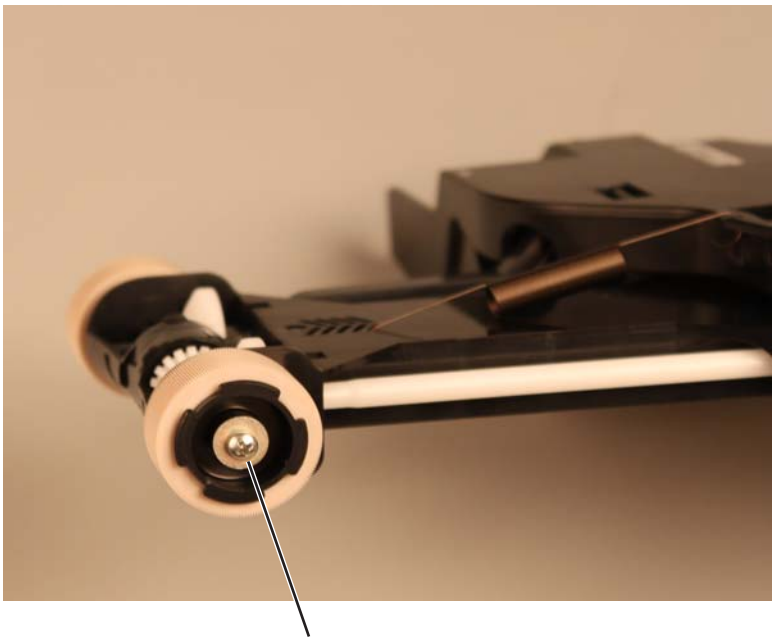
3. Be sure that the tab is aligned in the opening and then turn the shaft counterclockwise.



550-sheet tray pick roll assembly removal

See **“Optional 550-sheet drawer assembly” on page 7-29** for the part number.

1. Remove the media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**.
2. Remove the pick assembly. See **“550-sheet tray pick assembly removal” on page 4-240**.
3. Remove the screw (A) securing the pick tire to the pick arm.



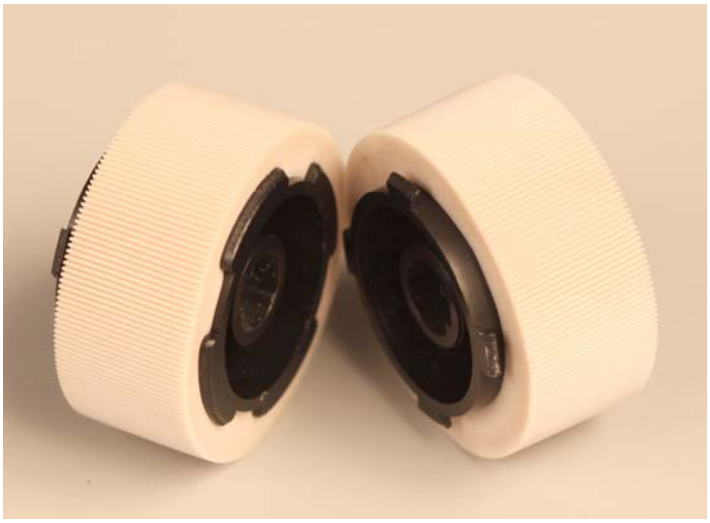
4. Remove the pick tire.
5. Repeat steps 3-4 to remove the other pick tire.

This is the photo of the pick roll assembly.



Installation note:

Before installing the pick tire, be sure that the pick tire is fully aligned against one end of the hub.

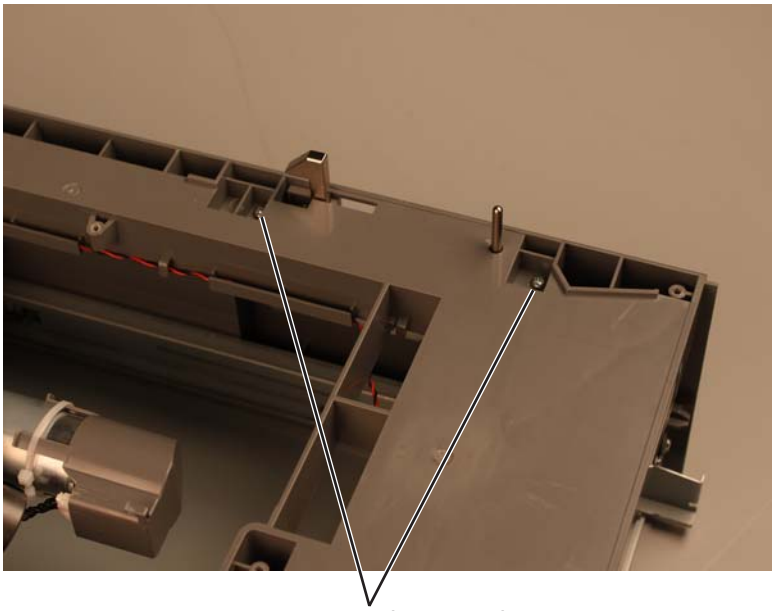


550-sheet tray right anti-tip latch assembly removal

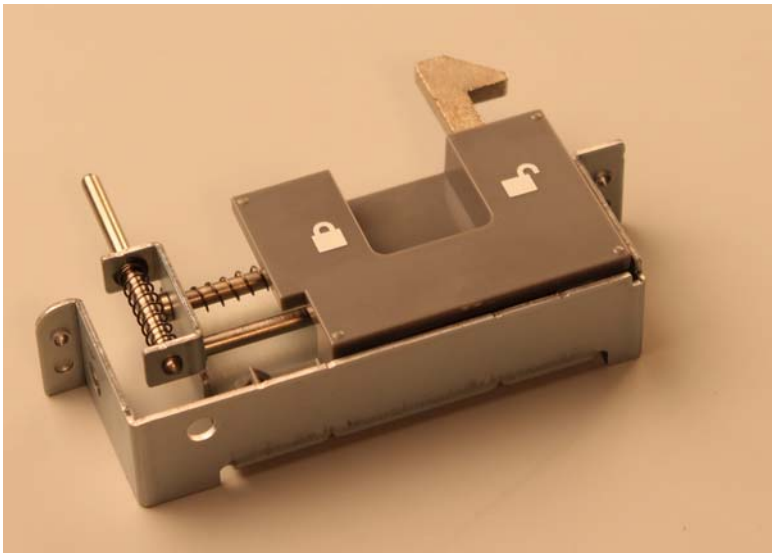
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See **“Optional 550-sheet drawer assembly” on page 7-29** for the part number.

1. Remove the media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**.
2. Remove the top metal cover. See **“550-sheet tray top metal cover removal” on page 4-247**.
3. Remove the two screws (A) securing the right anti-tip latch assembly to the drawer.
   Note: Hold the right anti-tip latch assembly to prevent it from falling off after removing the screws.

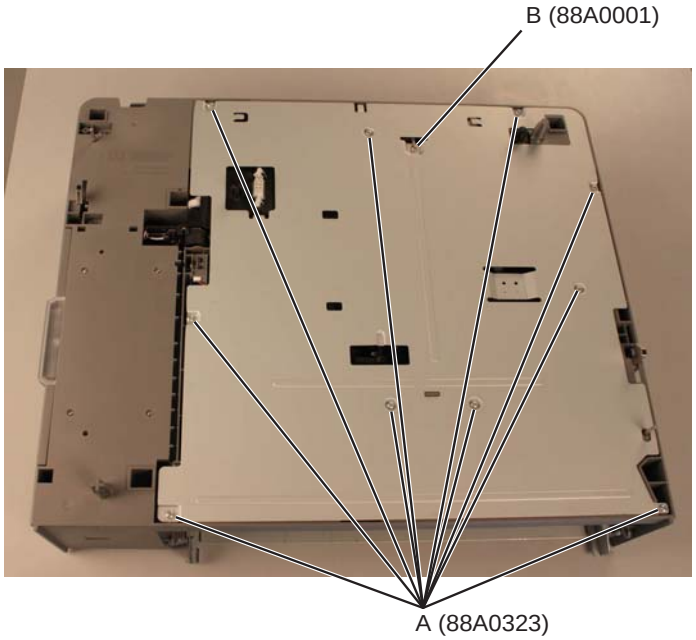


4. Remove the right anti-tip latch assembly.

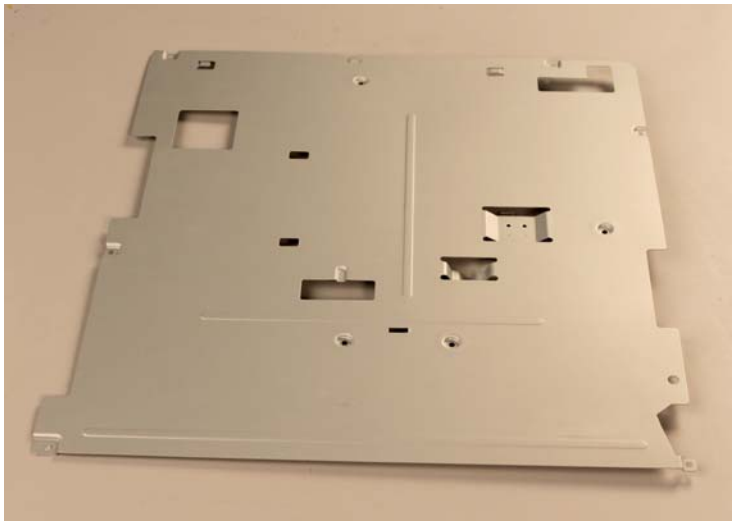


550-sheet tray top metal cover removal

1. Remove the media tray assembly. See **“550-sheet media tray assembly removal” on page 4-230**.
2. Remove the 10 screws (A) and one screw (B) securing the top metal cover to the drawer.



3. Remove the 550-sheet tray top metal cover.



2000-sheet high-capacity feeder

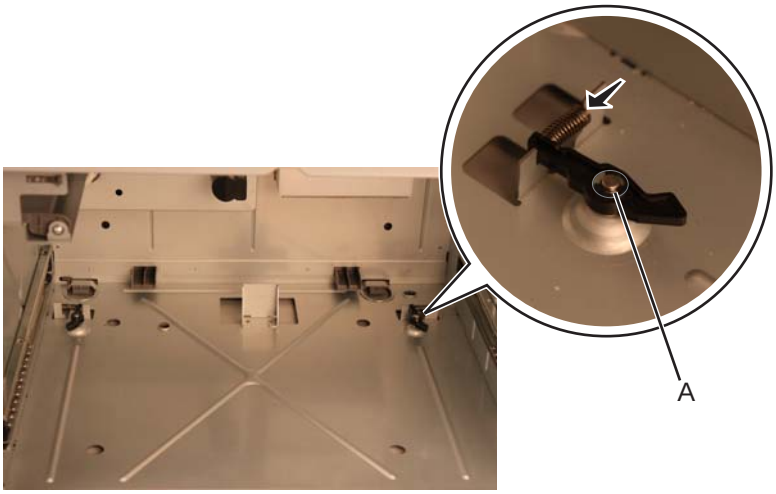


Note: Carefully remove the 2000-sheet high-capacity feeder option from the base printer before proceeding.

2000-sheet high-capacity feeder bellcrank assembly removal

See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Remove the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**.
2. Remove the recoil spring from the bellcrank.
3. Remove the E-clip (A) securing the bellcrank to the frame.



4. Remove the bellcrank.
5. Repeat steps 2-4 to remove the bellcrank on the other side.

This is the photo of the 2000-sheet high-capacity feeder bellcrank assembly.

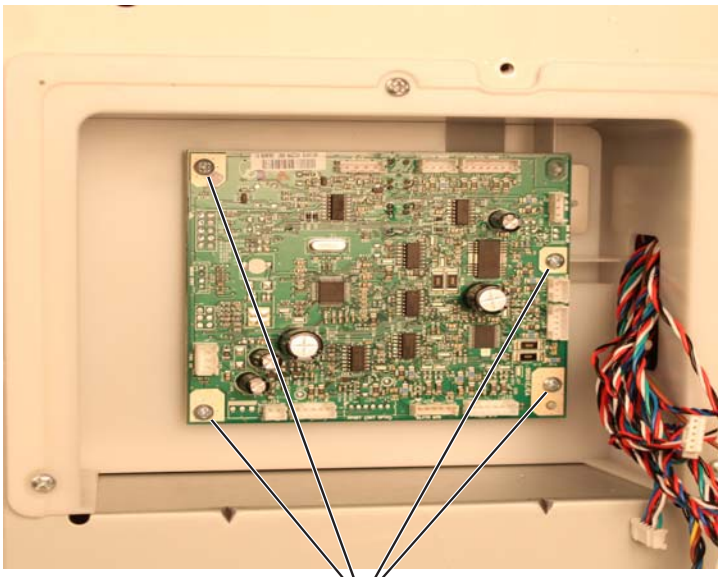


2000-sheet high-capacity feeder controller card assembly removal

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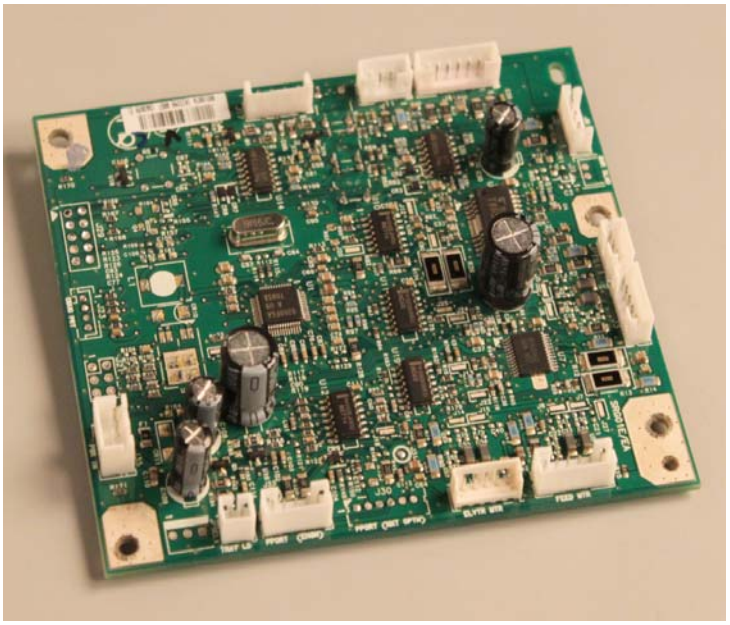
See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
2. Disconnect all connectors from the controller card assembly.
3. Remove the four screws (A) securing the controller card assembly. (temporary pic)



A (88A0313)

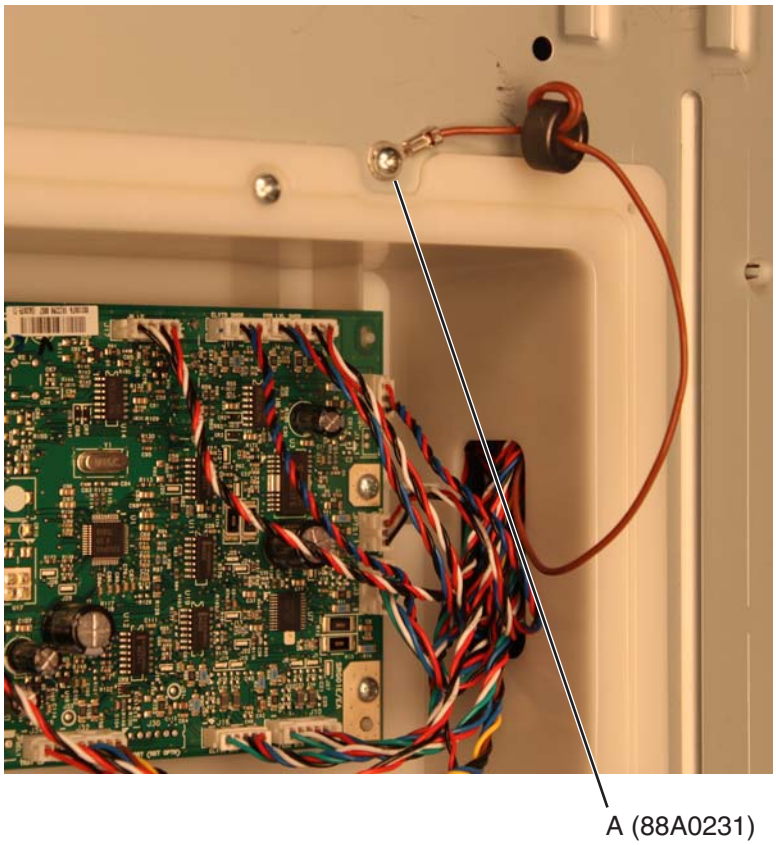
4. Remove the controller card assembly from the shield.



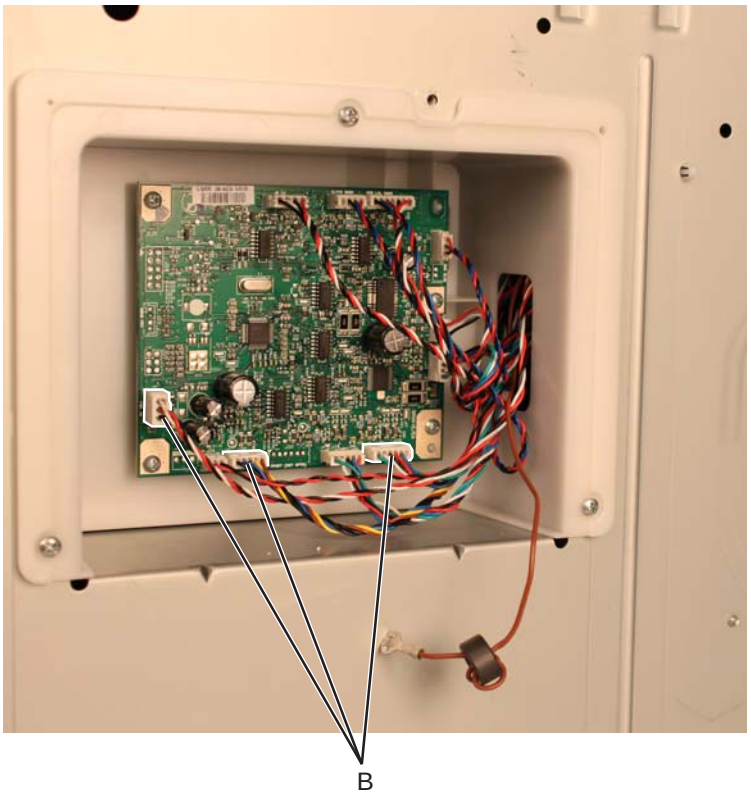
2000-sheet high-capacity feeder drive assembly removal

See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

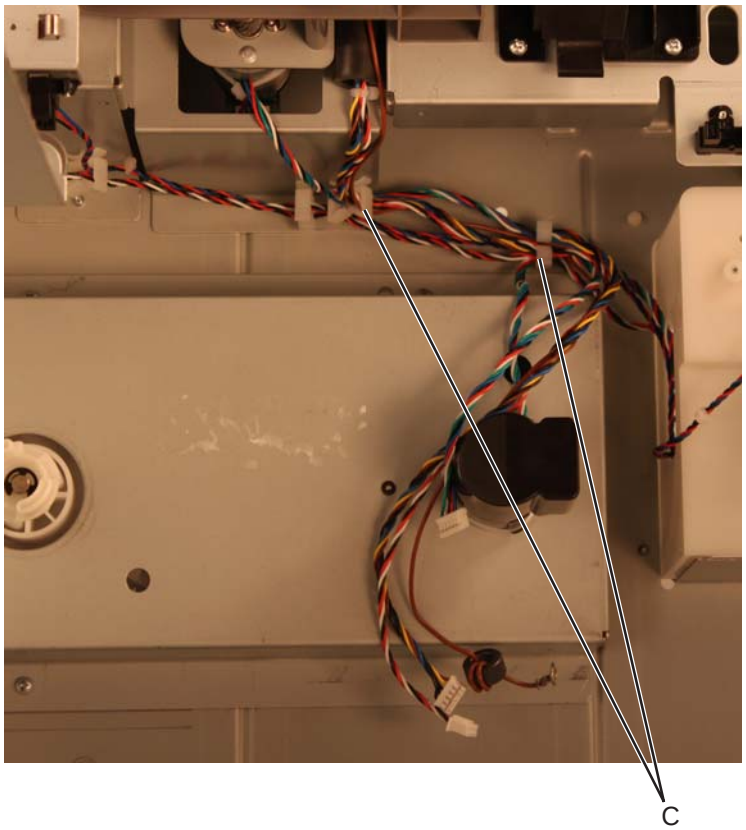
1. Remove the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**.
2. Remove the jam clearance top cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
3. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
4. Remove the right side cover. See **“2000-sheet high-capacity feeder right side cover removal” on page 4-298**.
5. Remove the pick assembly. See **“2000-sheet high-capacity feeder pick assembly removal” on page 4-285**.
6. Remove the screw (A) to disconnect the ground cable from the rear.



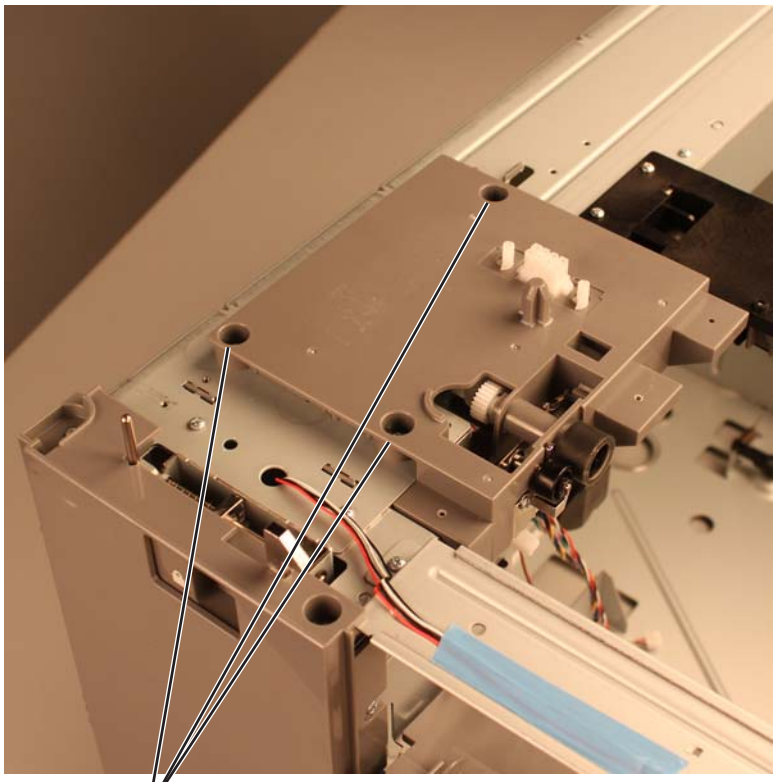
7. Remove the three drive assembly connectors (B) from the controller card assembly.



8. Release the three drive assembly cables from the cable guides (C).

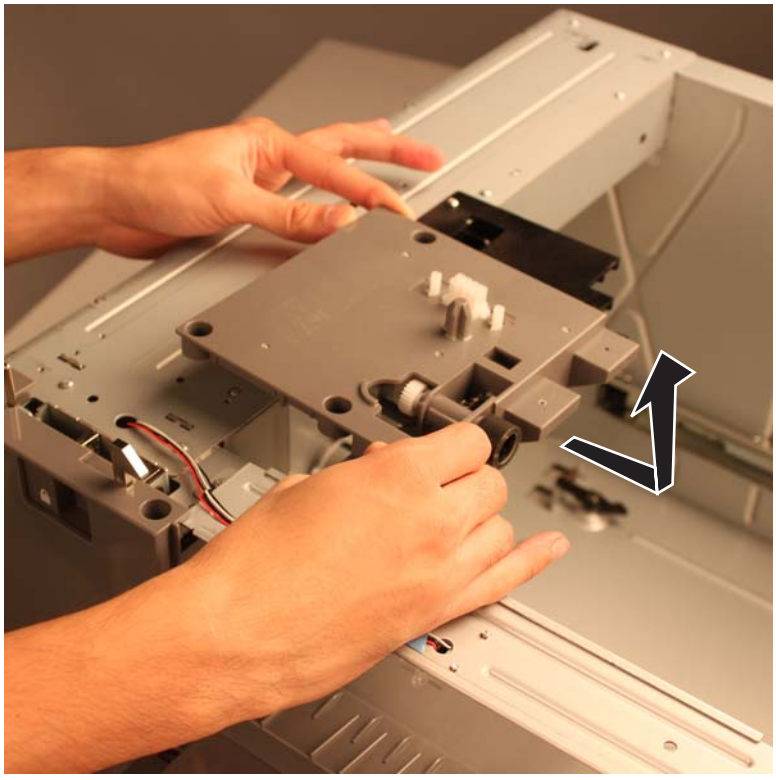


9. Remove the three screws (D) securing the drive assembly to the drawer.

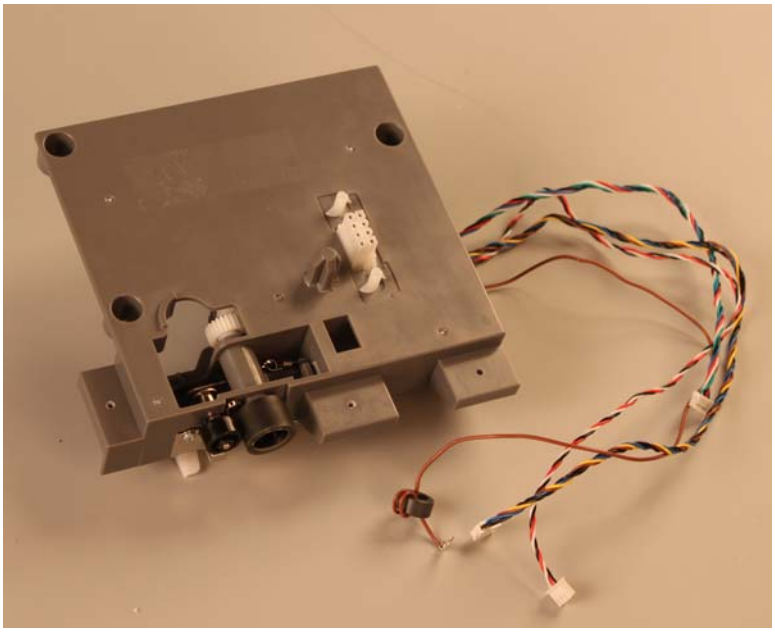


D (88A0442)

10. Remove the drive assembly.



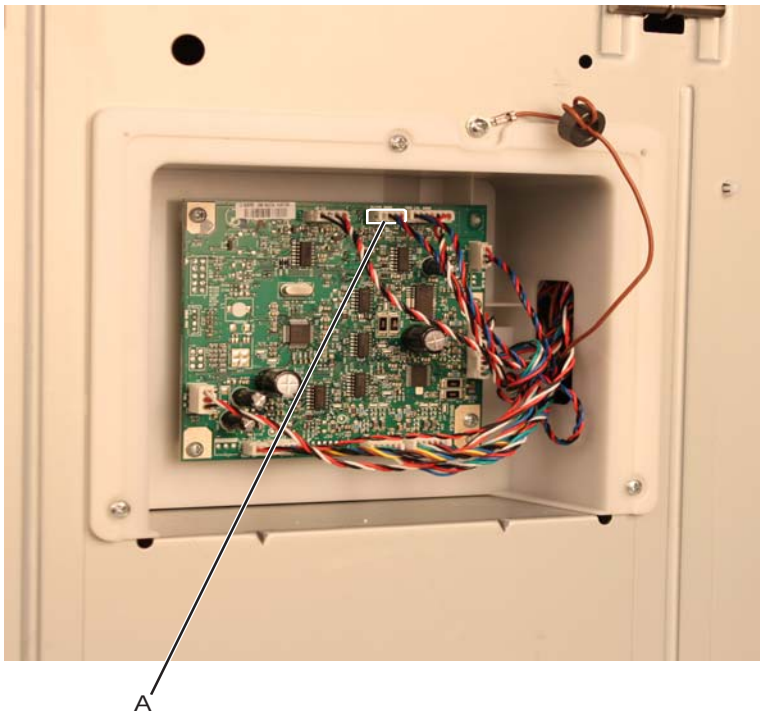
This is the photo of the 2000-sheet high-capacity feeder drive assembly.



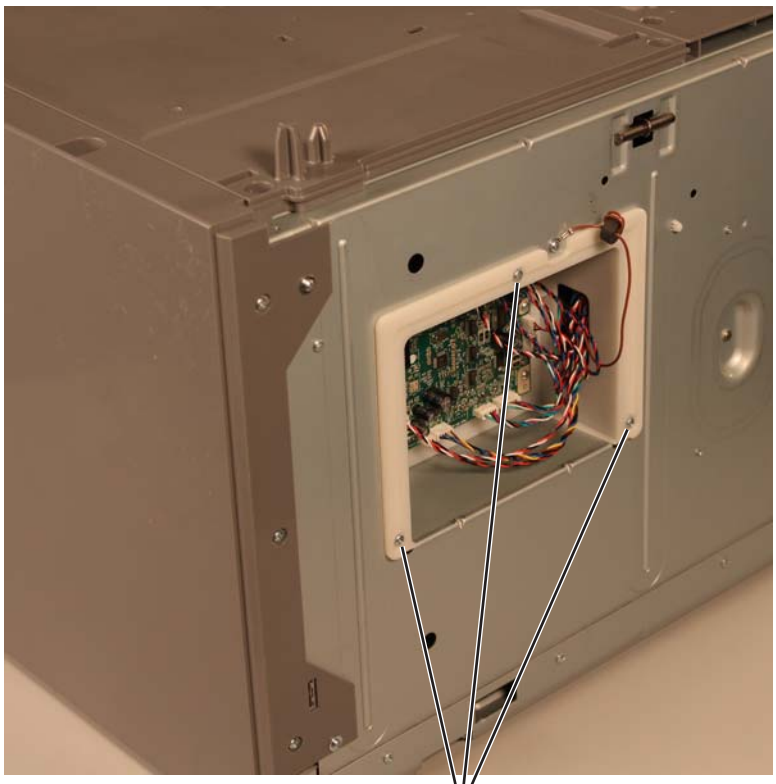
2000-sheet high-capacity feeder elevator home sensor removal

See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
2. Open the media tray assembly.
3. Disconnect the elevator home sensor connector (A) from the controller card assembly.

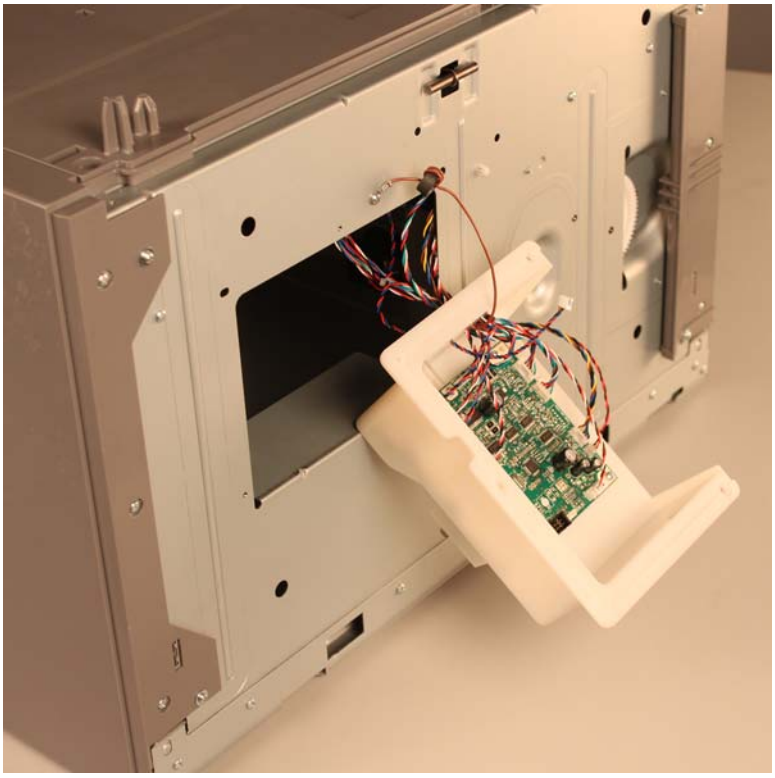


4. Remove the three screws (B) securing the controller card housing.

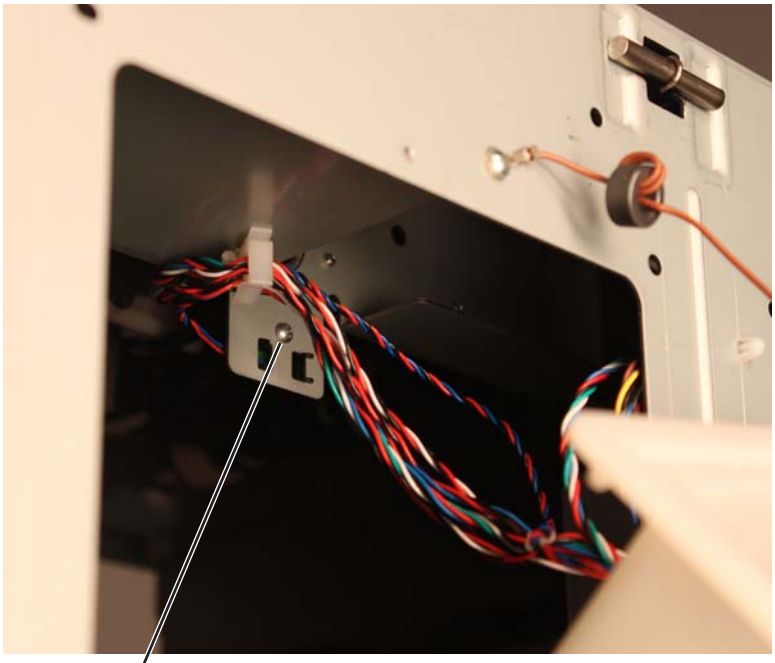


B (88A0231)

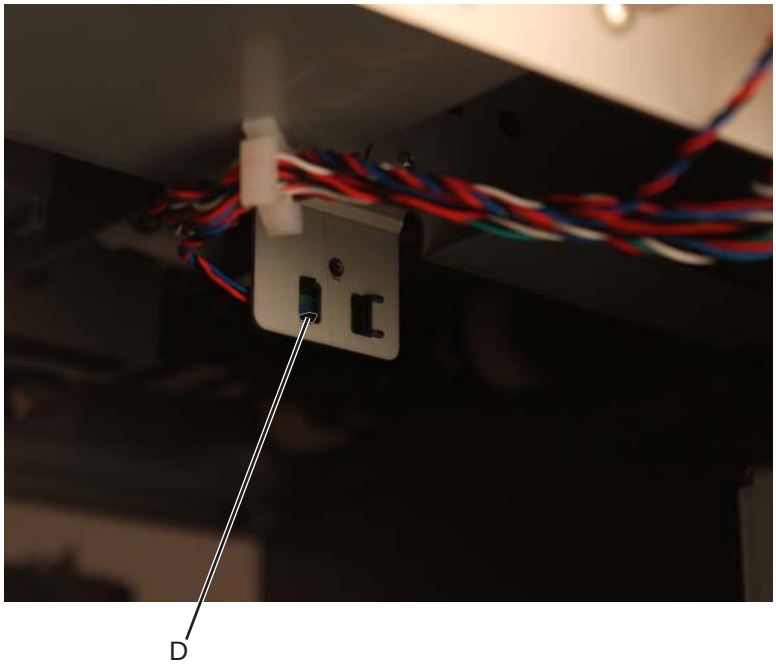
5. Detach the controller card housing.
Note: The controller card housing does not need to be completely removed from the machine. It may be allowed to hang on the side.



6. Remove the screw (C) securing the elevator home sensor.



7. Press the latch (D) to remove the elevator home sensor.



8. Remove the elevator home sensor cable.

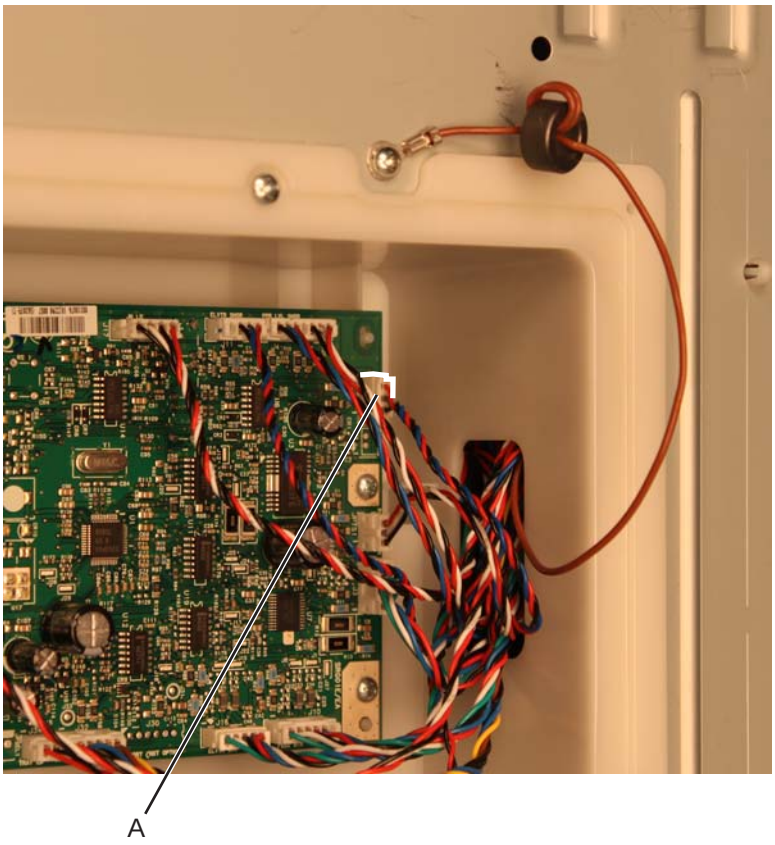


2000-sheet high-capacity feeder jam clearance cover removal

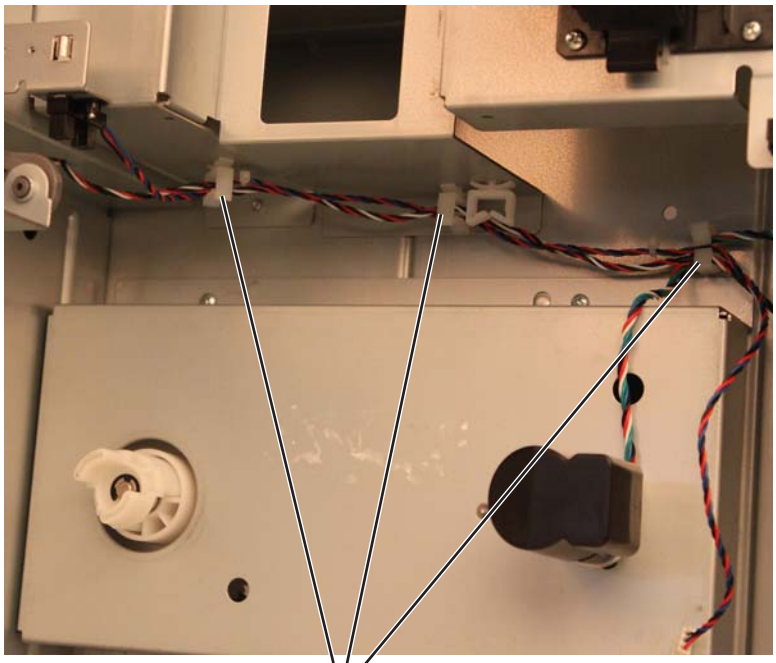
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See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Remove the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**.
2. Remove the jam clearance top cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
3. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
4. Remove the left side cover. See **“2000-sheet high-capacity feeder left side cover removal” on page 4-270**.
5. Remove the right side cover. See **“2000-sheet high-capacity feeder right side cover removal” on page 4-298**.
6. Remove the pick assembly. See **“2000-sheet high-capacity feeder pick assembly removal” on page 4-285**.
7. Remove the drive assembly. See **“2000-sheet high-capacity feeder drive assembly removal” on page 4-251**.
8. Remove the LED bracket. See **“2000-sheet high-capacity feeder LED bracket removal” on page 4-267**.
9. Disconnect the jam clearance cover connector (A) from the controller card assembly.

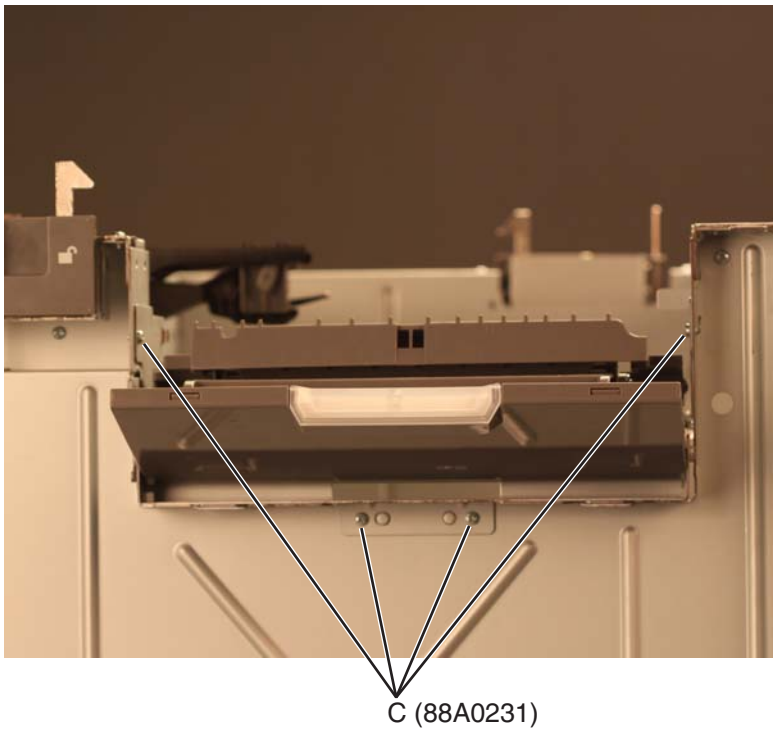


10. Release the jam clearance cover cable from the cable guides (B).



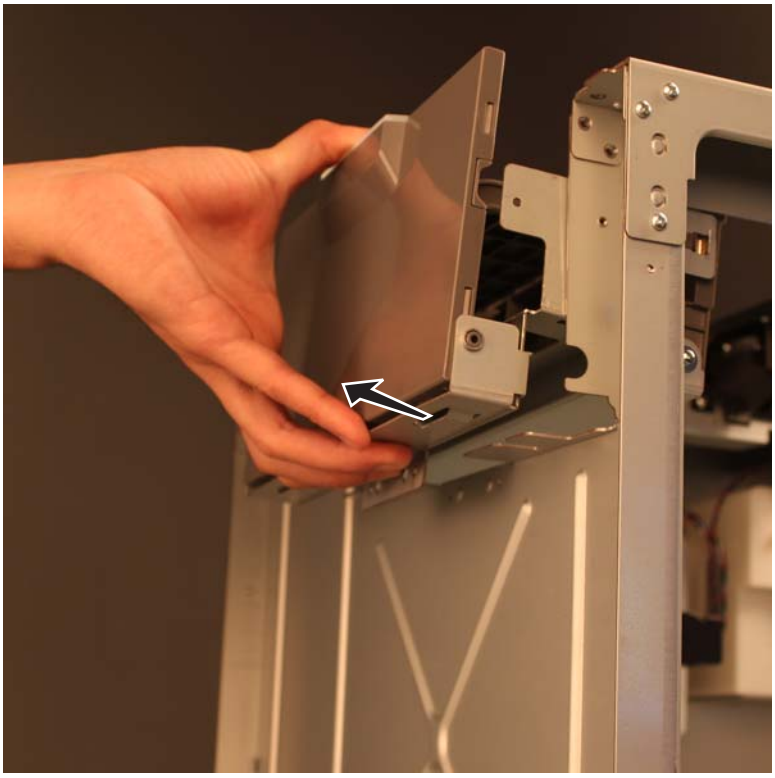
11. Open the jam clearance cover.

12. Remove the 4 screws (C) securing the jam clearance cover to the drawer.

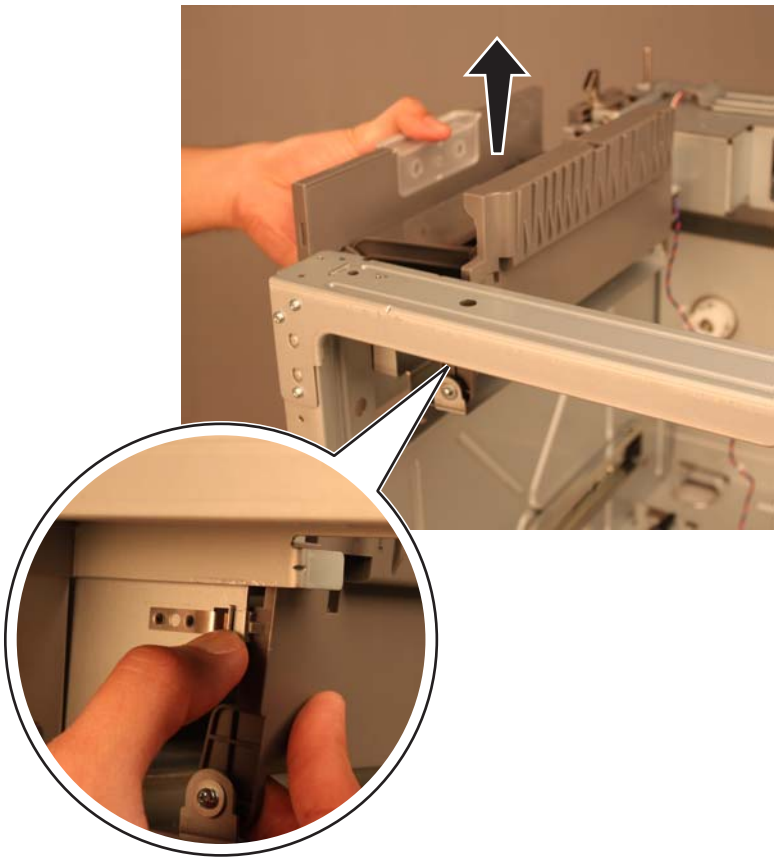


13. Close the jam clearance cover.

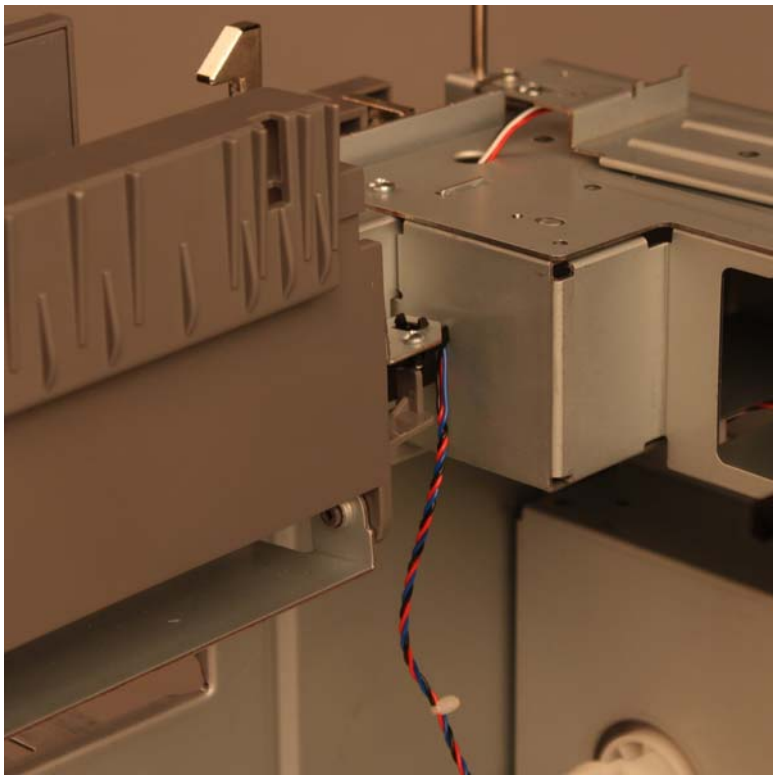
14. Pull out the jam clearance cover to clear the slots from the frame.



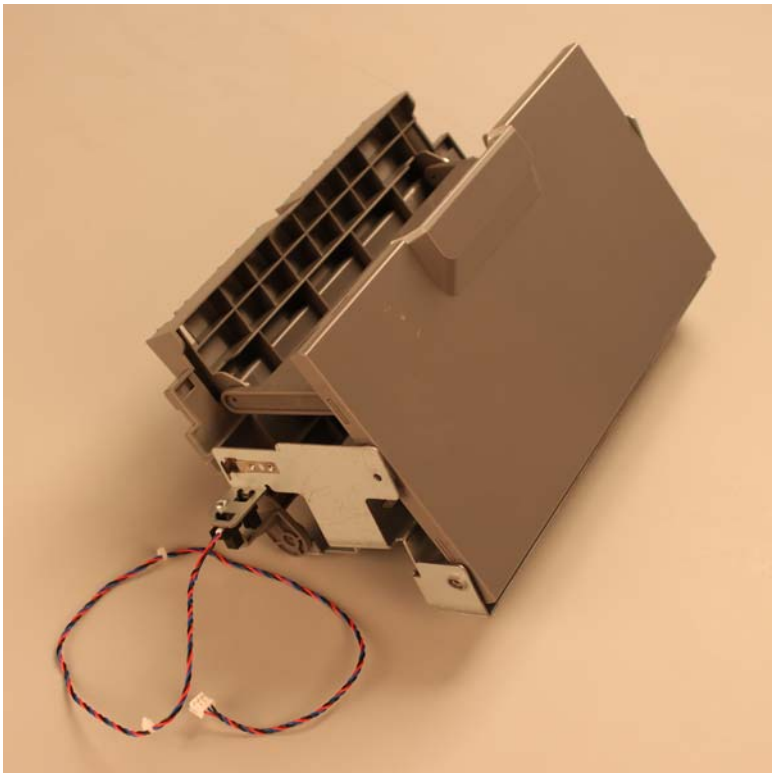
15. Press the metal tab to release the jam clearance cover, and pull up to remove the jam clearance cover.



Warning: Be careful not to damage the jam clearance cover sensor.

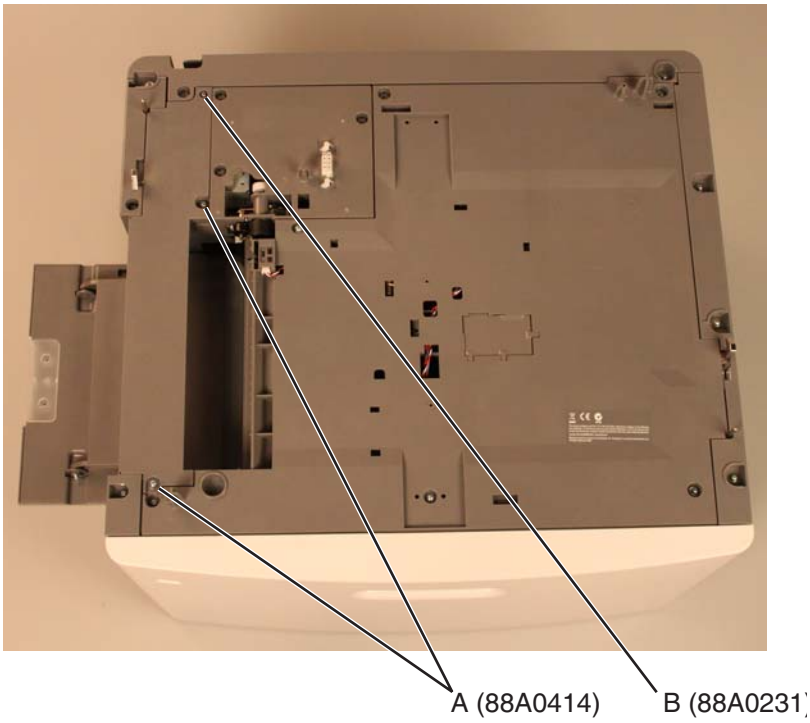


This is the photo of the 2000-sheet high-capacity feeder jam clearance cover.



2000-sheet high-capacity feeder jam clearance top cover removal

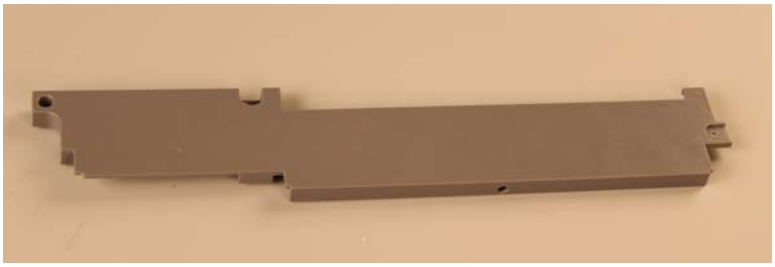
1. Open the jam clearance cover.
2. Remove the two screws (A) and one screw (B) securing the jam clearance top cover to the drawer.



3. Lift the right side of the jam clearance top cover to clear it from the LED bracket.



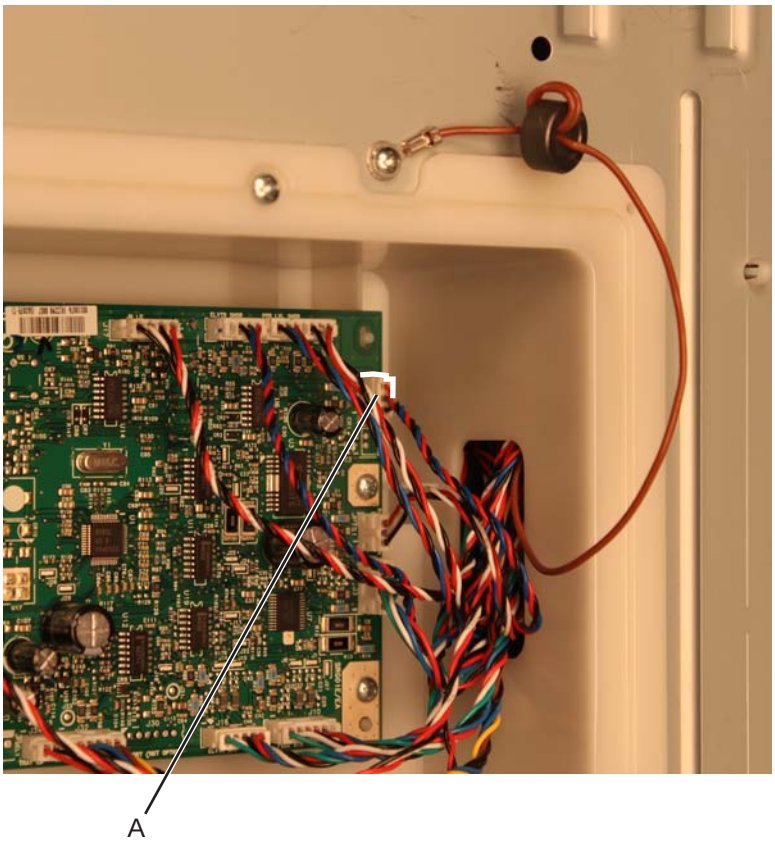
4. Remove the jam clearance top cover.



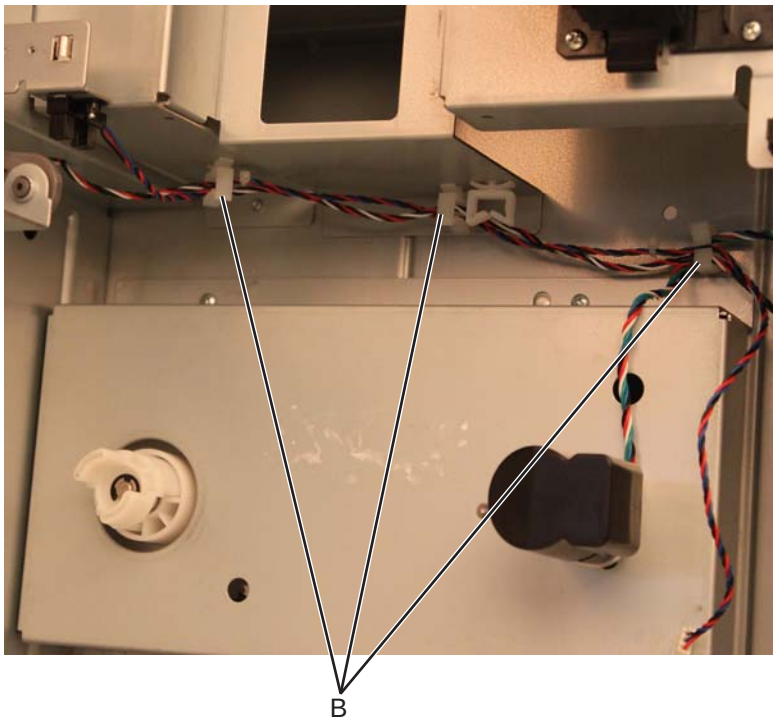
2000-sheet high-capacity feeder jam door clearance sensor removal

See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

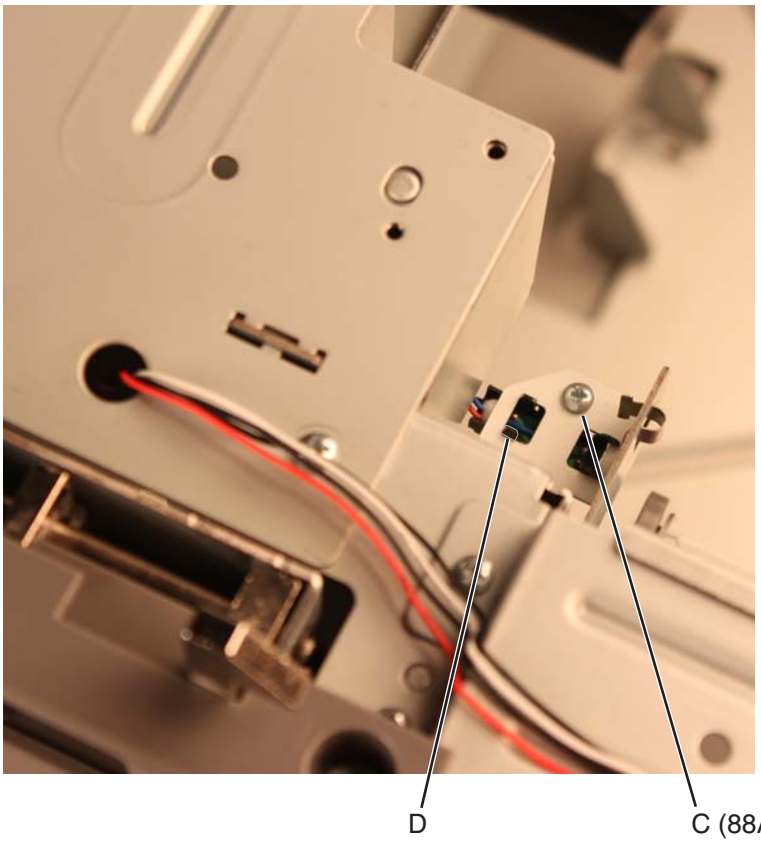
1. Remove the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**.
2. Remove the jam clearance top cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
3. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
4. Remove the right side cover. See **“2000-sheet high-capacity feeder right side cover removal” on page 4-298**.
5. Remove the pick assembly. See **“2000-sheet high-capacity feeder pick assembly removal” on page 4-285**.
6. Remove the drive assembly. See **“2000-sheet high-capacity feeder drive assembly removal” on page 4-251**.
7. Disconnect the jam clearance cover connector (A) from the controller card assembly.



8. Release the jam clearance cover cable from the cable guides (B).



9. Remove the screw (C) and press the latch (D) to release the jam clearance cover sensor.

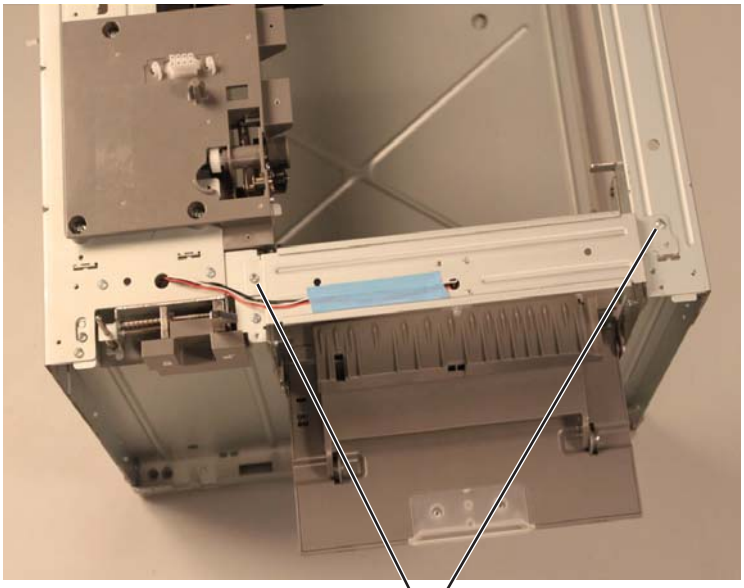


10. Remove the jam clearance cover sensor.



2000-sheet high-capacity feeder LED bracket removal

1. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
2. Remove the left side cover. See **“2000-sheet high-capacity feeder left side cover removal” on page 4-270**.
3. Remove the right side cover. See **“2000-sheet high-capacity feeder right side cover removal” on page 4-298**.
4. Remove the pick assembly. See **“2000-sheet high-capacity feeder pick assembly removal” on page 4-285**.
5. Remove the two screws (A) securing the LED bracket to the drawer.



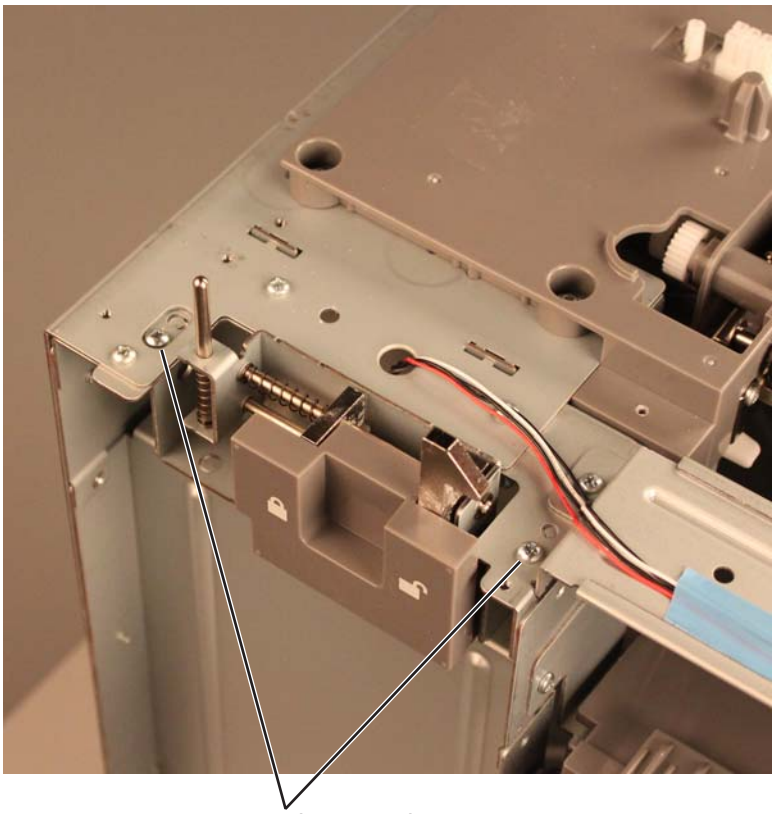
6. Detach the LED bracket.
   Note: The LED bracket does not need to be completely removed from the machine. It may be allowed to hang on the side.

2000-sheet high-capacity feeder left anti-tip latch assembly removal

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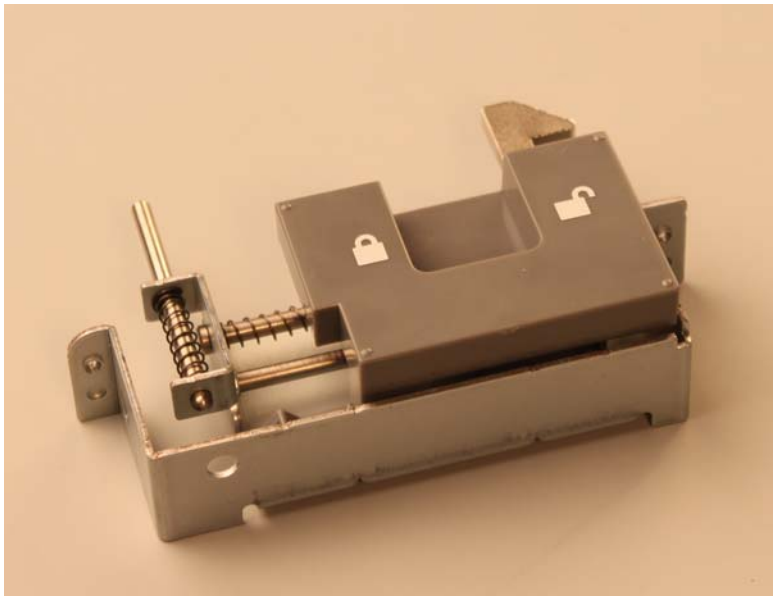
See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Remove the jam clearance top cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
1. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
2. Remove the left side cover. See **“2000-sheet high-capacity feeder left side cover removal” on page 4-270**.
3. Remove the two screws (A) securing the left anti-tip latch assembly to the drawer.
   Note: Hold the left anti-tip latch assembly to prevent it from falling off after removing the screws.



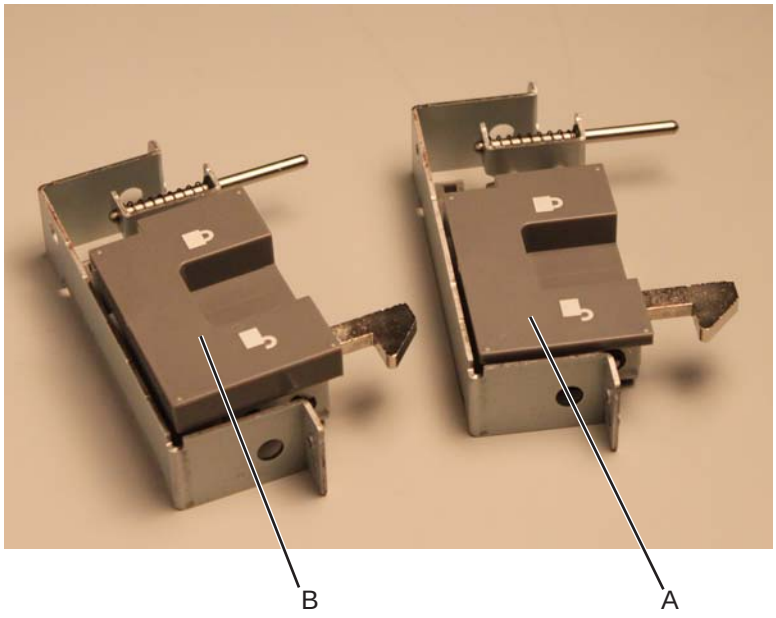
A (88A0231)

This is the photo of the left anti-tip latch assembly.



Installation note:

The right anti-tip latch assembly (A) is thinner compared to the left-anti-tip latch assembly (B).

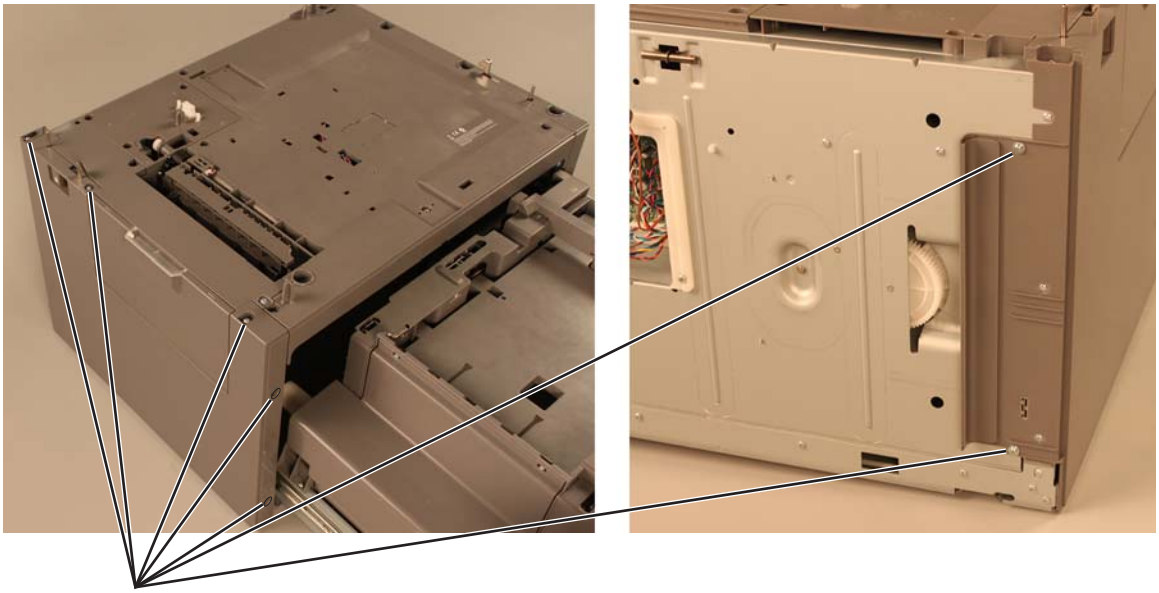


2000-sheet high-capacity feeder left side cover removal

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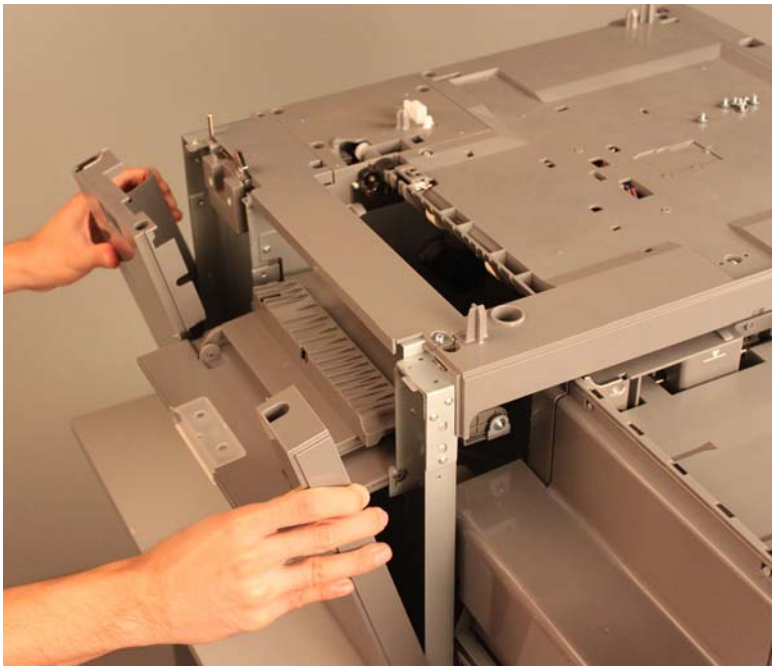
See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
2. Open the media tray assembly.
3. Remove the seven screws (A) securing the left side cover to the drawer.

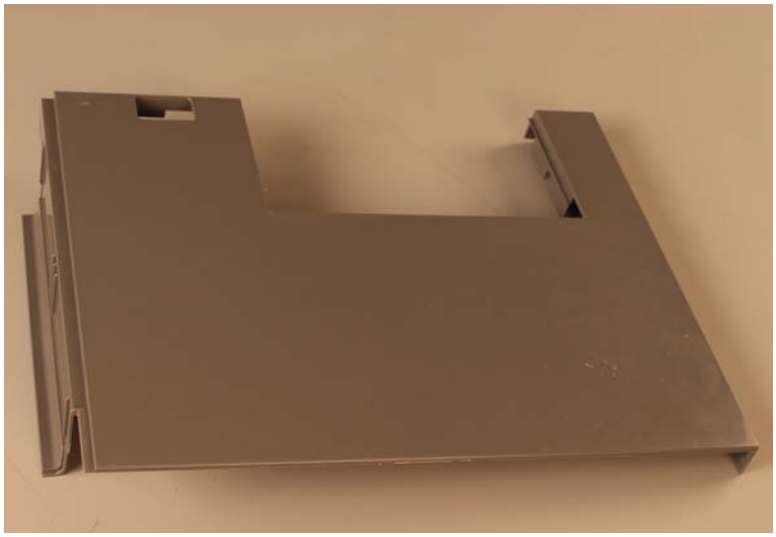


A (88A0442)

4. Open the jam clearance cover.
5. Remove the left side cover by slightly lifting it.

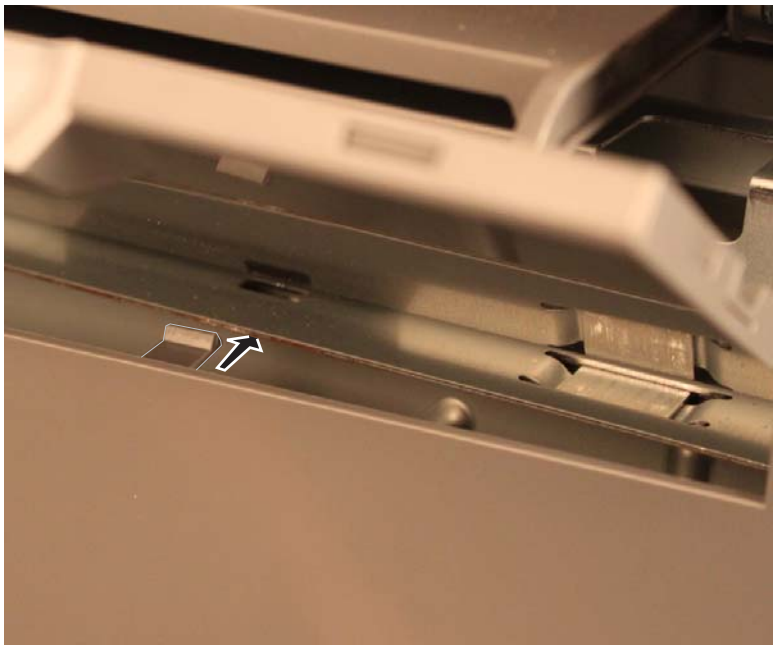


This is the photo of the 2000-sheet high-capacity feeder left side cover.



Installation note:

Be sure that the latch is inside the slot.

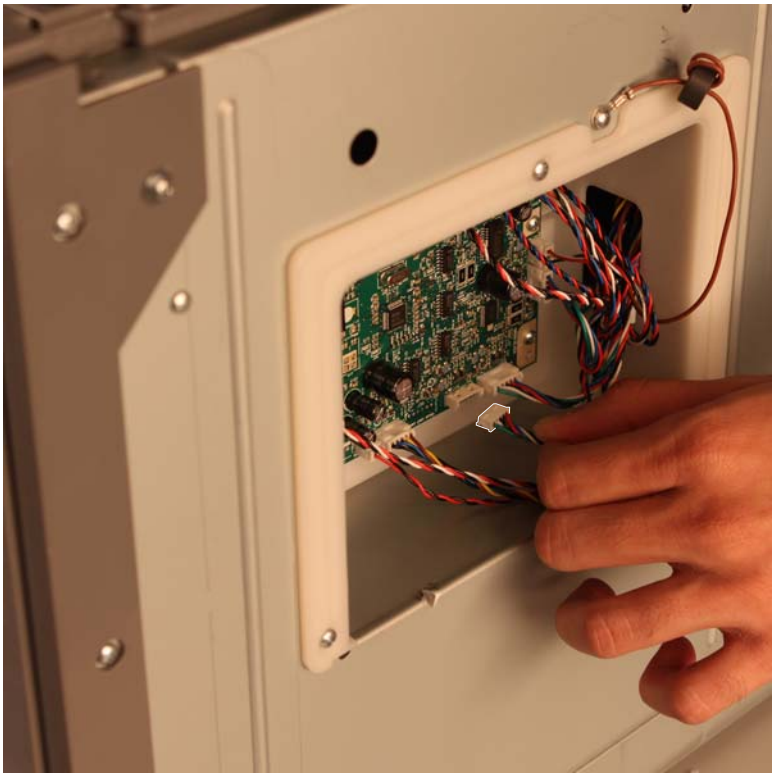


2000-sheet high-capacity feeder lift drive gear assembly removal

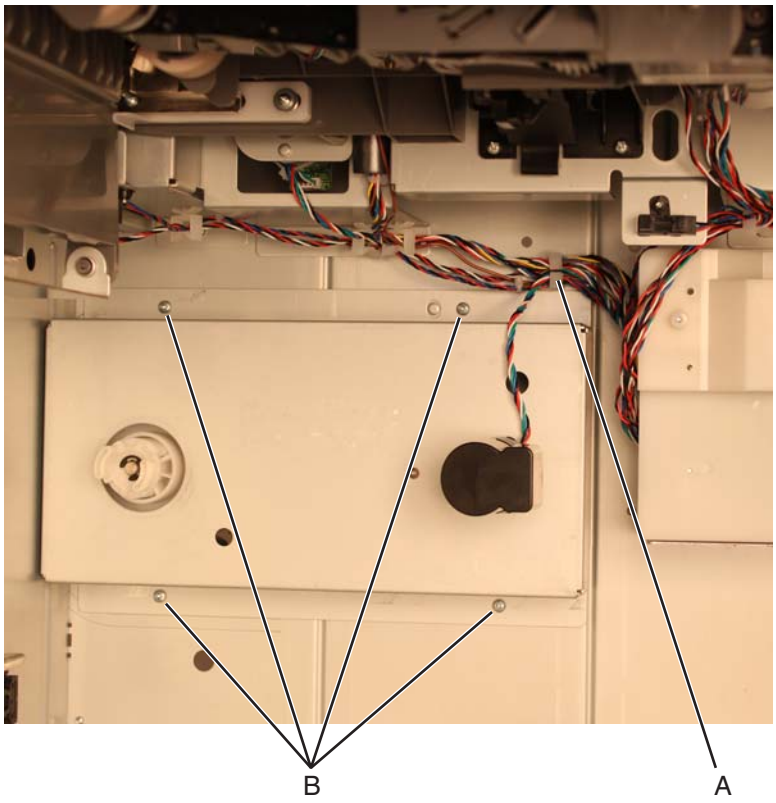
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See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

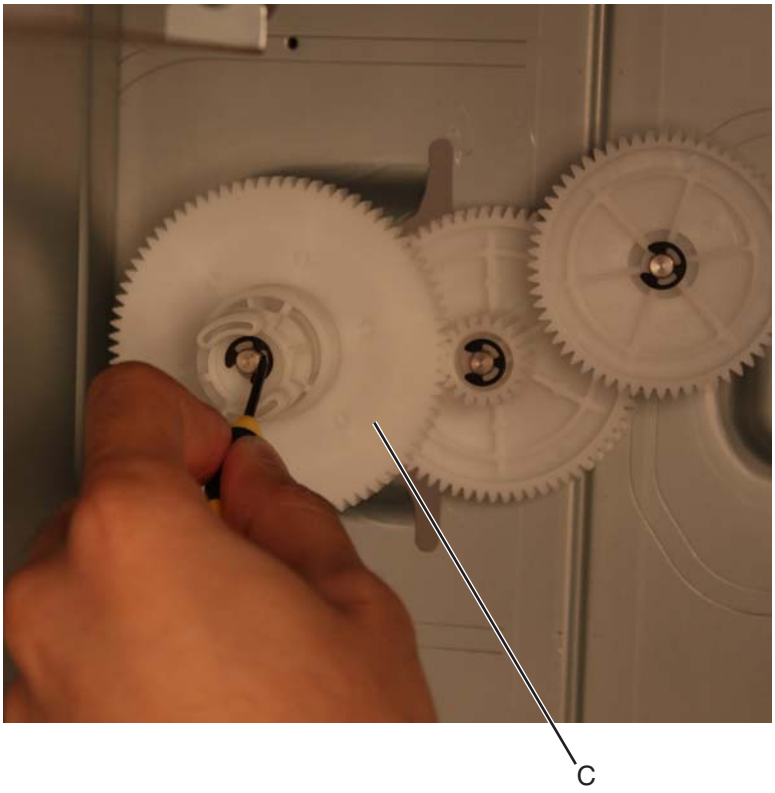
1. Remove the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**.
2. Remove the rear cover. See **“2000-sheet high-capacity feeder right side cover removal” on page 4-298**.
3. Disconnect the lift drive motor connector from the controller card assembly.



