Revision: September 14, 2022

Service Manual

Lexmark™ X95x Series

7558-xxx

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LEXMARK™

Edition: September 14, 2022

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Notices and safety information

The following printhead LED notice labels may be affixed to this printer.

Printhead LED notice

This product is certified in the U.S. and elsewhere to conform to the requirements of UL 60950-1, Safety of Information Technology Equipment. The LED printhead contained in this product is a diffuse type LED and does not exceed Class I levels during normal operation, user maintenance, or prescribed service conditions. Class I printhead LED products are not considered to be hazardous.

printhead LED-Hinweis

Dieses Produkt ist in den USA und anderenorts zertifiziert und entspricht den Anforderungen der Vorschrift UL 60950-1, Safety of Information Technology Equipment (Sicherheitsvorschriften bei Informationstechnolgieeinrichtungen). Die in diesem Produkt enthaltene Druckkopf-LED ist eine LED mit breiter Streuung und überschreitet nicht die Werte für Klasse I bei normalen Betriebsbedingungen, bei der Wartung durch den Benutzer oder bei den vorgeschriebenen Wartungsbedingungen. Druckkopf-LED-Produkte der Klasse I werden nicht als gefährlich betrachtet.

Avis relatif à l’utilisation de printhead LED

Ce produit est certifié aux États-Unis et ailleurs conforme aux exigences de la norme UL 60950-1 relative à la sécurité du matériel informatique. La tête d'impression DEL contenue dans ce produit est un DEL de type diffus et ne dépasse pas le niveau de classe I pendant un fonctionnement normal, l'entretien par l'utilisateur ou les conditions d'entretien recommandées. Les têtes d'impression DEL de classe I ne sont pas considérées comme des produits dangereux.

Avvertenze sui prodotti printhead LED

Questo prodotto è certificato negli Stati Uniti e in altri Paesi secondo i requisiti dello standard UL 60950-1, Safety of Information Technology Equipment. La testina di stampa LED in dotazione è di una tipologia diffusa e non supera i livelli di Classe I durante il normale funzionamento, le operazioni di manutenzione eseguite dall'utente o le condizioni di assistenza indicate. Le testine di stampa LED di Classe I non sono considerate nocive.

Avisos sobre el láser

Este producto se ha certificado en EE. UU. y en otros países para garantizar el cumplimiento de los requisitos del estándar UL 60950-1 sobre seguridad de equipos de tecnología de la información. El producto incorpora un cabezal de impresión LED de tipo LED difuso y no supera los niveles de la clase I durante su normal funcionamiento ni en las tareas de mantenimiento o intervención de servicio técnico prescritas. Los productos LED para cabezales de impresión de clase I no se consideran peligrosos.

Aviso sobre o printhead LED

Este produto está classificado nos EUA e noutros países como estando em conformidade com os requisitos UL 60950-1, Segurança de equipamento destinado a tratamento de informação. A cabeça de impressão LED neste

produto consiste num LED de tipo difuso e não excede os níveis correspondentes à Classe I durante o funcionamento normal, manutenção ou em condições de assistência recomendada. Produtos como cabeças de impressão LED de Classe I não são considerados perigosos.

printhead LEDinformatie

Dit product is in de Verenigde Staten en andere landen gecertificeerd als een product dat voldoet aan de vereisten van UL 60950-1, Veiligheid van gegevensverwerkende apparatuur. De LED-printkop in dit product is een diffuus type LED en overschrijdt niet het toegestane niveau voor klasse I-apparaten tijdens normaal gebruik, onderhoudswerkzaamheden door de gebruiker of voorgeschreven servicewerkzaamheden. Producten met een LED-printkop van klasse I worden geacht geen gevaar op te leveren.

printhead LEDmeddelelse

Dette produkt er certificeret i USA og andre lande som værende i overensstemmelse med kravene i UL 60950-1, Safety of Information Technology Equipment. LED-printhovedet, som er en del af dette produkt, er en diffus type LED og overskrider ikke Klasse I-niveauer under normal drift, brugervedligeholdelse eller foreskrevne servicebetingelser. LED-printhoveder i Klasse I betegnes ikke som farlige.

printhead LEDilmoitus

Tämä tuote on sertifioitu Yhdysvalloissa ja muualla UL 60950-1 Tietotekniikan laitteen turvallisuus -standardin mukaiseksi. Tämän tuotteen sisältämä LED-tulostuspää on diffuusityyppinen, eikä se ylitä luokan 1 säteilytasoa normaalin käytön, ylläpidon tai huollon aikana. Luokan 1 LED-tulostuspäät eivät ole vaarallisia.

printhead LED-notis

Den här produkten är certifierad i USA och i andra länder enligt kraven i UL 60950-1, Säkerhet för informationsteknikutrustning. LED-skrivhuvudet i den här produkten är av diffus LED-typ och överstiger inte klass I-nivå vid normal användning, underhåll eller service. LED-skrivhuvudprodukter i klass I betraktas inte som skadliga.

printhead LED-melding

Dette produktet er sertifisert i USA og andre steder for samsvar med kravene i UL 60950-1, Safety of Information Technology Equipment. LED-skrivehodet i dette produktet er en diffus LED-type og overstiger ikke klasse I-nivåene under normal drift, vedlikehold fra bruker eller foreskrevet service. LED-skrivehodeprodukter av klasse I anses ikke som helseskadelige.

Aviso de láser

Este producto está certificado en los Estados Unidos y otros países para cumplir con las disposiciones de UL 60950-1, que rige la seguridad de los equipos de tecnologías de la información. El cabezal de impresión LED que contiene este producto es de tipo difuso y no supera los niveles de Clase I durante el funcionamiento normal, el mantenimiento del usuario ni las condiciones de servicio indicadas. Los productos LED de cabezal de impresión Clase I no se consideran peligrosos.

通知

この製品が、UL 60950-
1「情報機器の安全性」の要件を満たしていることを米国および他の地域で承認されています。この製品に組み込まれているLED印字ヘッドは反射式LEDで、通常の使用、ユーザのメンテナンスまたは所定のサービス状態においてクラス1レベルを超えることはありません。クラス1印字ヘッドLED製品は危険製品とみなされていません。

통지

본 제품은 미국 및 미국 외 지역에서 UL 60950-1의 요구 사항을 준수하며 ITE(Information Technology Equipment) 안전성을 준수하는 제품으로 승인되었습니다.
이 제품에 포함된 LED 프린트헤드는 분산형 LED이며 정상적인 작동, 사용자 유지관리 또는 사전 설명된 서비스 조건에서는 클래스 I 수준을 초과하지 않습니다.
클래스 I 프린트헤드 LED 제품은 위험한 제품으로 간주되지 않습니다.

通知

本產品係經過美國及其他地區核可，符合 UL 公司公佈資訊技術設備 (Information Technology Equipment) UL 60950-1 之安全標準。使用者只要以正確的方法操作及維護保養，並依照指定的維修方式進行修護，本產品內附的 LED 列印頭（屬於一種擴散式 LED），其擴散程度絕不會超出 I 級以上，而對人體造成傷害。根據 I 級列印頭 LED 產品的規定，這類產品不會對人體造成傷害。

通知

本产品在美国和其他地方认证合乎 UL60950-1，信息技术设备的安全要求。包含在此产品内的 LED 打印头是漫射型 LED，并且在一般操作、使用者维护或规定内的维修情况下不会超过分类 I 级别。分类 I 打印头 LED 产品不认为具有危险性。

Lithium warning

CAUTION

This product contains a lithium battery. THERE IS A RISK OF EXPLOSION IF THE BATTERY IS REPLACED BY AN INCORRECT TYPE. Discard used batteries according to the battery manufacturer's instructions and local regulations.

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. **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 service tips and information.
   Appendix B contains representative print samples.

Change history

Revision date	Updates
2022/07/12	Updated the part number of the following parts: • 40X7349 to 40X0729 Sensor (TTM media size)
2022/07/05	Updated the part number of the following parts: • 40X0850 to 40X7403 Sensor (stacker bin level encoder) • 40X0850 to 40X7403 Sensor (stacker bin upper limit) • 40X0850 to 40X7403 Sensor (stacker bin no media)
2020/04/30	• Updated **Factory Defaults** topic.
2019/10/04	• Changed 40X7492 to 40X4002 in Assembly 86: Booklet maker 6 of the Parts catalog.
2018/08/15	• Updated the wiring diagram.
2018/02/12	• Updated **“175.05 Suction fan failure” on page 2-84**.
2017/08/17	• Added **“ADF skew adjustment” on page A-2**. • Updated **“Automatic document feeder (ADF) assembly removal” on page A-233**.
2017/07/03	• Update **“121.04 Heat belt (center) overheat error” on page 2-57**.
2017/06/07	• Changed 40X4827 to 40X9652 in the “Miscellaneous” topic of the “Parts catalog” chapter.
2017/04/03	• Removed step 1 of the topic “121.08 Heat belt (rear) temperature increase failure” in the “Diagnostic information” chapter.
2016/12/02	• Updated **“Finisher—media eject” on page 7-77** to add P/N 40X0825 Sensor (media eject clamp HP). • Updated **“Finisher—eject and compiler unit” on page 7-78** to remove P/N 40X0825 Sensor (media eject clamp HP). • Updated **“Operator panel (MFP)” on page A-10** to add the UICC cable to the display (part of the PN 40X9241 kit). • Updated **“Miscellaneous” on page A-118** to remove PN 40X6306 (UICC cable to the display).
2016/10/26	Updated **“Tray module controller PCBA removal” on page A-284** to add an installation note regarding the correct dip-switch settings for the input option where the PCBA is being installed into.
2016/09/02	Updated **“Media feed 4” on page A-30** to change the pick roller quantity in bag from 3 to 12.
2016/05/31	Added PN 41X1313 in Assembly 48 of the Parts catalog chapter.
2016/03/08	Updated the topic **“121.10 Heat belt rotation failure” on page 2-61**.
2016/02/01	• Revised the wiring diagrams. • Revised the topic “171.01 Controller cooling fan failure” in the “Diagnostic information” chapter. • Revised the topic ”Assembly 36: TTM media feed 1” in the “Parts catalog” chapter. • Revised the topic “Finisher—stacker bin lift” in the “Parts catalog” chapter.
2015/09/11	• Created **“Center exhaust fan removal” on page 4-38**. • Updated **“1xx service error codes” on page 2-12**. • Updated **“Service checks” on page 2-40**. • Updated **“Cooling fans 3” on page 7-18**.
2015/07/30	Updated the LVPS PCBA removal topic in Repair chapter.
2015/05/15	Changed part number 40X6880 to 40X0886.
2014/11/20	Added scanner calibration information in the **“Diagnostics Menu” on page 3-17**.
2014/10/10	Removed the Registration topic from the Diagnostic aids chapter.

Revision date	Updates
2014/09/05	• Updated the 121.04, 121.06, and 121.08 service checks in the Diagnostics information chapter. • Added PN 40X6091 in the parts catalog.
2014/08/12	Parts catalog assembly 9—Deleted part numbers 40X6973 and 40X6307, and replaced them with 40X9241.
2014/05/05	• Updated **"Booklet maker 2" on page 7-87**, removed the booklet controller card in the art and table. • Updated **"Finisher—electronics" on page 7-84**, added the booklet controller card in the art and table.
2014/01/10	Changed PN 40X0727 to 40X6676 for the Sensor (Tray module feedout) in Assembly 37: TTM media feed 2 of the parts catalog.
2013/12/05	• Updated description for error code 121.12 to "Fuser failure" from "Incorrect fuser." • Updated the action description to "Wrong fuser is possibly installed or fuser drive PCBA has failed" from "Wrong fuser is installed." • Updated **"121.12 Fuser failure" on page 2-62**.
2013/11/4	Parts catalog Assembly 55: Changed P/N to 40X7464 to 40X6726.
2013/10/21	Parts catalog Assembly 37: • Updated description of 40X7334 • Added 40X0588 and 40x0727 • Deleted 40X7336, 40X7337, and 40X7338
2013/10/7	Replaced 40X7511 with 40X7512 in Parts catalog Assembly 108.
2013/9/4	Replaced 40X0727 with 40X7334 in the Parts catalog Assembly 37.
2013/08/01	• Updated Parts catalog Assembly 37. • Added "Steps before starting the 9yy service checks".
2013/07/11	• Updated the Bridge PCBA (MFP) part number. • Added the following error codes and service checks: 146, 324, 334, 344, and 354.
2013/04/26	• Updated Assembly 62 to show the proper orientation of the parts catalog illustration. • Added the rear lower cover removal procedure before the step "Disconnect the input option cable (A)" in the repair chapter.
2013/02/25	Updated Assembly 18 of the parts catalog to the show proper order of the augers.
2012/08/15	Replaced part number 40X7421 to 40X8663 in **"Finisher—stacker bin lift" on page 7-73** of the parts catalog.
2012/08/01	Updaed the Bridge PCBA (MFP) part number in **"Electrical 1" on page 7-57** of the parts catalog.
2012/07/02	Added part number 40X0580 in **"Media feed 1" on page 7-27**, **"TTM trays" on page 7-36**, and **"Tray module media feed" on page 7-31** in the parts catalog.

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.

1. General information

The Lexmark™ X95x Series MFPs combine print, scan, copy, and fax functions. These MFPs are network ready, competitive and easy to use, with brilliant color output and fast print runs. Standard input capacities of these MFPs reach up to 3,660 sheets.

Staple and hole punch finisher, as well as booklet finishing options are also available. The optional finisher staples, punches, performs folding and stapling, and stacks media transferred from the MFP. Output is stacked in the upper media bin, or separately collated in the stacker media bin, or folded and stapled in the booklet bin.

Models

The Lexmark X95x Series MFPs are available in the following models:

Model	Configurations	Machine type / model
X950de	Network/Duplex A3 Color printhead LED MFP, Duplex Scanner, Fax	7558-036
X952dte	Network/Duplex A3 Color printhead LED MFP, Duplex Scanner, Fax, Extra Trays	7558-236
X954dhe	Network/Duplex A3 Color printhead LED MFP, Duplex Scanner, Fax, Hard drive	7558-436

Options and features

Available options include:

- 650-sheet duo drawer—a 550-sheet drawer with a 100-sheet multipurpose feeder (MP Feeder)
- 550-sheet drawer
- Additional memory—one 128MB, 256MB, 512MB, or 1GB memory card may be added
- Flash memory card—one 256MB card may be added
- Font cards—one language card can be added

Input options include:

- 520-sheet drawer
- 3TM—3-Tray Module, each tray is capable of holding up to 520 sheets
- TTM—Tandem Tray Module, three different trays with capacities of 520, 867, and 1,133 sheets
- HCF—High Capacity Feeder, holds up to 2,000 sheets and is compatible with the optional drawer, the 3TM and the TTM

Internal options include:

- Memory cards
  - Printer memory
  - Flash memory
  - Fonts
- Firmware cards
  - Bar code
  - PrintCryption™
- Printer hard disk

Printer specifications

Electronics

4—Supported 8—Not supported	**Lexmark X950**	**Lexmark X952**	**Lexmark X954**
Processor			
Speed and type	1.2Ghz Freescale		
Memory			
Standard	1GB		
Optional	256MB, 512MB and 1GB		
Maximum printer memory	2GB		
Hard drive	160GB		
Optional Flash memory	256MB		
Option Slots			
ISP slots	1INA+1HDD		
Wireless Option	4	4	4
Connections			
Gigabit ethernet	4	4	4
USB 2.0 high speed	4	4	4

MFP

4—Supported 8—Not supported	**Lexmark X950, X952, X954**
Scanner	
Scanner type	Color Flatbed Scanner with ADF
Scan technology	Charge Coupled Device (CCD)
Light source	White LED
Number of light sources	1 LED array per CCD Module
Scanner ADF	
ADF Type	ADF
Scanner ADF document input and output capacity	110 Sheets, 20 lb (75 g/m^2) bond
Scanner media depth (thickness)	Maximum: 0.11 mm Minimum: 0.08 mm
Scanner media weight	Simplex: 38 to 128 g/m^2 Duplex: 50 to 128 g/m^2

4—Supported 8—Not supported	**Lexmark X950, X952, X954**
Document size	Maximum: 297 mm x 432 mm Minimum (simplex): 125 mm x 85 mm Minimum (duplex): 125 mm x 110 mm
Document size sensing (length and width in ADF)	4
Document sensing (ADF paper present LED and on/off settable beep)	4
Scanner Flatbed	
Maximum document size	297 mm x 432 mm
Document size sensing (paper length sensing only on flatbed)	4
Print Engine	
Print technology	Color LED
Duplex output	Standard
Paper feed orientation	Short-edge and long-edge fed
Fax	
Modem	Built-in Group 3 compatible, Full Function Fax 33,600 bps, Max V.34 Half Duplex

Connectivity (network support)

4—Supported 8—Not supported **Network protocol**	**Lexmark X950**	**Lexmark X952**	**Lexmark X954**
10/100/1000 Base TX Ethernet	4	4	4
Standard USB2.0 High-speed device port	4	4	4
USB-A host ports (In front/back) Supported file types: .pdf, .gif, .jpeg, .jpg, .bmp, .png, .tiff, .tif, .pcx, .dcx	4	4	4

4—Supported 8—Not supported **Network protocol**	**Lexmark X950**	**Lexmark X952**	**Lexmark X954**
DirectUSB Supported flash drives: • Lexar FireFly 512MB • Lexar FireFly 1GB • SanDisk Cruizer Micro 512MB • SanDisk Cruizer Micro 1GB • Sony 512MB • Sony 1GB Supported file formats: .gif, .jpeg, .jpg, .bmp, .png, .tiff, .tif, .pcx, .dcx, PDF, HTML, XPS	4	4	4

Operating modes

Mode	Description
Off	Uses factory default settings for all settings associated with Eco-Mode. This setting supports the performance specifications of the printer
Energy	Reduces energy use, especially when the printer is idle • Printer engine motors do not start until it is ready to print. A short delay occurs before the first page is printed. • The printer enters Sleep mode after one minute of inactivity. • When the printer enters Sleep mode, the printer control panel display and the standard exit bin lights are turned off. • If scanning is supported, the scanner lamps are activated only when a scan job is started.
Energy/Paper	Uses all the settings associated with Energy mode and Paper mode
Paper	• Enables the automatic duplex feature • Turns off print log features

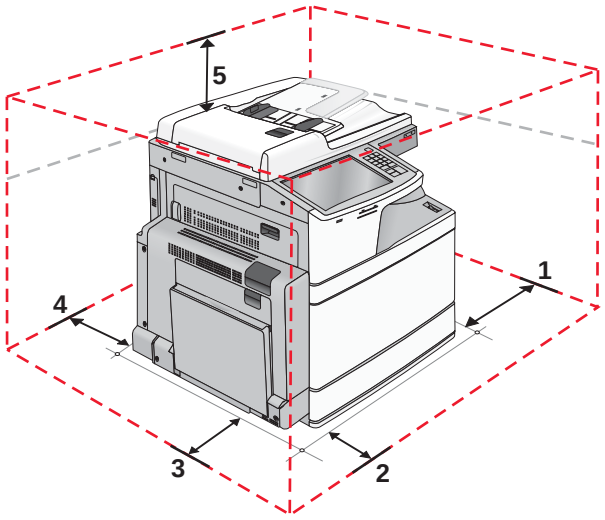
Data streams

4—Supported 8—Not supported **Data streams**	**Lexmark X950**	**Lexmark X952**	**Lexmark X954**
PostScript 3 Emulation	4	4	4
PCL 6 Emulation	4	4	4
XPS	4	4	4
PPDS	4	4	4
PDF v1.6	4	4	4
HTML	4	4	4
Direct Image	4	4	4

Dimensions

Models	**Height**	**Width**	**Depth**	**Weight**
Lexmark X950	771 mm (30.4 in.)	672 mm (26.5 in.)	668 mm (26.3 in.)	84.2 kg (185 lb)
Lexmark X952				
Lexmark X954				
Optional 550-sheet Drawer	135 mm (5.3 in.)	590 mm (23.2 in.)	539 mm (21.2 in.)	14 kg (31 lb)

Clearances



Description		**Clearances**
		Lexmark X950, X952, X954
1	Right side	100 mm (4 in.)
2	Front	610 mm (24 in.)
3	Left side	385 mm (24 in.)

Description		Clearances
		Lexmark X950, X952, X954
4	Rear	100 mm (4 in.)
5	Top	100 mm (4 in.)

Environment specifications

Environment	Specifications
Operating	
Air temperature—operating	10.0 to 32.00° C (50 to 90° F)
Air relative humidity—operating	Relative Humidity 15 to 85%
Altitude	0–2,500 meters (8,200 ft.)
Atmospheric pressure	760 mmHG, 1,013 HPa
Ambient operating environment*	15.6 to 32.2° C (60 to 90° F) and 8% to 80% RH
Ship / Storage	
Cartridges—packaged	Up to 1 month from the date of manufacture when kept in storage (non-condensing) in the following *harsh* environment: • -20 to 0° C or 35 to 40° C (-4 to 32° F or 95 to 104° F) • 5 to 20RH% or 80 to 95RH% Up to 24 months from the date of manufacture when kept in storage (non-condensing) in the following *normal* environment: • 0 to 35° C (32 to 104° F) • 15 to 80RH%
Printer with cartridges—packaged	-40 to 40° C (-40 to 104° F)
Altitude	15,000 meters (49,200 feet)
* In some cases performance specifications (such as paper feed error or PFE, EP cartridge usage) are specified to be measured at an ambient condition.	

Media handling specifications

Input and output sources

Sheet numbers are assuming 20 lb. xerographic paper	Lexmark X950	Lexmark X952	Lexmark X954
Standard input sources			
Media trays	520 sheets	• 520 sheets • 1560 sheets (3TM)	• 520 sheets • 3040 sheets (TTM)
Multipurpose Feeder capacity	100 sheets	100 sheets	100 sheets
Total standard input capacity	620	2180	3660
Duplex			
Type of duplex	Standard	Standard	Standard
Standard output sources			
Standard output bin	500	500	500

Media input size specifications

4—Supported 8—Not supported **Input source**	**520-sheet tray**	**2,000-sheet drawer**	**MP feeder**	**Manual paper**	**Manual envelope**	**Duplex**	**ADF**	**Scanner glass**
A4 210 x 297 mm	4	4	4	4	8	4	4	4
A5 148 x 210 mm	4	8	4	4	8	4	4	4
A6 105 x 148 mm	8	8	4	4	8	8	8	4
JIS B5 182 x 257 mm	4	4	4	4	8	4	4	4
Letter 216 x 279 mm	4	4	4	4	8	4	4	4
Legal 216 x 356 mm	4	8	4	4	8	4	4	4
Executive 184 x 267 mm	4	4	4	4	8	4	4	4
JIS B4 257 x 364 mm	4	8	4	4	8	4	4	4
A3 297 x 420 mm	4	8	4	4	8	4	4	4
11x17 279 x 432 mm	4	8	4	4	8	4	4	4
Oficio (Mexico) 216 x 340 mm	4	8	4	4	8	4	4	4
Folio 216 x 330 mm	4	8	4	4	8	4	4	4

4—Supported 8—Not supported **Input source**	**520-sheet tray**	**2,000-sheet drawer**	**MP feeder**	**Manual paper**	**Manual envelope**	**Duplex**	**ADF**	**Scanner glass**
Statement 140 x 216 mm	4	8	4	4	8	4	4	4
Universal 64-297 mm x 148-432 mm	4	8	4	4	8	4	4	4
7¾ Envelope (Monarch) 98 x 191 mm	8	8	4	8	4	8	8	8
9 Envelope 98 x 226 mm	8	8	8	8	8	8	8	8
Com 10 Envelope 105 x 241 mm	8	8	4	8	4	8	8	8
DL Envelope 110 x 220 mm	8	8	4	8	4	8	8	8
C5 Envelope 162 x 229 mm	8	8	4	8	4	8	8	8
B5 Envelope 176 x 250 mm	8	8	8	8	4	8	8	8
Other envelope 86 x 165 mm to 216 x 356 mm	8	8	4	8	4	8	8	8

Media input type specifications

Printer

The printer supports 60–300-g/m^2 (16–80-lb) paper weights. The duplex unit supports 60–169-g/m^2 (16–32-lb) paper weights.

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

4—Supported 8—Not supported **Input type**	**520-sheet tray**	**2,000-sheet Drawer**	**MP feeder**	**Manual paper**	**Manual Envelope**	**Duplex**	**ADF**	**Scanner glass**
Paper • Bond • Glossy • Heavy Glossy • Colored • Custom Type [x] • Letterhead • Light • Heavy • Preprinted • Rough/Cotton • Recycled	4	4	4	4	8	4	4	4
Card stock	4	4	4	4	8	8	8	4
Transparencies	4	4	4	4	8	8	8	4
Labels • Paper • Vinyl	4	4	4	4	8	8	8	4
Envelopes	8	8	4	8	4	8	8	4

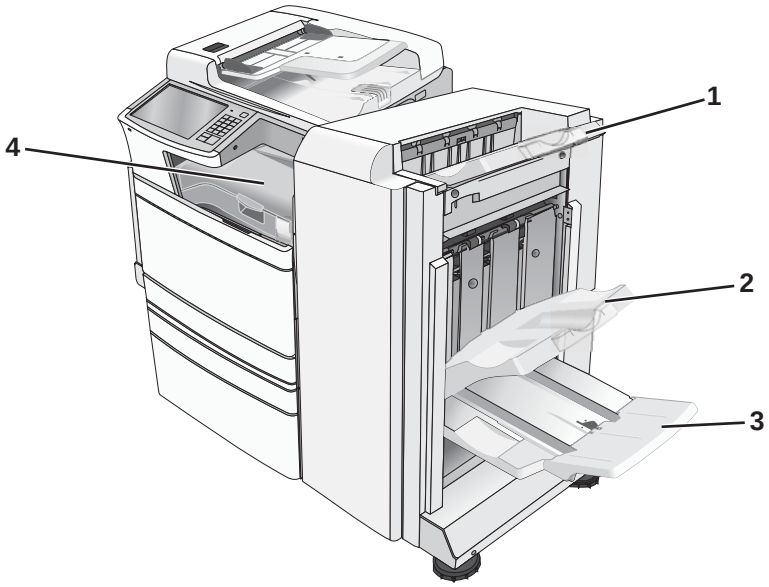
Finisher

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

The finisher standard bin supports 60–300-g/m^2 (16–80-lb) paper weights, bin 1 supports 60–220-g/m^2 (16–60-lb) paper weights, and bin 2 (booklet-maker) supports 60–90-g/m^2 (16–24-lb) paper weights plus one additional cover weighted up to 220 g/m^2 (60 lb).

4—Supported 8—Not supported **Input type**	**Standard 500-sheet bin**	**Second exit bin**	**Bin 1**	**Bin 2**	**Bin 3**
Plain paper	4	4	4	4	4
Card stock	4	4	4	4	8
Transparencies	4	4	8	8	8
Recycled	4	4	8	8	8

Supported finishing features



Callout	Part name
1	Finisher standard bin
2	Finisher Bin 1
3	Finisher Bin 2 (booklet-maker)
4	Bridge unit

Notes:

- The finisher shown is the booklet finisher. Bin 2 is available only when the booklet finisher is installed.
- All paper tray capacities are based on 75-g/m^2 (20-lb) paper.

Paper transport

- The paper capacity is 50 sheets.
- Finishing options are not supported in this bin.
- Envelopes are routed here.
- Universal paper is routed here when it is longer than 483 mm (19 in.) or shorter than 148 mm (6 in.).

Finisher standard bin

- The paper capacity is 500 sheets.
- Envelopes and executive-size paper are not supported in this bin.
- Finishing options are not supported in this bin.

Bin 1

- The paper capacity is 3,000 sheets when the standard finisher is installed.
- The paper capacity is 1,500 sheets when the booklet finisher is installed.

Bin 1 finishing features

4—Supported 8—Not supported **Size**	**Punch***	**Offset**	**Single/Double staple**	**Double dual staple**
A3	4	4	4	4
A4	4	4	4	4
A5	8	8	8	8
Executive	4	4	4	8
Folio	8	4	4	8
JIS B4	4	4	4	8
JIS B5	4	4	4	8
Legal	8	4	4	8
Letter	4	4	4	4
Statement	8	8	8	4
Tabloid	4	4	4	8
Universal	4	4	4	4
Envelopes (any size)	8	8	8	8

*For the Universal paper size, the finishing edge must be at least 9 in. (229 mm) for a 3-hole punch and 10 in. (254 mm) for a 4-hole punch.

Punch—Selects from two-, three-, or four-hole punch

Single staple—Uses only one staple

Double staple—Uses two staples

Double dual staple—Uses two sets of two staples. This setting is supported only for widths between 8 in. (203 mm) and 12 in. (297 mm) with lengths between 7 in. (182 mm) and 17 in. (432 mm).