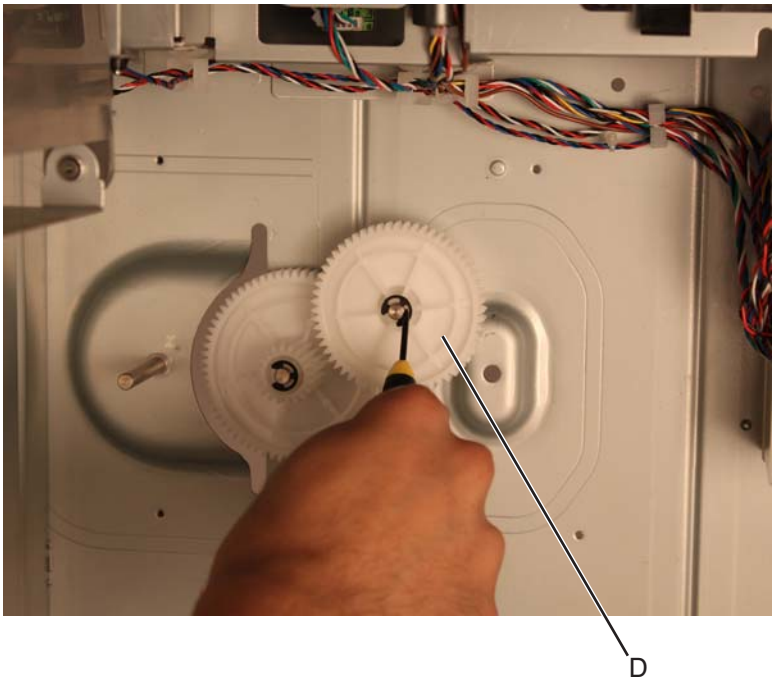
4. Release the lift drive motor cable from the cable guide (A).
5. Remove the four screws (B) to remove the bracket.



6. Remove the E-clip securing the elevator gear (C) to the frame.
   Note: The spring from gear (C) will pop out when removing the E-clip.

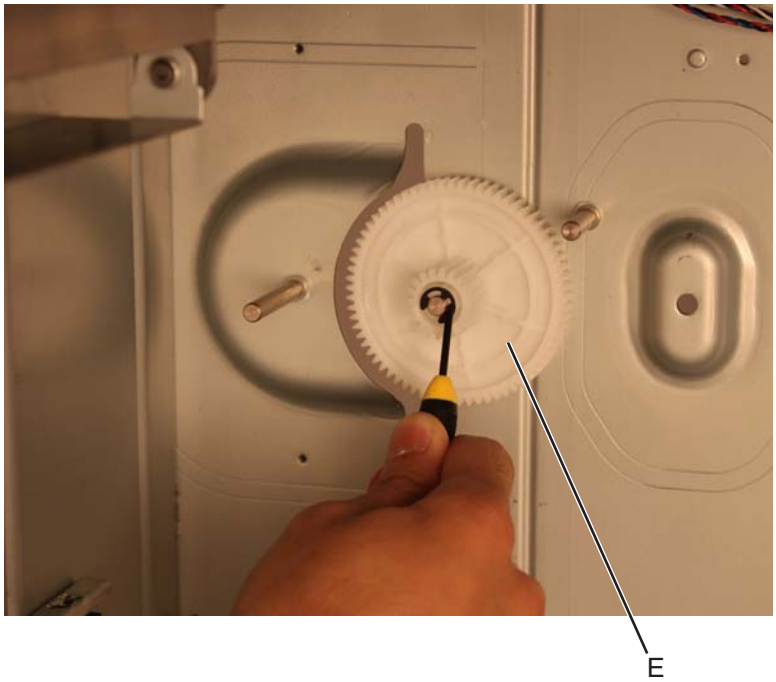


7. Remove the elevator gear (C).
8. Remove the E-clip securing the elevator gear (D) to the frame.



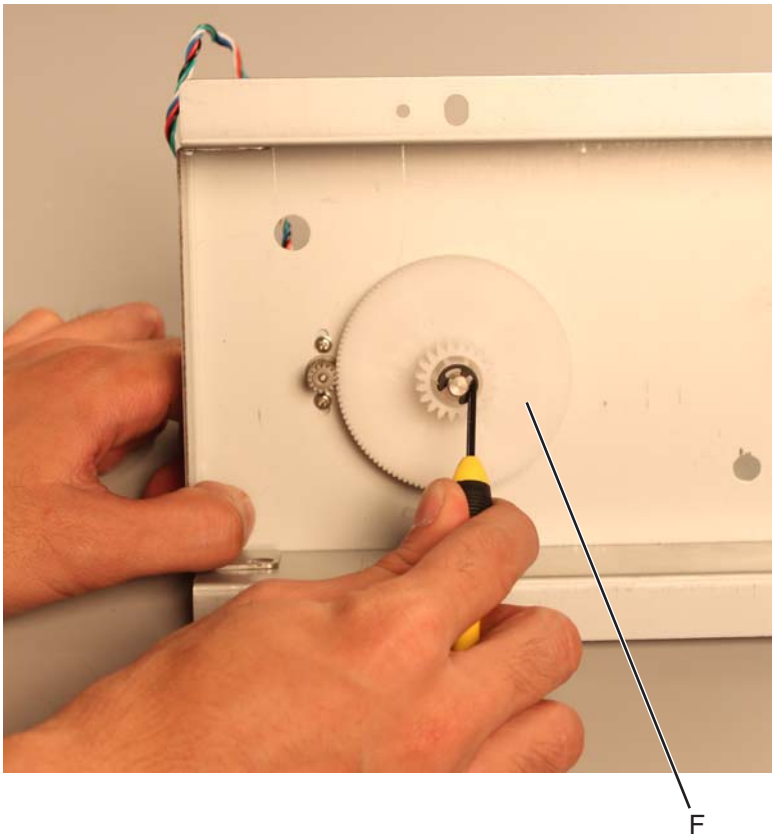
9. Remove the elevator gear (D).

10. Remove the E-clip securing the elevator gear (E) to the frame.



11. Remove the elevator gear (E).

12. Remove the E-clip securing the elevator gear (F) to the bracket.

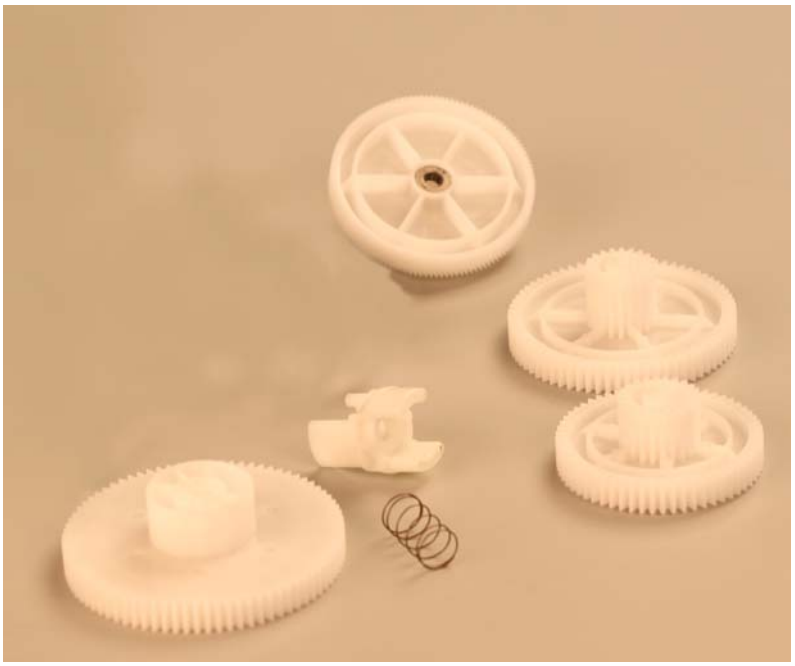


13. Remove the elevator gear (F).

14. Remove the bearing (G).

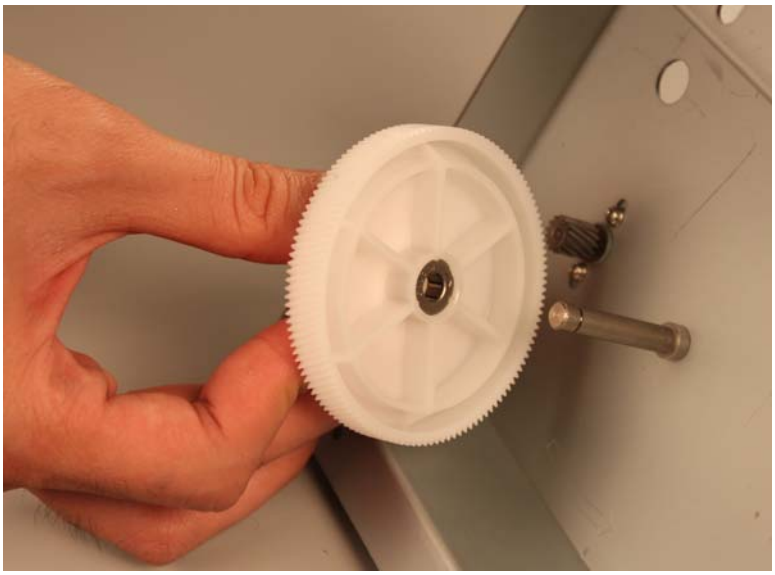


This is the photo of the 2000-sheet high-capacity feeder lift motor drive assembly.

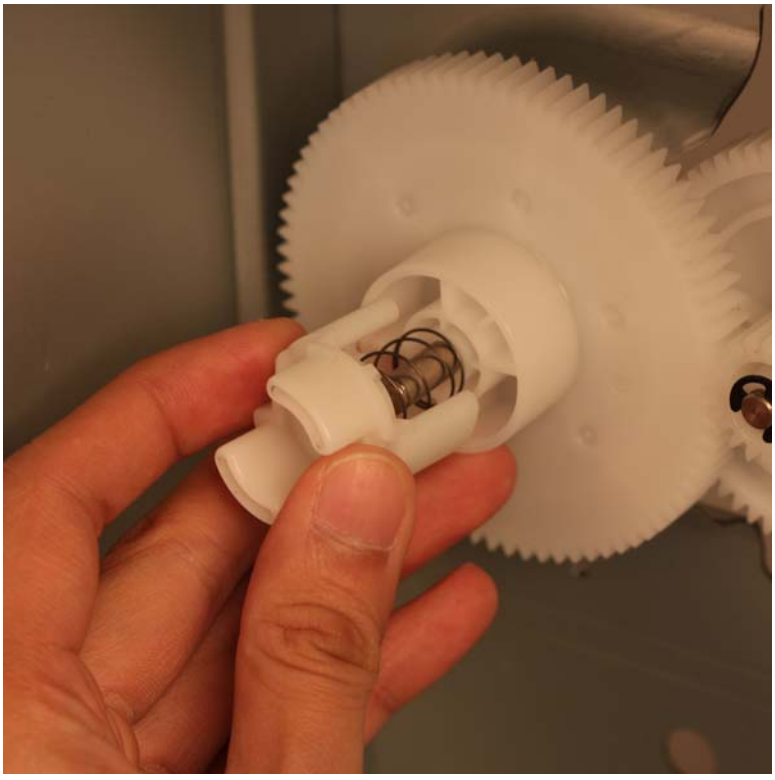


Installation notes:

Be sure that the bearing is reinstalled as shown in the picture.



Be sure that the gear is reassembled as shown in the picture.

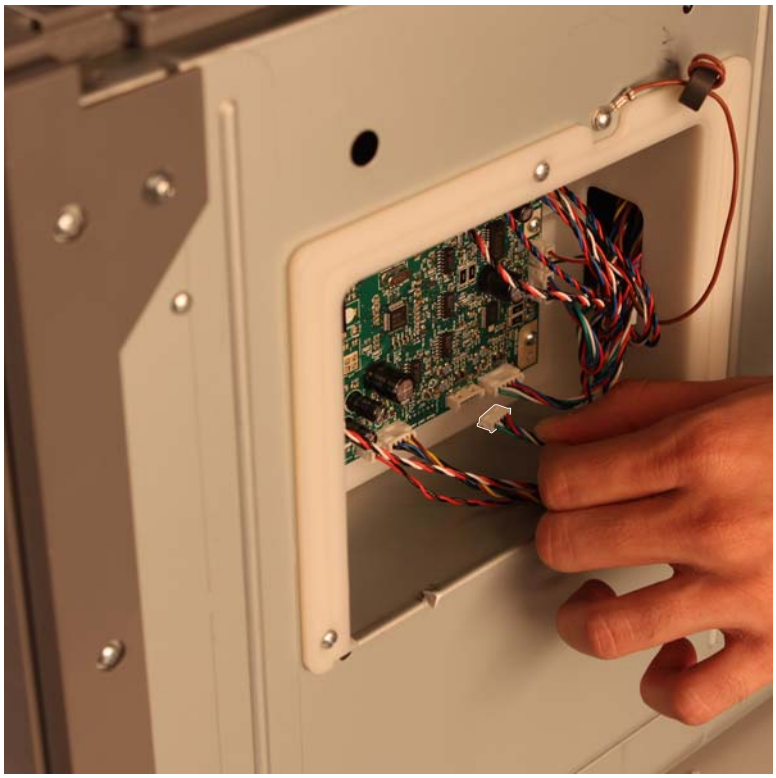


2000-sheet high-capacity feeder lift drive motor assembly removal

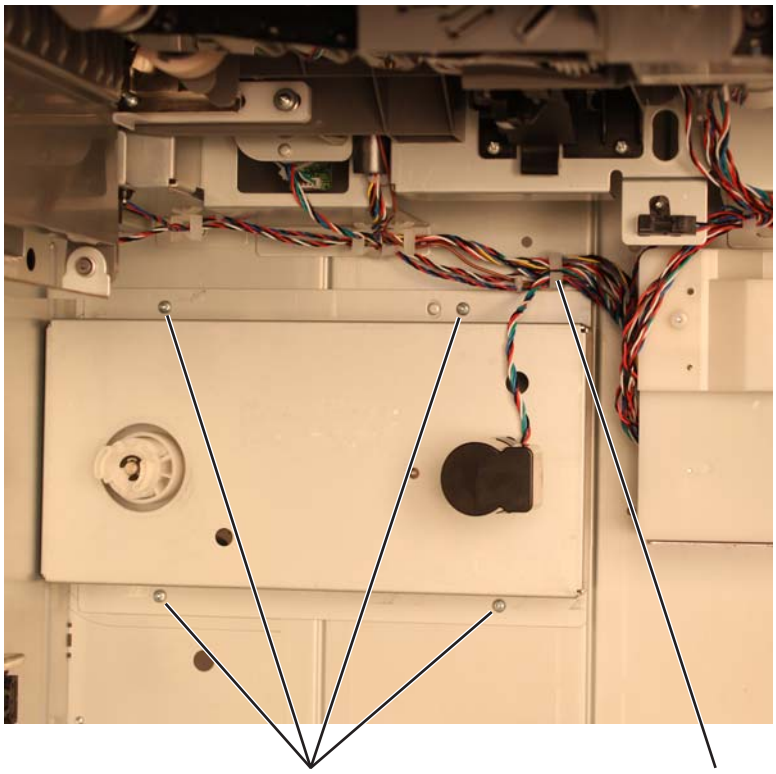
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See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

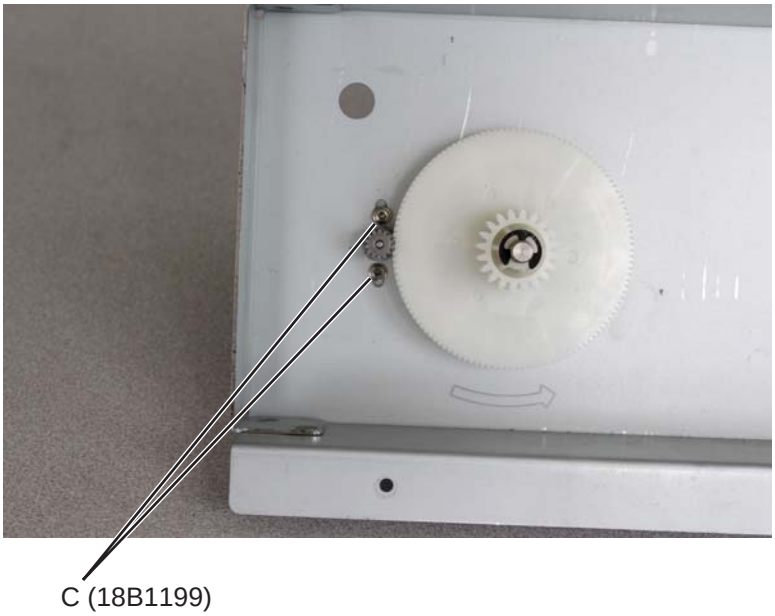
1. Remove the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**.
2. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
3. Disconnect the lift drive motor connector from the controller card assembly.



4. Release the lift drive motor cable from the cable guide (A).
5. Remove the four screws (B) to remove the bracket.

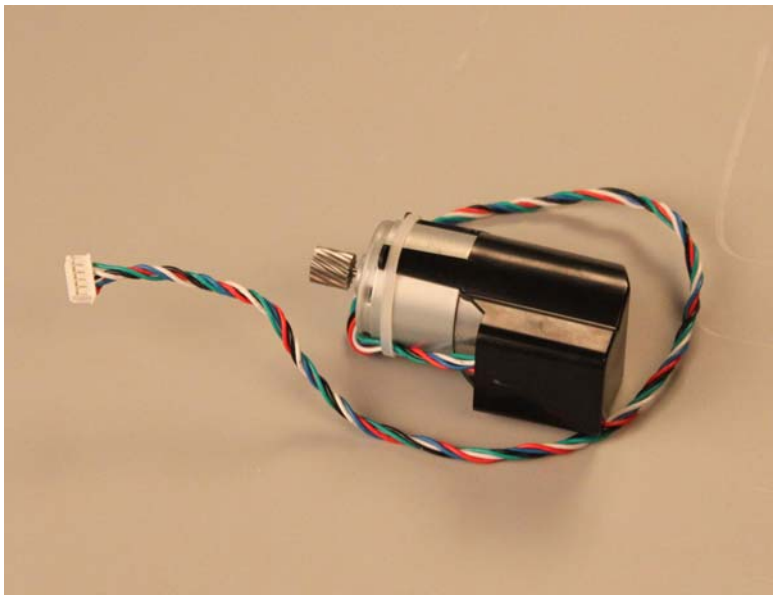


6. Remove the two screws (C) securing the motor to the bracket.



C (18B1199)

7. Remove the motor from the bracket.

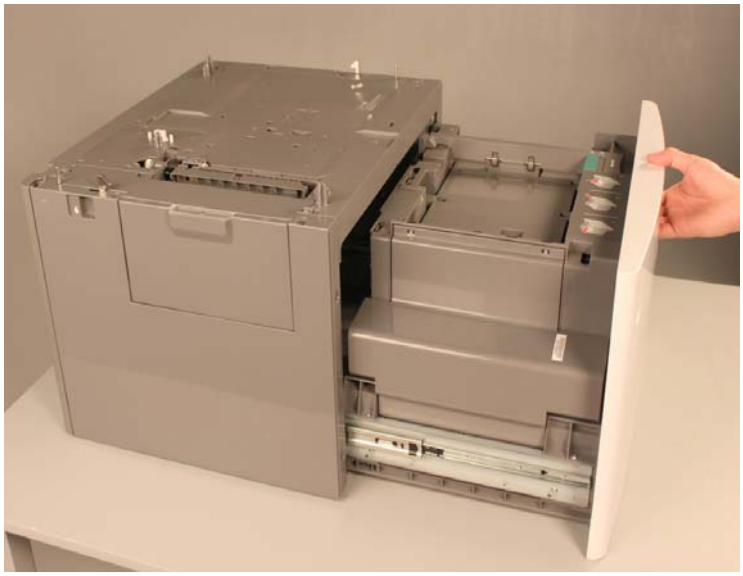


2000-sheet high-capacity feeder media tray assembly removal

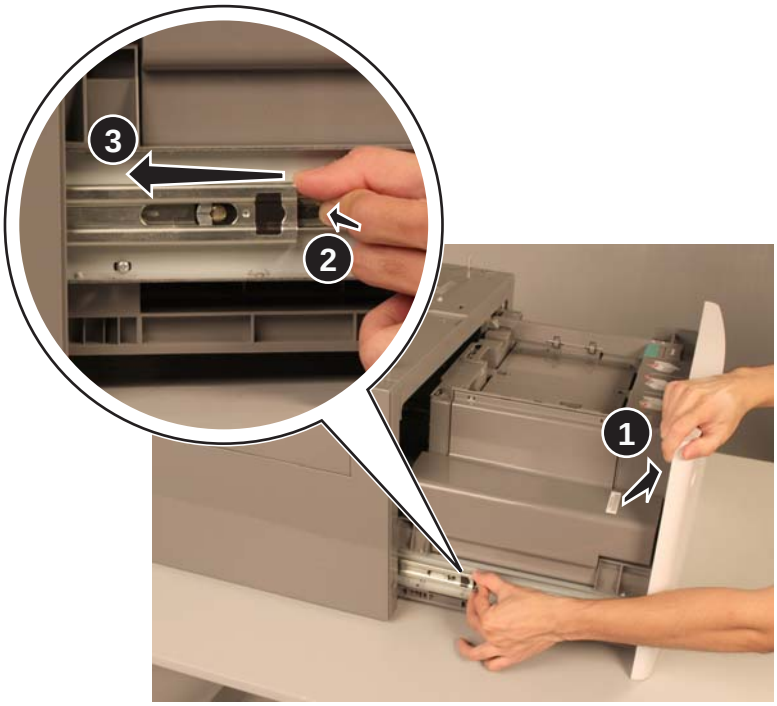
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See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Open the media tray assembly until it stops.

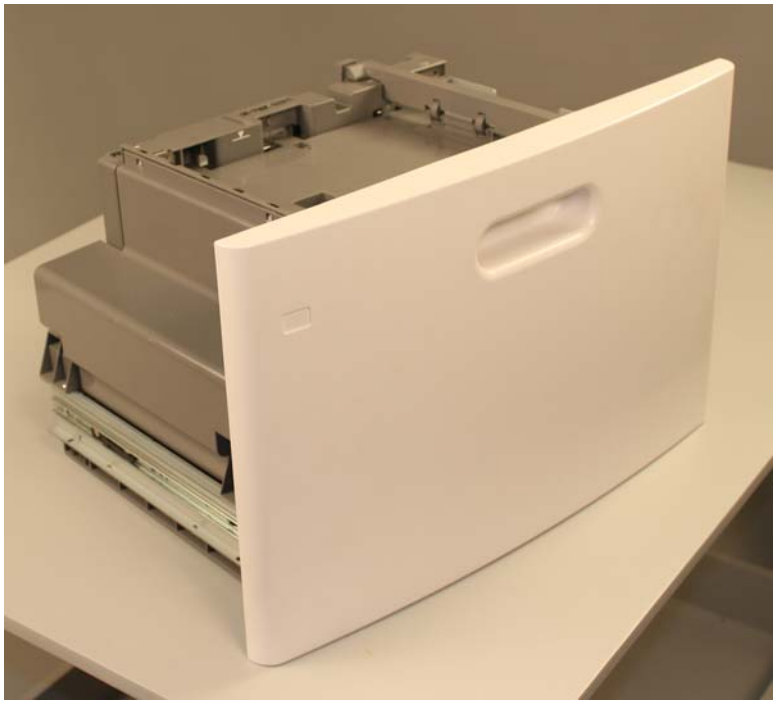


2. Slightly pull the media tray to the right, push the latch on the media tray slide, and push the slide until it clears the tray.



3. Do the same on the other side.

4. Slightly lift the tray to clear it from the stopper and pull to remove the media tray assembly out of the drawer.

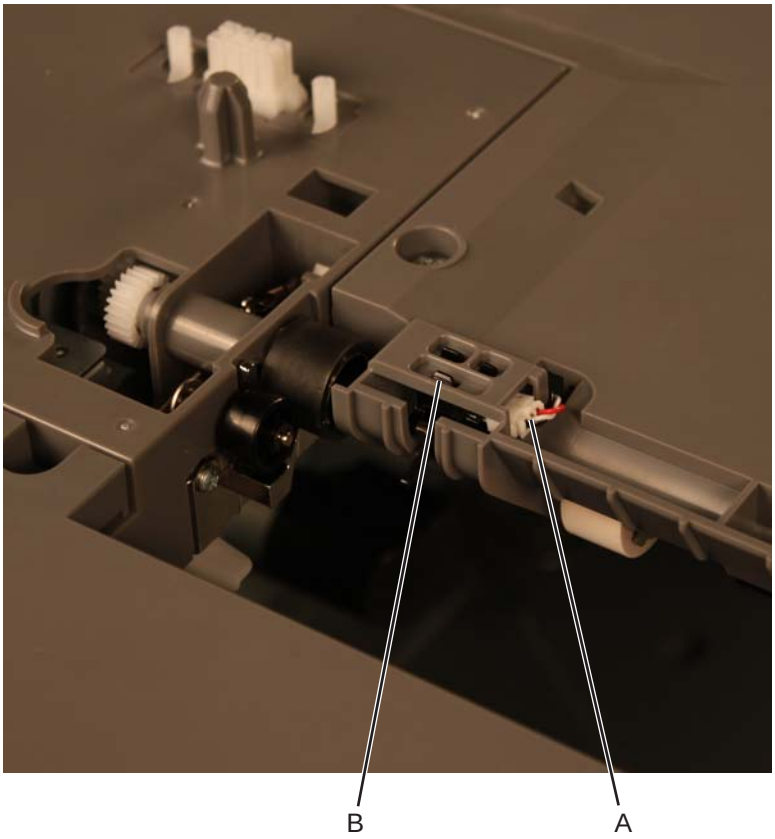


2000-sheet high-capacity feeder pass thru sensor removal

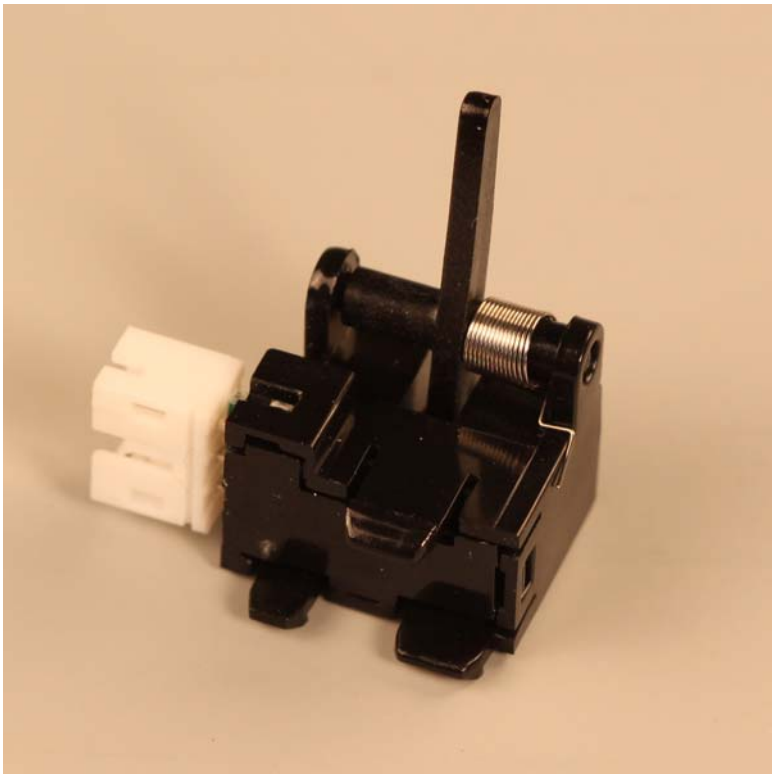
See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Open the media tray assembly.
2. Open the jam clearance cover.
3. Disconnect the pass thru sensor connector (A) from the pass thru sensor.

4. Release the latch (B) securing the pass thru sensor.



5. Remove the pass thru sensor.

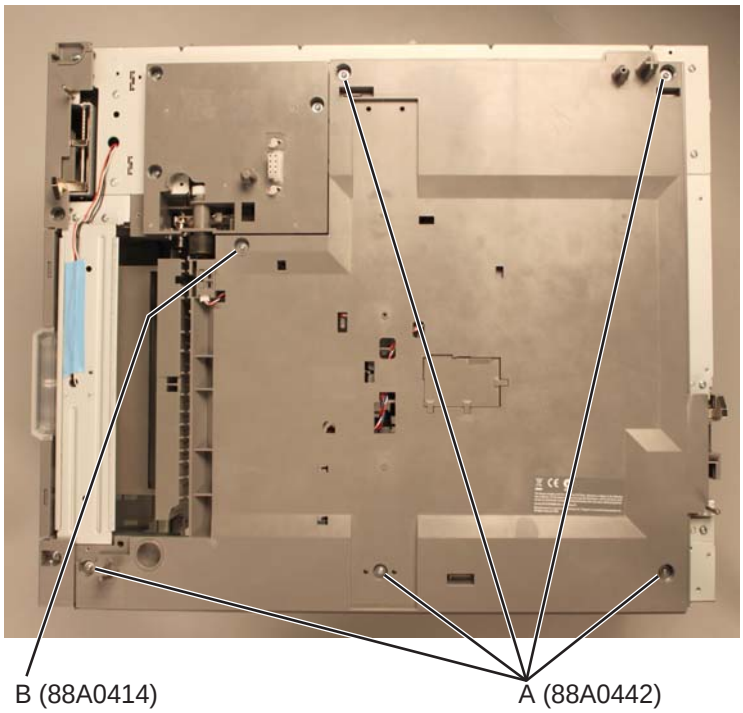


2000-sheet high-capacity feeder pick assembly removal

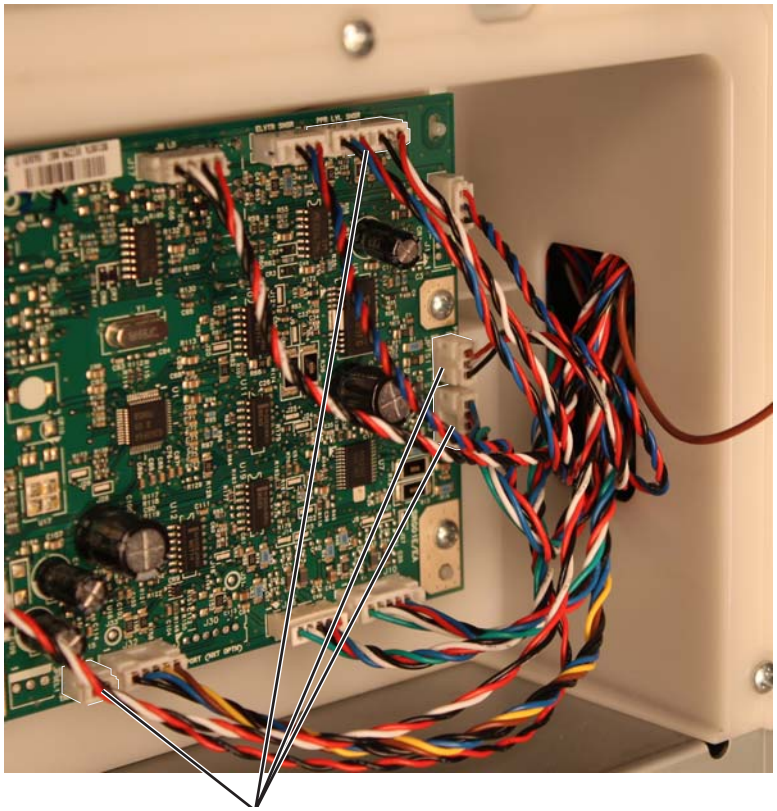
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See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

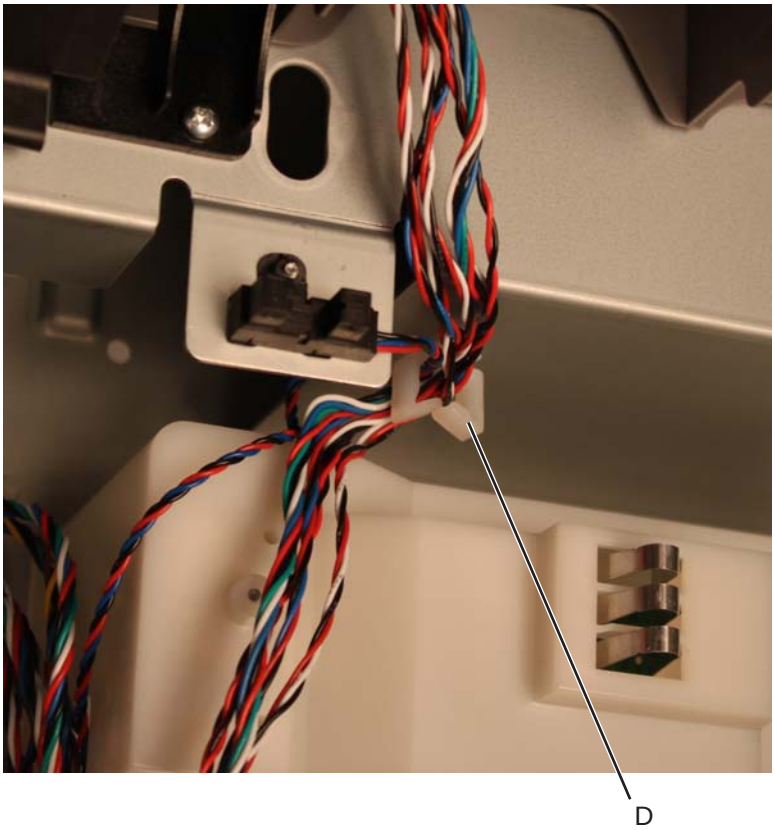
1. Remove the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**.
2. Remove the jam clearance top cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
3. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
4. Remove the right side cover. See **“2000-sheet high-capacity feeder right side cover removal” on page 4-298**.
5. Remove the five screws (A) and one screw (B) securing the pick assembly to the drawer.



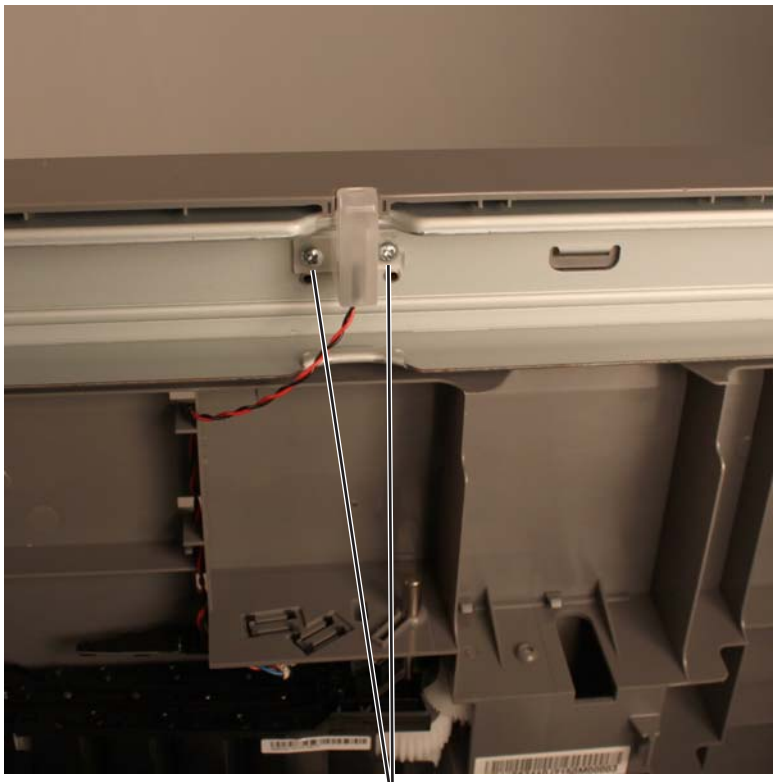
6. Disconnect the four pick assembly connectors (C) from the controller card assembly.



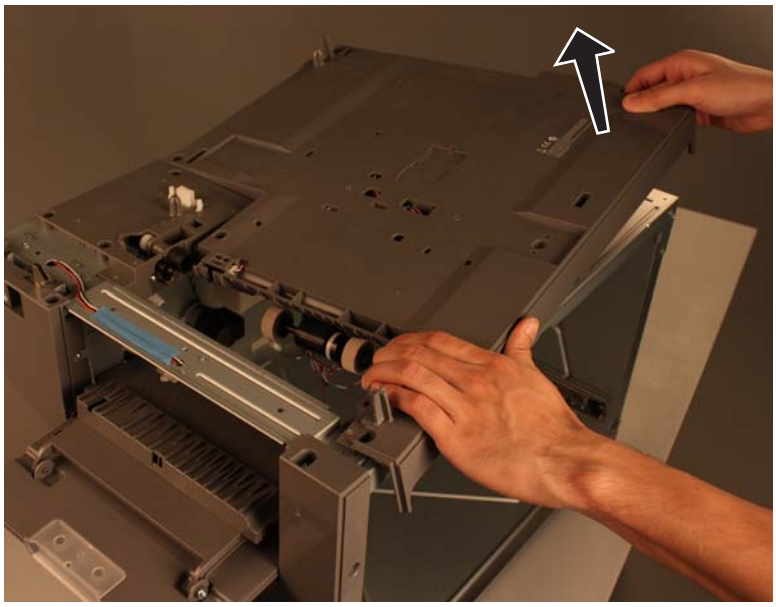
7. Release the pick assembly cables from the cable guide (D).



8. Remove the two screws (E) securing the cave light to the drawer.



9. Lift the lower right side of the pick assembly and pull to remove it.

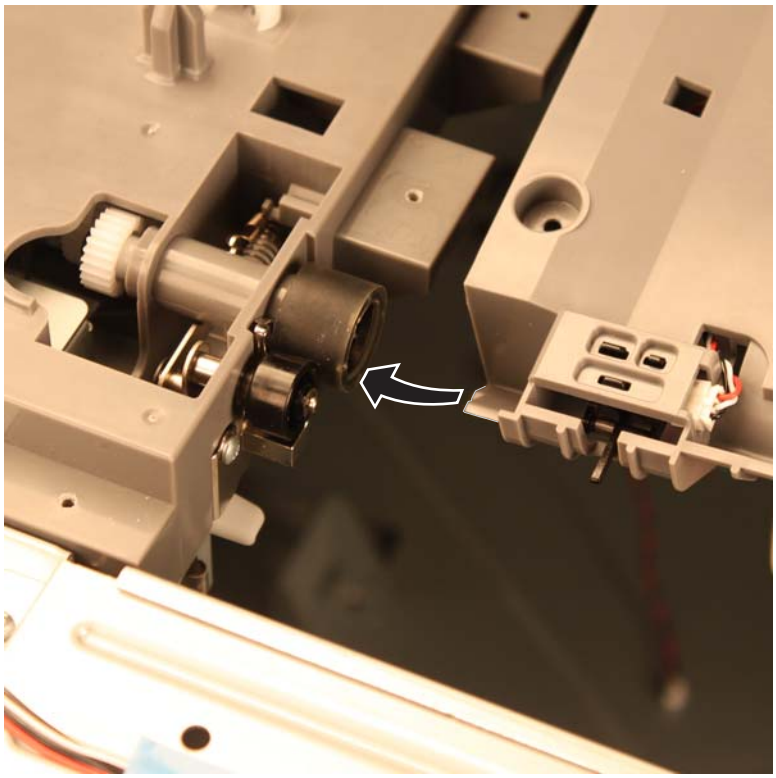


This is the photo of the 2000-sheet high-capacity feeder pick assembly.



Installation note:

1. Align the upper left part of the pick assembly.

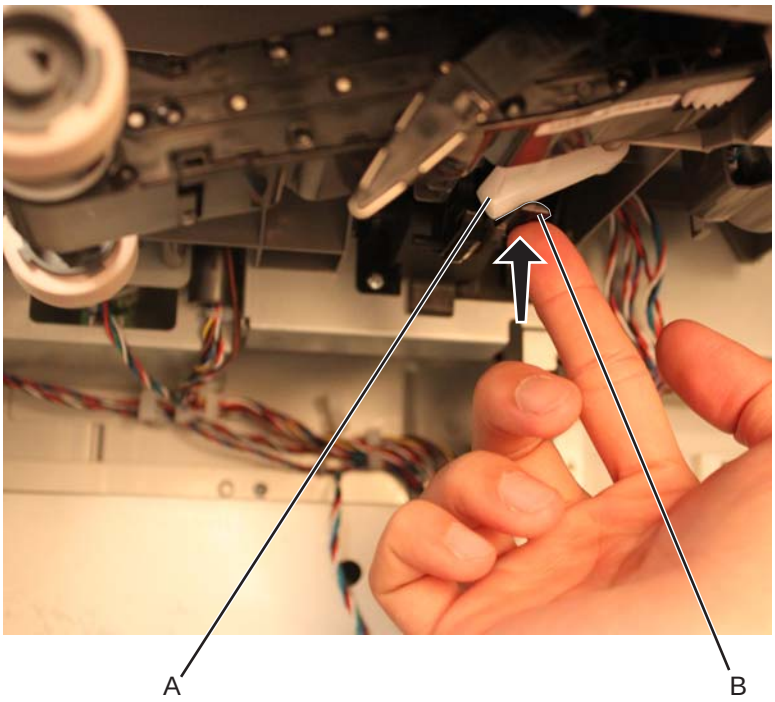


2. Align the frame tabs to their corresponding pick arm slots.

Installation note:

Be sure that the pick arm lever (A) is on top of the actuator lever (B).

If the pick arm is hanging, press the actuator lever as shown in the picture.



Be sure that the pick arm is positioned as shown in the picture.

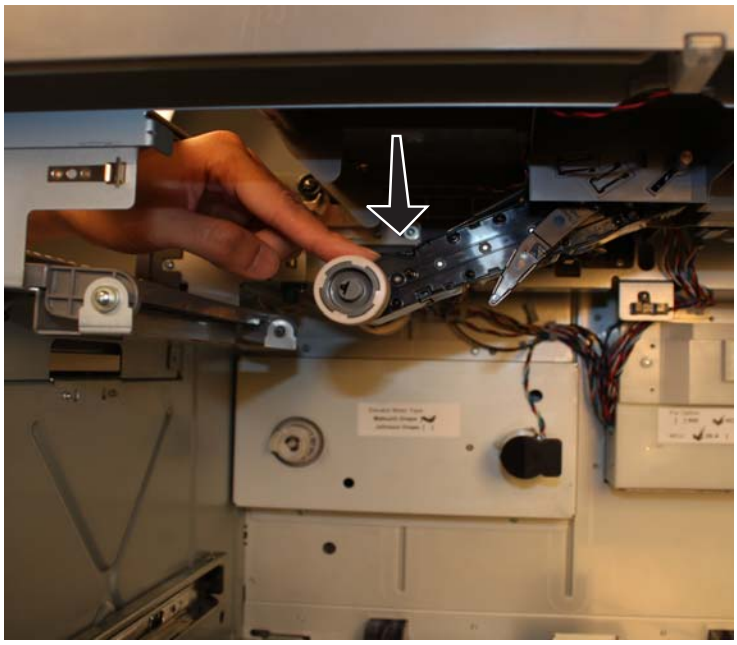


2000-sheet high-capacity feeder pick roll assembly removal

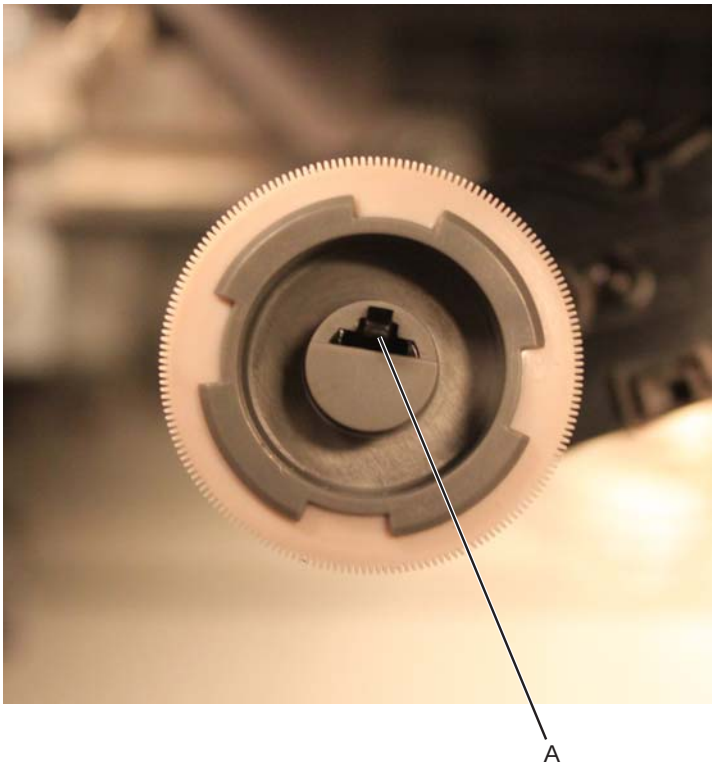
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See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

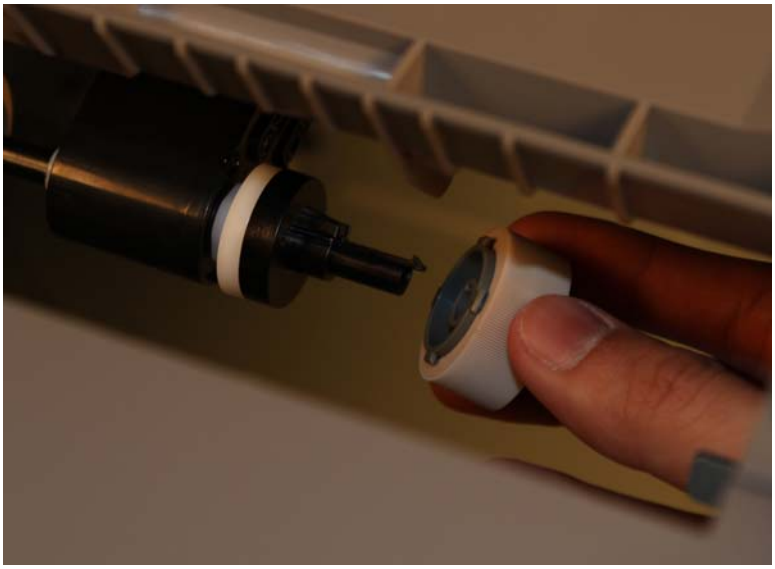
1. Remove the media tray assembly. See **“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**.
2. Open the jam clearance cover.
3. Push down the pick arm until it clicks.



4. Press down the black latch (A) to release the pick tire.



5. Remove the pick roll tire.



6. Repeat steps 4-5 to remove the pick tire on the other side.

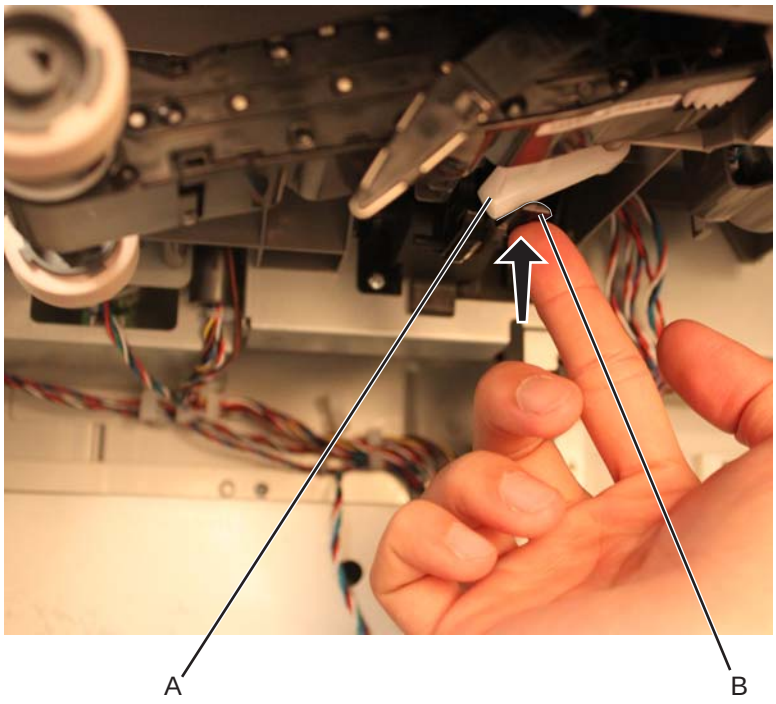
This is the photo of the 2000-sheet high-capacity feeder pick roll assembly.



Installation note:

Be sure that the pick arm lever (A) is on top of the actuator lever (B).

If the pick arm is hanging, press the actuator lever as shown in the picture.



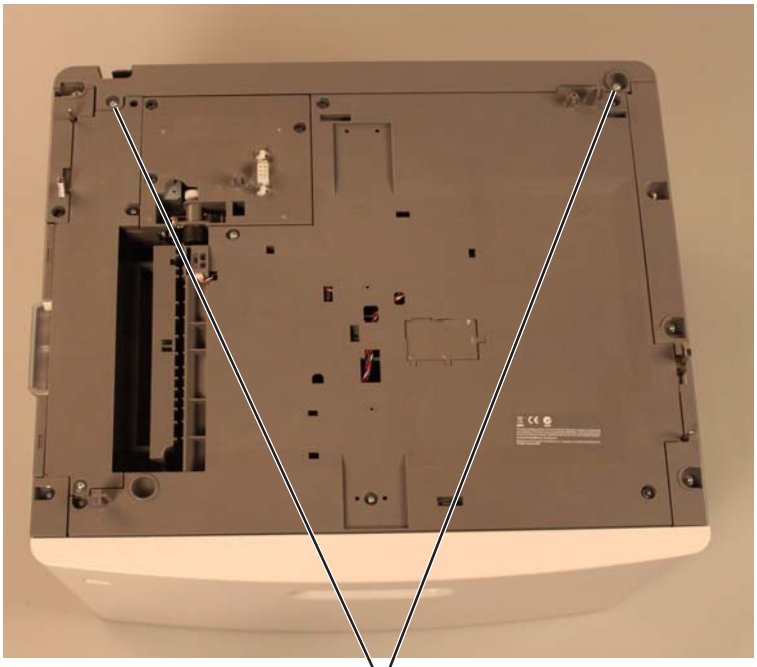
Be sure that the pick arm is positioned as shown in the picture.



2000-sheet high-capacity feeder rear cover removal

See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

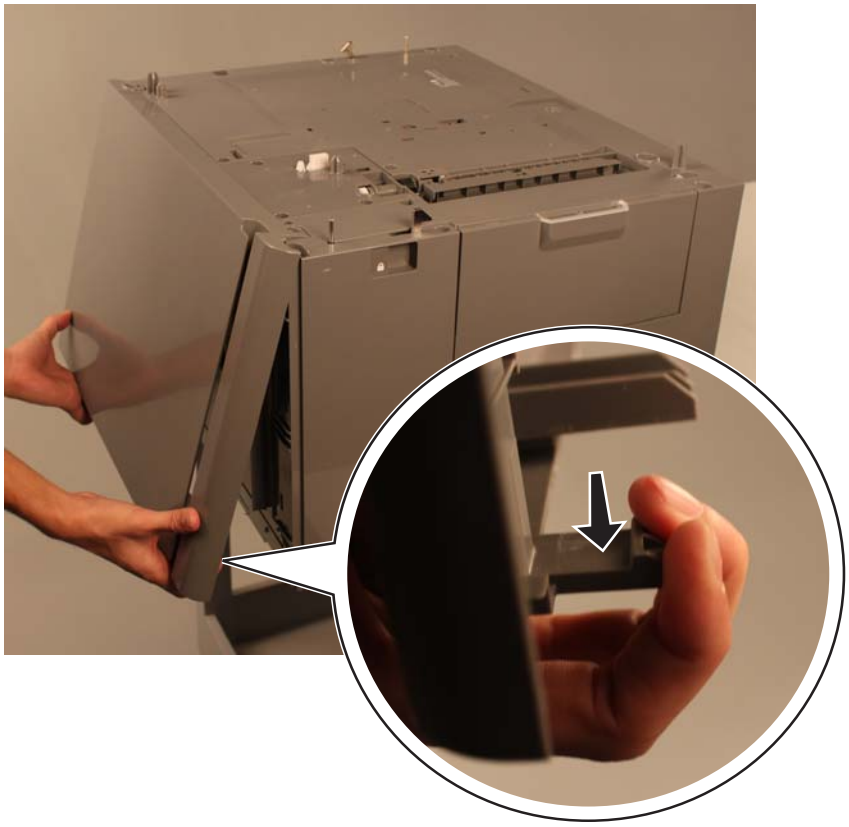
1. Remove the two screws (A) securing the rear cover to the drawer.



A (88A0442)

2. Position the printer so that the rear cover is over the edge of the table.

3. Release the two latches, and remove the rear cover.



This is the photo of the 2000-sheet high-capacity feeder rear cover.

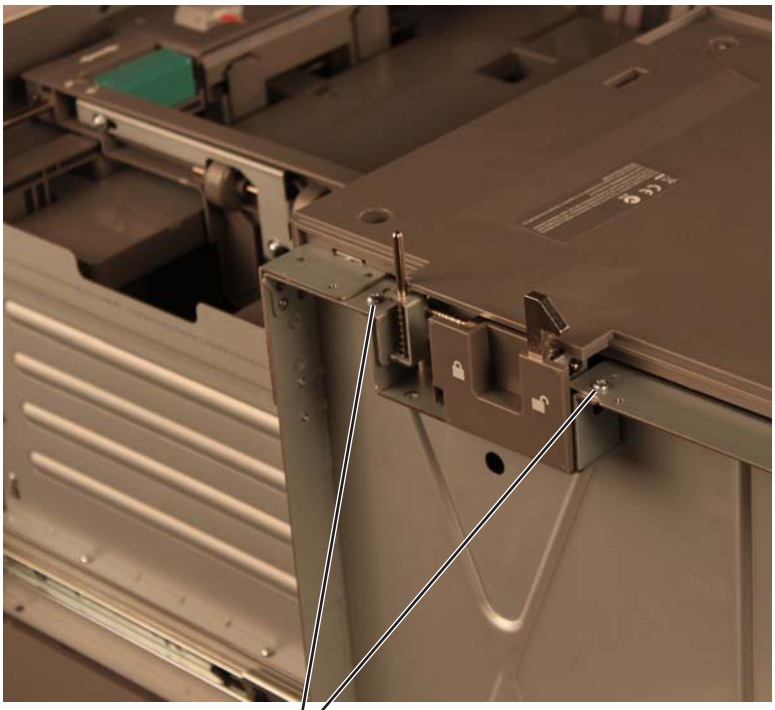


2000-sheet high-capacity feeder right anti-tip latch assembly removal

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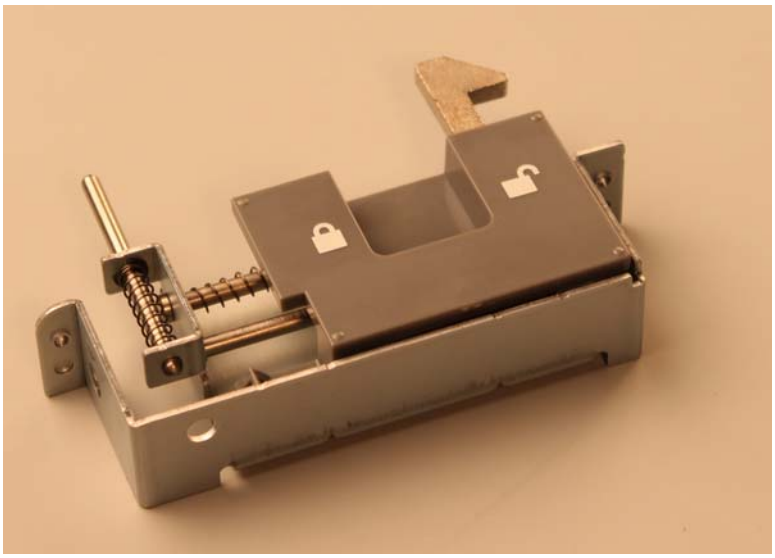
See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
2. Remove the right side cover. See **“2000-sheet high-capacity feeder right side cover removal” on page 4-298**.
3. Remove the two screws (A) securing the right anti-tip latch assembly to the drawer.
   Note: Hold the right anti-tip latch assembly to prevent it from falling off after removing the screws.



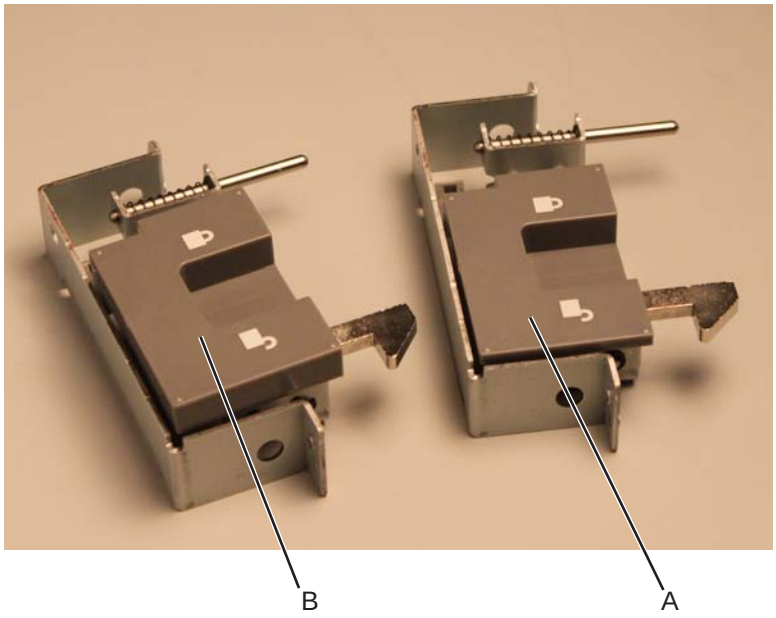
A (88A0231)

This is the photo of the right anti-tip latch assembly.



Installation note:

The right anti-tip latch assembly (A) is thinner compared to the left-anti-tip latch assembly (B).

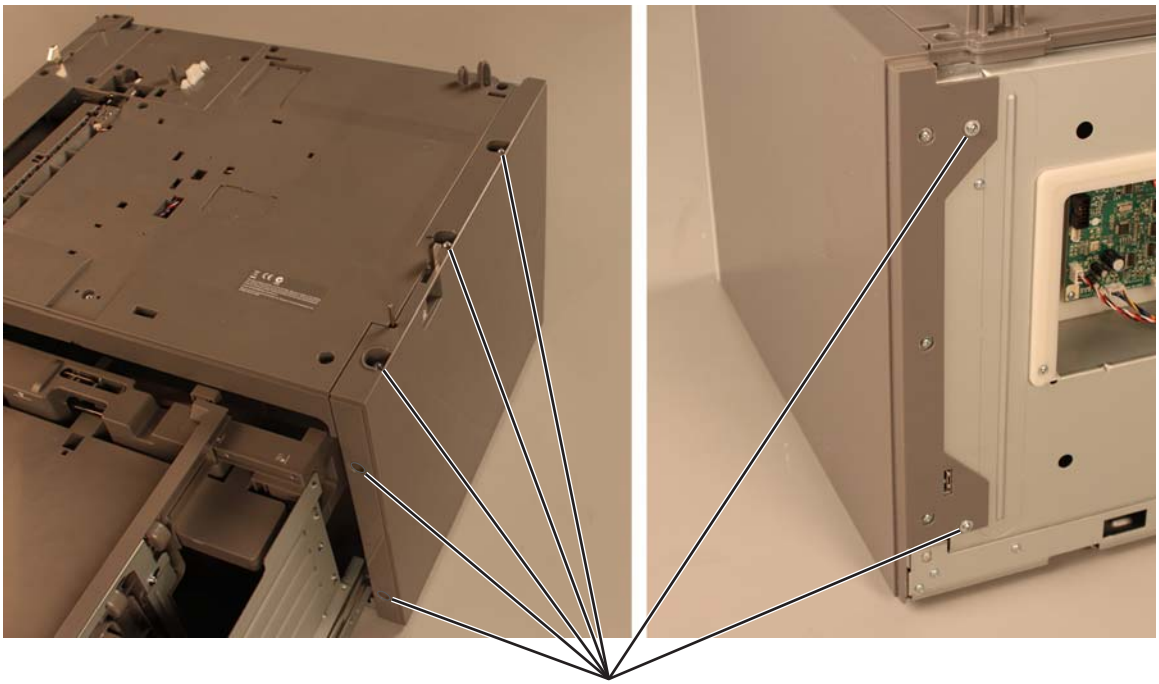


2000-sheet high-capacity feeder right side cover removal

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See **“Optional 2000-sheet high-capacity feeder” on page 7-33** for the part number.

1. Remove the rear cover. See **“2000-sheet high-capacity feeder rear cover removal” on page 4-294**.
2. Open the media tray assembly.
3. Remove the seven screws (A) securing the right side cover to the drawer.

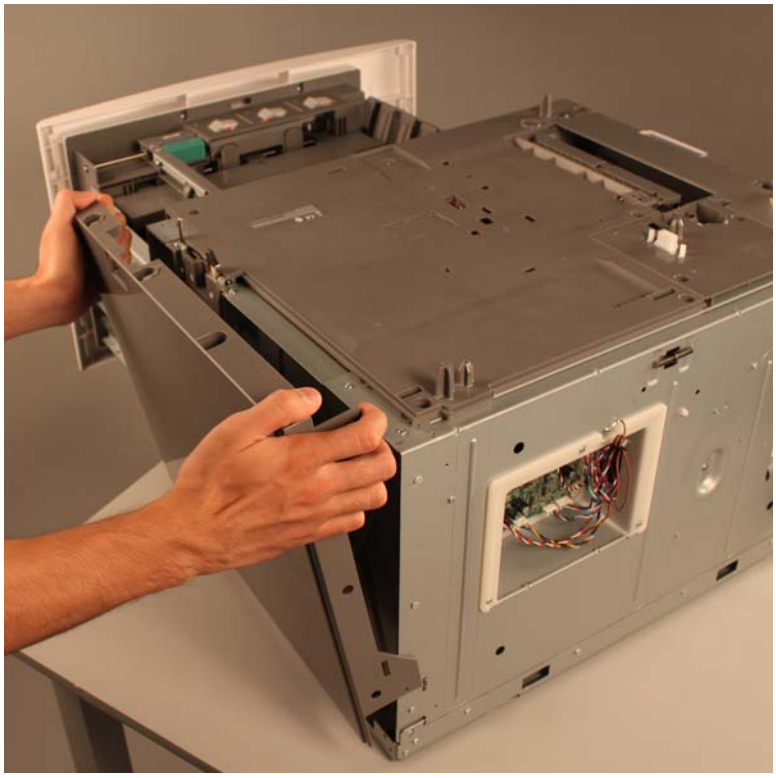


A (88A0442)

4. Pull the upper back portion of the right side cover.



5. Lift the right side cover to remove it.



This is the photo of the 2000-sheet high-capacity feeder right side cover.



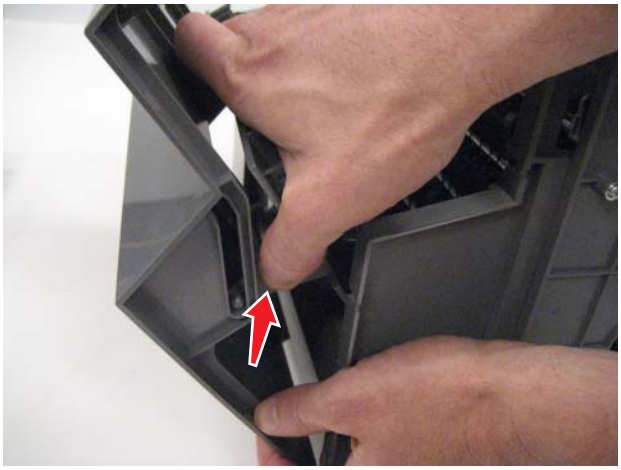
Output option removals

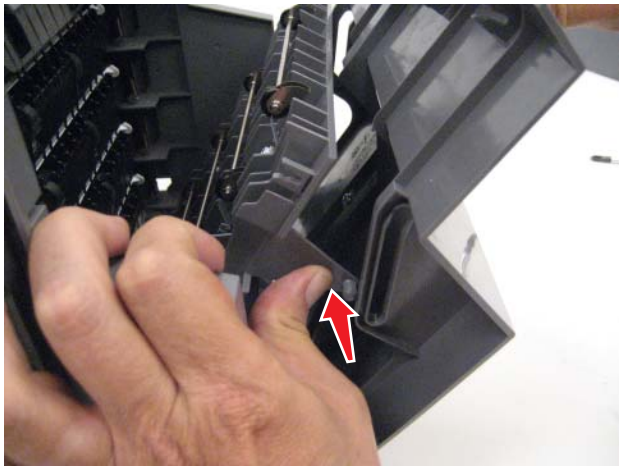
5-bin mailbox

5-bin mailbox access door removal

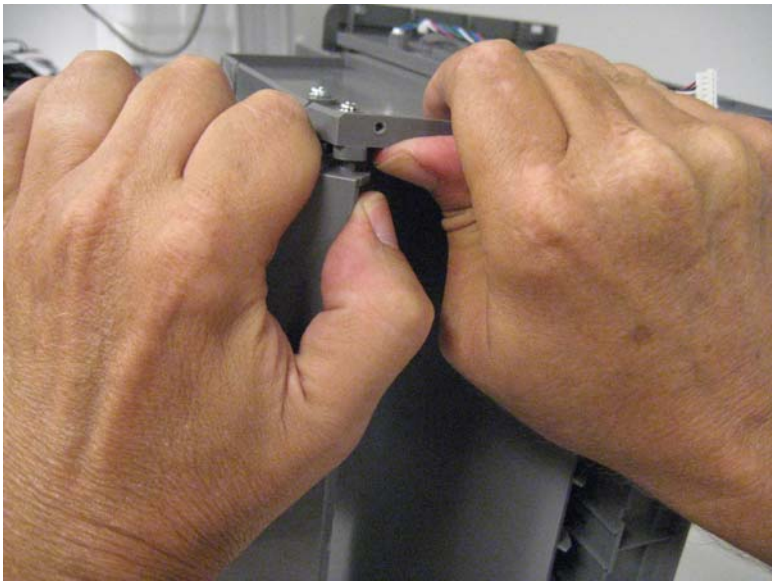
See **“5-bin mailbox assembly (covers)” on page 7-49** for the part number.

1. Remove the mailbox from the printer.
2. Remove the front cover. See **“5-bin mailbox front cover removal” on page 4-309**.
3. Open the access door, and press in to release the support pins from each side of the door.

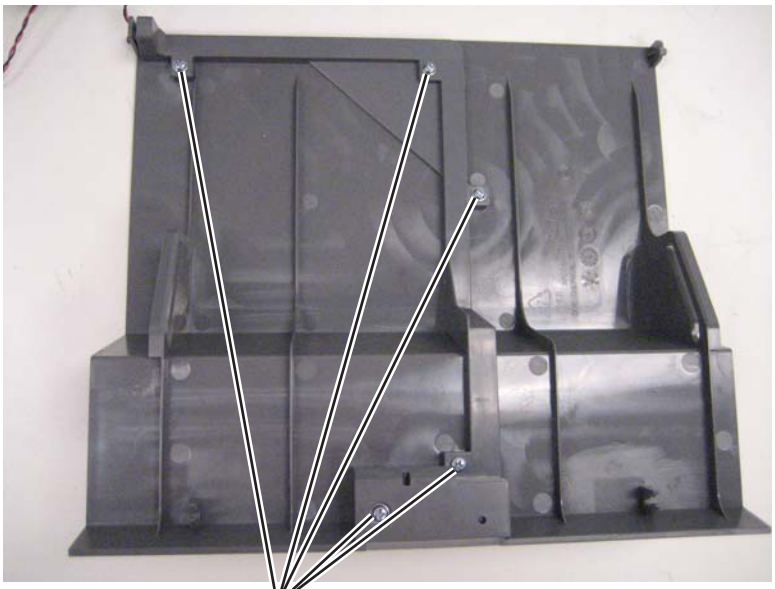




4. Flex a side plate enough to free one hinge of the door, and then remove the door.



5. Remove five screws (B) to remove the beacon LED and cover.



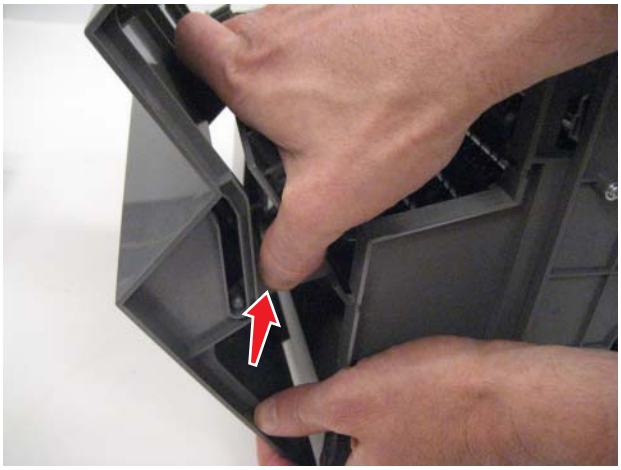
B (3014444)

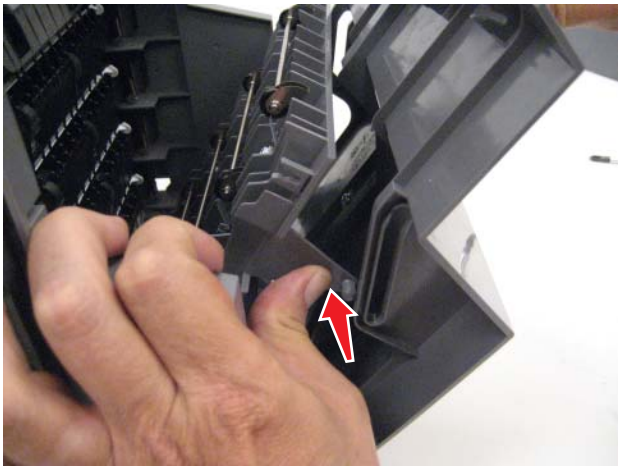
5-bin mailbox backup roll plate assembly removal

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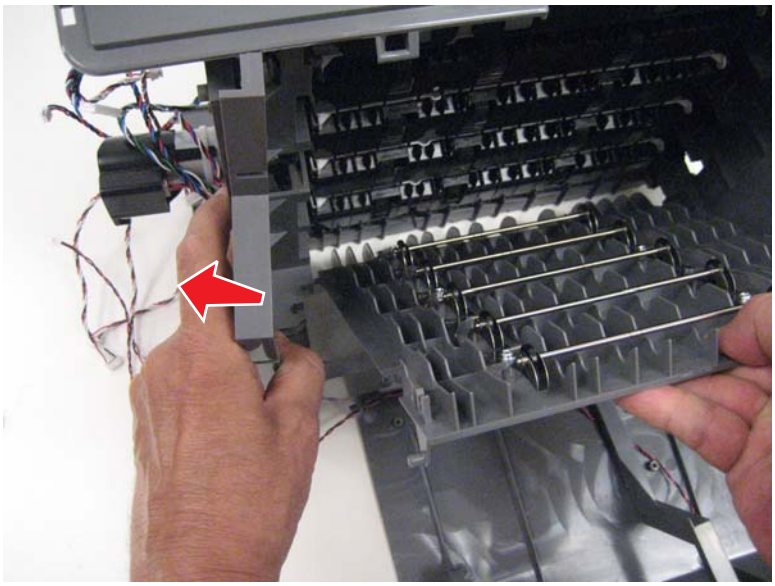
See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

1. Remove the mailbox from the printer.
2. Remove the mailbox rear cover. See **“5-bin mailbox rear cover removal” on page 4-318**.
3. Open the left access door, and press in to release the support pins from each side of the door.





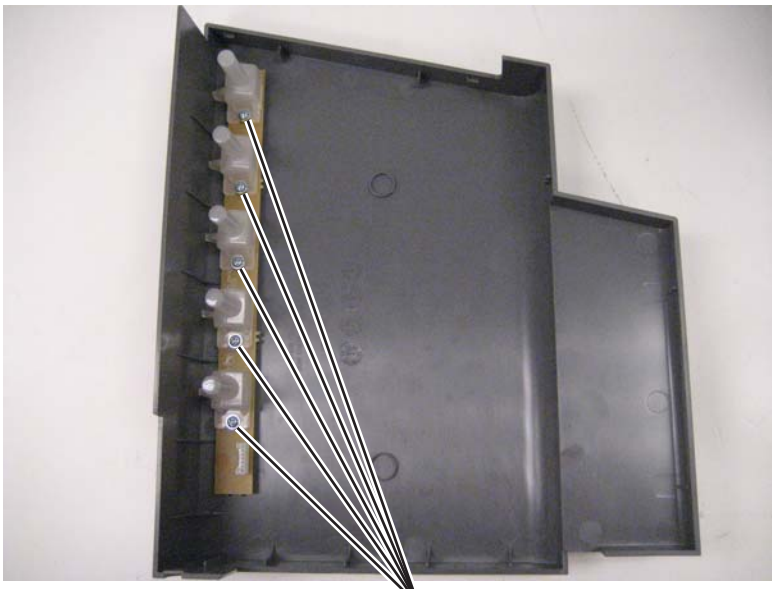
4. Flex the sides to remove the roller frame.



5-bin mailbox bin-full beacon card and light pipe removal

See **“5-bin mailbox assembly (covers)” on page 7-49** for the part number.

1. Remove the mailbox from the printer.
2. Remove the mailbox front cover. See **“5-bin mailbox front cover removal” on page 4-309**.
3. Remove the five screws (A), and then remove the beacon card and covers.



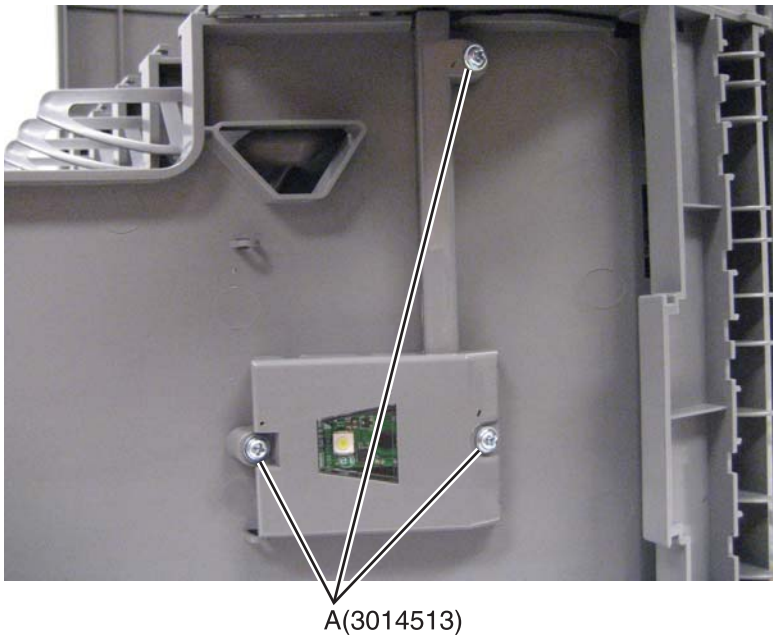
A(3014513)

5-bin mailbox cave beacon removal

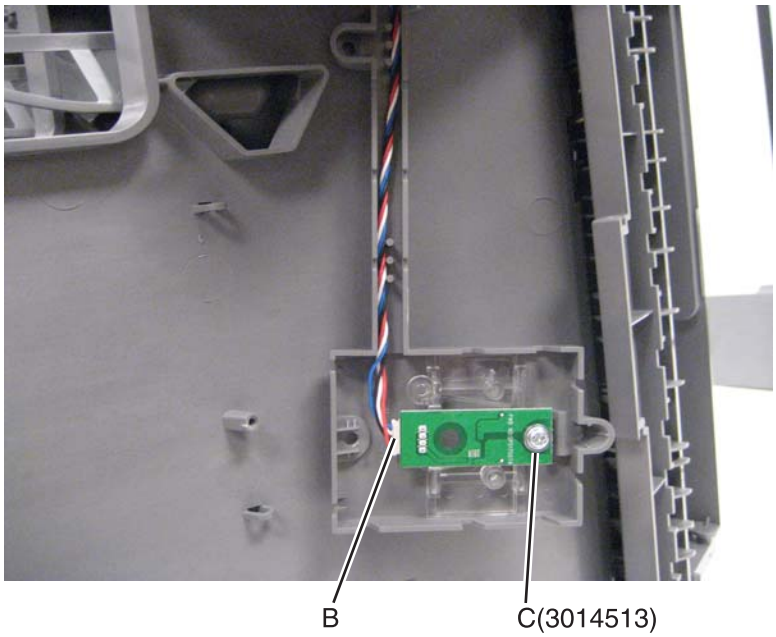
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See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

1. Remove the mailbox from the printer.
2. Remove the three screws (A) from the bottom to remove the cable cover.



3. Remove the screw (C), and then disconnect the cable (B) from the card to remove the beacon.

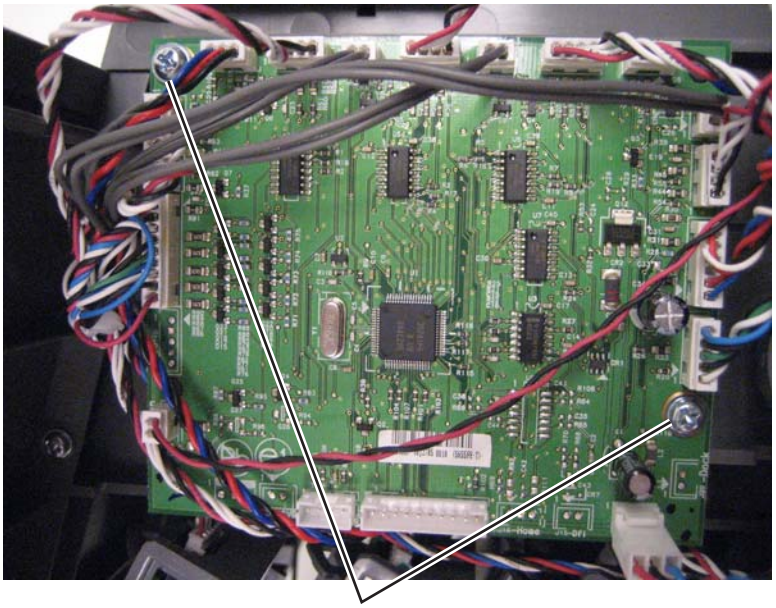


Note: Observe the cable routing for reinstallation. To replace the cable, remove the rear cover and disconnect the cable from the printer circuit board. See **“5-bin mailbox rear cover removal” on page 4-318**.

5-bin mailbox controller card removal

See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

1. Remove the mailbox from the printer.
2. Remove the rear cover. See **“5-bin mailbox rear cover removal” on page 4-318**.
3. Disconnect all cables from the board.
4. Remove the two screws (A) to remove the board.

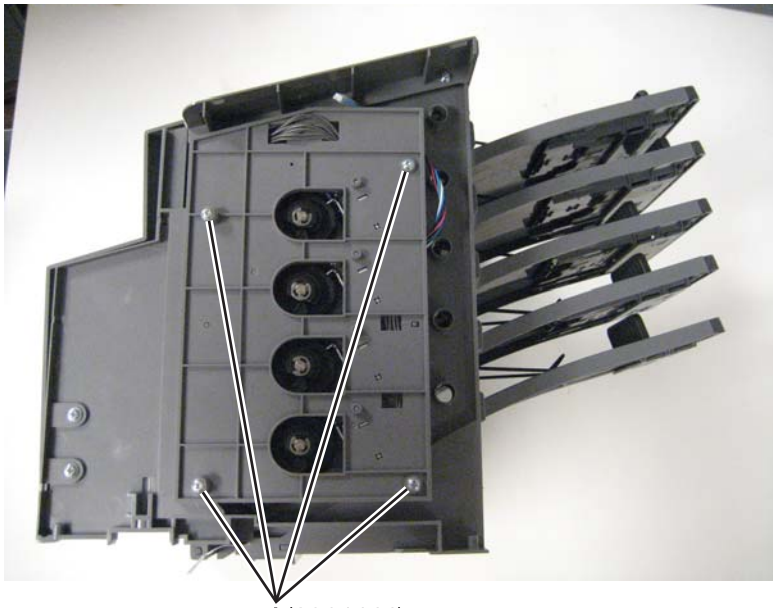


5-bin mailbox diverter solenoid removal

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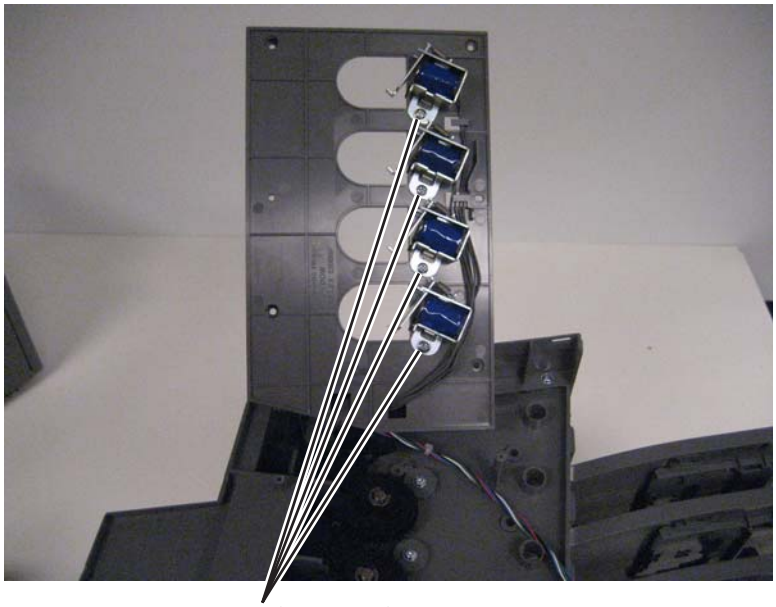
See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

1. Remove the mailbox from the printer.
2. Remove the 5-bin mailbox feed motor with plate. See **“5-bin mailbox feed motor with plate removal” on page 4-307**.
3. Remove the four screws (A) securing the diverter plate.



A(3014444)

4. Remove the screw (B) of the deflector gate solenoid you need to remove.



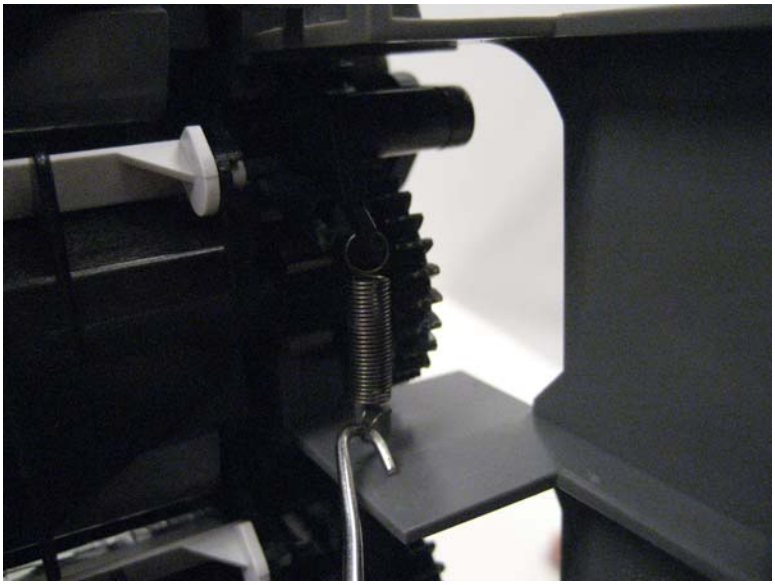
B (3014444)

5. Carefully unroute the deflector gate solenoid cables from the cable clips under the top cover.
6. Disconnect the appropriate deflector gate solenoid cable from the controller card.
7. Route the cable through the frame to remove the assembly.

5-bin mailbox diverter spring removal

See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

1. Remove the mailbox option from the printer.
2. Open the left access door.
3. Using a spring hook or needlenose pliers, remove the spring off the hooks.

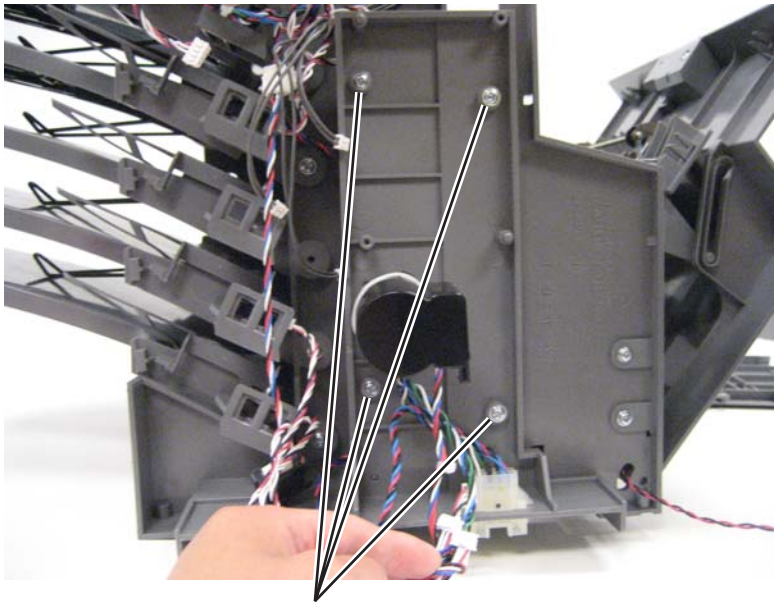


5-bin mailbox feed motor with plate removal

See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

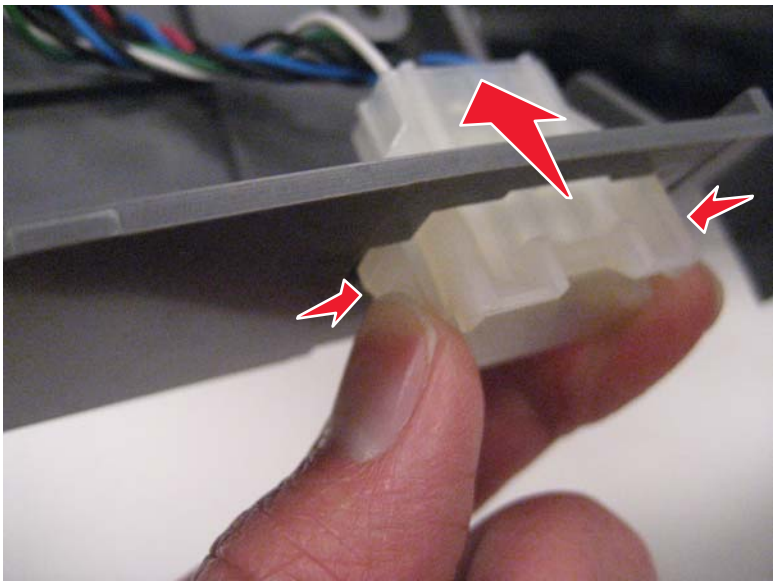
1. Remove the mailbox from the printer.
2. Remove the mailbox front cover. See **“5-bin mailbox front cover removal” on page 4-309**.
3. Remove the printer circuit board. See **“5-bin mailbox controller card removal” on page 4-305**.

4. Remove four screws (A), and remove the feed motor side plate.



A(3014444)

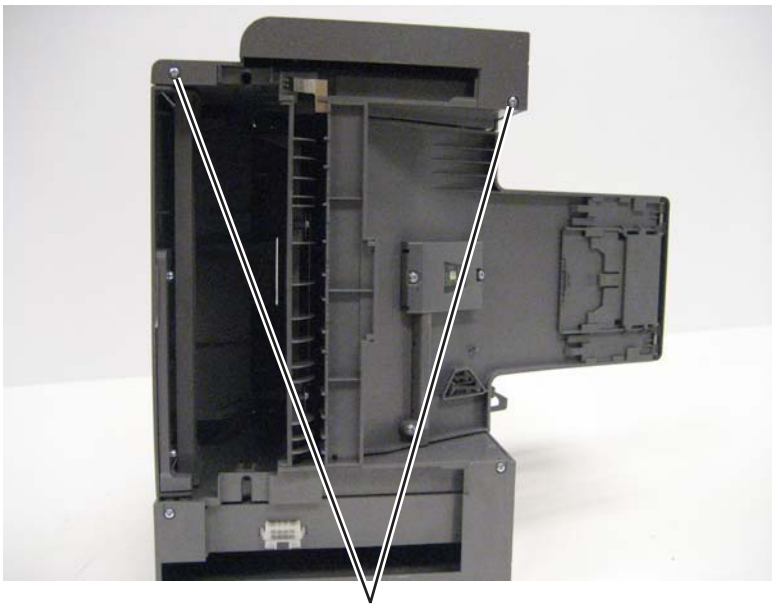
5. Squeeze the tabs and push up to release the option connector, and then slide the plate over the cable to remove it.



5-bin mailbox front cover removal

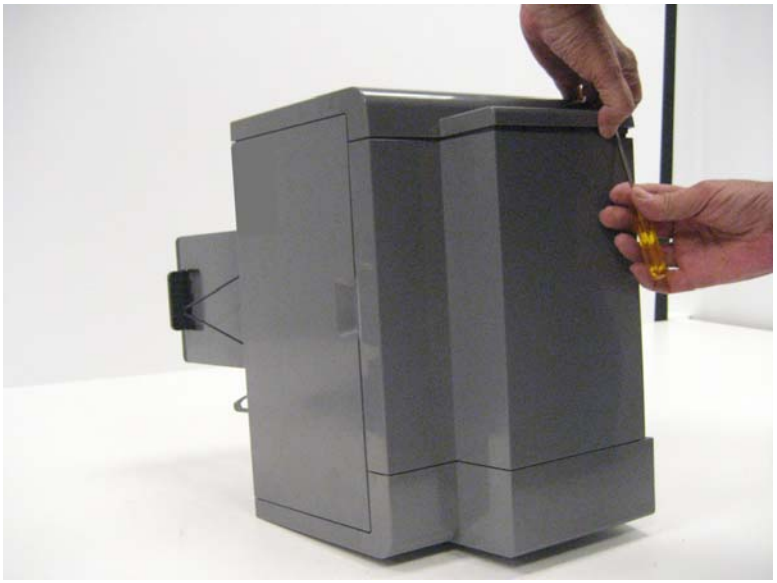
See **“5-bin mailbox assembly (covers)” on page 7-49** for the part number.

1. Remove the mailbox from the printer.
2. Remove two screws (A) from the bottom.

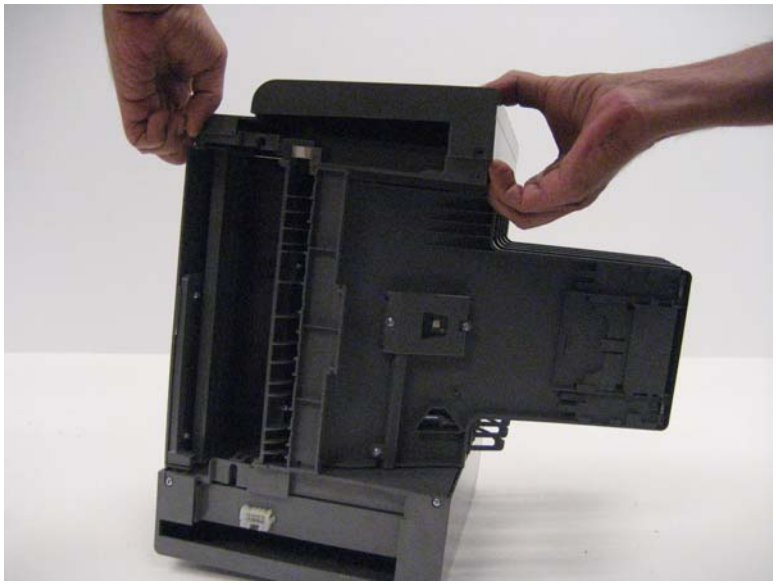


A (3015189)

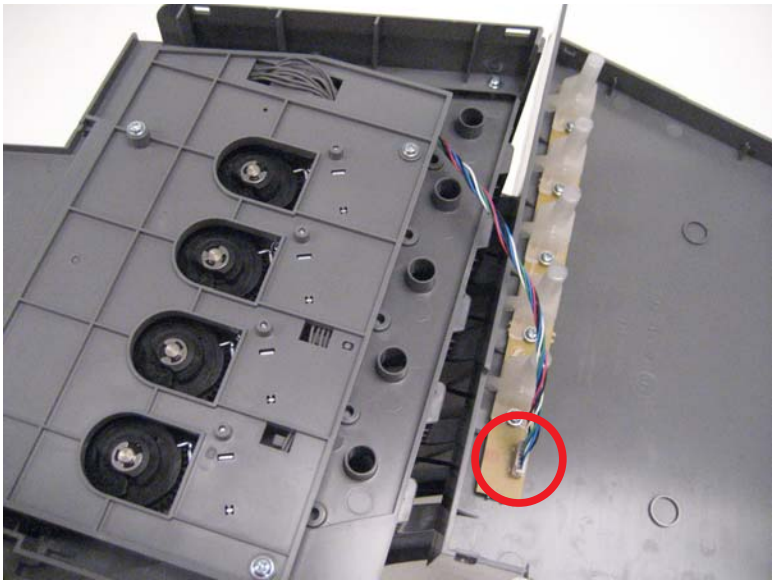
3. From the left side, use a flat-blade screwdriver to pry up and disengage the tabs.



4. Pull out on the right side to disengage the tabs, and then remove the cover.



5. Disconnect the cable from the beacon card.



Note: If you are replacing the cover FRU, then remove the bin-full beacon card. See **"5-bin mailbox bin-full beacon card and light pipe removal" on page 4-303**.

5-bin mailbox media bin full actuator removal

See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

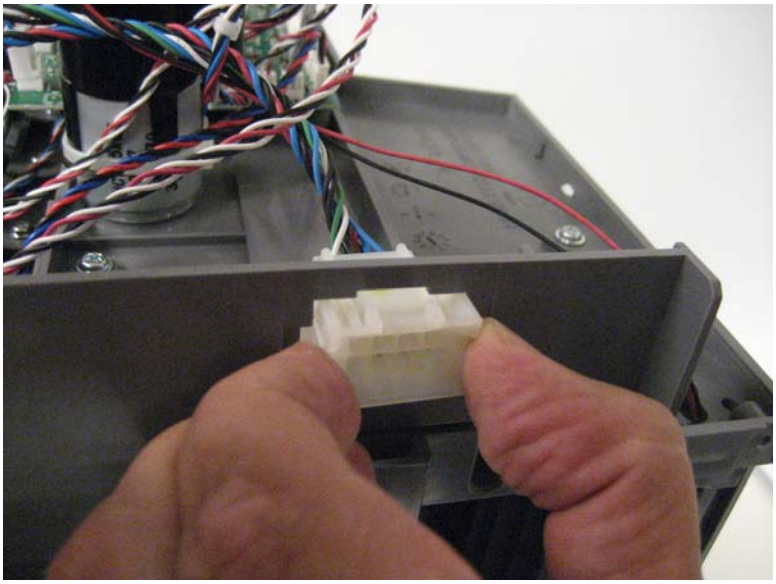
1. Remove the front cover. See **“5-bin mailbox front cover removal” on page 4-309**.
2. Pry the front hinge of the media bin full actuator towards the rear until the front boss is released from its socket.



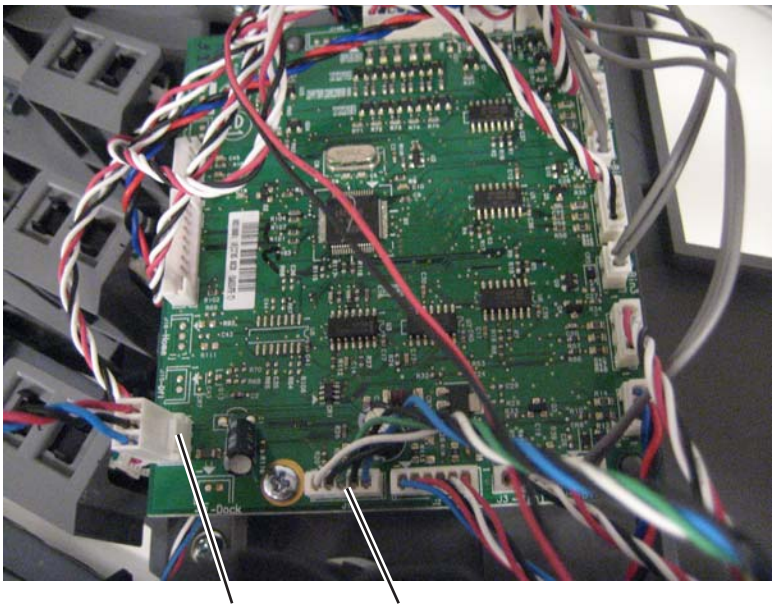
3. Pull the media bin full actuator toward the front and out of 5-bin mailbox assembly.

5-bin mailbox option cable removal

1. Remove the mailbox from the printer.
2. Remove the rear cover. See **“5-bin mailbox rear cover removal” on page 4-318**.
3. Press the tabs to release the cable, and push the cable through the frame.



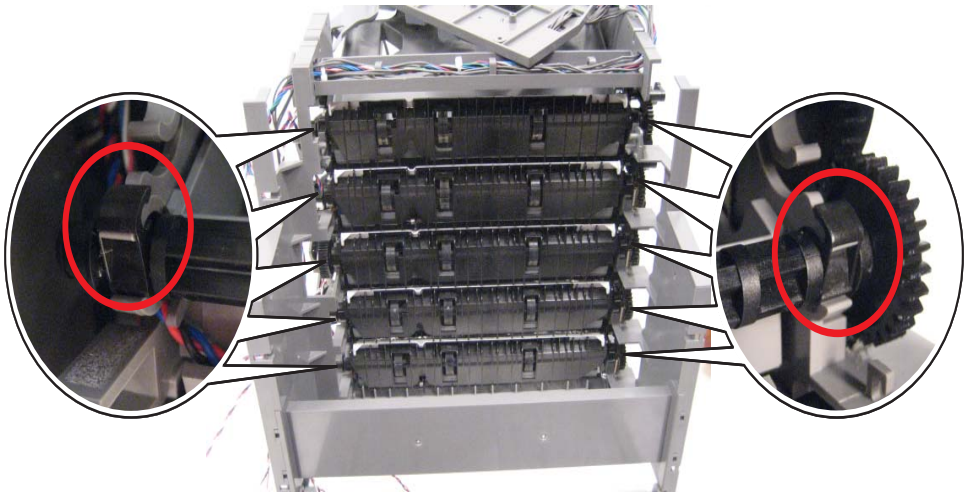
4. Disconnect the cable (A) from the controller card, and press the latch to disconnect cable (B) from the controller card.



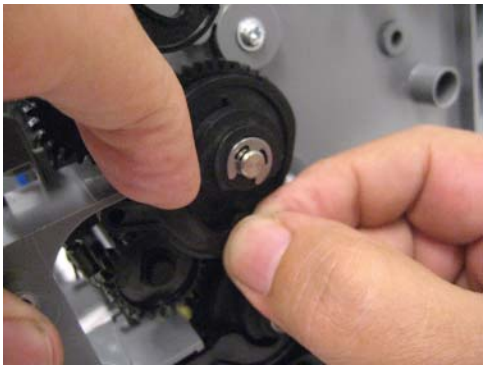
5-bin mailbox output bin deflector removal

See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

1. Remove the mailbox option from the printer.
2. Remove the mailbox access door roller assembly.
3. Remove the rear cover. See **“5-bin mailbox rear cover removal” on page 4-318**.
4. Remove the mailbox feed motor with plate assembly. See **“5-bin mailbox feed motor with plate removal” on page 4-307**.
5. If you are removing deflectors 1 through 4, then remove the deflector spring.
6. Rotate the clips forward that are holding the deflector in place.

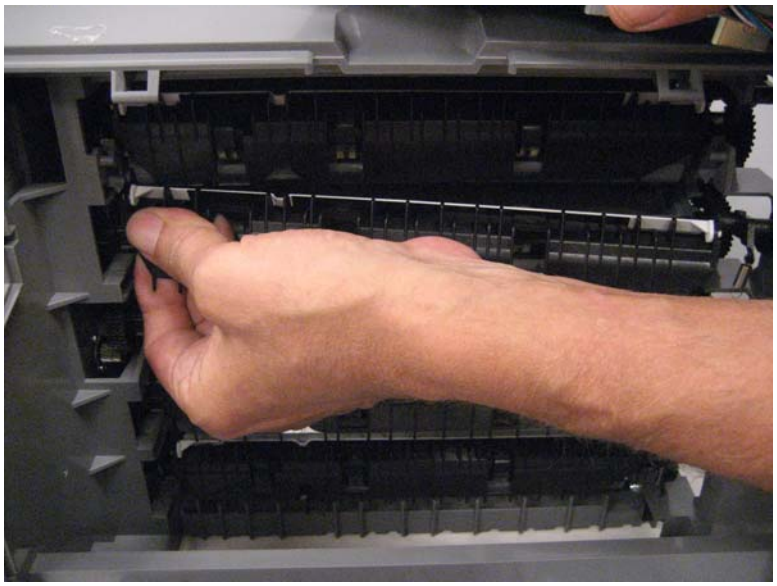


7. Rotate the right side of the deflector out.





8. Pull the left side out.

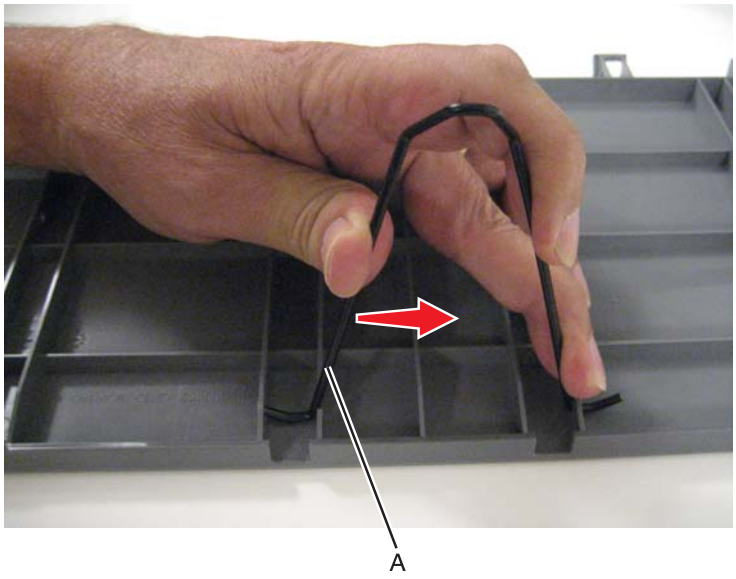


5-bin mailbox output bin paper bail removal

See **“5-bin mailbox assembly (covers)” on page 7-49** for the part number.

Top bail:

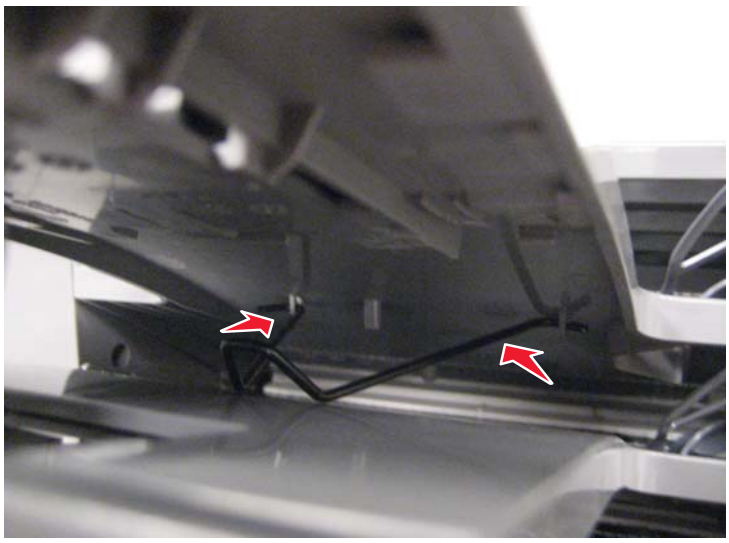
1. Remove the mailbox from the printer.
2. Remove the top cover. See **“5-bin mailbox top cover removal” on page 4-321**.
3. From the top cover, lift the bail to line up the bail arm with the slot (A), and squeeze the bail to release the rear side.



4. Remove the bail.

Lower four bails:

1. Squeeze both sides of the bail to release the arms from the slots.



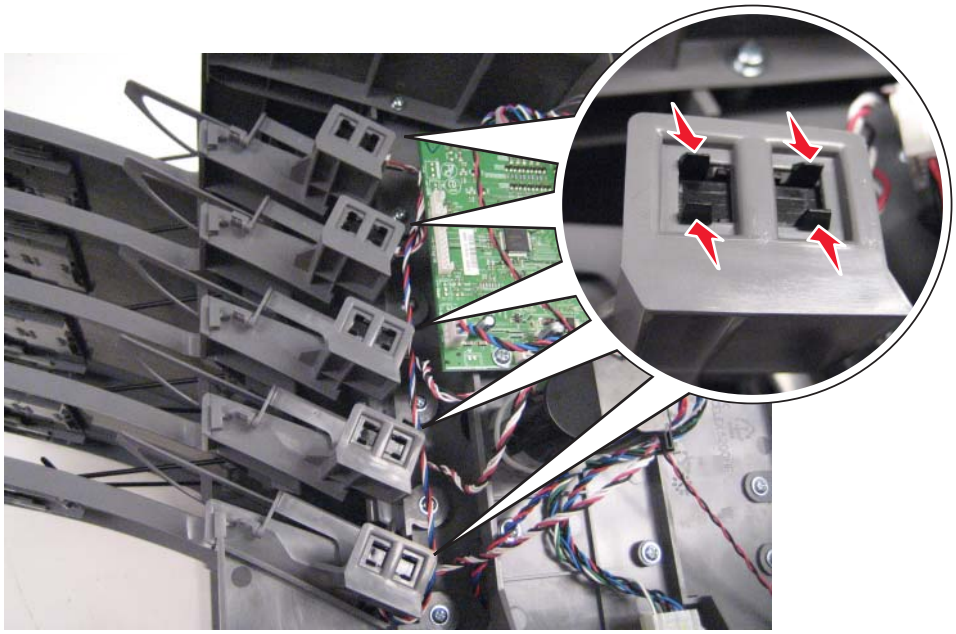
2. Remove the bail.

5-bin mailbox output bin sensors removal

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See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

1. Remove the mailbox from the printer.
2. Remove the rear cover. See **“5-bin mailbox rear cover removal” on page 4-318**.
3. Press in the tabs to pop out the sensor you need to replace.



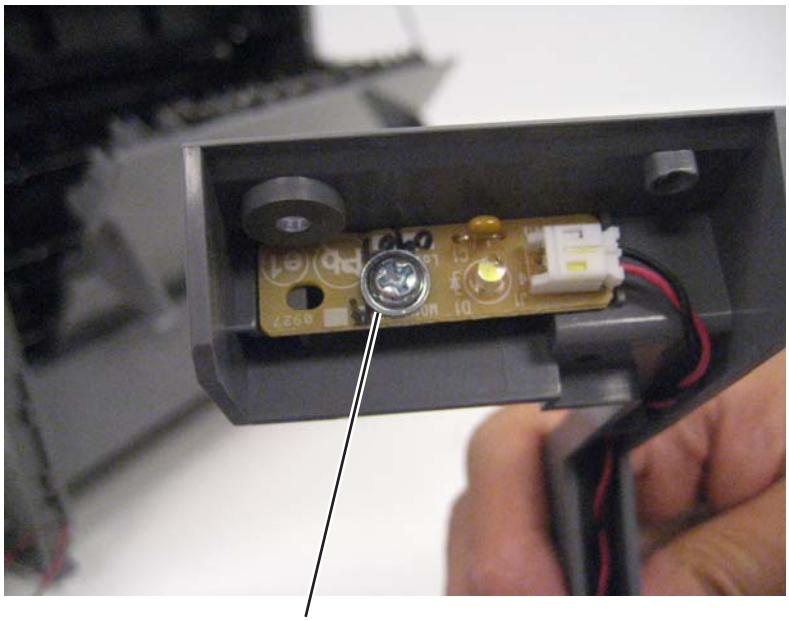
4. Disconnect the cable to remove the sensor.

Installation note: When you put the sensor in place, be sure the side with the cable connector faces the printer circuit board.

5-bin mailbox paper jam beacon removal

See **“5-bin mailbox assembly (covers)” on page 7-49** for the part number.

1. Remove the mailbox from the printer.
2. Remove the mailbox front cover. See **“5-bin mailbox front cover removal” on page 4-309**.
3. Remove the mailbox access door. See **“5-bin mailbox access door removal” on page 4-300**.
4. Remove one screw (A), and remove the beacon LED card.



A(3014513)

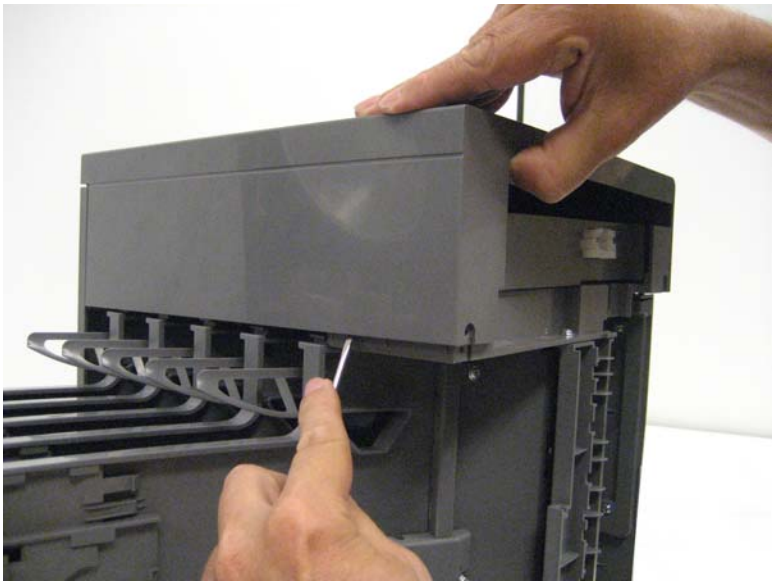
5-bin mailbox rear cover removal

See **“5-bin mailbox assembly (covers)” on page 7-49** for the part number.

1. Remove the mailbox from the printer.
2. Remove two screws (A) from the bottom.

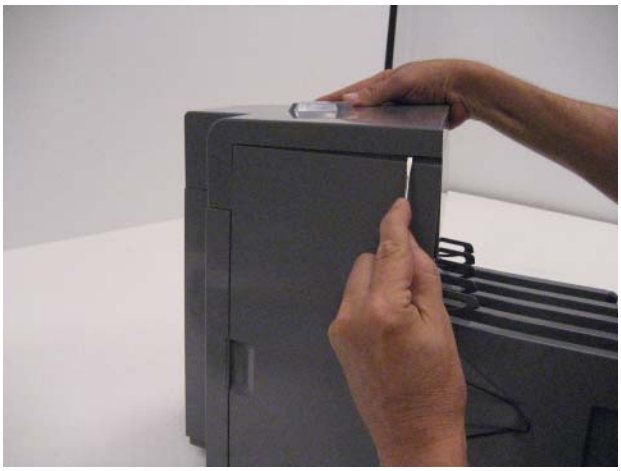


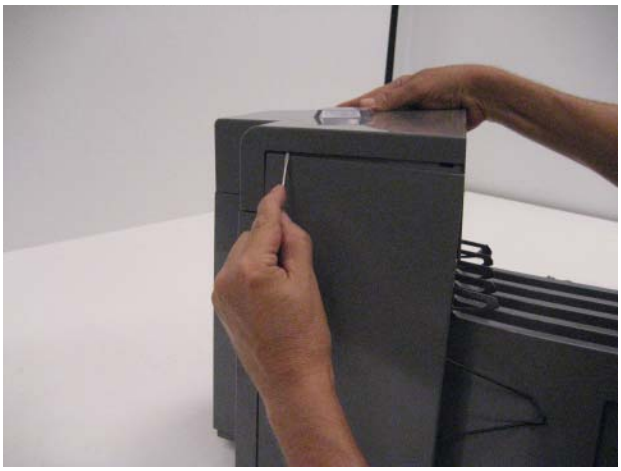
3. Use a flat-blade screwdriver to pry out the right side to disengage the latches.



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4. Use the screwdriver to disengage the two latches on the left side, and then remove the cover.

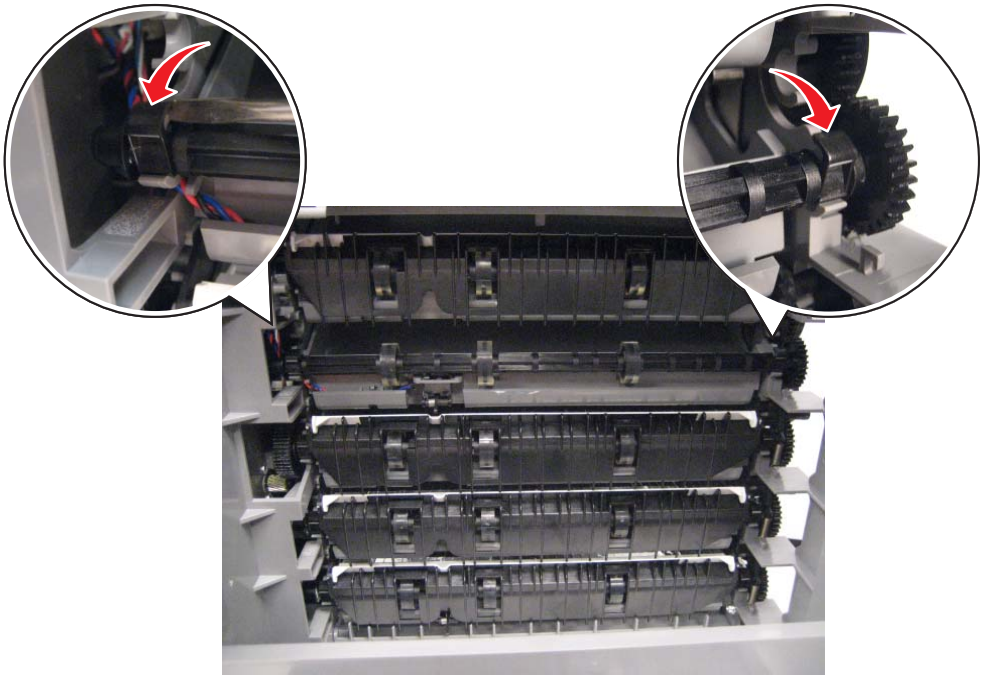




5-bin mailbox roller removal

See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

1. Remove the 5-bin mailbox option from the printer.
2. Remove the output bin deflector that covers the roller to be removed. See **“5-bin mailbox output bin deflector removal” on page 4-313**.
3. Rotate the clips forward that are holding the roller in place.



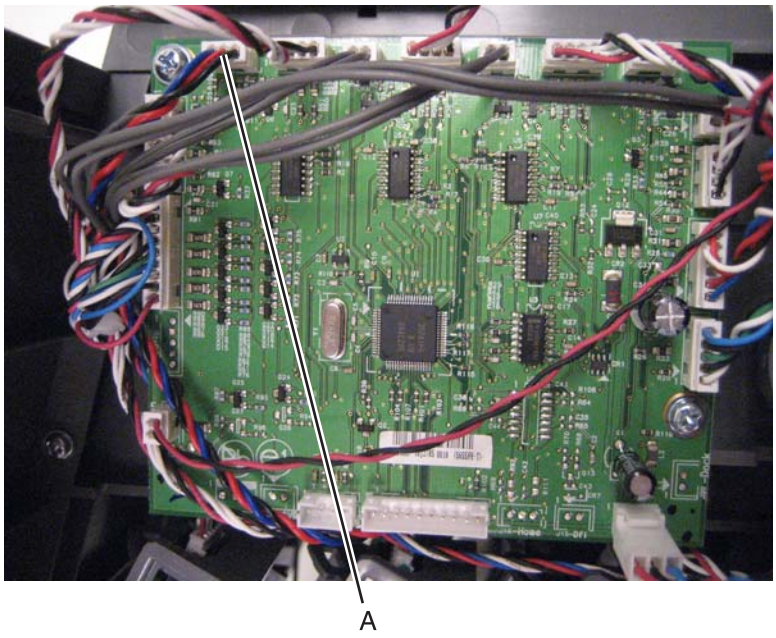
4. Lift the roller out of the option.

5-bin mailbox sensor (pass thru) assembly removal

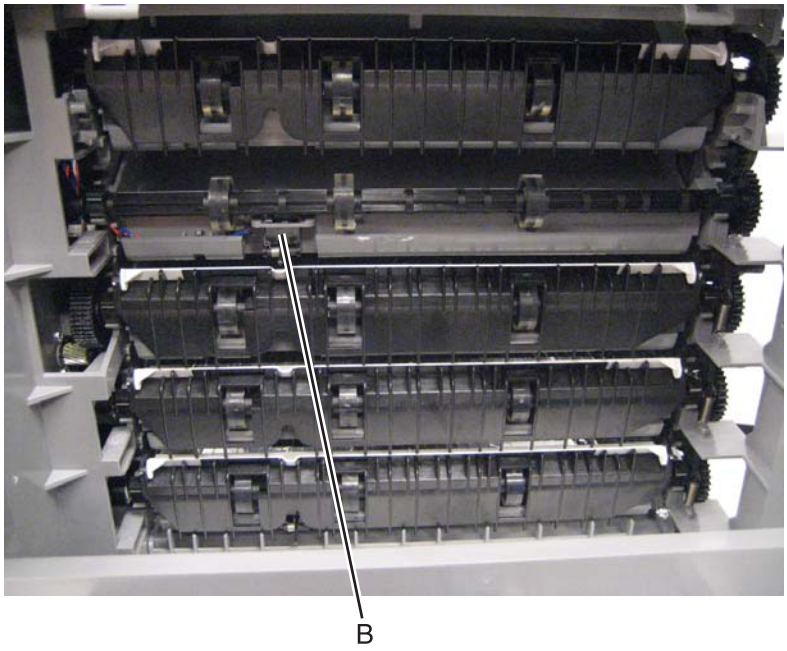
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See **“5-bin mailbox assembly (interior)” on page 7-51** for the part number.

1. Remove the 5-bin mailbox option from the printer.
2. Remove the 4th mailbox output bin deflector. See **“5-bin mailbox output bin deflector removal” on page 4-313**.
3. Disconnect the pass thru sensor cable (A) from the controller card.



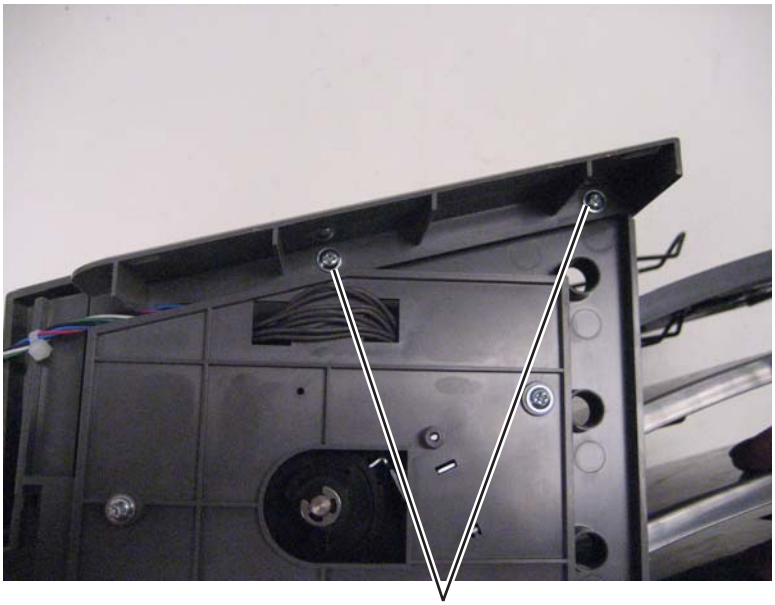
4. Release the tabs (B) holding the sensor, and then disconnect the sensor cable to remove the sensor.



5-bin mailbox top cover removal

See **“5-bin mailbox assembly (covers)” on page 7-49** for the part number.

1. Remove the mailbox from the printer.
2. Remove the front cover. See **“5-bin mailbox front cover removal” on page 4-309**.
3. Remove the two screws (A), and remove the top cover.



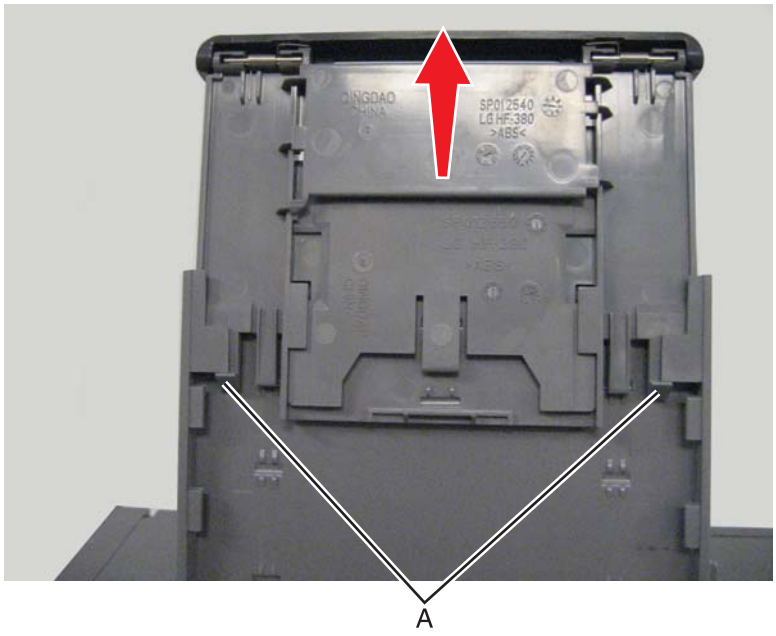
4. Remove the rear cover. See **“5-bin mailbox rear cover removal” on page 4-318**.
5. Remove the two screws (B), and then lift off the top cover.



5-bin mailbox tray extension removal

See **“5-bin mailbox assembly (covers)” on page 7-49** for the part number.

1. Pull out the extension until it stops.
2. Push to release the two tabs (A) on the bottom of the extension, and then pull the extension out to remove it.



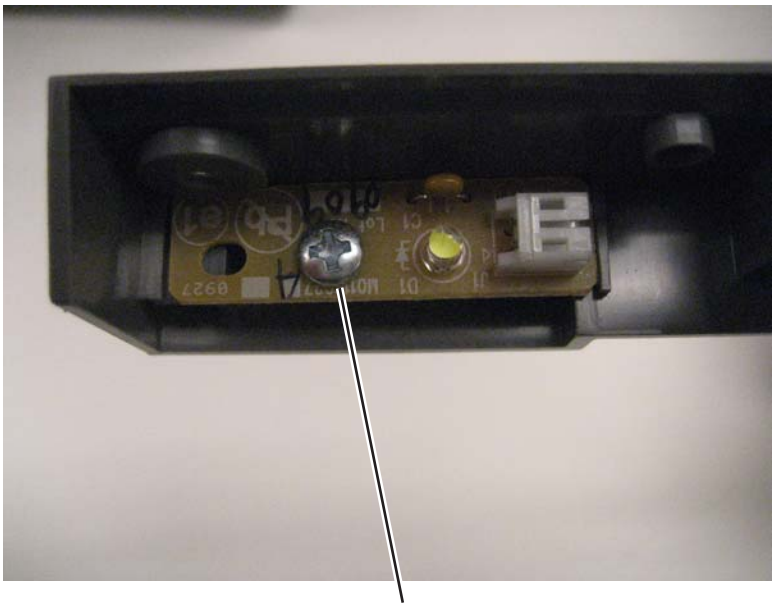
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StapleSmart finisher and High-capacity output stacker

Finisher or stacker access door beacon LED and beacon housing removal

See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove the left access door assembly. See **“Finisher or stacker left access door assembly removal” on page 4-330**.
3. Remove the screw (A), and remove the beacon card.

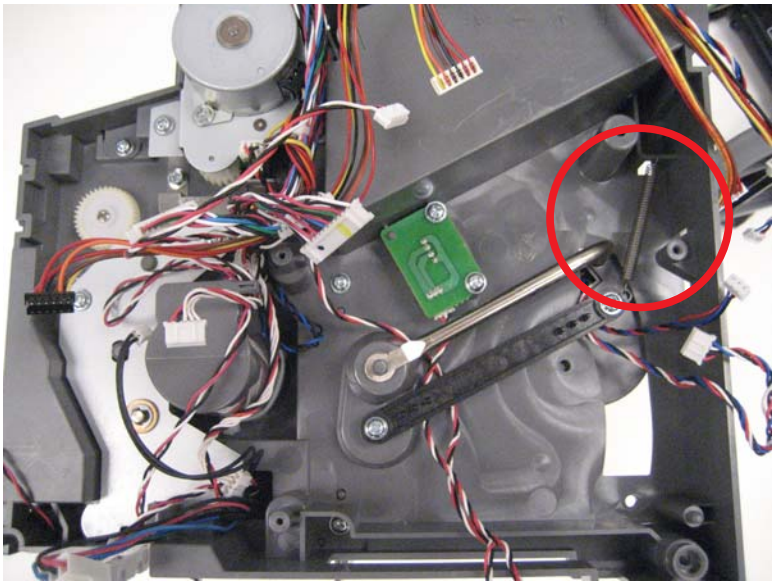


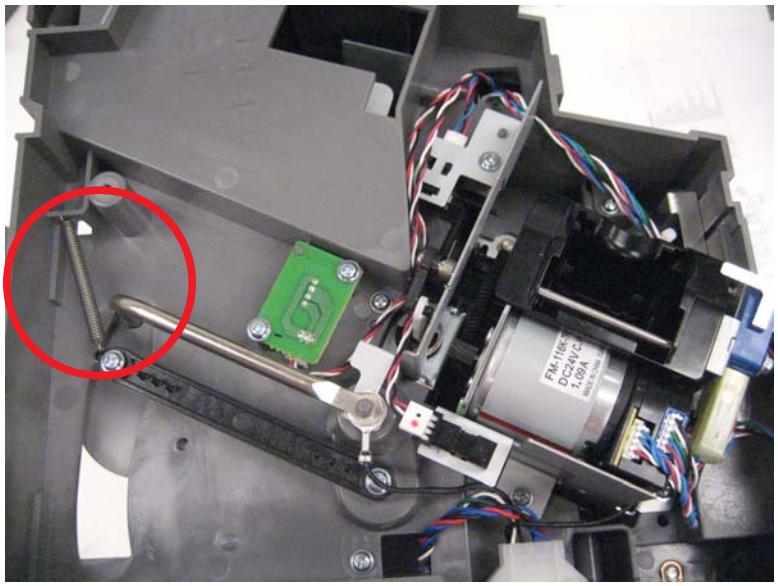
Finisher or stacker bin-full spring removal

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See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. To remove the front spring, remove the front cover. See **“Finisher or stacker front cover removal” on page 4-328**.
   To remove the rear spring, remove the controller card. See **“Finisher or stacker controller card assembly removal” on page 4-326**.
3. Using a spring hook, remove the spring.

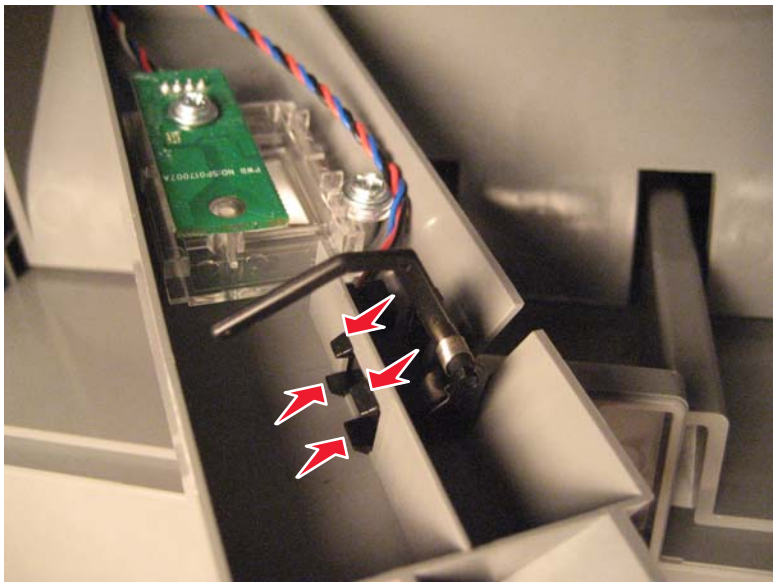




Finisher or stacker bottom cover removal

See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove the standard output bin LED and LED lens. See **“Finisher or stacker output bin LED and LED lens removal” on page 4-334**.
3. Press the tabs on the bin media present to remove the sensor from the cover.



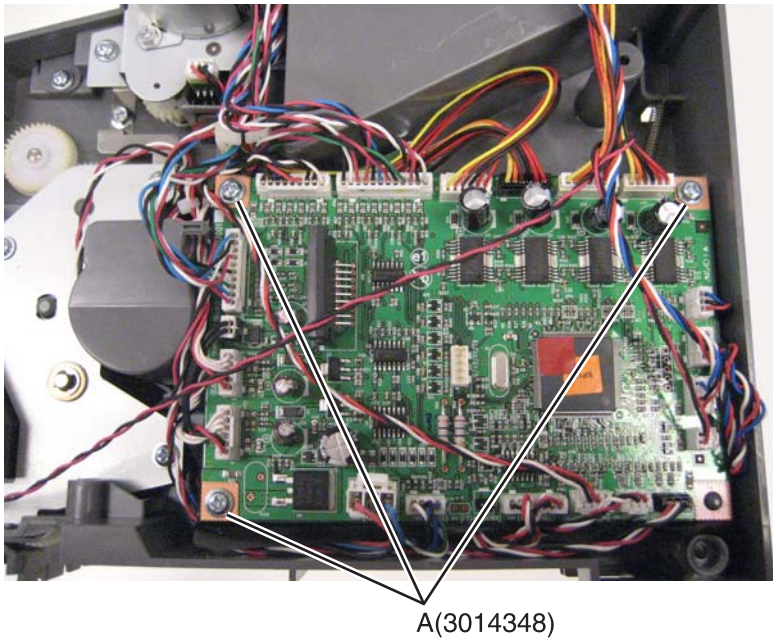
4. Disconnect the cable from the beacon card.

Finisher or stacker controller card assembly removal

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See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove the front cover. See **“Finisher or stacker front cover removal” on page 4-328**.
3. Disconnect all cables from the controller card.
4. Remove the three screws (A) securing the stapler/stacker controller card assembly.



5. Remove the stapler/stacker controller card assembly.

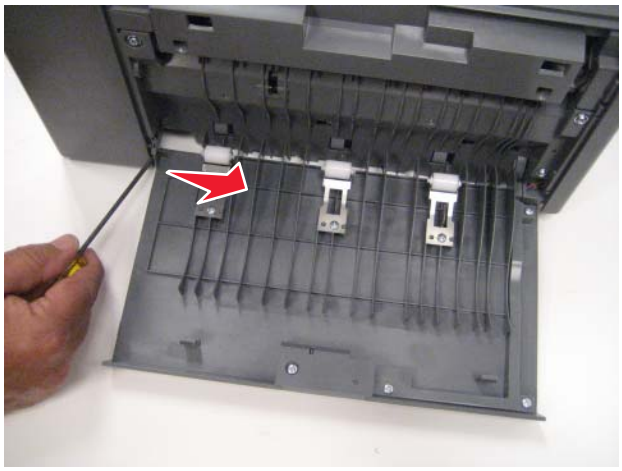
Installation note: Be sure to place the black plastic under the controller card before you put the card in place.

Finisher or stacker feed roller removal

See **“Finisher assembly” on page 7-35** for the part number.

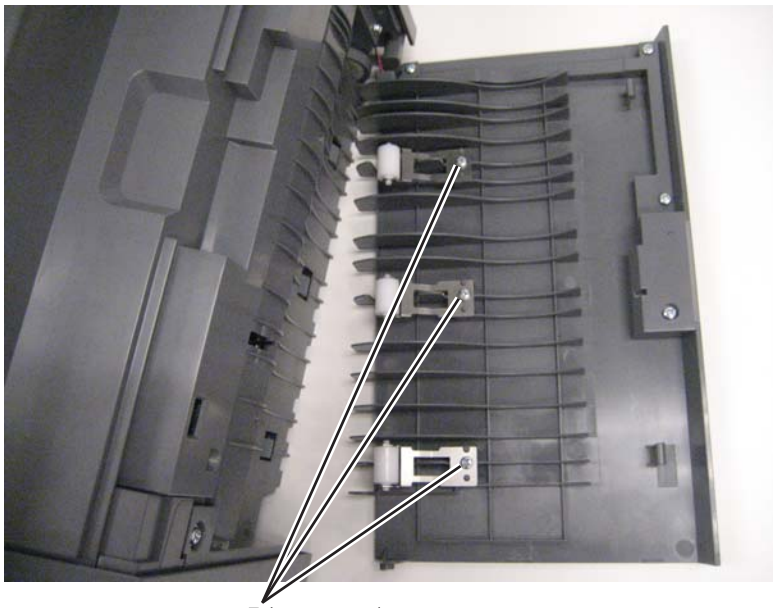
1. Remove the option from the printer.
2. Open the option left access door.
3. Using a screwdriver, force the rear hinge (A) out of the slot by pushing the door to the front.





B

4. Remove the screw (B) to remove the roller you are replacing.

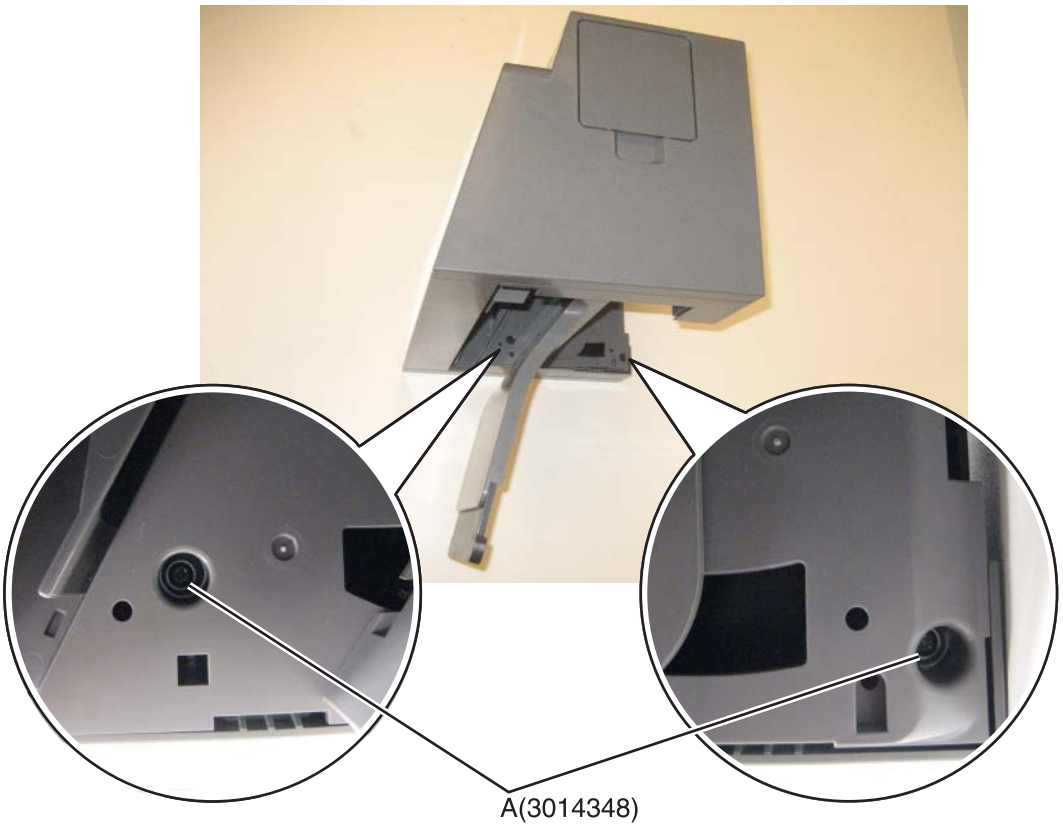


B(3014513)

Finisher or stacker front cover removal

See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove the two screws (A) on the inside of the exit bin compartment.



3. Using a flat-blade screwdriver, pry up to disengage the tabs on the right, left, and top sides of the cover.







4. Remove the left cover.

Finisher or stacker LED sensor cover removal

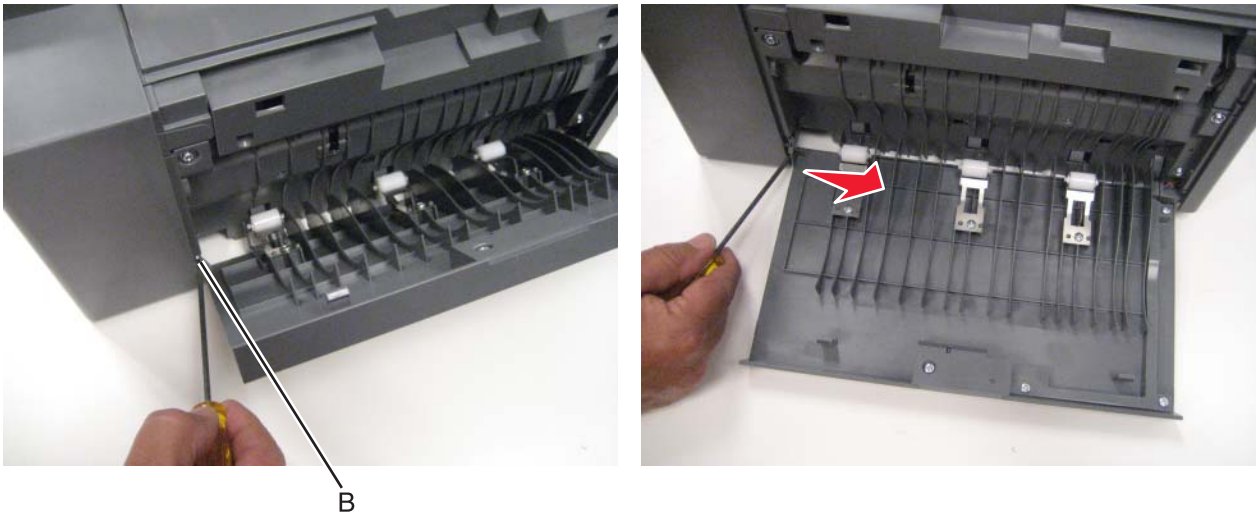
1. Remove the option from the printer.
2. Remove the standard output bin LED lens. See **“Finisher or stacker output bin LED and LED lens removal” on page 4-334**.
3. Remove the sensor (finisher media bin present). See **“Finisher or stacker sensor (finisher bin media present) removal” on page 4-341**.

Finisher or stacker left access door assembly removal

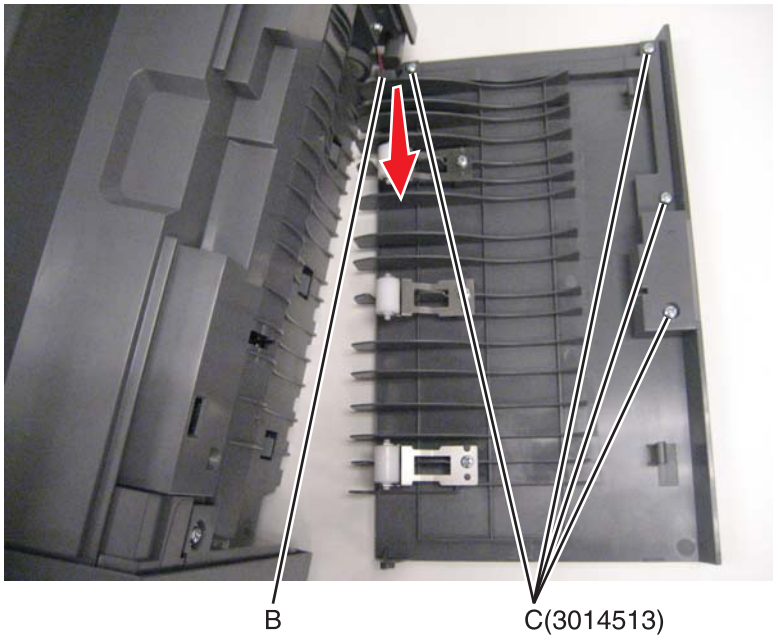
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See **“Finisher assembly” on page 7-35** for the part number.

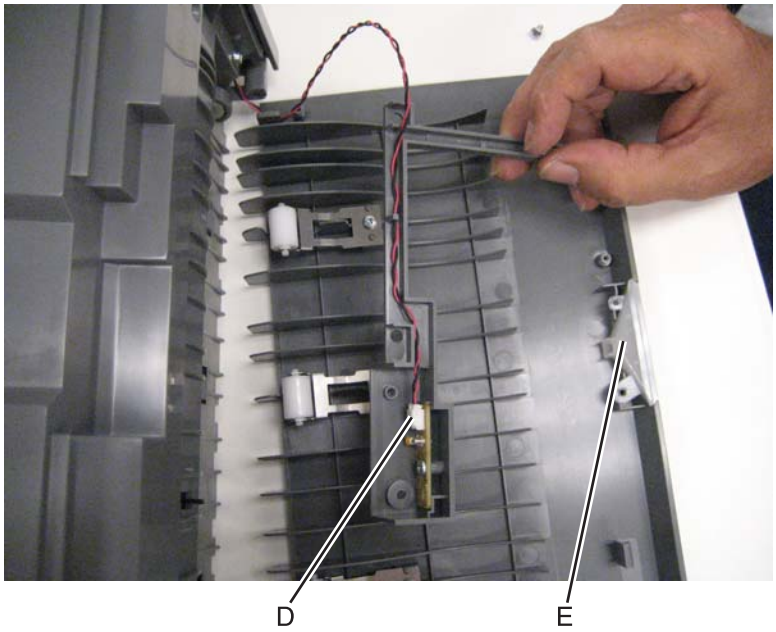
1. Remove the option from the printer.
2. Open the left access door.
3. Using a screwdriver, force the rear hinge (A) out of the slot to lower the door all the way, and then pry the rear hinge out by pushing the door to the front.



4. Once the rear hinge has been disengaged, pull out the front hinge (B).
5. Remove four screws (C), and turn over the beacon cable cover.



6. Disconnect the cable (D) from the beacon card.
7. Remove the beacon lens (E), and remove the door assembly

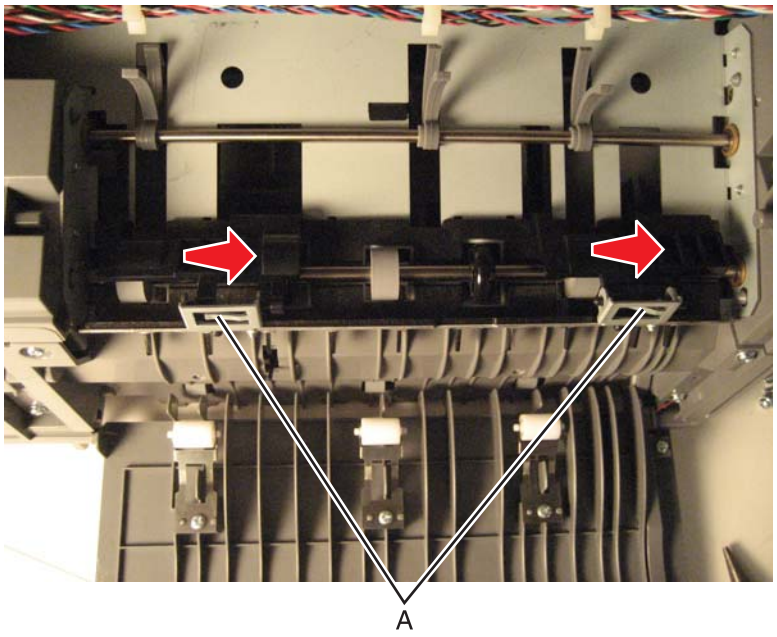


Finisher or stacker media stack flap and media stack flap actuator removal

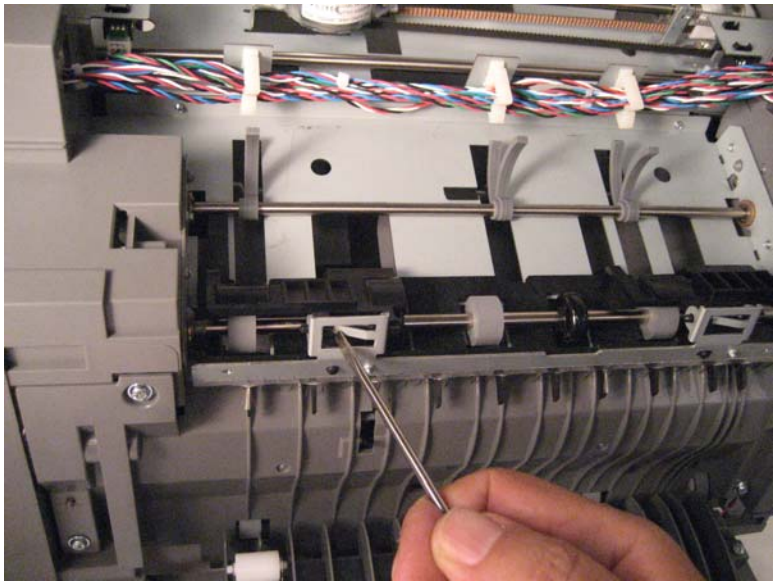
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See **“Finisher assembly (continued)” on page 7-37** for the part number.

1. Remove the option from the printer.
2. Remove the top cover. See **“Finisher or stacker top cover removal” on page 4-350**.
3. Use plyers to straighten the locking tab (A) of the actuator you are replacing, and then slide the actuator to the right to remove it.

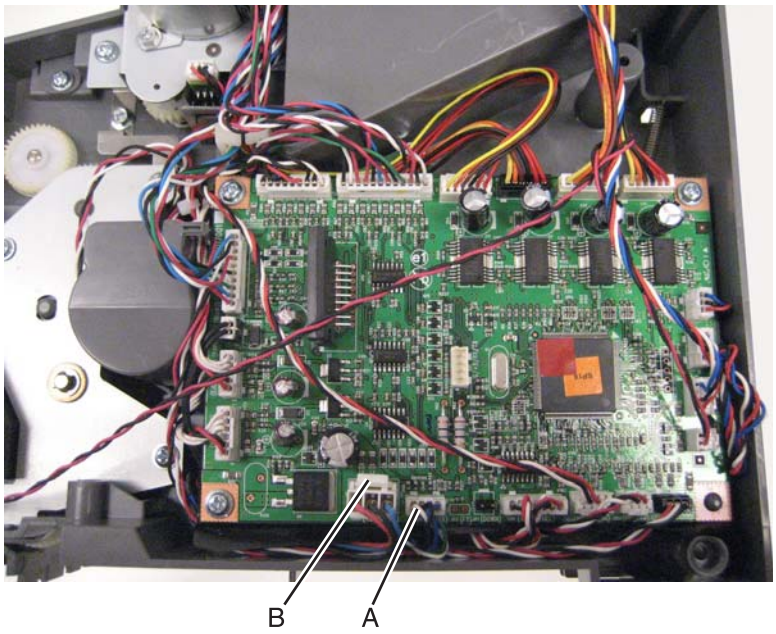


Installation note: Use a flat-blade screwdriver to bend the locking tab back into place after you position the actuator.

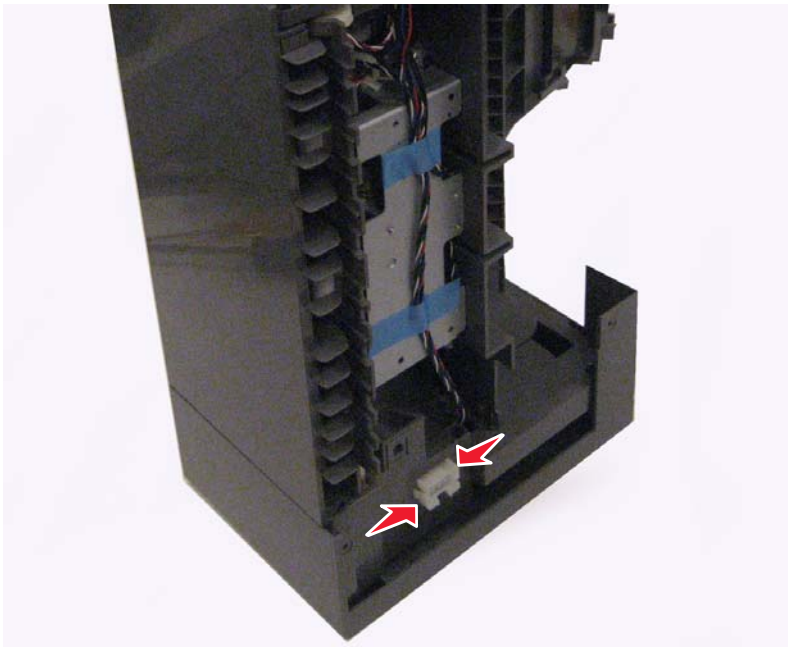


Finisher or stacker option cable removal

1. Remove the option from the printer.
2. Remove the rear cover. See **"Finisher or stacker rear cover removal" on page 4-337**.
3. Remove the front cover. See**"Finisher or stacker front cover removal" on page 4-328**.
4. Disconnect the cable (A), and press the latch to disconnect the cable (B) from the controller card.



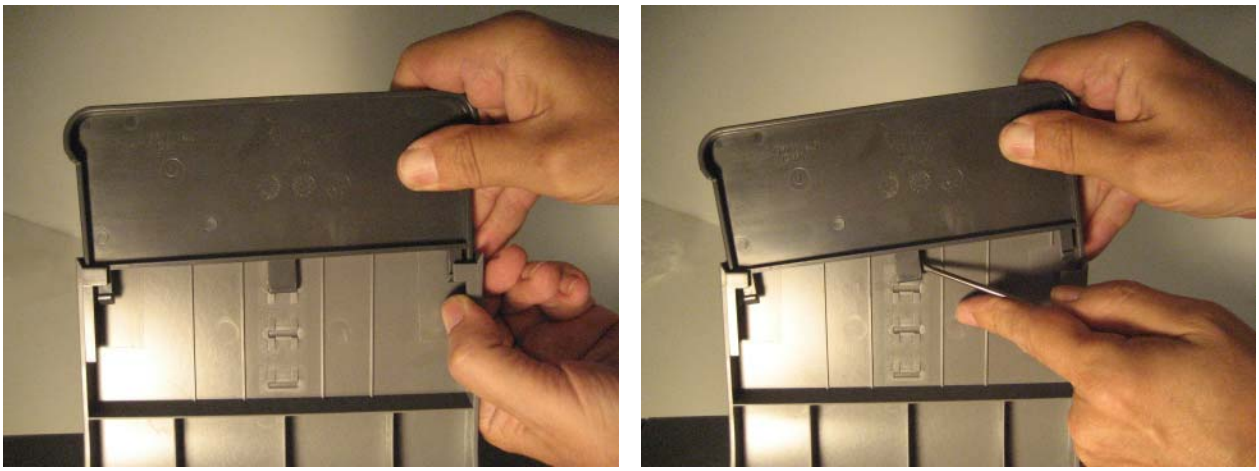
5. Route the cables through option.
6. Press the tabs to disconnect the option connector, and route the cables through to remove it.



Finisher or stacker output bin extension removal

See **“Finisher assembly” on page 7-35** for the part number.

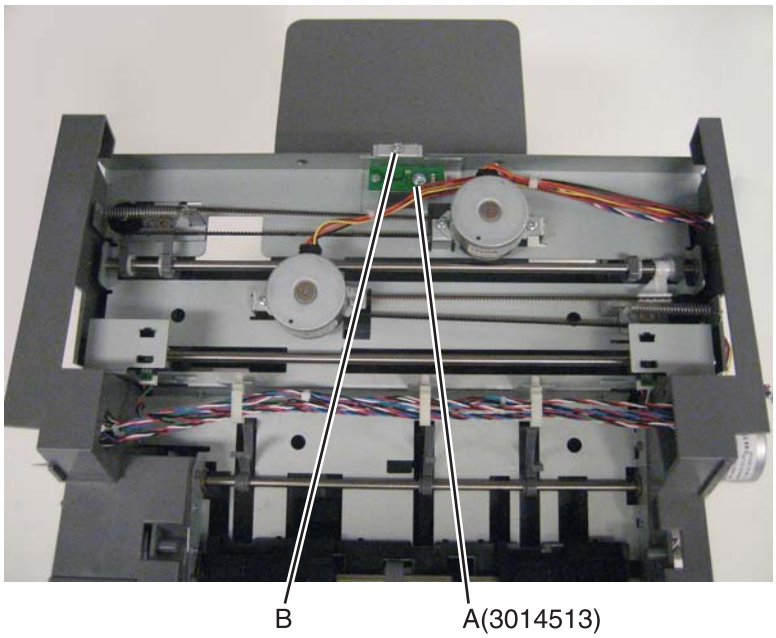
While pulling out the extension, push in the left and right tabs, and pry up the center tab.