Bin 2 (booklet-maker)

Bin 2 is available only when the booklet finisher is installed. The paper capacity of Bin 2 (booklet-maker) is 300 sheets or 20 sets of 15-sheet booklets.

Bin 2 finishing features

4—Supported 8—Not supported **Size**	**Bi fold**	**Booklet fold**	**Saddle staple**
A3	4	4	4
A4 (only SEF)	4	4	4
A5	8	8	8
Executive	8	8	8
Folio	4	4	4
JIS B4	4	4	4
JIS B5	8	8	8
Legal	4	4	4
Letter (only SEF)	4	4	4
Statement	8	8	8
Tabloid	4	4	4
Universal	8	8	8
Envelopes (any size)	8	8	8
SEF—The paper is loaded in the short-edge orientation. The short-edge of the paper enters the printer first. **Bi fold**—Each page is individually folded and stacked separately. **Booklet fold**—A multiple-page job is folded along the center into a single booklet. **Saddle staple**—A booklet-fold print job is stapled along the center fold.			

Media guidelines

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

- **Weight**—The printer can automatically feed paper weights from 60 to 300 g/m^2 (16 to 80 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. For paper smaller than 182 x 257 mm (7.2 x 10.1 in.), we recommend 90 g/m^2 (24 lb) or heavier paper.
  Notes:
  - The duplex unit supports only 60–169 g/m^2 (16–32 lb bond) paper weights.
  - The multipurpose feeder supports 60–300 g/m^2 (16–80 lb bond) paper.
- **Curl**—Curl is the tendency for paper to curl at its edges. Excessive curl can cause paper feeding problems. Curl can occur after the paper passes through the printer, where it is exposed to high temperatures. Storing paper unwrapped in hot, humid, cold, or dry conditions, even in the trays, can contribute to paper curling prior to printing and can cause feeding problems.

- **Smoothness**—Paper smoothness directly affects print quality. If paper is too rough, toner cannot fuse to it properly. If paper is too smooth, it can cause paper feeding or print quality issues. Always use paper between 100 and 300 Sheffield points; however, smoothness between 150 and 200 Sheffield points produces the best print quality.
- **Moisture content**—The amount of moisture in paper affects both print quality and the ability of the printer to feed the paper correctly. Leave paper in its original wrapper until it is time to use it. This limits the exposure of paper to moisture changes that can degrade its performance.
  Condition paper before printing by storing it in its original wrapper in the same environment as the printer for 24 to 48 hours before printing. Extend the time several days if the storage or transportation environment is very different from the printer environment. Thick paper may also require a longer conditioning period.
- **Grain direction**—Grain refers to the alignment of the paper fibers in a sheet of paper. Grain is either grain long, running the length of the paper, or grain short, running the width of the paper.
  For 60 to 135 g/m^2 (16 to 36 lb bond) paper, grain long paper is recommended. For papers heavier than 135 g/m^2, grain short is recommended.
- Fiber content—Most high-quality xerographic paper is made from 100% chemically treated pulped wood. This content provides the paper with a high degree of stability resulting in fewer paper feeding problems and better print quality. Paper containing fibers such as cotton can negatively affect paper handling.

Unacceptable paper

The following paper types 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 ±2.3 mm (±0.9 in.), such as optical character recognition (OCR) forms.
  In some cases, registration can be adjusted with a software application to successfully print on these forms.
- Coated papers (erasable bond), synthetic papers, thermal papers
- Rough-edged, rough or heavily textured surface papers, or curled papers
- Recycled paper that fail EN12281:2002 (European)
- Paper weighing less than 60 g/m^2 (16 lb)
- Multiple-part forms or documents

Selecting paper

Using appropriate paper prevents jams and helps ensure trouble-free printing.

To help avoid jams and 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 paper sizes, types, or weights in the same source; mixing results in jams.
- Do not use coated papers unless they are specifically designed for electrophotographic printing.

Selecting preprinted forms and letterhead

Use these guidelines when selecting preprinted forms and letterhead:

- Use grain long for 60 to 90 g/m^2 (16 to 24 lb) weight paper.
- Use only forms and letterhead printed using an offset lithographic or engraved printing process.
- Avoid papers with rough or heavily textured surfaces.

Use papers printed with heat-resistant inks designed for use in xerographic copiers. The ink must be able to withstand temperatures up to 190°C (374°F) without melting or releasing hazardous emissions. Use inks that are not affected by the resin in toner. Inks that are oxidation-set or oil-based generally meet these requirements; latex inks might not. When in doubt, contact the paper supplier.

Preprinted papers such as letterhead must be able to withstand temperatures up to 190°C (374°F) without melting or releasing hazardous emissions.

Using recycled paper and other office papers

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

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

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

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

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

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

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

1. Minimize paper consumption.
2. Be selective about the origin of wood fiber. Buy from suppliers who carry certifications such as the Forestry Stewardship Council (FSC) or The Program for the Endorsement of Forest Certification (PEFC). These certifications guarantee that the paper manufacturer uses wood pulp from forestry operators that employ environmentally and socially responsible forest management and restoration practices.
3. Choose the most appropriate paper for printing needs: normal 75 or 80 g/m^2 certified paper, lower weight paper, or recycled paper.

Storing paper

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

- For best results, store paper where the temperature is 21°C (70°F) and the relative humidity is 40%. Most label manufacturers recommend printing in a temperature range of 18 to 24°C (65 to 75°F) with relative humidity between 40 and 60%.
- Store paper in cartons when possible, on a pallet or shelf, rather than on the floor.
- Store individual packages on a flat surface.
- Do not store anything on top of individual paper packages.

Tools required for service

Flat-blade screwdrivers, various sizes
#1 Phillips screwdriver, magnetic
#2 Phillips screwdriver, magnetic
#2 Phillips screwdriver, magnetic short-blade
7/32 inch (5.5 mm) open-end wrench
7.0 mm nut driver
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
Flash light (optional)
0.3µm toner vacuum

Acronyms

3TM	3-Tray Module
AC	Alternating Current
ADF	Automatic Document Feeder
ASIC	Application-specific Integrated Circuit
C	Cyan
CCD	Charge Coupled Device
CCP	Carbonless Copy Paper
CCW	Counter-clockwise
DC	Direct Current
DRAM	Dynamic Random Access Memory
EEPROM	Electrically Erasable Programmable Read-Only Memory
EP	ElectroPhotographic
EPROM	Erasable Programmable Read-Only Memory
ESD	Electrostatic Discharge
FB	Flatbed
FPGA	Field-programmable Gate Array
FRU	Field Replaceable Unit
FSC	Forestry Stewardship Council
GB	Gigabyte
HCF	High Capacity Feeder
HDD	Hard Disk Drive
HID	Human Interface Device
HP	Home Position
HVPS	High Voltage Power Supply
IGBT	Insulated-gate Bipolar Transistor
INA	Internal Network Adapter
ISP	Internal Solutions Port
ITU	Image Transfer Unit
K	Black
LCD	Liquid Crystal Display
LDAP	Lightweight Directory Access Protocol
LED	Light-Emitting Diode
LEF	Long-edge Fed
LES	Lexmark Embedded Solution
LVPS	Low Voltage Power Supply
M	Magenta
MB	Megabyte
MFP	Multi-function Printer
MPF	Multipurpose Feeder
MTU	Maximum Transmission Unit
NCR	No Carbon Required Paper
NS	Not Shown
NVM	Nonvolatile Memory
NVRAM	Nonvolatile Random Access Memory
OCR	Optical Character Recognition
PC	Photoconductor
PCBA	Printed Circuit Board Assembly
PEFC	Program for the Endorsement of Forest Certification
pel	Picture element
PIN	Personal Identification Number
POR	Power-On Reset

PP	Parts Packet
PPDS	Personal Printer Data Stream
RAM	Random Access Memory
RFID	Radio-frequency Identification
RIP	Raster Imaging Processor
ROM	Read Only Memory
SE	Service Engineer
SEF	Short-edge Fed
SMTP	Simple Mail Transfer Protocol
SNMP	Simple Network Management Protocol
TPS	Toner Patch Sensing
TTM	Tandem Tray Module
URL	Uniform Resource Locator
USB	Universal Serial Bus
V ac	Volts alternating current
V dc	Volts direct current
Y	Yellow

2. Diagnostic information

Start

CAUTION

Unplug power cord from the electrical outlet before you connect or disconnect any cable or electronic board or assembly for personal safety and to prevent damage to the printer. Disconnect any connections between the printer and PCs/peripherals.

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

- Does the POR stop? Check **“POR (Power-On Reset) sequence” on page 2-2**.
- If you have an error message or user message, check the following:
  - **“Error codes and messages” on page 2-3**
  - **“User status and attendance messages” on page 2-3**
  - **“Paper jam error codes” on page 2-12**
  - **“1xx service error codes” on page 2-12**
  - **“2xx service error codes” on page 2-21**
  - **“3xx service error codes” on page 2-27**
  - **“8xx service error codes” on page 2-34**
  - **“9xx service error codes” on page 2-37**
  - **“Service checks” on page 2-40**
- For information regarding electrical connections, see **“Locations” on page 5-1**.
- Additional information can be found at the following locations:
  - **“Understanding the operator panel” on page 3-1**
  - **“Printer theory of operations” on page 3-60**
  - **“Finisher theory of operations” on page 3-80**
  - **“TTM theory of operations” on page 3-112**
  - **“3TM theory of operations” on page 3-119**
  - **“1TM theory of operations” on page 3-125**
  - **“High capacity feeder theory of operations” on page 3-131**

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

POR (Power-On Reset) sequence

The following is an example of the events that occur during the POR sequence:

1. Turn the machine on.
2. The Lexmark splash screen appears with a progress bar in the center until the code is loaded.
3. The scanner exposure lamp flashes several times.
4. The fuser cooling fan turns on.
5. The fuser assembly lamps turn on.
6. The RIP card assembly cooling fan turns on.
7. Operator panel LED becomes solid.
8. The transport motor turns on.

The following is an example of the screen that appears after the code is loaded.

Error codes and messages

User status and attendance messages

User primary message	Explanation
Adjusting color	Wait for the process to complete.
Change [paper source] to [custom type name]	Try one or more of the following: • Touch **Use current [paper source]** to ignore the message and print from the selected tray. • Load the correct paper size and type in the tray, verify the paper size and type settings are specified in the printer control panel Paper menu, and then touch **Paper changed, continue**. • Touch **Cancel job** to cancel the print job.
Change [paper source] to [custom type name] load [orientation]	Try one or more of the following: • Touch **Use current [paper source]** to ignore the message and print from the selected tray. • Load the correct paper size and type in the tray, verify the paper size and type settings are specified in the printer control panel Paper menu, and then touch **Paper changed, continue**. • Touch **Cancel job** to cancel the print job.
Change [paper source] to [custom string]	Try one or more of the following: • Touch **Use current [paper source]** to ignore the message and print from the selected tray. • Load the correct paper size and type in the tray, verify the paper size and type settings are specified in the printer control panel Paper menu, and then touch **Paper changed, continue**. • Touch **Cancel job** to cancel the print job.
Change [paper source] to [custom string] load [orientation]	Try one or more of the following: • Touch **Use current [paper source]** to ignore the message and print from the selected tray. • Load the correct paper size and type in the tray, verify the paper size and type settings are specified in the printer control panel Paper menu, and then touch **Paper changed, continue**. • Touch **Cancel job** to cancel the print job.
Change [paper source] to [paper size]	Try one or more of the following: • Touch **Use current [paper source]** to ignore the message and print from the selected tray. • Load the correct paper size and type in the tray, verify the paper size and type settings are specified in the printer control panel Paper menu, and then touch **Paper changed, continue**. • Touch **Cancel job** to cancel the print job.
Change [paper source] to [paper size] load [orientation]	Try one or more of the following: • Touch **Use current [paper source]** to ignore the message and print from the selected tray. • Load the correct paper size and type in the tray, verify the paper size and type settings are specified in the printer control panel Paper menu, and then touch **Paper changed, continue**. • Touch **Cancel job** to cancel the print job.
Change [paper source] to [paper size] [paper type]	Try one or more of the following: • Touch **Use current [paper source]** to ignore the message and print from the selected tray. • Load the correct paper size and type in the tray, verify the paper size and type settings are specified in the printer control panel Paper menu, and then touch **Paper changed, continue**. • Touch **Cancel job** to cancel the print job.

User status and attendance messages

User primary message	Explanation
Change [paper source] to [paper size] [paper type] load [orientation]	Try one or more of the following: • Touch **Use current [paper source]** to ignore the message and print from the selected tray. • Load the correct paper size and type in the tray, verify the paper size and type settings are specified in the printer control panel Paper menu, and then touch **Paper changed, continue**. • Touch **Cancel job** to cancel the print job.
Check [src] orientation or guides	Try one or more of the following: • Move the paper guides in the tray to the correct positions for the paper size loaded. • Make sure the paper size setting matches the paper loaded in the tray: 1. From the printer control panel Paper menu, check the Paper Size setting. 2. Before sending the print job, specify the correct size setting: - For Windows users, specify the paper size from Print Properties. - For Macintosh users, specify the paper size from the Page Setup dialog.
Close cover [x]	Close the specified cover to clear the message.
Close door [x]	Close the specified door.
Disk corrupted	The printer attempted a hard disk recovery on a corrupted hard disk, and the hard disk cannot be repaired. The hard disk must be reformatted. Touch **Format disk** to reformat the printer hard disk and clear the message. **Note:** Formatting deletes all the files stored on the printer hard disk.
Empty the hole punch box	1. Empty the hole punch box. For instructions on emptying the hole punch box, from the printer control panel touch **More Information**. 2. Reinsert the hole punch box into the finisher, and then touch **Continue** to clear the message.
Error reading USB drive. Remove USB.	An unsupported USB device has been inserted. Remove the USB device, and then install a supported one.
Fax memory full	There is not enough memory to send the fax job. Touch **Continue** to clear the message.
Fax partition inoperative. Contact system administrator.	The fax partition appears to be corrupted. Try one or more of the following: • Touch **Continue** to clear the message. • Turn the printer off and then back on to reset the printer. If the message appears again, then contact your system support person.
Fax server 'To Format' not set up. Contact system administrator.	The printer is in Fax Server mode, but the Fax Server setup has not been completed. Try one or more of the following: • Touch **Continue** to clear the message. • Complete the Fax Server setup. If the message appears again, contact your system support person.
Fax Station Name not set up	The Fax Station Name has not been entered. Sending and receiving faxes is disabled until fax is configured properly. Try one or more of the following: • Touch **Continue** to clear the message. • Complete the Analog Fax Setup. If the message appears again, contact your system support person.

User status and attendance messages

User primary message	Explanation
Fax Station Number not set up	The Fax Station Number has not been entered. Sending and receiving faxes is disabled until fax is configured properly. Try one or more of the following: • Touch **Continue** to clear the message. • Complete the Analog Fax Setup. If the message appears again, contact your system support person.
Insert Tray [x]	Insert the specified tray into the printer.
Insert the hole punch box	Insert the hole punch box into the finisher, and then touch **Continue** to clear the message.
Install Tray [x]	Try one or more of the following: • Install the specified tray: 1. Turn the printer off. 2. Unplug the power cord from the wall outlet. 3. Install the specified tray. 4. Connect the power cord to a properly grounded electrical outlet. 5. Turn the printer back on. • Cancel the print job.
Load [src] with [custom type name]	Try one or more of the following: • Load the specified paper in the tray or feeder. • Touch **Paper loaded, continue** to clear the message and continue printing. If the printer finds a tray that has the correct paper type and size, it feeds from that tray. If the printer cannot find a tray with the correct paper type and size, it prints from the default paper source. • Cancel the print job.
Load [src] with [custom string]	Try one or more of the following: • Load the specified paper in the tray or feeder. • Touch **Paper loaded, continue** to clear the message and continue printing. If the printer finds a tray that has the correct paper type and size, it feeds from that tray. If the printer cannot find a tray with the correct paper type and size, it prints from the default paper source. • Cancel the print job.
Load [src] with [size]	Try one or more of the following: • Load the specified paper in the tray or feeder. • Touch **Paper loaded, continue** to clear the message and continue printing. If the printer finds a tray that has the correct paper type and size, it feeds from that tray. If the printer cannot find a tray with the correct paper type and size, it feeds from the default paper source. • Cancel the print job.
Load [src] with [type] [size]	Try one or more of the following: • Load the specified paper in the tray or feeder. • Touch **Paper loaded, continue** to clear the message and continue printing. If the printer finds a tray that has the correct paper type and size, it feeds from that tray. If the printer cannot find a tray with the correct paper type and size, it feeds from the default paper source. • Cancel the print job.
Load Manual Feeder with [custom type name]	Try one or more of the following: • Load the specified paper in the multipurpose feeder. • Touch **Prompt each page, paper loaded** to clear the message and continue printing. If the printer finds a tray that has the correct paper type and size, then it feeds from that tray. If the printer cannot find a tray with the correct paper type and size, then it prints from the default paper source. • Cancel the print job.

User status and attendance messages

User primary message	Explanation
Load Manual Feeder with [custom string]	Try one or more of the following: • Load the specified paper in the multipurpose feeder. • Touch **Prompt each page, paper loaded** to clear the message and continue printing. If the printer finds a tray that has the correct paper type and size, then it feeds from that tray If the printer cannot find a tray with the correct paper type and size, then it prints from the default paper source. • Cancel the print job.
Load Manual Feeder with [size]	Try one or more of the following: • Load the specified paper in the multipurpose feeder. • Touch **Prompt each page, paper loaded** to clear the message and continue printing. If the printer finds a tray that has the correct paper type and size, then it feeds from that tray. If the printer cannot find a tray with the correct paper type and size, then it prints from the default paper source. • Cancel the print job.
Load Manual Feeder with [type] [size]	Try one or more of the following: • Load the specified paper in the multipurpose feeder. • Touch **Prompt each page, paper loaded** to clear the message and continue printing. If the printer finds a tray that has the correct paper type and size, then it feeds from that tray. If the printer cannot find a tray with the correct paper type and size, then it prints from the default paper source. • Cancel the print job.
Load staples	Try one or more of the following: • Replace the specified staple cartridge in the finisher. • Touch **Continue** to clear the message and continue printing. • Touch **Cancel job** to cancel the print job.
Manual feeder expects [paper size]. Check [paper source] guides	Try one or more of the following: • Load the specified paper size in the manual feeder. • Physically adjust [paper source] guides to a recognized paper size. • Touch **Continue** to clear the message and continue printing. If the printer finds a tray that has the correct paper type and size, then it feeds from that tray. If the printer cannot find a tray with the correct paper type and size, then it prints from the default source.
Memory full, cannot print faxes	There is not enough memory to print the fax job. Touch **Continue** to clear the message without printing. Held faxes will attempt to print after the printer has been restarted.
Power off, wait 2 seconds, power on	Turn the printer off and wait for 2 seconds before turning the printer back on.
Remove paper from standard output bin	Remove the stack of paper from the standard exit bin.
Remove paper from bin [x]	Remove the paper from the specified bin. The printer automatically senses paper removal and resumes printing. If removing the paper does not clear the message, then touch Continue.
Remove paper from [linked bin set name]	Remove the paper from the specified bin. The printer automatically senses paper removal and resumes printing. If removing the paper does not clear the message, then touch **Continue**.
Remove paper from all bins	Remove the paper from all of the bins. The printer automatically senses paper removal and resumes printing. If removing the paper does not clear the message, then touch **Continue**.

User status and attendance messages

User primary message	Explanation
Restore Held Jobs?	Try one or more of the following: • Touch **Continue** to restore all held jobs stored on the printer hard disk. • Touch **Do not restore** if you do not want any print jobs to be restored.
Scanner ADF Cover Open	The ADF cover is open. The message clears when the cover is closed.
Scan Document Too Long	The scan job exceeds the maximum number of pages. Touch **Cancel Job** to clear the message.
SMTP server not set up. Contact system administrator.	An error occurred on the SMTP server, or the SMTP server is not configured properly. Touch **Continue** to clear the message. If the message appears again, then contact your system support person.
Some held jobs were not restored	Touch **Continue** to delete the specified job. **Note:** Held jobs that are not restored stay on the hard disk and are inaccessible.
Unsupported disk	An unsupported printer hard disk has been installed. Remove the unsupported device, and then install a supported one.
31.xx Missing or defective [color] cartridge	Try one or more of the following: 1. Remove and reinstall the specified print cartridge. For instructions on removing a print cartridge, touch **More Information**. 2. Touch **Continue** to clear the message. **Note:** If the message is not cleared, then replace the defective print cartridge.
32.xx [color] cartridge part number unsupported by device	Remove the unsupported toner cartridge, and then install a supported one.
34 Incorrect paper size, check [paper source]	Try one or more of the following: • Load the appropriate paper or specialty media in the proper tray. • Confirm that the wheel on Tray 1 is set to the paper size loaded in the tray. Make sure the paper size matches the document you are trying to print. • Touch **Continue** to clear the message and print using a different tray. • Check the tray length and width guides and make sure the paper is loaded properly in the tray. • Make sure the correct paper size and type are specified on the Print Properties or Print dialog settings. • Check that the paper size is correctly set. For example, if the MP Feeder Size is set to Universal, make sure the paper is large enough for the data being printed. • Cancel the print job.
34 Incorrect paper type, check [paper source]	Try one or more of the following: • Load the appropriate paper or specialty media in the proper tray. • Confirm that the wheel on Tray 1 is set to the paper type loaded in the tray. Make sure the paper type matches the document you are trying to print. • Touch **Continue** to clear the message and print using a different tray. • Check the tray length and width guides and make sure the paper is loaded properly in the tray. • Make sure the correct paper size and type are specified on the Print Properties or Print dialog settings. • Check that the paper type is correctly set. For example, if the MP Feeder Type is set to Universal, then make sure the paper is large enough for the data being printed. • Cancel the print job.
35 Insufficient memory to support Resource Save feature	Try one or more of the following: • Touch **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, and then exit the menus to activate the link buffer changes. When Ready appears, enable Resource Save. • Install additional memory.

User status and attendance messages

User primary message	Explanation
36 Printer service required	Touch **Continue** to clear the message or contact customer support.
37 Insufficient memory to collate job	Try one or more of the following: • Touch **Continue** to print the portion of the job already stored and begin collating the rest of the print job. • Cancel the current print job.
37 Insufficient memory for Flash Memory Defragment operation	Try one or more of the following: • Touch **Continue** to stop the defragment operation and continue printing. • Delete fonts, macros, and other data in printer memory. • Install additional printer memory.
37 Insufficient memory, some Held Jobs were deleted	The printer deleted some held jobs in order to process current jobs. Touch **Continue** to clear the message.
38 Memory full	Try one or more of the following: • Touch **Cancel job** to clear the message. • Install additional printer memory.
39 Complex page, some data may not have printed	Try one or more of the following: • Touch **Continue** to clear the message and continue printing. • Cancel the current print job. • Install additional printer memory.
50 PPDS font error	Try one or more of the following: • Touch **Continue** to clear the message and continue printing. • The printer cannot find a requested font. From the PPDS menu, select Best Fit, and then select On. The printer will find a similar font and reformat the affected text. • Cancel the current print job.
51 Defective flash detected	Try one or more of the following: • Touch **Continue** to clear the message and continue printing. • Cancel the current print job.
52 Not enough free space in flash memory for resources	Try one or more of the following: • Touch **Continue** to clear the message and continue printing. Downloaded fonts and macros not previously stored in flash memory are deleted. • Delete fonts, macros, and other data stored in flash memory. • Upgrade to a larger capacity flash memory card.
53 Unformatted flash detected	Try one or more of the following: • Touch **Continue** to stop the defragment operation and continue printing. • Format the flash memory. If the error message remains, the flash memory may be defective and require replacing.
54 Network [x] software error	Try one or more of the following: • Touch **Continue** to continue printing. • Turn the printer off, wait for about 10 seconds, and then turn the printer back on. • Upgrade (flash) the network firmware in the printer.
54 Serial option [x] error	Try one or more of the following: • Check that the serial cable is properly connected and is the correct one for the serial port. • Check that the serial interface parameters (protocol, baud, parity, and data bits) are set correctly on the printer and host computer. • Touch **Continue** to continue printing. • Turn the printer power off and then back on to reset the printer.

User status and attendance messages

User primary message	Explanation
54 Standard network software error	Try one or more of the following: • Touch **Continue** to continue printing. • Turn the printer off and then back on to reset the printer. • Upgrade (flash) the network firmware in the printer or print server.
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 card from the printer system board, and then replace it with a supported card. 4. Connect the power cord to a properly grounded electrical outlet. 5. Turn the printer back on.
56 Parallel port [x] disabled	Try one or more of the following: • Touch **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.
56 Serial port [x] disabled	Try one or more of the following: • Touch **Continue** to clear the message. The printer discards any data received through the serial port. • Make sure the Serial Buffer menu is not set to Disabled.
56 Standard USB port disabled	Try one or more of the following: • Touch **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.
56 Standard parallel port disabled	Try one or more of the following: • Touch **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.
56 USB port [x] disabled	Try one or more of the following: • Touch **Continue** to clear the message. The printer discards any data received through the USB port. • Make sure the USB Buffer menu is not set to Disabled.
58 Too many disks installed	1. Turn the printer off. 2. Unplug the power cord from the wall outlet. 3. Remove the excess disks. 4. Connect the power cord to a properly grounded electrical outlet. 5. Turn the printer back on.
58 Too many flash options installed	1. Turn the printer off. 2. Unplug the power cord from the wall outlet. 3. Remove the excess flash memory. 4. Connect the power cord to a properly grounded outlet. 5. Turn the printer back on.
58 Too many trays attached	1. Turn the printer off. 2. Unplug the power cord from the wall outlet. 3. Remove the additional trays. 4. Connect the power cord to a properly grounded outlet. 5. Turn the printer back on.
61 Remove defective disk	Try one or more of the following: • Touch **Continue** to clear the message and continue printing. • Install a different printer hard disk before performing any operations that require a printer hard disk.

User status and attendance messages

User primary message	Explanation
62 Disk full	Try one or more of the following: • Touch **Continue** to clear the message and continue processing. • Delete fonts, macros, and other data stored on the printer hard disk. • Install a printer hard disk with larger capacity.
63 Unformatted disk	Try one or more of the following: • Touch **Continue** to clear the message and continue printing. • Format the printer hard disk. If the error message remains, the hard disk may be defective and require replacing.
80.xx Fuser life warning	• Order a replacement fuser immediately. When print quality is reduced, install the new fuser, following the instruction sheet that came with the replacement part. • Touch **Continue** to clear the message and continue printing.
80 Replace fuser	1. Replace the fuser using the instruction sheet that came with the replacement part. 2. Touch **Continue** to clear the message and continue printing.
80 Scanner maintenance required, use ADF kit	Contact customer support, and report the message. The printer is scheduled for maintenance.
80 Scheduled maintenance [x]	Contact customer support, and report the message. The printer is scheduled for maintenance.
82.xx Replace waste toner bottle	1. Replace the waste toner bottle. For instructions on replacing the waste toner bottle, from the printer control panel touch **More Information**. 2. Touch **Continue** to clear the message and continue printing.
82.xx Waste toner bottle missing	Reinsert the waste toner bottle into the printer.
82.xx Waste toner bottle nearly full	Order a replacement waste toner bottle immediately. 1. Replace the waste toner bottle. For instructions on installing the waste toner bottle, from the printer control panel touch **More Information**. 2. Touch **Continue** to clear the message and continue printing.
84 unsupported [color] photoconductor	Remove the specified photoconductor, and then install a supported one.
84.xx [color] photoconductor missing	Install the specified color photoconductor, following the instruction sheet that came with the replacement part.
84.xx [color] photoconductor nearly low	1. Order a replacement photoconductor. 2. When print quality is reduced, install the new photoconductor, following the instruction sheet that came with the replacement part. 3. Touch **Continue** to clear the message and continue printing.
84.xx [color] photoconductor low	1. Order a replacement photoconductor immediately. 2. When print quality is reduced, install the new photoconductor, following the instruction sheet that came with the replacement part. 3. Touch **Continue** to clear the message and continue printing.
83.xx Transfer module missing	Insert the transfer module into the printer.
84.xx Replace [color] photoconductor	1. Replace the photoconductor, following the instruction sheet that came with the replacement part. 2. From the printer control panel, touch **Continue** to clear the message and continue printing.