Finisher or stacker output bin LED and LED lens removal

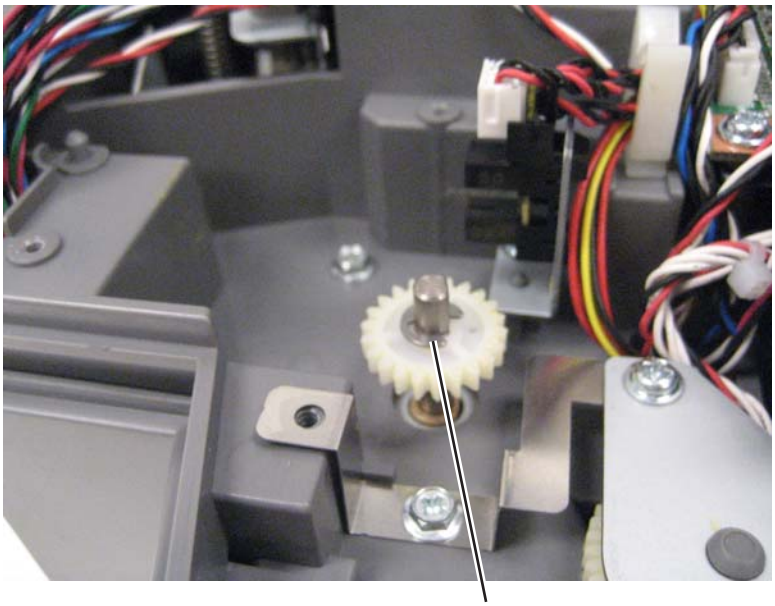
See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove the top cover. See **“Finisher or stacker top cover removal” on page 4-350**.
3. Remove the screw (A), and then disconnect the cable to remove the beacon LED.
4. Remove the screw (B) to remove the lens.



Finisher or stacker paddle drive gear removal

1. Remove the option from the printer.
2. Remove the paddle drive motor. See **“Finisher or stacker paddle drive motor assembly removal” on page 4-336**.
3. Remove the E-clip (A), and remove the gear.

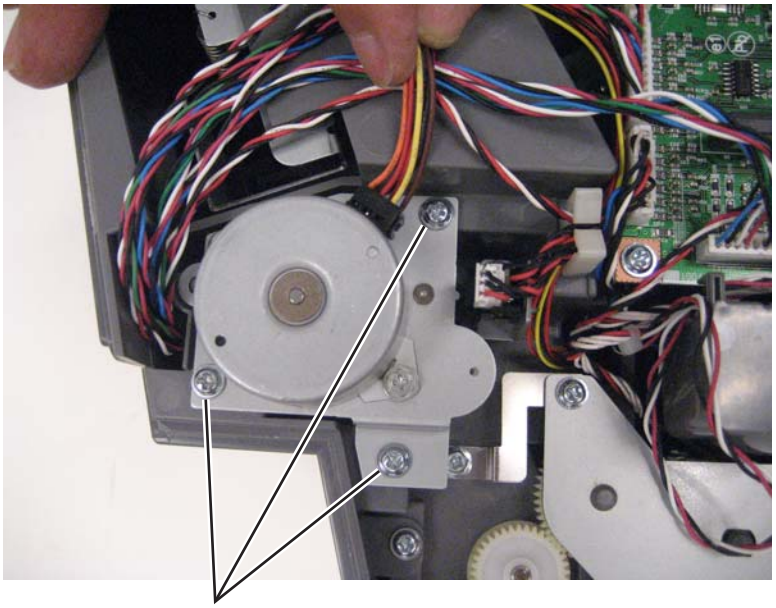


Finisher or stacker paddle drive motor assembly removal

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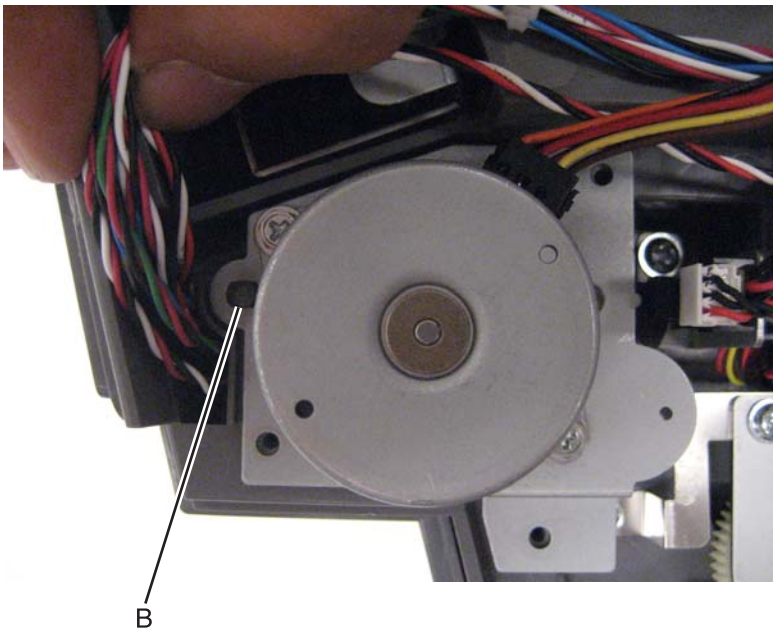
See **“Finisher assembly (continued)” on page 7-37** for the part number.

1. Remove the option from the printer.
2. Remove the front cover. See **“Finisher or stacker front cover removal” on page 4-328**.
3. Disconnect the paddle motor cable from the controller card.
4. Remove the cable from the clip.
5. Remove the three screws (A) securing the two paddle drive motor assemblies.



6. Remove the paddle drive motor assembly.

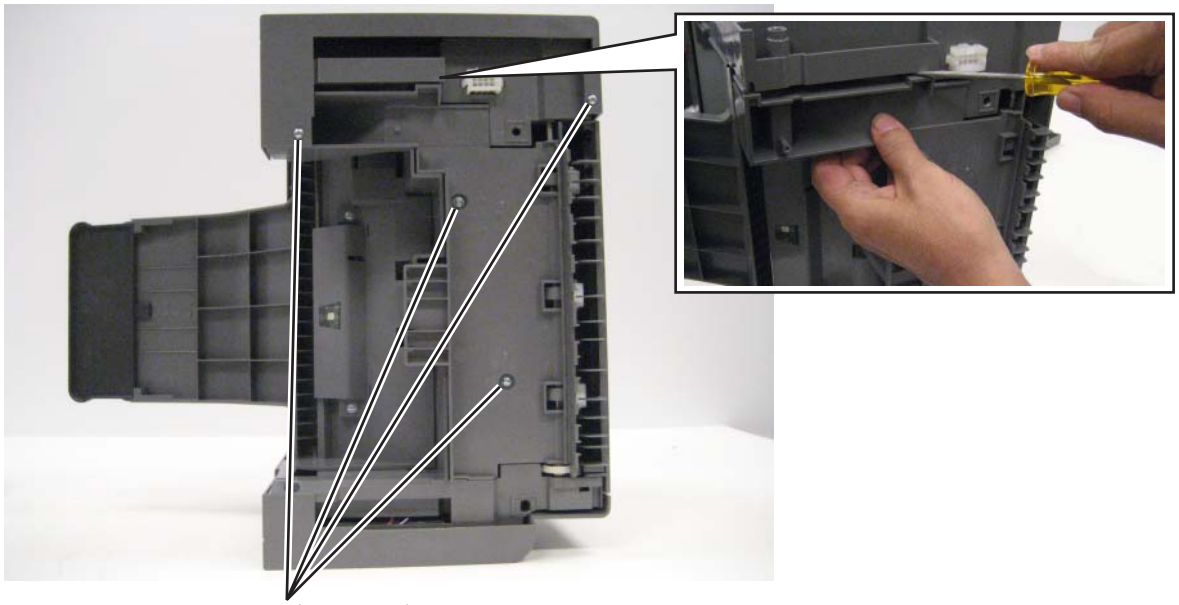
Installation note: Be sure to line up the locator (B) when you install the motor.



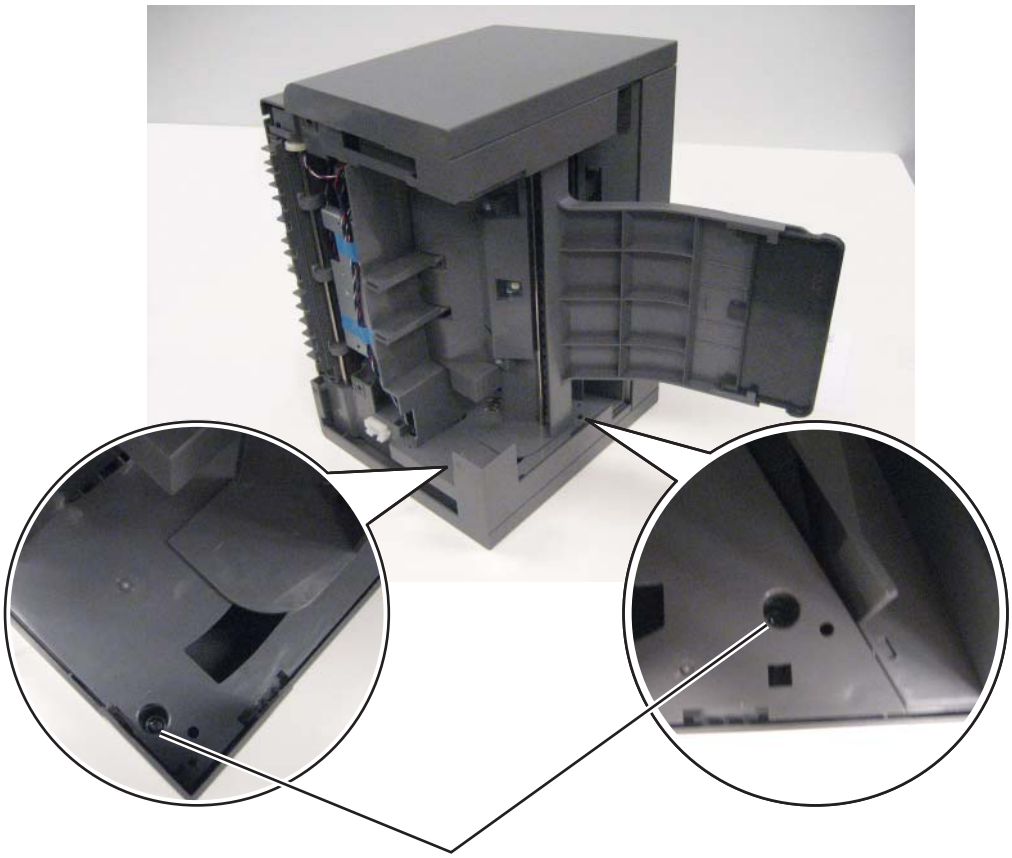
Finisher or stacker rear cover removal

See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove the four screws (A) from the bottom of the option.
3. Using a flat-blade screwdriver, pry out the bottom plate, and then remove it.



4. Remove the two screws (B) on the inside of the exit bin compartment.

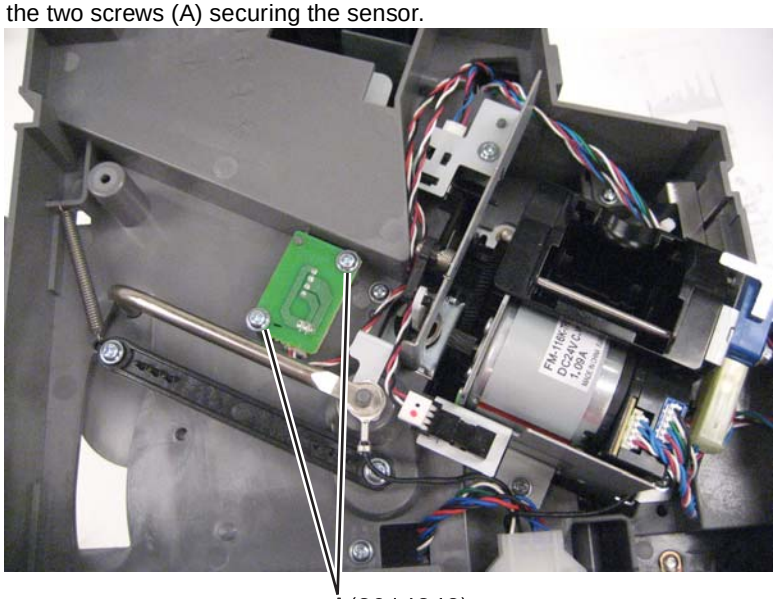


5. Pull out on the right side of the cover to disengage the tabs, and remove the cover.

Finisher or stacker sensor (bin-full receive) removal

See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove the option rear cover. See **“Finisher or stacker rear cover removal” on page 4-337**.
3. Remove the two screws (A) securing the sensor.



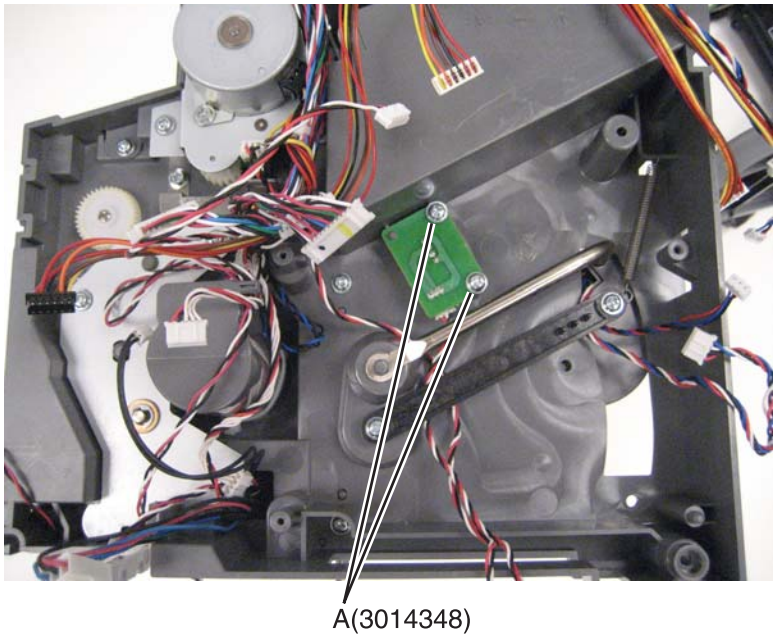
4. Disconnect the cable, and remove the sensor.

Finisher or stacker sensor (bin-full send) removal

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See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove the finisher or stacker controller card assembly. See **“Finisher or stacker controller card assembly removal” on page 4-326**.
3. Remove the two screws (A) securing the sensor.

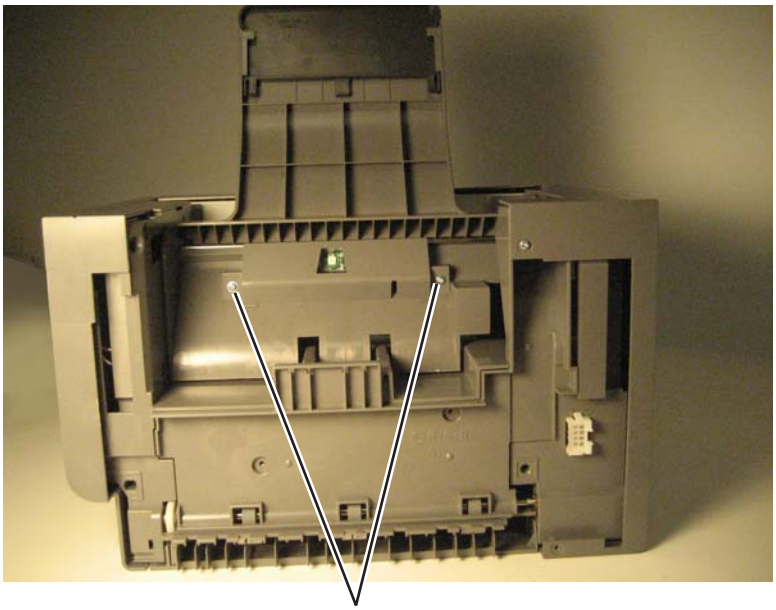


4. Disconnect the cable, and remove the sensor.

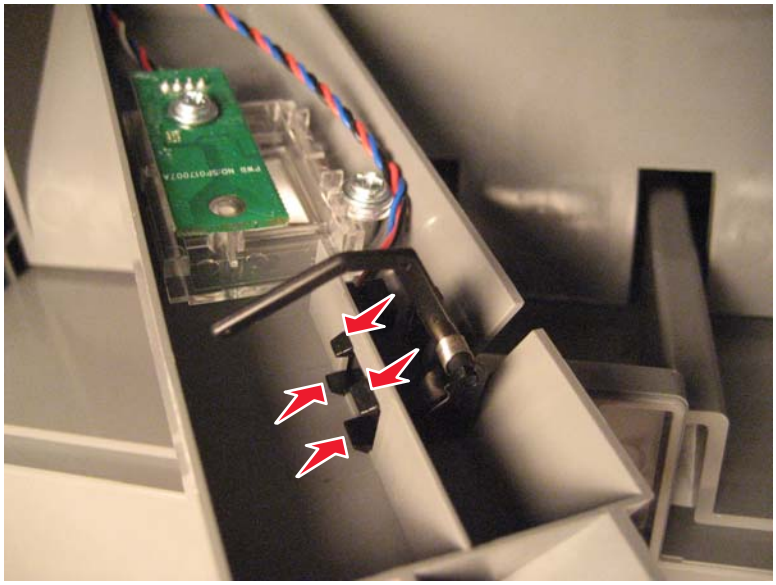
Finisher or stacker sensor (finisher bin media present) removal

See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove two screws (A), and pull out the sensor cover.



3. Press the tabs to remove the sensor from the cover.



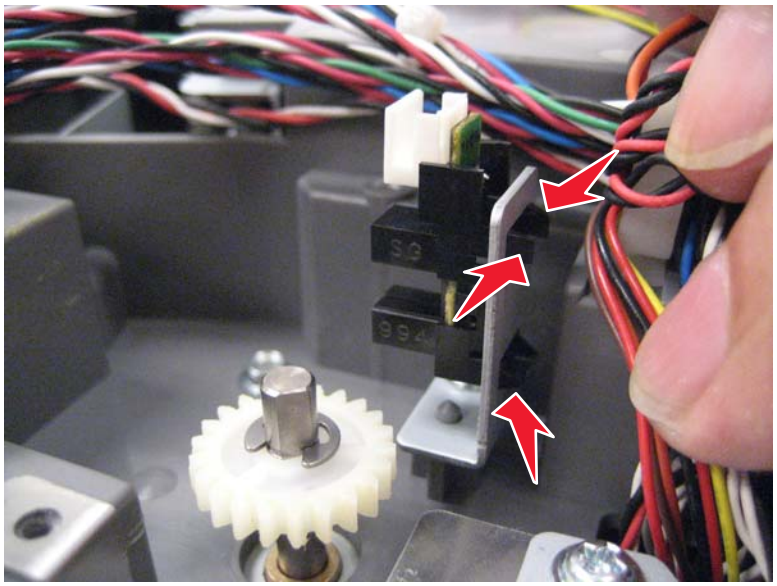
4. Disconnect the cable from the sensor to remove the sensor.

Finisher or stacker sensor (paddle HP) removal

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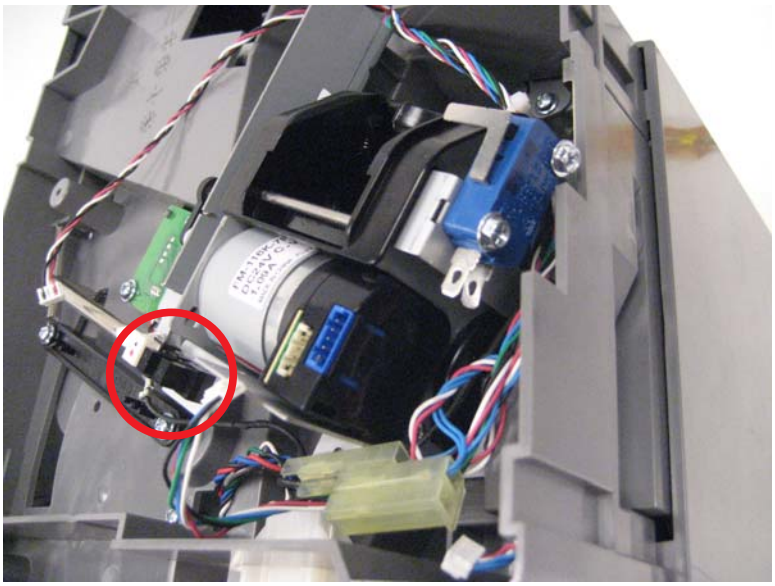
See **“Finisher assembly (continued)” on page 7-37** for the part number.

1. Remove the option from the printer.
2. Remove the paddle drive motor. See **“Finisher or stacker paddle drive motor assembly removal” on page 4-336**.
3. Disconnect the cable from the sensor.
4. Press the tabs to remove the sensor.



Finisher sensor (stapler access door interlock) removal

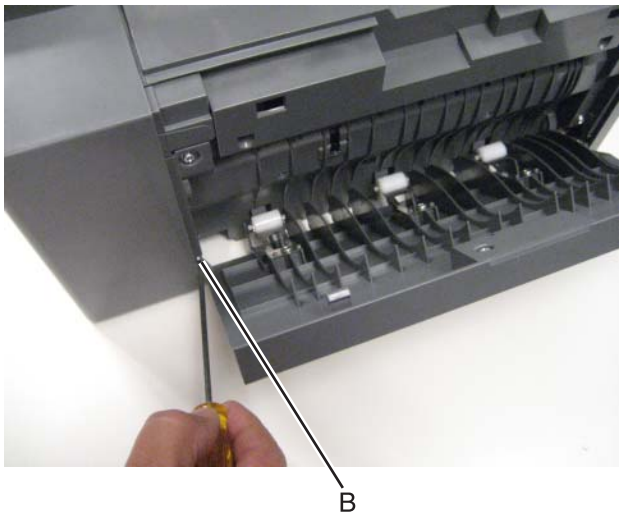
1. Remove the finisher from the printer.
2. Remove the finisher rear cover. See **“Finisher or stacker rear cover removal” on page 4-337**.
3. Disconnect the cable from the sensor.
4. Pinch tab to remove the sensor.

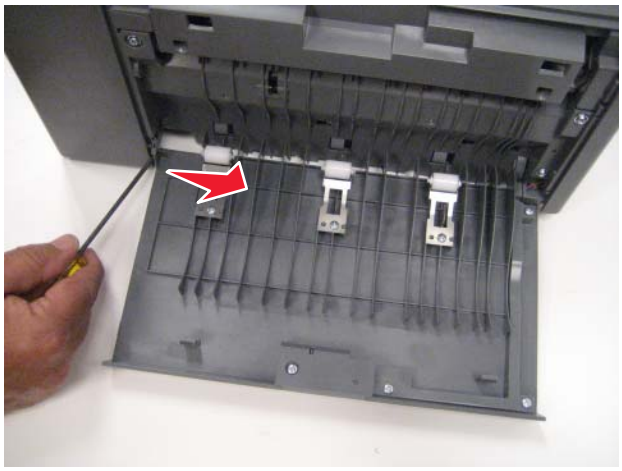


Finisher sensor (stapler pass thru) removal

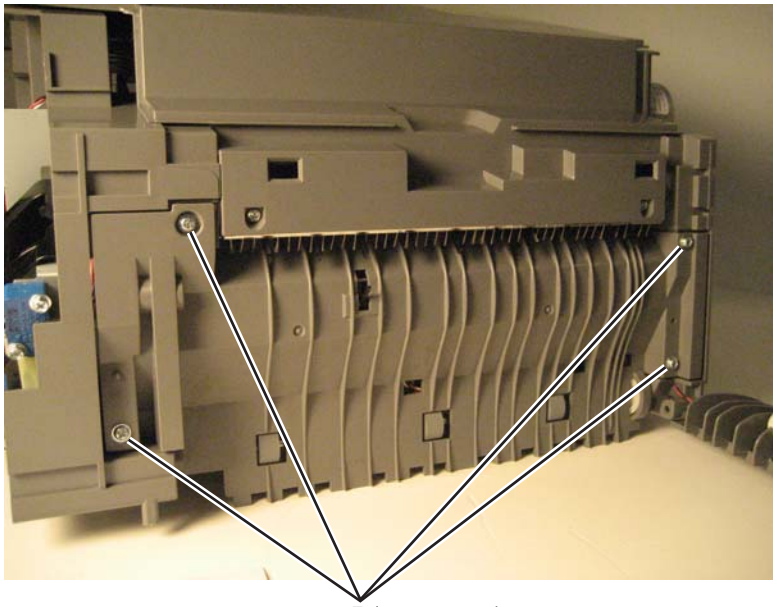
See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the finisher from the printer.
2. Remove the finisher rear cover. See **“Finisher or stacker rear cover removal” on page 4-337**.
3. Remove the finisher front cover. See **“Finisher or stacker front cover removal” on page 4-328**.
4. Open the left access door, and pry out the left hinge (A) to lower the door.
5. Push the door to the right to release the left hinge, and then release the right hinge.

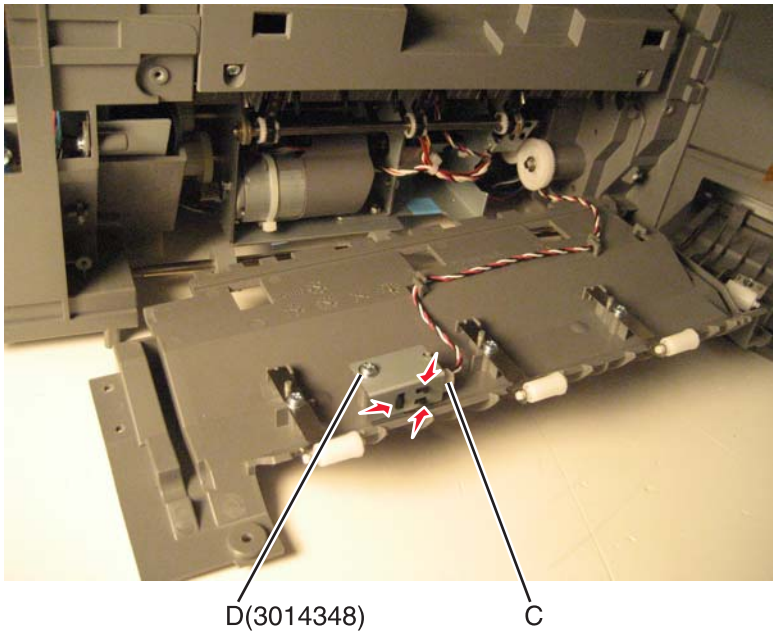




6. Remove the four screws (B), and pull out the deflector plate.



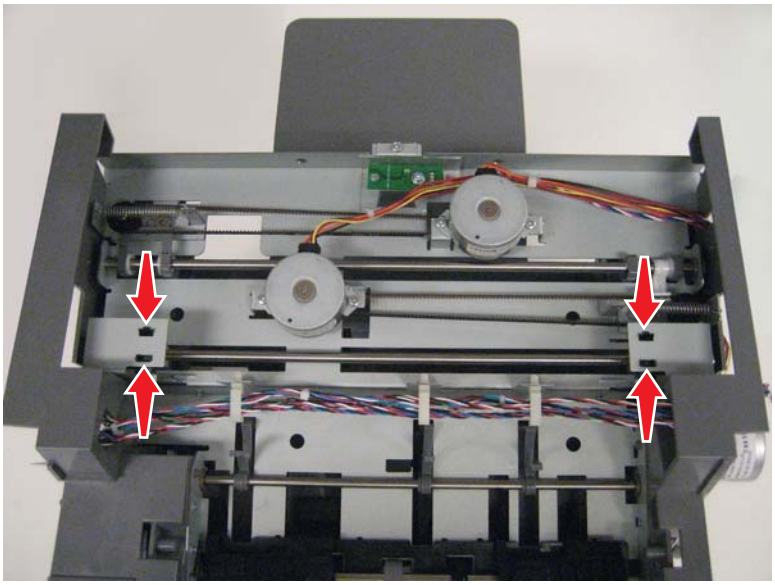
7. Disconnect the cable (C) from the sensor.
8. Remove the screw (D) to remove the sensor bracket.
9. Press the tabs to remove the sensor.



Finisher or stacker sensor (tamper HP left and right) removal

See **“Finisher assembly (continued)” on page 7-37** for the part number.

1. Remove the option from the printer.
2. Remove the option top cover. See **“Finisher or stacker top cover removal” on page 4-350**.
3. Disconnect the cable from the sensor.
4. Pinch the tabs (A) to remove the sensors.

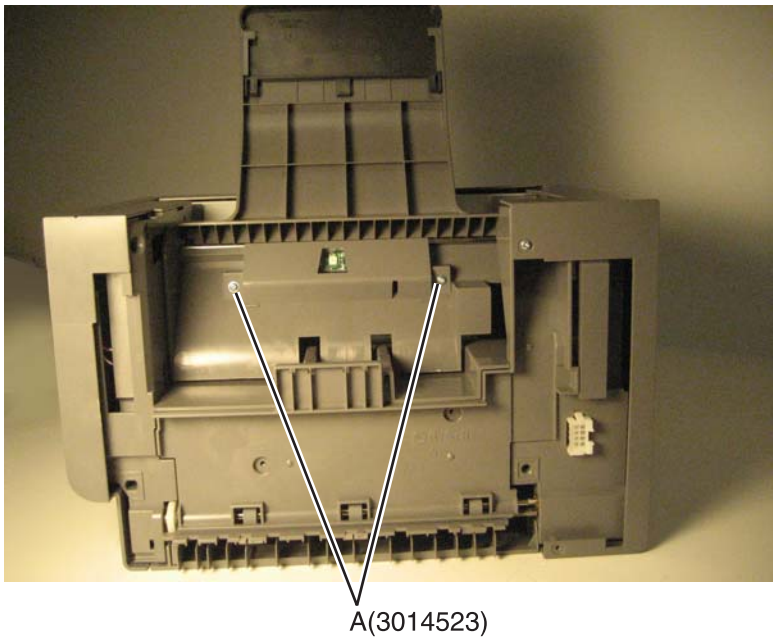


Finisher or stacker standard output bin LED and LED lens removal

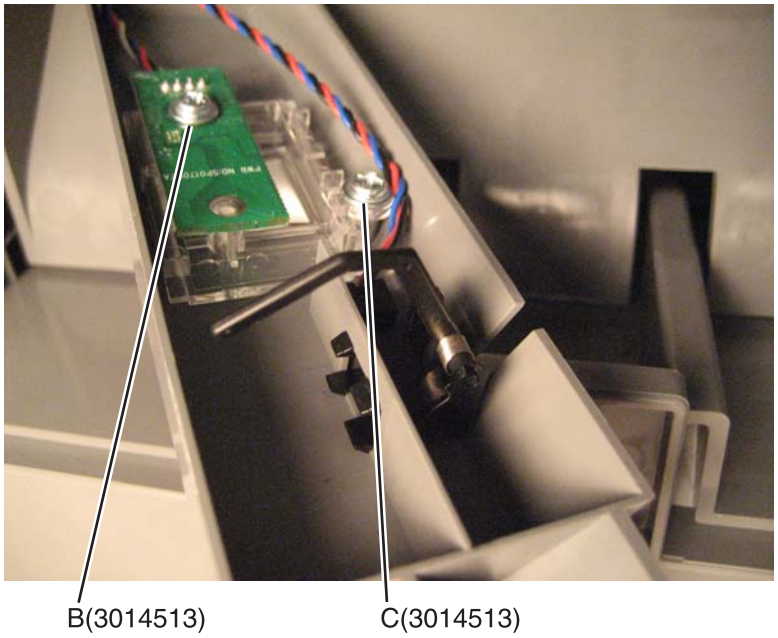
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See **“Finisher assembly” on page 7-35** for the part number.

1. Remove the option from the printer.
2. Remove two screws (A), and pull out the sensor cover.



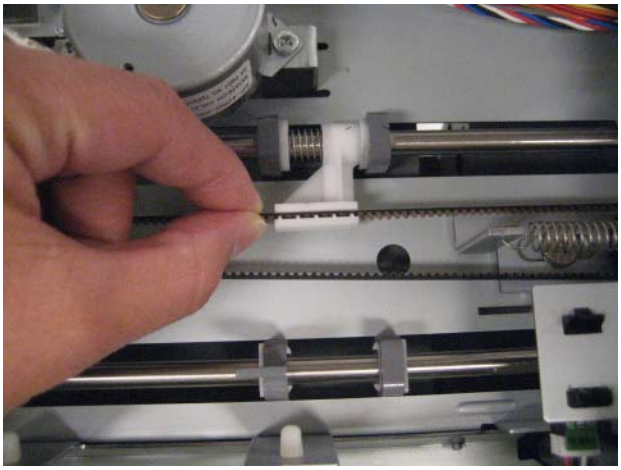
3. To remove the LED, remove the screw (B), and then disconnect the cable from the LED card.
4. To remove the lens, remove the screw (B) and the screw (C), and then remove the lens.

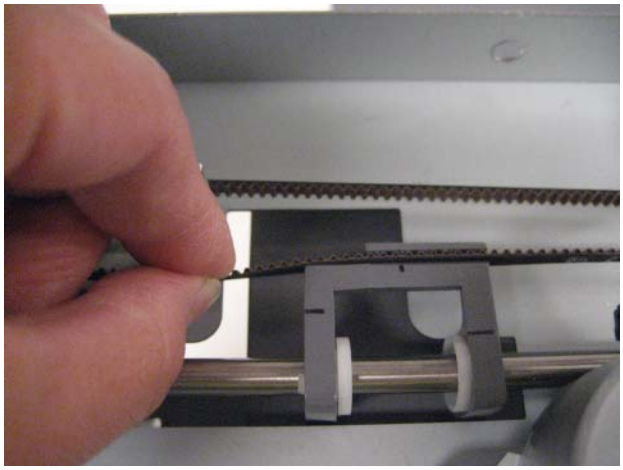


Finisher or stacker tamper drive belt removal

See **“Finisher assembly (continued)” on page 7-37** for the part number.

1. Remove the option from the printer.
2. Remove the tamper drive motor from the belt you need to replace. See **“Finisher or stacker tamper drive motor assembly removal” on page 4-348**.
3. Pull the belt out the tamper belt holder and remove the belt from the pulley.





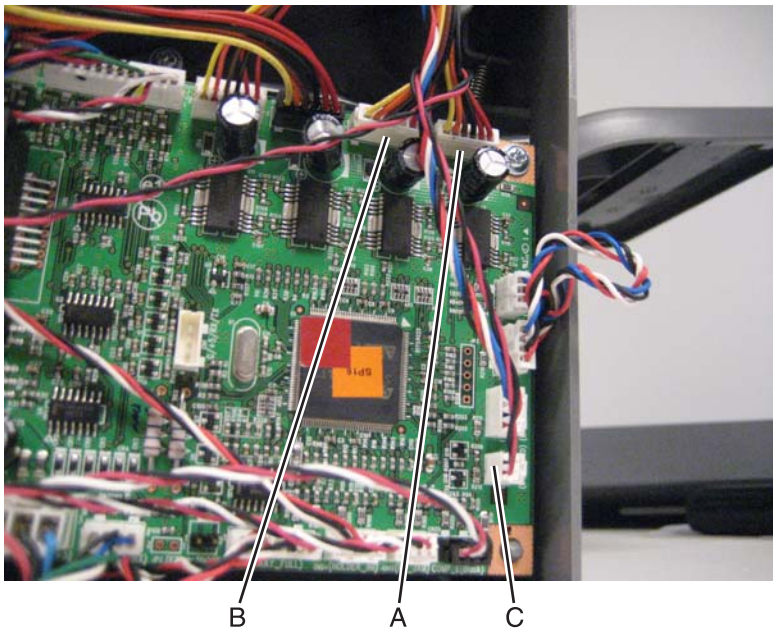
Finisher or stacker tamper drive motor assembly removal

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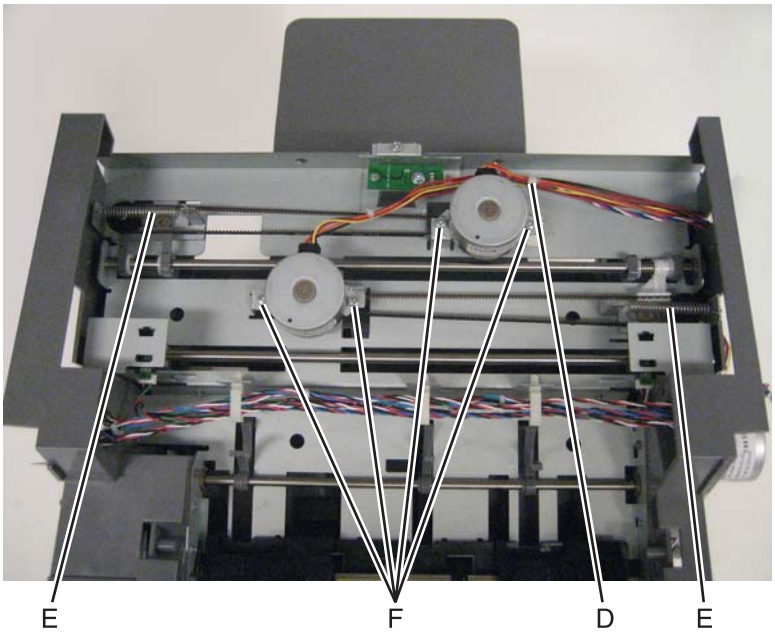
See **“Finisher assembly (continued)” on page 7-37** for the part number.

Note: The left tamper motor controls the front tamper, and the right tamper motor controls the rear tamper.

1. Remove the option from the printer.
2. Remove the top cover. See **“Finisher or stacker top cover removal” on page 4-350**.
3. From the controller card, disconnect the cable for the motor you are removing: left motor (A); right motor (B).
4. Disconnect the cable wrapped around the motor cables (C) to free the motor cable.



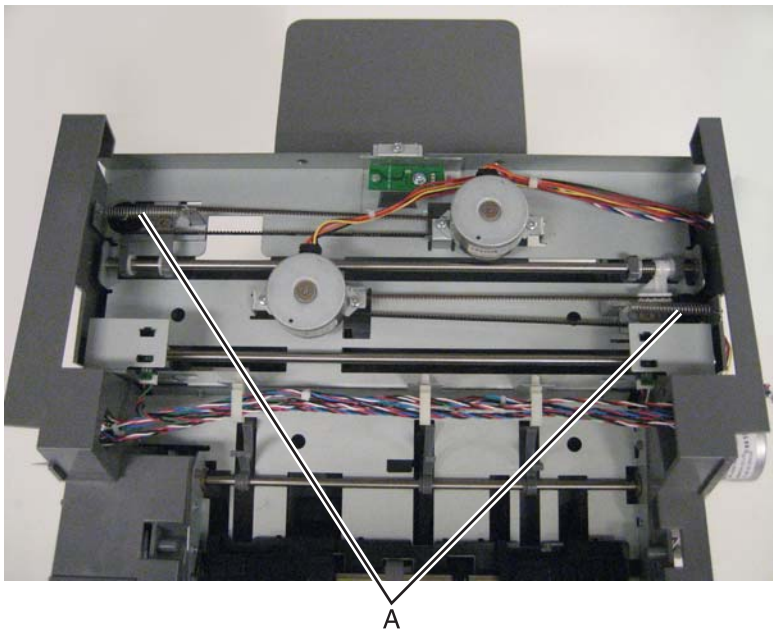
5. Clip the cable tie (D).
6. Use a spring hook to remove the tamper recoil spring (E) for the motor you are removing.
7. Remove the two screws (F) from the motor you are removing, and remove the motor assembly.



Finisher or stacker tamper recoil spring removal

See **“Finisher assembly (continued)” on page 7-37** for the part number.

1. Remove the option from the printer.
2. Remove the top cover. See **“Finisher or stacker top cover removal” on page 4-350**.
3. Using a spring hook, remove the spring (A) you need to replace.

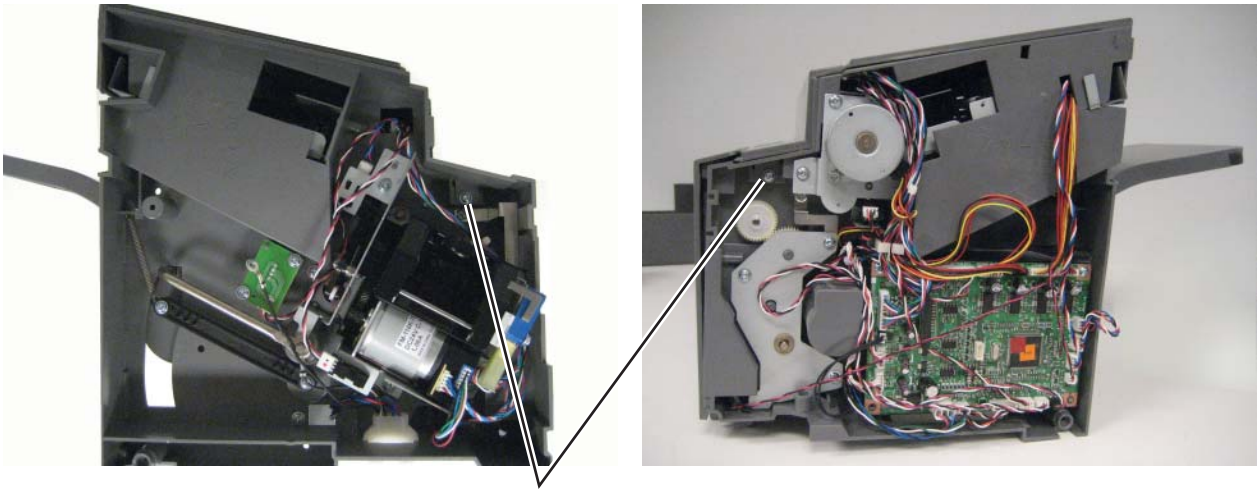


Finisher or stacker top cover removal

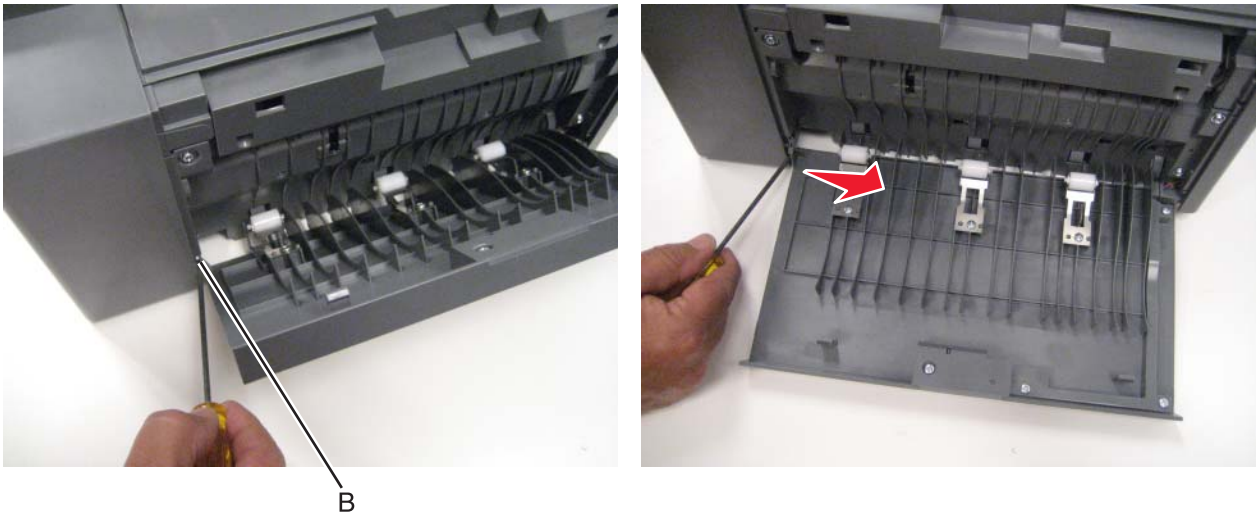
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See **“Finisher assembly” on page 7-35** for the part number.

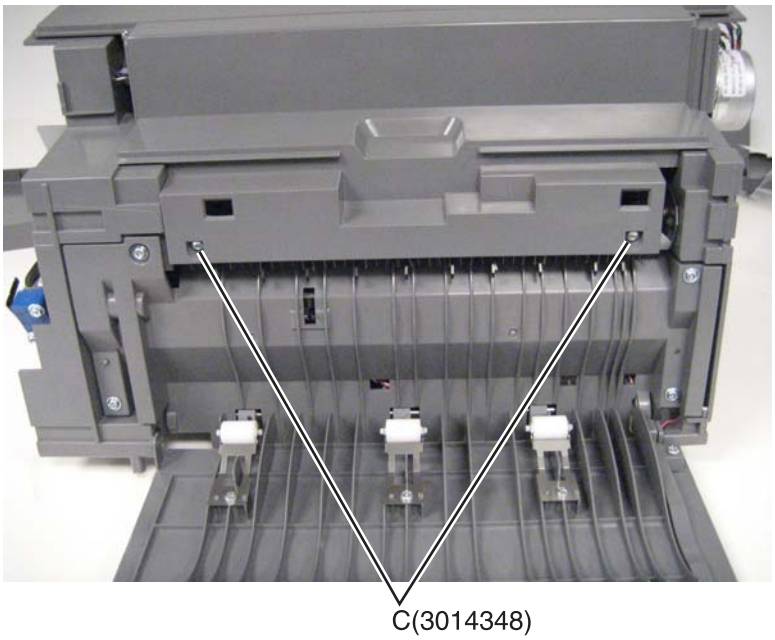
1. Remove the option from the printer.
2. Remove the front cover. See **“Finisher or stacker front cover removal” on page 4-328**.
3. Remove the rear cover. See **“Finisher or stacker rear cover removal” on page 4-337**.
4. Remove the screw (A) on each side of the top cover.



5. Open the left access door, and use a screwdriver to force the rear hinge (B) out of the slot by pushing the door to the front.



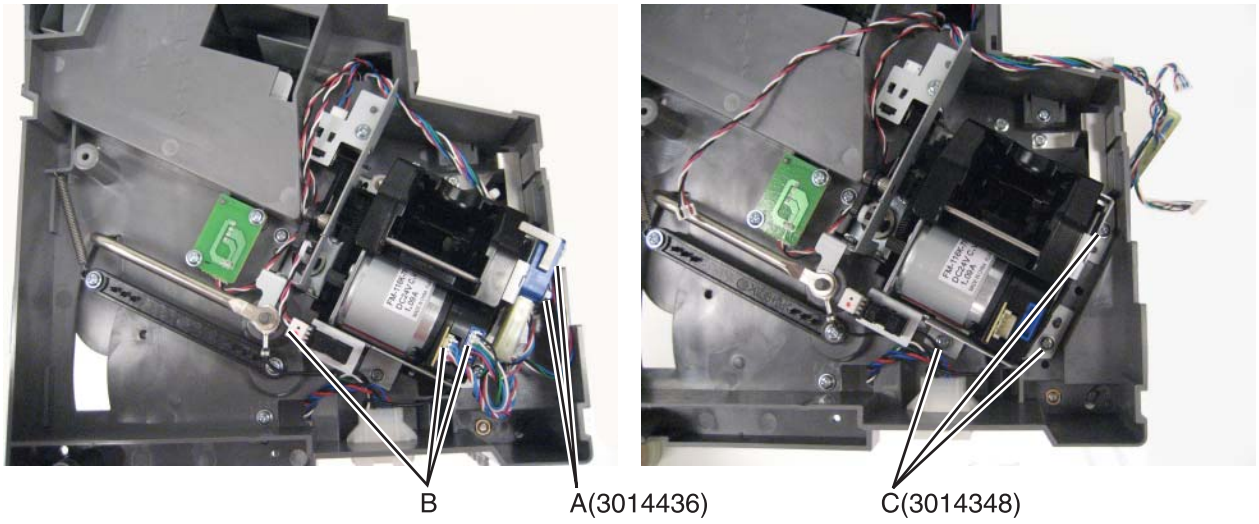
6. Remove two screws (C).



7. Pull up to remove the top cover.

Finisher stapler unit assembly removal

1. Remove the finisher from the printer.
2. Remove the finisher rear cover. See **"Finisher or stacker rear cover removal" on page 4-337**.
3. Remove two screws (A) to remove rear cable from the stapler unit assembly, and then remove the other three cables (B) attached to the assembly.
4. Remove the three screws (C).



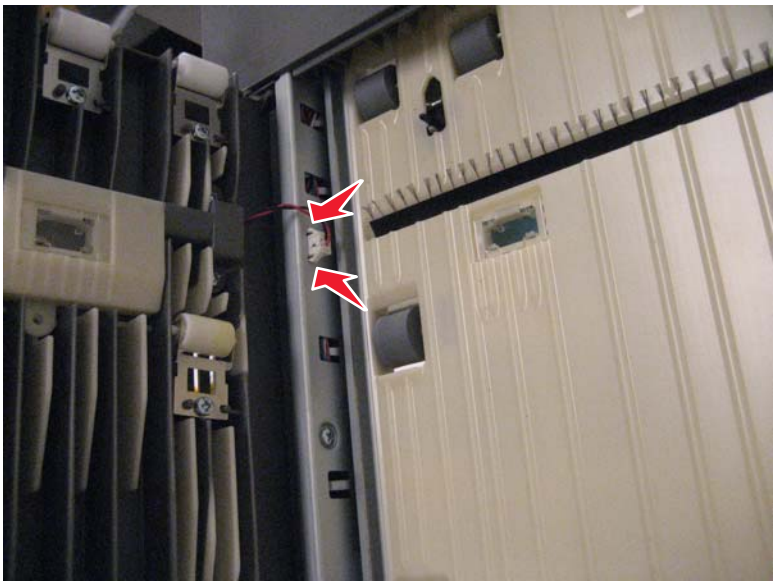
5. Remove the stapler unit assembly.

Installation note: Be sure to secure the ground cable with the front screw.

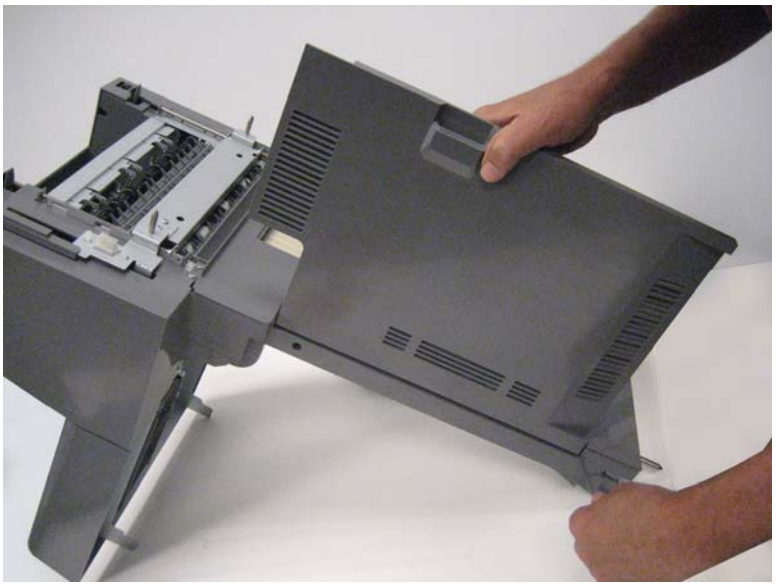
Horizontal transport unit (HTU)

HTU access door removal

1. Remove all output options from the printer.
2. Open the access door, and press the tabs to disconnect the beacon cable.



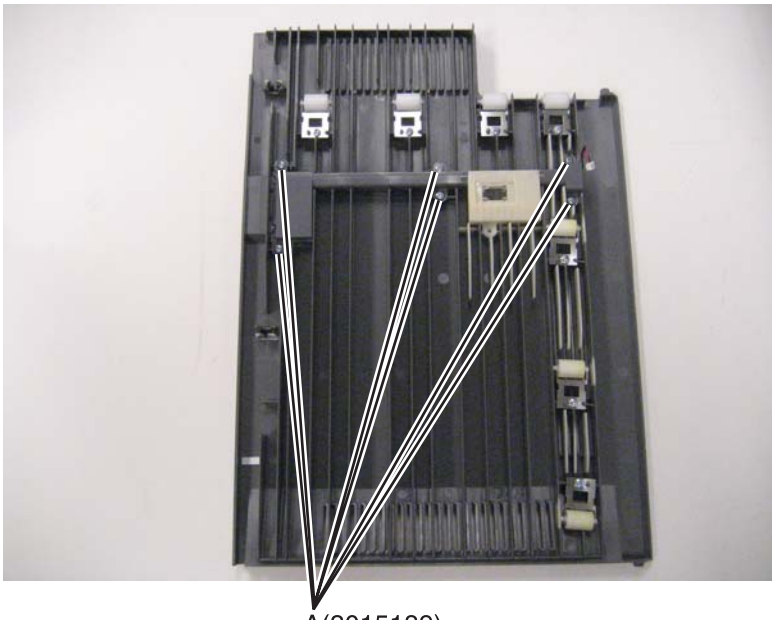
3. Insert a flat-blade screwdriver below the bottom hinge, and flex the door enough to pull out the hinge.



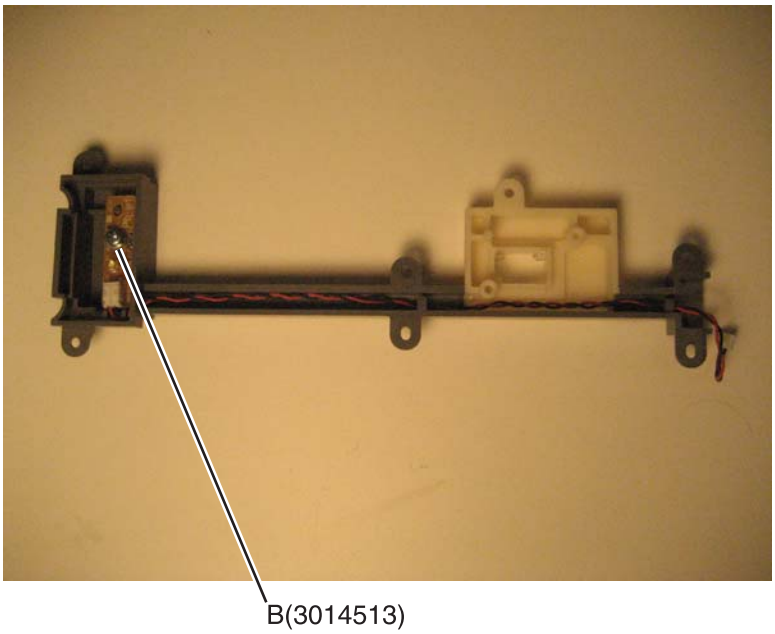
4. Remove the door.

HTU access door paper jam beacon (with cover and cable) removal

1. Remove all output options from the printer.
2. Remove the HTU access door. See **"HTU access door removal" on page 4-352**.
3. Remove six screws (A), and turn over the beacon cover.

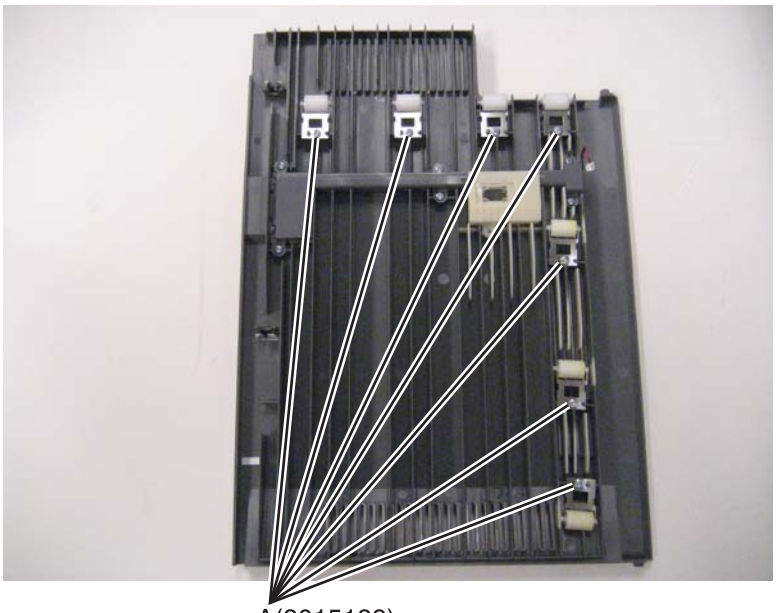


4. Remove the screw (B) to remove the beacon card, and disconnect the cable.
   Note: Observe the cable routing for installation.

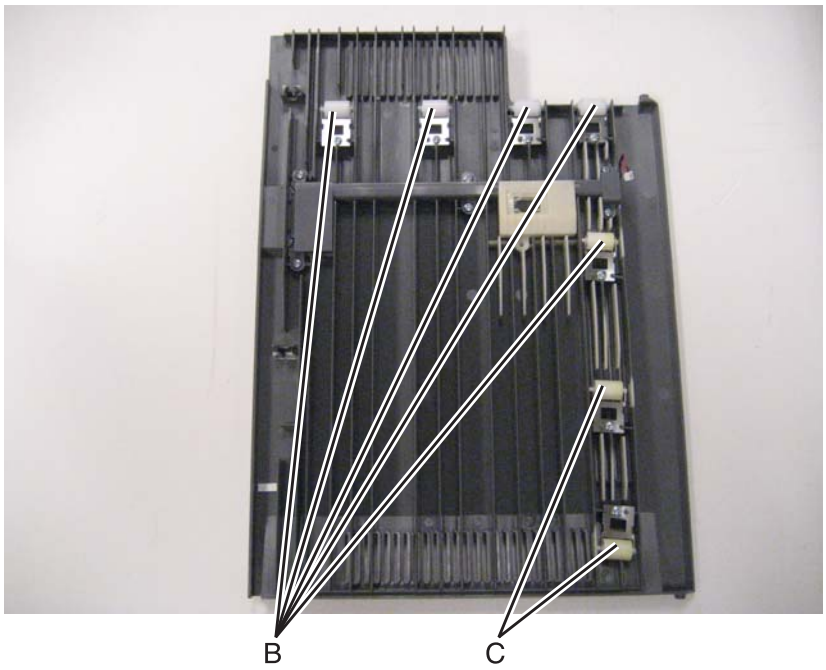


HTU access door rollers removal

1. Remove all output options from the printer.
2. Remove the HTU access door. See **"HTU access door removal" on page 4-352**.
3. Remove the screw (A) from the roller you are replacing, and remove the roller.

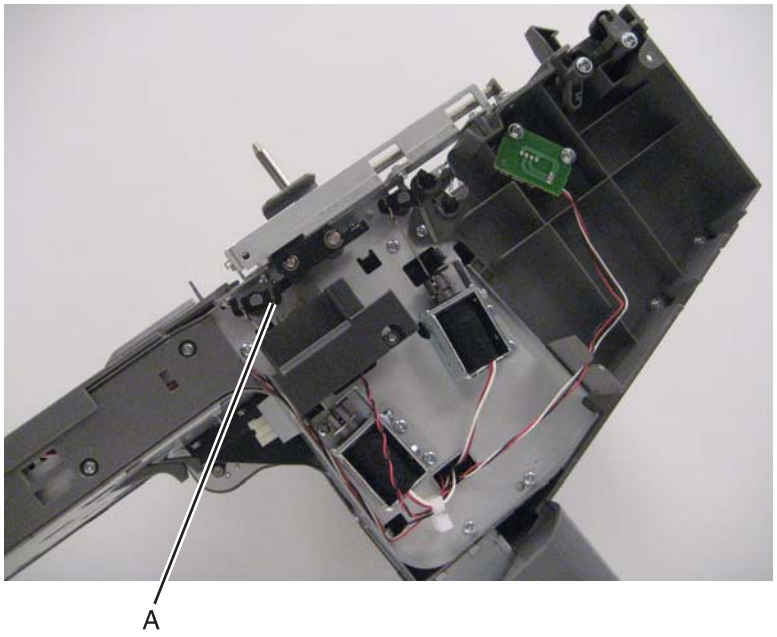


Installation note: Rollers (B) are different from rollers (C). Make sure that the color of the roller you will reinstall matches the color of the roller you have removed.



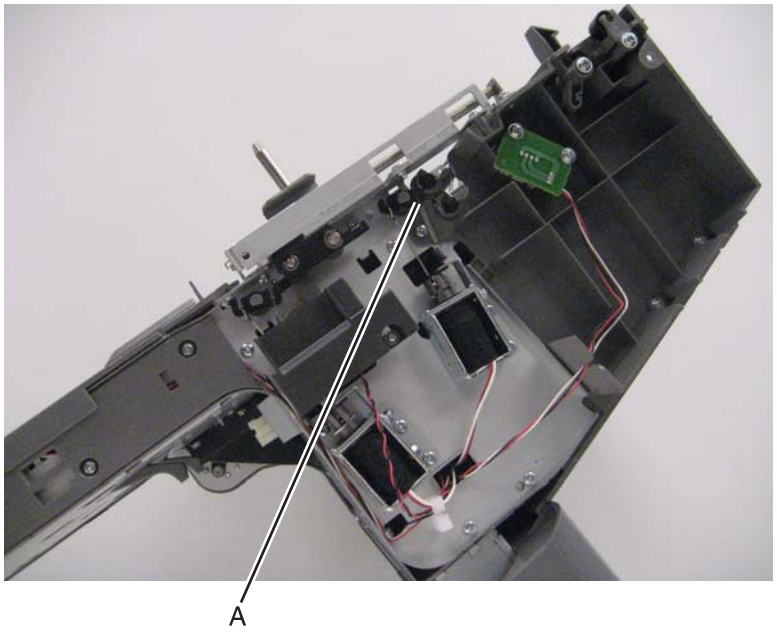
HTU bin diverter gate spring removal

1. Remove all output options from the printer.
2. Remove the front standard bin cover. See **“HTU front standard bin cover removal” on page 4-364**.
3. Use a spring hook to remove the spring (A).



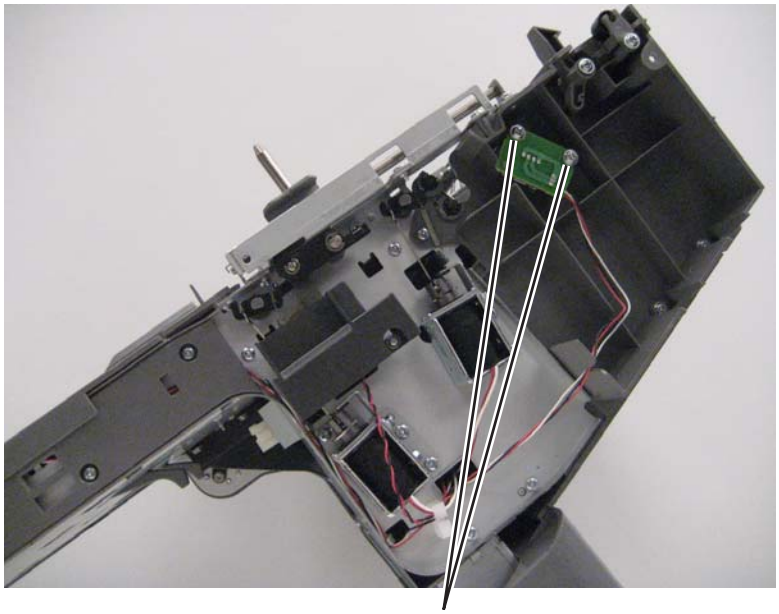
HTU bin media exit spring removal

1. Remove all output options from the printer.
2. Remove the front standard bin cover. See **“HTU front standard bin cover removal” on page 4-364**.
3. Use a spring hook to remove the spring (A).



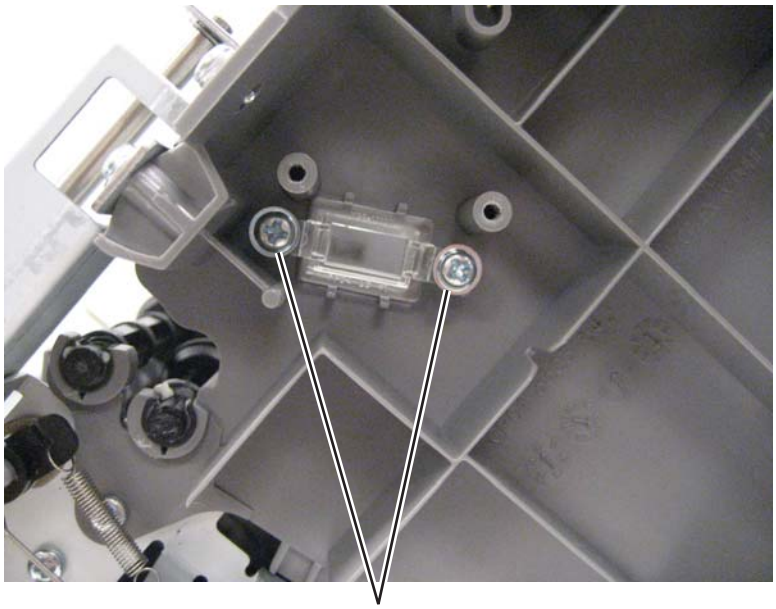
HTU card (bin-full receive card and lens) removal

1. Remove all output options from the printer.
2. Remove the front standard bin cover. See **"HTU front standard bin cover removal" on page 4-364**.
3. Remove the two screws (A), and then remove the sensor card.



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4. Disconnect the cable to remove the sensor.
5. If you are replacing the lens, then remove two screws (B) to remove it.

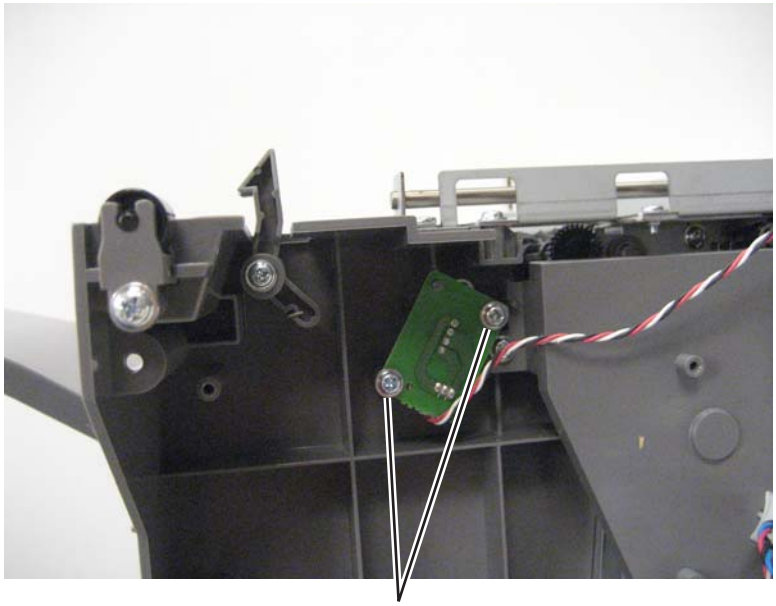


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HTU card (bin-full send card and lens) removal

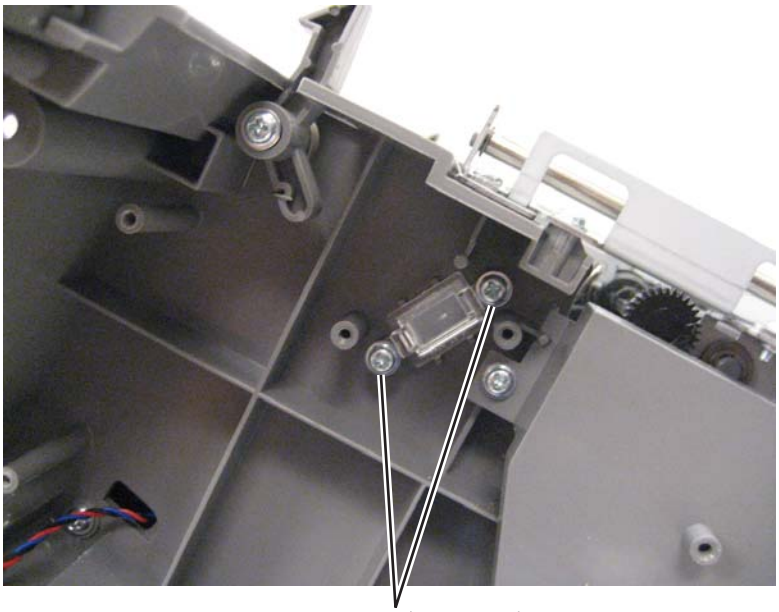
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1. Remove all output options from the printer.
2. Remove the HTU controller card. See **"HTU controller card removal" on page 4-359**.
3. Remove the two screws (A), and then remove the sensor card.



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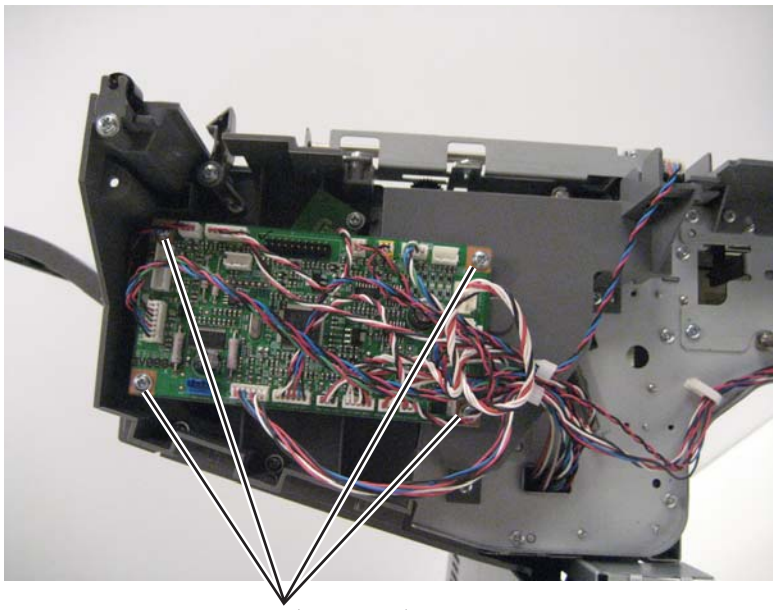
4. Disconnect the cable from the sensor to remove the sensor.
5. If you are replacing the lens, then remove two screws (B) to remove it.



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HTU controller card removal

1. Remove all output options from the printer.
2. Remove the rear standard bin cover. See **“HTU rear standard bin cover removal” on page 4-380**.
3. Disconnect all cables connected to the controller card.
4. Remove four screws (A).

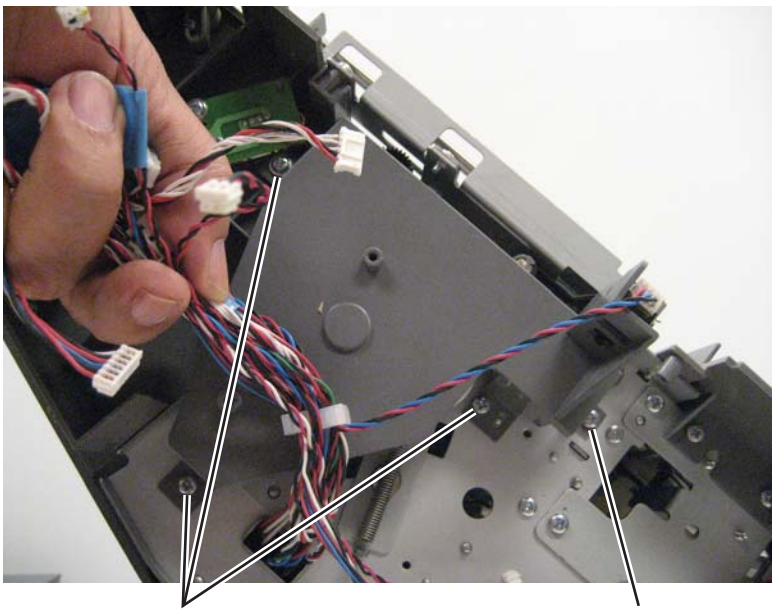


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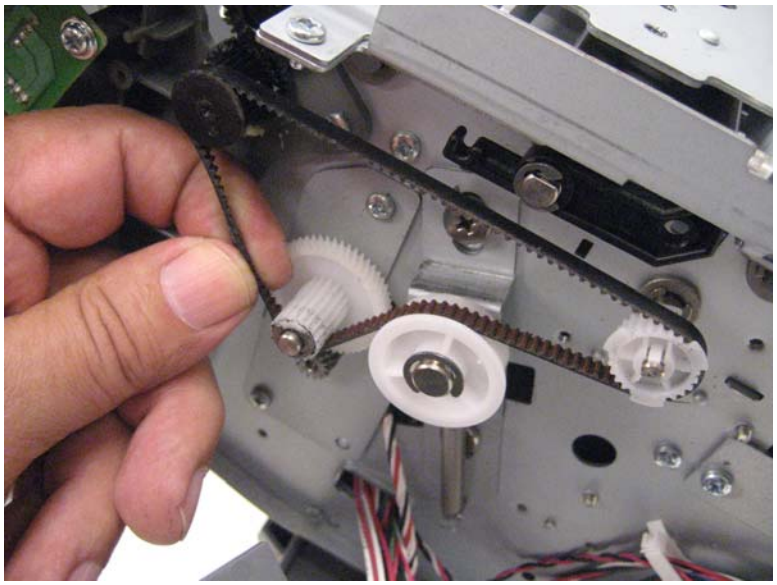
HTU drive belt removal

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1. Remove all output options from the printer.
2. Remove the HTU controller card. See **“HTU controller card removal” on page 4-359**.
3. Remove three screws (A) and one screw (B).

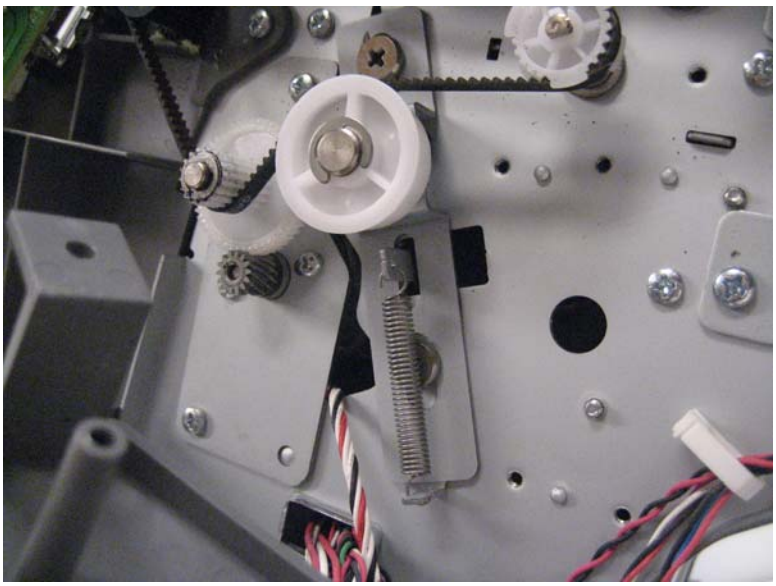


4. Slide the belt off the lowest gear.



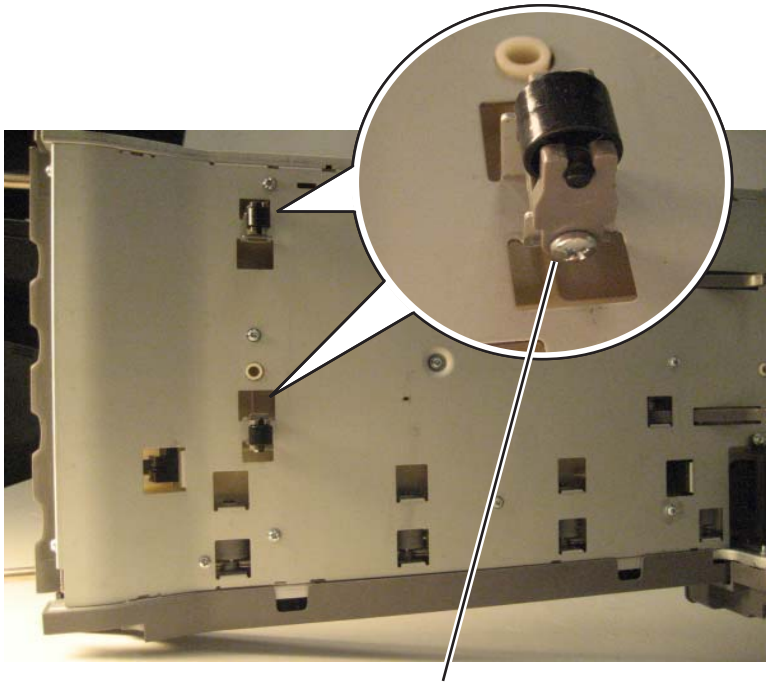
HTU drive gear spring removal

1. Remove all output options from the printer.
2. Remove the controller card. See **“HTU controller card removal” on page 4-359**.
3. Use a spring hook to remove the spring.



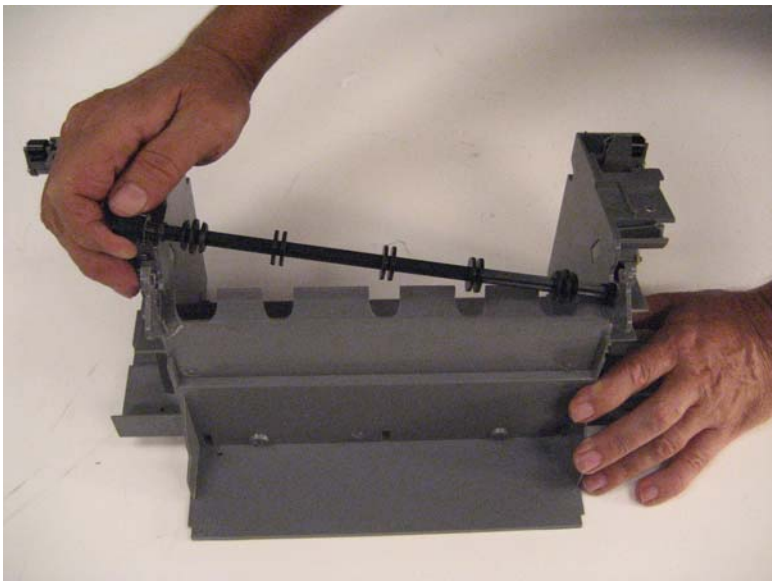
HTU engagement roller removal

1. Remove all output options from the printer.
2. Lay the HTU on its back.
3. Remove the screw (A) to remove the roller you are replacing.



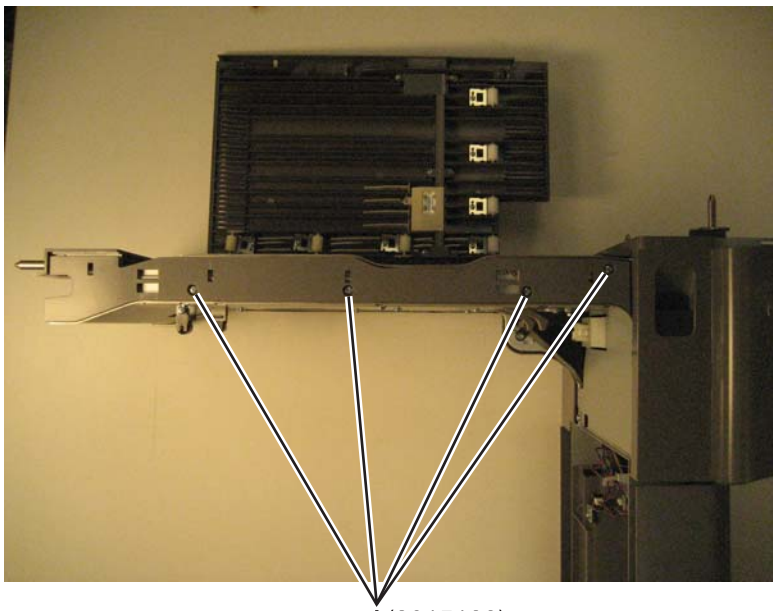
HTU exit roller removal

1. Remove the upper exit shaft. See **“HTU upper exit shaft removal” on page 4-400**.
2. Unsnap the left side of the roller from the cover and remove the roller.



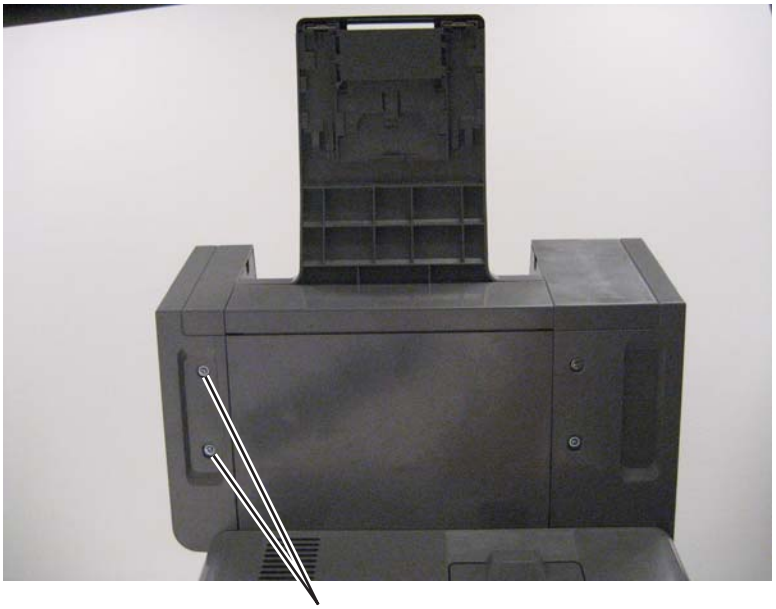
HTU front redrive cover removal

1. Remove all output options from the printer.
2. Lay the HTU on its back, and open the access door.
3. Remove four screws (A), and remove the cover.

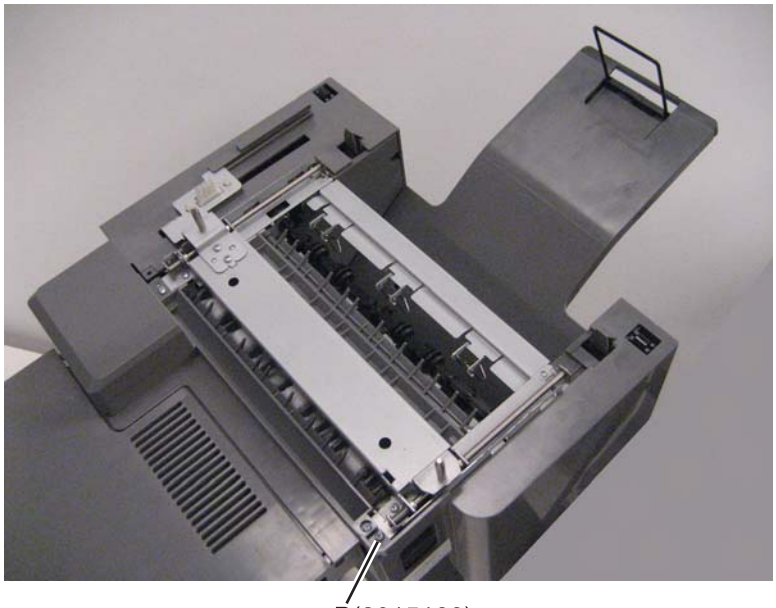


HTU front standard bin cover removal

1. Remove all output options from the printer.
2. Remove two screws (A) from the bottom.



3. Remove the screw (B) from the top.

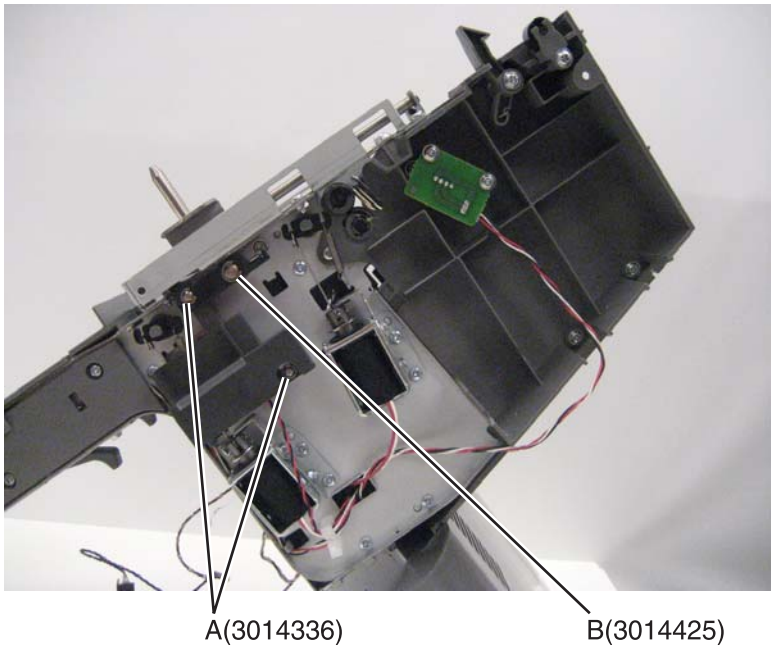


4. Remove the screw (C) inside the output bin, and remove the cover.

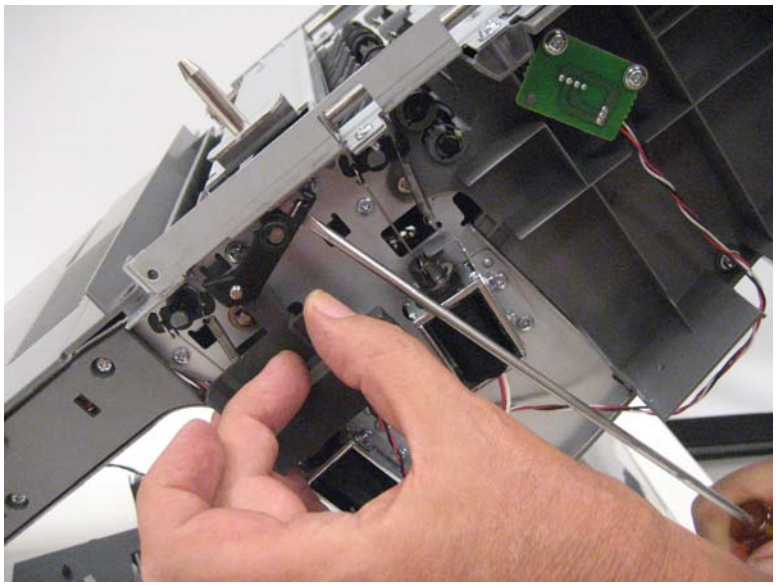


HTU locking lever removal

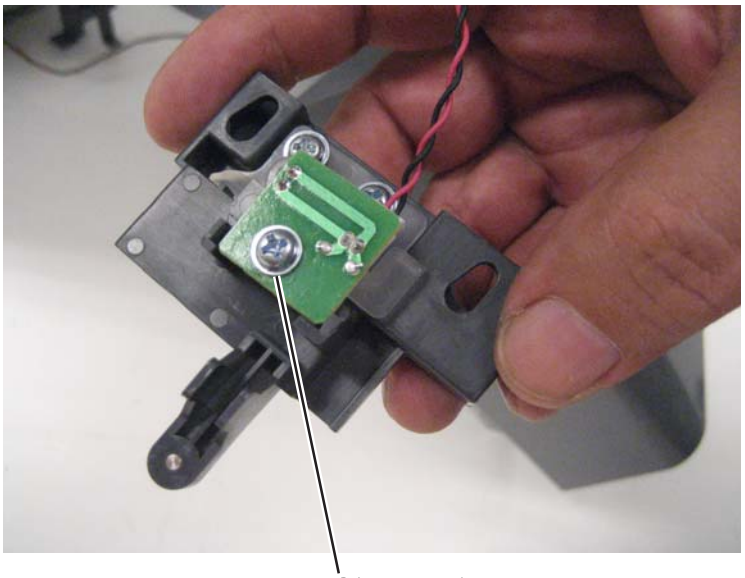
1. Remove the front standard bin cover. See **“HTU front standard bin cover removal” on page 4-364**.
2. Remove the two E-Clips (A) and the one E-clip (B) holding the locking lever.



3. Use a flat-blade screwdriver to slide the lever out.



4. Remove the screw (C).

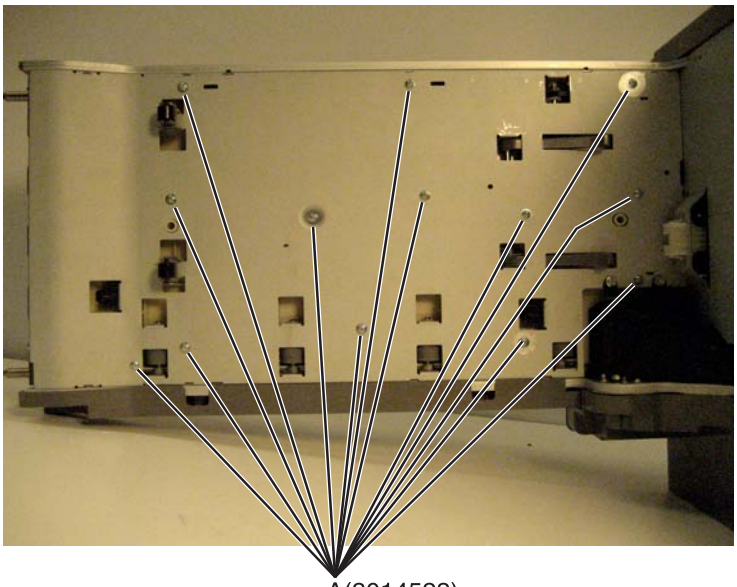


HTU locking lever card removal

1. Remove the locking lever. See **"HTU locking lever removal" on page 4-365**.
2. Disconnect the cable to remove the locking level card.

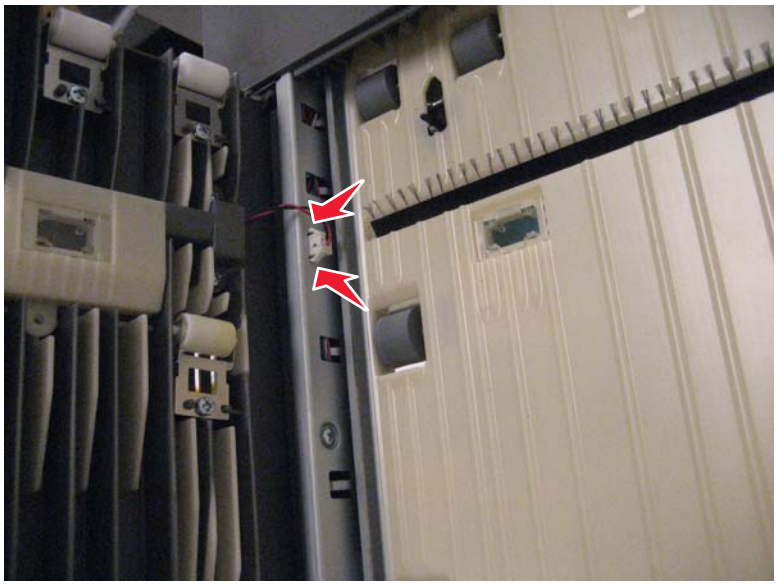
HTU lower redrive guide removal

1. Remove all output options from the printer.
2. Remove the upper guide. See **"HTU upper guide removal" on page 4-401**.
3. Remove 13 screws (A) from the bottom of the transport unit.

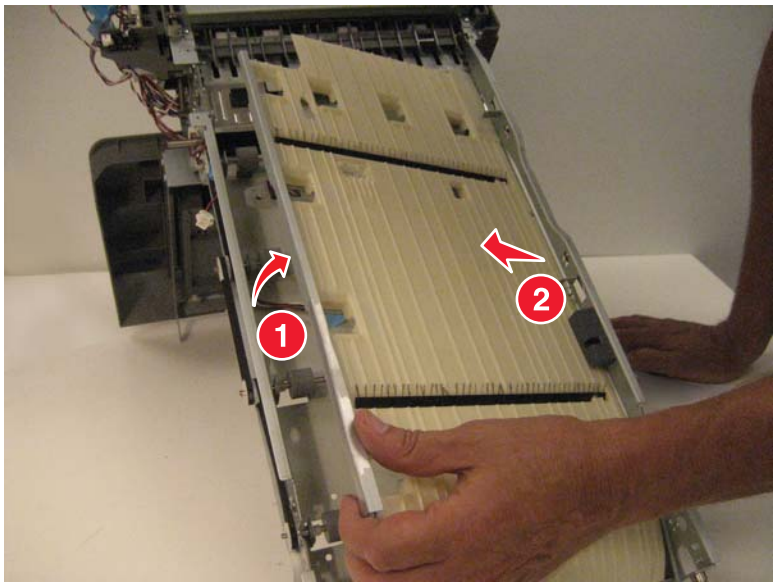


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4. Press the tabs to remove the connector from the rear frame.



5. Lift the back edge of the plate, and then slide the plate to the rear to remove it.

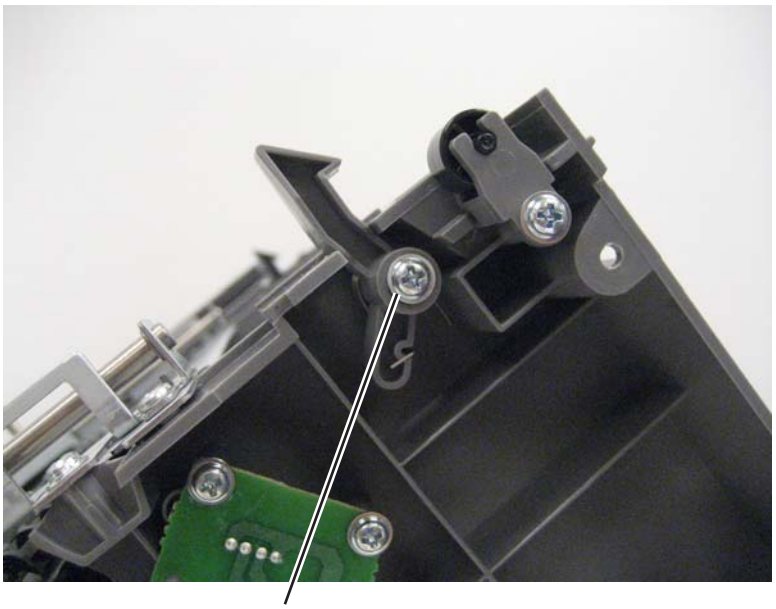


HTU option hook removal

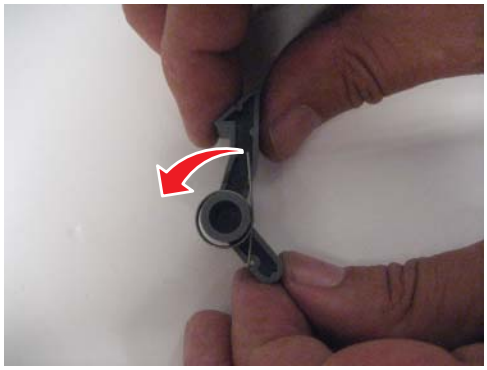
1. Remove all output options from the printer.

Front hook

a. Remove the front standard bin cover. See **"HTU front standard bin cover removal" on page 4-364**.
b. Remove one screw (A), and then remove the hook.



Installation note: From the back of the hook, turn the spring arm 1/2 turn counterclockwise, and then hold the arm in place while you install the hook.

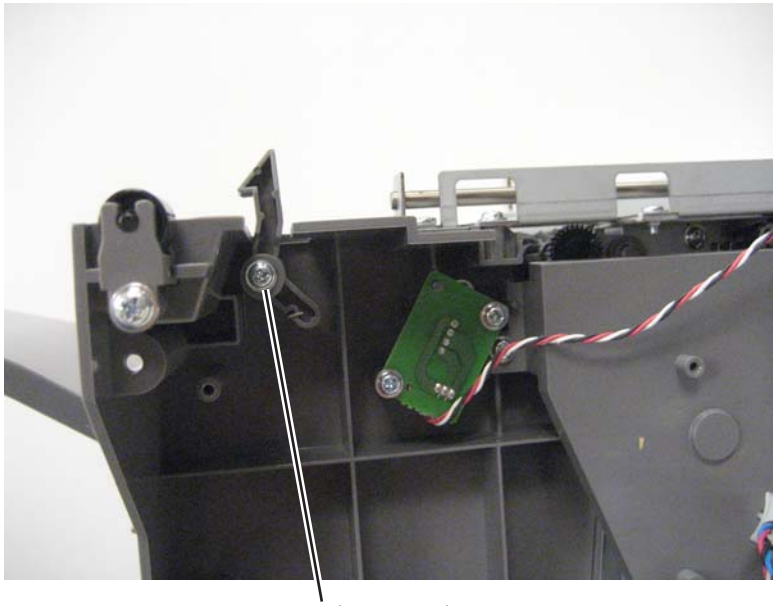




Rear hook

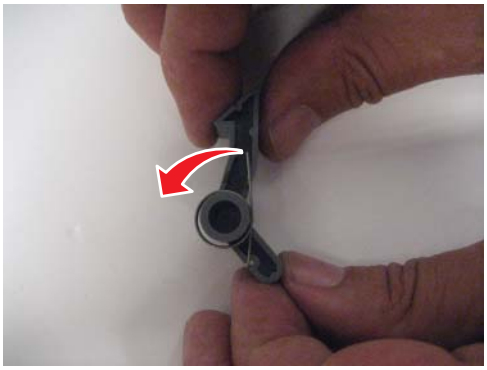
a. Remove the rear standard bin cover. See **"HTU rear standard bin cover removal" on page 4-380**.

b. Remove the screw (A), and then remove the hook.



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Installation note: From the back of the hook, turn the spring arm 1/2 turn counterclockwise, and then hold the arm in place while you install the hook.



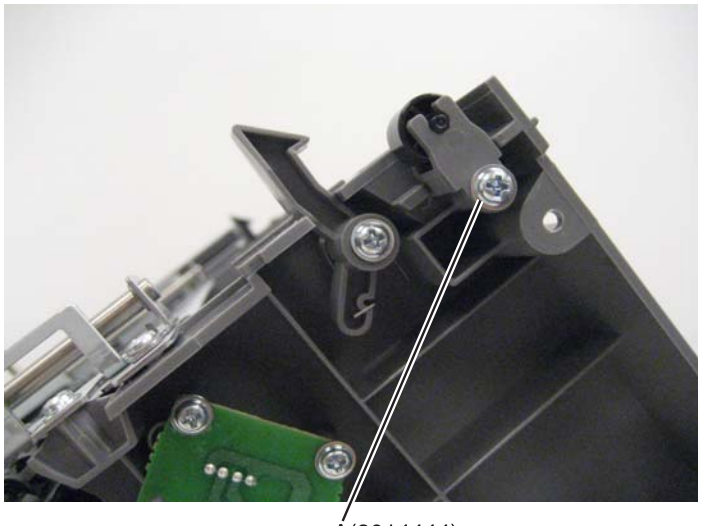


HTU option roller removal

1. Remove all output options from the printer.

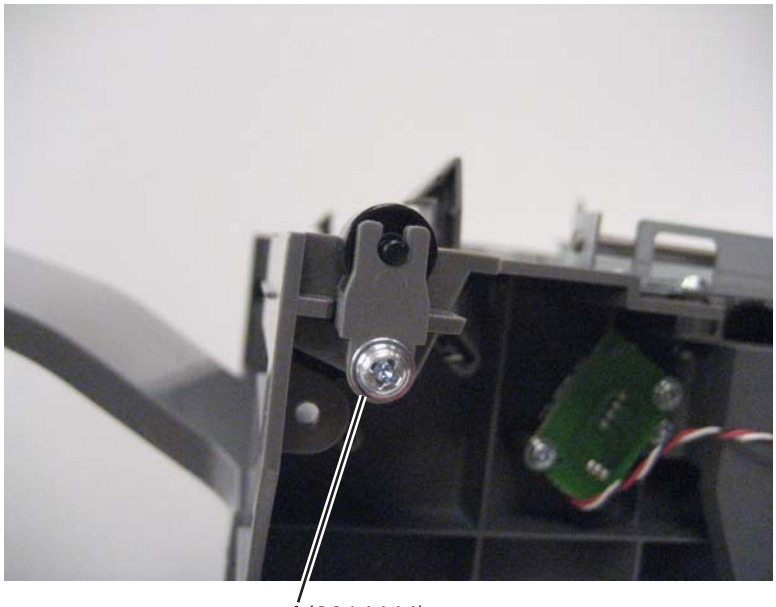
Front roller

a. Remove the front standard bin cover. See **"HTU front standard bin cover removal" on page 4-364**.
b. Remove the screw (A) to remove the roller.



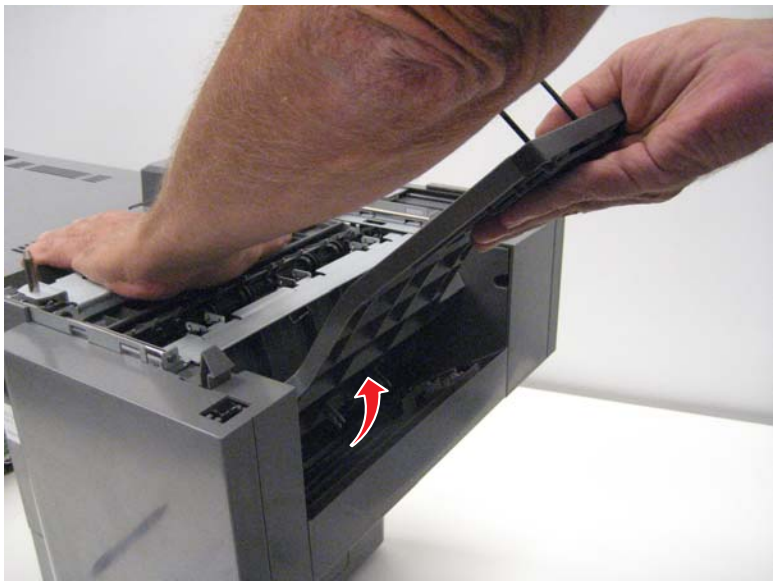
Rear roller

a. Remove the rear standard bin cover. See **"HTU rear standard bin cover removal" on page 4-380**.
b. Remove the screw (A) to remove the roller.



HTU output bin removal

1. Remove the output option from the HTU.
2. Rotate the bin up, and then pull back to remove it.

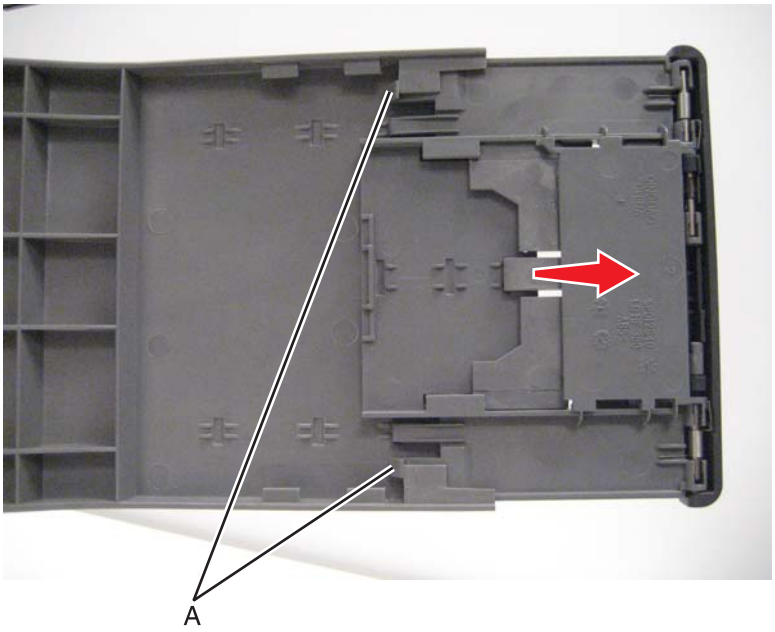


Installation note: If you are replacing the output bin FRU, then remove the wire stop. See **“HTU output bin wire stop removal” on page 4-375**.

HTU output bin extension removal

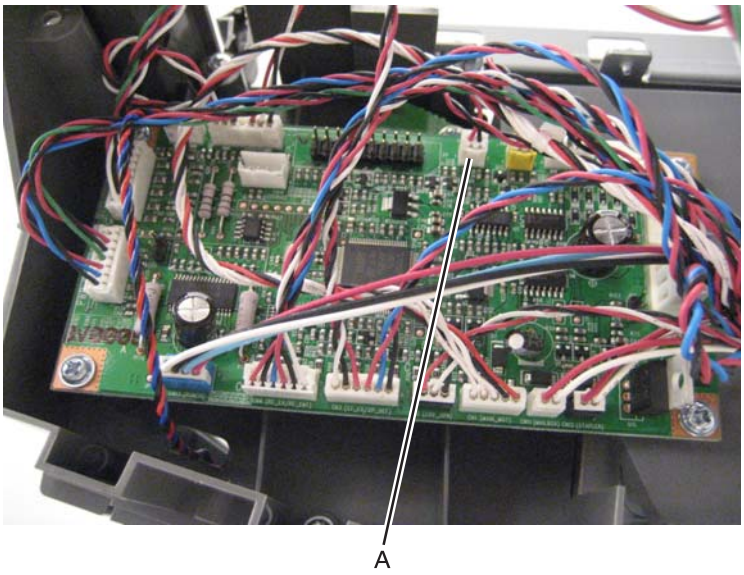
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1. Remove the output bin wire stop. **“HTU output bin wire stop removal” on page 4-375**.
2. Extend the extension until it stops.
3. Press the tabs (A) to release the latches, and then pull to remove the extension.



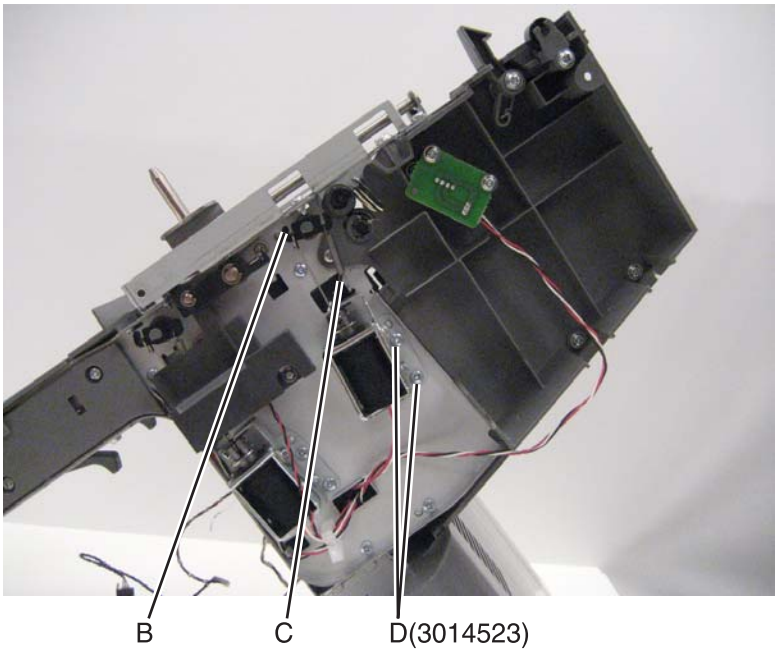
HTU output bin solenoid removal

1. Remove the rear standard bin cover. See **"HTU rear standard bin cover removal" on page 4-380**.
2. Disconnect the output bin solenoid cable (A).



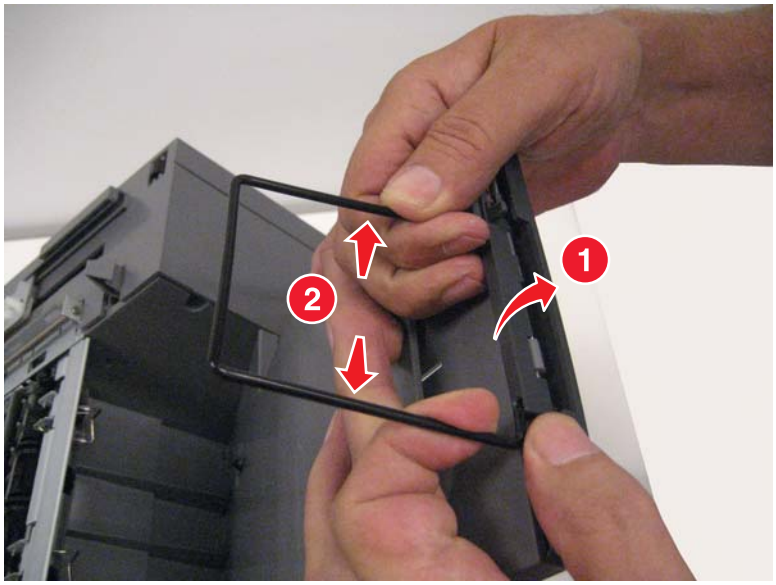
Note: Tie a string onto the cable so you can route the new cable through the HTU.

3. Remove the front standard bin cover. See **"HTU front standard bin cover removal" on page 4-364**.
4. Disconnect the plunger (B) from stopper diverter and the spring (C) from the solenoid.
5. Remove the two screws (D) and remove the solenoid.



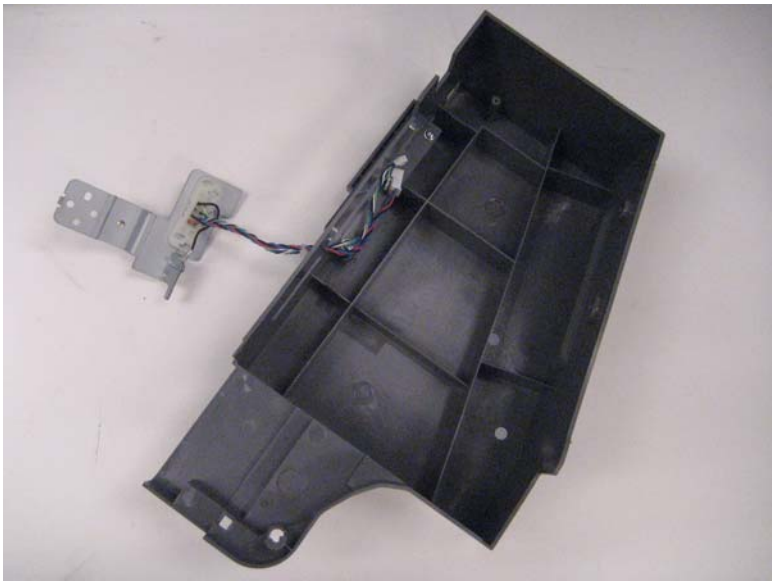
HTU output bin wire stop removal

1. Remove the output option from the HTU.
2. Rotate the extension cover down.
3. Pull out the sides of the stop to remove it.



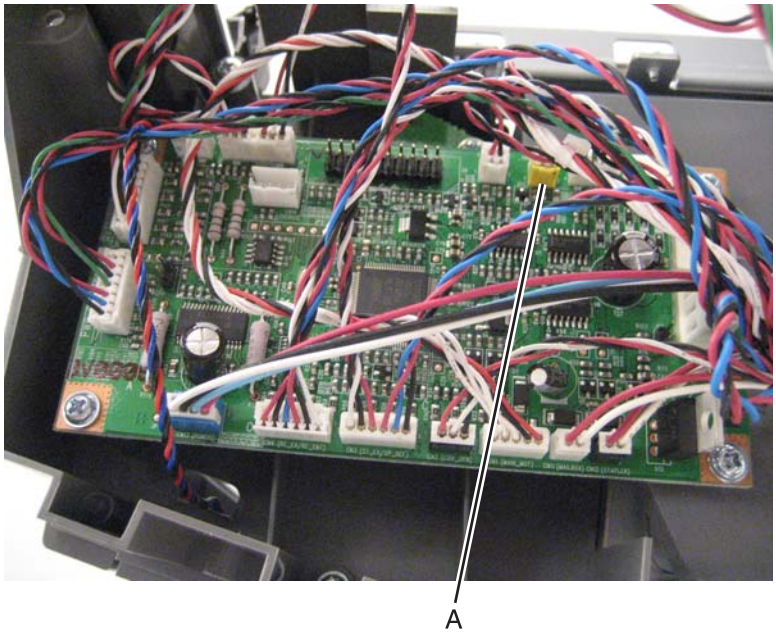
HTU output option guide removal

1. Remove the rear standard bin cover. See **“HTU rear standard bin cover removal” on page 4-380**.
2. Slide the cables through the rear standard bin cover.



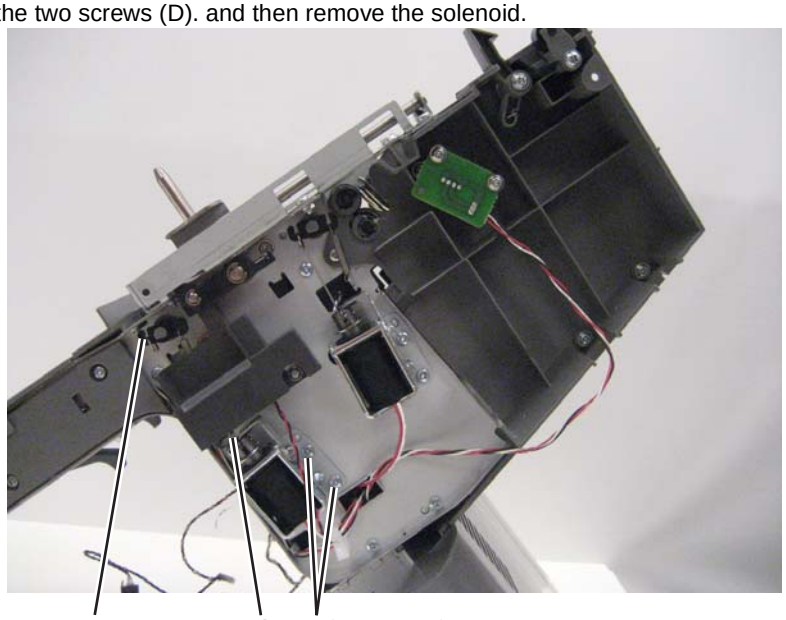
HTU output option solenoid removal

1. Remove the rear standard bin cover. See **"HTU rear standard bin cover removal" on page 4-380**.
2. Disconnect the output bin solenoid cable (A).



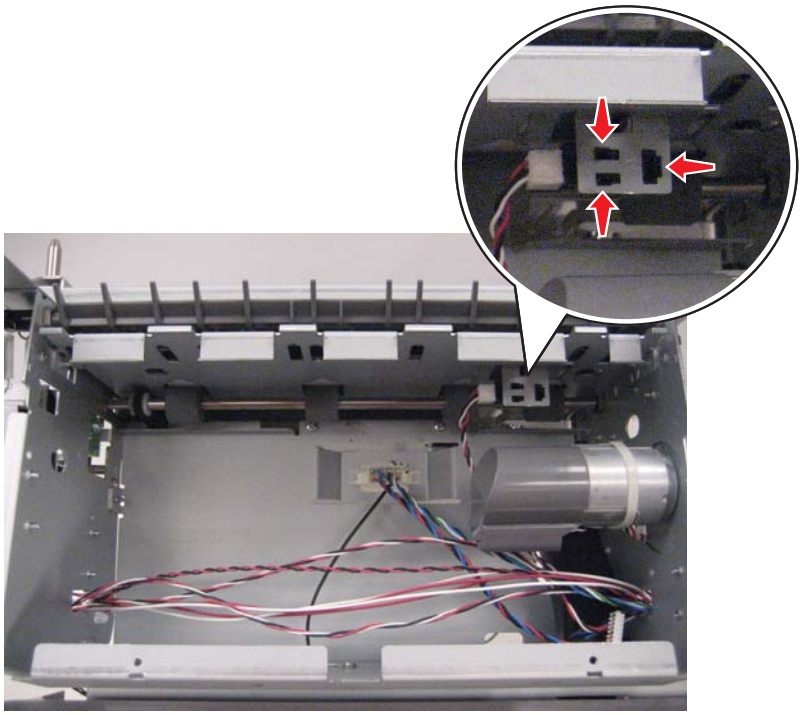
Note: Tie a string to the cable so you can route the new cable through the HTU.

3. Remove the front standard bin cover. See **"HTU front standard bin cover removal" on page 4-364**.
4. Disconnect the plunger (B) from the stopper diverter, and the spring (C) from the solenoid.
5. Remove the two screws (D). and then remove the solenoid.



HTU output sensor removal

1. Remove the right inner cover. See **"HTU right inner cover removal" on page 4-384**.
2. Release the tabs that hold the sensor in place, and then disconnect the cable.



HTU outer front cover removal (AIO only)

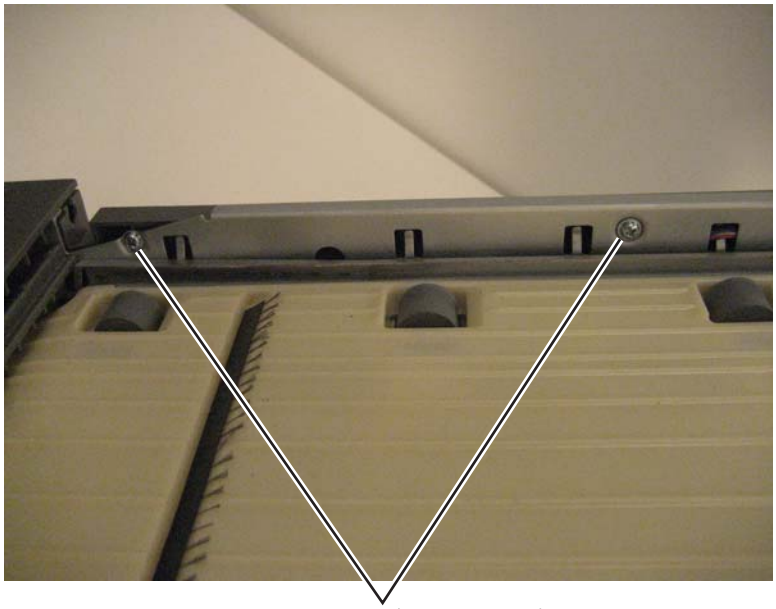
1. Remove all output options from the printer.
2. Push up the tabs to release the latches, and rotate the cover up to remove it.



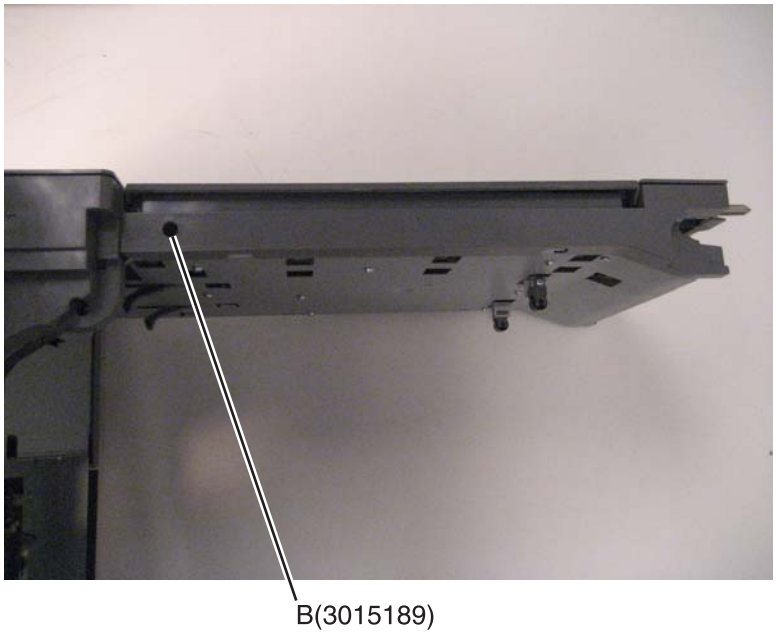


HTU rear redrive cover removal

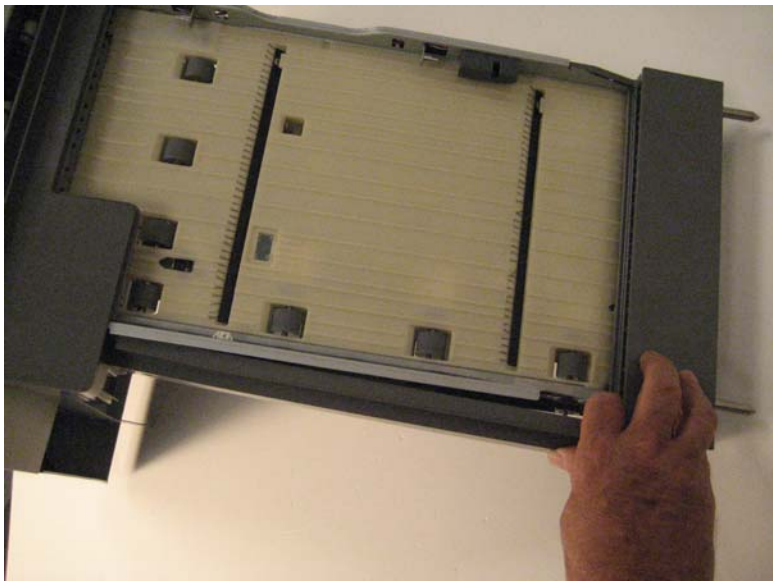
1. Remove all output options from the printer.
2. Remove the access door. See **“HTU access door removal” on page 4-352**.
3. Remove the two screws (A) from the inside.



4. Remove the screw (B) from the rear.



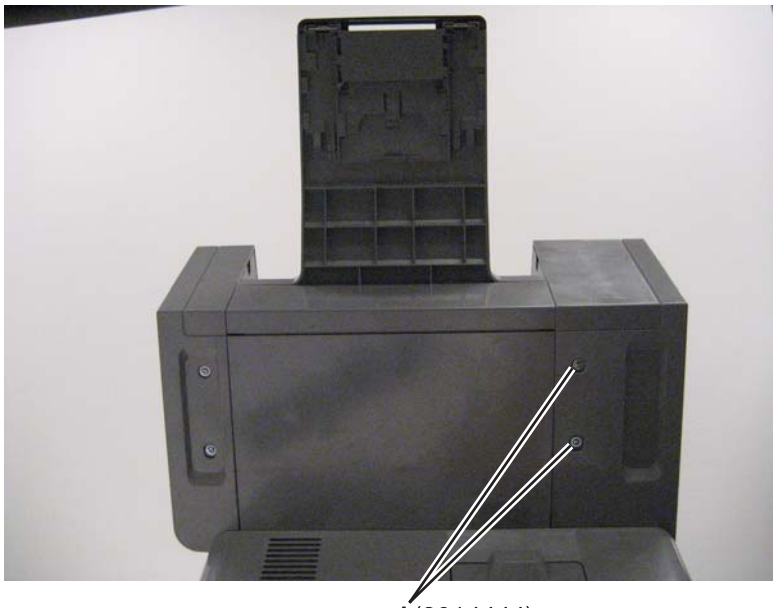
5. Pull out the side to release the tabs.



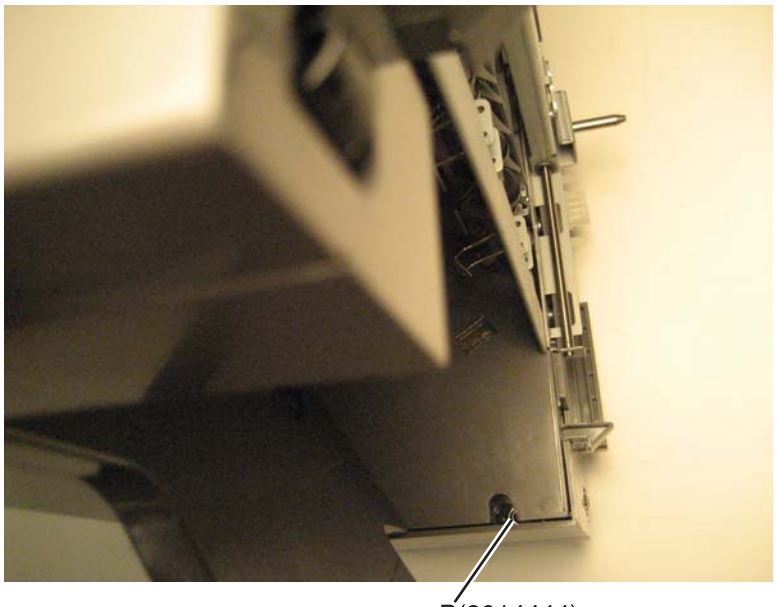
Installation note: Use a screwdriver to push the tabs back into the slots.

HTU rear standard bin cover removal

1. Remove all output options from the printer.
2. Remove two screws (A) from the bottom.



3. Remove the screw (B) inside the output bin.

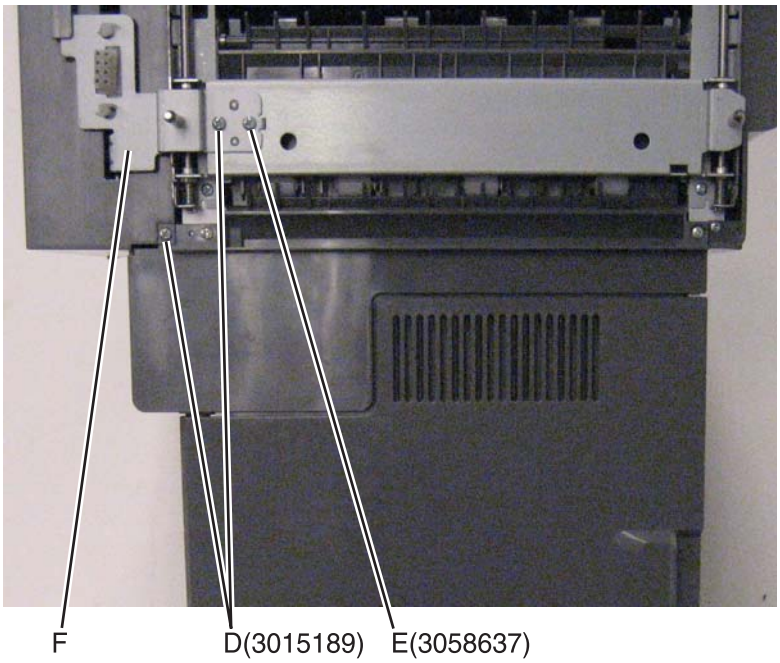


4. Remove the screw (C) from the left side.

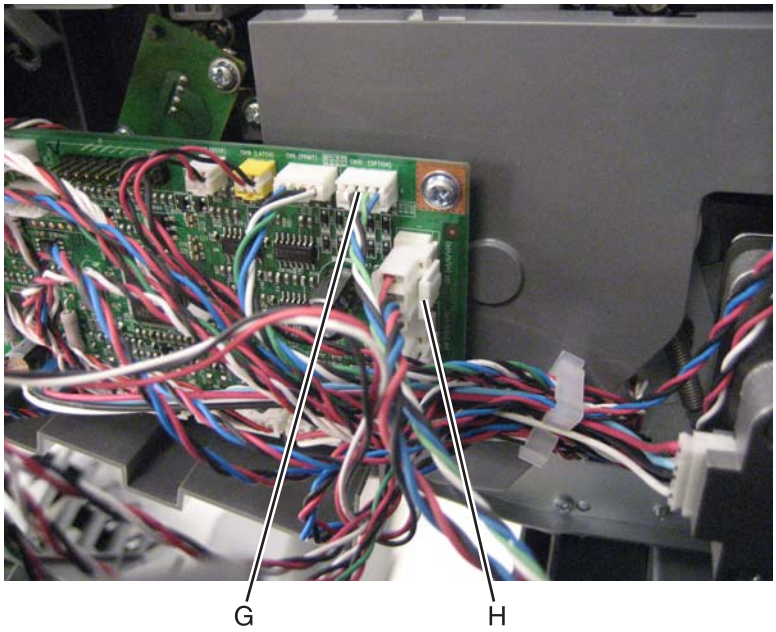


5. Remove two screws (D) and one screw (E) from the top.

6. LIft off the output option connector bracket (F), and then lift off the rear standard bin cover.

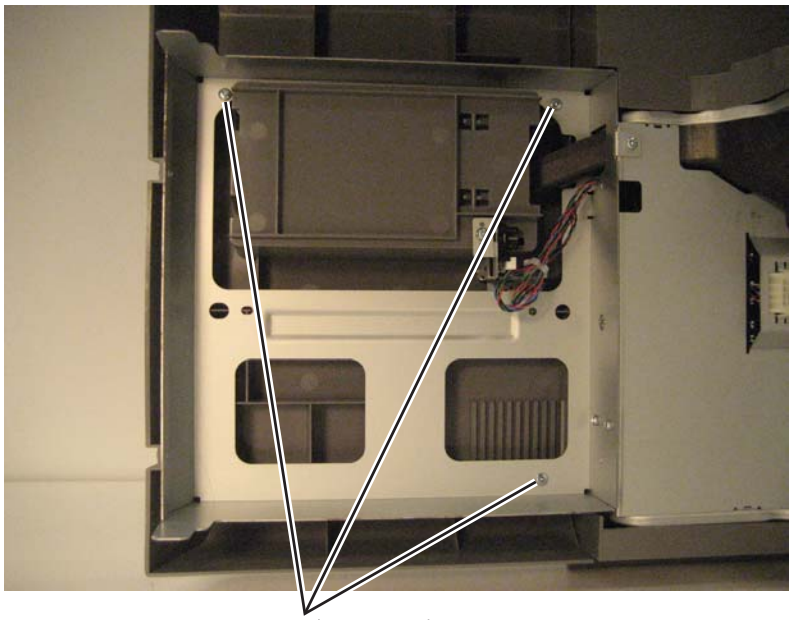


7. Disconnect the cable (F), and press the tab to disconnect the cable (G) from the controller card.
Note: If you are replacing the rear standard bin cover FRU, then feed the cables through the slot in the cover.

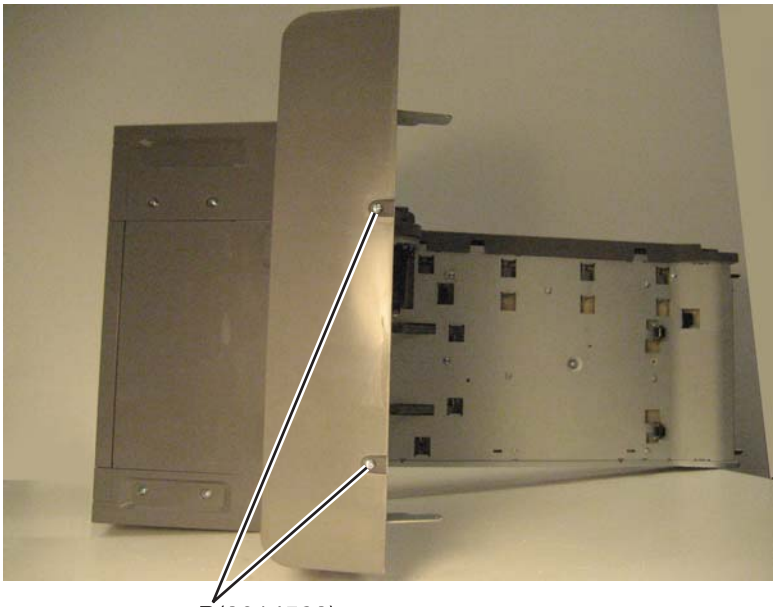


HTU right bottom cover removal

1. Remove all output options from the printer.
2. Remove three screws (A) from the inside.

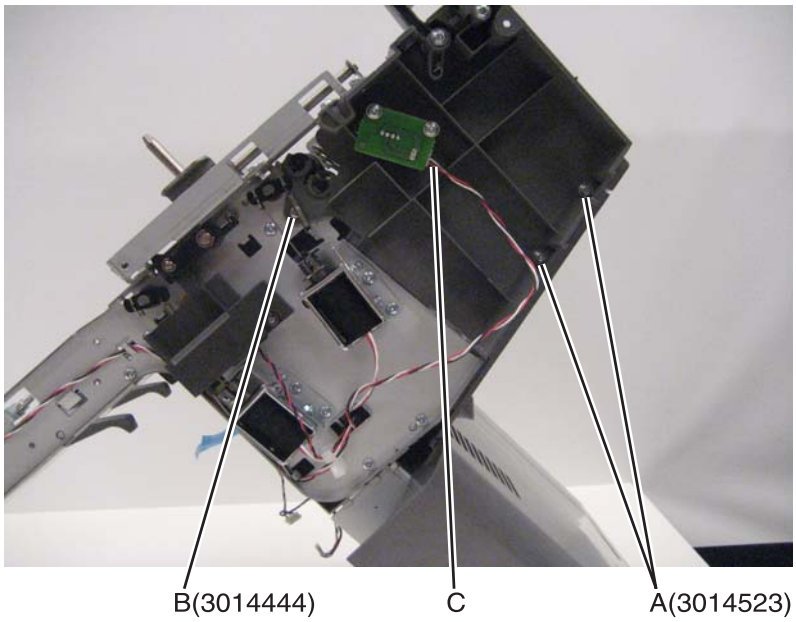


3. Remove two screws (B) from bottom, and remove the cover.

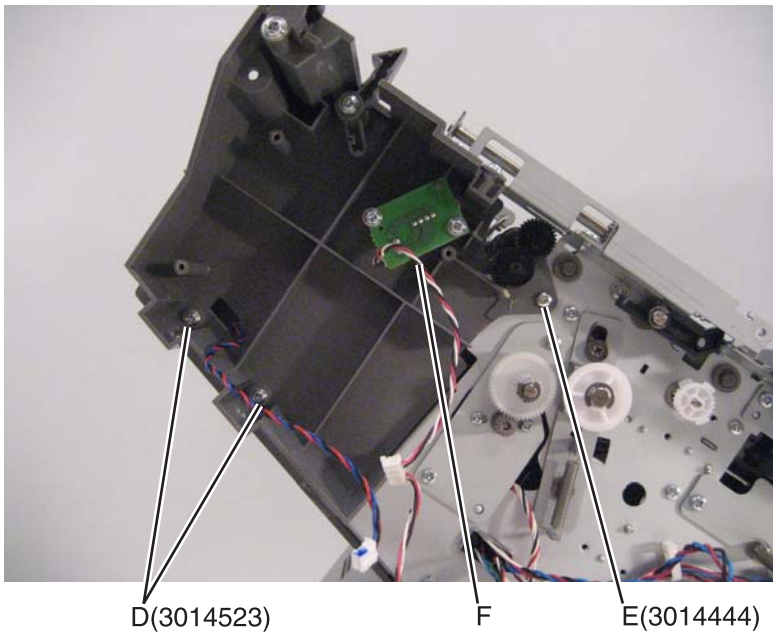


HTU right inner cover removal

1. Remove all output option from the printer.
2. Remove the output bin. See **"HTU output bin removal" on page 4-372**.
3. Remove the front standard bin cover. See **"HTU front standard bin cover removal" on page 4-364**.
4. Remove the two screws (A), one screw (B) and disconnect the cable (C).



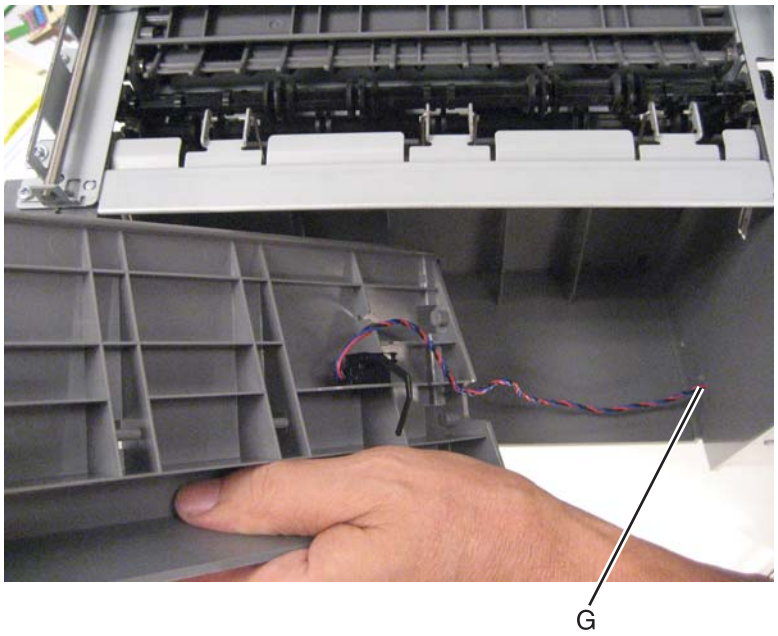
5. Remove the HTU drive belt. See **"HTU drive belt removal" on page 4-360**.
6. Remove the two screws (D), one screw (E) and disconnect the cable (F).



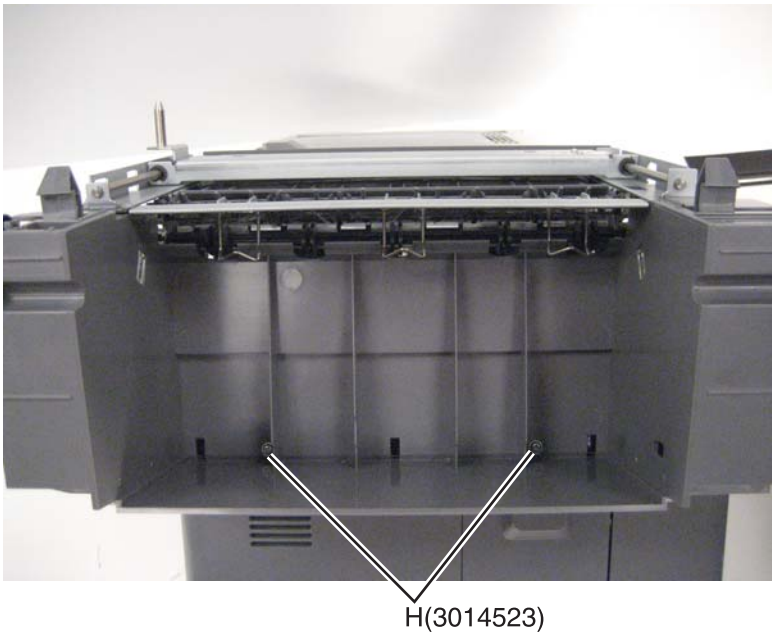
7. Remove the right lower cover.



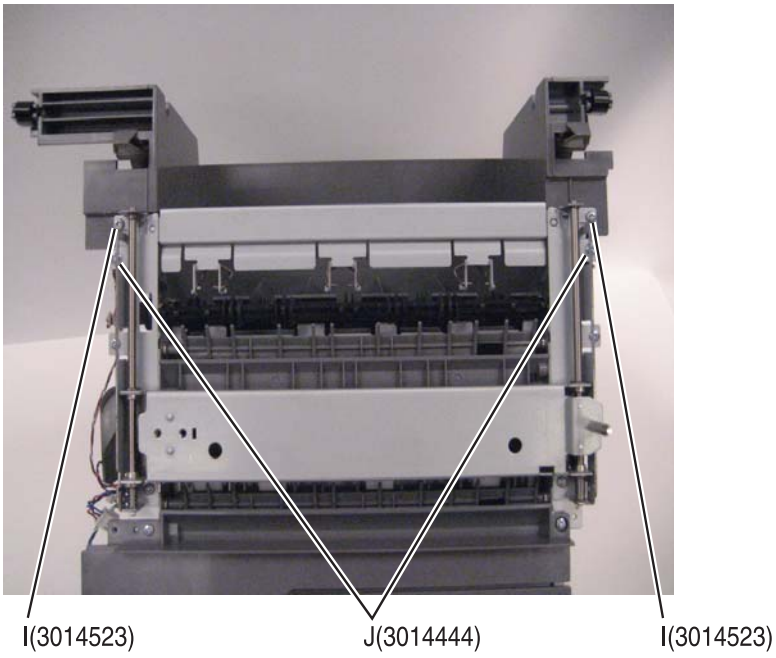
Note: Observe the routing of cable (G) through the side frame.



8. Remove the two screws (H).



9. Remove the two screws (I), and two screws (J).



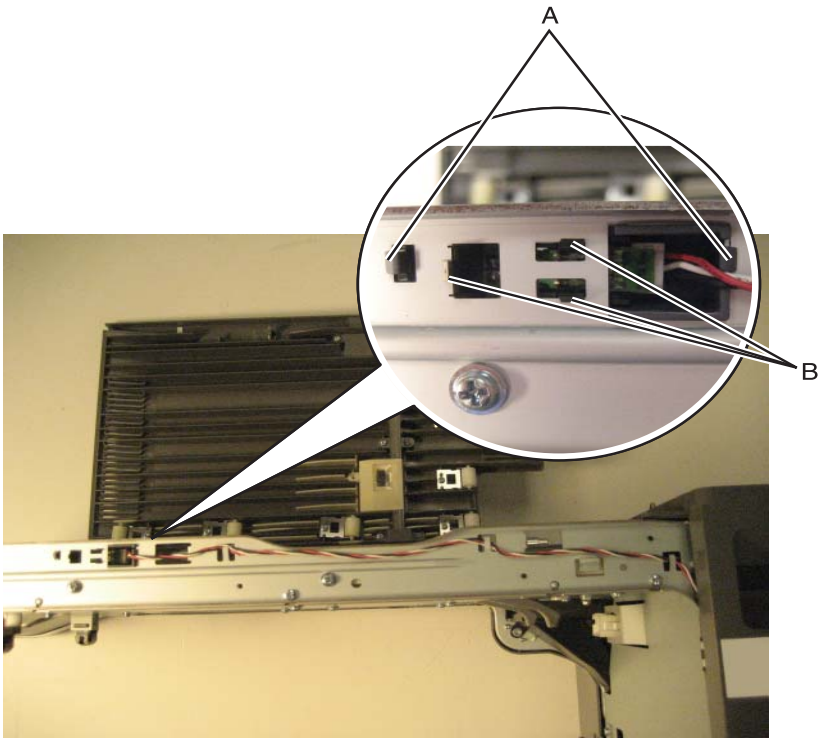
10. Lift up the frame and slide the right inner cover out.



HTU sensor (access door interlock) removal

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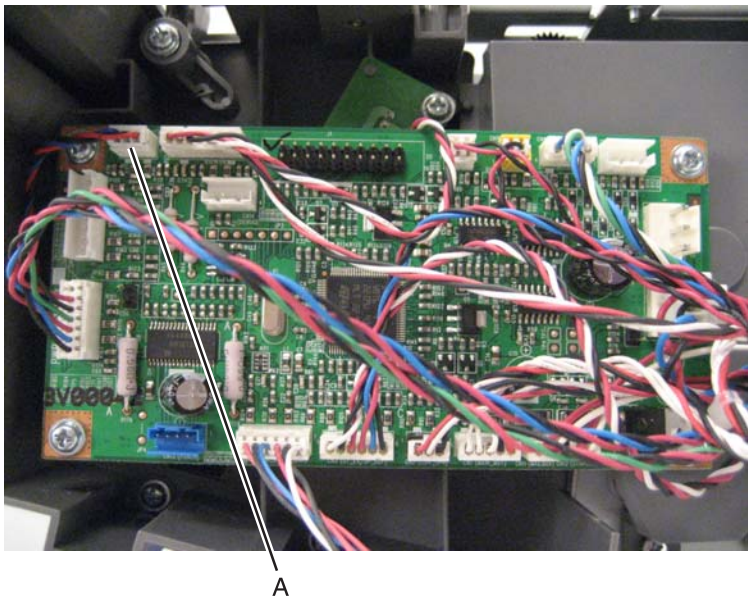
1. Remove all output options from the printer.
2. Remove the front redrive cover. See **“HTU front redrive cover removal” on page 4-363**.
3. Press the outer tabs (A) to remove the sensor cover.
4. Press the inner tabs (B) to pull out the sensor.



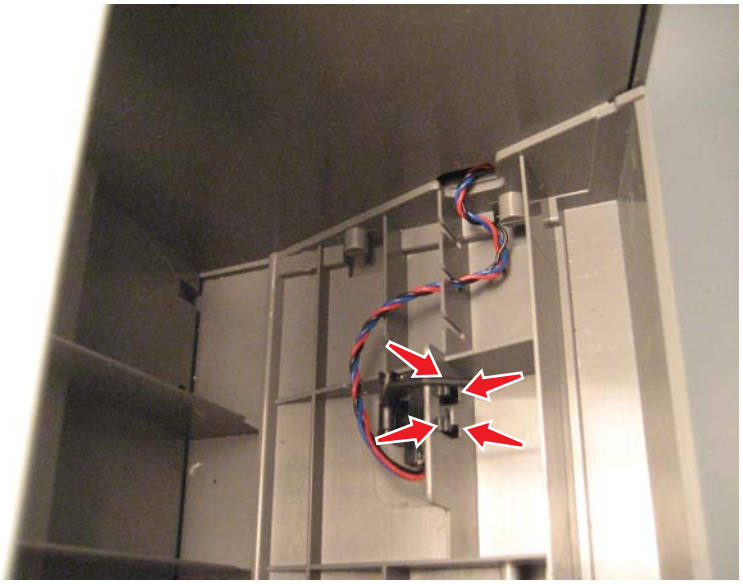
5. Disconnect the cable to remove the sensor.

HTU sensor (empty bin) removal

1. Remove all output options from the printer.
2. Remove the rear standard bin cover. See **"HTU rear standard bin cover removal" on page 4-380**.
3. Disconnect the sensor cable (A) from the controller card.



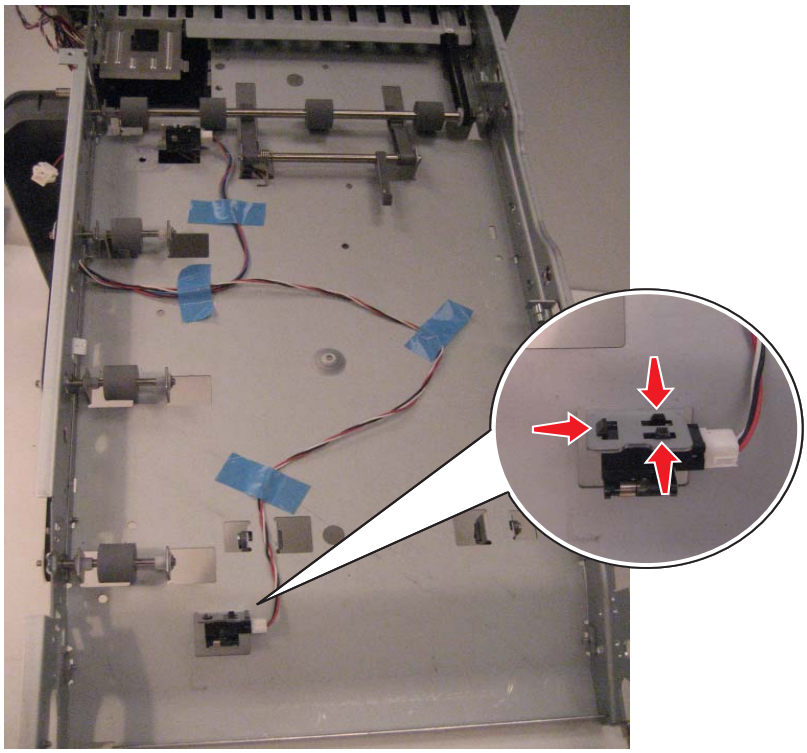
4. Remove the output bin. See **"HTU output bin removal" on page 4-372**.
5. Press tabs to pull out the sensor.



6. Pull the cable through the frame to remove the sensor.

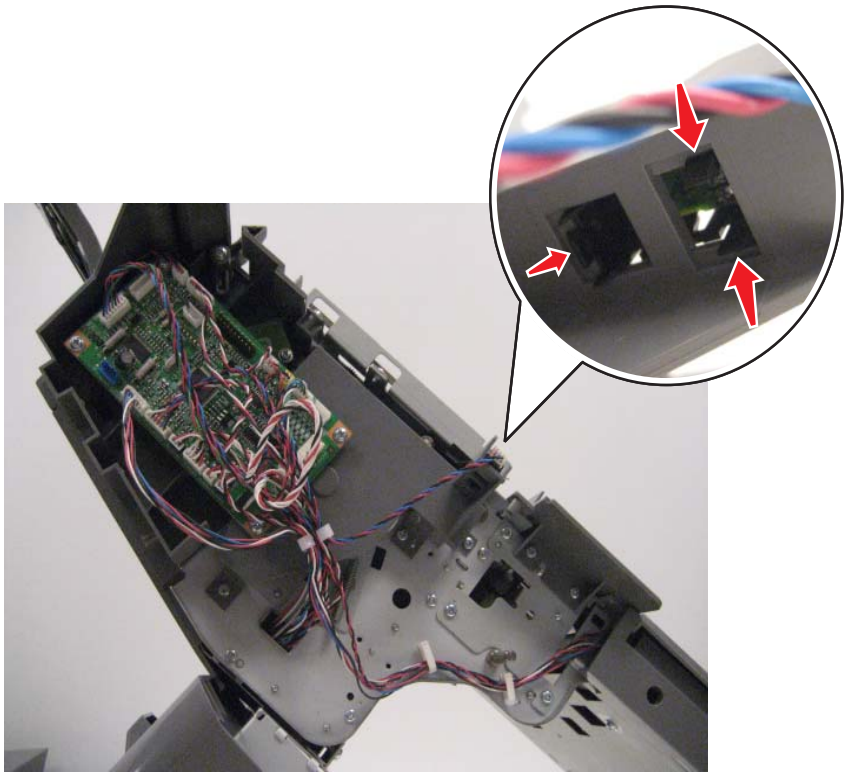
HTU sensor (input) removal

1. Remove all output options from the printer.
2. Remove the HTU lower redrive guide. See **“HTU lower redrive guide removal” on page 4-367**.
3. Press the tabs to release the sensor, and then disconnect the cable to remove the sensor.



HTU sensor (output option position) removal

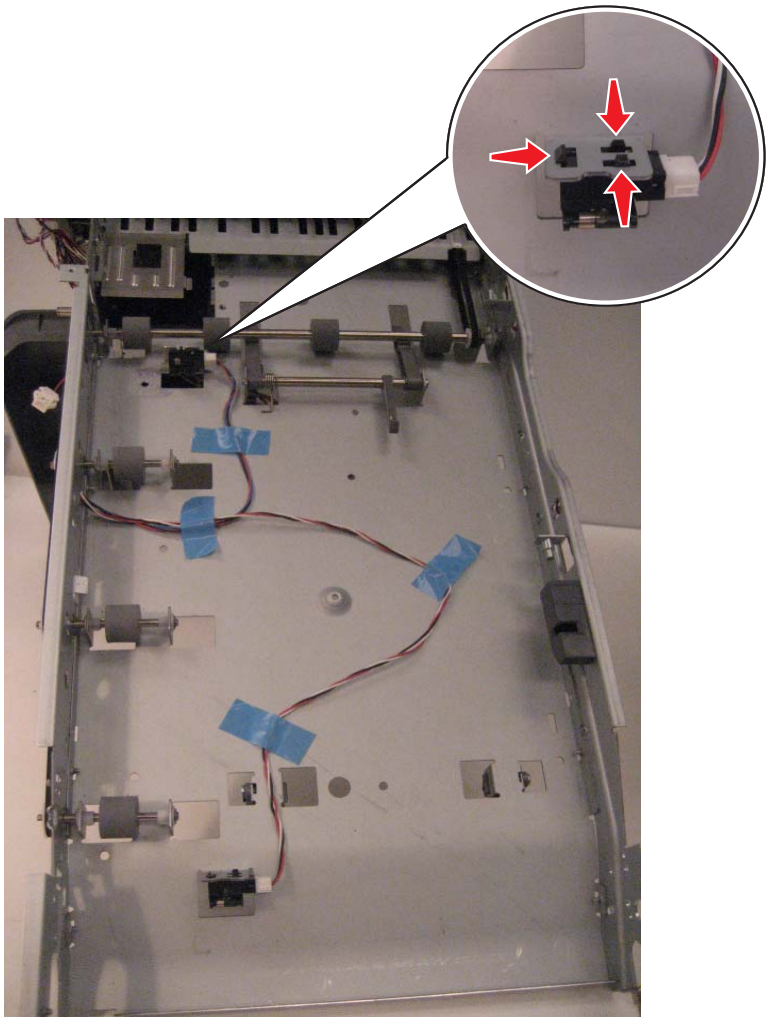
1. Remove all output options from the printer.
2. Remove the rear standard bin cover. See **"HTU rear standard bin cover removal" on page 4-380**.
3. Press the tabs to pull out the sensor.



4. Disconnect the cable to remove sensor.

HTU sensor (second) removal

1. Remove all output options from the printer.
2. Remove the HTU lower redrive guide. See **“HTU lower redrive guide removal” on page 4-367**.
3. Press the tabs to release the sensor, and then disconnect the cable to remove the sensor.

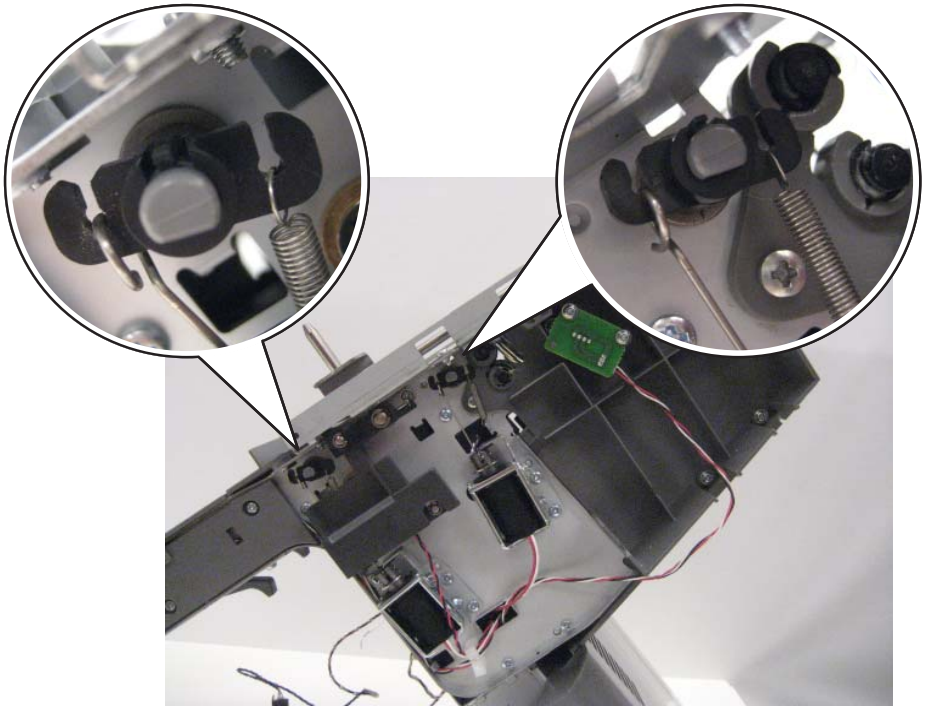


HTU sensor cable (bin-full send and receive) removal

1. Remove all output options from the printer.
2. Remove both bin-full sensors. See **“HTU card (bin-full send card and lens) removal” on page 4-358** and **“HTU card (bin-full receive card and lens) removal” on page 4-357**.
3. Route the cable through the frame.

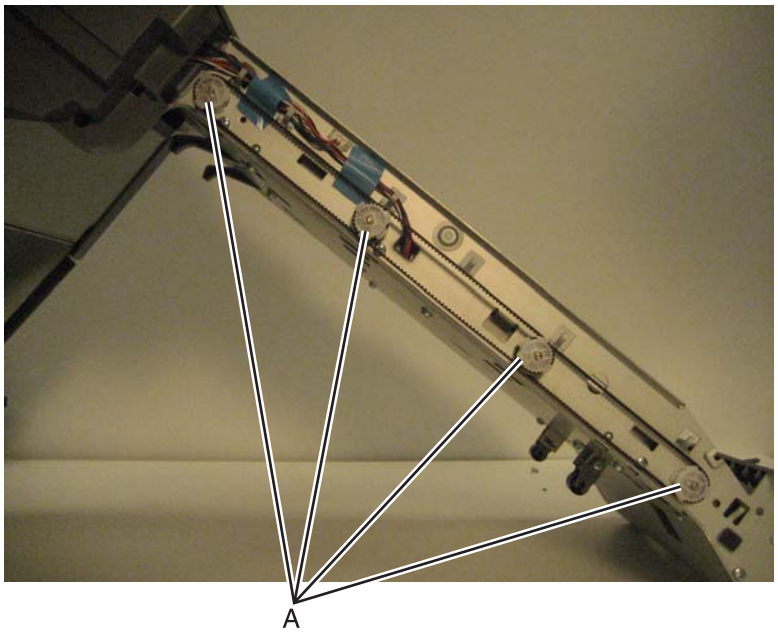
HTU stopper diverter removal

1. Remove the front standard bin cover. See **“HTU front standard bin cover removal” on page 4-364**.
2. Remove the solenoid plunger and spring from the stopper diverter, and then slide the stopper diverter off the option.