User status and attendance messages

User primary message	Explanation
88 Replace [color] cartridge	The specified print or toner cartridge is empty. 1. Replace the specified cartridge. For instructions on replacing a cartridge, from the printer control panel, touch **More Information**. 2. Touch **Continue** to clear the message and continue printing.
88.xx [color] cartridge low	1. Order a replacement toner cartridge immediately. 2. Remove the specified cartridge. 3. Firmly shake the cartridge side-to-side and front-to-back several times to redistribute the toner. 4. Reinsert the cartridge, and then touch **Continue** to clear the message and continue printing. **Note:** Repeat this procedure multiple times until the print remains faded, and then replace the cartridge.
88.xx [color] cartridge very low	The specified cartridge is very low. 1. For instructions on replacing a cartridge, from the printer control panel, touch **More Information**. 2. Touch **Continue** to clear the message and continue printing.
2yy.xx Close flatbed cover and load originals if restarting job	Try one or more of the following: • Touch **Cancel job** to cancel the job and clears the message. • Touch **Scan from automatic feeder** to resume the scan job from the ADF immediately following the last successfully scanned page. • Touch **Scan from flatbed** to resume the scan job from the scanner glass immediately following the last successfully scanned page. • Touch **Finish job without further scanning** to end the scan job at the last successfully scanned page. **Note:** This does not cancel the scan job. All successfully scanned pages will be processed further for copying, faxing and e-mailing.
280.06 Paper missing	This message appears when the scanner is instructed to scan from the ADF but there is no paper in the tray. Try one or more of the following: • Touch **Continue** to clear the message. • Touch **Cancel job** to cancel the job and clears the message. • Touch **Scan from automatic feeder** to resume the scan job from the ADF immediately following the last successfully scanned page. • Touch **Scan from flatbed** to resume the scan job from the scanner glass immediately following the last successfully scanned page. • Touch **Finish job without further scanning** to end the scan job at the last successfully scanned page. **Note:** This does not cancel the scan job. All successfully scanned pages will be processed further (copy, fax, e-mail, etc.) • Touch **Restart job** to clear the message and start a new scan job with the same settings as the previous job.
840.01 Scanner disabled by admin	Print without the scanner or contact your system support person.
840.02 Scanner disabled. Contact system administrator if problem persists.	A scanner crash has occurred and disabled the scanner. Try one or more of the following: • Touch **Continue with scanner disabled** to return to the home screen, and then contact your system support person. • Touch **Reboot and automatically enable scanner** to cancel the job. **Note:** This attempts to bring the scanner back online.
1565 Emulation error, load emulation option	The printer automatically clears the message in 30 seconds, and then disables the download emulator on the firmware card.

Paper jam error codes

Error code	Description	Action
201 Paper Jam	Jam is detected at the fuser or at the printer exit.	Go to **“201-202 paper jams” on page 3-36**.
202 Paper Jam	Jam is detected at the printer exit.	Go to **“203 paper jam” on page 3-39**.
230 Paper Jam	Jam is detected at the duplex area.	Go to **“230 paper jam” on page 3-40**.
231 Paper Jam Check Duplex	Jam is detected at the duplex area.	Go to **“231 paper jam” on page 3-41**.
24x Paper Jam Check Tray [x]	Jam is detected at the media trays.	Go to **“24x paper jam” on page 3-43**.
250 Paper Jam Check Manual Feeder	Jam is detected at the MPF.	Go to **“250 paper jam” on page 3-49**.
281 Paper Jam	Jam is detected at the fuser or the bridge unit.	Go to **“281 paper jam” on page 3-49**.
28y.xx paper jams	Jam is detected at the ADF.	Go to **“28y.xx paper jams” on page 3-58**.
455 Staple Jam	A jam is detected at the stapler.	Go to **“455 staple jam” on page 3-56**.
4yy.xx Paper Jam Check [area]	Jam is detected at the bridge unit.	Go to **“4yy.xx paper jams” on page 3-52**.

1xx service error codes

Error code	Description	Action
111.01 Service printhead error	LED printhead (K) failure	Open circuit detected in the LED printhead. Go to **“111.01 LED printhead (K) failure” on page 2-43**.
111.02 Service printhead error	LED printhead (K) failure	Open circuit detected in the LED printhead. Go to **“111.02–111.04 LED printhead (K) signal failure” on page 2-43**.
111.03 Service printhead error	LED printhead (K) failure	Open circuit detected in the LED printhead. Go to **“111.02–111.04 LED printhead (K) signal failure” on page 2-43**.
111.04 Service printhead error	LED printhead (K) failure	Open circuit detected in the LED printhead. Go to **“111.02–111.04 LED printhead (K) signal failure” on page 2-43**.
112.01 Service printhead error	LED printhead (C) failure	Open circuit detected in the LED printhead. Go to **“112.01 LED printhead (C) failure” on page 2-44**.

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Error code	Description	Action
112.02 Service printhead error	LED printhead (C) failure	Open circuit detected in the LED printhead. Go to **"112.02–112.04 LED printhead (C) signal failure" on page 2-44**.
112.03 Service printhead error	LED printhead (C) failure	Open circuit detected in the LED printhead. Go to **"112.02–112.04 LED printhead (C) signal failure" on page 2-44**.
112.04 Service printhead error	LED printhead (C) failure	Open circuit detected in the LED printhead. Go to **"112.02–112.04 LED printhead (C) signal failure" on page 2-44**.
113.01 Service printhead error	LED printhead (M) failure	Open circuit detected in the LED printhead. Go to **"113.01 LED printhead (M) failure" on page 2-44**.
113.02 Service printhead error	LED printhead (M) failure	Open circuit detected in the LED printhead. Go to **"113.02–113.04 LED printhead signal failure (M)" on page 2-45**.
113.03 Service printhead error	LED printhead (M) failure	Open circuit detected in the LED printhead. Go to **"113.02–113.04 LED printhead signal failure (M)" on page 2-45**.
113.04 Service printhead error	LED printhead (M) failure	Open circuit detected in the LED printhead. Go to **"113.02–113.04 LED printhead signal failure (M)" on page 2-45**.
114.01 Service printhead error	LED printhead (Y) failure	Open circuit detected in the LED printhead. Go to **"114.01 LED printhead failure (Y)" on page 2-45**.
114.02 Service printhead error	LED printhead (Y) failure	Open circuit detected in the LED printhead. Go to **"114.02–114.04 LED printhead (Y) signal failure" on page 2-46**.
114.03 Service printhead error	LED printhead (Y) failure	Open circuit detected in the LED printhead. Go to **"114.02–114.04 LED printhead (Y) signal failure" on page 2-46**.
114.04 Service printhead error	LED printhead (Y) failure	Open circuit detected in the LED printhead. Go to **"114.02–114.04 LED printhead (Y) signal failure" on page 2-46**.

1xx service error codes

Error code	Description	Action
115.01 Service printhead error	Multiple LED printhead power supply failure	Power is not supplied correctly in more than one LED printhead. Go to **"115.01 Multiple LED printhead power supply failure" on page 2-46**.
115.02 Service printhead error	Single LED printhead power supply failure	Power is not supplied correctly in one LED printhead. Go to **"115.02 Single LED printhead power failure" on page 2-47**.
115.03 Service printhead error	Multiple LED printhead download failure	An error occurs in downloading data from more than one LED printhead. Go to **"115.03 Multiple LED printhead download failure" on page 2-47**.
115.04 Service printhead error	Single LED printhead download failure	An error occurs in downloading data from one LED printhead. Go to **"115.04 Single LED printhead download failure" on page 2-48**.
115.05 Service printhead error	Multiple LED printhead mismatch failure	The model numbers of multiple LED Printheads do not match. Go to **"115.05 Multiple LED printhead mismatch failure" on page 2-48**.
115.06 Service printhead error	Single LED printhead mismatch failure	Go to **"115.06 Single LED printhead mismatch failure" on page 2-49**.
115.07 Service printhead error	Multiple LED printhead read failure	Communication failed between the upper engine PCBA and more than one LED printhead. Go to **"115.07 Multiple LED printhead read failure" on page 2-49**.
115.08 Service printhead error	Single LED printhead read failure	Communication failed between the upper engine PCBA and one LED printhead. Go to **"115.08 Single LED printhead read failure" on page 2-49**.
115.09 Service printhead error	Multiple LED printhead write failure	Communication failed between the upper engine PCBA and more than one LED printhead. Go to **"115.09 Multiple LED printhead write failure" on page 2-50**.
115.10 Service printhead error	Single LED printhead write failure	Communication failed between the upper engine PCBA and one LED printhead. Go to **"115.10 Single LED printhead write failure" on page 2-50**.
115.11 Service printhead error	Multiple LED printhead communication failure	Communication failed between the upper engine PCBA and more than one LED printhead. Go to **"115.11 Multiple LED printhead communication failure" on page 2-51**.

1xx service error codes

Error code	Description	Action
115.12 Service printhead error	Single LED printhead communication failure	Communication failed between the upper engine PCBA and one LED printhead. Go to **“115.12 Single LED printhead communication failure” on page 2-52**.
115.13 Service printhead error	Multiple LED printhead clock failure	Synchronization failed on multiple LED printheads. Go to **“115.13 Multiple LED printhead clock failure” on page 2-52**.
115.14 Service printhead error	Single LED printhead clock failure	Synchronization failed on one LED printhead. Go to **“115.14 Single LED printhead clock failure” on page 2-53**.
115.15 Service tray error	Tray module logic failure	An error was detected in the tray module. Go to **“115.15 Tray module logic failure” on page 2-54**.
120.01 Service fuser error	Fuser motor failure	An error was detected in the fuser motor. Go to **“120.01 Fuser motor failure” on page 2-54**.
120.02 Service fuser error	Fuser pressure roll retract motor failure	An error was detected at the fuser pressure rolls and motor. Go to **“120.02 Fuser pressure roll retract motor failure” on page 2-55**.
121.01 Service fuser error	Encoder pulse fail	No change was detected on the speed of the belt for more than 1 second. Go to **“121.01 Encoder pulse failure” on page 2-55**.
121.03 Service fuser error	Heat belt (center) disconnection error	Open circuit is detected at the fuser heat belt. Go to **“121.03 Heat belt (center) disconnection error” on page 2-56**.
121.04 Service fuser error	Heat belt (center) overheat error	Temperature in the heat belt has exceeded the limit. Go to **“121.04 Heat belt (center) overheat error” on page 2-57**.
121.05 Service fuser error	Heat belt (rear) disconnection error	Open circuit is detected at the fuser heat belt. Go to **“121.05 Heat belt (rear) disconnection error” on page 2-58**.
121.06 Service fuser error	Heat belt (rear) overheat error	Temperature in the heat belt has exceeded the limit. Go to **“121.06 Heat belt (rear) overheat error” on page 2-58**.
121.07 Service fuser error	Heat belt (center) temperature increase failure	The temperature is late in reaching a specified temperature within the specified time. Go to **“121.07 Heat belt (center) temperature increase failure” on page 2-59**.

1xx service error codes

Error code	Description	Action
121.08 Service fuser error	Heat belt (rear) temperature increase failure	The temperature is late in reaching a specified temperature within the specified time. Go to **"121.08 Heat belt (rear) temperature increase failure" on page 2-59**.
121.09 Service fuser error	Fuser temperature lag error	The temperature is late in reaching a specified temperature within the specified time. Go to **"121.09 Fuser temperature lag error" on page 2-60**.
121.10 Service fuser error	Heat belt rotation failure	Speed of belt rotation did not change within the specified time. Go to **"121.10 Heat belt rotation failure" on page 2-61**.
121.11 Service fuser error	Fuser temperature recovery failure.	The status of the fuser temperature did not switch at the specified time. Go to **"121.11 Fuser temperature recovery failure" on page 2-61**.
121.12 Service fuser error	Fuser failure	Wrong fuser is possibly installed or fuser drive PCBA has failed. Go to **"121.12 Fuser failure" on page 2-62**.
121.13 Service fuser error	Fuser thermostat failure	The Fuser Assembly Thermostat is broken. Go to **"121.13 Fuser thermostat failure" on page 2-62**.
126.01 Service fuser error	Fuser interface failure	There is a a broken link between upper engine PCBA and the fuser. Go to **"126.01 Fuser driver interface failure" on page 2-62**.
126.02 Service fuser error	Fuser driver to upper engine PCBA interface failure	There is a broken link between upper engine PCBA and the fuser. Go to **"126.02 Fuser driver to upper engine PCBA interface failure" on page 2-63**.
126.03 Service fuser error	Fuser driver communication failure	There is a communication error between the fuser and upper engine PCBA Go to **"126.03 Fuser driver communication failure" on page 2-63**.
126.04 Service fuser error	Fuser driver freeze failure	The processing unit of the fuser driver PCBA has hung up. Go to **"126.04 Fuser driver freeze failure" on page 2-63**.
126.05 Service fuser error	Fuser driver high voltage error	Fuser driver voltage levels has exceeded the specified value. Go to **"126.05 Fuser driver high voltage error" on page 2-64**.

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Error code	Description	Action
126.06 Service fuser error	Fuser driver low voltage error	Fuser driver voltage levels has not reached the specified value. Go to **"126.06 Fuser driver low voltage error" on page 2-64**
126.07 Service fuser error	Fuser driver suge failure	A surge in voltage is detected in the fuser. Go to **"126.07 Fuser driver surge failure" on page 2-64**.
126.08 Service fuser error	IGBT high temperature error	High temperature is detected at the IGBT. Go to **"126.08 IGBT high temperature error" on page 2-65**.
126.09 Service fuser error	IGBT temperature sensor failure	Open circuit is detected at the IGBT. Go to **"126.09 IGBT temperature sensor failure" on page 2-65**.
126.12 Service fuser error	Input low current error	The input current supplied to the fuser is below the lower limit at the specified time. Go to **"126.12 Input low current error" on page 2-65**.
132.01 Service engine error	ATC sensor(K) failure	There is an error at the ATC sensor. Go to **"132.01 ATC sensor (K) failure" on page 2-66**.
132.03 Service engine error	ATC sensor(M) failure	There is an error at the ATC sensor. Go to **"132.03 ATC sensor (M) failure" on page 2-69**.
132.04 Service engine error	ATC sensor(C) failure	There is an error at the ATC sensor. Go to **"132.04 ATC sensor (C) failure" on page 2-70**.
137.01 Service engine error	ATC sensor(Y) failure	There is an error at the ATC sensor. Go to **"137.01 Upper printer engine PCBA communication error" on page 2-71**.
137.01 Service engine error	Upper printer engine PCBA communication error	There is a communication error between the upper engine and a sub system. Go to **"137.01 Upper printer engine PCBA communication error" on page 2-71**.
140.01 Service engine error	Registration drive motor failure.	The registration drive motor is not functioning. Go to **"140.01 Registration drive motor failure" on page 2-72**.
141.01 Service engine error	Drum drive motor (K) failure	The PC drive motor is not functioning. Go to **"141.01 Drum drive motor (K) failure" on page 2-72**.
141.02 Service engine error	Drum drive motor (Y/M/C) failure	The PC drive motor is not functioning. Go to **"141.02 Drum drive motor (Y/M/C) failure" on page 2-73**.

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Error code	Description	Action
146.xx Service engine error	Tray 1 lift motor failure	The Tray 1 lift motor did not raise to the appropriate position. Go to **"146.xx Tray 1 lift motor failure" on page 2-74**.
151.01 Service engine error	Transfer belt motor failure	The transfer belt motor is not functioning. Go to **"151.01 Transfer belt motor failure" on page 2-75**.
151.02 Service engine error	First transfer contact/retract failure	The first transfer contact/retract motor is not functioning. Go to **"151.02 First transfer contact/ retract failure" on page 2-75**.
154.01 Service engine error	Developer (Y/M/C) motor	The developer motor is not functioning. Go to **"154.01 Developer (Y/M/C) motor failure" on page 2-77**.
155.01 Service engine error	Toner dispense motor (K) failure	The toner dispense motor is not functioning. Go to **"155.01 Toner dispense motor (K) failure" on page 2-78**.
156.01 Service engine error	Toner dispense motor (C) failure	The toner dispense motor is not functioning. Go to **"156.01 Toner dispense motor (C) failure" on page 2-79**.
157.01 Service engine error	Toner dispense motor (M) failure	The toner dispense motor is not functioning. Go to **"157.01 Toner dispense motor (M) failure" on page 2-79**.
158.01 Service engine error	Toner dispense motor (Y) failure	The toner dispense motor is not functioning. Go to **"158.01 Toner dispense motor (Y) failure" on page 2-80**.
171.01 Service engine error	Controller cooling fan failure	The controller cooling fan is not functioning. Go to **"171.01 Controller cooling fan failure" on page 2-81**.
171.02 Service engine error	Fuser cooling fan failure	The fuser cooling fan is not functioning. Go to **"171.01 Controller cooling fan failure" on page 2-81**.
172.01 Service engine error	Front upper cooling fan failure	The front upper cooling fan is not functioning. Go to **"172.01 Front upper cooling fan failure" on page 2-82**.
173.01 Service engine error	LVPS sub cooling fan failure	The LVPS sub cooling fan is not functioning. Go to **"173.01 LVPS sub cooling fan failure" on page 2-82**.

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Error code	Description	Action
174.01 Service engine error	Charge roll HVPS cooling fan failure	The HVPS cooling fan is not functioning. Go to **"174.01 Charge roll HVPS cooling fan failure" on page 2-83**.
175.01 Service engine error	Front right cooling fan failure	The front right cooling fan is not functioning. Go to **"175.01 Front right cooling fan failure" on page 2-83**.
175.03 Service engine error	PC/developer drive motor cooling fan failure	The PC/developer drive motor is not functioning. Go to **"175.03 PC/developer drive motor cooling fan failure" on page 2-84**.
175.04 Service engine error	Front left cooling fan failure	The front left cooling fan is not functioning. Go to **"175.04 Front left cooling fan failure" on page 2-84**.
175.05 Service engine error	Suction fan failure	The suction fan is not functioning. Go to **"175.05 Suction fan failure" on page 2-84**.
175.06 Service engine error	Center exhaust fan failure	The rear upper cooling fan is not functioning. Go to **"175.06 Center exhaust fan failure" on page 2-85**.
175.07 Service engine error	Fuser driver PCBA cooling fan failure	The fuser driver PCBA cooling fan is not functioning. Go to **"175.07 Fuser driver PCBA cooling fan failure" on page 2-85**.
175.08 Service engine error	Upper exhaust cooling fan failure	The upper exhaust cooling fan is not functioning. Go to **"175.08 Upper exhaust cooling fan failure" on page 2-85**
191.01 Service engine error	Lower engine PCBA detect failure	The lower engine PCBA is not detected. Go to **"191.01 Lower engine PCBA detect failure" on page 2-86**.
191.02–191.05 Service engine error	Fuse on the upper engine PCBA has blown.	Go to **"191.02–191.05 Upper engine PCBA fuse blown" on page 2-86**.
191.06 Service engine error	Fuse 2 on the lower engine PCBA has blown.	Go to **"191.06 Lower engine PCBA fuse 2 blown" on page 2-87**.
191.08 Service engine error	Fuse 4 on the lower engine PCBA has blown.	Go to **"191.08 Lower engine PCBA fuse 4 blown" on page 2-87**.
191.09 Service engine error	Fuse 5 on the lower engine PCBA has blown.	Go to **"191.09 Upper engine PCBA fuse 5 blown" on page 2-88**.

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Error code	Description	Action
191.10 Service engine error	Fuse 6 on the lower engine PCBA has blown.	Go to **"191.10 Lower engine PCBA fuse 6 blown" on page 2-88**.
191.11 Service engine error	Fuse 7 on the lower engine PCBA has blown.	A fuse has blown. Go to **"191.11 Lower engine PCBA fuse 7 blown" on page 2-88**.
191.12 Service engine error	Fuse 8 on the lower engine PCBA has blown.	A fuse has blown. Go to **"191.12 Lower engine PCBA fuse 8 blown" on page 2-89**.
191.13 Service engine error	Lower engine PCBA fuse 9 blown	A fuse has blown. Go to **"191.13 Lower engine PCBA fuse 9 blown" on page 2-89**.
191.14 Service engine error	Lower engine PCBA fuse 10 blown	A fuse has blown. Go to **"191.14 Lower engine PCBA fuse 10 blown" on page 2-90**.
191.15 Service engine error	Lower engine PCBA fuse 11 blown	A fuse has blown. Go to **"191.15 Lower engine PCBA fuse 11 blown" on page 2-90**.
191.16 Service engine error	Lower engine PCBA fuse 12 blown	A fuse has blown. Go to **"191.16 Lower engine PCBA fuse 12 blown" on page 2-90**.
191.17 Service engine error	Lower engine PCBA fuse 13 blown	A fuse has blown. Go to **"191.17 Lower engine PCBA fuse 13 blown" on page 2-91**.
191.18 Service engine error	Upper engine PCBA data failure	Data values are not normal on the upper engine memory. Go to **"191.18 Upper engine PCBA data failure" on page 2-91**.
191.19 Service engine error	Upper engine PCBA access failure	Data values are not normal on the upper engine memory. Go to **"191.19 Upper engine PCBA access failure" on page 2-91**.
191.20 Service engine error	Upper engine PCBA buffer failure	Data values are not normal on the upper engine memory. Go to **"191.20 Upper engine PCBA buffer failure" on page 2-92**.
191.23 Service engine error	Fuse 14 on the lower engine PCBA has blown.	Go to **"191.23 Lower engine PCBA fuse 14 blown" on page 2-92**.
191.24 Service engine error	Fuse 15 on the lower engine PCBA has blown.	Go to **"191.24 Lower engine PCBA fuse 15 blown" on page 2-92**.
191.25 Service engine error	Fuse 16 on the lower engine PCBA has blown.	Go to **"191.25 Lower engine PCBA fuse 16 blown" on page 2-93**.

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Error code	Description	Action
200.01 Paper jam	Sensor (registration) static jam	Media remains detected by the sensor (registration) after power on. Go to **"200.01 Sensor (registration) static jam" on page 2-93**.
200.03 Paper jam	Sensor (registration) late jam (feeding from the tray)	The media is late reaching the sensor (registration) within the specified time after the registration clutch is turned on. Go to **"200.03 Sensor (registration) late jam (feeding from the tray)" on page 2-94**.
200.03 Paper jam	Sensor (registration) late jam (feeding from the MPF)	The media is late reaching the sensor (registration) within the specified time after the MPF pick solenoid is turned on. Go to **"200.03 Sensor (registration) late jam (feeding from the MPF)" on page 2-95**.
200.05 Paper jam	Sensor (registration) lag jam	The media reached the sensor (registration) but did not clear it within the specified time. Go to **"200.05/200.55 Sensor (registration) lag jam" on page 2-97**.
200.53 Paper jam	Sensor (registration) late jam 80K interval for feed rollers exceeded in tray 1	The media is late reaching the sensor (registration) within the specified time after being fed from any given media tray. Go to **"200.53 Sensor (registration) late jam (80K interval exceeded for feed rolls)" on page 2-99**.
200.55 Paper jam	Sensor (registration) lag jam 80K interval for feed rollers exceeded in tray 1	The media reached the sensor (registration) but did not clear it within the specified time. Go to **"200.05/200.55 Sensor (registration) lag jam" on page 2-97**.
201.01 Paper jam	Sensor (media on belt) static jam	Media remains detected by the sensor (media on belt) after power on. Go to **"201.01 Sensor (media on belt) static jam" on page 2-102**.
201.03 Paper jam	Sensor (media on belt) late jam	The media is late reaching the sensor (media on belt) within the specified time after reaching the sensor (registration). Go to **"201.03 Sensor (media on belt) late jam" on page 2-102**.
202.01 Paper jam	Sensor (fuser exit) static jam	Media remains detected by the sensor (fuser exit) after power on. Go to **"202.01 Sensor (fuser exit) static jam" on page 2-105**.

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Error code	Description	Action
202.03 Paper jam	Sensor (fuser exit) late jam	The media is late reaching the sensor (fuser exit) within the specified time after reaching the sensor (registration). Go to **"202.03 Exit Sensor 1 Late Jam" on page 2-105**.
202.04 Paper jam	Sensor (fuser exit) lag jam	The media reached the sensor (fuser exit) but did not clear it within the specified time. Go to **"202.04/202.05 Sensor (fuser exit) lag jam" on page 2-108**.
202.05 Paper jam	Sensor (fuser exit) cleared too soon jam	The media reached the sensor (fuser exit) but cleared too soon. Go to **"202.04/202.05 Sensor (fuser exit) lag jam" on page 2-108**.
203.01 Paper jam	Sensor (upper redrive) static jam	Media remains detected by the sensor (upper redrive) after power on. Go to **"203.01 Sensor (upper redrive) static jam" on page 2-110**.
203.03 Paper jam	Sensor (upper redrive) late jam	The media is late reaching the sensor (upper redrive) within the specified time after reaching the sensor (fuser exit). Go to **"203.03 Sensor (upper redrive) late jam" on page 2-111**.
203.05 Paper jam	Sensor (upper redrive) lag jam	The media reached the sensor (upper redrive) but did not clear it within the specified time. Go to **"203.05 Sensor (upper redrive) lag jam" on page 2-113**.
230.01 Paper jam	Sensor (duplex wait) static jam.	Media remains detected by the sensor (duplex wait) after power on. Go to **"230.01 Sensor (duplex wait) static jam" on page 2-114**.
231.03 Paper jam	Sensor (duplex wait) late jam	The media is late reaching the sensor (duplex wait) within the specified time after the upper redrive motor has turned on for duplexing. Go to **"231.03 Sensor (duplex wait) late jam" on page 2-115**.
232.03 Paper jam	Sensor (registration) late jam (Duplex direct)	The media is late reaching the sensor (registration) within the specified time after the registration clutch has turned on for duplex direct mode. Go to **"232.03 Sensor (registration) late jam (duplex direct)" on page 2-117**.
242.01 Paper jam	Sensor (tray 2 feed out) static jam	Media remains detected by the sensor (tray 2 feed out) after power on. Go to **"242.01 Sensor (tray 2 feed out) static jam" on page 2-118**.

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Error code	Description	Action
242.03 Paper jam	Sensor (tray 2 feed out) late jam	The media is late reaching the sensor (tray 2 feed out) within the specified time after the feed from tray 3 or tray 4 has started. Go to **"242.03/242.06 Sensor (tray 2 feed out) late jam" on page 2-119**.
242.06 Paper jam	Sensor (tray 2 feed out) failed to pick jam	The media is late reaching the sensor (tray 2 feed out) within the specified time after the feed from tray 3 or tray 4 has started. Go to **"242.03/242.06 Sensor (tray 2 feed out) late jam" on page 2-119**.
242.56 Paper jam	Sensor (tray 2 feed out) late jam 80K interval for feed rollers exceeded in tray 2.	The media is late reaching the sensor (tray 2 feed out) within the specified time after the feed from tray 2 has started. Go to **"242.56 Sensor (tray 2 feed out) late jam (80K interval exceeded for feed rolls)" on page 2-120**.
243.01 Paper jam	Sensor (tray 3 feed out) static jam	Media remains detected by the sensor (tray 3 feed out) after power on. Go to **"243.01 Sensor (tray 3 feed out) static jam" on page 2-121**.
243.03 Paper jam	Sensor (tray 3 feed out) late jam	The media is late reaching the sensor (tray 3 feed out) within the specified time after the feed from tray 4 has started. Go to **"243.03/243.06 Sensor (tray 3 feed out) late jam" on page 2-122**.
243.06 Paper jam	Sensor (tray 3 feed out) failed to pick jam	The media is late reaching the sensor (tray 3 feed out) within the specified time after the feed from tray 4 has started. Go to **"243.03/243.06 Sensor (tray 3 feed out) late jam" on page 2-122**.
243.56 Paper jam	Sensor (tray 3 feed out) late jam 80K interval for feed rollers exceeded in tray 3.	The media is late reaching the sensor (tray 3 feed out) within the specified time after the feed from tray 4 has started. Go to **"243.56 Sensor (tray 3 feed out) late jam (80K interval exceeded for feed rolls)" on page 2-124**.
244.01 Paper jam	Sensor (tray 4 feed out) static jam	Media remains detected by the sensor (tray 4 feed out) after power on. Go to **"244.01 Sensor (tray 4 feed out) static jam" on page 2-125**.
244.06 Paper jam	Sensor (tray 4 feed out) failed to pick jam	The media is late reaching the sensor (tray 4 feed out) within the specified time after the feed from 4 has started. Go to **"244.06 Sensor (tray 4 feed out) late jam" on page 2-126**.
244.56 Paper jam	Sensor (tray 4 feed out) late jam 80K interval for feed rollers exceeded in tray 4.	The media is late reaching the sensor (tray 4 feed out) within the specified time after the feed from tray 4 has started. Go to **"244.56 Sensor (tray 4 feed out) late jam (80K interval exceeded for feed rollers)" on page 2-128**.