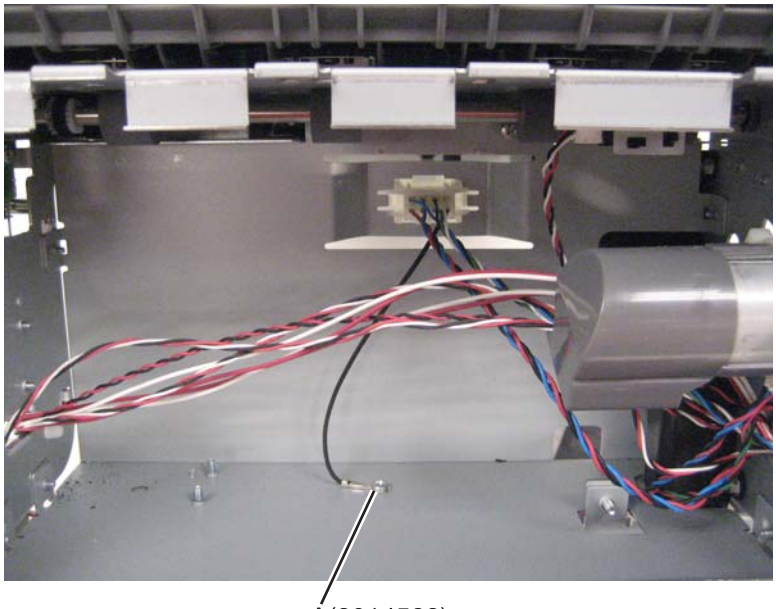
HTU timing belts (rear) removal

1. Remove all output options from the printer.
2. Remove the rear redrive cover. See **“HTU rear redrive cover removal” on page 4-378**.
3. Remove one of the gears (A) to remove the belt you are replacing.
   Note: Remove the center belt to access the other two belts.

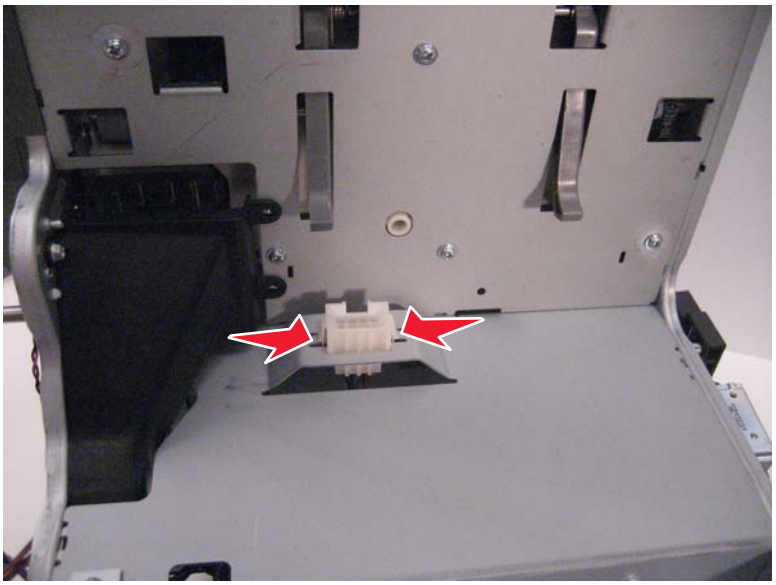


HTU to printer cable removal

1. Remove the right inner cover. See **“HTU right inner cover removal” on page 4-384**.
2. Remove the screw (A) to disconnect the ground cable.

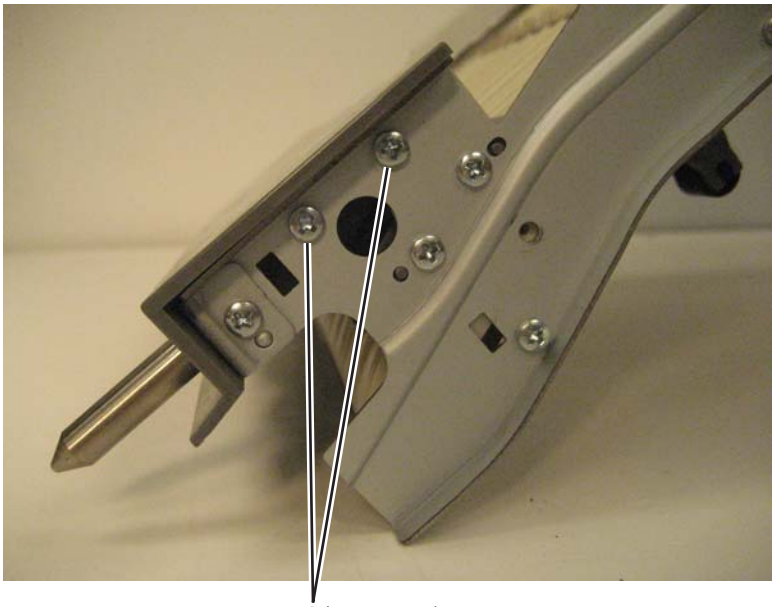


3. Press on the tabs to release the connector.

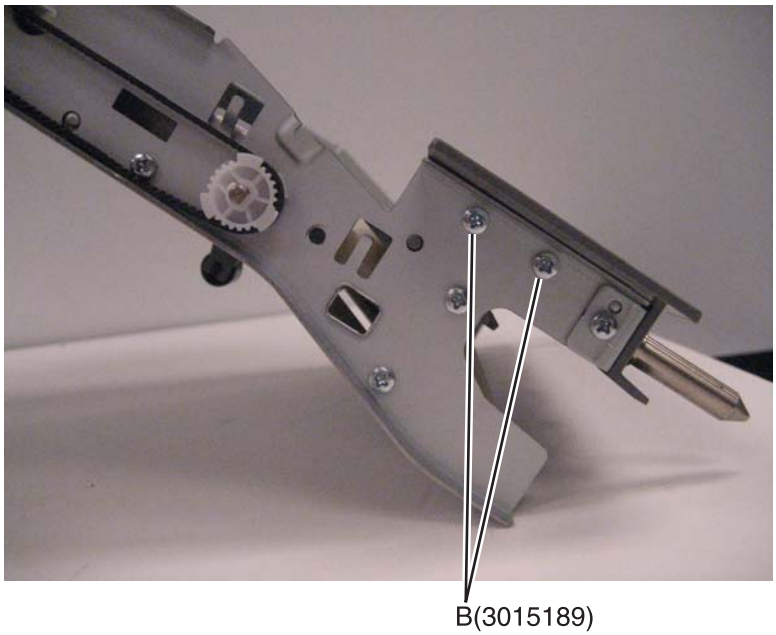


HTU top redrive cover removal

1. Remove all output options from the printer.
2. Remove the front redrive cover. See **“HTU front redrive cover removal” on page 4-363**.
3. Remove two screws (A).

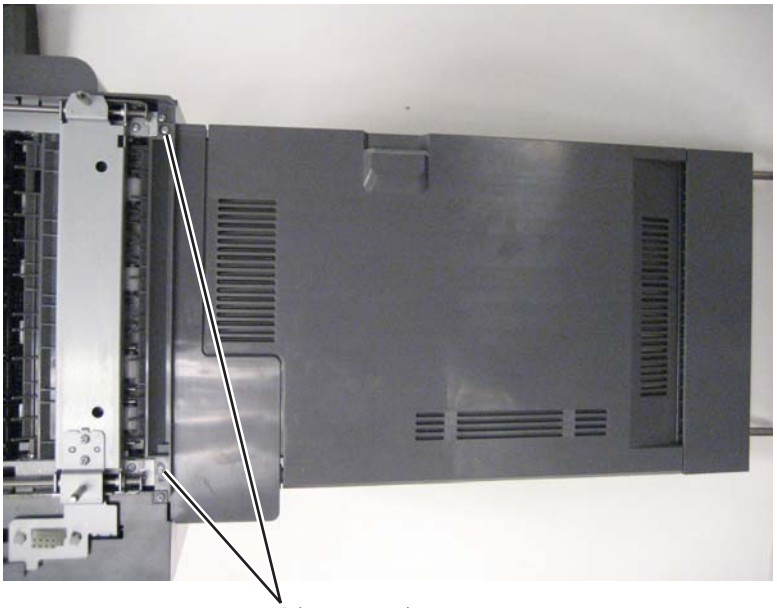


4. Remove the rear redrive cover. See **“HTU rear redrive cover removal” on page 4-378**.
5. Remove two screws (B), and then remove the cover.

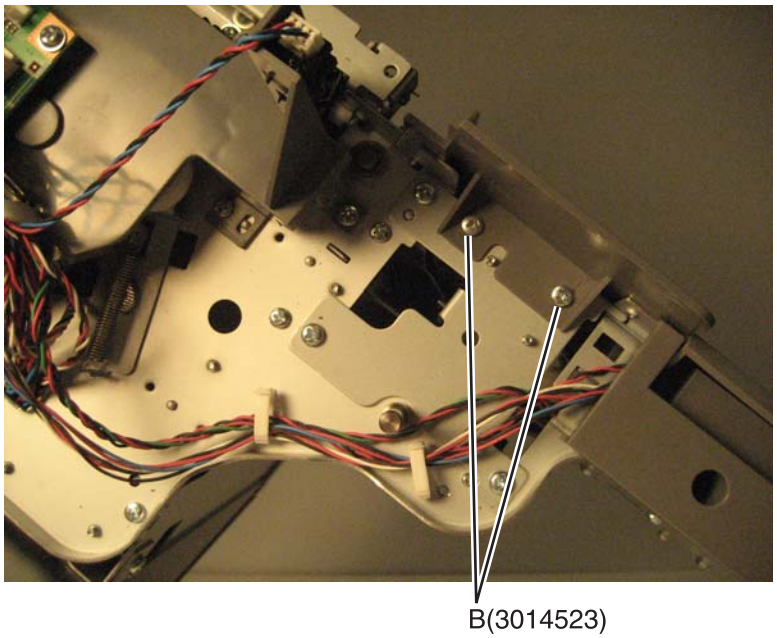


HTU top right cover removal

1. Remove all output options from the printer.
2. Remove the rear standard bin cover. See **“HTU rear standard bin cover removal” on page 4-380**.
3. Remove two screws (A) from the top.



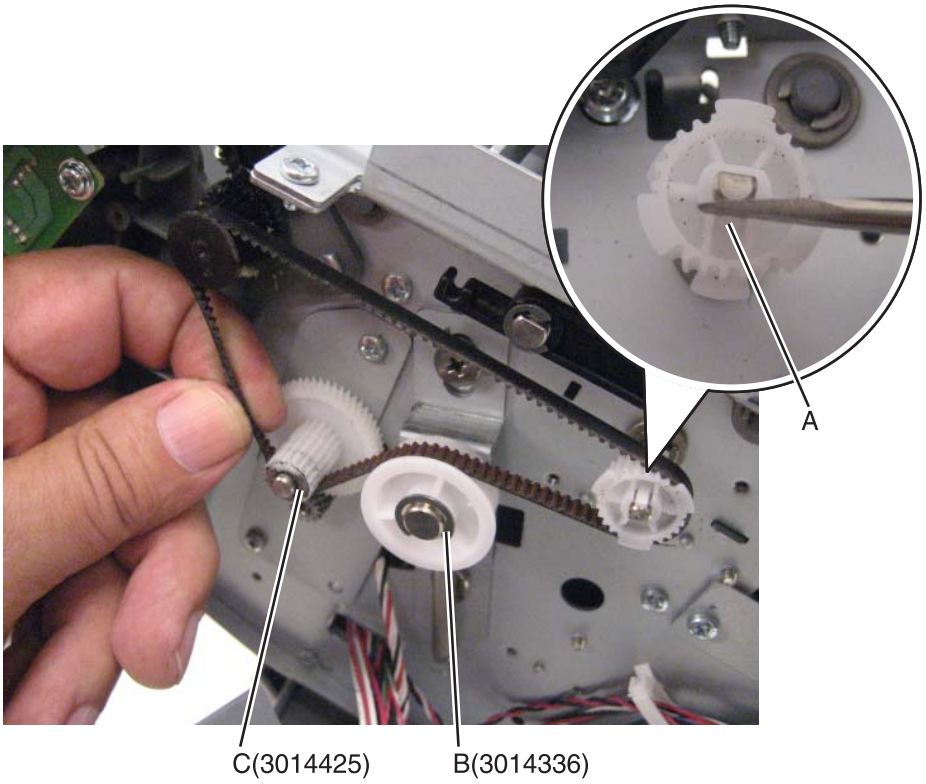
4. Remove two screws (B) from the rear, and then remove the top cover.



HTU transport gear removal

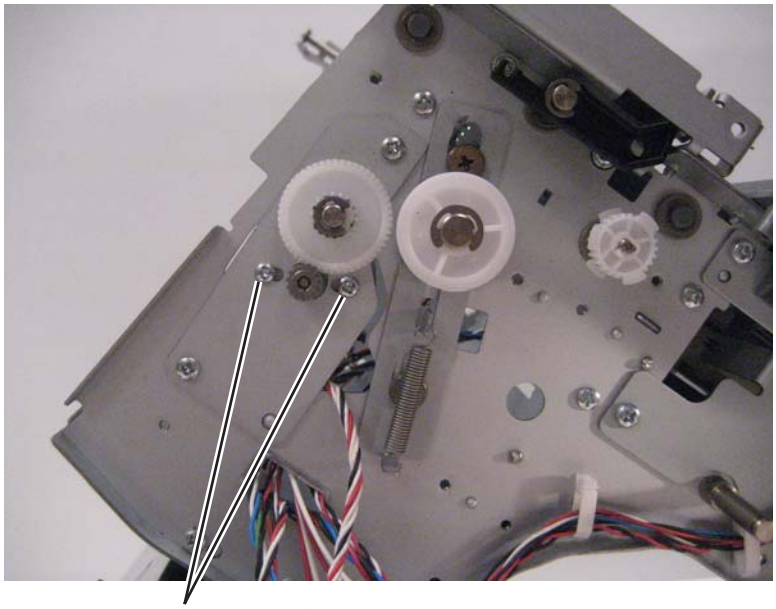
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1. Remove the HTU drive belt. See **“HTU drive belt removal” on page 4-360**.
2. Use a flat screwdriver to remove the gear (A).
3. Remove the E-clip (B) and E-clip (C), and then slide the gears off their posts.



HTU transport motor removal

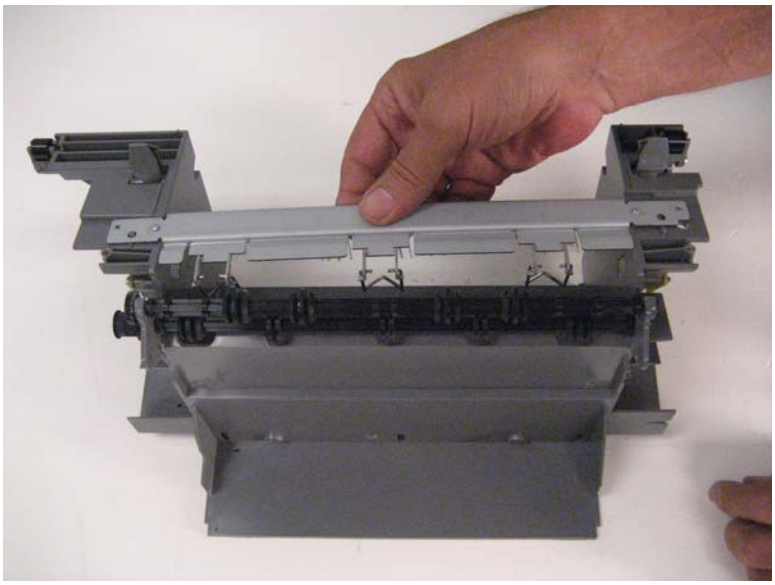
1. Remove the right inner cover. See **“HTU right inner cover removal” on page 4-384**.
2. Remove the two screws (A), and then remove the transport motor.



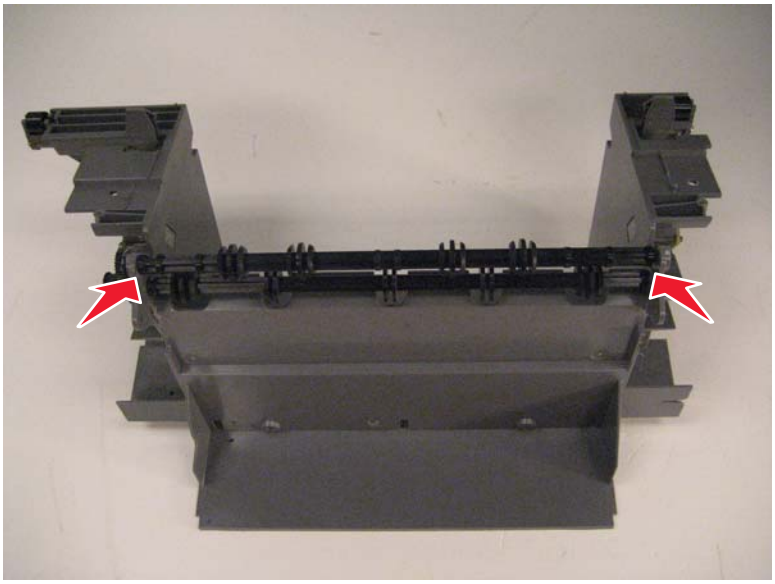
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HTU upper exit shaft removal

1. Remove the right inner cover. See **“HTU right inner cover removal” on page 4-384**.
2. Remove the metal beam slide.

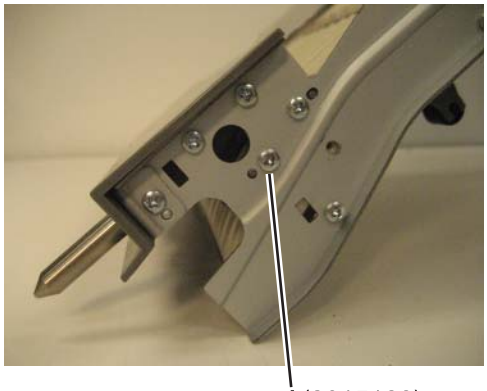


3. Unsnap the upper exit shaft out of the cover.

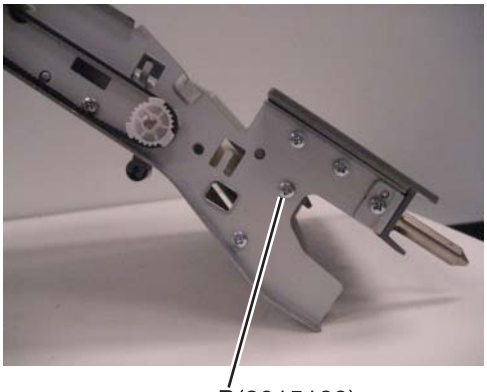


HTU upper guide removal

1. Remove all output options from the printer.
2. Remove the top redrive cover. See **"HTU top redrive cover removal" on page 4-396**.
3. Remove the screw (A) from the front.
4. Remove the screw (B) from the rear.

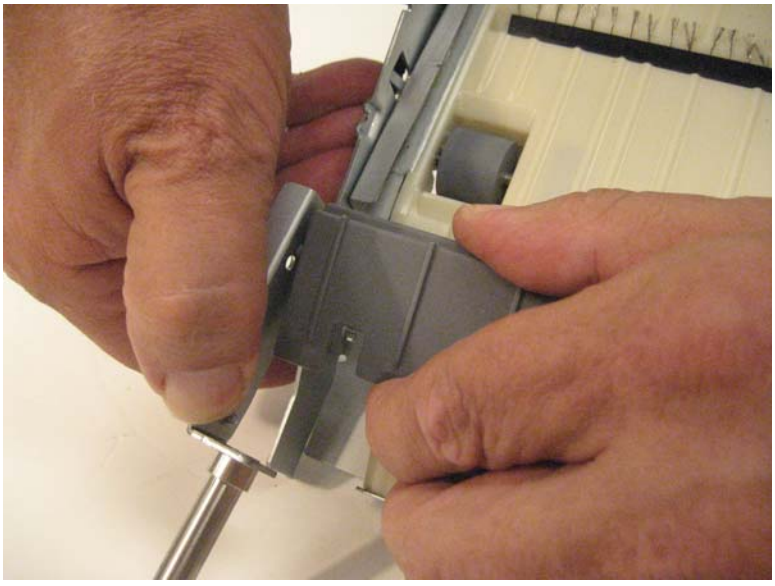


A(3015189)



B(3015189)

5. Flex the back of the frame to release the rear edge, and then remove the guide.

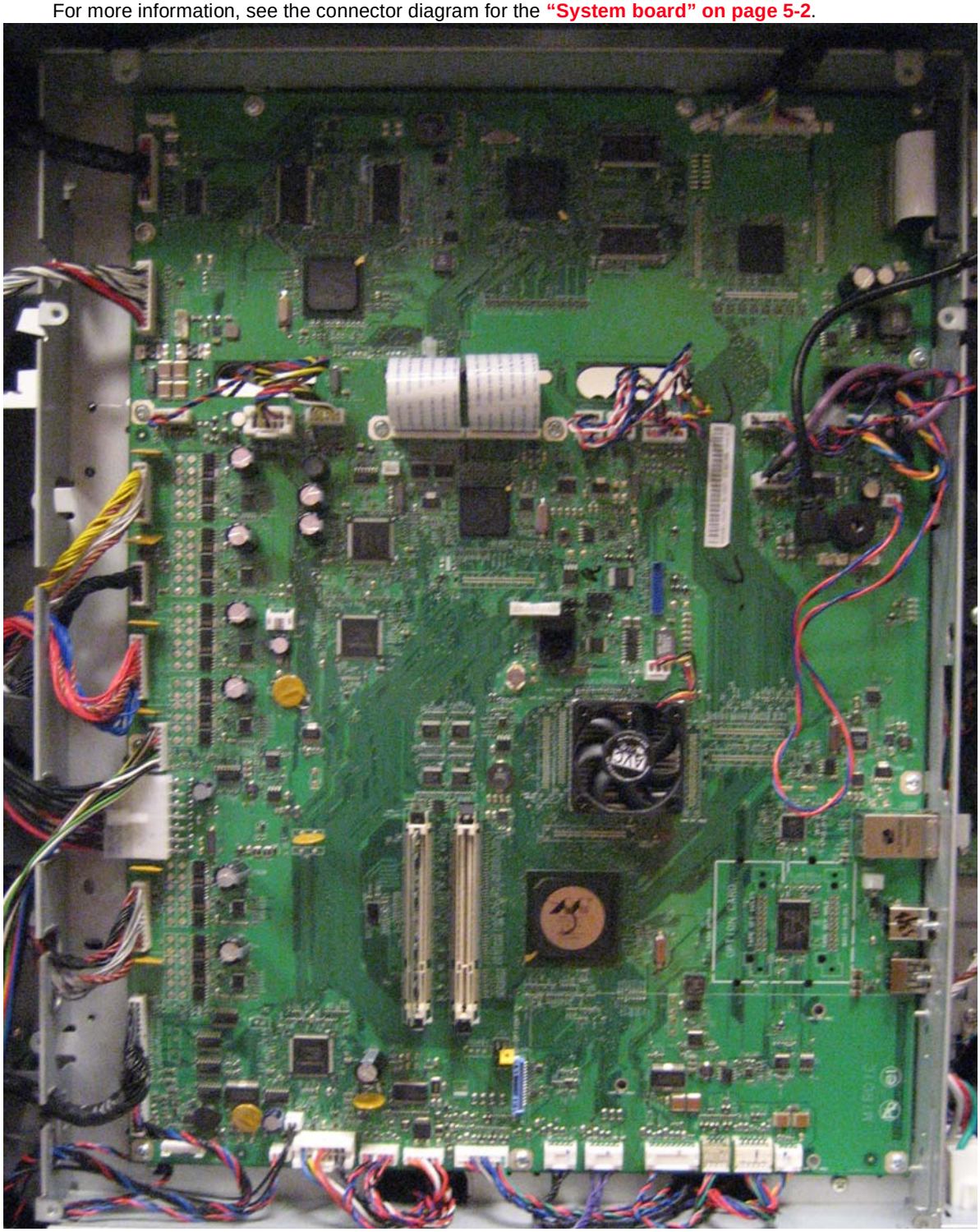


5. Connector locations

Locations

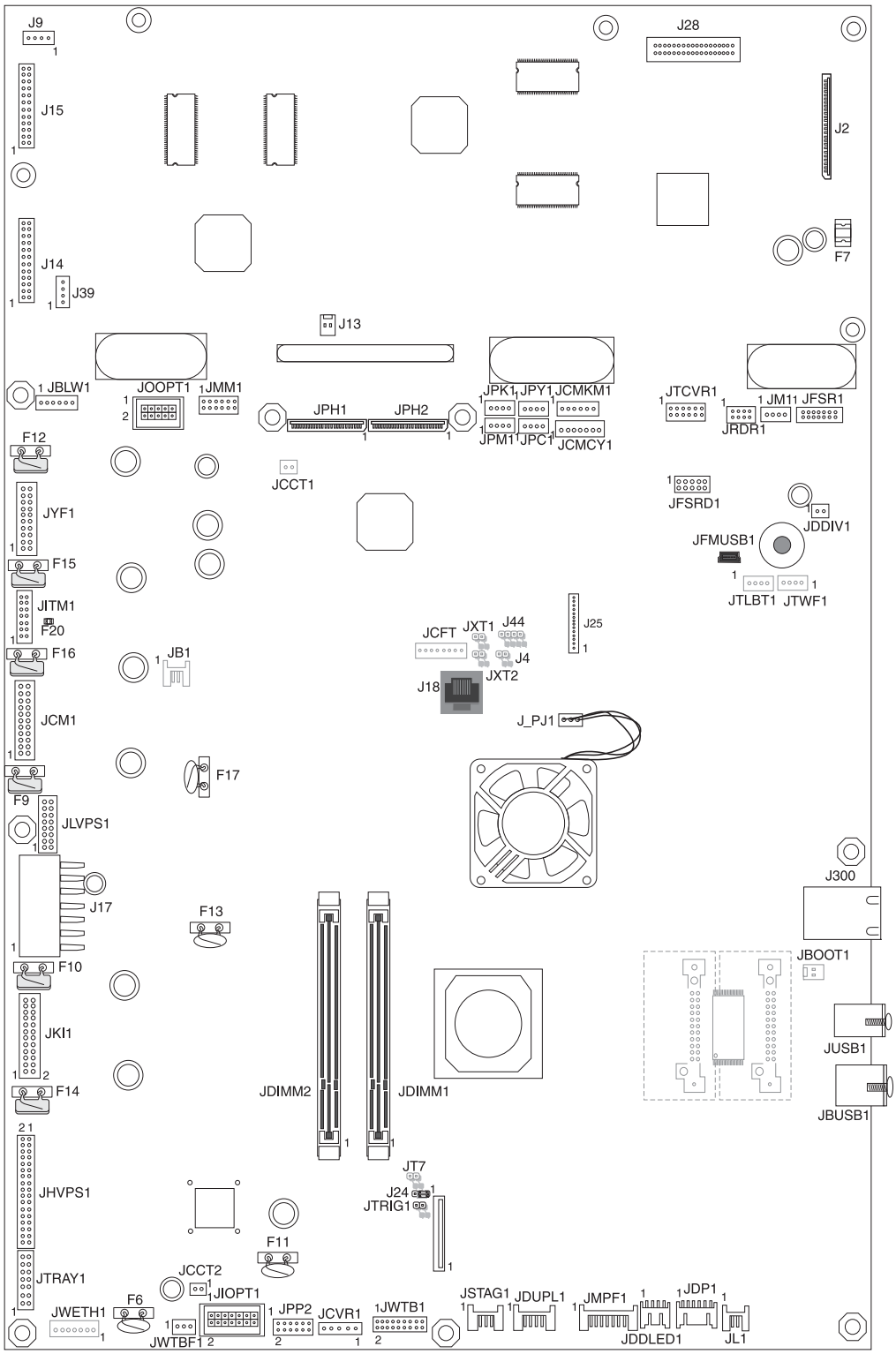
System board cabling reference

For more information, see the connector diagram for the **“System board” on page 5-2**.



Connectors

System board



System board

System board connectors

See “System board” on page 5-2.

Connector	Pin #	Signal	Pin #	Signal
Connector	**Pin #**	**Signal**	**Pin #**	**Signal**
J2 Scanner Flatbed **Cable:** Part of Flatbed	N/A			
J14 To Scanner Flatbed **Cable:** 10J4309 Flatbed Interface	1	GND	2	24V_FEED_FAN
	3	24V_TP_FB_MOTOR	4	24V_FEED_FAN
	5	GND	6	TOP_FB_CN
	7	TOP_BS_CN	8	+5V_SCANNER
	9	+5V_SCANNER	10	GND
	11	MDC_TXD_CN	12	MDC_RXD_CN
	13	GND	14	ADF_PAPER_PRES_R
	15	FB_COV_CLOSING_R	16	GND
	17	FB_NHOME_R	18	ADF_INTERVAL_R
	19	GND	20	MDC_RST_NR
	21	+3.3v	22	GND
	23	2C_CLK_AIO	24	I2C_DATA_AIO
J15 To UICC Card **Cable:** 10J4308 UICC to RIP Card	1	UI_RESET_NR	2	GND
	3	TXT1-	4	TXT1+
	5	TXT2-	6	TXT2+
	7	CLKTX	8	CLKTX+
	9	GND	10	+5V_UI
	11	RXD232_N	12	TXD232_N
	13	TXO-_L	14	TXO+_L
	15	GND	16	+5V_UI
	17	+5V_UI	18	+5V_UI
	19	WAKE*_L	20	GND
	21	PWR_LED2_L	22	PWR_LED1_L
	23	+5V_+3V_CONT	24	PWR_BUT_AIO
J17 LVPS **Cable:** Part of LVPS	1	+5V_ENG_CONN	2	+5V_RIP
	3	+5V_RIP	4	+24v
	5	+24v	6	+24v
	7	GND	8	GND
	9	GND	10	GND
	11	GND	12	GND
	13	GND	14	GND

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System board connectors
See "System board" on page 5-2.

Connector	Pin #	Signal	Pin #	Signal
J25 Modem **Cable:** Part of Modem Option	N/A			
J28 To ADF **Cable:** 3004892 ADF Interface	1	GND	2	BSR_LVDS_RXIN0-
	3	GND	4	BSR_LVDS_RXIN0+
	5	BSR_LVDS_MCLK	6	GND
	7	BSR_LVDS_MCLK+	8	GND
	9	GND	10	BSR_AFE_NRST_R
	11	GND	12	GND
	13	BSR_LVDS_RXCLK-	14	BSR_AFE_SDIO_R
	15	BSR_LVDS_RXCLK+	16	BSR_AFE_SCK_R
	17	GND	18	BSR_AFE_SEN_R
	19	GND	20	BSR_AFE_SH_R
	21	BSR_LVDS_RXIN2-	22	76 BS_PWRSVR_R
	23	BSR_LVDS_RXIN2+	24	5V_BS_CDU
	25	GND	26	5V_BS_CDU
	27	GND	28	GND
	29	BSR_LVDS_RXIN1-	30	+V_CDU_LAMP
	31	BSR_LVDS_RXIN1+	32	+V_CDU_LAMP
	33	GND	34	GND
	35	GND	36	BS_LAMP_ON_R
JBLW1 Cartridge Blower **Cable:** 10J0953 Blower & RS Waste	1	S_BLOW_FG		
	2	GND		
	3	V20_BLT_BLOWER		
	4	BLOW_PWM		
	5	S_BLED5		
	6	G		
JCCT2 Thermistor on LVPS **Cable:** 10J0974 Weather Station	1	REMOTE_WS		
	2	GND		

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System board connectors
See "System board" on page 5-2.

Connector	Pin #	Signal	Pin #	Signal
JCM1 C & M Block **Cable:** 10J0932 BLDC C & M	1	C_BLDC_HOME	2	GND
	3	C_BLDC_HALL_U	4	V45_M_WIND_W
	5	C_BLDC_HALL_V	6	V45_M_WIND_V
	7	C_BLDC_HALL_W	8	V45_M_WIND_U
	9	C_BLDC_FG	10	+5V_SW
	11	GND	12	GND
	13	+RV_SW	14	M_BLDC_FG
	15	V45_C_WIND_U	16	M_BLDC_HALL_W
	17	V45_C_WIND_V	18	M_BLDC_HALL_V
	19	V45_C_WIND_W	20	M_BLDC_HALL_U
	21	GND	22	M_BLDC_HOME
JCMCY1 C+Y Metering **Cable:** 10J0955 C+Y Cart Metering	1	VS10_CM_C		
	2	GND		
	3	S_CART_MTR_C_IN		
	4	GND		
	5	S_CART_MTR_Y_IN		
	6	GND		
	7	VS10_CM_Y		
JCMKM1 M+K Metering **Cable:** 10J0940 M+K Cart Metering	1	VS10_CM_K		
	2	GND		
	3	S_CART_MTR_K_IN		
	4	S_CART_MTR_M_IN		
	5	GND		
	6	VS10_CM_M		
JCVR1 Cover Open Switch **Cable:** 10J0946 Part of Housing	1	VDO_5V_SUPPLY		
	2	GND		
	3	VDO_5V_SOURCE		
	4	V48_+24V_SW_FU		
	5	V48_+24V_SW_PS		
JDDIV1 Duplexer Diverter Mtr **Cable:** Part of 10J1801	1	V10_D_D_MTR-		
	2	V10_D_D_MTR+		
JDDLED1 Duplex Door LED **Cable:** 10J0948 Duplex Door	1	SDLED1	2	+5V or GND
	3	SDLED3	4	+5V or GND
	5	SDLED5	6	+5V or GND
	7	SDLED7	8	+5V or GND

System board connectors
See "System board" on page 5-2.

Connector	Pin #	Signal	Pin #	Signal
JDIMM1 Card Opt **Cable:** N/A	N/A			
JDIMM2 Card Opt **Cable:** N/A	N/A			
JDP1 Duplex Paperpath Sensor **Cable:** 10J0957 Duplexer	1	GND	2	GND
	3	VS10_S2_DUP	4	VS10_DUP_PARK
	5	S_S2_DUP_SNS	6	S_DUP_PARK_SNS
	7	NO NAME	8	S_DUP_DOOR_LED
	9	S_FSR_BUBBL_SNS	10	VS10_FSR_BUBBL
	11	GND	12	GND
JDUPL1 Duplex Mtr **Cable:** 10J0935 Dupler Motor	1	VS10_DUPLEX_LED		
	2	S_DUPLEX_ENC		
	3	GND		
	4	GND		
	5	V25_DUPLEX_MOT+		
	6	V25_DUPLEX_MOT-		
JFMUSB1 Op Panel **Cable:** 10J0971 Panel USB	N/A			
JFSR1 Fuser Low Voltage **Cable:** 10J0938 Fuser SYSCARD & LVPS	1	3.3V_ENG_L	2	I2C_DATA_FSR
	3	I2C_CLK_FSR	4	GND
	5	GND	6	BR_THERM_IN
	7	S_EXIT_SENSOR_IN	8	GND
	9	F_B_SNS_IN	10	S_FUSER_CAM_IN
	11	HR_THERM_IN	12	+5V_SW
	13	S_FLED13	14	GND
JFSRD1 Fuser Redrive **Cable:** 10J0937 Thermistor & Redrive	1	VIN+	2	VIN-
	3	+3.3V_ENG_I	4	GND
	5	GND_R	6	VS10_FSRD_LED
	7	S_FSRD_ENC	8	GND
	9	V25_FSRD_MOT-	10	V25_FSRD_MOT+

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System board connectors
See "System board" on page 5-2.

Connector	Pin #	Signal	Pin #	Signal
JHVPS1 HVPS **Cable:** 10J0939 HVPS	1	+24V_SW	2	CHR_AC_ENA
	3	M_DEV_PWM_OUT	4	M_AC_PWM_OUT
	5	C_AC_PWM_OUT	6	K_DEV_PWM_OUT
	7	C_DEV_PWM_OUT	8	K_AC_PWM_OUT
	9	C_CHG_PWM_OUT	10	M_CHG_PWM_OUT
	11	Y_CHG_PWM_OUT	12	K_CHG_PWM_OUT
	13	Y_AC_PWM_OUT	14	GND
	15	Y_DEV_PWM_OUT	16	GND
	17	GND	18	GND
	19	ITM_TX_PWM_CUR_O	20	KCMY_TX_ENA_OUT
	21	ITM_TX_ENA_OUT	22	K_TX_PWM_OUT
	23	ITM_TX_PWM_OUT	24	K_SERVO_INTO
	25	CHG_AC_FREQ	26	M_SERVO_INTO
	27	ITM_SERVO_INTO	28	+3.3v_ENG
	29	Y_SERVO_INTO	30	M_TX_PWM_OUT
	31	Y_TX_PWM_OUT	32	PNR_PWM_OUT
	33	C_SERVO_INTO	34	C_TX_PWM_OUT
JIOPT1 Input Opt **Cable:** 10J0942 Option Bottom	1	TXD1_OPT_OUT	2	GND
	3	GND	4	RXD1_OPT_IN
	5	+24V_BOPT	6	GND
	7	+5V_OPTS	8	GND
	9	STAG_ENC_OPT	10	+24V_BOPT
	11	TRAY_SIZE_1	12	TRAY_SIZE_2
	13	TRAY_SIZE_3	14	GND
JITM1 ITU **Cable:** 10J0944 ITU Autoconnect	1	I2C_ITM_CLK	2	GND
	3	+3.3v_ENG	4	I2C_ITM_DATA
	5	TPS2L_SNS	6	VS10_TPS_LED_OUT
	7	GND	8	TPS1L_SNS
	9	TPS2H_SNS	10	VS10_ACR_LED
	11	S_ACR_ENC	12	TPS1H_SNS
	13	V10_ACR_MTR-	14	V10_ACR_MTR+

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System board connectors
See "System board" on page 5-2.

Connector	Pin #	Signal	Pin #	Signal
JKI1 K / ITU Blck **Cable:** 10J0930 BLDC K & ITU	1	K_BLDC_HOME	2	V45_I_WIND_W
	3	K_BLDC_HALL_U	4	V45_I_WIND_V
	5	K_BLDC_HALL_V	6	V45_I_WIND_U
	7	K_BLDC_HALL_W	8	+5V_SW
	9	K_BLDC_FG	10	GND
	11	I2C_DATA_F	12	I2C_CLK_F
	13	V10_FRU_3.3V	14	GND
	15	GND	16	I_BLDC_FG
	17	+5V_SW	18	I_BLDC_HALL_W
	19	V45_K_WIND_U	20	I_BLDC_HALL_V
	21	V45_K_WIND_V	22	I_BLDC_HALL_U
	23	V45_K_WIND_W	24	I_BLDC_HOME
JL1 LVPS Fan **Cable:** Part of Fan	1	S_LFAN_STALL		
	2	GND		
	3	LFAN_OUT		
	4	V20_LFAN		
JLVPS1 LVPS **Cable:** Part of LVPS	1	LVPS1_TEMP	2	GND
	3	+24V_LOW_PWR_OUT	4	LVPS2_TEMP
	5	AC_CURRENT	6	+5V_RIP_PWR_OUT
	7	GND	8	GND
	9	+5V_ENG_PWR_OUT	10	BR_HEAT_ON_OUT
	11	HR_HEAT_ON_OUT	12	+5V_CONT_IN
	13	V10_LVPS_FSR_RLY	14	TR_HEAT_ON
	15	GND	16	ZERO_XING_IN
JM1 Main Fan **Cable:** Part of Fan	1	S_MFAN_STALL		
	2	GND		
	3	MFAN_OUT		
	4	V20_MAIN_FAN		
JMM1 Printhead **Cable:** Part of Printhead	1	MM_REF_KM	2	+24V_MM
	3	MM_LOCK_KM	4	GND
	5	+3.3V_A1	6	START_CY
	7	START_KM	8	GND
	9	GND	10	MM_LOCK_CY
	11	+24V_MM	12	MM_REF_CY

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System board connectors
See "System board" on page 5-2.

Connector	Pin #	Signal	Pin #	Signal
JMPF1 MPF Sensor **Cable:** 10J0929 MPF Sensor cable	1	VS10_MPF_OUT		
	2	S_MPF_OUT_SNS		
	3	GND		
	4	VS10_MPF_SM_OUT		
	5	S_MPF_SM_OUT_SNS		
	6	GND		
	7	+24V_DUP		
	8	MPF_PIO_GEN		
	9	MPF_PIO_ENC		
JOOPT1 Output Opt **Cable:** 10J0941 Output Options	1	TXD1_OPT_OUT	2	GND
	3	GND	4	RXD1_OPT_IN
	5	+24V_TOPT	6	GND
	7	+5V_OPTS	8	GND
	9	F_BLDC_FG_OUT	10	V10_LVPS_FSR_RLY
JPC1 Cyan Memory **Cable:** Part of Part	1	V_CART_3V		
	2	XP_DAT_C		
	3	XP_CLK_C		
	4	GND		
JPH1 Printhead **Cable:** Part of Printhead	N/A			
JPH2 Printhead **Cable:** Part of Printhead	N/A			
J_PJ1 Processor Fan **Cable:** Part of Fan	1	+5V _DC		
	2	+5V_DC or GND		
	3	FANSENSE		
JPK1 Black Memory **Cable:** Part of Part	1	V_CART_3V		
	2	XP_DAT_K		
	3	XP_CLK_K		
	4	GND		
JPM1 Magenta Memory **Cable:** Part of Part	1	V_CART_3V		
	2	XP_DAT_M		
	3	XP_CLK_M		
	4	GND		

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System board connectors
See "System board" on page 5-2.

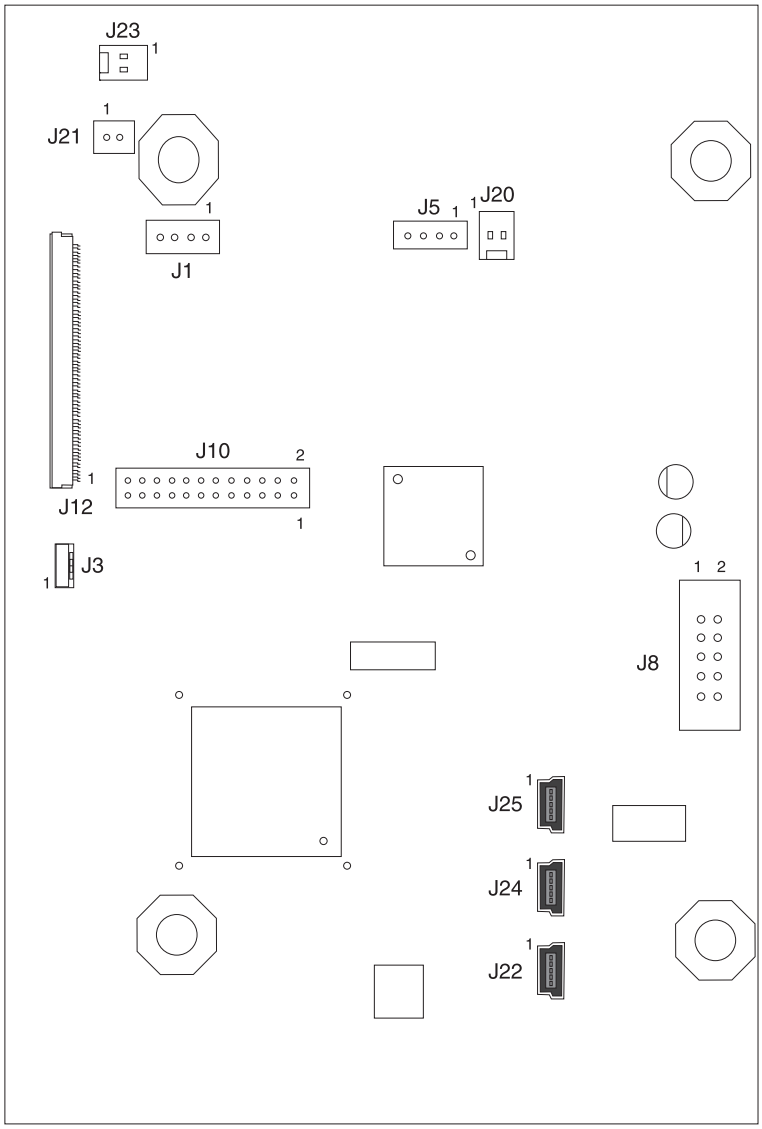
Connector	Pin #	Signal	Pin #	Signal
JPP2 Paperpath Sensors **Cable:** 10J0927 Paper path	1	VS10_NNMS_LED	2	S_NNM_SNSR_IN
	3	GND	4	VS10_S1S
	5	S_S1S_FB	6	GND
	7	VS10_NMS	8	GND
	9	S_NMS_FB	10	GND
	11	VS1-_S2S	12	S_S2S_FB
JPY1 Yellow Memory **Cable:** Part of Part	1	V_CART_3V		
	2	XP_DAT_Y		
	3	XP_CLK_Y		
	4	GND		
JRDR1 Paperpath Redrive **Cable:** Part of 10J1801	1	GND	2	VS10_SWS
	3	S_SWS_FB	4	GND
	5	GND	6	GND
	7	S_ACC_JAM2_SNS	8	VS10_ACC_JAM2
JSTAG1 Staging Mtr **Cable:** 10J0936 Staging Motor	1	VS10_STAGING_LED		
	2	S_STAGING_ENC		
	3	GND		
	4	V20_STAGING_MTR-		
	5	V20_STAGING_MTR+		
JTCVR1 **Cable:** 10J0950 Bin Full and Output Beacon	1	S_LED5	2	NO NAME
	3	GND	4	GND
	5	GND	6	GND
	7	VS10_BIN_FULL	8	S_BF_IN
	9	GND	10	GND
	11	S_RD2_SNS	12	VS10_RD2_LED
JTRAY1 Autocomp **Cable:** 10J0933 Tray 1 Machine Side	1	VS10_ATO_CMP_LED	2	VS10_TRAY1_HALF
	3	S_AUTOCOMP_ENC	4	S_PAPER_HALF_IN
	5	GND	6	GND
	7	V25_AUTOCMP_MT+	8	V25_AUTOCMP_MT-
	9	GND	10	GND
	11	S_PAPER_LOW_IN	12	S_PAPER_OUT_IN
	13	VS10_TRAY1_LOW	14	VS10_TRAY1_OUT
JUSB1 Out **Cable:** N/A	N/A			

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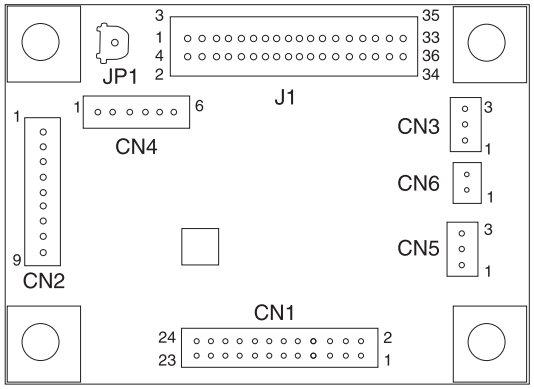
System board connectors
See "System board" on page 5-2.

Connector	Pin #	Signal	Pin #	Signal
JWTB1 Waste Toner Sensor **Cable:** 10J0943 Waste Toner Cable	1	VS10_WB_LED	2	RT SIDE WT
	3	GND	4	VS_10_WB_PRES
	5	S_WB_PRES_IN	6	GND
	7	S_WLED7	8	PAPER TRAY
	9	S_WLED9	10	NARROW MEDIA
	11	S_WLED11	12	FR DOOR BEACCON
	13	S_WLED13	14	LT SIDE WT
	15	GND	16	GND
	17	S_FD_OPEN_SNS	18	VS10_FD_OPEN
JWTBF1 Waste Toner Full Sensors **Cable:** 10J0967 WASTE TONER FULL	1	VS_WST_FUL		
	2	S_WST_FUL		
	3	GND		
JYF1 Yellow & Fuser BLDC **Cable:** 10J0931 BLDE Y & FUSER	1	Y_BLDC_HOME	2	V45_F_WIND_W
	3	Y_BLDC_HALL_U	4	V45_F_WIND_V
	5	Y_BLDC_HALL_V	6	V45_F_WIND_U
	7	Y_BLDC_HALL_W	8	+5V_SW
	9	Y_BLDC_FG	10	GND
	11	GND	12	F_BLDC_FG
	13	+5V_SW	14	F_BLDC_HALL_W
	15	V45_Y_WIND_U	16	F_BLDC_HALL_V
	17	V45_Y_WIND_V	18	F_BLDC_HALL_U
	19	V45_Y_WIND_W	20	F_BLDC_HOME
SP-OPTION HD **Cable:** Part of HD Option	N/A			

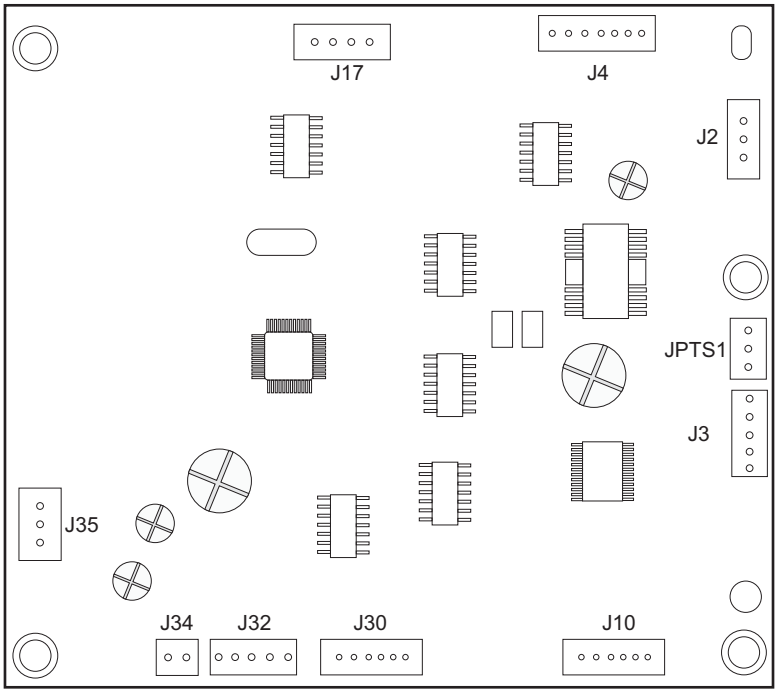
UICC card



Scanner interface card



550-sheet tray option system card



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550-sheet tray option system card

550-sheet tray option system card connectors

See “550-sheet tray option system card” on page 5-13.

Connector	Pin #	Signal	Pin #	Signal
J2 Jam door sensor	1	GND		
	2	Input		
	3	+5V_Switch		
J3 Pick motor	1	+5V_Switch		
	2	ENCODER		
	3	GND		
	4	Motor +		
	5	Motor -		
J4 Paper level sensor	1	+5V_Switch		
	2	P_LEV_SENSOR_1		
	3	GND		
	4			
	5	+5V_Switch		
	6	P_LEV_SENSOR_2		
	7	GND		
J10 Feed motor	1	+5V_Switch		
	2	ENCODER		
	3	GND		
	4	Motor +		
	5	Motor -		
	6			
J17 Jam Led	1	JAM_LIGHTPIPE		
	2	Ground		
	3	JAM_DOOR_LED		
	4	Ground		
J30 Paper port to next option	1	GND		
	2	PP_RXD		
	3	GND		
	4	PP_TXD		
	5	MTR2 ENCODER		
	6	S2		
J32 Paper port to printer	1	GND		
	2	PP_RXD		
	3	GND		
	4	PP_TXD		
	5	S2		

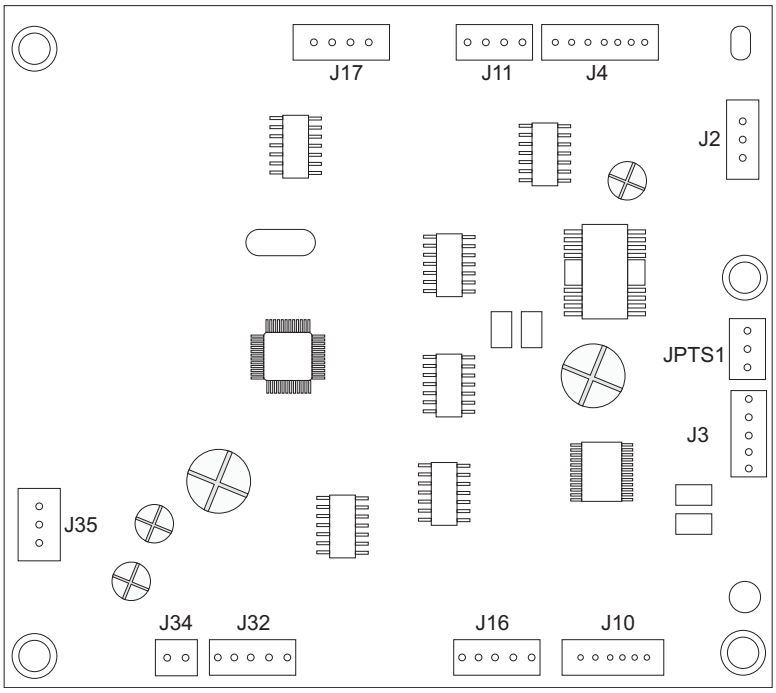
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550-sheet tray option system card connectors

See “550-sheet tray option system card” on page 5-13.

Connector	Pin #	Signal	Pin #	Signal
J34 LED tray	1	TRAY_LIGHTPIPE		
	2	GND		
J35 Power IN	1	+24V		
	2	+5V		
	3	Ground		
JPTS1 Pass thru sensor	1	+24V		
	2	+5V		
	3	+5V_Switch		

2000-sheet high-capacity feeder option system card



2000-sheet high-capacity feeder option system card

2000-sheet high-capacity feeder option system card connectors

See “2000-sheet high-capacity feeder option system card” on page 5-16.

Connector	Pin #	Signal	Pin #	Signal
J2 Jam door sensor	1	GND		
	2	Input		
	3	+5V_Switch		
J3 Pick motor	1	+5V_Switch		
	2	ENCODER		
	3	GND		
	4	Motor +		
	5	Motor -		
J4 Paper level sensor	1	+5V_Switch		
	2	P_LEV_SENSOR_1		
	3	GND		
	4			
	5	+5V_Switch		
	6	P_LEV_SENSOR_2		
	7	GND		
J10 Feed motor	1	+5V_Switch		
	2	ENCODER		
	3	GND		
	4	Motor +		
	5	Motor -		
	6			
J11 Elevator sensor	1	+5V_Switch		
	2	Input		
	3	Ground		
	4	Ground		
J16 Elevator motor	1	+5V_Switch		
	2	ENCODER		
	3	Ground		
	4	Motor +		
	5	Motor -		
J17 Jam Led	1	JAM_LIGHTPIPE		
	2	Ground		
	3	JAM_DOOR_LED		
	4	Ground		

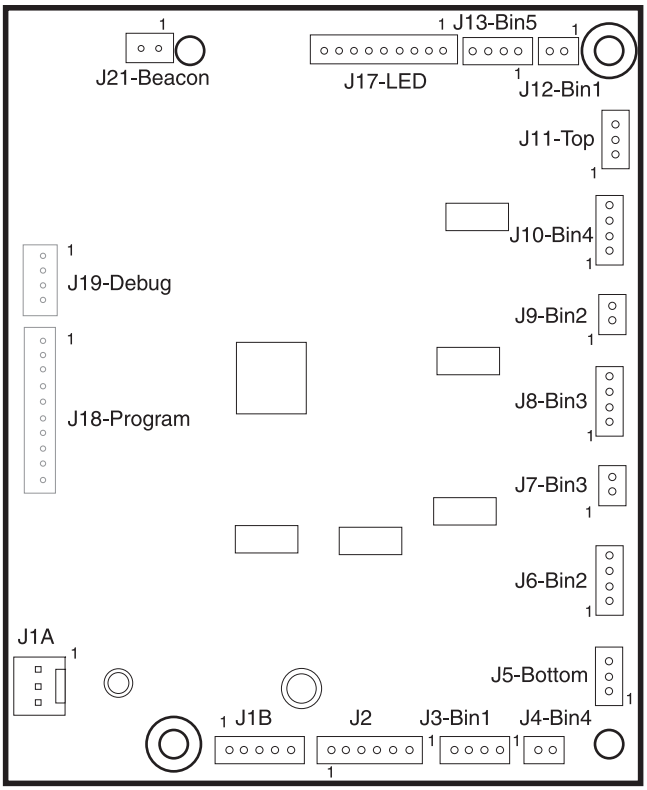
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2000-sheet high-capacity feeder option system card connectors

See “2000-sheet high-capacity feeder option system card” on page 5-16.

Connector	Pin #	Signal	Pin #	Signal
J32 Paper port to printer	1	GND		
	2	PP_RXD		
	3	GND		
	4	PP_TXD		
	5	S2		
J34 LED tray	1	TRAY_LIGHTPIPE		
	2	GND		
J35 Power IN	1	+24V		
	2	+5V		
	3	Ground		
JPTS1 Pass thru sensor	1	+24V		
	2	+5V		
	3	+5V_Switch		

5-bin mailbox- printer circuit board



6. Preventive maintenance

This chapter describes procedures for printer preventive maintenance. Follow these recommendations to help prevent problems and maintain optimum performance.

Safety inspection guide

The purpose of this inspection guide is to aid you in identifying unsafe conditions.

If any unsafe conditions exist, find out how serious the hazard could be and if you can continue before you correct the hazard.

Check the following items:

- Damaged, missing, or altered parts, especially in the area of the On/Off switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top cover and the power supply cover
- Possible safety exposure from any non-Lexmark attachments

Lubrication specifications

Lubricate only when parts are replaced or as needed, not on a scheduled basis. Use of lubricants other than those specified can cause premature failure. Some unauthorized lubricants may chemically attack polycarbonate parts.

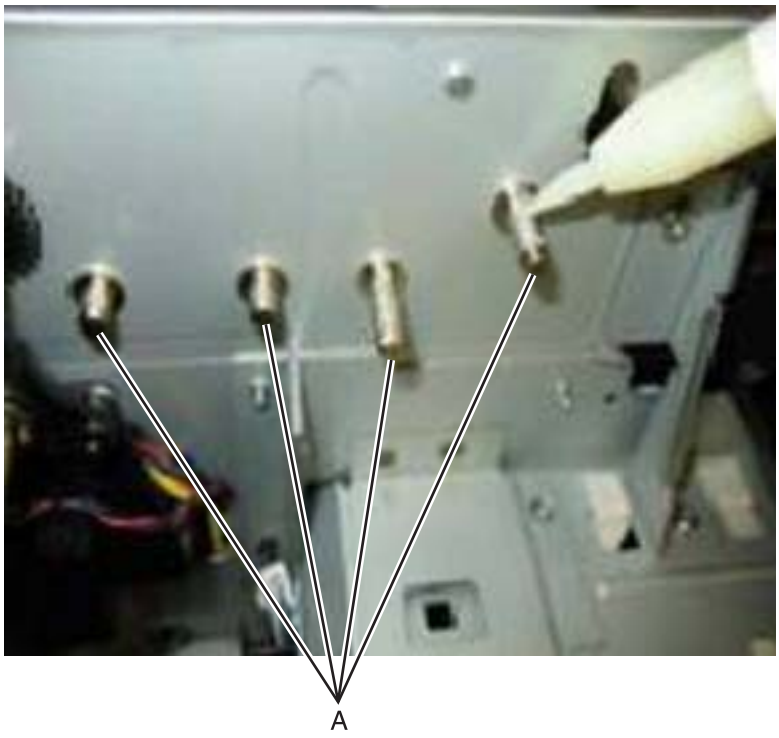
The motor drive FRUs contain the proper lubricant in the FRU. Use only the lubricant included.

Lubrication for replacement motors

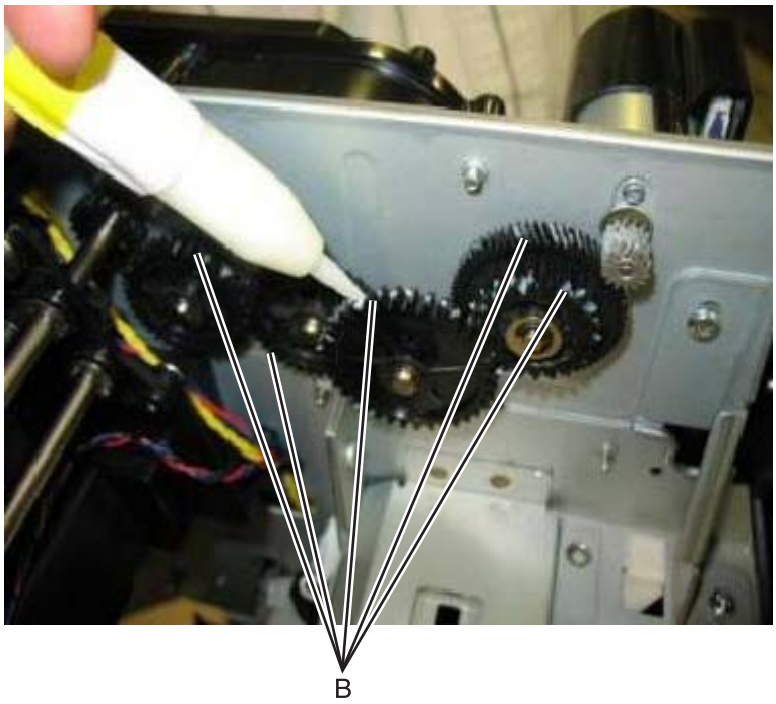
When you install a motor drive assembly, you must grease the posts and gears to ensure proper performance from the printer.

Redrive parts packet

1. Using the 739A grease that came with the redrive assembly, lubricate the four posts (A).



2. Install the gears.
3. Using the 744 grease, lubricate the teeth (B) of the gears as shown.

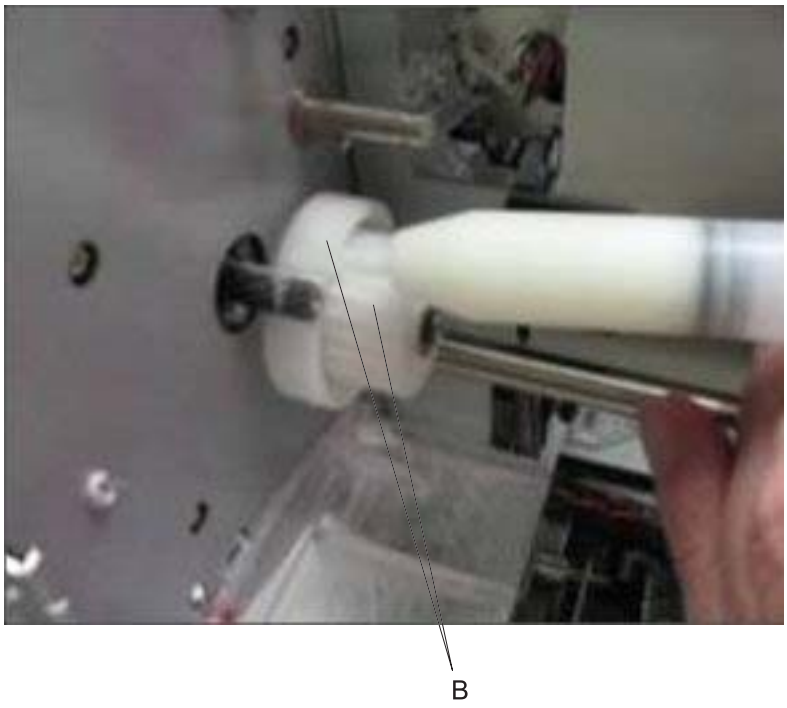


Fuser drive assembly

1. Using the 739A grease that came with the fuser drive assembly, lubricate the post (A).



2. Install the gear.
3. Using the 744 grease, lubricate the teeth (B) of the gear as shown.



7. Parts catalog

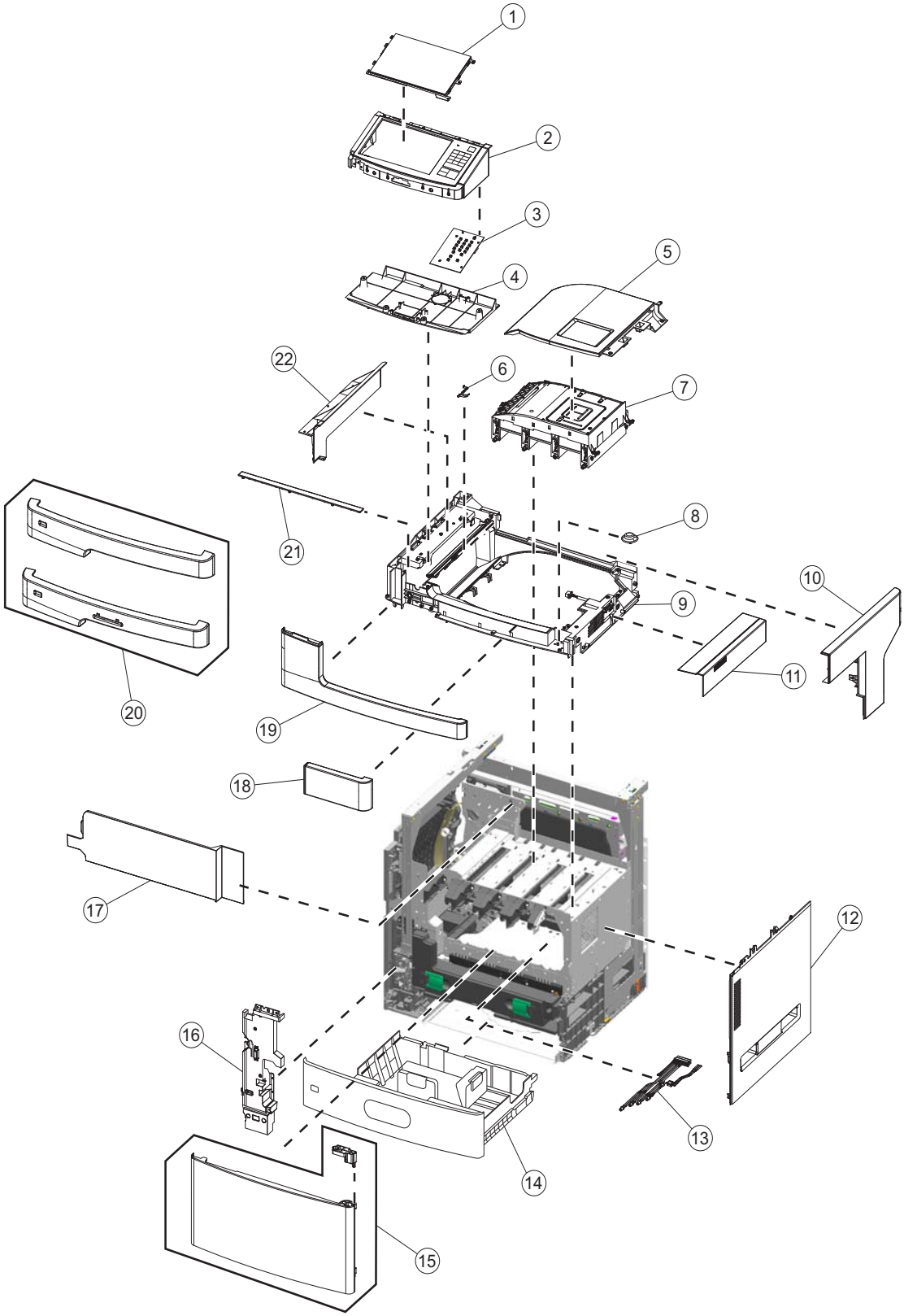
How to use this parts catalog

Asm-index	Part number	Units/ mach	Units/ FRU	Description	Removal procedure

- **Asm-index**: Identifies the assembly and the item in the diagram. For example, 3-1 indicates Assembly 3 and item number 1 in the table.
- **Part number**: Identifies the unique number that identifies this FRU.
- **Units/mach**: Refers to the number of units actually used in the base machine or product.
- **Units/option**: Refers to the number of units in a particular option. It does not include the rest of the base machine.
- **Units/FRU**: Refers to the number of units packaged together and identified by the part number.
- **Description**: Provides more descriptive information to help identify the part.
- **Removal procedure**: Links directly to the instructions for removing the part.
- **NS**: (Not shown) in the Asm-Index column indicates that the part is procurable but is not pictured in the illustration.
- Model information used in the parts catalog:

Abbreviation used	Machine type and model	Printer name
432	7562-432	X792de
436	7562-436	X792de, X792dte, X792dtfe, X792dtpe, X792dtme, X792dtse
496	7562-496	XS796de, XS796dte

Assembly 1: Front, right, and top covers

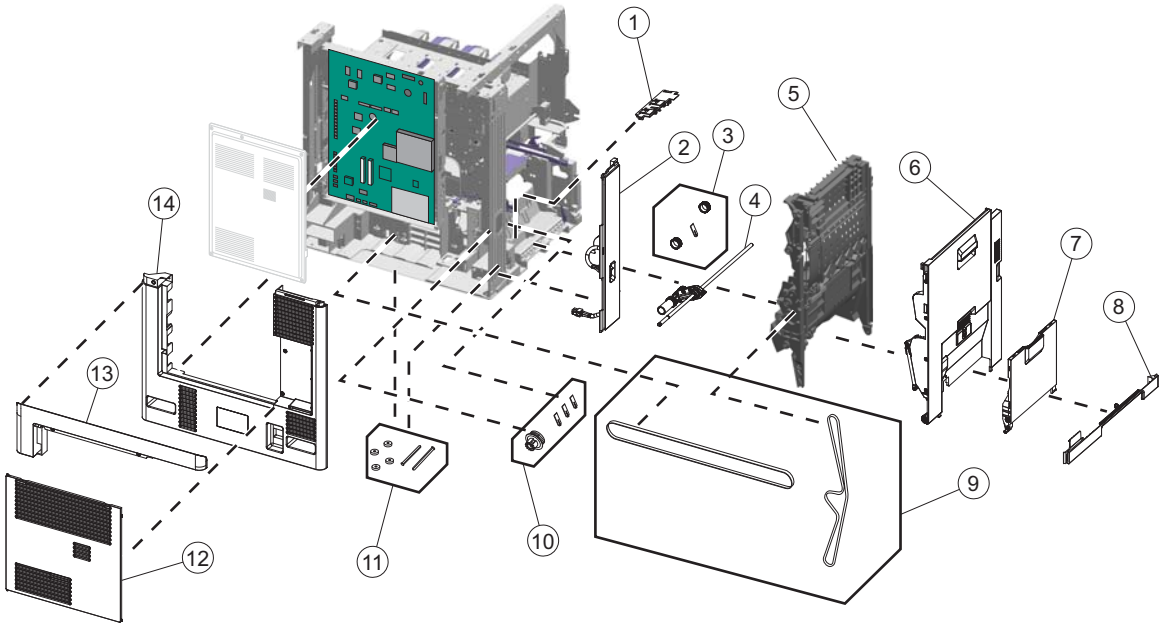


Assembly 1: Front, right, and top covers

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Asm-Index	Part number	Units/mach	Units/FRU	Description	Removal procedures
1—1	40X6307	1	1	OP panel LCD and touch-screen display	**“OP panel display removal” on page 4-107**
2	40X7198	1	1	OP panel housing with buttons	**“OP panel housing removal” on page 4-108**
3	40X6308	1	1	OP panel UICC card	**“OP panel UICC card removal” on page 4-109**
4	40X7197	1	1	OP panel bottom cover	**“OP panel bottom cover removal” on page 4-22**
5	40X7182	1	1	Printhead access cover	**“Printhead access cover removal” on page 4-22**
6	40X7124	1	1	Bin-full flag	**“Bin-full flag removal” on page 4-33**
7	40X7127	1	1	Printhead assembly	**“Printhead removal, installation, and alignment” on page 4-117**
8	40X7117	1	1	OP panel speaker	**“OP panel speaker removal” on page 4-109**
9	40X7181	1	1	AIO top cover assembly with output options cable	**“AIO top cover removal” on page 4-5**
10	40X7192	1	1	Scanner right side cover	**“Scanner right side cover removal” on page 4-205**
11	40X7183	1	1	AIO option cover	**“AIO option cover removal” on page 4-4**
12	40X7120	1	1	Right cover	**“Right cover removal” on page 4-26**
13	40X7189	1	1	Cave light/Out beacon cable	**“40X7189” on page 7-59**
14	40X6099	1	1	Standard media tray (550-sheet media tray assembly)	**“Standard media tray removal” on page 4-141**
15	40X7111	1	1	Front access door and pivot	**“Front access door assembly removal” on page 4-9**
16	40X7125	1	1	Waste toner left cover	**“Waste toner left cover removal” on page 4-31**
17	40X7186	1	1	AIO rear scanner cover	**“AIO rear scanner cover removal” on page 4-201**
18	40X7191	1	1	Scanner front cover	**“Scanner front cover removal” on page 4-203**
19	40X7184	1	1	AIO front lower cover	**“AIO front lower cover removal” on page 4-3**
20	40X7196	1	1	AIO front upper cover: • One with USB • One with USB and card reader slot	**“AIO front upper cover removal” on page 4-3**
21	40X7190	1	1	Scanner top cover	**“Scanner top cover removal” on page 4-206**
22	40X7185	1	1	AIO lower scanner cover	**“AIO lower scanner cover removal” on page 4-202**

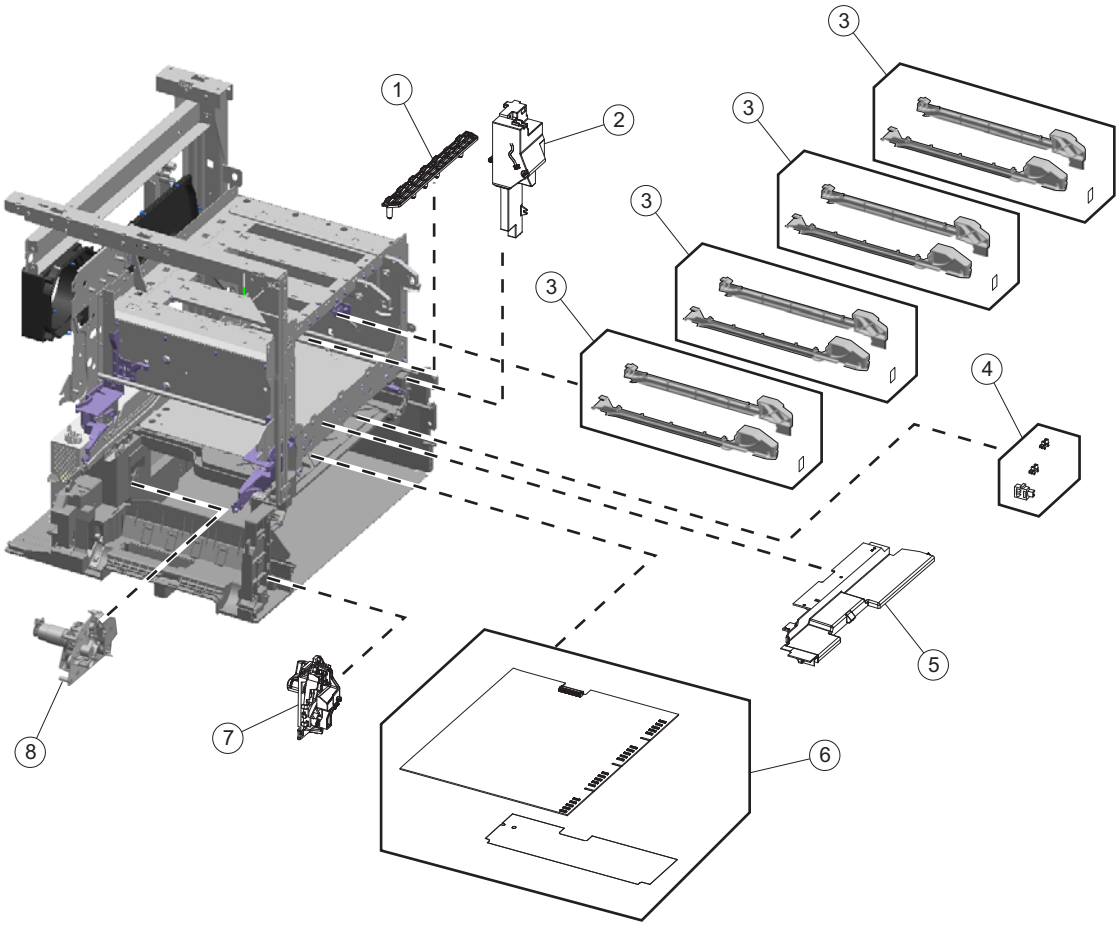
Assembly 2: Left and rear covers



Assembly 2: Left and rear covers

Asm-Index	Part number	Units/mach	Units/FRU	Description	Removal procedures
2—1	40X7151	1	1	MPF sensor plate assembly	**“MPF sensor plate assembly removal” on page 4-102**
2	40X7122	1	1	Left cover assembly with LVPS power switch	**“Left cover removal” on page 4-16**
3	40X7149	1	1	MPF pick tire roll assembly, including • Pick rolls (x2) • MPF Special wear strip, pellathane strip	**“MPF pick rolls and special wear strip removal” on page 4-97**
4	40X7148	1	1	MPF paper pick assembly, including • Thrust washer • Pick tire rolls	**“MPF paper pick assembly removal (including the MPF ratchet collar and MPF drive pulley)” on page 4-94**
5	40X7156	1	1	Duplex assembly	**“Duplex assembly removal” on page 4-48**
6	40X7123	1	1	Left access door assembly, including • Duplex belt shield • Connector shield	**“Left access door assembly removal” on page 4-10**
7	40X7147	1	1	MPF door assembly, including • MPF door cover • MPF outer plate • MPF side restraint • Paper guide slide	**“Multipurpose feeder (MPF) cover removal” on page 4-21**
8	40X7121	1	1	Lower left cover	**“Lower left cover removal” on page 4-16**
9	40X7157	1	1	Belts parts packet, including • MPF drive belt • Duplex drive belt	**“MPF drive assembly removal” on page 4-100** **“Duplex assembly removal” on page 4-48**
10	40X7150	1	1	MPF pick parts packet, including • MPF Wear strip (x3) • MPF pulley • Ratchet collar	**“MPF wear strips removal” on page 4-103** **“MPF drive assembly removal” on page 4-100**
11	40X7174	1	1	Pins & pads parts packet, including • Pad (x7) • Pin–Side door front • Pin–Side door rear	**“Pad removal” on page 4-110** **“Left access door assembly removal” on page 4-10**
12	40X7138	1	1	System board shield door	**“Rear upper cover removal” on page 4-25**
13	40X7180	1	1	Rear upper cover	
14	40X7105	1	1	Rear cover	**“Rear cover removal” on page 4-23**

Assembly 3: Front

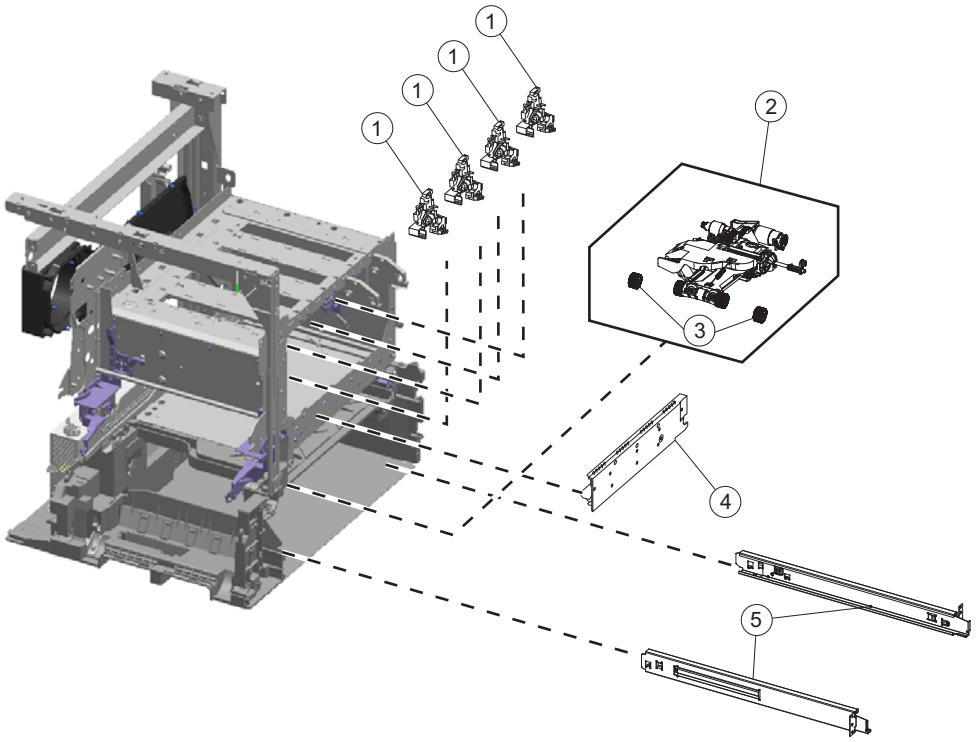


Assembly 3: Front

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Index	P/N	Units/ mach	Units/ FRU	Description	Removal procedure
3—1	40X7145	1	1	ITU block assembly	**“ITU block assembly removal” on page 4-71**
2	40X7130	1	1	Cartridge blower assembly	**“Cartridge blower assembly removal” on page 4-35**
3	40X7141	4	1	Cartridge rail assembly, including • Labels Y, C, M, K (2 each) • Cartridge rail, right side • Cartridge rail, left side	**“Cartridge rail removal” on page 4-44**
4	40X7163			Sensors parts packet, including • Waste toner sensors (2) • Paper auto size sensor • Paper path sensor (not shown) • Bin-full sensor (not shown)	**“Waste toner sensor removal” on page 4-154** **“Waste toner full sensor removal” on page 4-158** **“Paper auto-size sensor removal” on page 4-111** **“Bin-full sensor removal” on page 4-34**
5	40X7161	1	1	Waste toner tray bracket	**“Waste toner tray bracket removal” on page 4-158**
6	40X7139	1	1	HVPS assembly with cable shield	**“High-voltage power supply (HVPS) board removal” on page 4-63**
7	40X7112	1	1	Housing interlock assembly with sensor	**“Housing interlock assembly removal” on page 4-67**
8	40X7158	1	1	Staging paper path reference edge assembly	**“Staging paper path reference edge assembly removal” on page 4-136**

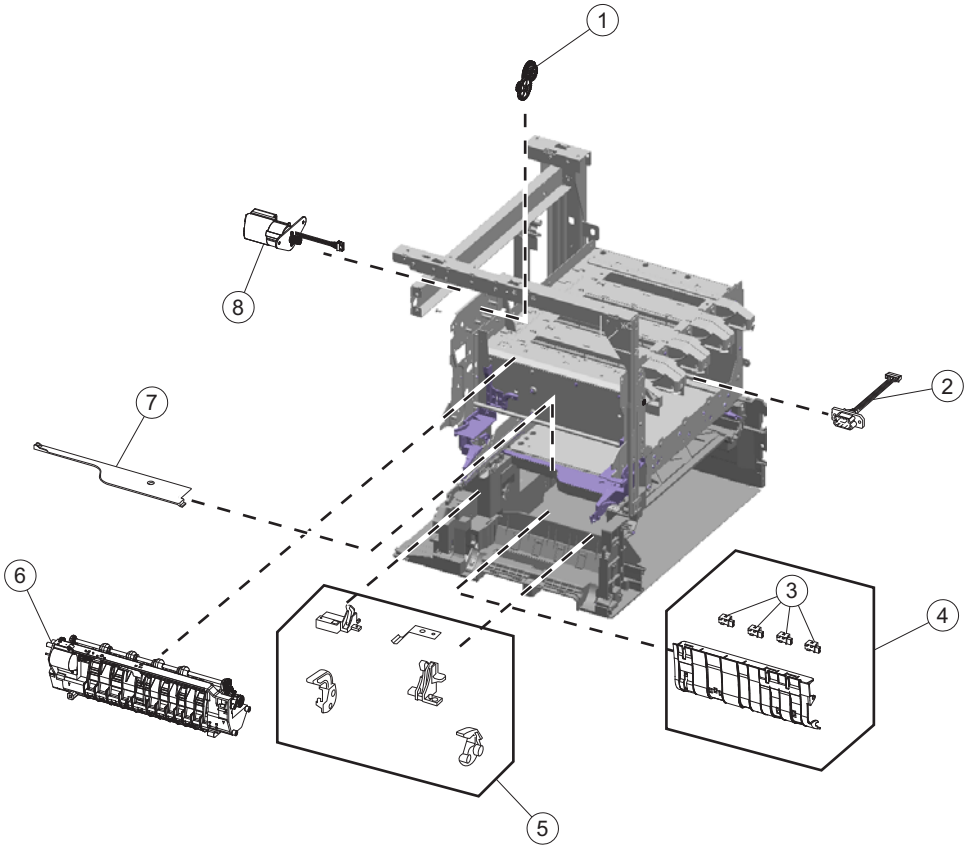
Assembly 3.1: Front (continued)



Assembly 3.1: Front (continued)

Index	P/N	Units/ mach	Units/ FRU	Description	Removal procedure
3.1—1	40X7142	4	1	Cartridge memory block with sensor	**“Cartridge memory block removal” on page 4-40**
2	40X7160	1	1	Paper pick mechanism assembly	**“Paper pick mechanism assembly removal” on page 4-114**
3	40X6104	2	2	Pick tire roll assembly	**“Pick rolls removal” on page 4-116**
4	40X7143	4	1	Cartridge contact block assembly	**“Cartridge contact block assembly removal” on page 4-38**
5	40X7126	1	1	Media tray rails (1 right, 1 left)	**“Media tray rail removal” on page 4-85**

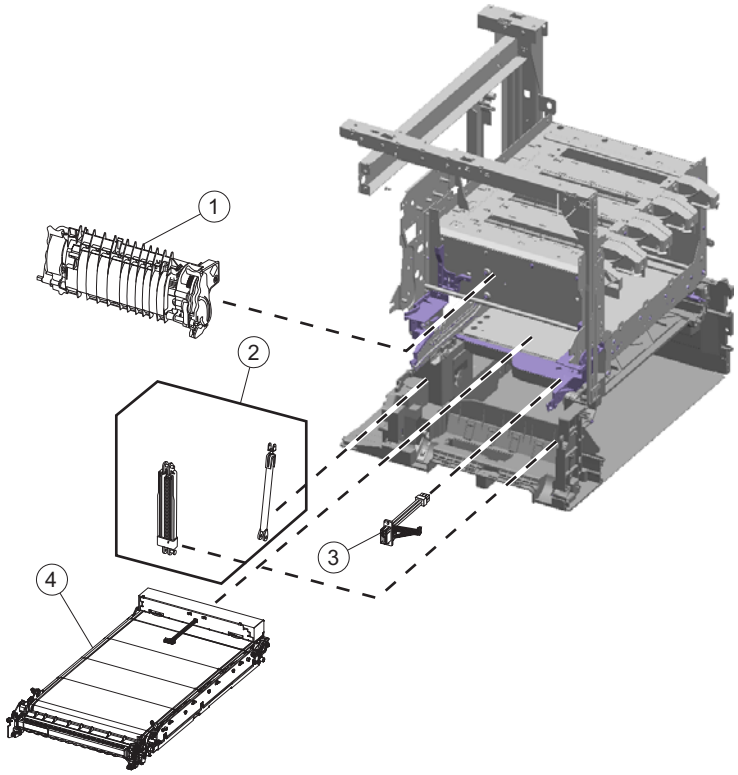
Assembly 4: Left



Assembly 4: Left

Index	P/N	Units/ mach	Units/ FRU	Description	Removal procedure
4—1	40X7133	1	1	Redrive parts packet, including • Gear thrust washer (2) • Gear—Idler 50T (2) • Gear—64T 22T Compound • Gear—36T 18T Compound	**“Redrive gears removal” on page 4-128**
2	40X7166	1	1	ITU autoconnect cable	**“ITU autoconnect removal” on page 4-69**
3	40X7163			Sensors parts packet, including • Waste toner sensors (2) (not shown) • Paper auto size sensor (not shown) • Paper path sensors (input, S1, narrow media, near narrow media) • Bin-full sensor (not shown)	**“Staging deflector assembly removal” on page 4-134**
4	40X7146	1	1	Staging deflector assembly with sensors	**“Staging deflector assembly removal” on page 4-134**
5	40X7172	1	1	Fuser/MPF/autocomp parts packet, including • Fuser datum rear bellcrank • Fuser datum front bellcrank • Fuser datum bellcrank spring (2) • Autocomp (ACM) bias spring • MPF rear breakaway support • MPF front breakaway support	**“Datum bell crank removal” on page 4-46** **“ACM bias spring removal” on page 4-33** **“MPF breakaway assemblies removal” on page 4-91**
6	40X7100	1	1	Fuser assembly, 115V	**“Fuser assembly removal” on page 4-56**
	40X7101			Fuser assembly, 220V	
	40X7102			Fuser assembly, 100V	
7	40X7164	1	1	Lower frame cable cover	**“Lower frame cable cover removal” on page 4-20**
8	40X7132	1	1	Redrive motor assembly	**“Redrive motor removal” on page 4-129**

Assembly 4.1: Left (continued)

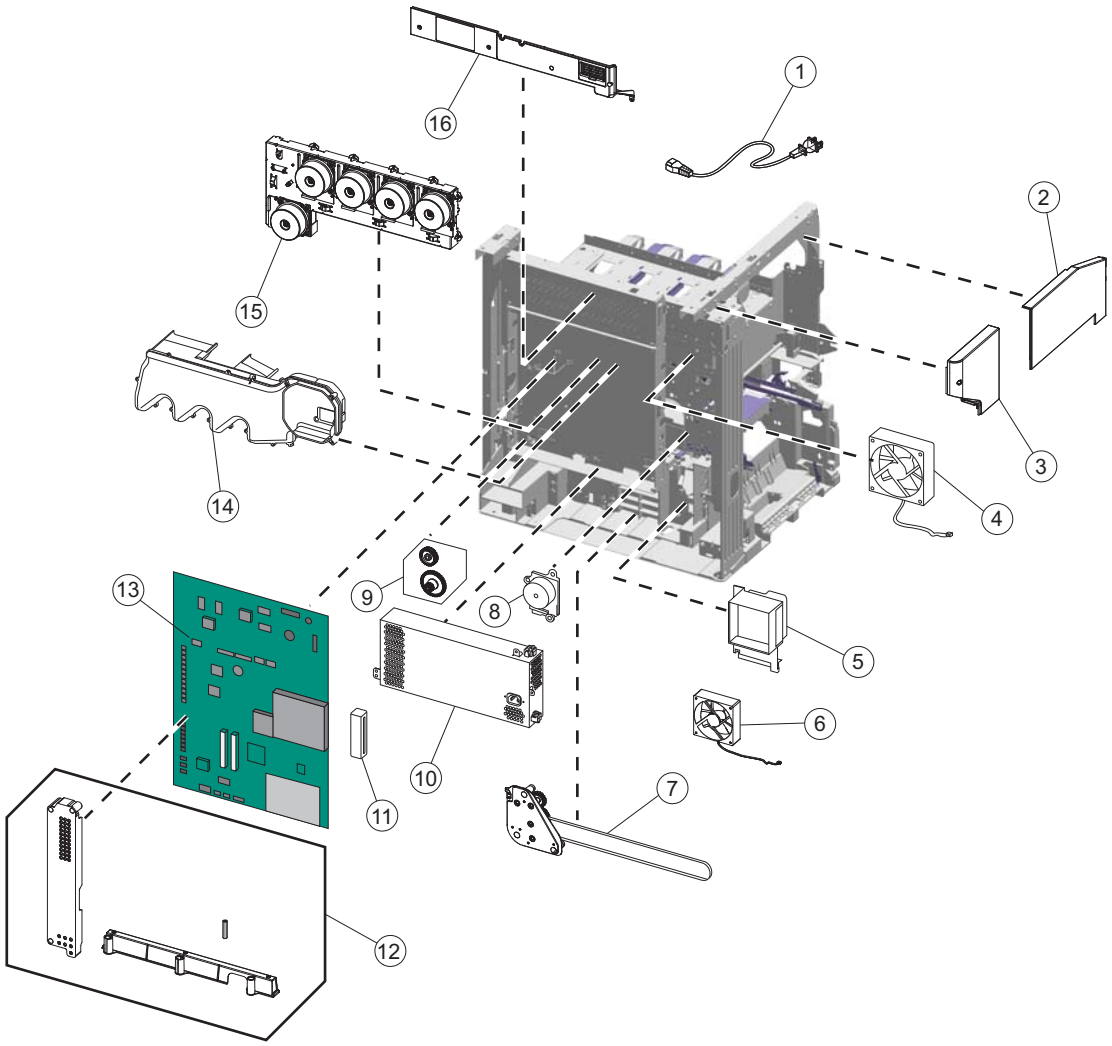


Assembly 4.1: Left (continued)

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Index	P/N	Units/ mach	Units/ FRU	Description	Removal procedure
4.1—1	40X7134	1	1	Paper path redrive assembly	**“Paper path redrive assembly with sensors removal” on page 4-112**
2	40X7153	1	1	Left access door pistons parts packet, including • Piston clip pin • Left door spring support • Piston housing assembly • Door support anchor pin (3)	**“Left access door piston removal” on page 4-73**
3	40X7165	1	1	Fuser system card and LVPS cable with cable ties	**“Fuser system card and LVPS cable removal” on page 4-59**
4	40X7103	1	1	ITU module assembly	**“ITU assembly removal” on page 4-68**

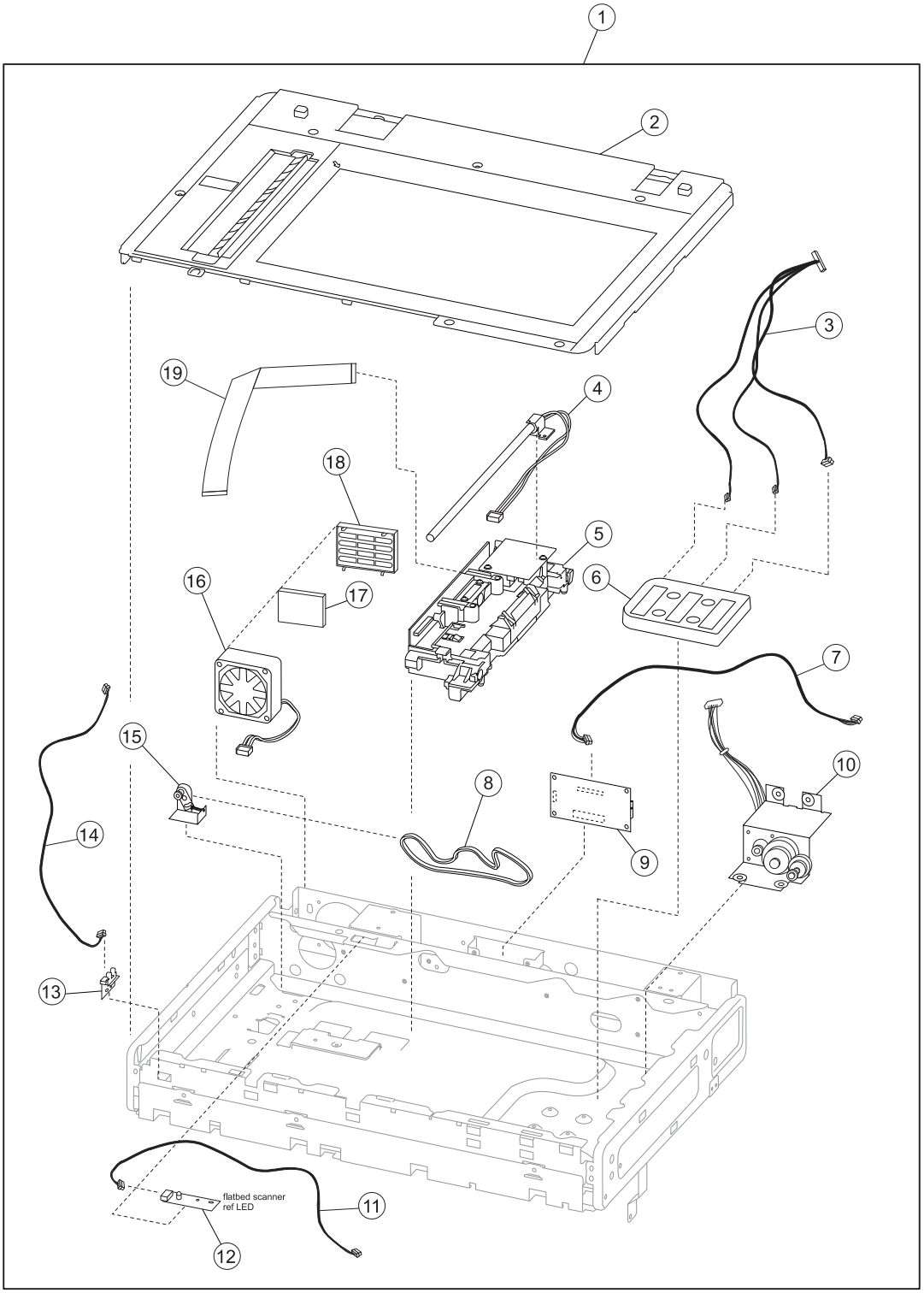
Assembly 5: Rear



Assembly 5: Rear

Asm-Index	Part number	Units/mach	Units/FRU	Description	Removal procedure
5—1	40X0269	1	1	Bolivia, Peru (8’ ST)	N/A
	40X0270	1	1	Japan (8’ ST)	
	40X0271	1	1	UK, Ireland (8' ST)	
	40X0273	1	1	Chile, Uruguay (8’ ST)	
	40X0275	1	1	Israel (8’ ST)	
	40X0288	1	1	Argentina (8’ ST)	
	40X0301	1	1	Australia (8’ ST)	
	40X0303	1	1	PRC (8’ ST)	
	40X1772	1	1	Switzerland (8’ ST)	
	40X1773	1	1	South Africa (8’ ST)	
	40X1774	1	1	Denmark (8’ ST)	
	40X1791	1	1	Taiwan (2.5 m ST)	
	40X1792	1	1	Korea (2.5 m ST)	
	40X3141	1	1	Europe (8’ ST)	
	40X4596	1	1	Brazil (8’ ST)	
	40X7104	1	1	U.S., Canada (8’ ST)	
2	40X7195	1	1	Scanner left side front cover	**“Scanner left side front cover removal” on page 4-204**
3	40X7194	1	1	Scanner left side rear cover	**“Scanner left side rear cover removal” on page 4-204**
4	40X7131	1	1	Main fan	**“Main fan removal” on page 4-84**
5	40X7128	1	1	LVPS exit duct	**“LVPS exit duct removal” on page 4-80**
6	40X7129	1	1	LVPS fan	**“LVPS fan removal” on page 4-81**
7	40X7152	1	1	MPF drive assembly	**“MPF drive assembly removal” on page 4-100**
8	40X7135	1	1	Fuser drive assembly, including • Gear thrust washer • Pick roll tires	**“Fuser drive assembly removal” on page 4-57**
9	40X7162	1	1	Waste toner gears parts packet, including • Gear—30T Helical • Gear—46T Spur 17T Helical	**“Waste toner gears removal” on page 4-153**
10	40X7188	1	1	Low-voltage power supply (LVPS) with thermistor retainer	**“Low-voltage power supply (LVPS) removal” on page 4-77**
11	40X7219	1	1	Toroid	N/A
12	40X7140			System board and HVPS card parts packet, including • RIP card shield • HVPS standoff • HVPS card standoff	Step **3** of **“Low-voltage power supply (LVPS) removal” on page 4-77** **“High-voltage power supply (HVPS) board removal” on page 4-63**
13	40X7187	1	1	System board	**“System board removal” on page 4-142**
14	40X7155	1	1	Exit cooling duct assembly	**“Exit cooling duct removal” on page 4-52**
15	40X7144	1	1	EP drive assembly	**“EP drive assembly removal” on page 4-50**
16	40X7193	1	1	Scanner rear cover	**“Scanner rear cover removal” on page 4-205**

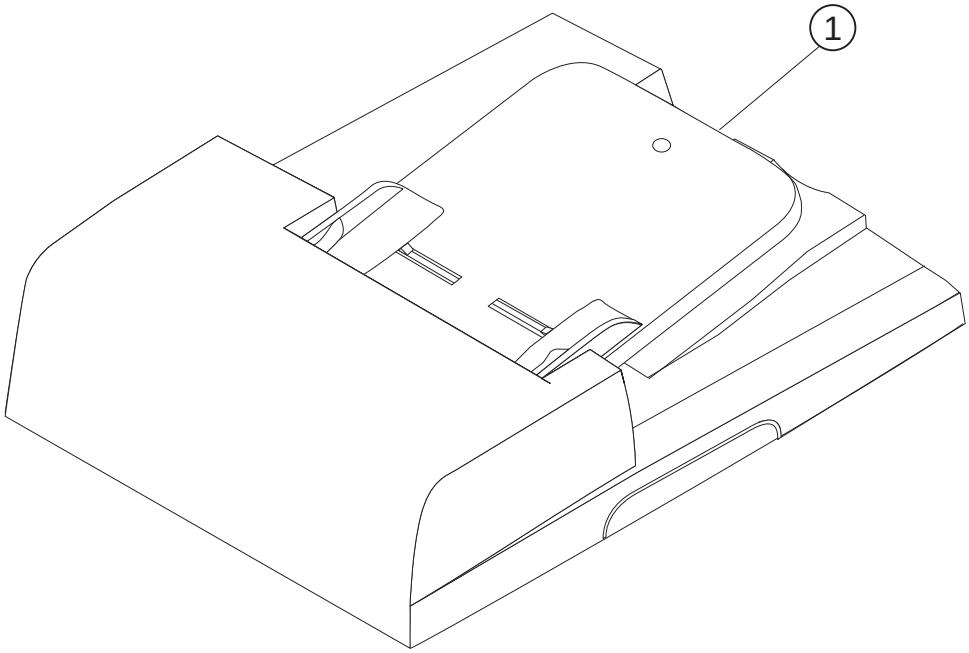
Assembly 6: Flatbed scanner



Assembly 6: Flatbed scanner

Asm-index	Part number	Units/mach	Units/FRU	Description	Removal procedure
6—1	40X7200	1	1	Flatbed scanner assembly	**“Flatbed scanner assembly removal” on page 4-216**
2	40X2642	1	1	Scanner platen glass cover assembly	**“Scanner platen glass cover removal” on page 4-224**
3	40X4530	1	1	Scanner FB length sensor cable assembly	**“Scanner FB length sensor cable removal” on page 4-214**
4	40X7201	1	1	Scanner exposure lamp	**“Scanner exposure lamp removal” on page 4-212**
5	40X7202	1	1	Scanner CCD assembly	**“Flatbed scanner CCD assembly removal” on page 4-211**
6	40X4534	1	1	Sensor (platen glass length) assembly	**“Sensor (platen glass length) removal” on page 4-226**
7	40X7203	1	1	Scanner interface card cable assembly	**“Scanner interface card removal” on page 4-223**
8	40X4523	1	1	Carriage belt	**“Carriage drive motor assembly removal” on page 4-208**
9	40X7210	1	1	Scanner interface card assembly	**“Scanner interface card removal” on page 4-223**
10	40X4521	1	1	Carriage drive motor assembly with cable	**“Carriage drive motor assembly removal” on page 4-208**
11	40X4528	1	1	Scanner reference LED cable assembly	**“Scanner reference LED sensor cable removal” on page 4-225**
12	40X4532	1	1	Scanner reference LED assembly	**“Scanner reference LED removal” on page 4-225**
13	40X4524	1	1	Sensor (scanner HP) with bracket	**“Sensor (scanner HP) removal” on page 4-228**
14	40X4529	1	1	Scanner HP sensor cable assembly	**“Sensor cable (scanner HP) removal” on page 4-227**
15	40X4522	1	1	Carriage belt tensioner assembly	**“Carriage belt tensioner assembly removal” on page 4-207**
16	40X4535	1	1	Scanner cooling fan	**“Flatbed scanner cooling fan removal” on page 4-210**
17	40X4536	1	1	Scanner cooling fan filter	**“Flatbed scanner cooling fan filter removal” on page 4-210**
18	40X7204	1	1	Scanner filter cover	
19	40X7205	1	1	Scanner CCD ribbon cable	

Assembly 7: ADF unit assembly

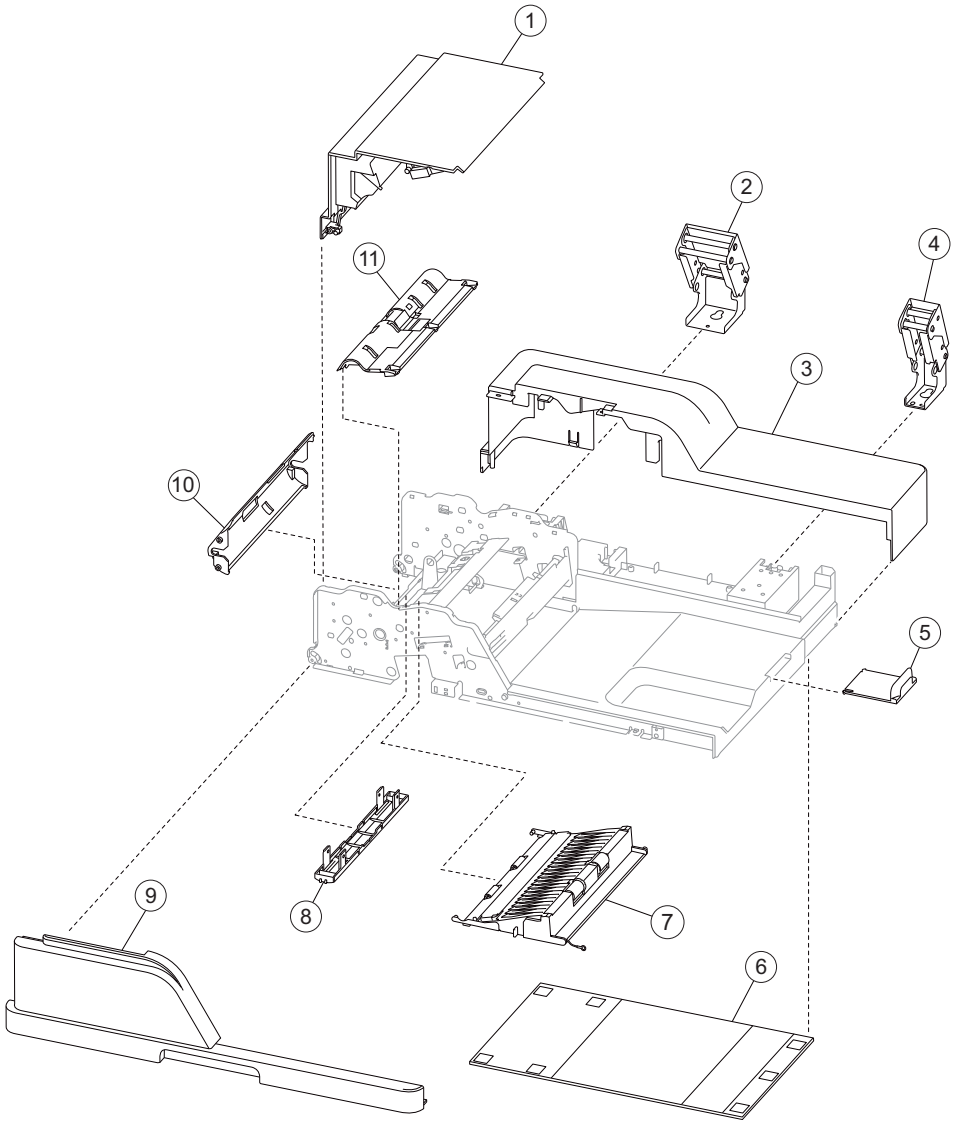


Assembly 7: ADF unit assembly

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Asm-index	Part number	Units/mach	Units/FRU	Description	Removal procedure
7—1	40X7206	1	1	ADF unit assembly	**“ADF unit assembly removal” on page 4-193**

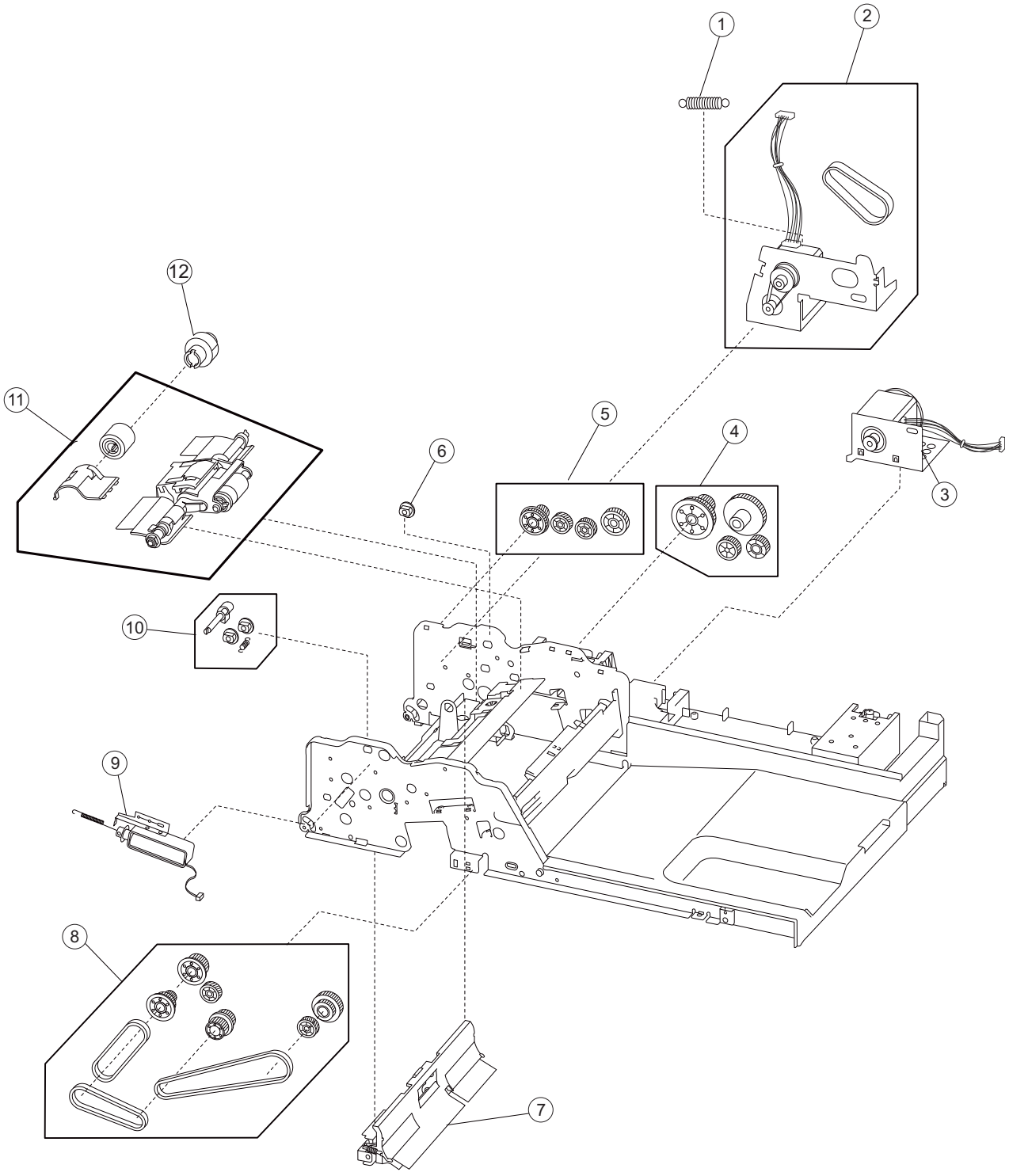
Assembly 8: ADF covers



Assembly 8: ADF covers

Asm-index	Part number	Units/mach	Units/FRU	Description	Removal procedure
8—1	40X7207	1	1	ADF top door assembly, including beacon LED	**“ADF top door assembly removal” on page 4-161**
2	40X7208	1	1	Left hinge assembly	**“ADF left hinge removal” on page 4-174**
3	40X4539	1	1	ADF rear cover	**“ADF rear cover removal” on page 4-161**
4	40X4563	1	1	Right hinge assembly	**“ADF right hinge removal” on page 4-184**
5	40X4564	1	1	Document tray extension	**“ADF document tray extension removal” on page 4-165**
6	40X7209	1	1	ADF platen cushion	**“ADF platen cushion removal” on page 4-183**
7	40X3438	1	1	ADF lower door assembly	**“ADF lower door assembly removal” on page 4-175**
8	40X3445	1	1	Media pinch pad assembly	**“ADF media pinch pad assembly removal” on page 4-176**
9	40X7212	1	1	ADF front cover	**“ADF front cover removal” on page 4-160**
10	40X4566	1	1	ADF turn guide	**“ADF turn guide removal” on page 4-192**
11	40X4562	1	1	Pick pad cover assembly	**“ADF pick pad cover assembly removal” on page 4-178**

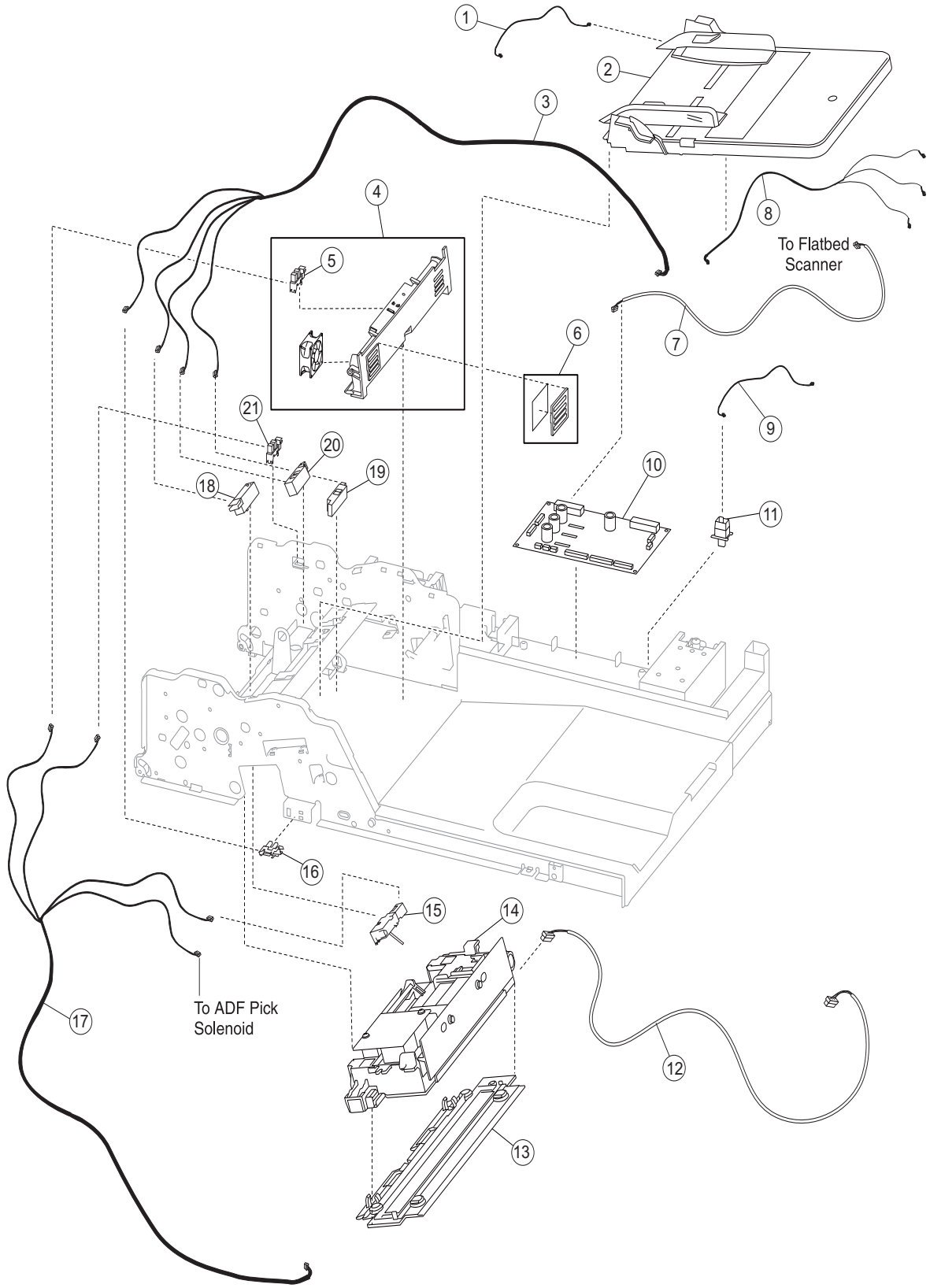
Assembly 9: ADF feed and drive



Assembly 9: ADF feed and drive

Asm-index	Part number	Units/mach	Units/FRU	Description	Removal procedure
9—1	40X4545	1	1	Transport drive motor bracket tension spring	**“ADF transport drive motor bracket assembly with cable removal” on page 4-190**
2	40X7213	1	3	Feed motor assembly with belt and cable	**“ADF feed drive motor assembly removal” on page 4-170**
3	40X4544	1	1	Transport motor bracket assembly with cable	**“ADF transport drive motor bracket assembly with cable removal” on page 4-190**
4	40X2759	1	4	Transport drive gear and pulley kit, rear	**“ADF transport drive gears (rear) and pulley removal” on page 4-189**
5	40X2749	1	4	Feed one-way bearing and gear kit	**“ADF feed 1-way bearing and gears removal” on page 4-170**
6	40X2750	1	1	Bushing, 6 mm	**“ADF pick roll position cam assembly removal” on page 4-179**
7	40X4542	1	1	Pinch roll assembly	**“ADF pinch roll assembly removal” on page 4-182**
8	40X2760	1	9	Transport drive gear, pulley, and belt kit, front	**“ADF transport drive gears (front) removal” on page 4-187**
9	40X4548	1	1	ADF solenoid assembly	**“ADF solenoid assembly removal” on page 4-186**
10	40X2761	1	4	Pick roll position cam assembly	**“ADF pick roll position cam assembly removal” on page 4-179**
11	40X7220	1	1	ADF feed / pick roll assembly, including ADF separator roll and guide	**“ADF feed/pick roll assembly removal” on page 4-173** **“ADF separator roll removal” on page 4-184**
12	40X7214	1	1	Torque limiter	**“ADF separator torque limiter assembly removal” on page 4-185**

Assembly 10: ADF electronics

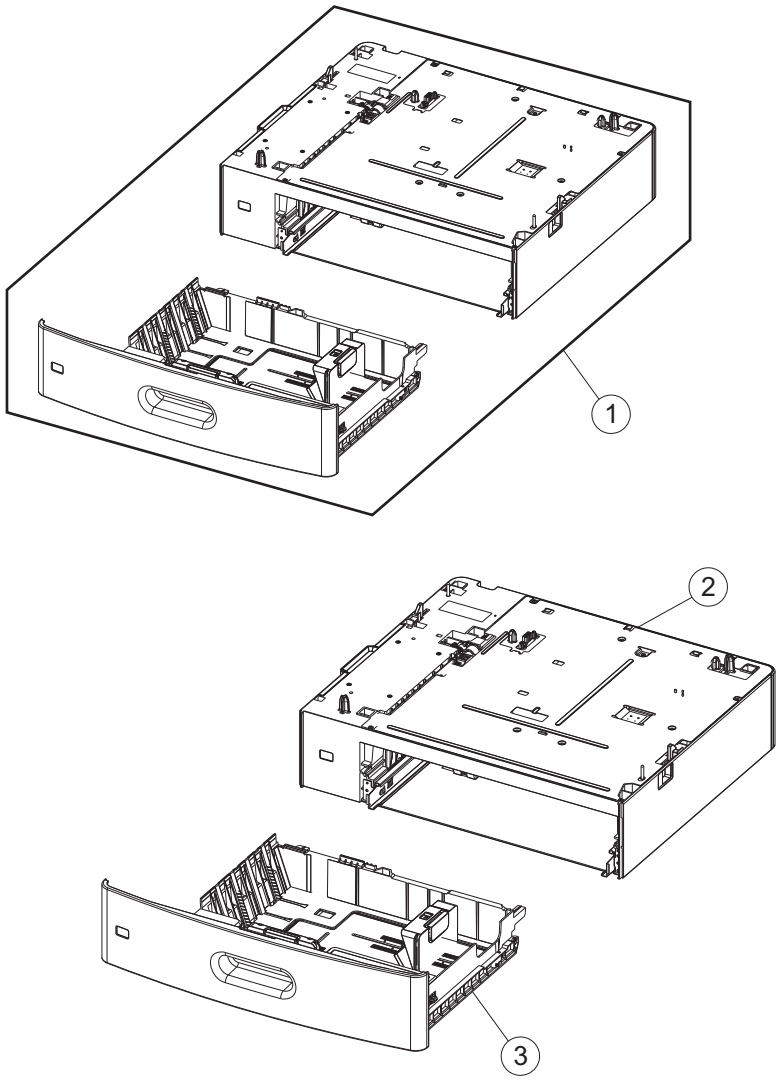


Assembly 10: ADF electronics

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Asm-index	Part number	Units/mach	Units/FRU	Description	Removal procedure
10—1	40X4559	1	1	ADF tray length cable assembly	
2	40X7215	1	1	ADF document tray assembly	**“ADF document tray assembly removal” on page 4-164**
3	40X4558	1	1	ADF sensor cable assembly	
4	40X4607	1	1	Sensor (ADF media exit) bracket assembly with fan	**“Sensor (ADF media exit) fan bracket assembly removal” on page 4-198**
5	40X4549	1	1	Sensor (ADF media exit)	
6	40X4608	1	1	ADF filter and cover	
7	40X4556	1	1	ADF interface cable assembly	
8	40X7218	1	1	ADF beacon LED cable	**“ADF beacon cable removal” on page 4-163**
9	40X4557	1	1	ADF closed interlock switch cable assembly	**“Switch (ADF closed interlock) removal” on page 4-200**
10	40X7216	1	1	ADF controller card assembly	**“ADF controller card removal” on page 4-164**
11	40X4554	1	1	Switch (ADF closed interlock)	**“Switch (ADF closed interlock) removal” on page 4-200**
12	40X4555	1	1	Duplex CCD interface cable assembly	**“ADF duplex CCD assembly removal” on page 4-166**
13	40X4565	1	1	ADF duplex CCD scan glass assembly	**“ADF duplex CCD scan glass assembly removal” on page 4-169**
14	40X7217	1	1	ADF duplex CCD assembly	**“ADF duplex CCD assembly removal” on page 4-166**
15	40X2762	1	1	Sensor (ADF 2nd scan)	**“Sensor (ADF 2nd scan) removal” on page 4-195**
16	40X4549	1	1	Sensor (ADF lower door interlock)	**“Sensor (ADF lower door interlock) removal” on page 4-197**
17	40X4560	1	1	ADF exit sensor cable	
18	40X4550	1	1	Sensor (ADF 1st scan)	**“Sensor (ADF 1st scan) removal” on page 4-195**
19	40X4551	1	1	Sensor (ADF document set)	**“Sensor (ADF document set) removal” on page 4-196**
20	40X4550	1	1	Sensor (ADF sheet through)	**“Sensor (ADF sheet through) removal” on page 4-199**
21	40X4549	1	1	Sensor (ADF top door interlock)	**“Sensor (ADF top door interlock) removal” on page 4-199**

Assembly 11: Optional 550-sheet tray

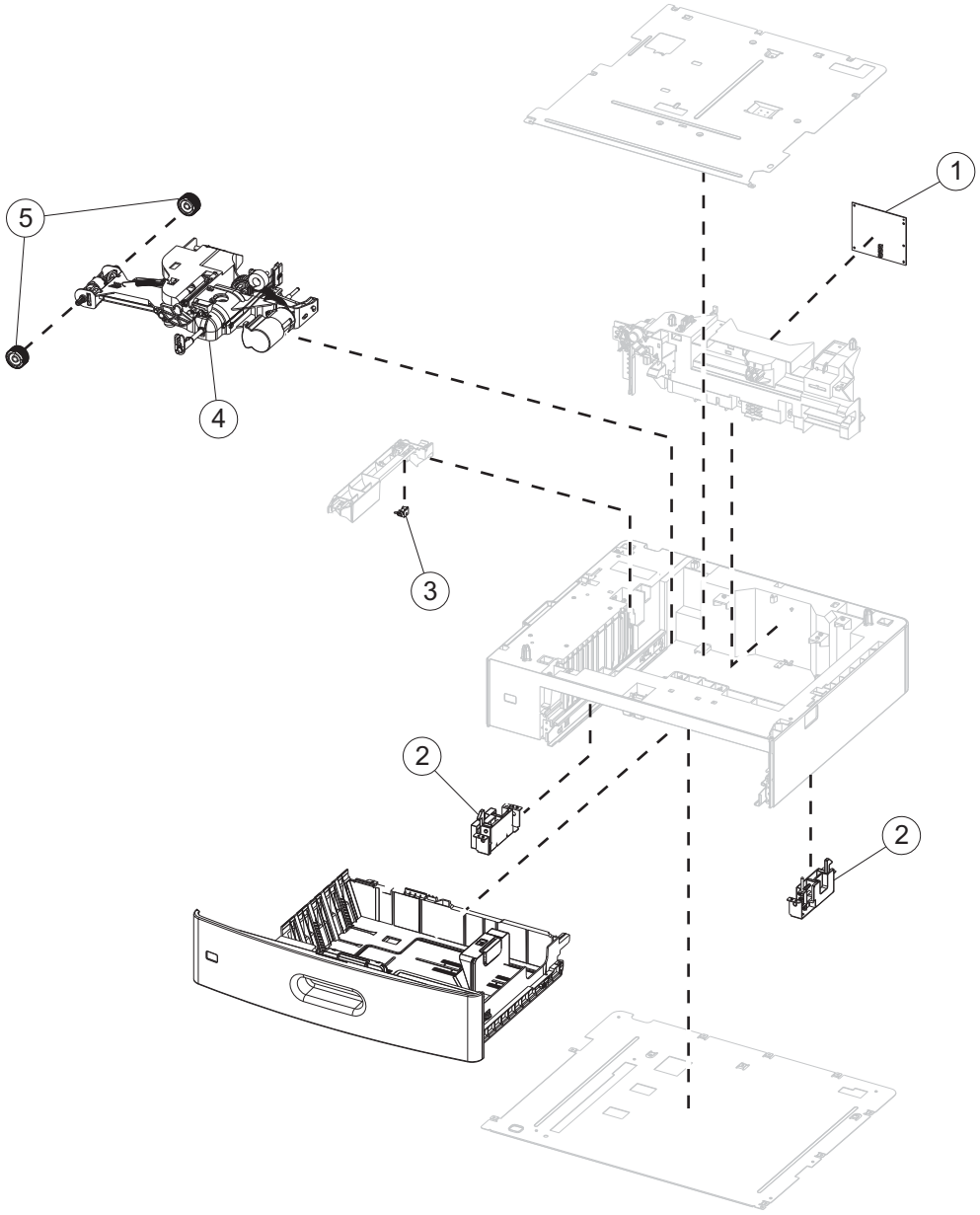


Assembly 11: Optional 550-sheet tray

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Index	P/N	Units/ opt	Units/ FRU	Description	Removal procedure
11—1	40X6967	1	1	550-sheet tray option	N\A
2	40X6102	1	1	550-sheet drawer assembly	**“550-sheet drawer assembly removal” on page 4-229**
3	40x6099	1	1	550-sheet media tray assembly	**“550-sheet media tray assembly removal” on page 4-230**

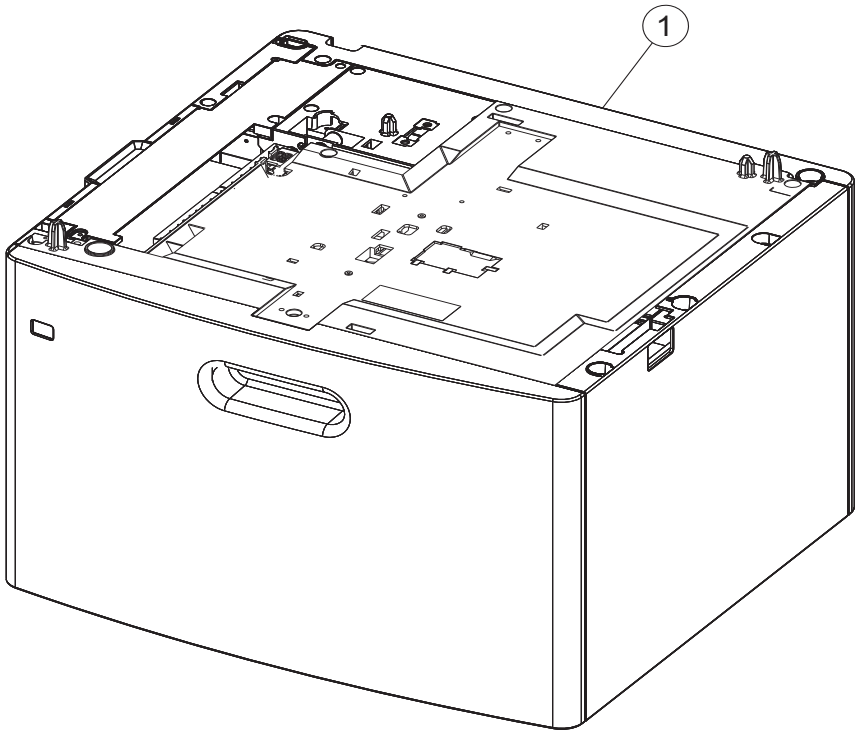
Assembly 12: Optional 550-sheet drawer assembly



Assembly 12: Optional 550-sheet drawer assembly

Index	P/N	Units/ opt	Units/ FRU	Description	Removal procedure
12—1	40X6100	1	1	550-sheet tray controller card assembly	**“550-sheet tray controller card assembly removal” on page 4-231**
2	40X6101	2	2	Anti-tip latch assembly	**“550-sheet tray left anti-tip latch removal” on page 4-237** and **“550-sheet tray right anti-tip latch assembly removal” on page 4-246**
3	40X6274	1	3	550-sheet/2000-sheet input option sensor pack	**“550-sheet tray pass thru sensor removal” on page 4-239**
4	40X6103	1	1	550-sheet tray pick assembly	**“550-sheet tray pick assembly removal” on page 4-240**
5	40X6104	2	2	Pick roll assembly	**“550-sheet tray pick roll assembly removal” on page 4-244**

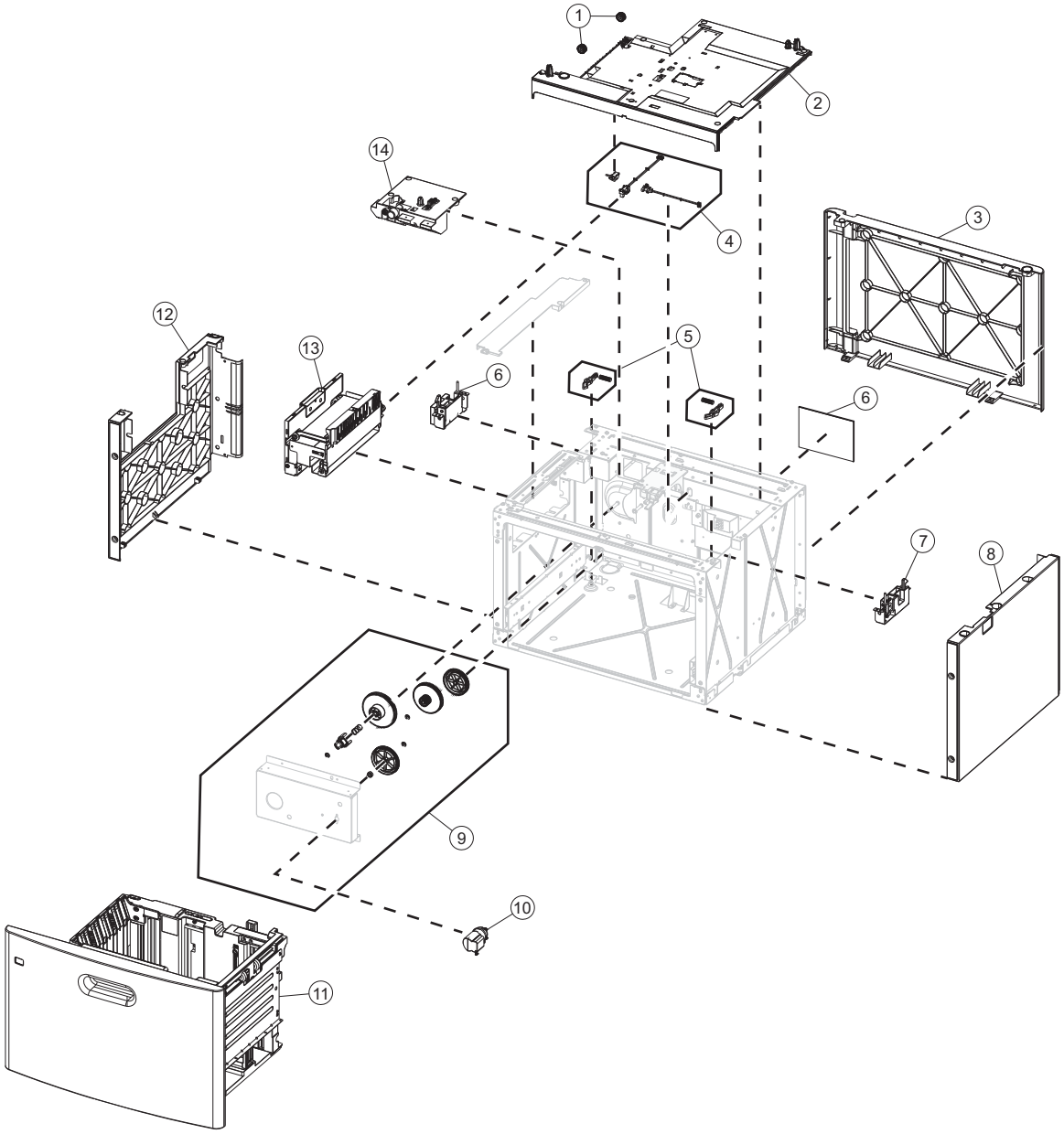
Assembly 13: Optional 2000-sheet high-capacity feeder (complete)



Assembly 13: Optional 2000-sheet high-capacity feeder (complete)

Index	P/N	Units/ opt	Units/ FRU	Description	Removal procedure
13—1	40X6968	1	1	2000-sheet high-capacity feeder media tray option	N\A

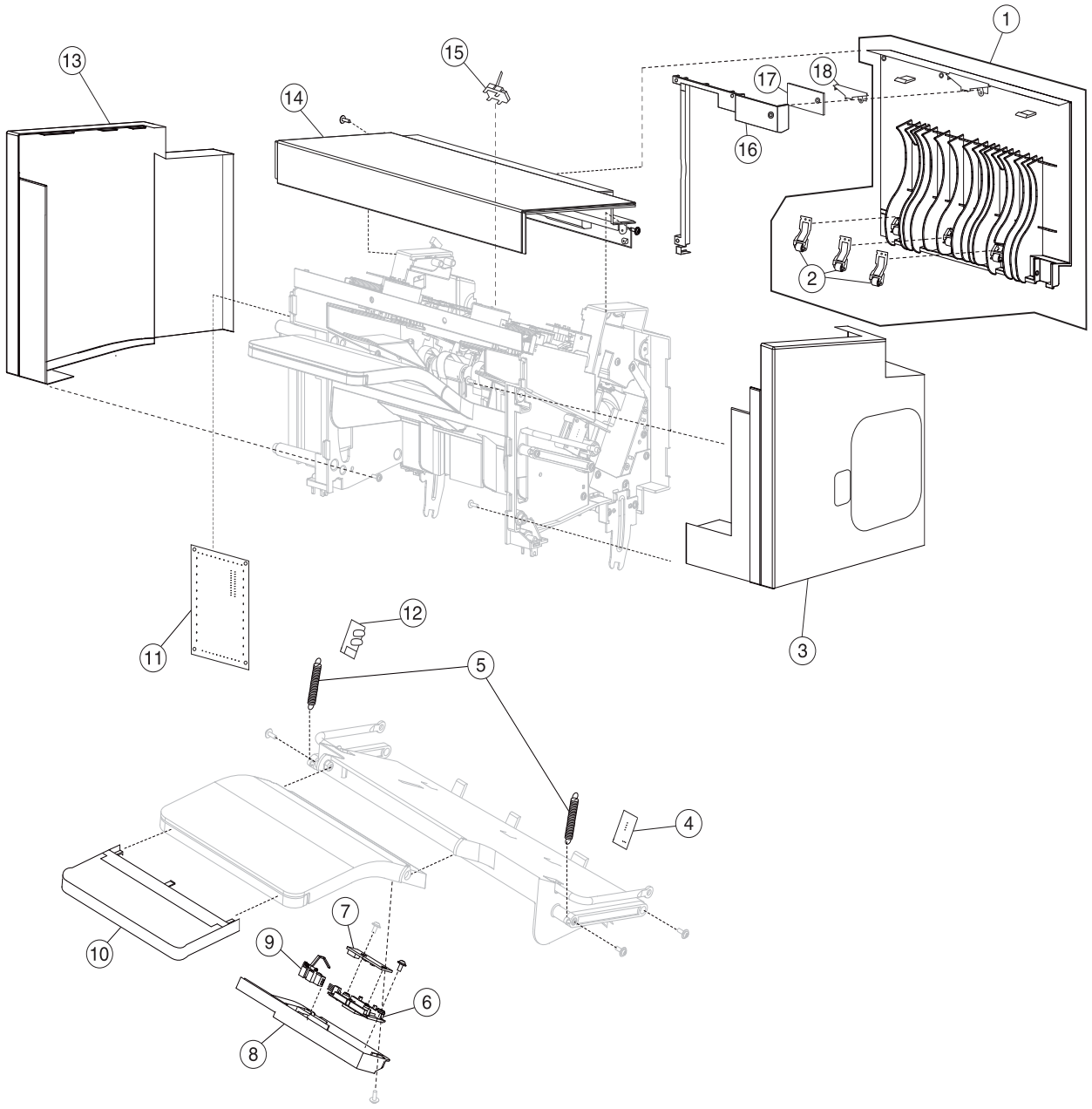
Assembly 14: Optional 2000-sheet high-capacity feeder



Assembly 14: Optional 2000-sheet high-capacity feeder

Index	P/N	Units/ opt	Units/ FRU	Description	Removal procedure
14—1	40X6275	2	2	2000-sheet high-capacity feeder pick roll assembly	**“2000-sheet high-capacity feeder pick roll assembly removal” on page 4-291**
2	40X6119	1	1	2000-sheet high-capacity feeder pick assembly	**“2000-sheet high-capacity feeder pick assembly removal” on page 4-285**
3	40X6972	1	1	2000-sheet high-capacity feeder rear cover	**“2000-sheet high-capacity feeder rear cover removal” on page 4-294**
4	40X6274	3	3	550-sheet/2000-sheet input option sensor pack	**“2000-sheet high-capacity feeder pass thru sensor removal” on page 4-283** and **“2000-sheet high-capacity feeder elevator home sensor removal” on page 4-254** and **“2000-sheet high-capacity feeder jam door clearance sensor removal” on page 4-264**
5	40X4585	2	1	Tray latch	**“2000-sheet high-capacity feeder bellcrank assembly removal” on page 4-249**
6	40X6276	1	1	2000-sheet high-capacity feeder controller card assembly	**“2000-sheet high-capacity feeder controller card assembly removal” on page 4-250**
7	40X6101	2	2	Anti-tip latch assembly	**“2000-sheet high-capacity feeder left anti-tip latch assembly removal” on page 4-268** and **“2000-sheet high-capacity feeder right anti-tip latch assembly removal” on page 4-296**
8	40X6971	1	1	2000-sheet high-capacity feeder right cover	**“2000-sheet high-capacity feeder right side cover removal” on page 4-298**
9	40X6486	1	1	2000-sheet high-capacity feeder lift drive gear pack	**“2000-sheet high-capacity feeder lift drive gear assembly removal” on page 4-272**
10	40X6969			2000-sheet high-capacity feeder lift drive motor assembly	**“2000-sheet high-capacity feeder lift drive motor assembly removal” on page 4-279**
11	40X6115	1	1	2000-sheet high-capacity feeder media tray assembly	**“2000-sheet high-capacity feeder media tray assembly removal” on page 4-282**
12	40X6970	1	1	2000-sheet high-capacity feeder left cover	**“2000-sheet high-capacity feeder left side cover removal” on page 4-270**
13	40X6118	1	1	2000-sheet high-capacity feeder jam clearance cover	**“2000-sheet high-capacity feeder jam clearance cover removal” on page 4-258**
14	40X6116	1	1	2000-sheet high-capacity feeder drive assembly	**“2000-sheet high-capacity feeder drive assembly removal” on page 4-251**

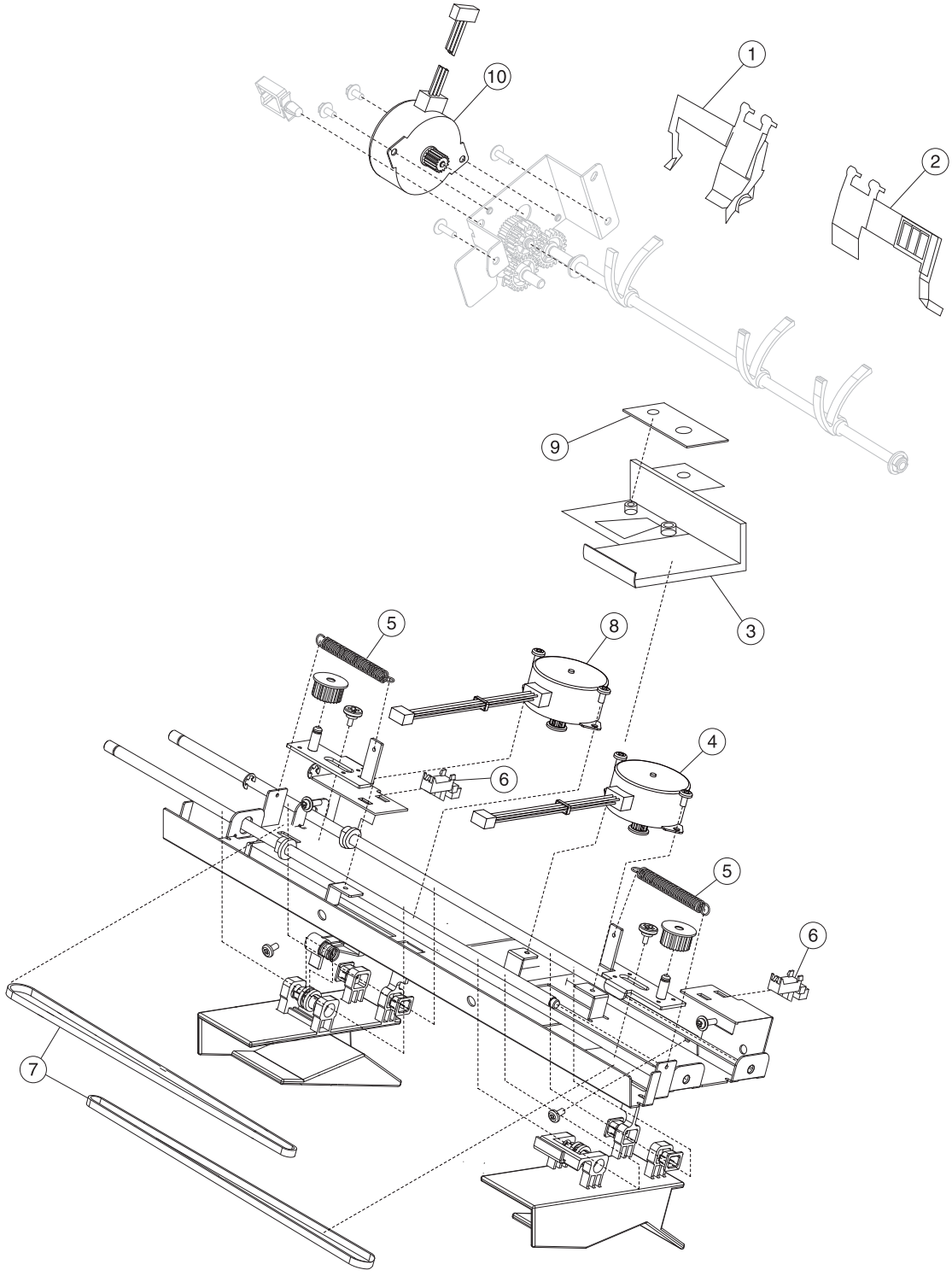
Assembly 15: Finisher assembly



Assembly 15: Finisher assembly

Asm-Index	Part number	Units/ mach	Units/ FRU	Description	Removal procedure
15—1	40X7234	1	1	Left access door assembly	**“Finisher or stacker left access door assembly removal” on page 4-330**
2	40X7238	1	1	Backup redrive roller	**“Finisher or stacker feed roller removal” on page 4-327**
3	40X7231	1	1	Rear cover	**“Finisher or stacker rear cover removal” on page 4-337**
4	40X5544	1	1	Sensor (bin full receive)	**“Finisher or stacker sensor (bin-full receive) removal” on page 4-339**
5	40X7240	1	1	Finisher bin-full spring	**“Finisher or stacker bin-full spring removal” on page 4-324**
6	40X5727	1	1	LED clear lens	**“Finisher or stacker output bin LED and LED lens removal” on page 4-334**
7	40X5545	1	1	Standard output bin LED	**“Finisher or stacker standard output bin LED and LED lens removal” on page 4-346**
8	40X7239	1	1	Bottom cover	**“Finisher or stacker bottom cover removal” on page 4-325**
9	40X4618	1	1	Sensor (finisher bin media present)	**“Finisher or stacker sensor (finisher bin media present) removal” on page 4-341**
10	40X4619	1	1	Output bin extension	**“Finisher or stacker output bin extension removal” on page 4-334**
11	40X7241	1	1	Finisher controller card assembly	**“Finisher or stacker controller card assembly removal” on page 4-326**
12	40X4626	1	1	Sensor (bin full send)	**“Finisher or stacker sensor (bin-full send) removal” on page 4-340**
13	40X7232	1	1	Front cover	**“Finisher or stacker front cover removal” on page 4-328**
14	40X7233	1	1	Top cover	**“Finisher or stacker top cover removal” on page 4-350**
15	40X5906	1	1	Sensor (stapler pass thru)	**“Finisher sensor (stapler pass thru) removal” on page 4-343**
16	40X7237	1	1	Beacon housing	**“Finisher or stacker access door beacon LED and beacon housing removal” on page 4-323**
17	40X7236	1	1	Beacon clear lens	**“Finisher or stacker left access door assembly removal” on page 4-330**
18	40X7235	1	1	Left access beacon	**“Finisher or stacker access door beacon LED and beacon housing removal” on page 4-323**

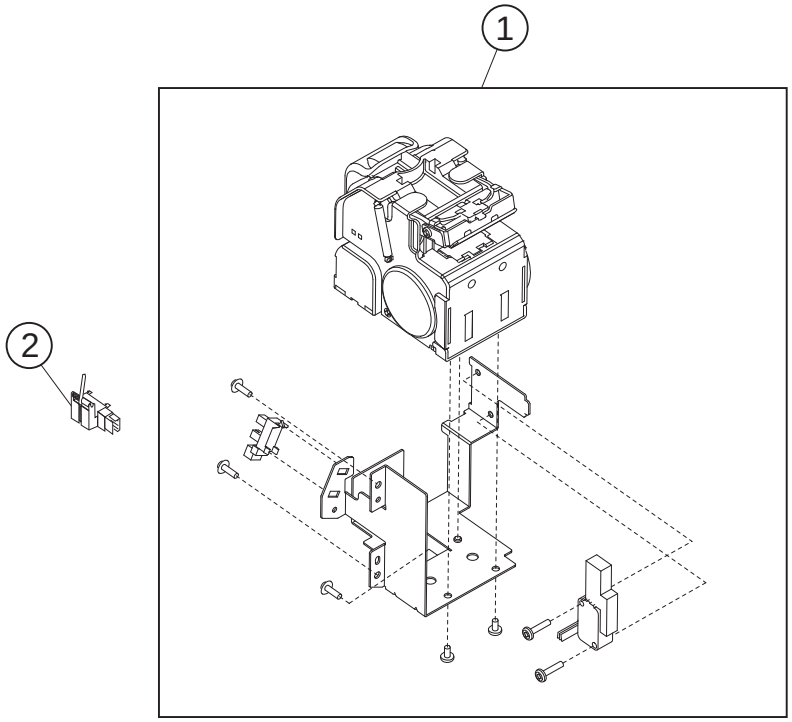
Assembly 15.1: Finisher assembly (continued)



Assembly 15.1: Finisher assembly (continued)

Asm-Index	Part number	Units/ mach	Units/ FRU	Description	Removal procedure
15.1—1	40X7244	1	1	Rear media stack flap	**“Finisher or stacker media stack flap and media stack flap actuator removal” on page 4-332**
2	40X7245	1	1	Front media stack flap	**“Finisher or stacker media stack flap and media stack flap actuator removal” on page 4-332**
3	40X7243	1	1	LED clear lens	**“Finisher or stacker standard output bin LED and LED lens removal” on page 4-346**
4	40X4622	1	1	Rear tamper motor assembly	**“Finisher or stacker tamper drive motor assembly removal” on page 4-348**
5	40X4624	1	1	Tamper recoil spring	**“Finisher or stacker tamper recoil spring removal” on page 4-349**
6	40X5909	1	1	Tamper front and rear paddle sensor	**“Finisher or stacker sensor (paddle HP) removal” on page 4-342**
7	40X4623	1	1	Tamper drive belt	**“Finisher or stacker tamper drive belt removal” on page 4-347**
8	40X4621	1	1	Front tamper motor assembly	**“Finisher or stacker tamper drive motor assembly removal” on page 4-348**
9	40X7242	1	1	Output beacon card	**“Finisher or stacker output bin LED and LED lens removal” on page 4-334**
10	40X4615	1	1	Paddle drive motor	**“Finisher or stacker paddle drive motor assembly removal” on page 4-336**

Assembly 16: Finisher stapler assembly

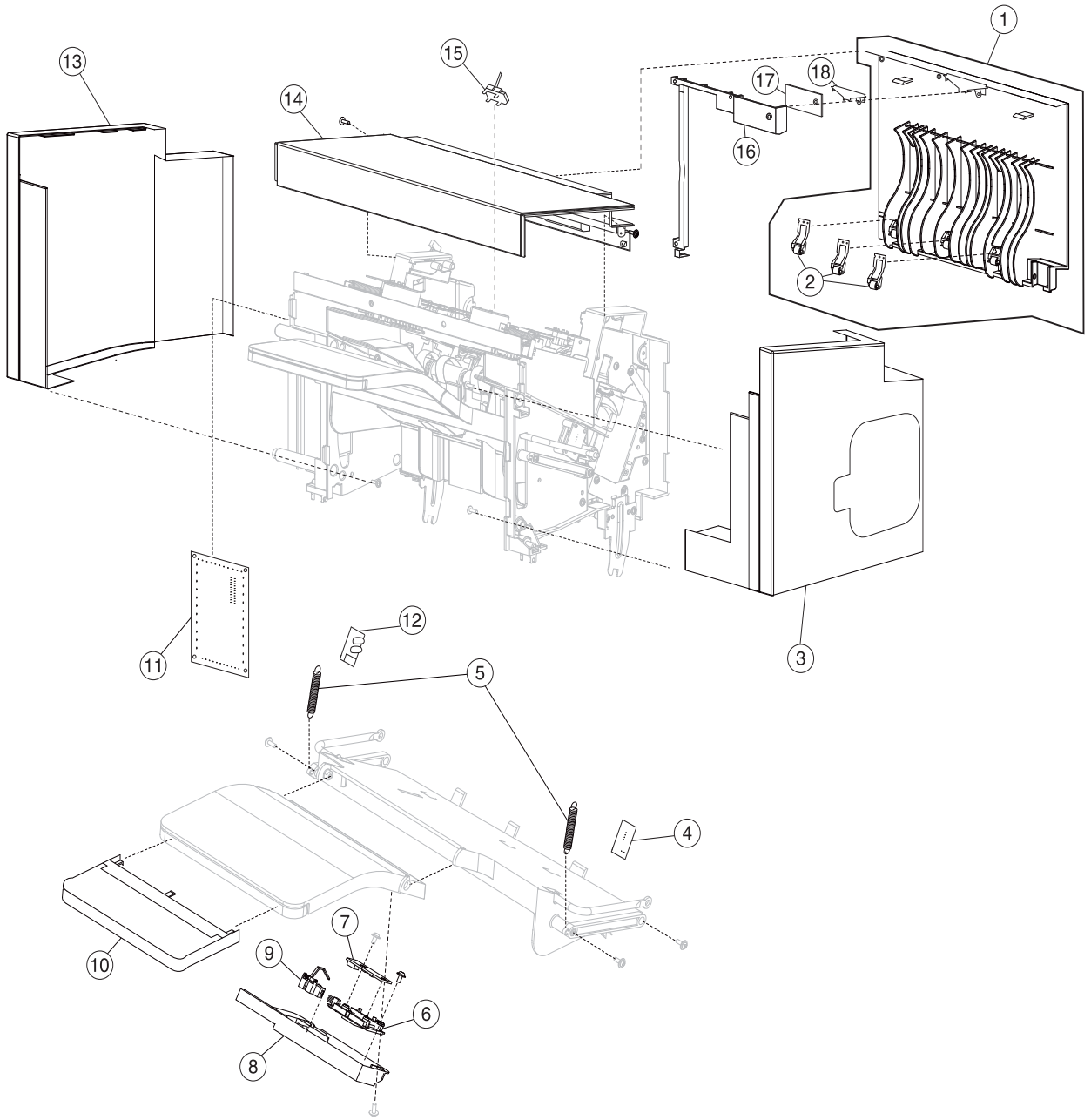


Assembly 16: Finisher stapler assembly

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Asm-Index	Part number	Units/mach	Units/FRU	Description	Removal procedure
16—1	40X7246	1	1	Stapler assembly	**“Finisher stapler unit assembly removal” on page 4-351**
2	40X5909	1	1	Sensor (media in stapler)	**“Finisher sensor (stapler pass thru) removal” on page 4-343**