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Error code	Description	Action
245.01 Paper jam	Sensor (tray 5 feed out) static jam	Media remains detected by the sensor (tray 5 feed out) after power on. Go to **"245.01 Sensor (tray 5 feed out) static jam" on page 2-130**.
245.03 Paper jam	Sensor (tray 5 feed out) late jam	The media is late reaching the sensor (tray 5 feed out) within the specified time. Go to **"245.03 Sensor (tray 5 feed out) late jam" on page 2-131**.
245.06 Paper jam	Sensor (tray 5 feed out) lag jam	The media reached the sensor (tray 5 feed out) but did not clear it within the specified time. Go to **"245.06 Sensor (tray 5 feed out) lag jam" on page 2-132**.
245.56 Paper jam	Sensor (tray 5 feed out) late jam 80K interval for feed rollers exceeded in tray 5.	The media is late reaching the sensor (tray 5 feed out) within the specified time. Go to **"245.56 Sensor (tray 5 feed out) late jam (80K interval exceeded for feed rollers)" on page 2-133**.
250.05 Paper jam	Sensor (MPF feed out) lag jam	The media reached the sensor (MPF feed out) but did not clear it within the specified time. Go to **"250.05 Sensor (MPF feed out) lag jam" on page 2-135**.
250.06 Paper jam	Sensor (MPF feed out) failed to pick jam	The media is late reaching the sensor (MPF feed out) within the specified time after the feed from the MPF has started. Go to **"250.06 Sensor (MPF feed out) late jam" on page 2-138**.
250.56 Paper jam	Sensor (MPF feed out) late jam 80K interval for feed rollers exceeded in tray 3.	The media is late reaching the sensor (MPF feed out) within the specified time after the feed from tray 4 has started. Go to **"250.56 Sensor (MPF feed out) late jam (80K interval exceeded for feed rolls)" on page 2-139**.
281.03 Scanner jam	Sensor (ADF feed out) late jam	The media is late reaching the sensor (ADF feed out) within the specified time. Go to **"281.03 Sensor (ADF feed out) late jam" on page 2-141**.
282.01 Scanner jam	Sensor (ADF pre-registration) static jam	Media remains detected by the sensor (ADF pre-registration) after power on. Go to **"282.01 Sensor (ADF pre registration) static jam" on page 2-142**.
282.03 Scanner jam	Sensor (ADF pre-registration) late jam (side 1)	The media is late reaching the sensor (ADF pre registration) within the specified time after pre-feed started. Go to **"282.03 Sensor (ADF pre registration) late jam" on page 2-142**.

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Error code	Description	Action
282.05 Scanner jam	Sensor (ADF pre-registration) lag jam	The media reached the sensor (ADF pre-registration) but did not clear it within the specified time. Go to **"282.05 Sensor (ADF pre registration) lag jam" on page 2-144**.
282.13 Scanner jam	Sensor (ADF pre-registration) late jam (side 2)	The media is late reaching the sensor (ADF pre-registration) within the specified time after the duplex operation started. Go to **"282.13 Sensor (ADF pre registration) late jam (side 2)" on page 2-146**.
282.15 Scanner jam	Sensor (ADF pre-registration) lag jam (side 2)	The media reached the sensor (ADF pre-registration) but did not clear it within the specified time. Go to **"282.15 Sensor (ADF pre registration) lag jam (inverting)" on page 2-147**.
283.01 Scanner jam	Sensor (ADF registration) static jam	Media remains detected by the sensor (ADF registration) after power on. Go to **"283.01 Sensor (ADF registration) static jam" on page 2-149**.
283.03 Scanner jam	Sensor (ADF registration) late jam	The media is late reaching the sensor (ADF registration) within the specified time after pre-registration has started. Go to **"283.03 Sensor (ADF registration) late jam" on page 2-149**.
283.05 Scanner jam	Sensor (ADF registration) lag jam	The media reached the sensor (ADF registration) but did not clear it within the specified time. Go to **"283.05 Sensor (ADF registration) lag jam" on page 2-151**.
283.13 Scanner jam	Sensor (ADF registration) late jam (side 2)	The media is late reaching the sensor (ADF registration) within the specified time after sensor (ADF pre registration) has turned on. Go to **"283.13 Sensor (ADF registration) late jam (side 2)" on page 2-153**.
283.15 Scanner jam	Sensor (ADF registration) lag jam (side 2)	The media reached the sensor (ADF registration) but did not clear it within the specified time. Go to **"283.15 Sensor (ADF registration) lag jam (inverting)" on page 2-155**.
285.01 Scanner jam	Sensor (ADF inverter) static jam	Media remains detected by the sensor (ADF registration) after power on. Go to **"285.01 Sensor (ADF inverter) static jam" on page 2-157**.

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Error code	Description	Action
285.03 Scanner jam	Sensor (ADF inverter) late jam	The media is late reaching the sensor (ADF inverter) within the specified time after the ADF registration motor has turned on (CCW). Go to **"285.03 Sensor (ADF inverter) late jam" on page 2-158**.
285.05 Scanner jam	Sensor (ADF inverter) lag jam	The media reached the sensor (ADF inverter) but did not clear it within the specified time. Go to **"285.05 Sensor (ADF inverter) lag jam" on page 2-159**.
285.13 Scanner jam	Sensor (ADF inverter) late jam (side 2)	The media is late reaching the sensor (ADF inverter) within the specified time after the sensor (ADF registration) has turned on. Go to **"285.13 Sensor (ADF inverter) late jam (inverting)" on page 2-161**.
285.15 Scanner jam	Sensor (ADF inverter) lag jam (side 2)	The media reached the sensor (ADF inverter) but did not clear it within the specified time. Go to **"285.15 Sensor (ADF inverter) lag jam (inverting)" on page 2-163**.
287.01 Scanner jam	Sensor (ADF scan width 1) static jam	Media remains detected by the sensor (ADF scan width 1) after power on. Go to **"287.01 Sensor (ADF scan width 1) static jam" on page 2-164**.
288.01 Scanner jam	Sensor (ADF scan width 2) static jam	Media remains detected by the sensor (ADF scan width 2) after power on. Go to **"288.01 Sensor (ADF scan width 2) static jam" on page 2-165**.
289.01 Scanner jam	Sensor (ADF scan width 3) static jam	Media remains detected by the sensor (ADF scan width 3) after power on. Go to **"289.01 Sensor (ADF scan width 3) static jam" on page 2-166**.
295.00 Scanner jam	Size mismatch jam (mix-size)	During mixed original document feeding, it was detected that the Fast Scan Direction size was different from the width of the document guide. Go to **"295.00 Size mismatch jam (mix-size)" on page 2-166**.
295.01 Scanner jam	Size mismatch jam (no mix-size)	The second and subsequent documents are different size from the first document. Go to **"295.01, 295.09 and 295.10 Size mismatch jam (no mix-size)" on page 2-168**.
295.02 Scanner jam	Invalid combine size jam	An invalid document size combination was detected. Go to **"Media input size specifications" on page 1-7** and **"Media input type specifications" on page 1-9**.

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Error code	Description	Action
295.03 Scanner jam	Too short size jam	The system detected a document with a length shorter than is allowed in the Slow Scan Direction. Go to **"295.03 Too short size jam" on page 2-171**.
295.04 Scanner jam	Too long size jam	The system detected a document with a length longer than is allowed in the Slow Scan Direction. Go to **"295.04 Too long size jam" on page 2-171**.
295.09 Scanner jam	Size mismatch jam (no mix-size)	The second and subsequent documents are different size from the first document. Go to **"295.01, 295.09 and 295.10 Size mismatch jam (no mix-size)" on page 2-168**.
295.10 Scanner jam	Size mismatch jam (no mix-size)	The second and subsequent documents are different size from the first document. Go to **"295.01, 295.09 and 295.10 Size mismatch jam (no mix-size)" on page 2-168**.

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Error code	Description	Action
324.xx Service finisher error	Tray 2 lift motor failure	The Tray 2 lift motor did not raise to the appropriate position. Go to **"324.xx Tray 2 lift motor failure" on page 2-172**.
334.xx Service finisher error	Tray 3 lift motor failure	The Tray 3 lift motor did not raise to the appropriate position. Go to **"334.xx Tray 3 lift motor failure" on page 2-173**.
344.xx Service finisher error	Tray 4 lift motor failure	The Tray 4 lift motor did not raise to the appropriate position. Go to **"344.xx Tray 4 lift motor failure" on page 2-174**.
354.xx Service finisher error	Tray 5 lift motor failure	The Tray 5 lift motor did not raise to the appropriate position. Go to **"354.xx Tray 5 lift motor failure" on page 2-175**.
381.01 Service finisher error	Sensor (booklet front tamper HP) late error	The sensor (booklet front tamper HP) did not activate within the specified time. Go to **"381.01 Sensor (front tamper HP) late jam" on page 2-176**.

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Error code	Description	Action
381.02 Service finisher error	Sensor (front tamper HP) lag error	The sensor (front tamper HP) activated, but did not clear it within the specified time. Go to **"381.02 Sensor (front tamper HP) lag jam" on page 2-177**.
381.03 Service finisher error	Sensor (rear tamper HP) late error	The sensor (rear tamper HP) did not activate within the specified time. Go to **"381.03 Sensor (rear tamper HP) late jam" on page 2-178**.
381.04 Service finisher error	Sensor (rear tamper HP) lag error	The sensor (rear tamper HP) activated, but did not clear within the specified time. Go to **"381.04 Sensor (rear tamper HP) lag jam" on page 2-179**.
381.05 Service finisher error	Sensor (stapler carriage HP) late error	The sensor (stapler carriage HP) did not activate within the specified time. Go to **"381.05 Sensor (stapler carriage HP) late jam" on page 2-180**.
381.06 Service finisher error	Sensor (stapler carriage HP) lag error	The sensor (stapler carriage HP) activated but did not clear within the specified time. Go to **"381.06 Sensor (stapler carriage HP) lag jam" on page 2-181**.
381.07 Service finisher error	Stapler unit error	The sensing area of the sensor (stapler unit motor HP) inside the stapler unit assembly is not interrupted within the specified timer after the stapler unit motor starts moving to the home position. Go to **"381.07 Stapler unit failure" on page 2-182**.
381.08 Service finisher error	Sensor (media eject clamp HP) late error	The sensor (media eject clamp HP) didn't activate within the specified time. Go to **"381.08 Sensor (media eject clamp HP late jam" on page 2-182**.
381.09 Service finisher error	Sensor (media eject clamp HP) lag error	The sensor (media eject clamp HP) activated, but did not clear within the specified time. Go to **"381.09 Sensor (media eject clamp HP) lag jam" on page 2-183**.
381.10 Service finisher error	Sensor (media eject shaft HP) late error	The sensor (media eject clamp HP) did not activate within the specified time. Go to **"381.10 Sensor (media eject shaft HP) late jam" on page 2-184**.
381.11 Service finisher error	Sensor (media eject shaft HP) lag error	The sensor (media eject shaft HP) activated, but did not clear within the specified time. Go to **"381.11 Sensor (media eject shaft HP) lag jam" on page 2-186**.

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Error code	Description	Action
381.12 Service finisher error	Stacker bin error	The sensor (stacker bin level encoder) did not activate within the specified time after the tray starts to lift. Go to **"381.12 Stacker bin failure" on page 2-187**.
381.13 Service finisher error	Sensor (stacker bin upper limit) error	The media level exceeds the height that is allowed by the sensor (stacker upper limit). Go to **"381.13 Sensor (stacker bin upper limit) error" on page 2-189**.
381.14 Service finisher error	Sensor (stacker bin no media) error	The media level doesn't reach the height that is allowed by the sensor (stacker bin no media). Go to **"381.14 Sensor (stacker bin no media) error" on page 2-191**.
381.15 Service finisher error	Sensor (punch side reg 1) lag error Sensor (punch side reg 2) lag error	The sensor (punch side reg 1) or (punch side reg 2) activated, but did not clear within the specified time. Go to **"381.15 Sensor (punch side reg 1/ 2) lag jam" on page 2-193**.
381.16 Service finisher error	Sensor (punch cam HP) late error	The sensing area of the sensor (punch cam HP) is not interrupted during the specified time after the punch unit starts moving to the home position. Go to **"381.16 Sensor (punch cam HP) late jam" on page 2-195**.
381.17 Service finisher error	Sensor (punch cam HP) lag error	The sensor (punch cam HP) activated, but did not clear within the specified time. Go to **"381.17 Sensor (punch cam HP) lag jam" on page 2-196**.
381.18 Service finisher error	Sensor (punch carriage shift HP) late error	The sensor (punch carriage shift HP) didn't activate within the specified time. Go to **"381.18 Sensor (punch carriage shift HP) late jam" on page 2-197**.
381.19 Service finisher error	Sensor (punch carriage shift HP) lag error	The sensor (punch carriage shift HP) activated, but did not clear within the specified time. Go to **"381.19 Sensor (punch carriage shift HP) lag jam" on page 2-198**.
381.20 Service finisher error	Sensor (punch cam HP) late error	The sensing area of the sensor (punch cam HP) is not interrupted during the specified time after the punch unit starts moving to the home position. Go to **"381.16 Sensor (punch cam HP) late jam" on page 2-195**.
381.21 Service finisher error	Sensor (punch cam HP) lag error	The sensor (punch cam HP) activated, but did not clear within the specified time. Go to **"381.17 Sensor (punch cam HP) lag jam" on page 2-196**.

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Error code	Description	Action
381.22 Service finisher error	Sensor (punch carriage shift HP) late error	The sensor (punch carriage shift HP) didn't activate within the specified time. Go to **"381.18 Sensor (punch carriage shift HP) late jam" on page 2-197**.
381.23 Service finisher error	Sensor (punch cam HP) lag error	The sensor (punch cam HP) activated, but did not clear within the specified time. Go to **"381.17 Sensor (punch cam HP) lag jam" on page 2-196**.
381.26 Service finisher error	Sensor (decurler cam HP) late error	The sensor (decurler cam HP) didn't activate within the specified time. Go to **"381.26 Sensor (decurler cam HP) late jam" on page 2-199**.
381.27 Service finisher error	Sensor (decurler cam HP) lag error	The sensor (decurler cam HP) activated, but did not clear within the specified time. Go to **"381.27 Sensor (decurler cam HP) lag jam" on page 2-200**.
381.28 Service finisher error	Sensor (decurler cam HP) late error	The sensor (decurler cam HP) didn't activate within the specified time. Go to **"381.26 Sensor (decurler cam HP) late jam" on page 2-199**.
381.29 Service finisher error	Sensor (decurler cam HP) lag error	The sensor (decurler cam HP) activated, but did not clear within the specified time. Go to **"381.27 Sensor (decurler cam HP) lag jam" on page 2-200**.
381.30 Service finisher error	Sensor (booklet front tamper HP) late error	The sensor (booklet front tamper HP) didn't activate within the specified time. Go to **"381.30 Sensor (booklet front tamper HP) late jam" on page 2-201**.
381.31 Service finisher error	Sensor (booklet front tamper HP) lag error	The sensor (booklet front tamper HP) activated, but did not clear within the specified time. Go to **"381.31 Sensor (booklet front tamper HP) lag jam" on page 2-203**.
381.32 Service finisher error	Sensor (booklet end guide HP) lag error	The sensor (booklet end guide HP) activated, but did not clear within the specified time. Go to **"381.32 Sensor (booklet end guide HP) lag jam" on page 2-204**.
381.33 Service finisher error	Sensor (booklet rear tamper HP) late error	The sensor (booklet rear tamper HP) didn't activate within the specified time. Go to **"381.33 Sensor (booklet rear tamper HP) late jam" on page 2-206**.

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Error code	Description	Action
381.34 Service finisher error	Sensor (booklet rear tamper HP) lag error	The sensor (booklet rear tamper HP) activated, but did not clear within the specified time. Go to **“381.34 Sensor (booklet rear tamper HP) lag jam” on page 2-207**.
381.35 Service finisher error	Sensor (booklet knife folding) failure	The sensor (booklet knife folding) activated, but did not clear within the specified time. Go to **“381.35 Sensor (booklet knife folding) failure” on page 2-209**.
381.36 Service finisher error	Booklet unit failure	The booklet unit is detected as open after power on. Go to **“381.36 Booklet unit fail” on page 2-210**.
381.37 Service finisher error	Sensor (booklet knife HP) late error	The sensor (booklet knife HP) activated, but did not clear within the specified time. Go to **“381.37 Sensor (booklet knife HP) late jam” on page 2-211**.
381.38 Service finisher error	Sensor (booklet knife HP) lag error	The sensor (booklet knife HP) activated, but did not clear within the specified time. Go to **“381.38 Sensor (booklet knife HP) lag jam” on page 2-213**.
381.39 Service finisher error	Booklet stapler error	The booklet stapler unit is not completely inserted into the booklet maker unit assembly or it has failed. Go to **“381.39 Booklet Staple Fail” on page 2-214**.
381.40 Service finisher error	Sensor (booklet compiler media present) error	The sensing area of the sensor (booklet compiler no media) did not detect any media when the booklet stapler motor was activated. Go to **“381.40 Sensor (booklet compiler media present) error” on page 2-215**.
381.41 Service finisher error	Communication error with booklet controller card assembly	A communication error has occurred with the booklet controller card assembly and the finisher controller card assembly. Go to **“381.41 Communication error with booklet controller card assembly” on page 2-216**.

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Error code	Description	Action
401.01 Service finisher error	Sensor (finisher media entrance) static jam.	Media remains detected by the sensor (finisher media entrance). Go to **"401.01 Sensor (finisher media entrance) static jam" on page 2-217**.
401.03 Service finisher error	Sensor (bridge media entrance) late jam	The media is late reaching the sensor (bridge unit media entrance) within the specified time. Go to **"401.03 Sensor (bridge media entrance) late jam" on page 2-217**.
401.05 Service finisher error	Sensor (bridge media entrance) lag jam	The sensor (bridge media entrance) activated, but did not clear within the specified time.
402.01 Service finisher error	Sensor (bridge media exit) static jam	Media remains detected by the sensor (bridge media exit). Go to **"402.01 Sensor (bridge media exit) static jam" on page 2-220**.
402.03 Service finisher error	Sensor (bridge media exit) late jam	The media is late reaching the sensor (bridge media exit) within the specified time. Go to **"402.03 Sensor (bridge media exit) late jam" on page 2-221**.
481.01 Service finisher error	Sensor (finisher media entrance) static jam	Media remains detected by the sensor (finisher media entrance). Go to **"401.01 Sensor (finisher media entrance) static jam" on page 2-217**.
481.03 Service finisher error	Sensor (finisher media entrance) late jam	The media is late reaching the sensor (bridge media exit) within the specified time. Go to **"481.03 Sensor (finisher media entrance) late jam" on page 2-223**.
482.01 Service finisher error	Sensor (diverter gate) static jam A (to stacker bin)	Media remains detected by the sensor (diverter gate). Go to **"482.01 Sensor (diverter gate) static jam A (to stacker bin)" on page 2-223**.
482.01 Service finisher error	Sensor (diverter gate) static jam B (to stacker bin)	Media remains detected by the sensor (diverter gate). Go to **"482.01 Sensor (diverter gate) static jam B (to top bin)" on page 2-224**.
482.03 Service finisher error	Sensor (diverter gate) late jam	The media is late reaching the sensor (diverter gate) within the specified time. Go to **"482.03 Sensor (diverter gate) late jam" on page 2-225**.
483.01 Service finisher error	Sensor (buffer path) static jam	Media remains detected by the sensor (buffer path). Go to **"483.01 Sensor (buffer path) static jam" on page 2-227**.

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Error code	Description	Action
483.03 Service finisher error	Sensor (buffer path) late jam	The media is late reaching the sensor (diverter gate) within the specified time. Go to **"483.03 Sensor (buffer path) late jam" on page 2-227**.
484.01 Service finisher error	Sensor (compiler media present) static jam	Media remains detected by the sensor (stacker bin no media). Go to **"484.01 Sensor (compiler media present) static jam" on page 2-229**.
485.01 Service finisher error	Sensor (upper media exit) static jam	Media remains detected by the sensor (upper media exit). Go to **"485.01 Sensor (upper media exit) static jam" on page 2-230**.
485.03 Service finisher error	Sensor (upper media exit) late jam	The media is late reaching the sensor (upper media exit) within the specified time. Go to **"485.03 Sensor (upper media exit) late jam" on page 2-231**.
485.05 Service finisher error	Sensor (upper media exit) lag jam	The sensor (upper media exit) activated, but did not clear within the specified time. Go to **"485.05 Sensor (upper media exit) lag jam" on page 2-232**.
486.01 Service finisher error	Sensor (lower media exit) static jam	Media remains detected by the sensor (lower media exit). Go to **"486.01 Sensor (lower media exit) static jam" on page 2-233**.
486.03 Service finisher error	Sensor (lower media exit) late jam	The media is late reaching the sensor (upper media exit) within the specified time. Go to **"486.03 Sensor (lower media exit) late jam" on page 2-234**.
486.05 Service finisher error	Sensor (lower media exit) lag jam	The sensor (lower media exit) activated, but did not clear within the specified time. Go to **"486.05 Sensor (lower media exit) lag jam" on page 2-236**.
487.05 Service finisher error	Sensor (compiler media present) lag jam	The sensor (compiler media present) activated, but did not clear within the specified time. Go to **"487.05 Sensor (compiler media present) late jam" on page 2-237**.
491.01 Service finisher error	Sensor (booklet media entrance) static jam	Media remains detected by the sensor (booklet media entrance). Go to **"491.01 Sensor (booklet media entrance) static jam" on page 2-239**.
491.03 Service finisher error	Sensor (booklet media entrance) late jam	The media is late reaching the sensor (booklet media entrance) within the specified time. Go to **"491.03 Sensor (booklet media entrance) late jam" on page 2-240**.

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Error code	Description	Action
491.05 Service finisher error	Sensor (booklet media entrance) lag jam	The sensor (booklet media entrance) activated, but did not clear within the specified time. Go to **“491.05 Sensor (booklet media entrance) lag jam” on page 2-242**.
492.01 Service finisher error	Sensor (booklet compiler media present) static jam	Media remains detected by the sensor (booklet compioler media present). Go to **“492.01 Sensor (booklet compiler media present) static jam” on page 2-243**.
493.01 Service finisher error	Sensor (booklet media exit) static jam	Media remains detected by the sensor (booklet media exit). Go to **“493.01 Sensor (booklet media exit) static jam” on page 2-244**.
493.03 Service finisher error	Sensor (booklet media exit) late jam	The media is late reaching the sensor (booklet media exit) within the specified time. Go to **“493.03 Sensor (booklet media exit) static jam” on page 2-244**.
493.05 Service finisher error	Sensor (booklet media exit) lag jam	The sensor (booklet media exit) activated, but did not clear within the specified time. Go to **“493.05 Sensor (booklet media exit) lag jam” on page 2-246**.

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Error code	Description	Action
841.00 Service scanner failure	Image pipeline ASIC failure	The image pipeline for processing the data that comes from the scanner, prior to being printed, has failed. Go to **“841.00 Image pipeline ASIC failure” on page 2-247**.
842.00 Service scanner failure	Scanner communication failure	Controller detected a communication failure. Communication timeout. Go to **“842.00 Scanner communication failure” on page 2-248**.
842.01 Service scanner failure	Scanner communication failure	Controller detected a communication failure packet timeout. Go to **“842.01 Scanner communication failure” on page 2-248**.
842.02 Service scanner failure	Scanner communication failure	Controller detected a communication failure. Invalid message checksum. Go to **“842.02 Scanner communication failure” on page 2-249**.

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Error code	Description	Action
842.03 Service scanner failure	Scanner communication failure	Controller detected a communication failure. Invalid message parameter(s). Go to **"842.03 Scanner communication failure" on page 2-249**.
842.04 Service scanner failure	Scanner communication failure	Controller detected a communication failure. Invalid message command. Go to **"842.04 Scanner communication failure" on page 2-250**.
842.10 Service scanner failure	Scanner unit assembly - ADF communication failure	Communication failure occurred between the scanner controller card assembly and the ADF controller card assembly. Go to **"842.10 Scanner unit assembly - ADF communication failure" on page 2-251**.
842.11 Service scanner failure	Scanner communication failure (by scanner)	Communication failure occurred between the scanner controller card assembly and the RIP card assembly. Go to **"842.11 Scanner communication failure (by scanner)" on page 2-251**.
842.12 Service scanner failure	Scanner unit assembly communication failure	Communication failure occurred between the scanner controller card assembly and the RIP card assembly. Go to **"842.12 Scanner unit assembly communication failure" on page 2-252**.
843.00 Service scanner failure	Sensor (scanner HP) failure	An failure occurred while counting the pulses of the scanner drive motor assembly. After the Carriage Motor turned on, the sensor (scanner HP) did not turn on within the specified time. Go to **"843.00 Sensor (scanner HP) failure" on page 2-252**.
843.05 Service scanner failure	Scanner carriage over run failure	The scanner carriage has over run. Go to **"843.05 Scanner carriage over run failure" on page 2-253**.
843.10 Service scanner failure	ADF RAM test failure	The ADF controller card assembly RAM has failed in the read/write operation. Go to **"843.10 ADF RAM test failure" on page 2-253**.
843.11 Service scanner failure	ADF EEPROM failure	The ADF-EEPROM failed during the read/write operation. Go to **"843.11 ADF EEPROM failure" on page 2-254**.
843.20 Service scanner failure	Scanner unit assembly connection failure	There is an open circuit in the scanner interface cable assembly between the scanner controller card assembly and the RIP card assembly. Go to **"843.20 Scanner unit assembly connection failure" on page 2-254**

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Error code	Description	Action
843.21 Service scanner failure	Scanner unit assembly EEPROM failure	The scanner unit assembly EEPROM failed during the read/write operation. Go to **"843.21 Scanner unit assembly EEPROM failure" on page 2-254**.
843.22 Service scanner failure	Scanner unit assembly EEPROM sub system failure	The scanner unit assembly EEPROM failed during the read/write operation. Go to **"843.22 Scanner unit assembly EEPROM sub system failure" on page 2-255**.
843.24 Service scanner failure	Image processing failure	An failure occurred in the image-processing system. Go to **"843.24 Image processing failure" on page 2-255**.
843.25 Service scanner failure	Scanner controller card assembly failure 1	An internal processing failure occurred in the scanner controller card assembly. Go to **"843.25 Scanner controller card assembly failure 1" on page 2-255**.
843.26 Service scanner failure	Scanner controller card assembly failure 2	An internal processing failure occurred in the scanner controller card assembly. Go to **"843.26 Scanner controller card assembly failure 2" on page 2-256**.
844.00 Service scanner failure	Exposure lamp failure	A failure has occurred with the exposure lamp. Go to **"844.00 Exposure lamp failure" on page 2-256**.
844.01 Service scanner failure	White reference/exposure lamp Illumination failure	The large platen glass is not properly installed or missing. The white reference initialization of the scanner unit assembly has failed after a POR or the amount of light from the exposure lamp is inadequate at the start of the scan. Go to **"844.01 White reference/exposure lamp illumination failure" on page 2-256**.
845.00 Service scanner failure	CCD failure	A failure has occurred with the CCD sensor assembly. Go to **"845.00 LED CCD failure" on page 2-257**.
845.01 Service scanner failure	CCD initialization (lamp on) failure	The CCD does not make a correct output when it receives a specified amount of light. Go to **"845.01 LED CCD initialization (lamp on) failure" on page 2-257**.
845.02 Service scanner failure	CCD initialization (lamp off) failure	The CCD does not make a correct output when light is absent. Go to **"845.02 LED CCD initialization (lamp off) failure" on page 2-258**.

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Error code	Description	Action
846.00 Service scanner failure	Scanner communication failure	Controller detected failures. Scanner download timeout. Go to **“846.00 Scanner communication failure” on page 2-258**.
846.01 Service scanner failure	Scanner communication failure	Controller detected failures. Detected I/O failure. Go to **“846.01 Scanner communication failure” on page 2-258**.
846.10 Service scanner failure	Sensor (ADF scan width [x]) failure	The combinations of outputs from the sensor (ADF scan width 1), sensor (ADF scan width 2) and sensor (ADF scan width 3) are abnormal. Go to **“846.10 Sensor (ADF scan width [x]) failure” on page 2-259**.
846.12 Service scanner failure	Scanner unit assembly software logic failure	A software failure was detected by the scanner controller card assembly. Go to **“846.12 Scanner unit assembly software logic failure” on page 2-260**.
846.13 Service scanner error	Switch (platen interlock) open	The system detected that the switch (platen interlock) is open. Go to **“846.13 Switch (platen interlock) open” on page 2-261**.
849.00 Service hard drive error	Hard drive/configuration ID mismatch	The device does not have a hard drive installed, even though its configuration ID indicates that a hard drive should be present. Go to **“849.00 Hard drive failure” on page 2-261**.