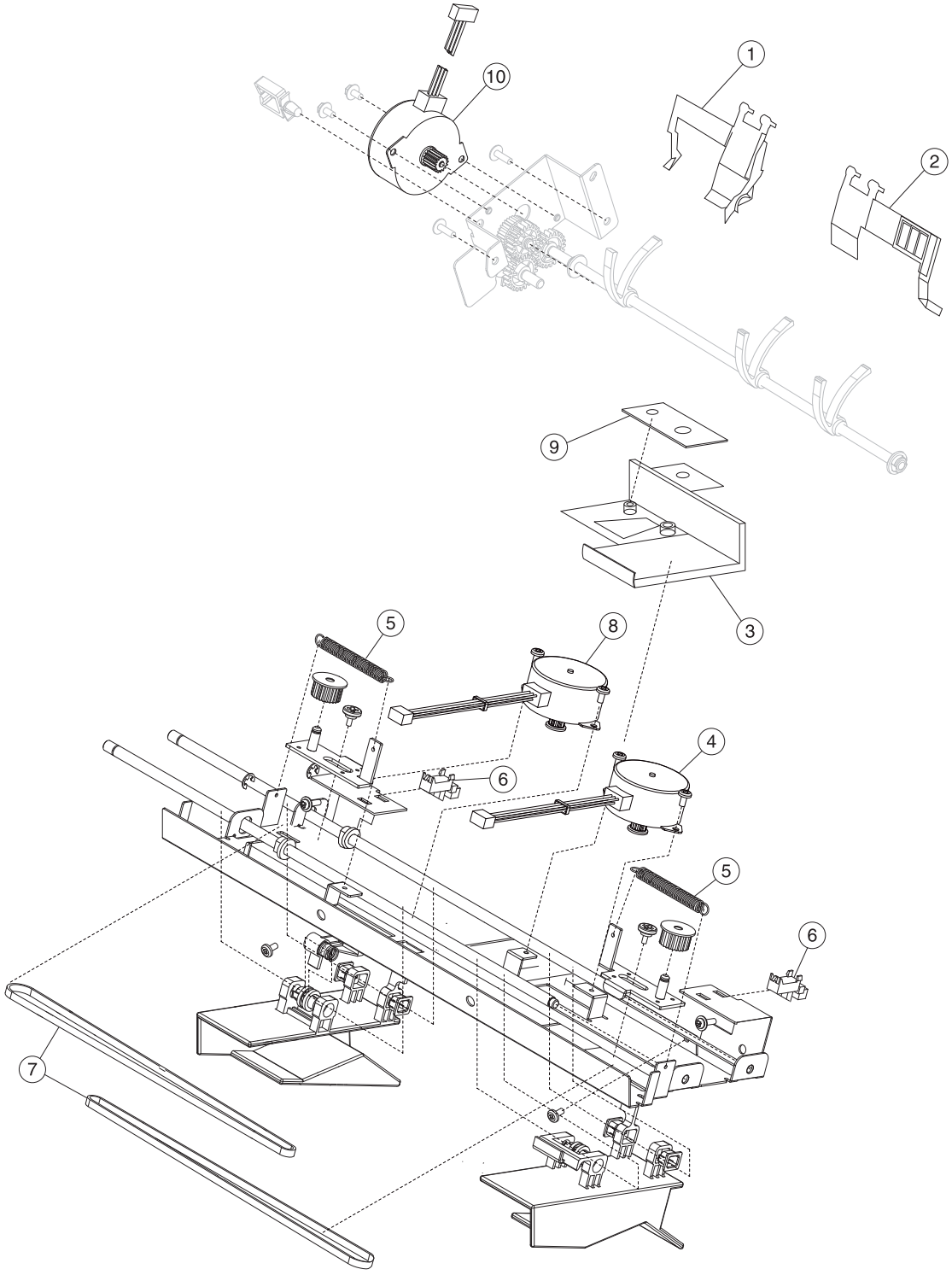
Assembly 17: High-capacity output stacker



Assembly 17: High-capacity output stacker

Asm-Index	Part number	Units/mach	Units/FRU	Description	Removal procedure
17—1	40X7234	1	1	Left access door assembly	**“Finisher or stacker left access door assembly removal” on page 4-330**
2	40X7238	1	1	Backup redrive roller	**“Finisher or stacker feed roller removal” on page 4-327**
3	40X7252	1	1	Rear cover	**“Finisher or stacker rear cover removal” on page 4-337**
4	40X5544	1	1	Sensor (bin full receive)	**“Finisher or stacker sensor (bin-full receive) removal” on page 4-339**
5	40X7240	1	1	Finisher bin-full spring	**“Finisher or stacker bin-full spring removal” on page 4-324**
6	40X5727	1	1	LED clear lens	**“Finisher or stacker output bin LED and LED lens removal” on page 4-334**
7	40X5545	1	1	Standard output bin LED	**“Finisher or stacker standard output bin LED and LED lens removal” on page 4-346**
8	40X7239	1	1	Bottom cover	**“Finisher or stacker bottom cover removal” on page 4-325**
9	40X4618	1	1	Sensor (finisher bin media present)	**“Finisher or stacker sensor (finisher bin media present) removal” on page 4-341**
10	40X4619	1	1	Output bin extension	**“Finisher or stacker output bin extension removal” on page 4-334**
11	40X7253	1	1	Stacker controller card assembly	**“Finisher or stacker controller card assembly removal” on page 4-326**
12	40X4626	1	1	Sensor (bin full send)	**“Finisher or stacker sensor (bin-full send) removal” on page 4-340**
13	40X7232	1	1	Front cover	**“Finisher or stacker front cover removal” on page 4-328**
14	40X7233	1	1	Top cover	**“Finisher or stacker top cover removal” on page 4-350**
15	40X5906	1	1	Sensor (stapler pass thru)	**“Finisher sensor (stapler pass thru) removal” on page 4-343**
16	40X7237	1	1	Beacon housing	**“Finisher or stacker access door beacon LED and beacon housing removal” on page 4-323**
17	40X7236	1	1	Beacon clear lens	**“Finisher or stacker left access door assembly removal” on page 4-330**
18	40X7235	1	1	Left access beacon	**“Finisher or stacker access door beacon LED and beacon housing removal” on page 4-323**

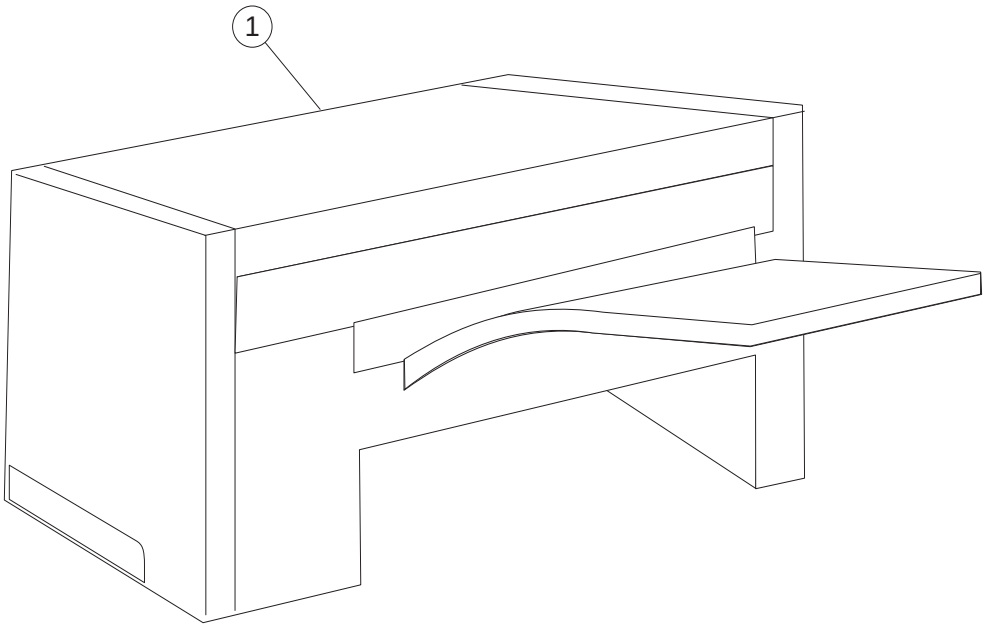
Assembly 17.1: High-capacity output stacker (continued)



Assembly 17.1: High-capacity output stacker (continued)

Asm-Index	Part number	Units/mach	Units/FRU	Description	Removal procedure
17.1—1	40X7244	1	1	Rear media stack flap	**“Finisher or stacker media stack flap and media stack flap actuator removal” on page 4-332**
2	40X7245	1	1	Front media stack flap	**“Finisher or stacker media stack flap and media stack flap actuator removal” on page 4-332**
3	40X7243	1	1	LED clear lens	**“Finisher or stacker standard output bin LED and LED lens removal” on page 4-346**
4	40X4622	1	1	Rear tamper motor assembly	**“Finisher or stacker tamper drive motor assembly removal” on page 4-348**
5	40X4624	1	1	Tamper recoil spring	**“Finisher or stacker tamper recoil spring removal” on page 4-349**
6	40X5909	1	1	Tamper front and rear paddle sensor	**“Finisher or stacker sensor (paddle HP) removal” on page 4-342**
7	40X4623	1	1	Tamper drive belt	**“Finisher or stacker tamper drive belt removal” on page 4-347**
8	40X4621	1	1	Front tamper motor assembly	**“Finisher or stacker tamper drive motor assembly removal” on page 4-348**
9	40X7242	1	1	Output beacon card	**“Finisher or stacker output bin LED and LED lens removal” on page 4-334**
10	40X4615	1	1	Paddle drive motor	**“Finisher or stacker paddle drive motor assembly removal” on page 4-336**

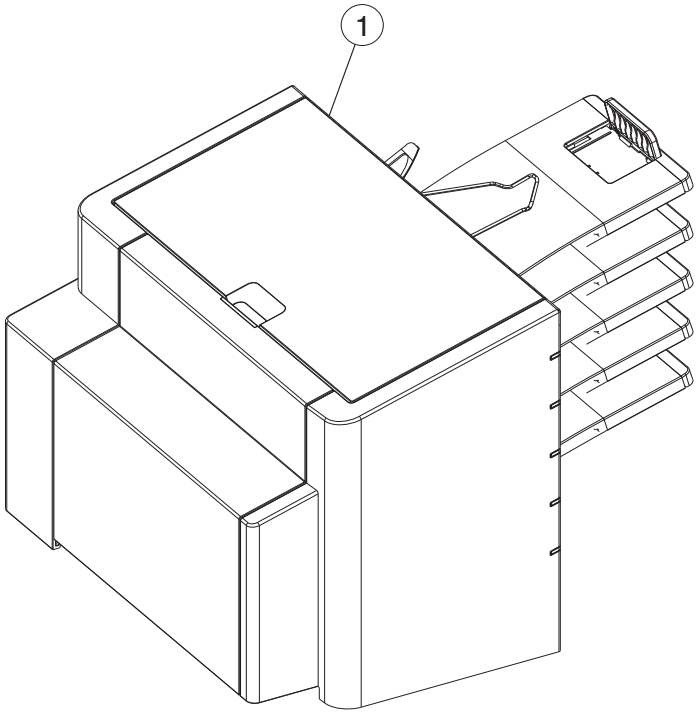
Assembly 18: Finisher/Stacker assembly (complete)



Assembly 18: Finisher/Stacker assembly (complete)

Asm-Index	Part number	Units/mach	Units/FRU	Description	Removal procedure
18—1	40X7230	1	1	Finisher assembly	N\A
18—1	40X7251	1	1	Stacker assembly	N\A

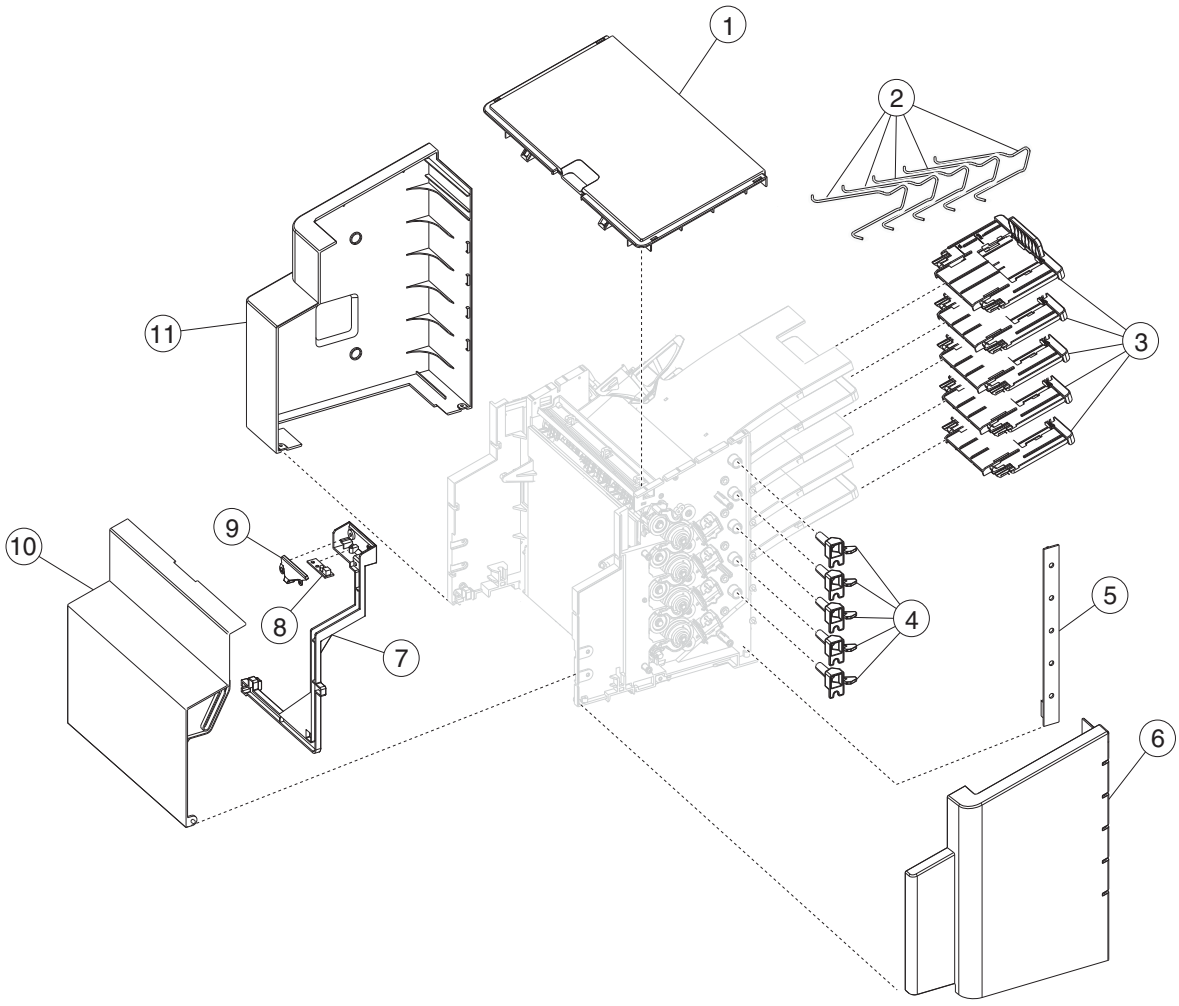
Assembly 19: 5-bin mailbox assembly (complete)



Assembly 19: 5-bin mailbox assembly (complete)

Index	P/N	Units/ mach	Units/ FRU	Description	Removal procedure
19—1	40X7254	1	1	5-bin mailbox total option	N\A

Assembly 20: 5-bin mailbox assembly (covers)

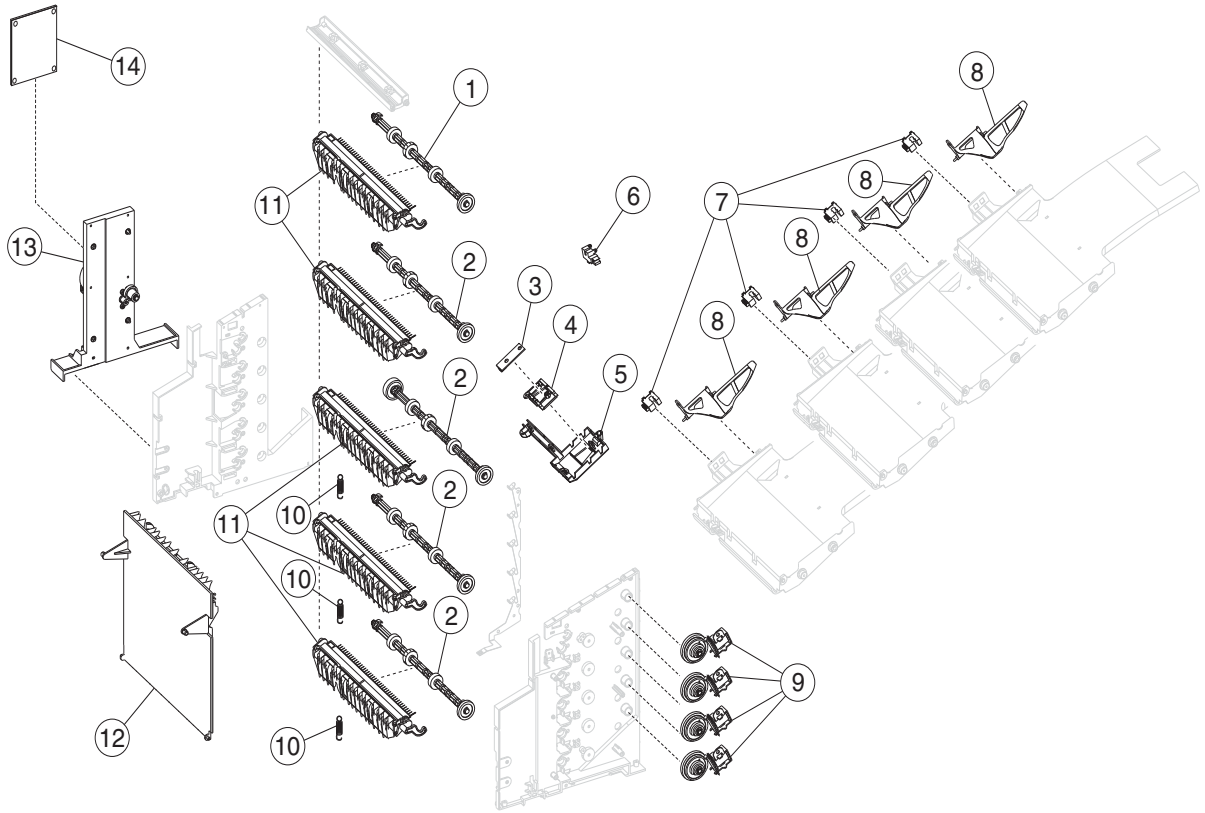


Assembly 20: 5-bin mailbox assembly (covers)

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Index	P/N	Units/ mach	Units/ FRU	Description	Removal procedure
20—1	40X7272	1	1	Top cover	**“5-bin mailbox top cover removal” on page 4-321**
2	40X7266	1	1	Output bin paper bail	**“5-bin mailbox output bin paper bail removal” on page 4-315**
3	40X7267	1	1	Output bin extension cover	**“5-bin mailbox tray extension removal” on page 4-322**
4	40X7257	1	1	Output bin light pipe	**“5-bin mailbox bin-full beacon card and light pipe removal” on page 4-303**
5	40X7256	1	1	LED card assembly	**“5-bin mailbox bin-full beacon card and light pipe removal” on page 4-303**
6	40X7255	1	1	Front cover	**“5-bin mailbox front cover removal” on page 4-309**
7	40X7261	1	1	LED jam cover	**“5-bin mailbox access door removal” on page 4-300**
8	40X4528	1	1	Scanner reference LED cable assembly	**“5-bin mailbox paper jam beacon removal” on page 4-317**
9	40X7247	1	1	Jam access light pipe	**“5-bin mailbox paper jam beacon removal” on page 4-317**
10	40X7259	1	1	Jam access door assembly • LED clear lens	**“5-bin mailbox access door removal” on page 4-300**
11	40X7270	1	1	Rear cover	**“5-bin mailbox rear cover removal” on page 4-318**

Assembly 21: 5-bin mailbox assembly (interior)

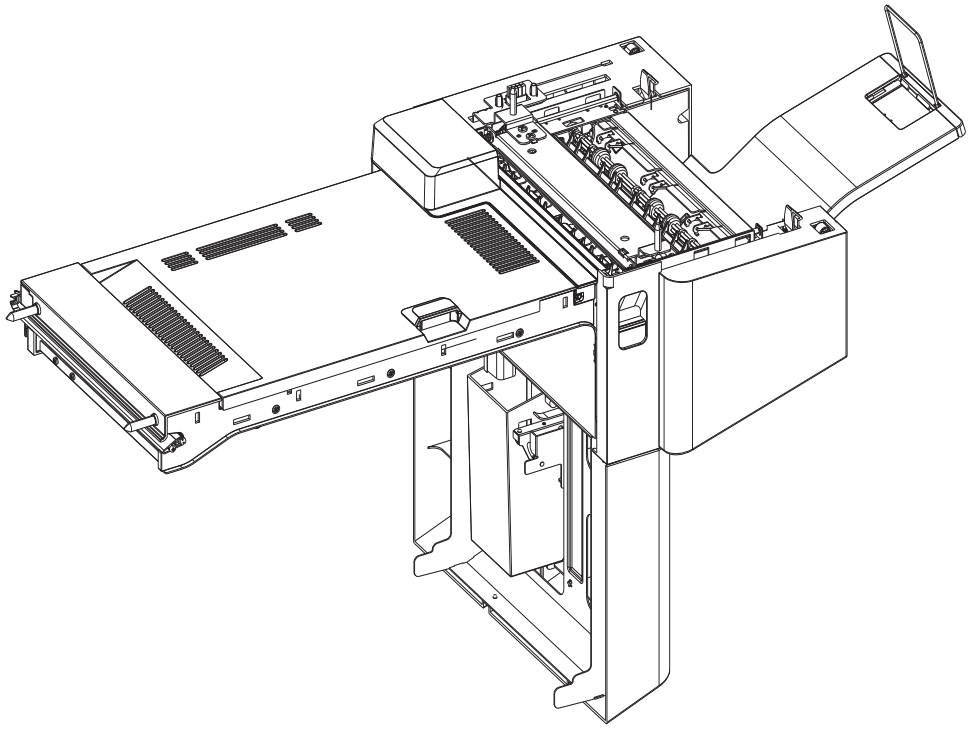


Assembly 21: 5-bin mailbox assembly (interior)

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Index	P/N	Units/ mach	Units/ FRU	Description	Removal procedure
21—1	40X7263	1	1	Top output bin roller	**“5-bin mailbox roller removal” on page 4-319**
2	40X7264	1	1	1 thru 4 output bin roller	**“5-bin mailbox roller removal” on page 4-319**
3	40X5545	4	1	Output bin LED	**“5-bin mailbox cave beacon removal” on page 4-304**
4	40X5727	1	1	LED clear lens	**“5-bin mailbox cave beacon removal” on page 4-304**
5	40X4647	1	1	Output bin LED bracket	**“5-bin mailbox cave beacon removal” on page 4-304**
6	40X7265	1	1	Pasthru sensor	**“5-bin mailbox sensor (pass thru) assembly removal” on page 4-320**
7	40X4633	1	1	Bin full sensor	**“5-bin mailbox output bin sensors removal” on page 4-316**
8	40X7268	1	1	Bin full flag	**“5-bin mailbox media bin full actuator removal” on page 4-311**
9	40X4635	4	1	Deflector gate solenoid	**“5-bin mailbox diverter solenoid removal” on page 4-306**
10	40X5750	4	1	Diverter spring	**“5-bin mailbox diverter spring removal” on page 4-307**
11	40X7262	5	1	Output bin deflector	**“5-bin mailbox output bin deflector removal” on page 4-313**
12	40X7260	1	1	Backup roll plate	**“5-bin mailbox backup roll plate assembly removal” on page 4-302**
13	40X7269	1	1	Feed motor with bracket	**“5-bin mailbox feed motor with plate removal” on page 4-307**
14	40X7271	1	1	Controller card	**“5-bin mailbox controller card removal” on page 4-305**

Assembly 22: HTU (complete)



Assembly 22: HTU (complete)

Index	P/N	Units/ mach	Units/ FRU	Description	Removal procedure
22—1	40X7275	1	1	Redrive unit, total asm	N\A

Assembly 23: Miscellaneous

Previous
Next
Go Back

P/N	Units/ FRU	Description	Removal procedure
40X7163	5	Sensors parts packet, including • Waste toner sensors (2) • Paper auto size sensor • Paper path sensor (not shown) • Bin-full sensor (not shown)	**“Waste toner sensor removal” on page 4-154** **“Waste toner full sensor removal” on page 4-158** **“Paper auto-size sensor removal” on page 4-111** **“Staging deflector assembly removal” on page 4-134** **“Bin-full sensor removal” on page 4-34**
40X7167	1	EP and cartridge cables parts packet, including • BLDC K & ITU cable • BLDC Y & Fuser cable • BLDC C & M cable • M+K Cart Metering cable • C+Y Cart Metering cable	For cable descriptions and locations, see **“Cable and thermistor location table” on page 7-56**.
40X7168	1	Cables parts packet, including • Paper path • MPF sensor • Tray 1 machine side • Duplex motor • Staging motor • Thermistor & redrive • HVPS cable • Option bottom • Ground • Duplex door beacon side • Ref edge ground • Blower & right side waste • Duplexer • Waste toner full	
40X7170	1	Beacon cables parts packet, including • Waste toner • Bin-full & output beacon • Front door beacon	
40X7171	1	Thermistors parts packet, including • Thermistor—weather station compensator • Fuser thermal guide assembly	
40X7173	140	Screws and fasteners parts packet	For screw descriptions and locations, see **“Screw and retainer identification table” on page 7-60**.
40X7175	24	Cable ties parts packet	N/A
40X7176	5	Cable retainer parts packet	N/A
40X7177	5	Cable retainer parts packet (holds thermistor on LVPS)	N/A
40X7199	5	OP panel cables parts packet, including • Front host USB cable • Panel USB Hub - H cable • AIO cavelight cable • 24-pin UICC cable • 30-pin UICC LCD cable	For cable descriptions and locations, see **“Cable and thermistor location table” on page 7-56**.

Assembly 24: Internal options

Index	P/N	Units/ mach	Units/ FRU	Description
NS		1	1	IPDS SCS card
NS		1	1	Forms & bar code card
NS		1	1	PRESCRIBE card
NS	40X4819	1	1	Serial interface adapter
NS	40X4823	1	1	Parallel 1284-B SERI adapter
NS	40X4826	1	1	MarkNet™ N8120 10/1000 card
NS	40X4827	1	1	MarkNet N8130 10/1000 F adapter
NS	40X5301	1	1	256MB DDR DRAM DIMM
NS	40X5302	1	1	512MB DDR DRAM DIMM
NS	40X5303	1	1	1GB DDR DRAM DIMM
NS	40X5704	1	1	256MB NAND flash card
NS	40X5969	1	1	Korean font card
NS	40X5970	1	1	Simplified Chinese font card
NS	40X5971	1	1	Traditional Chinese font card
NS	40X5972	1	1	Japanese font card
NS	40X6337	1	1	Arabic font card
NS	40X7055	1	1	MarkNet N8110 fax card
NS	40X7058	1	1	160GB hard drive
NS	40X7062	1	1	MarkNet N8250 802.11g US server
NS	40X7063	1	1	MarkNet N8250 802.11g RW server

Cable and thermistor location table

Using the following table, locate the part you need to replace, and then go to the listed removal to find instructions for accessing the cable or thermistor.

Cable location table

P/N	item number	Description	Location	To access
40X7165	10J0938	Fuser system card and LVPS cable	Fuser • System board connector: JFSR1	See **"Fuser system card and LVPS cable removal" on page 4-59**.
40X7166	10J0944	ITM autoconnect cable	Right frame • System board connector: JITM1	See **"ITU autoconnect removal" on page 4-69**.
40X7167	10J0930	BLDC K & ITU cable	EP drive • System board connector: JKI1	See **"EP drive assembly removal" on page 4-50**. **Note:** Use cable ties to attach the toroids to the new cables as you replace them.
	10J0931	BLDC Y & fuser cable	EP drive • System board connector: JYF1	
	10J0932	BLDC C & M cable	EP drive • System board connector: JCM1	
	10J0940	M+K cartridge metering cable	Cartridge memory blocks • System board connector: JCMKM1	See **"Cartridge metering cable removal" on page 4-42**.
	10J0955	C+Y cartridge metering cable	Cartridge memory blocks • System board connector: JCMCY1	

Cable location table

P/N	item number	Description	Location	To access
40X7168	10J0927	Paper path cables	Deflector assembly • System board connector: JPP2	1. Remove the lower frame cable cover. See **“Lower frame cable cover removal” on page 4-20**. 2. Remove the staging deflector assembly. See **“Staging deflector assembly removal” on page 4-134**. 3. Remove the LVPS to route the cable through the hole in the lower frame. See **“Low-voltage power supply (LVPS) removal” on page 4-77**.
	10J0929	MPF sensor cable	Multipurpose feeder • System board connector: JMPF1	1. Remove the MPF sensor plate assembly. See **“MPF sensor plate assembly removal” on page 4-102**. 2. Remove the LVPS exit duct to route the cable through the hole in the lower frame. See **“LVPS exit duct removal” on page 4-80**.
	10J0933	Autocomp W2W cable	Behind Tray 1, between MPF redrive gears and rear frame • System board connector: JTRAY1	See **“MPF drive assembly removal” on page 4-100**.
	10J0935	Duplex motor cable	Left access door • System board connector: JDUPL1	See **“Staging paper path reference edge assembly removal” on page 4-136**.
	10J0936	Staging motor cable	Left access door System board connector: JSTAG1	See **“Staging deflector assembly removal” on page 4-134**. **Note:** Use a cable tie to attach the toroid to the new cable and frame bracket.

Cable location table

P/N	item number	Description	Location	To access
40X7168 (Cont.)	10J0937	Thermistor & redrive cable	Behind fuser System board connector: JFSRD1	See **"Fuser thermistor removal" on page 4-62**.
	10J0939	HVPS cable	Under HVPS board • System board connector: JHVPS1	See **"High-voltage power supply (HVPS) board removal" on page 4-63**.
	10J0942	Input option cable	Bottom frame • System board connector: JIOPT1	1. Remove the bottom plate of the printer. See steps 1 through 5 of **"MPF breakaway assemblies removal" on page 4-91**. 2. Push the cable up through the frame. 3. Stand the printer back up, and remove the cable **Note:** Use cable ties to attach the toroid to the new cable.
	10J0947	Ground strap cable	Front system board cage support above LVPS	1. Remove the rear cover. See **"Rear cover removal" on page 4-23**. 2. Remove the strap from the top of the LVPS.
	10J0948	Duplex door beacon cable, side	Behind LVPS exit duct, through left rear frame to left access door • System board connector: JDDLED1	See **"LVPS exit duct removal" on page 4-80** and **"Left cover removal" on page 4-16**.
	10J0949	Ref edge ground cable	Staging paper path reference edge	See **"Staging paper path reference edge assembly removal" on page 4-136**.
	10J0951	Paper path redrive sensor cable	Paper path redrive • System board connector: JRDR1	See **"Paper path redrive assembly with sensors removal" on page 4-112**.
	10J0953	Blower & right side waste cable	Behind blower, on top frame under printhead access cover • System board connector: JBLW1	See **"Printhead access cover removal" on page 4-22**.
	10J0957	Duplex unit cable	Behind LVPS exit duct, through left rear frame to left access door • System board connector: JDP1	See **"LVPS exit duct removal" on page 4-80** and **"Left cover removal" on page 4-16**.
	10J0967	Waste toner full cable	• System board connector: JWTBF1	See **"Waste toner full cable removal" on page 4-157**.
40X7170	10J0943	Waste toner cable	Under lower frame cable cover • System board connector: JWTB1	See **"Waste toner cable removal" on page 4-155**.
	10J0950	Bin-full sensor cable	Top cover • System board connector: JTCVR1	See AIO cavelight cable in **"OP panel cables removal" on page 4-106**.
	10J0960	Front door beacon cable	Waste toner left cover	See **"Waste toner left cover removal" on page 4-31**.

Cable location table

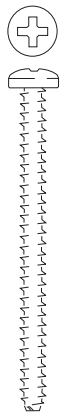
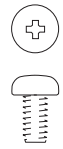
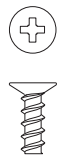
P/N	item number	Description	Location	To access
40X7171	10J0974	Weather station compensation thermistor	On LVPS • System board connector: JCCT2	See step 5 of**"Low-voltage power supply (LVPS) removal" on page 4-77**.
	10J1370	Fuser thermal guide assembly	Behind fuser	See **"Fuser thermistor removal" on page 4-62**.
40X7189	10J4303	Cave light/Output bin cable	Connects to bin-full sensor and to cave light cable under scanner left side front cover • System board connector: JTCVR1	1. Disconnect the cable from the bin full sensor. See **"Bin-full sensor removal" on page 4-34**. 2. Disconnect the cable from under the scanner left side covers. See **"Scanner left side front cover removal" on page 4-204** and **"Scanner left side rear cover removal" on page 4-204**.
40X7199	10J0963	Front host USB cable	OP panel housing to UICC card	**"Front USB cable removal" on page 4-55**
	10J0971	Panel USB Hub - H cable	Under flatbed scanner assembly • System board connector: JFMUSB	**"OP panel cables removal" on page 4-106**
	10J4302	AIO cavelight cable	Connects to the OP panel housing and to cable 10J4303 under the scanner left side covers.	
	10J4308	24-pin UICC cable	Under flatbed scanner assembly • System board connector: J1	
	17X0054	30-pin UICC LCD cable	OP panel UICC card to display	
40X7199		ADF beacon LED cable	On the bottom of the ADF document tray	**"ADF beacon cable removal" on page 4-163**

Screw and retainer identification table

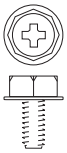
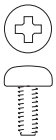
The following table contains screw and fastener descriptions, locations, and quantities necessary to service the printer. Pay careful attention to each screw type location when doing removals. You must install the correct screw type in each location during reassembly.

Sizes are as close to actual as possible, as long as the printout is not scaled or resized.

Screw identification table

P/N	Screw type	Location	Qty
10B1580 	#6 1.75” Panhead	Main fan to exit cooling fan duct	2
		LVPS fan to LVPS exit duct	2
10J1046 	3 x 5 mm	Pads to bottom plate	6
		Bottom plate to cartridge rails	2
10J1733 	M3.5 x 10 mm Flathead	ITU DS roller plate to paper path staging assembly	2
10J3568 	SEMS Machine Panhead	Printhead brackets to frame	6
27S2839 	Taptite M3 x 6 mm slotted hex black	System board shield to system board cage	6

Screw identification table (continued)

P/N	Screw type	Location	Qty
3002501 	Flange M3.0 x 6 mm	Scanner interface card to flatbed	4
88A0011 	Machine M2 x 0.4–6G 3LG	Operator panel display bracket to display	6
88A0212 	Taptite Metal M3.5 x 6 mm PAN	AIO flat cable bracket to frame	3
		AIO left support frame to frame	8
		AIO LS rear bracket to frame	3
		AIO rear support frame to frame	4
		AIO right support frame to frame	4
		AIO RS rear bracket to frame	3
		Datum guide/thermister assembly to frame	4
		Cartridge contact block assembly to front frame	3
		Cartridge memory block assemblies to rear frame, 2 per assembly	8
		Cartridge rail assemblies to frame, left and right, 1 per rail	8
		EP drive assembly to frame	8
		Exit cooling fan duct assembly to frame	1
		Flatbed scanner assembly to frame	5
		Fuser drive assembly to frame	3
		Ground cables to frame	4
		LVPS to frame	3
		Media tray rails to bottom plate, 1 per rail	2
		Operator panel assembly to frame	1
		Post to HVPS board and frame plate above it	2
		Rear cover to system board cage and frame	2
		Rear upper cover to rear cover	2
		Redrive motor to frame	2
		Rear cover to rear frame	3
		Rear upper cover to rear cover and frame	3
		Right cover to lower front frame	1
		System board cage to support	1
		System board cage to upper frame	2
		Top cover to top frame	3
		Waste toner left cover	5

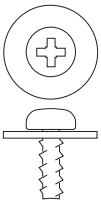
Screw identification table (continued)

P/N	Screw type	Location	Qty
88A0232 	Taptite M3 x 6 mm MTF PAN	Cable cover to system board cage	2
		Fax ports on system board to cage	2
		Printer hard drive to system board	2
		Operator panel assembly to flatbed and frame	5
		Scanner front cover to flatbed	1
		Scanner left side rear cover to flatbed	1
		Scanner rear cover to flatbed	4
		Scanner right side cover to flatbed	1
		System board to cage	13
		System board upper shield to system board cage	4
88A0313 	Plastite M2.9 x 8 mm PAN	Beacon cover to frame	1
88A0322 	Plastite ROLN 3.5 x 6 mm	Scanner right side cover to AIO scanner rear cover	1
88A0323 	Plastite M3.5 x 8 mm PAN	AIO front lower cover to top cover	4
		AIO LS rear frame to rear frame	8
		AIO RR strile plate to rear frame	2
		AIO RS rear frame to rear frame	5
		AIO strike plates to lower frame	2
		ACM bias spring to lower frame	1
		Auto-connect harness to frame	7
		Bottom plate to frame	7
		Contact bracket to HVPS board	3
		Cable retainers to frame	4
		Cartridge blower assembly to front frame	1
		Exit cooling fan duct to frame	3
		Front access door beacon cover to waste toner left cover	2
		Front access door pivot to top cover	3
		Interlock housing assembly	3
		ITU block assembly to frame	3
		Left cover to top cover and left frame	2
		Left frame cable cover	1
		Lower left cover to frame	2
		LVPS exit duct to frame	2

Screw identification table (continued)

P/N	Screw type	Location	Qty
88A0323  (Cont.)	Plastite M3.5 x 8 mm PAN	LVPS to frame	2
		Media rails, left and right, to front lower frame	2
		MPF breakaway assembly, front	3
		MPF breakaway assembly, rear	2
		MPF cable cover to lower frame	2
		MPF connector cover to duplex assembly	3
		MPF drive assembly to frame	3
		Operator panel bottom cover to assembly	4
		Operator panel display bracket to operator panel cover	4
		Printhead access cover to top cover	3
		Rear cover to frame	2
		Rear upper cover to rear cover	1
		Redrive assembly	3
		Right cover to frame	5
		Scanner left side front cover to operator panel	1
		Scanner rear cover to frame	1
		Speaker to top cover	1
		Top cover to left cover and front frame	3
		Tray beacon cable plate assembly	4
		UICC card to operator panel cover	4
		Waste toner left cover to frame	3
88A0329 	M3.5 x 30 mm	Paper path staging assembly to frame	2
88A0412 	PL ROLN 2.9 x 5.2 mm	Pick tires to Tray 1 paper pick mechanism	2

Screw identification table (continued)

P/N	Screw type	Location	Qty
88A0425 	SEMS PL ROLN 3.5 x 11 mm	Duplex unit to left access door	1
1126827 	E-clip M2	Left access door rear piston to door assembly	1
1126829 	E-clip M4	Fuser drive gear	1
		Left access door front piston to frame and door assembly	3
		Left access door rear piston to frame	1
		Redrive train	1
1126830 	E-clip M5	Bellcrank daturn, front and rear	2
		MPF pivot shaft	2
		MPF pulley	1
		Spur 17T Helicai gear	2
1126831 	E-clip M6	MPF redrive gear	2

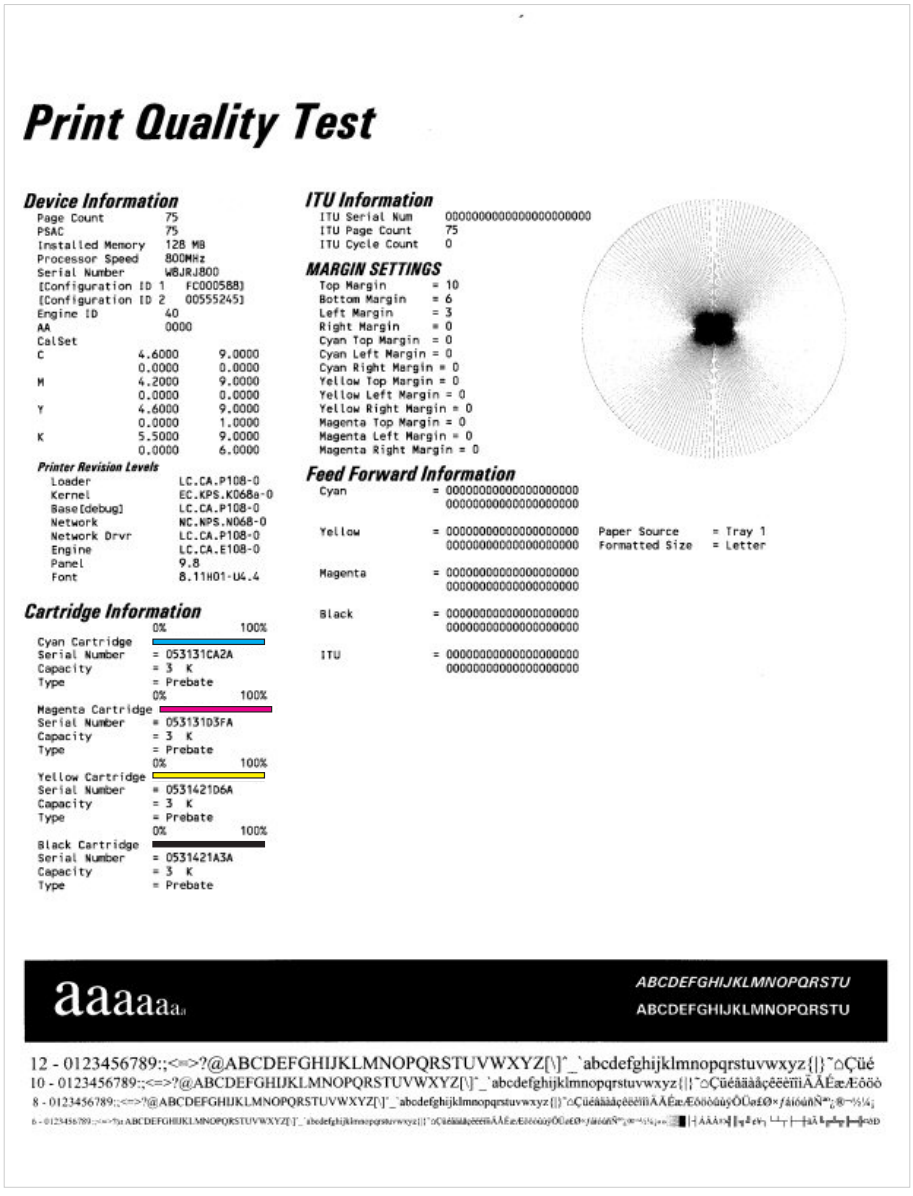
Appendix A—Print samples

The following pages represent some of the pages available in various menus. While they are as close as possible to what you will see, variations in printing may result from individual user printer settings, media, and printer alignment.

Print tests

Print Quality Pages—Title page (total of five)

From the Diagnostics menu, select **PRINT TESTS** > **Print Quality Pages**.



Print Quality Test

Device Information

Page Count	75	
PSAC	75	
Installed Memory	128 MB	
Processor Speed	800MHz	
Serial Number	W8JRJ800	
[Configuration ID 1	FC000588]	
[Configuration ID 2	00555245]	
Engine ID	40	
AA	0000	
CalSet		
C	4.6000	9.0000
	0.0000	0.0000
M	4.2000	9.0000
	0.0000	0.0000
Y	4.6000	9.0000
	0.0000	1.0000
K	5.5000	9.0000
	0.0000	6.0000

Printer Revision Levels

Loader	LC.CA.P108-0
Kernel	EC.KPS.K068a-0
Base[debug]	LC.CA.P108-0
Network	NC.NPS.N068-0
Network Drvr	LC.CA.P108-0
Engine	LC.CA.E108-0
Panel	9.8
Font	8.11H01-U4.4

Cartridge Information

Cyan Cartridge (0% 100%)
Serial Number = 053131CA2A
Capacity = 3 K
Type = Prebate

Magenta Cartridge (0% 100%)
Serial Number = 053131D3FA
Capacity = 3 K
Type = Prebate

Yellow Cartridge (0% 100%)
Serial Number = 053142106A
Capacity = 3 K
Type = Prebate

Black Cartridge (0% 100%)
Serial Number = 0531421A3A
Capacity = 3 K
Type = Prebate

ITU Information

ITU Serial Num	000000000000000000000
ITU Page Count	75
ITU Cycle Count	0

MARGIN SETTINGS

Top Margin	= 10
Bottom Margin	= 6
Left Margin	= 3
Right Margin	= 0
Cyan Top Margin	= 0
Cyan Left Margin	= 0
Cyan Right Margin	= 0
Yellow Top Margin	= 0
Yellow Left Margin	= 0
Yellow Right Margin	= 0
Magenta Top Margin	= 0
Magenta Left Margin	= 0
Magenta Right Margin	= 0

Feed Forward Information

Cyan = 000000000000000000000 000000000000000000000
Yellow = 000000000000000000000 000000000000000000000
Magenta = 000000000000000000000 000000000000000000000
Black = 000000000000000000000 000000000000000000000
ITU = 000000000000000000000 000000000000000000000

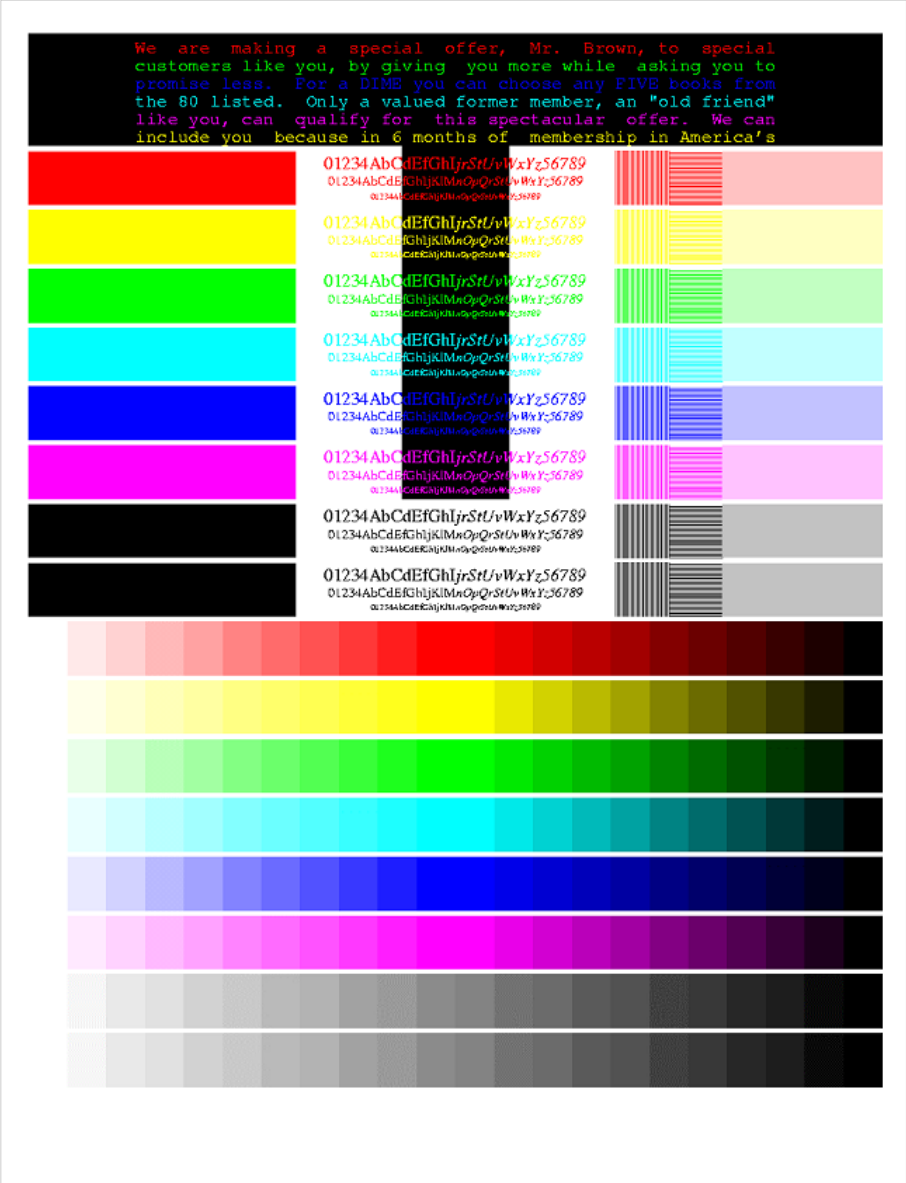
Paper Source = Tray 1
Formatted Size = Letter

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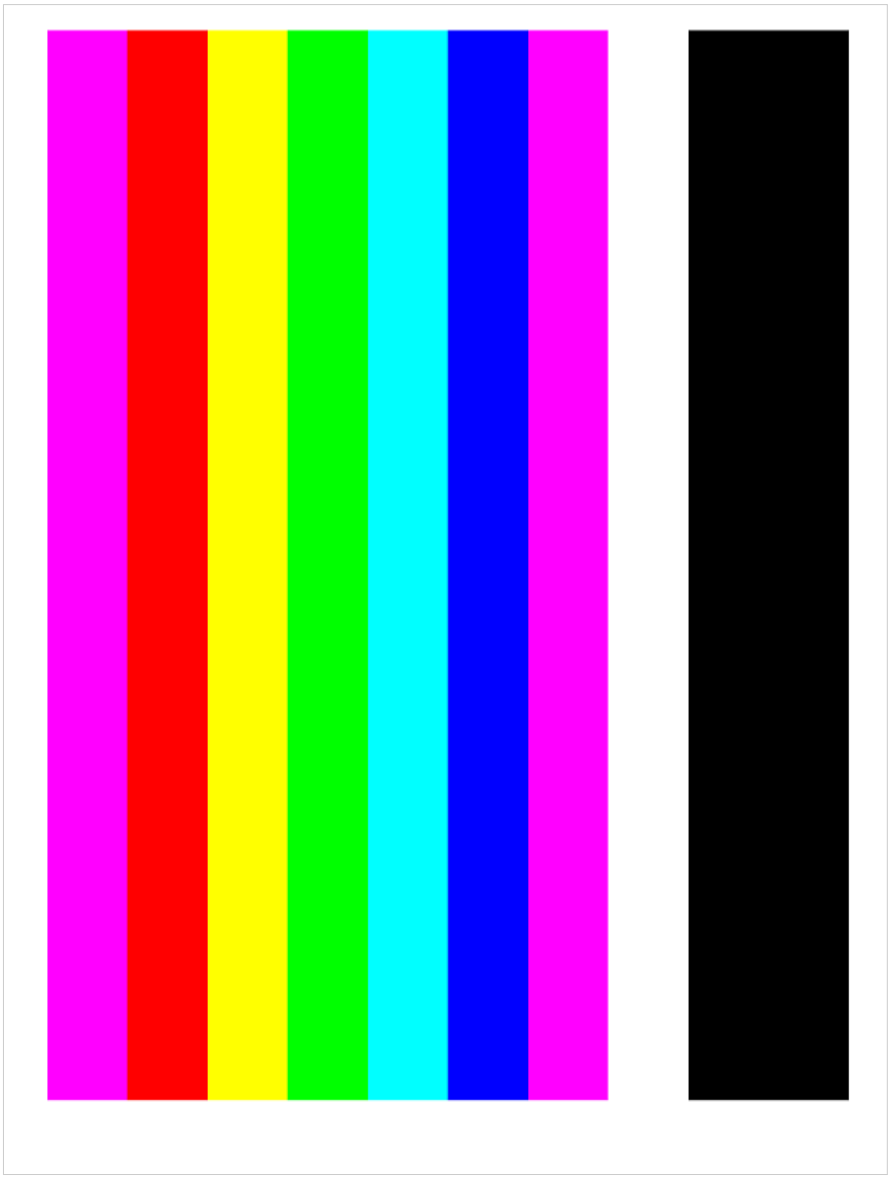
ABCDEFGHIJKLMNOPQRSTU
ABCDEFGHIJKLMNOPQRSTU

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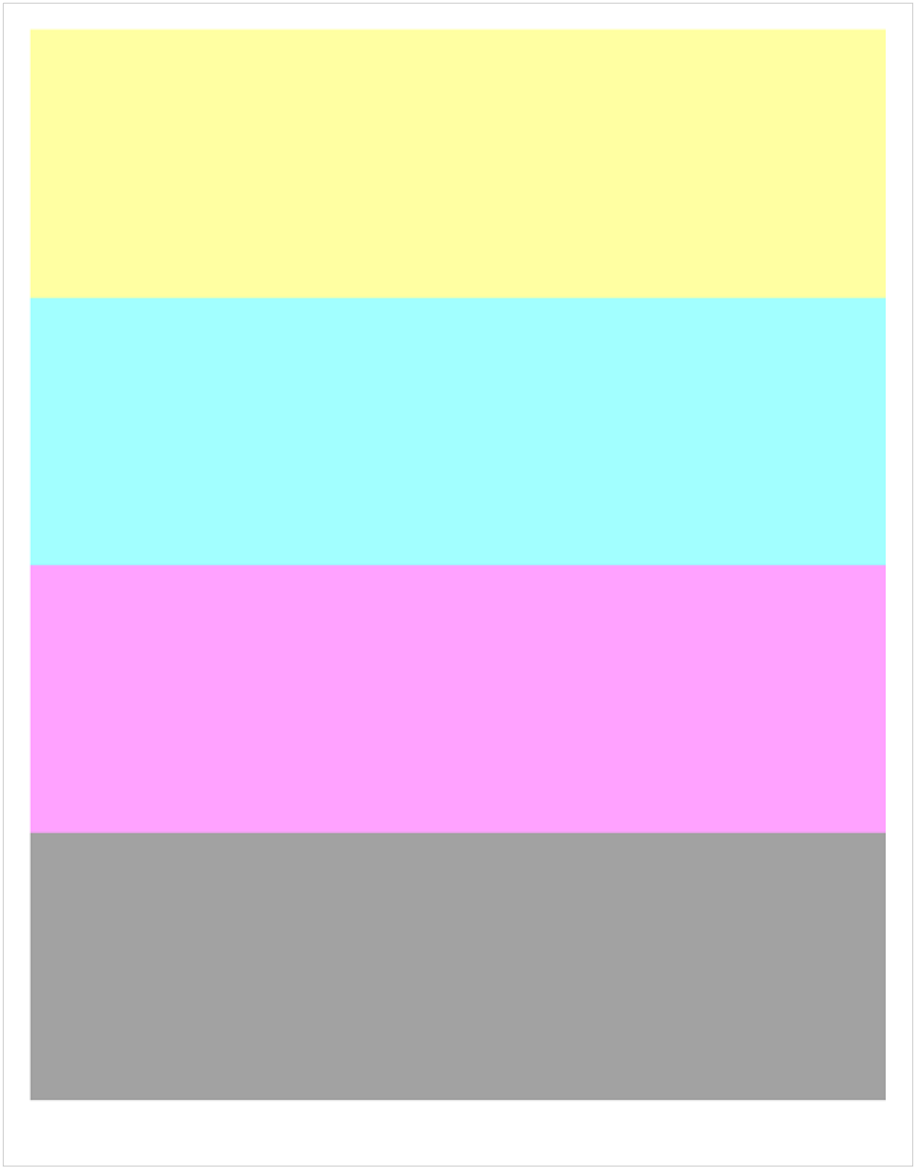
Print Quality Pages—Page 1 (total of five)



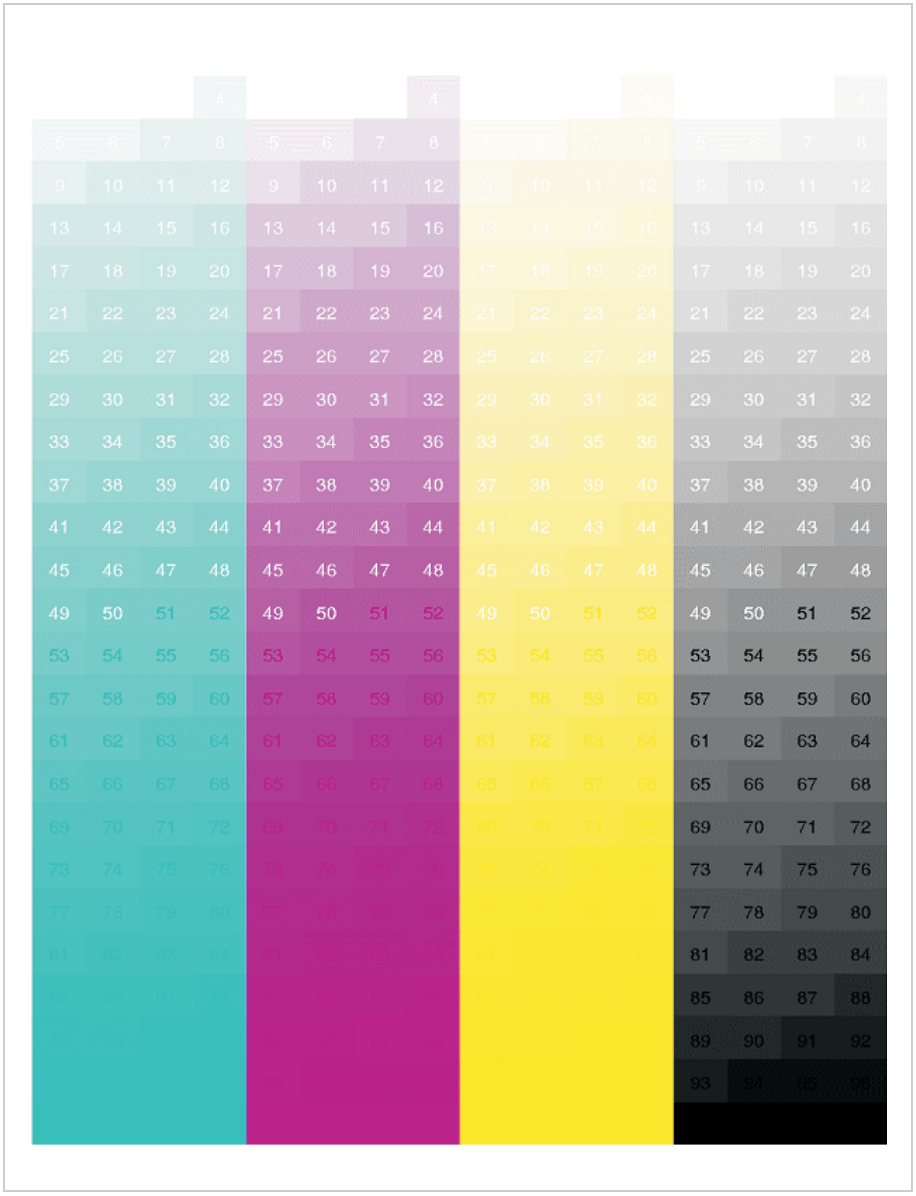
Print Quality Pages—Page 2 (total of five)



Print Quality Pages—Page 3 (total of five)



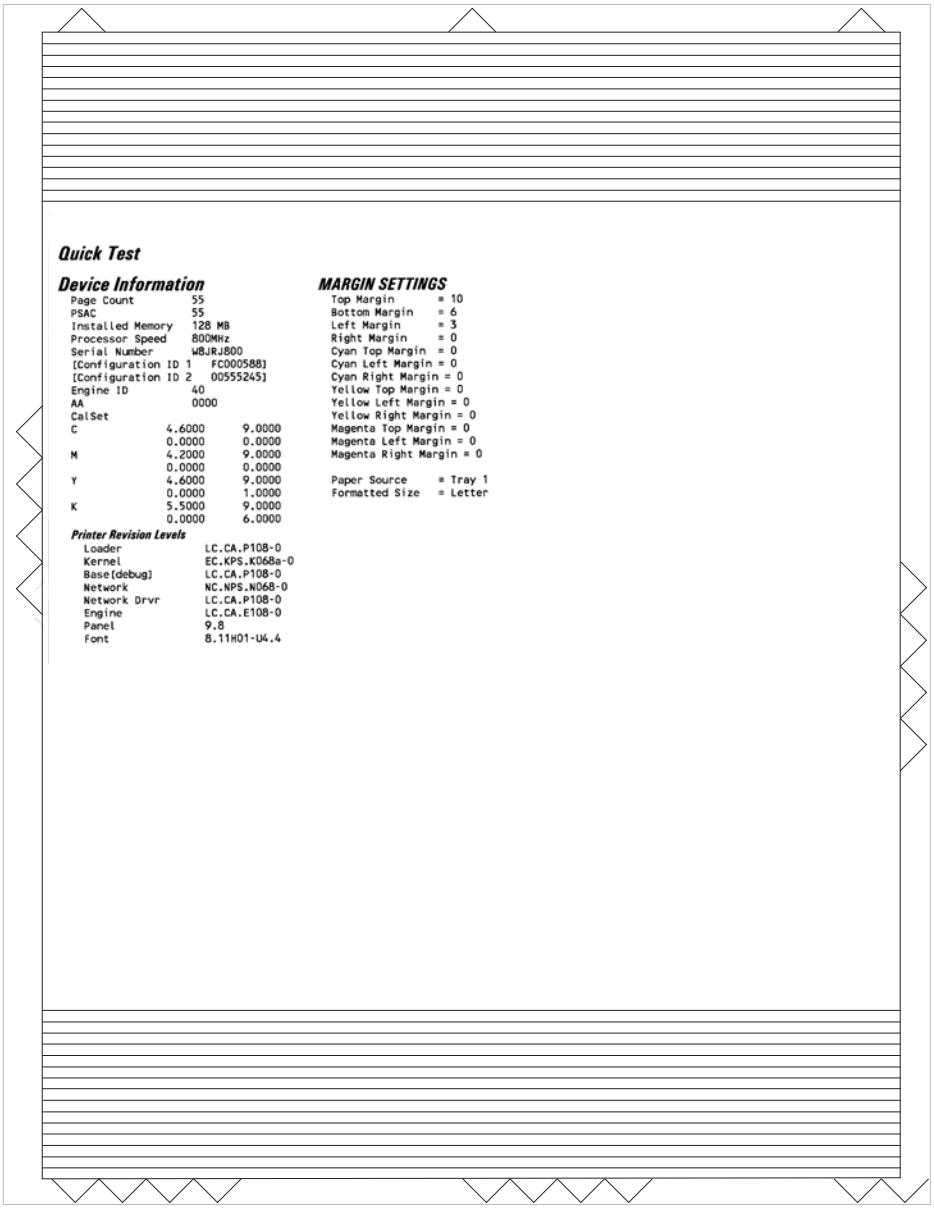
Print Quality Pages—Page 4 (total of five)



Registration and alignment

Quick Test Page

From the Diagnostics menu, select: **REGISTRATION** > **Quick Test**.



Quick Test

Device Information

Page Count	55	
PSAC	55	
Installed Memory	128 MB	
Processor Speed	800MHz	
Serial Number	WBJRJB00	
[Configuration ID 1	FC000588]	
[Configuration ID 2	005552451	
Engine ID	40	
AA	0000	
CalSet		
C	4.6000	9.0000
	0.0000	0.0000
M	4.2000	9.0000
	0.0000	0.0000
Y	4.6000	9.0000
	0.0000	1.0000
K	5.5000	9.0000
	0.0000	6.0000

Printer Revision Levels

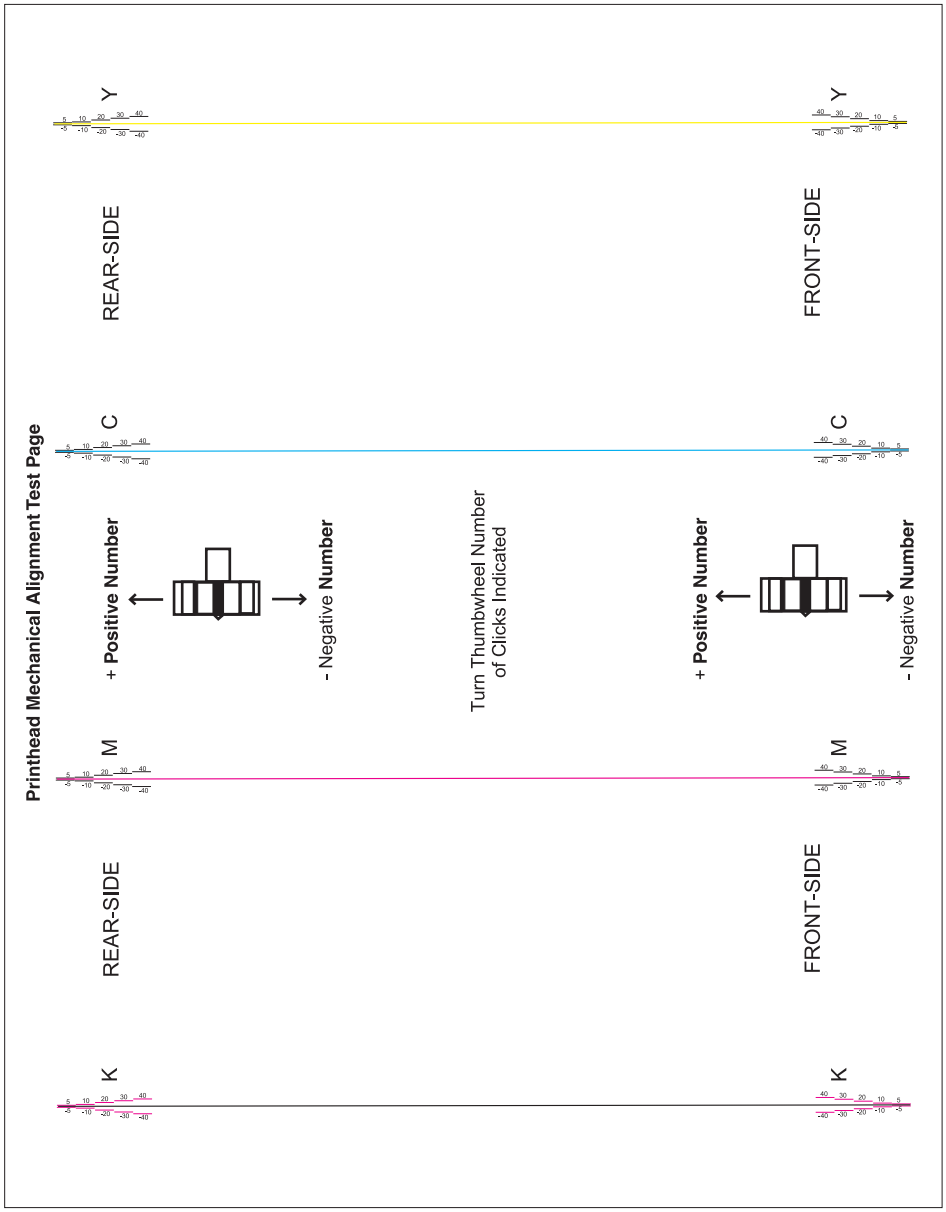
Loader	LC.CA.P108-0
Kernel	EC.KPS.K068a-0
Base[debug]	LC.CA.P108-0
Network	NC.NPS.N068-0
Network Drvr	LC.CA.P108-0
Engine	LC.CA.E108-0
Panel	9.8
Font	8.11H01-U4.4

MARGIN SETTINGS

Top Margin	= 10
Bottom Margin	= 6
Left Margin	= 3
Right Margin	= 0
Cyan Top Margin	= 0
Cyan Left Margin	= 0
Cyan Right Margin	= 0
Yellow Top Margin	= 0
Yellow Left Margin	= 0
Yellow Right Margin	= 0
Magenta Top Margin	= 0
Magenta Left Margin	= 0
Magenta Right Margin	= 0
Paper Source	= Tray 1
Formatted Size	= Letter

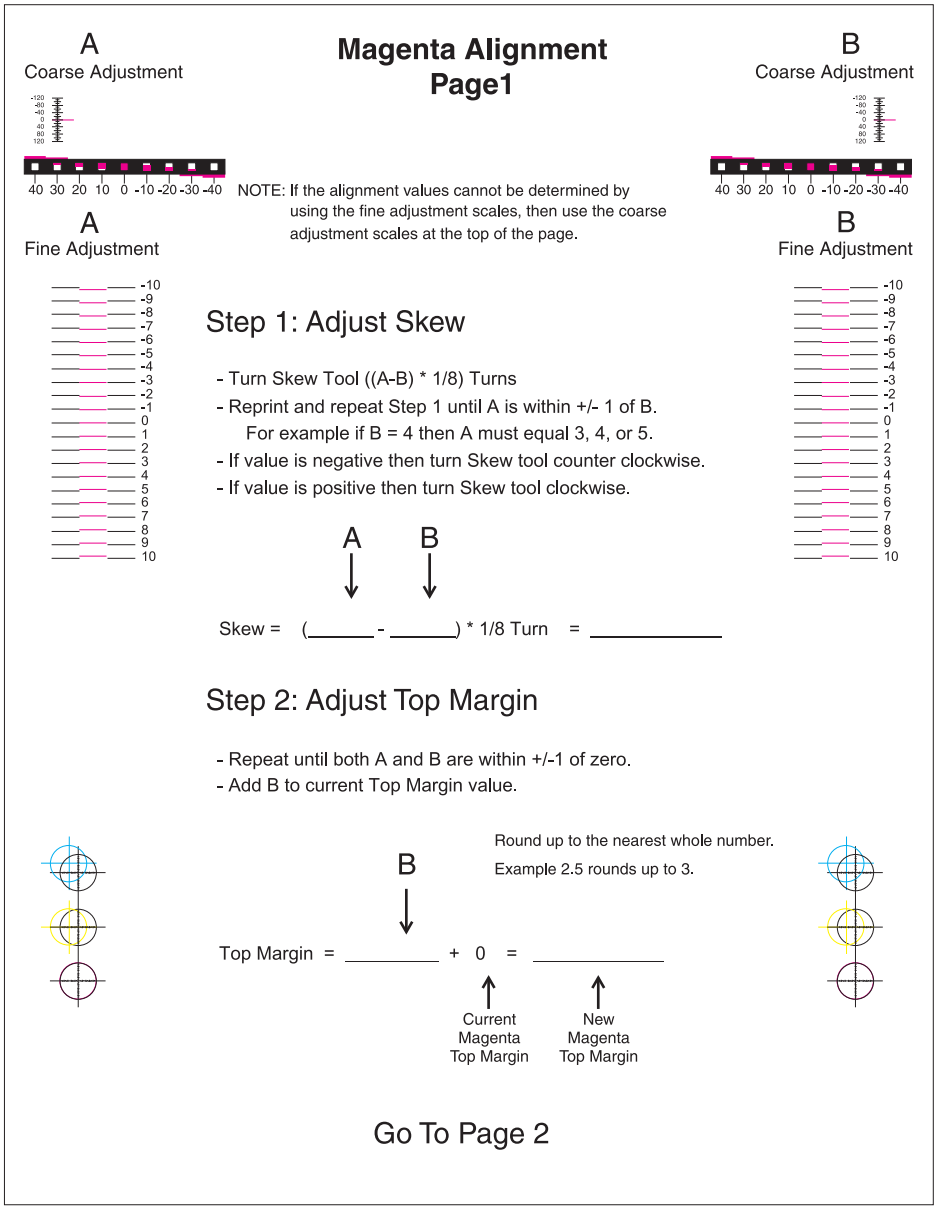
Printhead mechanical alignment test page

From the Diagnostics menu, select **MISC TESTS** > **Printhead Inst**.

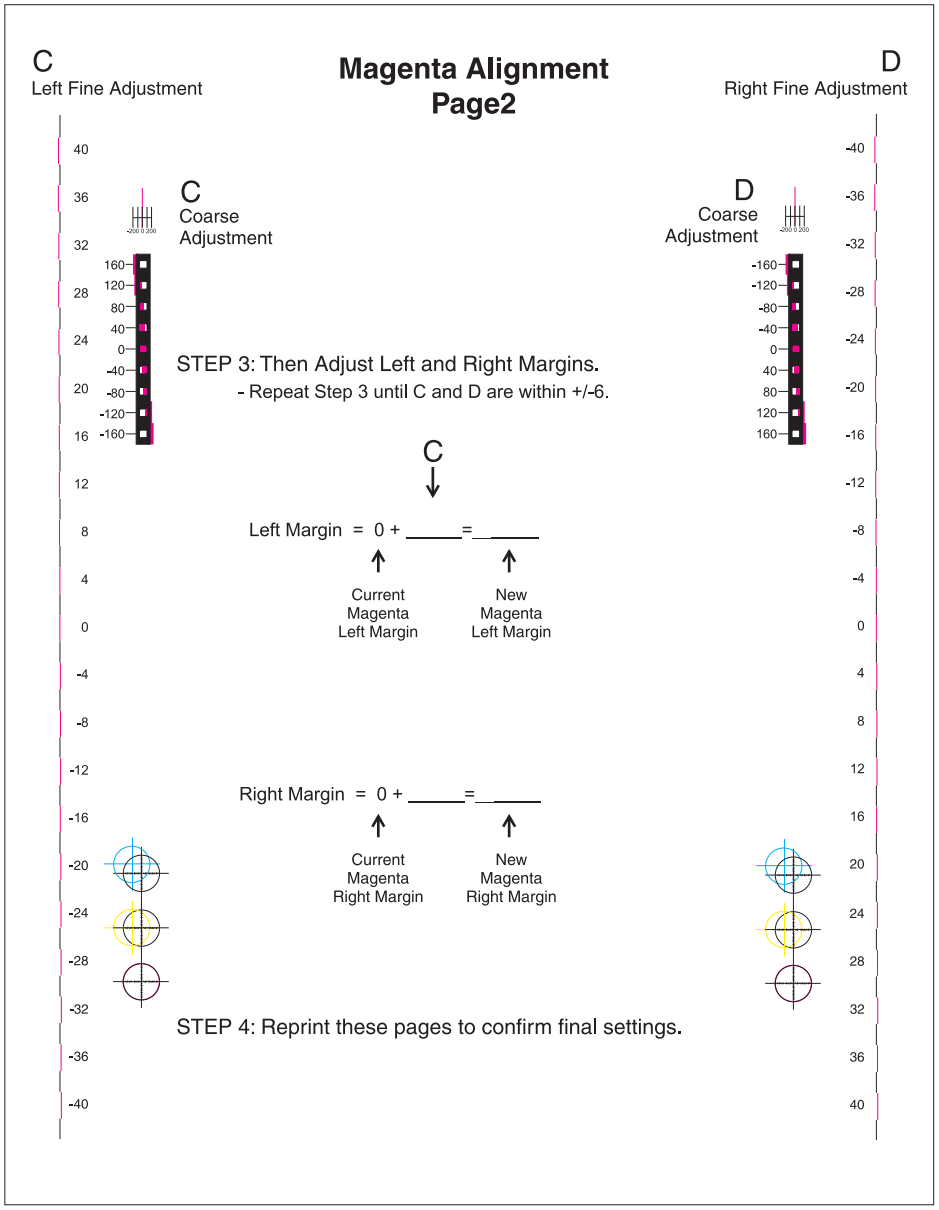


Printhead electronic alignment test page—Magenta (one of two)

From the Diagnostics menu, select **Alignment Menu** > [select a color] > **Quick Test**.

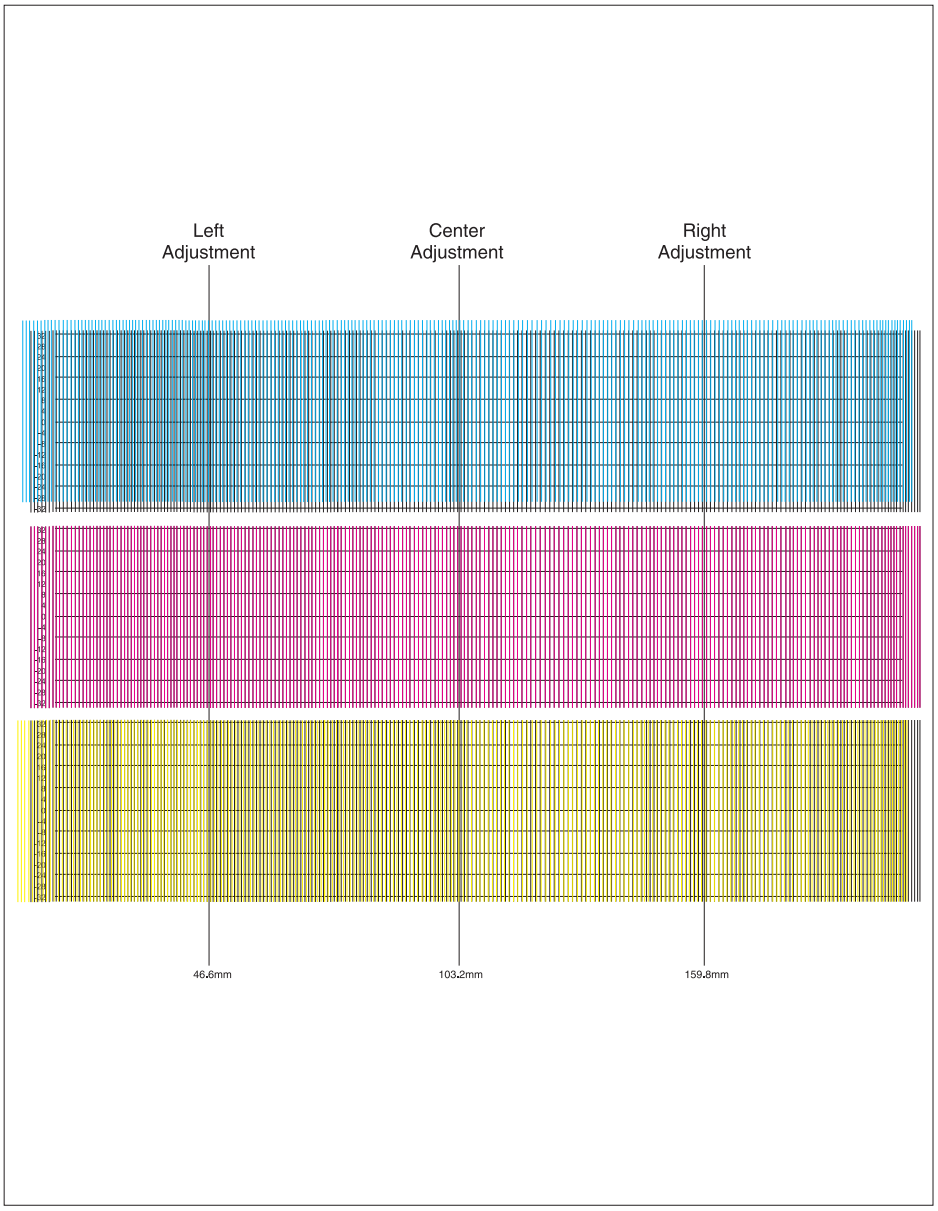


Printhead electronic alignment test page—Magenta (two of two)



Printhead linearity test page

From the Diagnostics menu, select **Alignment Menu** > [select a color] > **Linearity** > **Quick Test**]



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