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Error code	Description	Action
900.xx System software error	Unrecoverable RIP software error / illegal trap	Go to **“Steps before starting the 9yy service checks” on page 2-262**. Go to **“900.xx System software error” on page 2-263**.
910.02 Service data error	Data communication error	Firmware upgrade is needed. Go to **“910.02–910.07 Data communication error” on page 2-266**.
910.03 Service data error	Data communication error	Firmware upgrade is needed. Go to **“910.02–910.07 Data communication error” on page 2-266**.
910.04 Service data error	Data communication error	Firmware upgrade is needed. Go to **“910.02–910.07 Data communication error” on page 2-266**.

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Error code	Description	Action
910.05 Service data error	Data communication error	Firmware upgrade is needed. Go to **“910.02–910.07 Data communication error” on page 2-266**.
910.06 Service data error	Data communication error	Firmware upgrade is needed. Go to **“910.02–910.07 Data communication error” on page 2-266**.
910.07 Service data error	Data communication error	Firmware upgrade is needed. Go to **“910.02–910.07 Data communication error” on page 2-266**.
940.02 Service data error	Clock signal communication error	The clock signal failed to reach the upper printer PCBA. Go to **“940.02 Clock signal communication error” on page 2-267**.
940.03 Service data error	Controller communication failure	A software control-related error has occurred. Go to **“940.03 Controller communication failure” on page 2-267**.
939.00 Service RIP engine Comm.	RIP card assembly communication failure	A communication error occurred between the printer engine card and the RIP card assembly. Go to **“939.00 RIP card assembly communication failure” on page 2-266**.
940.04 Service data error	IM logic failure	A software control-related error has occurred. Go to **“940.04 IM logic failure” on page 2-268**.
951.xx Service NVRAM failure	RIP card assembly NVRAM failure	A failure has occurred in the RIP card assembly NVRAM. Go to **“951.xx RIP card assembly NVRAM failure” on page 2-268**.
953.xx Service NVRAM failure	Operator panel assembly NVRAM failure	NVRAM chip failure with operator panel assembly (mirror). Go to **“953.xx Operator panel assembly NVRAM failure” on page 2-268**.
955.xx Service Code CRC error	RIP card assembly NAND CRC failure	The code ROM or NAND flash failed the cyclic redundancy check. Go to **“955.xx RIP card assembly NAND CRC failure” on page 2-268**.
956.00 Service system board error	RIP card assembly processor failure	The RIP card processor has failed. Go to **“956.00 RIP card assembly processor failure” on page 2-269**.
956.01 Service system board error	RIP card assembly processor over temperature failure	The RIP card assembly has exceeded safe operating temperature. Go to **“956.01 RIP card assembly processor over temperature failure” on page 2-269**.

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Error code	Description	Action
956.02 Service system board error	RIP card assembly cooling fan failure	The RIP card assembly cooling fan is not functioning properly. Go to **“956.02 RIP card assembly cooling fan failure” on page 2-269**.
956.03 Service system board error	RIP card assembly FPGA failure	The RIP card assembly has failed. Go to **“956.03 RIP card assembly FPGA failure” on page 2-270**.
957.01 Service data error	BITZ1 initialize failure	A data-loading error has occurred. Go to **“957.01 BITZ1 initialize failure” on page 2-271**.
957.02 Service data error	BITZ2 initialize failure	A data-loading error has occurred. Go to **“957.02 BITZ2 initialize failure” on page 2-272**.
980.04 Service duplex comm.	Duplex controller card assembly communication failure	A communication error occurred between the printer engine card assembly and the duplex controller card assembly. Go to **“980.04 Duplex controller card assembly communication failure” on page 2-270**.
980.05 Service flicker communication error	Engine flicker communication failure	A communication error has occurred in the printer engine card assembly. Go to **“980.05 Engine flicker communication failure” on page 2-271**.
995.00 Service finisher NVM error	Finisher NVM R/W failure	A read/write error occurred on the NVM of the finisher controller card assembly. Go to **“995.00 Finisher NVM R/W failure” on page 2-272**.

Service checks

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 of 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. • 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 Diagnostics 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.

Step	Action and questions	Yes	No
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.
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.

Step	Action and questions	Yes	No
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
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.

Step	Action and questions	Yes	No
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 the error appears to be isolated to a single file • File/Application used If the error is related to specific print file • Device Operating System • Driver used (PCL/PS) • Frequency of the occurrence of the error		

111.01 LED printhead (K) failure

Step	Action and questions	Yes	No
1	Check the LED Printhead (K) for proper installation. **Is the LED Printhead (K) properly installed?**	Go to step 2.	Install the LED Printhead (K) properly.
2	Check the event log for the history of errors that occurred. 1. Enter the Diagnostics Menu. 2. Navigate to **EVENT LOG**. 3. Touch **Display Event Log**. **Has any connection-related errors occurred?**	Go to step **"111.02–111.04 LED printhead (K) signal failure" on page 2-43**.	Replace the LED Printhead (K). Go to **"LED printhead removal" on page 4-108**.

111.02–111.04 LED printhead (K) signal failure

Step	Action and questions	Yes	No
1	Check the LED printhead. **Is the above component properly connected?**	Go to step 2.	Replace the connections. Replace the printhead flat data cable.
2	Replace the LED printhead. Go to **"LED printhead removal" on page 4-108**. **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

112.01 LED printhead (C) failure

Step	Action and questions	Yes	No
1	Check the LED Printhead (C) for proper installation. **Is the LED Printhead (C) properly installed?**	Go to step 2.	Install the LED Printhead (C) properly.
2	Check the event log for the history of errors that occurred 1. Enter the Diagnostics Menu. 2. Navigate to **EVENT LOG**. 3. Touch **Display Event Log**. **Has any connection-related errors occurred?**	Go to step **"112.02–112.04 LED printhead (C) signal failure" on page 2-44**.	Replace the LED Printhead (C). Go to **"LED printhead removal" on page 4-108**.

112.02–112.04 LED printhead (C) signal failure

Step	Action and questions	Yes	No
1	Check the LED printhead. **Is the above component properly connected?**	Go to step 2.	Replace the connections. Replace the printhead flat data cable.
2	Replace the LED printhead. Go to **"LED printhead removal" on page 4-108**. **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

113.01 LED printhead (M) failure

Step	Action and questions	Yes	No
1	Check the LED printhead (M) for proper installation. **Is the LED printhead (M) properly installed?**	Go to step 2.	Install the LED printhead (M) properly.

Step	Action and questions	Yes	No
2	Check the event log for the history of errors that occurred. 1. Enter the Diagnostics Menu. 2. Navigate to **EVENT LOG**. 3. Touch **Display Event Log**. **Has any connection-related errors occurred?**	Go to step **"113.02–113.04 LED printhead signal failure (M)" on page 2-45**.	Replace the LED Printhead (M). Go to **"LED printhead removal" on page 4-108**.

113.02–113.04 LED printhead signal failure (M)

Step	Action and questions	Yes	No
1	Check the LED printhead. **Is the above component properly connected?**	Go to step 2.	Replace the connections. Replace the printhead flat data cable.
2	Replace the LED printhead. Go to **"LED printhead removal" on page 4-108**. **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

114.01 LED printhead failure (Y)

Step	Action and questions	Yes	No
1	Check the LED printhead (Y) for proper installation. **Is the LED printhead (Y) properly installed?**	Go to step 2.	Install the LED printhead (Y) properly.
2	Check the event log for the history of errors that occurred. 1. Enter the Diagnostics Menu. 2. Navigate to **EVENT LOG**. 3. Touch **Display Event Log**. **Has any connection-related errors occurred?**	Go to **"113.02–113.04 LED printhead signal failure (M)" on page 2-45**.	Replace the LED printhead (Y). Go to **"LED printhead removal" on page 4-108**.

114.02–114.04 LED printhead (Y) signal failure

Step	Action and questions	Yes	No
1	Check the LED printhead. **Is the above component properly connected?**	Go to step 2.	Replace the connections. Replace the printhead flat data cable.
2	Replace the LED printhead. Go to **"LED printhead removal" on page 4-108**. **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.01 Multiple LED printhead power supply failure

Step	Action and questions	Yes	No
1	Check each LED printhead for proper connections. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the printhead flat data cable assembly. **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the lower engine PCBA card assembly. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 5.	Problem resolved
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.02 Single LED printhead power failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper connections. **Is the above component properly connected?**	Go to step 3.	Replace the connections.
2	Replace the printhead flat data cable assembly. **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the lower engine PCBA card assembly. Go to **“Lower engine PCBA removal” on page 4-109**. Go to step 5.	Problem resolved
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **“Upper printer engine PCBA removal” on page 4-193**.	Problem resolved

115.03 Multiple LED printhead download failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper connections. **Is the above component properly connected?**	Go to step 3.	Replace the connections.
2	Replace the printhead flat data cable assembly. **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the lower engine PCBA card assembly. Go to **“Lower engine PCBA removal” on page 4-109**. Go to step 5.	Problem resolved

Step	Action and questions	Yes	No
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **“Upper printer engine PCBA removal” on page 4-193**.	Problem resolved

115.04 Single LED printhead download failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper connections. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the LED printhead. Go to **“LED printhead removal” on page 4-108**. **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead flat data cable assembly. **Does the error remain?**	Go to step 3.	Problem resolved
4	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
5	POR the machine. **Does the error continue?**	Replace the lower engine PCBA card assembly. Go to **“Lower engine PCBA removal” on page 4-109**. Go to step 6.	Problem resolved
6	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **“Upper printer engine PCBA removal” on page 4-193**.	Problem resolved

115.05 Multiple LED printhead mismatch failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper connections. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the printhead interface contact. **Does the error remain?**	Go to step 3.	Problem resolved

Step	Action and questions	Yes	No
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.06 Single LED printhead mismatch failure

Step	Action and questions	Yes	No
1	Check the LED printhead. **Is the correct LED printhead installed?**	Check the LED printhead installation and connections.	Install with the correct LED printhead. Go to **"LED printhead removal" on page 4-108**.

115.07 Multiple LED printhead read failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper connections. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the printhead interface contact. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA card assembly. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.08 Single LED printhead read failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper connections. **Is the above component properly connected?**	Go to step 2.	Replace the connections.

Step	Action and questions	Yes	No
2	Replace the printhead flat data cable **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the lower engine PCBA . Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 5.	Problem resolved
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.09 Multiple LED printhead write failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper connections. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the printhead interface contact. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.10 Single LED printhead write failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper installation. **Is the LED Printhead properly installed?**	Go to step 2.	Install the LED printhead properly.

Step	Action and questions	Yes	No
2	Check the LED printhead for proper connections. **Is the above component properly connected?**	Go to step 3.	Replace the connections.
3	Replace the printhead flat data cable **Does the error remain?**	Go to step 4.	Problem resolved
4	Replace the printhead interface contact. **Does the error remain?**	Go to step 5.	Problem resolved
5	Check the PC/developer drive motor assembly. **Is the above component properly installed?**	Go to step 6.	Replace connections and re-install the PC/developer drive motor assembly.
6	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 7.	Problem resolved
7	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.11 Multiple LED printhead communication failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper installation. **Is the LED Printhead properly installed?**	Go to step 2.	Install the LED printhead properly.
2	Replace the printhead flat data cable **Does the error remain?**	Go to step 3.	Problem resolved
3	Replace the printhead interface contact. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 5.	Problem resolved

Step	Action and questions	Yes	No
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.12 Single LED printhead communication failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper installation. **Is the LED Printhead properly installed?**	Go to step 2.	Install the LED printhead properly.
2	Check the LED printhead for proper connections. **Is the above component properly connected?**	Replace the LED printhead. Go to **"LED printhead removal" on page 4-108**. Go to step 3.	Replace the connections.
3	Replace the printhead flat data cable **Does the error remain?**	Go to step 4.	Problem resolved
4	Replace the printhead interface contact. **Does the error remain?**	Go to step 5.	Problem resolved
5	Check the PC/developer drive motor assembly. **Is the above component properly installed?**	Go to step 6.	Replace connections and re-install the PC/developer drive motor assembly.
6	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 7.	Problem resolved
7	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.13 Multiple LED printhead clock failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper connections. **Is the above component properly connected?**	Go to step 2.	Replace the connections.

Step	Action and questions	Yes	No
2	Replace the printhead interface contact. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.14 Single LED printhead clock failure

Step	Action and questions	Yes	No
1	Check the LED printhead for proper installation. **Is the LED Printhead properly installed?**	Go to step 2.	Install the LED printhead properly.
2	Check the LED printhead for proper connections. **Is the above component properly connected?**	Replace the LED printhead. Go to **"LED printhead removal" on page 4-108**. Go to step 3.	Replace the connections.
3	Replace the printhead flat data cable **Does the error remain?**	Go to step 4.	Problem resolved
4	Replace the printhead interface contact. **Does the error remain?**	Go to step 5.	Problem resolved
5	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 6.	Problem resolved
6	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

115.15 Tray module logic failure

Step	Action and questions	Yes	No
1	Check the tray module PCBA for proper connection. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the tray module PCBA. Go to **"Tray module controller PCBA removal" on page 4-284**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 6.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

120.01 Fuser motor failure

Step	Action and questions	Yes	No
1	Check the fuser drive motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Fuser/lower redrive/ 1st transfer retract motor**. **Does the above component operate properly?**	Go to step 3.	Go to step 2.
2	Check the fuser drive motor for proper connection. **Is the above component properly connected?**	Replace the fuser drive motor. Go to **"Fuser/lower redrive/1st BTR retract motor removal" on page 4-102**.	Replace the connections.
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 4.	Problem resolved

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Step	Action and questions	Yes	No
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

120.02 Fuser pressure roll retract motor failure

Step	Action and questions	Yes	No
1	Check the fuser pressure roll retract motor. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser pressure roll retract motor. Go to **"Fuser pressure roll retract motor removal" on page 4-99**. **Does the error remain?**	Go to step 3.	Problem resolved
3	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
4	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved
5	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 6.	Problem resolved
6	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

121.01 Encoder pulse failure

Step	Action and questions	Yes	No
1	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved

Step	Action and questions	Yes	No
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

121.02 Encoder pulse failure

Step	Action and questions	Yes	No
1	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

121.03 Heat belt (center) disconnection error

Step	Action and questions	Yes	No
1	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Remove foreign particles, and replace the connections.
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

121.04 Heat belt (center) overheat error

Step	Action and questions	Yes	No
1	Enter into invalid engine code and flash the PJL file. Go to support.lexmark.com or copy the following link to your browser: http://downloads.lexmark.com/webcontent/kbase/downloads/744_001_00nvm_ver2.zip **Does the error remain?**	Go to step 2.	Problem resolved
2	Check if the fuser assembly is properly connected. **Is the fuser assembly properly connected?**	Go to step 3.	Remove foreign particles, and replace the connections.
3	Replace the fuser assembly. See **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 4.	Problem resolved
4	Check the fuser driver for poor connection or damaged connector. **Is the fuser driver properly connected?**	Go to step 5.	Replace the connection.
5	Replace the fuser driver. See **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 6.	Problem resolved
6	Check the sub-LVPS for poor connection or damaged connector. **Is the component properly connected?**	Go to step 7.	Replace the connection.
7	Replace the sub-LVPS. See **"Sub LVPS PCBA removal" on page 4-171**. **Does the error remain?**	Go to step 8.	Problem resolved
8	Check the LVPS for poor connection or damaged connector. **Is the component properly connected?**	Go to step 9.	Replace the connection.
9	Replace the LVPS. See **"LVPS PCBA removal" on page 4-118**.	Call the next level of support.	Problem resolved

121.05 Heat belt (rear) disconnection error

Step	Action and questions	Yes	No
1	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Remove foreign particles, and replace the connections.
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

121.06 Heat belt (rear) overheat error

Step	Action and questions	Yes	No
1	Enter into invalid engine code and flash the PJL file. Go to support.lexmark.com or go to the following link: http://downloads.lexmark.com/webcontent/kbase/downloads/744_001_00nvm_ver2.zip **Does the error remain?**	Go to step 2.	Problem resolved
2	Check if the fuser assembly is properly connected. **Is the fuser assembly properly connected?**	Go to step 3.	Remove foreign particles, and replace the connections.
3	Replace the fuser assembly. See **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 4.	Problem resolved
4	Check the fuser driver for poor connection or damaged connector. **Is the fuser driver properly connected?**	Go to step 5.	Replace the connection.
5	Replace the fuser driver. See **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 6.	Problem resolved

Step	Action and questions	Yes	No
6	Check the sub-LVPS for poor connection or damaged connector. **Is the component properly connected?**	Go to step 7.	Replace the connection.
7	Replace the sub-LVPS. See **"Sub LVPS PCBA removal" on page 4-171**. **Does the error remain?**	Go to step 8.	Problem resolved
8	Check the LVPS for poor connection or damaged connector. **Is the component properly connected?**	Go to step 9.	Replace the connection.
9	Replace the LVPS. See **"LVPS PCBA removal" on page 4-118**.	Call the next level of support.	Problem resolved

121.07 Heat belt (center) temperature increase failure

Step	Action and questions	Yes	No
1	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Remove foreign particles, and replace the connections.
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

121.08 Heat belt (rear) temperature increase failure

Step	Action and questions	Yes	No
1	Check if the fuser assembly is properly connected. **Is the fuser assembly properly connected?**	Go to step 3.	Remove foreign particles, and replace the connections.
2	Replace the fuser assembly. See **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 4.	Problem resolved

Step	Action and questions	Yes	No
3	Check the fuser driver for poor connection or damaged connector. **Is the fuser driver properly connected?**	Go to step 5.	Replace the connection.
4	Replace the fuser driver. See **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 6.	Problem resolved
5	Check the sub-LVPS for poor connection or damaged connector. **Is the component properly connected?**	Go to step 7.	Replace the connection.
6	Replace the sub-LVPS. See **"Sub LVPS PCBA removal" on page 4-171**. **Does the error remain?**	Go to step 8.	Problem resolved
7	Check the LVPS for poor connection or damaged connector. **Is the component properly connected?**	Go to step 9.	Replace the connection.
8	Replace the LVPS. See **"LVPS PCBA removal" on page 4-118**.	Call the next level of support.	Problem resolved

121.09 Fuser temperature lag error

Step	Action and questions	Yes	No
1	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Remove foreign particles, and replace the connections.
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

121.10 Heat belt rotation failure

Step	Action and questions	Yes	No
1	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Remove foreign particles, and replace the connections.
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

121.11 Fuser temperature recovery failure

Step	Action and questions	Yes	No
1	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Remove foreign particles, and replace the connections.
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

121.12 Fuser failure

Step	Action and questions	Yes	No
1	POR the machine. **Does the error continue?**	Go to step 2.	Problem resolved
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error continue?**	Replace the fuser drive PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**. **Does the error continue?**	Problem resolved

121.13 Fuser thermostat failure

Step	Action and questions	Yes	No
1	Check the fuser assembly. **Is the above component properly connected?**	Go to step 2.	Remove foreign particles, and replace the connections.
2	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

126.01 Fuser driver interface failure

Step	Action and questions	Yes	No
1	Check the fuser driver PCBA. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

126.02 Fuser driver to upper engine PCBA interface failure

Step	Action and questions	Yes	No
1	Check the fuser driver PCBA. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	POR the machine. **Does the error continue?**	Go to step 3.	Problem resolved
3	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. **Does the error continue?**	Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**.	Problem resolved

126.03 Fuser driver communication failure

Step	Action and questions	Yes	No
1	Remove the sub LVPS PCBA. Go to **"Sub LVPS PCBA removal" on page 4-171**. Check the fuser driver PCBA. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

126.04 Fuser driver freeze failure

Step	Action and questions	Yes	No
1	Remove the sub LVPS PCBA. Go to **"Sub LVPS PCBA removal" on page 4-171**. Check the fuser driver PCBA. **Is the above component properly connected?**	Go to step 2.	Replace the connections.

Step	Action and questions	Yes	No
2	Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

126.05 Fuser driver high voltage error

Step	Action and questions	Yes	No
1	Remove the fuser cooling fan. Go to **"Fuser cooling fan removal" on page 4-90**. Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 2.	Problem resolved
2	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

126.06 Fuser driver low voltage error

Step	Action and questions	Yes	No
1	Remove the fuser cooling fan. Go to **"Fuser cooling fan removal" on page 4-90**. Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 2.	Problem resolved
2	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

126.07 Fuser driver surge failure

Step	Action and questions	Yes	No
1	POR the machine. **Does the error continue?**	Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**.	Problem resolved

126.08 IGBT high temperature error

Step	Action and questions	Yes	No
1	Check the fuser driver PCBA. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

126.09 IGBT temperature sensor failure

Step	Action and questions	Yes	No
1	Check the fuser driver PCBA. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

126.12 Input low current error

Step	Action and questions	Yes	No
1	Remove the sub LVPS PCBA. Go to **"Sub LVPS PCBA removal" on page 4-171**. Check the fuser driver PCBA. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96**. **Does the error remain?**	Go to step 3.	Problem resolved

Step	Action and questions	Yes	No
3	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**. **Does the error remain?**	Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

132.01 ATC sensor (K) failure

Step	Action and questions	Yes	No
1	Check the path from the toner cartridge to the developer. **Is the above component free from obstacles?**	Go to step 2.	Remove the toner blockages, including internal clogs inside the developer and toner cartridge.
2	Check the ATC sensor PCB. **Is the above component properly connected?**	Go to step 3.	Replace the connections.
3	Remove the ATC sensor PCB. Go to **"ATC sensor PCB removal" on page 4-30**. **Does the error remain?**	Go to step 4.	Problem resolved
4	Check the toner dispense motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **K toner dispense motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the toner dispense motor for proper connection. **Is the above component properly connected?**	Replace the toner dispense motor. Go to **"Toner dispense motor removal" on page 4-176**.	Replace the connections.

Step	Action and questions	Yes	No
6	Check the developer motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Developer motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the developer motor for proper connection. **Is the above component properly connected?**	Replace the PC/developer drive motor. Go to **"PC/developer drive motor removal" on page 4-143**.	Replace the connection.
8	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains, then go to step 9.	Problem resolved
9	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

132.02 ATC sensor (Y) failure

Step	Action and questions	Yes	No
1	Check the path from the toner cartridge to the developer. **Is the above component free from obstacles?**	Go to step 2.	Remove the toner blockages, including internal clogs inside the developer and toner cartridge.
2	Check the ATC sensor PCB. **Is the above component properly connected?**	Go to step 3.	Replace the connections.
3	Remove the ATC sensor PCB. Go to **"ATC sensor PCB removal" on page 4-30**. **Does the error remain?**	Go to step 4.	Problem resolved

Step	Action and questions	Yes	No
4	Check the toner dispense motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Y toner dispense motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the toner dispense motor for proper connection. **Is the above component properly connected?**	Replace the toner dispense motor. Go to **“Toner dispense motor removal” on page 4-176**.	Replace the connections.
6	Check the developer motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Developer motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the developer motor for proper connection. **Is the above component properly connected?**	Replace the PC/developer drive motor. Go to **“PC/developer drive motor removal” on page 4-143**.	Replace the connection.
8	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **“Lower engine PCBA removal” on page 4-109**. If the error remains, then go to step 9.	Problem resolved
9	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **“Upper printer engine PCBA removal” on page 4-193**.	Problem resolved

132.03 ATC sensor (M) failure

Step	Action and questions	Yes	No
1	Check the path from the toner cartridge to the developer. **Is the above component free from obstacles?**	Go to step 2.	Remove the toner blockages, including internal clogs inside the developer and toner cartridge.
2	Check the ATC sensor PCB. **Is the above component properly connected?**	Go to step 3.	Replace the connections.
3	Remove the ATC sensor PCB. Go to **"ATC sensor PCB removal" on page 4-30**. **Does the error remain?**	Go to step 4.	Problem resolved
4	Check the toner dispense motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **M toner dispense motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the toner dispense motor for proper connection. **Is the above component properly connected?**	Replace the toner dispense motor. Go to **"Toner dispense motor removal" on page 4-176**.	Replace the connections.
6	Check the developer motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Developer motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.

Step	Action and questions	Yes	No
7	Check the developer motor for proper connection. **Is the above component properly connected?**	Replace the PC/developer drive motor. Go to **"PC/developer drive motor removal" on page 4-143**.	Replace the connection.
8	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains, then go to step 9.	Problem resolved
9	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

132.04 ATC sensor (C) failure

Step	Action and questions	Yes	No
1	Check the path from the toner cartridge to the developer. **Is the above component free from obstacles?**	Go to step 2.	Remove the toner blockages, including internal clogs inside the developer and toner cartridge.
2	Check the ATC sensor PCB. **Is the above component properly connected?**	Go to step 3.	Replace the connections.
3	Remove the ATC sensor PCB. Go to **"ATC sensor PCB removal" on page 4-30**. **Does the error remain?**	Go to step 4.	Problem resolved
4	Check the toner dispense motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **C toner dispense motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.

Step	Action and questions	Yes	No
5	Check the toner dispense motor for proper connection. **Is the above component properly connected?**	Replace the toner dispense motor. Go to **"Toner dispense motor removal" on page 4-176**.	Replace the connections.
6	Check the developer motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Developer motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the developer motor for proper connection. **Is the above component properly connected?**	Replace the PC/developer drive motor. Go to **"PC/developer drive motor removal" on page 4-143**.	Replace the connection.
8	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains, then go to step 9.	Problem resolved
9	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

137.01 Upper printer engine PCBA communication error

Step	Action and questions	Yes	No
1	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

140.01 Registration drive motor failure

Step	Action and questions	Yes	No
1	Check the registration motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration motor**. **Does the above component operate properly (motor rotating)?**	Go to step 3.	Go to step 2.
2	Check the registration motor for proper connection. **Is the above component properly connected?**	Replace the registration drive motor. Go to **"Registration drive motor removal" on page 4-153**.	Replace the connections.
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains, then go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

141.01 Drum drive motor (K) failure

Step	Action and questions	Yes	No
1	Check the drum motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **KCMY drum & transfer belt motor**. **Does the above component operate properly (motor rotating)?**	Go to step 3.	Go to step 2.

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Step	Action and questions	Yes	No
2	Check the drum motor for proper connection. **Is the above component properly connected?**	Replace the PC/developer drive motor. Go to **"PC/developer drive motor removal" on page 4-143**.	Replace the connections.
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains, then go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

141.02 Drum drive motor (Y/M/C) failure

Step	Action and questions	Yes	No
1	Check the drum motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **KCMY drum & transfer belt motor**. **Does the above component operate properly (motor rotating)?**	Go to step 3.	Go to step 2.
2	Check the drum motor for proper connection. **Is the above component properly connected?**	Replace the PC/developer drive motor. Go to **"PC/developer drive motor removal" on page 4-143**.	Replace the connections.
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

146.xx Tray 1 lift motor failure

Step	Action and questions	Yes	No
1	Check the sensor (tray 1 media level) on the tray 1 media feeder. **Is the sensor properly attached?**	Go to step 2.	Reattach the sensor.
2	Check the sensor for proper operation. Navigate to: **Diagnostics Menu** > **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Sensor (tray 1 media level)** **Does the display on the operator panel change every time the sensing area of the sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor for proper connection. **Is it properly connected?**	Replace the sensor. Go to **"Sensor (media level) removal" on page 4-160**.	Reseat the cable.
4	Check the tray 1 media feed lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. Navigate to: **Diagnostics Menu** > **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Tray1 Feed/Lift Motor** **Does it operate properly?**	Go to step 6.	Go to step 5.
5	Check the motor for proper connection. **Is it properly connected?**	Replace the media feed lift motor. Go to **"Media feed lift motor removal" on page 4-127**.	Reseat the cable.
6	POR the machine and perform a print test. **Does the error continue?**	Replace the tray media feeder. Go to **"Printer tray 1 feeder removal" on page 4-150**.	Problem resolved.
7	POR the machine and perform a print test. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved.

151.01 Transfer belt motor failure

Step	Action and questions	Yes	No
1	Check the transfer belt motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Transfer belt motor**. **Does the above component operate properly (motor rotating)?**	Go to step 3.	Go to step 2.
2	Check the transfer belt motor for proper connection. **Is the above component properly connected?**	Replace the transfer belt motor. Go to **"PC/developer drive motor removal" on page 4-143**.	Replace the connections.
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

151.02 First transfer contact/retract failure

Step	Action and questions	Yes	No
1	Check the sensor (1st transfer rolls retract HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (1st transfer rolls retract HP)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.

Step	Action and questions	Yes	No
2	Check the sensor (1st transfer rolls retract HP) for proper connection. **Is the above component properly connected?**	Replace the 1st transfer retract clutch assembly. Go to **"1st transfer retract clutch assembly removal" on page 4-26**.	Replace the connections.
3	Check the 1st transfer rollers retract motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1st transfer rollers retract motor (contracted)**. 5. Touch **1st transfer rollers retract motor (retracted)**. **Does the above component operate properly (motor rotating)?**	Go to step 5.	Go to step 4.
4	Check the 1st belt rolls retract motor for proper connection. **Is the above component properly connected?**	Replace the 1st transfer belt rolls retract motor. Go to **"Fuser/ lower redrive/1st BTR retract motor removal" on page 4-102**.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

151.03 Second transfer contact/retract failure

Step	Action and questions	Yes	No
1	Check the sensor (2nd transfer roll retract HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (2nd transfer roll retract HP)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.

Step	Action and questions	Yes	No
2	Check the sensor (2nd transfer roll retract HP) for proper connection. **Is the above component properly connected?**	Replace the printer left duplex door assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**.	Replace the connections.
3	Check the 2nd transfer roller retract motor for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1st transfer roller retract motor (contracted)**. 5. Touch **1st transfer roller retract motor (retracted)**. **Does the above component operate properly (motor rotating)?**	Go to step 5.	Go to step 4.
4	Check the 2nd transfer roller retract motor for proper connection. **Is the above component properly connected?**	Replace the printer left duplex door assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

154.01 Developer (Y/M/C) motor failure

Step	Action and questions	Yes	No
1	Check the developer motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Developer motor**. **Does the above component operate properly (motor rotating)?**	Go to step 3.	Go to step 2.

Step	Action and questions	Yes	No
2	Check the developer motor for proper connection. **Is the above component properly connected?**	Replace the PC/developer drive motor. Go to **"PC/developer drive motor removal" on page 4-143**.	Replace the connections.
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains, then go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

155.01 Toner dispense motor (K) failure

Step	Action and questions	Yes	No
1	Replace the toner cartridge. **Does the error remain?**	Go to step 2.	Problem resolved
2	Check the toner smart chip PCB. **Is the above component properly connected?**	Go to step 3.	Replace the connections.
3	Check the toner dispense motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **K toner dispense motor**. **Does the above component operate properly (motor rotating)?**	Go to step 5.	Go to step 4.
4	Check the toner dispense motor for proper connection. **Is the above component properly connected?**	Replace the toner dispense motor. Go to **"Toner dispense motor removal" on page 4-176**.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

156.01 Toner dispense motor (C) failure

Step	Action and questions	Yes	No
1	Replace the toner cartridge. **Does the error remain?**	Go to step 2.	Problem resolved
2	Check the toner smart chip PCB. **Is the above component properly connected?**	Go to step 3.	Replace the connections.
3	Check the toner dispense motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **C toner dispense motor**. **Does the above component operate properly (motor rotating)?**	Go to step 5.	Go to step 4.
4	Check the toner dispense motor for proper connection. **Is the above component properly connected?**	Replace the toner dispense motor. Go to **"Toner dispense motor removal" on page 4-176**.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

157.01 Toner dispense motor (M) failure

Step	Action and questions	Yes	No
1	Replace the toner cartridge. **Does the error remain?**	Go to step 2.	Problem resolved
2	Check the toner smart chip PCB. **Is the above component properly connected?**	Go to step 3.	Replace the connections.

Step	Action and questions	Yes	No
3	Check the toner dispense motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **M toner dispense motor**. **Does the above component operate properly (motor rotating)?**	Go to step 5.	Go to step 4.
4	Check the toner dispense motor for proper connection. **Is the above component properly connected?**	Replace the toner dispense motor. Go to **"Toner dispense motor removal" on page 4-176**.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

158.01 Toner dispense motor (Y) failure

Step	Action and questions	Yes	No
1	Replace the toner cartridge. **Does the error remain?**	Go to step 2.	Problem resolved
2	Check the toner smart chip PCB. **Is the above component properly connected?**	Go to step 3.	Replace the connections.

Step	Action and questions	Yes	No
3	Check the toner dispense motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Y toner dispense motor**. **Does the above component operate properly (motor rotating)?**	Go to step 5.	Go to step 4.
4	Check the toner dispense motor for proper connection. **Is the above component properly connected?**	Replace the toner dispense motor. Go to **"Toner dispense motor removal" on page 4-176**.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

171.01 Controller cooling fan failure

Step	Action and questions	Yes	No
1	Check the controller cooling fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the controller cooling fan. Go to **"Controller cooling fan removal" on page 4-47**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower printer engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

171.02 Fuser cooling fan failure

Step	Action and questions	Yes	No
1	Check the fuser cooling fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser cooling fan. Go to **"Fuser cooling fan removal" on page 4-90**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower printer engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains go to step 4.	Problem resolved
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

172.01 Front upper cooling fan failure

Step	Action and questions	Yes	No
1	Check the front upper cooling fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the front upper cooling fan. Go to **"Front upper cooling fan removal" on page 4-88**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

173.01 LVPS sub cooling fan failure

Step	Action and questions	Yes	No
1	Check the LVPS sub cooling fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.

Step	Action and questions	Yes	No
2	Replace the LVPS sub cooling fan. Go to **"LVPS sub cooling fan removal" on page 4-121**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

174.01 Charge roll HVPS cooling fan failure

Step	Action and questions	Yes	No
1	Check the charge roll HVPS cooling fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the charge roll HVPS cooling fan. Go to **"Charge roll HVPS cooling fan removal" on page 4-41**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

175.01 Front right cooling fan failure

Step	Action and questions	Yes	No
1	Check the front right cooling fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the front right cooling fan. Go to **"Front right cooling fan removal" on page 4-86**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

175.03 PC/developer drive motor cooling fan failure

Step	Action and questions	Yes	No
1	Check the PC/developer drive motor cooling fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the PC/developer drive motor cooling fan. Go to **"PC/ developer drive motor cooling fan removal" on page 4-142**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

175.04 Front left cooling fan failure

Step	Action and questions	Yes	No
1	Check the front left cooling fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the front left cooling fan. Go to **"Front left cooling fan removal" on page 4-84**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

175.05 Suction fan failure

Step	Action and questions	Yes	No
1	Check the suction fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the suction fan. Go to **"Suction fan removal" on page 4-173**. **Does the error continue?**	Go to step 3.	Problem resolved
3	Replace the suction filter. Go to **"Suction filter" on page 4-176**.		

Step	Action and questions	Yes	No
4	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

175.06 Center exhaust fan failure

Step	Action and questions	Yes	No
1	Check the center exhaust fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the center exhaust fan Go to **"Center exhaust fan removal" on page 4-38**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

175.07 Fuser driver PCBA cooling fan failure

Step	Action and questions	Yes	No
1	Check the fuser driver PCBA cooling fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Replace the fuser driver PCBA cooling fan. Go to **"Fuser driver PCBA cooling fan removal" on page 4-92**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

175.08 Upper exhaust cooling fan failure

Step	Action and questions	Yes	No
1	Check the upper exhaust fan. **Is the above component properly connected?**	Go to step 2.	Replace the connections.

Step	Action and questions	Yes	No
2	Replace the upper exhaust fan. Go to **"Upper exhaust cooling fan removal" on page 4-190**. **Does the error continue?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

191.01 Lower engine PCBA detect failure

Step	Action and questions	Yes	No
1	POR the machine. **Does the error remain?**	Go to step 2.	Problem resolved
2	Check the lower engine PCBA. **Is the above component properly connected?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 2.	Replace the connections.
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

191.02–191.05 Upper engine PCBA fuse blown

Step	Action and questions	Yes	No
1	POR the machine. **Does the error remain?**	Go to step 2.	Problem resolved
2	Check the upper engine PCBA. **Is the above component properly connected?**	Replace the upper engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Replace the connections.

191.06 Lower engine PCBA fuse 2 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage. • LED printhead (Y, M, C, K) • Printhead interface contact (Y, M, C, K) **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.07 Lower engine PCBA fuse 3 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage: • Tray module controller PCBA • HCF **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.08 Lower engine PCBA fuse 4 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage: • Tray module controller PCBA • HCF **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.09 Upper engine PCBA fuse 5 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the finisher circuit for overcurrent and overvoltage. **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.10 Lower engine PCBA fuse 6 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage: • Media transport/MPF drive motor • Media feed lift motor • Fuser pressure roll retract motor • Waste toner agitator motor **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.11 Lower engine PCBA fuse 7 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage: • Fuser cooling fan • LVPS cooling fan • Rear left exhaust fan • Rear upper cooling fan • Front right cooling fan **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.

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Step	Action and questions	Yes	No
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.12 Lower engine PCBA fuse 8 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage: • MPF tray feeder motor. • Upper redrive motor. • Duplex motor. **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.13 Lower engine PCBA fuse 9 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the toner dispense motor (Y, M, C, K) for overcurrent and overvoltage. **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.14 Lower engine PCBA fuse 10 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage: • 2nd transfer roller contact retract motor • Printer left duplex door assembly **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.15 Lower engine PCBA fuse 11 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage: • Fuser drive motor • Registration drive motor **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.16 Lower engine PCBA fuse 12 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage: • PC/Developer drive motor • Fuser drive motor assembly **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.

Step	Action and questions	Yes	No
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.17 Lower engine PCBA fuse 13 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the PC/Developer drive motor (Y,M,C) circuits for overcurrent and overvoltage: **Are the current and voltage values normal?**	Go to step 2.	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.18 Upper engine PCBA data failure

Step	Action and questions	Yes	No
1	POR The machine. **Does the error continue?**	Go to step 2	Problem resolved
2	Install the correct version of the firmware. **Does the problem persist?**	Turn the power OFF, and replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

191.19 Upper engine PCBA access failure

Step	Action and questions	Yes	No
1	POR The machine. **Does the error continue?**	Go to step 2	Problem resolved
2	Turn the power OFF and check whether there is poor connection between the EEPROM and the upper engine PCBA. **Are there no problems with the connection?**	Turn the power OFF, and replace the upper printer engine assembly. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

191.20 Upper engine PCBA buffer failure

Step	Action and questions	Yes	No
1	POR The machine. **Does the error continue?**	Go to step 2	Problem resolved
2	Turn the power OFF, and check whether there is poor connection between the EEPROM and the upper engine PCBA. **Are there no problems with the connection?**	Turn the power OFF, and replace the upper printer engine assembly. Go to **"Upper printer engine PCBA removal" on page 4-193**.	

191.23 Lower engine PCBA fuse 14 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the following parts circuits for overcurrent and overvoltage: • Upper redrive assembly • Lower redrive shift motor assembly **Are the current and voltage values normal?**	Go to step 2	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.24 Lower engine PCBA fuse 15 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the upper redrive assembly circuits for overcurrent and overvoltage: **Are the current and voltage values normal?**	Go to step 2	Replace the faulty parts, or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

191.25 Lower engine PCBA fuse 16 blown

Step	Action and questions	Yes	No
1	**Warning:** Remove the cause of blown fuse before replacing the lower engine PCBA. Check the registration/transport roller assembly. **Are the current and voltage values normal?**	Go to step 2	Replace the faulty part or repair the circuits.
2	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

200.01 Sensor (registration) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (registration)**. **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 (registration) for proper connection. **Is the above component properly connected?**	Replace the registration/transport roll assembly. Go to **"Registration/transport roller assembly removal" on page 4-155**.	Replace the connections.
4	Check the registration/transport roll assembly. **Is the above component free of excess wear and contamination?**	Go to step 5.	Clean or replace the registration/ transport roll assembly. Go to **"Registration/transport roller assembly removal" on page 4-155**.
5	POR the machine, and perform a PRINT test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 6.	Problem resolved

Step	Action and questions	Yes	No
6	POR the machine, and perform a PRINT test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

200.03 Sensor (registration) late jam (feeding from the tray)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (registration)**. **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 (registration) for proper connection. **Is the above component properly connected?**	Replace the registration/transport roll assembly. Go to **"Registration/transport roller assembly removal" on page 4-155**.	Replace the connections.
4	Check the registration drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the registration motor for proper connection. **Is the above component properly connected?**	Replace the registration drive motor. Go to **"Registration drive motor removal" on page 4-153**.	Replace the connection.

Step	Action and questions	Yes	No
6	Check the media transport/MPF drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Tray [x] feed/lift motor (pick)** 5. Touch **Tray [x] feed/lift motor (feed)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the media feed/lift motor for proper connection. **Is the above component properly connected?**	Replace the media feed lift motor. Go to **"Media feed lift motor removal" on page 4-127**.	Replace the connection.
8	POR the machine, and perform a PRINT test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
9	POR the machine, and perform a PRINT test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

200.03 Sensor (registration) late jam (feeding from the MPF)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the Sensor (registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (registration)**. **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 (registration) for proper connection. **Is the above component properly connected?**	Replace the registration/transport roll assembly. Go to **"Registration/transport roller assembly removal" on page 4-155**.	Replace the connections.
4	Check the registration drive motor for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the registration motor for proper connection. **Is the above component properly connected?**	Replace the registration drive motor. Go to **"Registration drive motor removal" on page 4-153**.	Replace the connection.
6	Check the media transport/MPF drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **MPF feed/lift motor (pick)** 5. Touch **MPF feed/lift motor (feed)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.

Step	Action and questions	Yes	No
7	Check the MPF feed/lift motor for proper connection. **Is the above component properly connected?**	Replace the media transport/MPF drive motor. Go to **"Media transport/MPF drive motor removal" on page 4-130**.	Replace the connection.
8	POR the machine, and perform a PRINT test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
9	POR the machine, and perform a PRINT test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

200.05/200.55 Sensor (registration) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the registration/transport roller assembly. **Is the above component free of excess wear and contamination?**	Go to step 3.	Clean or replace the registration/ transport roller assembly. Go to **"Registration/transport roller assembly removal" on page 4-155**.
3	Check the 2nd transfer roller. **Is the above component free of excess wear and contamination?**	Go to step 4.	Clean or replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.
4	Check the sensor (registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (registration)**. **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.

Step	Action and questions	Yes	No
5	Check the sensor (registration) for proper connection. **Is the above component properly connected?**	Replace the media transport/ MPF drive motor assembly. Go to **"Media transport/MPF drive motor removal" on page 4-130**.	Replace the connections.
6	Check the fuser drive motor for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Fuser/lower redrive/ 1st transfer retract motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the fuser drive motor for proper connection. **Is the above component properly connected?**	Replace the fuser drive motor. Go to **"Fuser/lower redrive/1st BTR retract motor removal" on page 4-102**.	Replace the connections.
8	Check the media transport/MPF drive motor assembly for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Media Transport/MPF drive motor**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	Check the media transport/MPF drive motor assembly for proper connection. **Is the above component properly connected?**	Replace the media transport/ MPF drive motor assembly. Go to **"Media transport/MPF drive motor removal" on page 4-130**.	Replace the connection.
10	POR the machine. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

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200.53 Sensor (registration) late jam (80K interval exceeded for feed rolls)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the registration/transport roll assembly. **Is the above component free of excess wear and contamination?**	Go to step 3.	Clean or replace the registration/ transport roll assembly. Go to **"Registration/transport roller assembly removal" on page 4-155**.
3	Check the sensor (registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (registration)**. **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 (registration) for proper connection. **Is the above component properly connected?**	Replace the media transport/MPF drive motor. Go to **"Media transport/MPF drive motor removal" on page 4-130**.	Replace the connections.
5	Check the registration motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the registration motor for proper connection. **Is the above component properly connected?**	Replace the registration drive motor. Go to **"Registration drive motor removal" on page 4-153**.	Replace the connection.

Step	Action and questions	Yes	No
7	Check the media feed lift motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Tray [x] feed/Lift motor (feed)**. 5. Touch **Tray [x] feed/Lift motor (lift)**. **Does the above component operate properly?**	Go to step 9.	Go to step 8.
8	Check the media feed lift motor assembly for proper connection. **Is the above component properly connected?**	Replace the media feed lift motor. Go to **"Media feed lift motor removal" on page 4-127**.	Replace the connection.
9	Check the media transport/MPF drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **MPF feed/lift motor (pick)**. 5. Touch **MPF feed/lift motor (feed)**. **Does the above component operate properly?**	Go to step 11.	Go to step 10.
10	Check the media transport/MPF drive motor for proper connection. **Is the above component properly connected?**	Replace the media transport/MPF drive motor. Go to **"Media transport/MPF drive motor removal" on page 4-130**.	Replace the connections.

Step	Action and questions	Yes	No
11	Check the tray module upper transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1TM/3TM/TTM upper transport motor**. **Does the above component operate properly?**	Go to step 13.	Go to step 12.
12	Check the tray module upper transportmotor for proper connection. **Is the above component properly connected?**	Replace the tray module upper transport motor. Go to **"Tray module upper transport motor removal" on page 4-294**.	Replace the connection.
13	Check the tray module lower transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1TM/3TM/TTM lower transport motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
14	Check the tray module lower transport motor for proper connection. **Is the above component properly connected?**	Replace the tray module lower transport motor. Go to **"Tray module lower transport motor removal" on page 4-287**.	Replace the connection.
15	Perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

200.55 Sensor (registration) lag jam

See **"200.05/200.55 Sensor (registration) lag jam" on page 2-97**.

201.01 Sensor (media on belt) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (media on belt) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (paper on belt)**. **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 (media on belt) for proper connection. **Is the above component properly connected?**	Replace the sensor (media on belt). Go to **“Sensor (media on belt) removal” on page 4-161**.	Replace the connection.
4	Perform a print test. Go to **“PRINT TESTS” on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **“Lower engine PCBA removal” on page 4-109**.	Problem resolved

201.03 Sensor (media on belt) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (media on belt) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (paper on belt)**. **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.

Step	Action and questions	Yes	No
3	Check the sensor (media on belt) for proper connection. **Is the above component properly connected?**	Replace the sensor (media on belt). Go to **"Sensor (media on belt) removal" on page 4-161**.	Replace the connection.
4	Check the registration drive motor assembly for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the registration drive motor for proper connection. **Is the above component properly connected?**	Replace the registration drive motor. Go to **"Registration drive motor removal" on page 4-153**.	Replace the connection.
6	Check the 2nd transfer roller contact retract motor assembly for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **2nd Transfer Rollers Retract Motor (contacted)**. 5. Touch **2nd Transfer Rollers Retract Motor (retracted)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the 2nd transfer roller contact retract motor assembly for proper connection. **Is the above component properly connected?**	Replace the 2nd transfer roller contact retract motor assembly. Go to **"2nd Transfer Roller Contact Retract Motor assembly removal" on page**.	Replace the connection.

Step	Action and questions	Yes	No
8	Check the media transport/MPF drive motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **MPF feed/lift motor (pick)**. 5. Touch **MPF feed/lift motor (feed) Test**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	Check the media transport/MPF drive motor assembly for proper connection. **Is the above component properly connected?**	Replace the media transport/MPF drive motor assembly. Go to **"Media transport/MPF drive motor removal" on page 4-130**.	Replace the connection.
10	Check the registration clutch for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration clutch.** **Does the above component operate properly?**	Go to step 12.	Go to step 11.
11	Check the registration clutch for proper connection. **Is the above component properly connected?**	Replace the registration transport roller . Go to **"Registration/transport roller assembly removal" on page 4-155**.	Replace the connection.
12	Perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

202.01 Sensor (fuser exit) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (fuser exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (fuser 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 (fuser exit) for proper connection. **Is the above component properly connected?**	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.	Replace the connection.
4	Perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the Upper printer engine card assembly. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

202.03 Exit Sensor 1 Late Jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (fuser exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (fuser 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.

Step	Action and questions	Yes	No
3	Check the sensor (fuser exit) for proper connection. **Is the above component properly connected?**	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.	Replace the connection.
4	Check the registration drive motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the registration motor for proper connection. **Is the above component properly connected?**	Replace the registration drive motor. Go to **"Registration drive motor removal" on page 4-153**.	Replace the connection.
6	Check the 2nd transfer roller contact retract motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **2nd Transfer Rollers Retract Motor (contacted)**. 5. Touch **2nd Transfer Rollers Retract Motor (retracted)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the 2nd transfer roller contact retract motor assembly for proper connection. **Is the above component properly connected?**	Replace the 2nd transfer roller contact retract motor assembly. Go to **"2nd Transfer Roller Contact Retract Motor assembly removal" on page**.	Replace the connection.

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Step	Action and questions	Yes	No
8	Check the fuser drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Fuser/lower redrive/ 1st transfer retract motor**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	Check the fuser drive motor for proper connection. **Is the above component properly connected?**	Replace the fuser/lower redrive/ 1st BTR retract motor. Go to **"Fuser/lower redrive/1st BTR retract motor removal" on page 4-102**.	Replace the connection.
10	Check the media transport/MPF drive motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **MPF feed/lift motor (pick)** 5. Touch **MPF feed/lift motor (feed) Test**. **Does the above component operate properly?**	Go to step 12.	Go to step 11.
11	Check the media transport/MPF drive motor assembly for proper connection. **Is the above component properly connected?**	Replace the media transport/MPF drive motor. Go to **"Media transport/MPF drive motor removal" on page 4-130**.	Replace the connection.

Step	Action and questions	Yes	No
12	Check the registration clutch for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration clutch**. **Does the above component operate properly?**	Go to step 14.	Go to step 13.
13	Check the registration clutch for proper connection. **Is the above component properly connected?**	Replace the registration transport roller . Go to **"Registration/transport roller assembly removal" on page 4-155**.	Replace the connection.
14	Perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

202.04/202.05 Sensor (fuser exit) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (fuser exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (fuser 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 2.	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.
3	Check the sensor (fuser exit) for proper connection. **Is the above component properly connected?**	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.	Replace the connections.

Step	Action and questions	Yes	No
4	Check the upper redrive motor.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Upper redrive motor (forward)**. 5. Touch **Upper redrive motor (reverse)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the upper redrive motor for proper connection. **Is the above component properly connected?**	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.	Replace the connections.
6	Check the lower redrive shift motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Lower redrive shift motor (forward)**. 5. Touch **Lower redrive shift motor (reverse)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the lower redrive shift motor assembly for proper connection. **Is the above component properly connected?**	Replace the lower redrive shift motor. Go to **"Lower redrive shift motor assembly removal" on page 4-111**.	Replace the connection.

Step	Action and questions	Yes	No
8	Check the fuser/lower redrive/1st transfer retract motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Fuser/lower redrive/ 1st transfer retract motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 9.
9	Check the fuser/lower redrive/1st transfer retract motor for proper connection. **Is the above component properly connected?**	Replace the fuser/lower redrive/ 1st transfer retract motor. Go to **“Fuser/lower redrive/1st BTR retract motor removal” on page 4-102**.	Replace the connection.
10	Perform a print test. Go to **“PRINT TESTS” on page 3-26**. **Does the error continue?**	Replace the upper printer engine card assembly. Go to **“Upper printer engine PCBA removal” on page 4-193**.	Problem resolved

202.05 Sensor (fuser exit) lag jam

See **“202.04/202.05 Sensor (fuser exit) lag jam” on page 2-108**.

203.01 Sensor (upper redrive) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (upper redrive) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (upper redrive)**. **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.

Step	Action and questions	Yes	No
3	Check the sensor (upper redrive) for proper connection. **Is the above component properly connected?**	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.	Replace the connection.
4	Check the upper redrive assembly. **Is the above component free of excess wear and damage?**	Go to step 5.	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.
5	Check the printer left duplex door assembly **Is the above component free of excess wear and damage?**	Go to step 6.	Replace the printer left duplex door assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**.
6	Perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine card assembly. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

203.03 Sensor (upper redrive) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the upper redrive rolls for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.
3	Check the sensor (upper redrive) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (Upper redrive)**. **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 (upper redrive) for proper connectin. **Is the above component properly connected?**	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.	Replace the connections.

Step	Action and questions	Yes	No
5	Check the fuser drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Fuser/lower redrive/ 1st transfer retract motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the Fuser Drive Motor for proper connection. **Is the above component properly connected?**	Replace the fuser drive motor. Go to **"Fuser/lower redrive/1st BTR retract motor removal" on page 4-102**.	Replace the connection.
7	Check the upper redrive diverter gate for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Upper redrive diverter gate**. **Does the above component operate properly?**	Go to step 9.	Go to step 8.
8	Check the upper redrive diverter gate for proper connection. **Is the above component properly connected?**	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.	Replace the connection.
9	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA card. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
10	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

203.05 Sensor (upper redrive) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the upper redrive rolls for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.
3	Check the sensor (upper redrive) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (upper redrive)** **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 (upper redrive) for proper connection. **Is the above component properly connected?**	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.	Replace the connection.
5	Check the upper redrive motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **upper redrive motor (forward)**. 5. Touch **upper redrive motor (reverse)**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the upper redrive motor for proper connection. **Is the above component properly connected?**	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.	Replace the connection.

Step	Action and questions	Yes	No
7	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
8	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

230.01 Sensor (duplex wait) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (duplex wait) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (duplex wait)**. **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 (duplex wait) for proper connection. **Is the above component properly connected?**	Replace the printer left duplex door assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**.	Replace the connections.
4	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
5	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

231.03 Sensor (duplex wait) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the duplex rolls for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.
3	Check the sensor (duplex wait) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (duplex wait)**. **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.
4	Check the sensor (duplex wait) for proper connection. **Is the above component properly connected?**	Replace the printer left duplex door assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**.	Replace the connections.
5	Check the duplex motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Duplex motor (reverse)**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the duplex motor for proper connection. **Is the above component properly connected?**	Replace the printer left duplex door assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**.	Replace the connection.

Step	Action and questions	Yes	No
7	Check upper redrive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **upper redrive motor (forward)**. 5. Touch **upper redrive motor (reverse)**. **Does the above component operate properly?**	Go to step 9.	Go to 8.
8	Check the upper redrive motor for proper connection. **Is the above component properly connected?**	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.	Replace the connection.
9	Check the upper redrive diverter gate for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Upper redrive diverter gate**. **Does the above component operate properly?**	Go to step 11.	Go to step 10.
10	Check the upper redrive diverter gate for proper connection. **Is the above component properly connected?**	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.	Replace the connection.
11	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
12	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

232.03 Sensor (registration) late jam (duplex direct)

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Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the duplex rolls for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the upper redrive assembly. Go to **"Upper redrive assembly removal" on page 4-195**.
3	Check the sensor (registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (registration)**. **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 (registration). **Is the above component properly connected?**	Replace the media transport/MPF drive motor. Go to **"Media transport/MPF drive motor removal" on page 4-130**.	Replace the connection.
5	Check the Duplex Motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Duplex Motor (reverse)**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the duplex motor for proper connection. **Is the above component properly connected?**	Replace the printer left duplex door assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**.	Replace the connection.
7	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

Step	Action and questions	Yes	No
8	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

242.01 Sensor (tray 2 feed out) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (tray 2 feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (tray 2 feed out)**. **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 (tray 2 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 2 feed out). Go to **"Sensor (tray module feedout) removal" on page 4-278**.	Replace the connection.
4	Check the connection between the lower engine PCBA and the tray module controller PCBA. **Are the above components properly connected?**	Replace the tray module controller PCBA. Go to **"Tray module controller PCBA removal" on page 4-284**. If the problem remains go to step 5.	Replace the connections.
5	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
6	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

242.03/242.06 Sensor (tray 2 feed out) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the pick rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the pick rollers. Go to **"Pick roller removal" on page 4-147**.
3	Check the transport rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 4.	Replace the transport rollers. Go to **"Tray module transport rollers removal" on page 4-293**.
4	Check the sensor (tray 2 feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (tray 2 feed out)**. **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 (tray 2 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 2 feed out). Go to **"Sensor (tray module feedout) removal" on page 4-278**.	Replace the connection.
6	Check the tray module upper transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1TM/3TM/TTM upper transport motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.

Step	Action and questions	Yes	No
7	Check the tray module upper transport motor for proper connection. **Is the above component properly connected?**	Replace the tray module upper transport motor. Go to **"Tray module upper transport motor removal" on page 4-294**.	Replace the connections.
8	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
9	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

242.06 Sensor (tray 2 feed out) late jam

See **"242.03/242.06 Sensor (tray 2 feed out) late jam" on page 2-119**.

242.56 Sensor (tray 2 feed out) late jam (80K interval exceeded for feed rolls)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the pick/feed rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the pick/feed rollers. Go to **"Pick roller removal" on page 4-147**.
3	Check the transport rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 4.	Replace the transport rollers. Go to **"Tray module transport rollers removal" on page 4-293**.
4	Check the sensor (tray 2 feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (tray 2 feed out)**. **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.

Step	Action and questions	Yes	No
5	Check the sensor (tray 2 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 2 feed out). Go to **"Sensor (tray module feedout) removal" on page 4-278**.	Replace the connection.
6	Check the tray module upper transport motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1TM/3TM/TTM upper transport motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the tray module upper transport motor for proper connection. **Is the above component properly connected?**	Replace the tray module upper transport motor. Go to **"Tray module upper transport motor removal" on page 4-294**.	Replace the connections.
8	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
9	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

243.01 Sensor (tray 3 feed out) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the sensor (tray 3 feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (tray 3 feed out)**. **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 (tray 3 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 3 feed out). Go to **"Sensor (tray module feedout) removal" on page 4-278**.	Replace the connection.
4	Check the connection between the Lower Engine PCBA and the tray module controller PCBA. **Are the above components properly connected?**	Replace the tray module controller PCBA. Go to **"Tray module controller PCBA removal" on page 4-284**. If the problem remains go to step 5.	Replace the connections.
5	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
6	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

243.03/243.06 Sensor (tray 3 feed out) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the pick rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the pick rollers. Go to **"Pick roller removal" on page 4-147**.
3	Check the transport rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 4.	Replace the transport rollers. Go to **"Tray module transport rollers removal" on page 4-293**.

Step	Action and questions	Yes	No
4	Check the sensor (tray 3 feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (tray 3 feed out)**. **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 (tray 3 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 3 feed out). Go to **"Sensor (tray module feedout) removal" on page 4-278**.	Replace the connection.
6	Check the tray module upper transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1TM/3TM/TTM upper transport motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the tray module upper transport motor for proper connection. **Is the above component properly connected?**	Replace the tray module upper transport motor. Go to **"Tray module upper transport motor removal" on page 4-294**.	Replace the connections.
8	Check the the tray module controller PCBA for proper connection. **Is the above component properly connected?**	Replace the tray module controller PCBA. Go to **"Tray module controller PCBA removal" on page 4-284**. If the error remains, then go to step 9.	Replace the connections.
9	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

Step	Action and questions	Yes	No
10	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

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243.06 Sensor (tray 3 feed out) late jam

See **"243.03/243.06 Sensor (tray 3 feed out) late jam" on page 2-122**.

243.56 Sensor (tray 3 feed out) late jam (80K interval exceeded for feed rolls)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the pick/feed rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the pick/feed rollers. Go to **"Pick roller removal" on page 4-147**.
3	Check the transport rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 4.	Replace the transport rollers. Go to **"Tray module transport rollers removal" on page 4-293**.
4	Check the sensor (tray 3 feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (tray 3 feed out)**. **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 (tray 3 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 3 feed out). Go to **"Sensor (tray module feedout) removal" on page 4-278**.	Replace the connection.

Step	Action and questions	Yes	No
6	Check the tray module upper transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1TM/3TM/TTM upper transport motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the tray module upper transport motor for proper connection. **Is the above component properly connected?**	Replace the tray module upper transport motor. Go to **"Tray module upper transport motor removal" on page 4-294**.	Replace the connections.
8	Check the the tray module controller PCBA for proper connection. **Is the above component properly connected?**	Replace the tray module controller PCBA. Go to **"Tray module controller PCBA removal" on page 4-284**. If the error remains, then go to step 9.	Replace the connections.
9	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
10	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

244.01 Sensor (tray 4 feed out) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the sensor (tray 4 feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (tray 4 feed out)**. **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 (tray 4 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 4 feed out). Go to **"Sensor (tray module feedout) removal" on page 4-278**.	Replace the connection.
4	Check the connection between the Lower Engine PCBA and the tray module controller PCBA. **Are the above components properly connected?**	Replace the tray module controller PCBA. Go to **"Tray module controller PCBA removal" on page 4-284**. If the problem remains go to step 5.	Replace the connections.
5	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
6	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

244.06 Sensor (tray 4 feed out) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the feed rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the feed rollers. Go to **"Pick roller removal" on page 4-147**.
3	Check the transport rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 4.	Replace the transport rollers. Go to **"Tray module transport rollers removal" on page 4-293**.

Step	Action and questions	Yes	No
4	Check the sensor (tray 4 feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (tray 4 feed out)**. **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 (tray 4 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 4 feed out). Go to **"Sensor (tray module feedout) removal" on page 4-278**.	Replace the connection.
6	Check the tray module feed/lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Tray 4 feed/lift motor (feed)**. 5. Touch **Tray 4 feed/lift motor (lift)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the tray feed/lift motor for proper connection. **Is the above component properly connected?**	Replace the media feed lift motor. Go to **"Media feed lift motor removal" on page 4-127**.	Replace the connections.

Step	Action and questions	Yes	No
8	Check the tray module upper transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1TM/3TM/TTM upper transport motor**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	Check the tray module upper transport motor for proper connection. **Is the above component properly connected?**	Replace the tray module upper transport motor. Go to **"Tray module upper transport motor removal" on page 4-294**.	Replace the connections.
10	Check the the tray module controller PCBA for proper connection. **Is the above component properly connected?**	Replace the tray module controller PCBA. Go to **"Tray module controller PCBA removal" on page 4-284**. Go to step 11.	Replace the connections.
11	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
12	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

244.56 Sensor (tray 4 feed out) late jam (80K interval exceeded for feed rollers)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the pick/feed rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the pick/feed rollers. Go to **"Pick roller removal" on page 4-147**.

Step	Action and questions	Yes	No
3	Check the transport rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 4.	Replace the transport rollers. Go to **"Tray module transport rollers removal" on page 4-293**.
4	Check the sensor (tray 4 feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (tray 4 feed out)**. **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 (tray 4 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 4 feed out). Go to **"Sensor (tray module feedout) removal" on page 4-278**.	Replace the connection.
6	Check the tray module feed/lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Tray 4 feed/lift motor (feed)**. 5. Touch **Tray 4 feed/lift motor (lift)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the tray feed/lift motor for proper connection. **Is the above component properly connected?**	Replace the media feed lift motor. Go to **"Media feed lift motor removal" on page 4-127**.	Replace the connections.

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Step	Action and questions	Yes	No
8	Check the tray module upper transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **1TM/3TM/TTM upper transport motor**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	Check the tray module upper transport motor for proper connection. **Is the above component properly connected?**	Replace the tray module upper transport motor. Go to **"Tray module upper transport motor removal" on page 4-294**.	Replace the connections.
10	Check the the tray module controller PCBA for proper connection. **Is the above component properly connected?**	Replace the tray module controller PCBA. Go to **"Tray module controller PCBA removal" on page 4-284**. If the error remains, then go to step 11.	Replace the connections.
11	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
12	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

245.01 Sensor (tray 5 feed out) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (tray 5 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 5 feed out). Go to **"HCF sensor (tray 5 feedout) removal" on page 4-450**.	Replace the connection.

Step	Action and questions	Yes	No
3	Check the connection between the lower engine PCBA and the tray module controller PCBA. **Are the above components properly connected?**	Replace the tray module controller PCBA. Go to **"HCF controller card PCBA removal" on page 4-436**. Go to step 4.	Replace the connections.
4	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

245.03 Sensor (tray 5 feed out) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the feed rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the feed rollers. Go to **"HCF feed roll assembly removal" on page 4-438**.
3	Check the transport rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 4.	Replace the transport rollers. Go to **"HCF transport roller kit removal" on page 4-456**.
4	Check the sensor (tray 5 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 5 feed out). Go to **"HCF sensor (tray 5 feedout) removal" on page 4-450**.	Replace the connection.
5	Check the HCF feed/lift motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **HCF feed/lift motor (feed)**. 5. Touch **HCF feed/lift motor (lift)**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.

Step	Action and questions	Yes	No
6	Check the HCF feed lift motor for proper connection. **Is the above component properly connected?**	Replace the HCF feed lift motor. Go to **"HCF feed lift motor removal" on page 4-437**.	Replace the connections.
7	Check the HCF transport motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **HCF transport motor**. **Does the above component operate properly?**	Go to step 9.	Go to step 8.
8	Check the HCF transport motor for proper connection. **Is the above component properly connected?**	Replace the HCF transport motor. Go to **"HCF transport motor removal" on page 4-456**.	Replace the connections.
9	Check the the HCF controller card PCBA for proper connection. **Is the above component properly connected?**	Replace the HCF controller card PCBA. Go to **"HCF controller card PCBA removal" on page 4-436**. Go to step 10.	Replace the connections.
10	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

245.06 Sensor (tray 5 feed out) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the feed rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the feed roll assembly. Go to **"HCF feed roll assembly removal" on page 4-438**.

Step	Action and questions	Yes	No
3	Check the sensor (tray 5 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 5 feed out). Go to **"HCF sensor (tray 5 feedout) removal" on page 4-450**.	Replace the connection.
4	Check the HCF transport motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **HCF transport motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the HCF transport motor for proper connection. **Is the above component properly connected?**	Replace the HCF transport motor. Go to **"HCF transport motor removal" on page 4-456**.	Replace the connections.
6	Check the the HCF controller card PCBA for proper connection. **Is the above component properly connected?**	Replace the HCF controller card PCBA. Go to **"HCF controller card PCBA removal" on page 4-436**. Go to step 7.	Replace the connections.
7	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

245.56 Sensor (tray 5 feed out) late jam (80K interval exceeded for feed rollers)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the feed rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 3.	Replace the feed rollers. Go to **"HCF feed roll assembly removal" on page 4-438**.

Step	Action and questions	Yes	No
3	Check the transport rollers for wear. **Is the above component free of excess wear and damage?**	Go to step 4.	Replace the transport rollers. Go to **"HCF transport roller kit removal" on page 4-456**.
4	Check the sensor (tray 5 feed out) for proper connection. **Is the above component properly connected?**	Clean or replace the sensor (tray 5 feed out). Go to **"HCF sensor (tray 5 feedout) removal" on page 4-450**.	Replace the connection.
5	Check the HCF feed/lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **HCF feed/lift motor (feed)**. 5. Touch **HCF feed/lift motor (lift)**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the HCF feed lift motor for proper connection. **Is the above component properly connected?**	Replace the HCF feed lift motor. Go to **"HCF feed lift motor removal" on page 4-437**.	Replace the connections.
7	Check the HCF transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **HCF transport motor**. **Does the above component operate properly?**	Go to step 9.	Go to step 8.
8	Check the HCF transport motor for proper connection. **Is the above component properly connected?**	Replace the HCF transport motor. Go to **"HCF transport motor removal" on page 4-456**.	Replace the connections.

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Step	Action and questions	Yes	No
9	Check the the HCF controller card PCBA for proper connection. **Is the above component properly connected?**	Replace the HCF controller card PCBA. Go to **"HCF controller card PCBA removal" on page 4-436**. Go to step 10.	Replace the connections.
10	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

250.05 Sensor (MPF feed out) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the MPF rollers for wear. **Is the MPF feed/pick roller assembly free of excess wear?**	Go to step 3.	Replace the MPF feed roller. Go to **"MPF roller removal" on page 4-133**.
3	Check the sensor (MPF feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (MPF feed out)**. **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 (MPF feed out) for proper connection. **Is the above component properly connected?**	Replace the sensor (MPF feed out). Go to **"MPF tray feeder removal" on page 4-134**.	

Step	Action and questions	Yes	No
5	Check the registration motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the registration motor for proper connection. **Is the above component properly connected?**	Replace the registration drive motor. Go to **"Registration drive motor removal" on page 4-153**.	Replace the connections.
7	Check the 2nd transfer roller contact retract motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **2nd transfer rollers retract motor (contracted)**. 5. Touch **2nd transfer rollers retract motor (retracted)**. **Does the above component operate properly?**	Go to step 9.	Go to step 8.
8	Check the 2nd transfer roller contact retract motor for proper connection. **Is the above component properly connected?**	Replace the printer left duplex door assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**.	Replace the connection.

Step	Action and questions	Yes	No
9	Check the fuser drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Fuser/lower redrive/ 1st transfer retract motor.** **Does the above component operate properly?**	Go to step 11.	Go to step 10.
10	Check the fuser drive motor for proper connection. **Is the above component properly connected?**	Replace the fuser drive motor. Go to **“Fuser/lower redrive/1st BTR retract motor removal” on page 4-102**.	Replace the connection.
11	Check the media transport/MPF drive motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **MPF feed/lift motor (feed)**. 5. Touch **MPF feed/lift motor (pick)**. **Does the above component operate properly?**	Go to step 13.	Go to step 12.
12	Check the media transport/MPF drive motor assembly for proper connection. **Is the above component properly connected?**	Replace the media transport/MPF drive motor assembly. Go to **“Media transport/MPF drive motor removal” on page 4-130**.	Replace the connection.

Step	Action and questions	Yes	No
13	Check the registration clutch for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **Registration clutch**. **Does the above component operate properly?**	Go to step 15.	Go to step 14.
14	Check the registration clutch for proper connection. **Is the above component properly connected?**	Replace the registration/transport roller assembly. Go to **"Registration/transport roller assembly removal" on page 4-155**.	Replace the connection.
15	POR the machine. **Does the error continue?**	Replace the lower engine PCBA card assembly. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

250.06 Sensor (MPF feed out) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the MPF rollers for wear. **Is the MPF feed rollers free of excess wear?**	Go to step 3.	Replace the MPF rollers. Go to **"MPF roller removal" on page 4-133**
3	Check the sensor (MPF media out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (MPF media out)**. **Does the display on the operator panel change every time the sensor actuator is operated?**	Go to step 5.	Go to step 4.

Step	Action and questions	Yes	No
4	Check the sensor (MPF media out) for proper connection. **Is the above component properly connected?**	Replace the MPF tray feeder. Go to **"MPF tray feeder removal" on page 4-134**.	Replace the connections.
5	Check the MPF feed/lift motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **MPF feed/lift motor (feed)**. 5. Touch **MPF feed/lift motor (pick)**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the MPF feed/lift motor for proper connection. **Is the above component properly connected?**	Replace the MPF tray feeder. Go to **"MPF tray feeder removal" on page 4-134**.	Go to step 7.
7	Print a sample page using the MPF. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved
8	Print a sample page using the MPF. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

250.56 Sensor (MPF feed out) late jam (80K interval exceeded for feed rolls)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the MPF roller for wear. **Is the MPF roller free of excess wear?**	Go to step 3.	Clean or replace the MPF roller assembly. Go to **"MPF roller removal" on page 4-133**.

Step	Action and questions	Yes	No
3	Check the sensor (MPF feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **PRINTER SENSOR TESTS**. 4. Touch **Sensor (MPF feed out)**. **Does the display on the operator panel change every time the sensor actuator is operated?**	Go to step 5.	Go to step 4.
4	Check the sensor (MPF feed out) for proper connection. **Is the above component properly connected?**	Replace the MPF tray feeder. Go to **"MPF tray feeder removal" on page 4-134**.	Replace the connections.
5	Check the MPF feed/lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **PRINTER MOTOR TESTS**. 4. Touch **MPF feed/lift motor (forward)**. 5. Touch **MPF feed/lift motor (reverse)**. **Does the motor rotate normally?**	Go to step 7.	Go to step 6.
6	Check the MPF feed motor for proper connection. **Is the above component properly connected?**	Replace the MPF tray feeder. Go to **"MPF tray feeder removal" on page 4-134**.	Replace the connections.
7	POR the machine, and print a sample page using the MPF. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. Go to step 8.	Problem resolved
8	POR the machine, and print a sample page using the MPF. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

281.03 Sensor (ADF feed out) late jam

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Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide assembly free of excess wear?**	Go to step 3.	Clean or replace the ADF feed/ pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**, or **"ADF separation roller guide removal" on page 4-229**.
3	Check the sensor (ADF feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF feed out)**. **Does the display on the operator panel change every time the sensor actuator is operated?**	Go to step 5.	Go to step 4.
4	Check the sensor (ADF feed out) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF feed out). Go to **"Sensor (ADF feedout) removal" on page 4-248**.	Replace the connections.
5	Check the ADF feed motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF feed motor (forward)**. 5. Touch **ADF feed motor (reverse)**. **Does the motor rotate normally?**	Go to step 7.	Go to step 6.
6	Check the ADF feed motor for proper connection. **Is the above component properly connected?**	Replace the ADF feed motor. Go to **"ADF feed motor removal" on page 4-215**.	Replace the connections.

Step	Action and questions	Yes	No
7	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

282.01 Sensor (ADF pre registration) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (ADF feed out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF pre registration)**. **Does the display on the operator panel change every time the sensor actuator is operated?**	Go to step 4.	Replace the sensor (ADF pre registration). Go to **"Sensor (ADF pre-registration) removal" on page 4-249**.
3	Check the sensor (ADF pre registration) for proper connection. **Is the above component properly connected?**	Go to step 4.	Replace connections.
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

282.03 Sensor (ADF pre registration) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the sensor (ADF pre registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF pre registration)**. **Does the display on the operator panel change every time the sensor actuator is operated?**	Go to step 4.	Go to step 3.
3	Check the sensor (ADF pre registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF pre registration). Go to **"Sensor (ADF pre-registration) removal" on page 4-249**.	Replace the connection.
4	Check the ADF feed motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF feed motor (forward)**. 5. Touch **ADF feed motor (reverse)**. **Does the motor rotate normally?**	Go to step 6.	Go to step 5.
5	Check the ADF feed motor for proper connection. **Is the above component properly connected?**	Replace the ADF feed motor. Go to **"ADF feed motor removal" on page 4-215**.	Go to step 6.
6	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

282.05 Sensor (ADF pre registration) lag jam

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Step	Action and questions	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, then go to step 2.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide assembly free of excess wear?**	Go to step 3.	Clean or replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**, or **"ADF separation roller guide removal" on page 4-229**.
3	Check the inverter gate. **Is the inverter gate free of damage and warpage, and does it move smoothly?**	Go to step 4.	Replace the ADF sensor actuator guide. Go to **"ADF sensor actuator guide removal" on page 4-228**.
4	Check the sensor (ADF pre registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF pre registration).** **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.
5	Check the sensor (ADF pre-registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF pre registration). Go to **"Sensor (ADF pre-registration) removal" on page 4-249**.	Replace the connections.

Step	Action and questions	Yes	No
6	Check the ADF registration motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF registration motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the ADF registration motor for proper connection. **Is the above component properly connected?**	Replace the ADF registration motor. Go to **"ADF registration motor removal" on page 4-224**.	Replace the connections.
8	Check the ADF nip release solenoid for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF nip release solenoid**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	Check the ADF nip release solenoid for proper connection. **Is the above component properly connected?**	Replace the ADF nip release solenoid. Go to **"ADF nip release solenoid removal" on page 4-222**.	Replace the connections.
10	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

282.13 Sensor (ADF pre registration) late jam (side 2)

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Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Clean or replace the ADF feed/pick roller assembly or the ADF separation roller guide. Go to **"ADF feed/pick roller assembly removal" on page 4-216**, or **"ADF separation roller guide removal" on page 4-229**.
3	Check the inverter gate. **Is the inverter gate free of damage and warpage, and does it move smoothly?**	Go to step 4.	Replace the ADF sensor actuator guide. Go to **"ADF sensor actuator guide removal" on page 4-228**.
4	Check the sensor (ADF pre registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF pre registration).** **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 pre-registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF pre-registration). Go to **"Sensor (ADF pre-registration) removal" on page 4-249**.	Replace the connections.
6	Check the ADF registration motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF registration motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.

Step	Action and questions	Yes	No
7	Check the ADF registration motor for proper connection. **Is the above component properly connected?**	Replace the ADF registration motor. Go to **"ADF registration motor removal" on page 4-224**.	Replace the connections.
8	Check the ADF nip release solenoid for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF nip release solenoid**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	Check the ADF nip release solenoid for proper connection. **Is the above component properly connected?**	Replace the ADF nip release solenoid. Go to **"ADF nip release solenoid removal" on page 4-222**.	Replace the connections.
10	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

282.15 Sensor (ADF pre registration) lag jam (inverting)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**.

Step	Action and questions	Yes	No
3	Check the sensor (ADF registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF registration)**. **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 registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF registration). Go to **"Sensor (ADF registration) removal" on page 4-252**.	Replace the connections.
5	Check the sensor (ADF inverter) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF inverter).** **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 inverter) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF inverter). Go to **"Sensor (ADF inverter) removal" on page 4-249**.	Replace connections.
7	Check the ADF feed motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF registration motor**. **Does the above component operate properly?**	Go to step 9.	Go to step 8.

Step	Action and questions	Yes	No
8	Check the ADF registration motor for proper connection. **Is the above component properly connected?**	Replace the ADF registration motor. Go to **"ADF registration motor removal" on page 4-224**.	Replace the connections.
9	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

283.01 Sensor (ADF registration) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (ADF registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF registration).** **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 registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF registration). Go to **"Sensor (ADF registration) removal" on page 4-252**.	Replace the connections.
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

283.03 Sensor (ADF registration) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**.
3	Check the ADF sensor actuator guide. **Is the inverter gate free of damage and warpage, and does it move smoothly?**	Go to step 4.	Replace the ADF sensor actuator guide. Go to **"ADF sensor actuator guide removal" on page 4-228**.
4	Check the sensor (ADF registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF registration).** **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 4.
5	Check the sensor (ADF registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF registration). Go to **"Sensor (ADF registration) removal" on page 4-252**.	Replace the connections.
6	Check the ADF feed motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF feed motor (forward)**. 5. Touch **ADF feed motor (reverse)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the ADF feed motor for proper connection. **Is the above component properly connected?**	Replace the ADF feed motor. Go to **"ADF feed motor removal" on page 4-215**.	Replace the connections.

Step	Action and questions	Yes	No
8	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

283.05 Sensor (ADF registration) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**.
3	Check the ADF inverter. **Is the inverter gate free of damage and warpage, and does it move smoothly?**	Go to step 4.	Replace the ADF sensor actuator guide. Go to **"ADF sensor actuator guide removal" on page 4-228**.
4	Check the sensor (ADF pre registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF registration)**. **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 registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF registration). Go to **"Sensor (ADF registration) removal" on page 4-252**.	Replace the connections.

Step	Action and questions	Yes	No
6	Check the sensor (ADF pre registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF pre registration)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 8.	Go to step 7.
7	Check the sensor (ADF pre registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF pre registration). Go to **"Sensor (ADF pre-registration) removal" on page 4-249**.	Replace the connections.
8	Check the ADF feed motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF feed motor (forward)**. 5. Touch **ADF feed motor (reverse)**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	Check the ADF feed motor for proper connection. **Is the above component properly connected?**	Replace the ADF feed motor. Go to **"ADF feed motor removal" on page 4-215**.	Replace the connections.

Step	Action and questions	Yes	No
10	Check the ADF feed motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF registration motor**. **Does the above component operate properly?**	Go to step 12.	Go to step 11.
11	Check the ADF registration motor for proper connection. **Is the above component properly connected?**	Replace the ADF registration motor. Go to **"ADF registration motor removal" on page 4-224**.	Replace the connections.
12	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

283.13 Sensor (ADF registration) late jam (side 2)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**.
3	Check the sensor (ADF pre registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF pre registration)**. **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.

Step	Action and questions	Yes	No
4	Check the sensor (ADF pre registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF pre registration). Go to **"Sensor (ADF pre-registration) removal" on page 4-249**.	Replace the connections.
5	Check the sensor (ADF registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF registration)**. **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 registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF registration). Go to **"Sensor (ADF registration) removal" on page 4-252**.	Replace the connections.
7	Check the ADF feed motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF feed motor (forward)**. 5. Touch **ADF feed motor (reverse)**. **Does the above component operate properly?**	Go to step 9.	Go to step 8.
8	Check the ADF feed motor for proper connection. **Is the above component properly connected?**	Replace the ADF feed motor. Go to **"ADF feed motor removal" on page 4-215**.	Replace the connections.

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Step	Action and questions	Yes	No
9	Check the ADF nip release solenoid for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF nip release solenoid**. **Does the above component operate properly?**	Go to step 11.	Go to step 10.
10	Check the ADF nip release solenoid for proper connection. **Is the above component properly connected?**	Replace the ADF nip release solenoid. Go to **"ADF nip release solenoid removal" on page 4-222**.	Replace the connections.
11	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

283.15 Sensor (ADF registration) lag jam (inverting)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**.
3	Check the sensor (ADF registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF registration)**. **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.

Step	Action and questions	Yes	No
4	Check the sensor (ADF registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF registration). Go to **"Sensor (ADF registration) removal" on page 4-252**.	Replace the connections.
5	Check the sensor (ADF pre registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF pre registration)**. **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 pre registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF pre registration). Go to **"Sensor (ADF pre-registration) removal" on page 4-249**.	Replace the connections.
7	Check the ADF registration motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF registration motor**. **Does the above component operate properly?**	Go to step 9.	Go to step 8.
8	Check the ADF registration motor for proper connection. **Is the above component properly connected?**	Replace the ADF registration motor. Go to **"ADF registration motor removal" on page 4-224**.	Replace the connections.

Step	Action and questions	Yes	No
9	Check the ADF feed motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF feed motor (forward)**. 5. Touch **ADF feed motor (reverse)**. **Does the above component operate properly?**	Go to step 11.	Go to step 10.
10	Check the ADF feed motor for proper connection. **Is the above component properly connected?**	Replace the ADF feed motor. Go to **"ADF feed motor removal" on page 4-215**.	Replace the connections.
11	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

285.01 Sensor (ADF inverter) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (ADF inverter) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF inverter)**. **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.

Step	Action and questions	Yes	No
3	Check the sensor (ADF inverter) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF inverter). Go to **"Sensor (ADF inverter) removal" on page 4-249**.	Replace the connections.
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

285.03 Sensor (ADF inverter) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**.
3	Check the sensor (ADF inverter) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF inverter).** **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 inverter) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF inverter). Go to **"Sensor (ADF inverter) removal" on page 4-249**.	Replace the connections.

Step	Action and questions	Yes	No
5	Check the ADF registration motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF registration motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the ADF registration motor for proper connection. **Is the above component properly connected?**	Replace the ADF registration motor. Go to **"ADF registration motor removal" on page 4-224**.	Replace the connections.
7	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

285.05 Sensor (ADF inverter) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**.
3	Check the ADF inverter gate. **Is the inverter gate free of damage and warpage, and does it move smoothly?**	Go to step 4.	Replace the ADF sensor actuator guide. Go to **"ADF sensor actuator guide removal" on page 4-228**.

Step	Action and questions	Yes	No
4	Check the sensor (ADF registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF registration)**. **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 registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF registration). Go to **"Sensor (ADF registration) removal" on page 4-252**.	Replace the connections.
6	Check the sensor (ADF inverter) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF inverter).** **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 8.	Go to step 7.
7	Check the sensor (ADF inverter) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF inverter). Go to **"Sensor (ADF inverter) removal" on page 4-249**.	Replace the connections.
8	Check the ADF registration motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF registration motor**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.

Step	Action and questions	Yes	No
9	Check the ADF registration motor for proper connection. **Is the above component properly connected?**	Replace the ADF registration motor. Go to **"ADF registration motor removal" on page 4-224**.	Replace the connections.
10	Check the ADF nip release solenoid for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF nip release solenoid**. **Does the above component operate properly?**	Go to step 12.	Go to step 11.
11	Check the ADF nip release solenoid for proper connection. **Is the above component properly connected?**	Replace the ADF nip release solenoid. Go to **"ADF nip release solenoid removal" on page 4-222**.	Replace the connections.
12	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

285.13 Sensor (ADF inverter) late jam (inverting)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**.

Step	Action and questions	Yes	No
3	Check the sensor (ADF registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF registration)**. **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 registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF registration). Go to **"Sensor (ADF registration) removal" on page 4-252**.	Replace the connections.
5	Check the sensor (ADF inverter) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF inverter).** **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 inverter) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF inverter). Go to **"Sensor (ADF inverter) removal" on page 4-249**.	Replace the connections.
7	Check the ADF registration motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF registration motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.

Step	Action and questions	Yes	No
8	Check the ADF registration motor for proper connection. **Is the above component properly connected?**	Replace the ADF registration motor. Go to **"ADF registration motor removal" on page 4-224**.	Replace the connections.
9	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

285.15 Sensor (ADF inverter) lag jam (inverting)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the ADF rollers for wear. **Is the ADF feed/pick roller assembly or the ADF separation roller guide free of excess wear?**	Go to step 3.	Replace the ADF feed/pick roller assembly. Go to **"ADF feed/pick roller assembly removal" on page 4-216**.
3	Check the sensor (ADF registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF registration)**. **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 registration) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF registration). Go to **"Sensor (ADF registration) removal" on page 4-252**.	Replace the connections.

Step	Action and questions	Yes	No
5	Check the sensor (ADF inverter) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF inverter)**. **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 inverter) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF inverter). Go to **"Sensor (ADF inverter) removal" on page 4-249**.	Replace the connections.
7	Check the ADF registration motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **ADF/SCANNER MOTOR TESTS**. 4. Touch **ADF registration motor**. **Does the above component operate properly?**	Go to step 9.	Go to step 8.
8	Check the ADF registration motor for proper connection. **Is the above component properly connected?**	Replace the ADF registration motor. Go to **"ADF registration motor removal" on page 4-224**.	Replace the connections.
9	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

287.01 Sensor (ADF scan width 1) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the sensor (ADF scan width 1) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF scan width 1)**. **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 scan width 1) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF scan width 1). Go to **"Sensor (ADF scan width 1) removal" on page 4-256**.	Replace the connections.
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

288.01 Sensor (ADF scan width 2) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (ADF scan width 2) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF scan width 2).** **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 scan width 2) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF scan width 2). Go to **"Sensor (ADF scan width 2) removal" on page 4-259**.	Replace the connections.

Step	Action and questions	Yes	No
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

289.01 Sensor (ADF scan width 3) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media or media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (ADF scan width 3) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF scan width 3)**. **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 scan width 3) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF scan width 3). Go to **"Sensor (ADF scan width 3) removal" on page 4-263**.	Replace the connections.
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

295.00 Size mismatch jam (mix-size)

Step	Action and questions	Yes	No
1	Check the document size. **Is the correct size document being inserted into the ADF?**	Go to step 2.	Insert the proper size document into the ADF.
2	Check the document tray media guide position. **Are the document tray media guides set correctly?**	Go to step 3.	Adjust the document tray media guides to the proper position.

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Step	Action and questions	Yes	No
3	Check the sensor (ADF document tray width 1) for proper operation. th 3) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF document tray width 1)**. **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.	Replace the ADF document tray. Go to **"ADF document tray removal" on page 4-211**.
4	Check the sensor (ADF document tray width 2) for proper operation. th 3) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF document tray width 2)**. **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.	Replace the ADF document tray. Go to **"ADF document tray removal" on page 4-211**.
5	Check the sensor (ADF document tray width 3) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF document tray width 3)**. **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.	Replace the ADF document tray. Go to **"ADF document tray removal" on page 4-211**.
6	Check the connection of each ADF controller card assembly connector. **Is each connector of ADF controller card assembly connected properly?**	Go to step 7.	Connect each connector of ADF controller card assembly properly.

Step	Action and questions	Yes	No
7	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**. Go to step 5.	Problem resolved
8	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

295.01, 295.09 and 295.10 Size mismatch jam (no mix-size)

Step	Action and questions	Yes	No
1	Check the document tray media guide position. **Are the document tray media guides set correctly?**	Go to step 2.	Adjust the document tray media guides to the proper position.
2	Check the sensor (ADF document tray width 1) for proper operation. th 3) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF document tray width 1)**. **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 document tray width 1). **Is the above component properly connected?**	Replace the sensor (ADF document tray width 1).	Replace the connection.

Step	Action and questions	Yes	No
4	Check the sensor (ADF document tray width 2) for proper operation. th 3) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF document tray width 2)**. **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 document tray width 2). **Is the above component properly connected?**	Replace the sensor (ADF document tray width 2).	Replace the connection.
6	Check the sensor (ADF document tray width 3) for proper operation. th 3) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF document tray width 3)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 8.	Go to step 7.
7	Check the sensor (ADF document tray width 3). **Is the above component properly connected?**	Replace the sensor (ADF document tray width 3).	Replace the connection.
8	Check the sensor (ADF scan width 1) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF scan width 1)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 10.	Go to step 9.

Step	Action and questions	Yes	No
9	Check the sensor (ADF scan width 1) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF scan width 1). Go to **"Sensor (ADF scan width 1) removal" on page 4-256**.	Replace the connection.
10	Check the sensor (ADF scan width 2) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF scan width 2)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 12.	Go to step 11.
11	Check the sensor (ADF scan width 2) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF scan width 2). Go to **"Sensor (ADF scan width 2) removal" on page 4-259**.	Replace the connection.
12	Check the sensor (ADF scan width 3) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER SENSOR TESTS**. 4. Touch **Sensor (ADF scan width 3)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 14.	Go to step 13.
13	Check the sensor (ADF scan width 3) for proper connection. **Is the above component properly connected?**	Replace the sensor (ADF scan width 3). Go to **"Sensor (ADF scan width 3) removal" on page 4-263**. Go to step 14.	Replace the connection.
14	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**. Go to step 15.	Problem resolved
15	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

295.03 Too short size jam

Step	Action and questions	Yes	No
1	Check the document size. **Is the correct size document being inserted into the ADF?**	Go to step 2.	Insert the proper size document into the ADF.
2	Check the sensor (ADF pre registration), sensor (ADF feed out), and ADF controller PCBA for proper connection. **Are the above components properly connected?**	Go to step 3.	Replace the connections.
3	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**. Go to step 4.	Problem resolved
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

295.04 Too long size jam

Step	Action and questions	Yes	No
1	Check the document size. **Is the correct size document being inserted into the ADF?**	Go to step 2.	Insert the proper size document into the ADF.
2	Check the sensor (ADF pre registration), sensor (ADF feed out), and ADF controller PCBA for proper connection. **Are the above components properly connected?**	Go to step 3.	Replace the connections.
3	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**. Go to step 4.	Problem resolved
4	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

324.xx Tray 2 lift motor failure

Step	Action and questions	Yes	No
1	Check the sensor (tray 2 media level) on the tray 2 media feeder. **Is the sensor properly attached?**	Go to step 2.	Reattach the sensor.
2	Check the sensor for proper operation. Navigate to: **Diagnostics Menu** > **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Sensor (tray 2 media level)** **Does the display on the operator panel change every time the sensing area of the sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor for proper connection. **Is it properly connected?**	Replace the sensor. Go to **"Sensor (media level) removal" on page 4-160**.	Reseat the cable.
4	Check the tray 2 media feed lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. Navigate to: **Diagnostics Menu** > **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Tray 2 Feed/Lift Motor** **Does it operate properly?**	Go to step 6.	Go to step 5.
5	Check the motor for proper connection. **Is it properly connected?**	Replace the media feed lift motor. Go to **"Media feed lift motor removal" on page 4-127**.	Reseat the cable.
6	POR the machine and perform a print test. **Does the error continue?**	Replace the tray media feeder. Go to **"Tray module media feeder removal" on page 4-288**.	Problem resolved.
7	POR the machine and perform a print test. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved.

334.xx Tray 3 lift motor failure

Step	Action and questions	Yes	No
1	Check the sensor (tray 3 media level) on the tray 3 media feeder. **Is the sensor properly attached?**	Go to step 2.	Reattach the sensor.
2	Check the sensor for proper operation. Navigate to: **Diagnostics Menu** > **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Sensor (tray 3 media level)** **Does the display on the operator panel change every time the sensing area of the sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor for proper connection. **Is it properly connected?**	Replace the sensor. Go to **"Sensor (media level) removal" on page 4-160**.	Reseat the cable.
4	Check the tray 3 media feed lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. Navigate to: **Diagnostics Menu** > **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Tray 3 Feed/Lift Motor** **Does it operate properly?**	Go to step 6.	Go to step 5.
5	Check the motor for proper connection. **Is it properly connected?**	Replace the media feed lift motor. Go to **"Media feed lift motor removal" on page 4-127**.	Reseat the cable.
6	POR the machine and perform a print test. **Does the error continue?**	Replace the tray media feeder. Go to **"Tray module media feeder removal" on page 4-288** or **"TTM tray 3 feeder removal" on page 4-297**.	Problem resolved.
7	POR the machine and perform a print test. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved.

344.xx Tray 4 lift motor failure

Step	Action and questions	Yes	No
1	Check the sensor (tray 4 media level) on the tray 4 media feeder. **Is the sensor properly attached?**	Go to step 2.	Reattach the sensor.
2	Check the sensor for proper operation. Navigate to: **Diagnostics Menu** > **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Sensor (tray 4 media level)** **Does the display on the operator panel change every time the sensing area of the sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor for proper connection. **Is it properly connected?**	Replace the sensor. Go to **"Sensor (media level) removal" on page 4-160**.	Reseat the cable.
4	Check the tray 4 media feed lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. Navigate to: **Diagnostics Menu** > **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Tray 4 Feed/Lift Motor** **Does it operate properly?**	Go to step 6.	Go to step 5.
5	Check the motor for proper connection. **Is it properly connected?**	Replace the media feed lift motor. Go to **"Media feed lift motor removal" on page 4-127**.	Reseat the cable.
6	POR the machine and perform a print test. **Does the error continue?**	Replace the tray media feeder. Go to **"Tray module media feeder removal" on page 4-288** or **"TTM tray 4 media feeder removal" on page 4-301**.	Problem resolved.
7	POR the machine and perform a print test. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved.

354.xx Tray 5 lift motor failure

Step	Action and questions	Yes	No
1	Check the sensor (tray 5 media level) on the tray 5 media feeder. **Is the sensor properly attached?**	Go to step 2.	Reattach the sensor.
2	Check the sensor for proper operation. Navigate to: **Diagnostics Menu** > **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Sensor (tray 5 media level)** **Does the display on the operator panel change every time the sensing area of the sensor is interrupted or blocked?**	Go to step 4.	Go to step 3.
3	Check the sensor for proper connection. **Is it properly connected?**	Replace the sensor. Go to **"Sensor (tray 5 media level) removal" on page 4-460**.	Reseat the cable.
4	Check the tray 5 media feed lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. Navigate to: **Diagnostics Menu** > **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Tray 5 Feed/Lift Motor** **Does it operate properly?**	Go to step 6.	Go to step 5.
5	Check the motor for proper connection. **Is it properly connected?**	Replace the media feed lift motor. Go to **"HCF feed lift motor removal" on page 4-437**.	Reseat the cable.
6	POR the machine and perform a print test. **Does the error continue?**	Replace the tray media feeder. Go to **"HCF feed unit removal" on page 4-439**.	Problem resolved.
7	POR the machine and perform a print test. **Does the error continue?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved.

381.01 Sensor (front tamper HP) late jam

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Step	Action and questions	Yes	No
1	Check the tamper mechanism by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Replace the media compiler unit assembly. Go to **"Media compiler unit assembly removal" on page 4-372**.
2	Check the sensor (front tamper HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (front tamper HP)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.
3	Check the sensor (front tamper HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (front tamper HP). Go to **"Sensor (front tamper HP) and sensor (rear tamper HP) removals" on page 4-399**.	Replace the connections.
4	Check the front tamper motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **front tamper motor (forward)**. 5. Touch **front tamper motor (reverse)**. **Does the above component operate properly?**	Go to step 5.	Go to step 4.
5	Check the front tamper motor for proper connection. **Is the above component properly connected?**	Replace the media compiler guide. Go to **"Media compiler unit assembly removal" on page 4-372**.	Replace the connections.
6	POR the machine. **Does the error remain?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.02 Sensor (front tamper HP) lag jam

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Step	Action and questions	Yes	No
1	Check the tamper mechanism by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Replace the media compiler unit assembly. Go to **"Media compiler unit assembly removal" on page 4-372**.
2	Check the sensor (front tamper HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (Front tamper HP)**. **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	Is the sensor (front tamper HP) properly connected? **Is the above component properly connected?**	Replace the sensor (front tamper HP). Go to **"Sensor (front tamper HP) and sensor (rear tamper HP) removals" on page 4-399**.	Replace the connection.
4	Check the front tamper motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Front tamper motor (forward)**. 5. Touch **Front tamper motor (rearward)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the front tamper motor for proper connection. **Is the above component properly connected?**	Replace the media compiler unit. Go to **"Media compiler unit assembly removal" on page 4-372**.	Replace the connections.
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.03 Sensor (rear tamper HP) late jam

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Step	Action and questions	Yes	No
1	Check the tamper mechanism by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Replace the media compiler unit assembly. Go to **"Media compiler unit assembly removal" on page 4-372**.
2	Check the sensor (rear tamper HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (rear tamper HP)**. **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 (rear tamper HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (rear tamper HP). Go to **"Sensor (front tamper HP) and sensor (rear tamper HP) removals" on page 4-399**.	Replace the connection.
4	Check the rear tamper drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Rear tamper motor (forward)**. 5. Touch **Rear tamper motor (rearward)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the media compiler unit assembly for proper connection. **Is the above component properly connected?**	Replace the media compiler unit. Go to **"Media compiler unit assembly removal" on page 4-372**.	Replace the connection.
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.04 Sensor (rear tamper HP) lag jam

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Step	Action and questions	Yes	No
1	Check the tamper mechanism by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Replace the media compiler unit assembly. Go to **"Media compiler unit assembly removal" on page 4-372**.
2	Check the sensor (rear tamper HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (rear tamper HP)**. **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 (rear tamper HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (rear tamper HP). Go to **"Sensor (front tamper HP) and sensor (rear tamper HP) removals" on page 4-399**.	Replace the connection.
4	Check the rear tamper motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Rear tamper motor (forward)**. 5. Touch **Rear tamper motor (rearward)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the rear tamper motor for proper connection. **Is the above component properly connected?**	Replace the media compiler guide. Go to **"Media compiler unit assembly removal" on page 4-372**.	Replace the connection.
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.05 Sensor (stapler carriage HP) late jam

Step	Action and questions	Yes	No
1	Check the stapler by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Remove obstructions.
2	Check the sensor (stapler carriage HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (stapler carriage HP)**. **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 (stapler carriage shift HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (stapler carriage HP). Go to **"Sensor (stapler carriage HP) removal" on page 4-411**.	Replace the connection.
4	Check the stapler carriage motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Stapler carriage motor (forward)**. 5. Touch **Stapler carriage motor (rearward)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the stapler transport motor for proper connection. **Is the above component properly connected?**	Replace the stapler transport motor.	Replace the connection
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.06 Sensor (stapler carriage HP) lag jam

Step	Action and questions	Yes	No
1	Check the stapler by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Remove obstructions.
2	Check the sensor (stapler carriage HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (Stapler carriage HP)**. **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 (stapler carriage HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (stapler carriage HP). Go to **"Sensor (stapler carriage HP) removal" on page 4-411**.	Replace the connection.
4	Check the stapler carriage motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Stapler carriage motor (forward)**. 5. Touch **Stapler carriage motor (rearward)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the stapler transport motor for proper connection. **Is the above component properly connected?**	Replace the stapler transport motor.	Replace the connection.
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.07 Stapler unit failure

Step	Action and questions	Yes	No
1	Check the stapler unit for proper connection. **Is the above component properly connected?**	Go to step 2.	Replace the connections.
2	Check the stapler unit for wear. **Is the stapler unit free of excess wear?**	Go to step 3.	Replace the stapler unit assembly. Go to **"Stapler unit assembly removal" on page 4-417**.
3	Perform a staple test. Go to **"Staple Test" on page 3-22** **Does the error remain?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.08 Sensor (media eject clamp HP late jam

Step	Action and questions	Yes	No
1	Check the sensor (media eject clamp HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (media eject clamp HP)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.
2	Check the sensor (media eject clamp HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (media eject clamp HP). Go to **"Sensor (media eject clamp HP) removal" on page 4-401**.	Replace the connection.

Step	Action and questions	Yes	No
3	Check the clamp drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Media eject clamp motor (unclamp)**. 5. Touch **Media eject clamp motor (clamp)**. **Does the above component operate properly?**	Go to step 5.	Go to step 4.
4	Check the clamp drive motor for proper connection. **Is the above component properly connected?**	Replace the clamp drive motor. Go to **"Clamp drive motor removal" on page 4-347**.	Replace the connection.
5	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.09 Sensor (media eject clamp HP) lag jam

Step	Action and questions	Yes	No
1	Check the sensor (media eject clamp HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor** (**media eject clamp HP)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.
2	Check the sensor (media eject clamp HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (media eject clamp HP). Go to **"Sensor (media eject clamp HP) removal" on page 4-401**.	Replace the connection.

Step	Action and questions	Yes	No
3	Check the media eject clamp motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Media eject clamp motor (unclamp)**. 5. Touch **Media eject clamp motor (clamp)**. **Does the above component operate properly?**	Go to step 5.	Go to step 4.
4	Check the media eject clamp motor for proper connection. **Is the above component properly connected?**	Replace the media eject clamp motor. Go to **"Clamp drive motor removal" on page 4-347**.	Replace the connection.
5	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.10 Sensor (media eject shaft HP) late jam

Step	Action and questions	Yes	No
1	Check the sensor (media eject shaft HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (media eject shaft HP)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.
2	Check the sensor (media eject shaft HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (media eject shaft HP). Go to **"Sensor (media eject shaft HP) removal" on page 4-402**.	Replace the connection.

Step	Action and questions	Yes	No
3	Check the eject shaft roller motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Media eject motor (forward)**. 5. Touch **Media eject motor (reverse)**. **Does the above component operate properly?**	Go to step 5.	Go to step 4.
4	Check the eject shaft roll motor for proper connection. **Is the above component properly connected?**	Replace the eject shaft roll motor. Go to **"Media eject motor assembly removal" on page 4-376**.	Replace the connection.
5	Check the media eject clamp clutch for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Media eject clutch.** **Does the above component make an audible clicking noise?**	Go to step 7.	Go to step 6.
6	Check the media eject clamp clutch for proper connection. **Is the above component properly connected?**	Replace the media eject clamp clutch. Go to **"Media eject clamp clutch removal" on page 4-375**.	Replace the connection.
7	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.11 Sensor (media eject shaft HP) lag jam

Step	Action and questions	Yes	No
1	Check the sensor (media eject shaft HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (media eject shaft HP)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.
2	Check the sensor (media eject shaft HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (media eject shaft HP). Go to **"Sensor (media eject shaft HP) removal" on page 4-402**.	Replace the connection.
3	Check the eject shaft roll motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Media eject motor (forward)**. 5. Touch **Media eject motor (reverse)**. **Does the above component operate properly?**	Go to step 5.	Go to step 4.
4	Check the eject shaft roll motor for proper connection. **Is the above component properly connected?**	Replace the eject shaft roll motor. Go to **"Media eject motor assembly removal" on page 4-376**.	Replace the connection.

Step	Action and questions	Yes	No
5	Check the media eject clamp clutch for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Media eject clutch.** **Does the above component make an audible clicking noise?**	Go to step 7.	Go to step 6.
6	Check the media eject clamp clutch for proper connection. **Is the above component properly connected?**	Replace the media eject clamp clutch. Go to **"Media eject clamp clutch removal" on page 4-375**.	Replace the connection.
7	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.12 Stacker bin failure

Step	Action and questions	Yes	No
1	Check the vertical transport mechanism of the stacker bin for obstacles and damage. **Are the any obstacles in the vertical transport mechanism of the stacker bin?**	Remove obstacles.	Go to step 2.
2	Check the sensor (stacker bin level encoder) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (stacker bin level encoder)**. **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.

Step	Action and questions	Yes	No
3	Check the sensor (stacker bin level encoder) for proper connection. **Is the above component properly connected?**	Replace the sensor (stacker bin level encoder). Go to **"Sensor (stacker bin level encoder) removal" on page 4-409**.	Replace the connection.
4	Check the sensor (stacker bin level R) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (stacker bin level 1)**. **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 (stacker bin level R) for proper connection. **Is the above component properly connected?**	Replace the sensor (stacker bin level R). Go to **"Sensor (stacker bin level R) removal" on page 4-409**.	Replace the connection.
6	Check the sensor (stacker bin level F) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (stacker bin level 2)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 8.	Go to step 7.
7	Check the sensor (stacker bin level F) for proper connection. **Is the above component properly connected?**	Replace the sensor (stacker bin level F). Go to **"Sensor (stacker bin level F) removal" on page 4-408**.	Replace the connection.

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Step	Action and questions	Yes	No
8	Check the stacker bin lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Stacker bin lift motor (up)**. 5. Touch **Stacker bin lift motor (down)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
9	**Is the stacker bin lift motor connected properly?**	Replace the stacker bin lift motor. Go to **"Stacker bin lift motor assembly removal" on page 4-414**.	Replace the connection.
10	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.13 Sensor (stacker bin upper limit) error

Step	Action and questions	Yes	No
1	Check the sensor (stacker bin level R) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (Stacker bin level 1)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.
2	Check the sensor (stacker bin level R) for proper connection. **Is the above component properly connected?**	Replace the sensor (stacker bin level R). Go to **"Sensor (stacker bin level R) removal" on page 4-409**.	Replace the connection.

Step	Action and questions	Yes	No
3	Check the sensor (stacker bin level F) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (Stacker bin level 2)**. **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 (stacker bin level F) for proper connection. **Is the above component properly connected?**	Replace the sensor (stacker bin level F). Go to **"Sensor (stacker bin level F) removal" on page 4-408**.	Replace the connection.
5	Check the media stacker bin actuator for proper operation. **Is the media stacker bin actuator installed properly?** **Does it enter the sensing area of the sensor (stacker bin upper limit)?**	Go to step 6.	Repair the media stacker bin actuator.
6	Check the sensor (stacker bin upper limit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (stacker bin upper limit)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 8.	Go to step 7.
7	Check the sensor (stacker bin upper limit) for proper connection. **Is the above component properly connected?**	Replace the sensor (stacker bin upper limit). Go to **"Sensor (stacker bin upper limit) or sensor (stacker bin no media) removal" on page 4-410**.	Replace the connection.

Step	Action and questions	Yes	No
8	Check the stacker bin lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Stacker bin lift motor (up)**. 5. Touch **Stacker bin lift motor (down)**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	**Is the stacker bin lift motor connected properly?**	Replace the stacker bin lift motor. Go to **"Stacker bin lift motor assembly removal" on page 4-414**.	Replace the connection.
10	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.14 Sensor (stacker bin no media) error

Step	Action and questions	Yes	No
1	Check the media stacker bin actuator for proper operation. **Is the media stacker bin actuator installed properly?** **Does it enter the sensing area of the sensor (stacker bin upper limit)?**	Go to step 2.	Repair the media stacker bin actuator.
2	Check the sensor (stacker bin no media) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (stacker bin no media)**. **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.

Step	Action and questions	Yes	No
3	**Is the sensor (stacker bin no media) properly connected?**	Replace the sensor (stacker bin no media). Go to **"Sensor (stacker bin upper limit) or sensor (stacker bin no media) removal" on page 4-410**.	Replace the connection.
4	Check the sensor (stacker bin level R) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (Stacker bin level 1)**. **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 (stacker bin level R) for proper connection. **Is the above component properly connected?**	Replace the sensor (stacker bin level R). Go to **"Sensor (stacker bin level R) removal" on page 4-409**.	Replace the connection.
6	Check the sensor (stacker bin level F) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (Stacker bin level 2)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 8.	Go to step 7.
7	Check the sensor (stacker bin level F) for proper connection. **Is the above component properly connected?**	Replace the sensor (stacker bin level F). Go to **"Sensor (stacker bin level F) removal" on page 4-408**.	Replace the connection.
8	Check the sensor (stacker bin level encoder) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (Stacker bin level encoder)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 10.	Go to step 9.

Step	Action and questions	Yes	No
9	Check the sensor (stacker bin level encoder) for proper connection. **Is the above component properly connected?**	Replace the sensor (stacker bin level encoder). Go to **"Sensor (stacker bin level encoder) removal" on page 4-409**.	Replace the connection.
10	Check the stacker bin lift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Stacker bin lift motor (up)**. 5. Touch **Stacker bin lift motor (down)**. **Does the above component operate properly?**	Go to step 12.	Go to step 11.
11	**Is the stacker bin lift motor connected properly?**	Replace the stacker bin lift motor. Go to **"Stacker bin lift motor assembly removal" on page 4-414**.	Replace the connection.
12	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.15 Sensor (punch side reg 1/2) lag jam

Step	Action and questions	Yes	No
1	Check the sensor (punch unit side reg 1) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (punch side reg 1)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.

Step	Action and questions	Yes	No
2	Check the sensor (punch unit side reg 1) connection. **Is the above component properly connected?**	Replace the appropriate sensor (punch unit side reg pair). Go to **"Sensor (punch unit side registration pair) with bracket removal" on page 4-406**.	Replace the connection.
3	Check the sensor (punch unit side reg 2) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (punch side reg 2)**. **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 (punch unit side reg 2) connection. **Is the above component properly connected?**	Replace the appropriate sensor (punch unit side reg pair). Go to **"Sensor (punch unit side registration pair) with bracket removal" on page 4-406**.	Replace the connection.
5	Check the punch carriage shift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Punch carriage shift motor (forward)**. 5. Touch **Punch carriage shift motor (forward)**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the punch carriage shift motor for proper connection. **Is the above component properly connected?**	Replace the punch carriage shift motor. Go to **"Punch carriage shift motor assembly removal" on page 4-384**.	Replace the connection.
7	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.16 Sensor (punch cam HP) late jam

Step	Action and questions	Yes	No
1	Check the punch rack gear by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Remove obstacles.
2	Check the sensor (punch cam HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (punch cam HP)**. **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	**Is the sensor (punch cam HP) properly connected?**	Replace the sensor (punch cam HP). Go to **"Sensor (punch hole select), sensor (punch cam front), and sensor (punch unit HP) removal" on page 4-404**.	Replace the connection.
4	Check the punch unit motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS.** 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Punch unit motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	**Is the punch unit motor properly connected?**	Replace the punch unit motor. Go to **"Punch unit motor assembly removal" on page 4-385**.	Replace the connection.
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.17 Sensor (punch cam HP) lag jam

Step	Action and questions	Yes	No
1	Check the punch rack gear by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Remove obstructions.
2	Check the sensor (punch unit HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (punch cam HP)**. **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	**Is the sensor (punch unit HP) properly connected?**	Replace the sensor (punch cam HP). Go to **"Sensor (punch hole select), sensor (punch cam front), and sensor (punch unit HP) removal" on page 4-404**.	Replace the connection.
4	Check the punch unit motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Punch unit motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	**Is the punch unit motor properly connected?**	Replace the punch unit motor assembly. Go to **"Punch unit motor assembly removal" on page 4-385**.	Replace the connection.
6	Perform a POR. Does the error continue when the power is turned off/on?	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.18 Sensor (punch carriage shift HP) late jam

Step	Action and questions	Yes	No
1	Check the punch carriage by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Remove obstacles.
2	Check the sensor (punch carriage shift HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (punch carriage shift HP)**. 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 (punch carriage shift HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (punch carriage shift HP). Go to **"Sensor (punch carriage shift HP) removal" on page 4-403**.	Replace the connection.
4	Check the punch carriage shift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Punch carriage shift motor (forward)**. 5. Touch **Punch carriage shift motor (rearward)**. **Does the above component operate properly?**	Go to step 6.	Go to step 9.
5	Check the punch carriage shift motor for proper connection. **Is the above component properly connected?**	Replace the punch carriage shift motor. Go to **"Punch carriage shift motor assembly removal" on page 4-384**..	Replace the connection.
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.19 Sensor (punch carriage shift HP) lag jam

Step	Action and questions	Yes	No
1	Check the punch carriage by moving it manually. **Does the above component slide back and forth properly?**	Go to step 2.	Remove obstacles.
2	Check the sensor (punch carriage shift HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (punch carriage shift HP)**. **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 (punch carriage shift HP) for proper connection. **Is the above component properly connected?**	Replace the sensor (punch carriage shift HP). Go to **"Sensor (punch carriage shift HP) removal" on page 4-403**.	Replace the connection.
4	Check the punch carriage shift motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Punch carriage shift motor (forward)**. 5. Touch **Punch carriage shift motor (rearward)**. **Does the above component operate properly?**	Go to step 6.	Go to step 9.
5	Check the punch carriage shift motor for proper connection. **Is the above component properly connected?**	Replace the punch carriage shift motor. Go to **"Punch carriage shift motor assembly removal" on page 4-384**..	Replace the connection.
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.26 Sensor (decurler cam HP) late jam

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Step	Action and questions	Yes	No
1	Check the sensor (decurler cam HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (decurler cam HP)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.
2	**Is the sensor (decurler cam HP) properly connected?**	Replace the sensor (decurler cam HP). Go to **"Sensor (decurler cam HP) removal" on page 4-325**.	Replace the connection.
3	Check the bridge decurler cam clutch for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Decurler cam clutch**. **Does the above component make an audible clicking sound?**	Go to step 5.	Go to step 4.
4	**Is the bridge decurler cam clutch properly connected?**	Replace the decurler clutch. Go to **"Decurler clutch removal" on page 4-317**.	Replace the connection.
5	Check the bridge unit drive motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Bridge unit motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.

Step	Action and questions	Yes	No
6	**Is the bridge drive motor properly connected?**	Replace the bridge drive motor. Go to **"Bridge drive motor removal" on page 4-310**.	Replace the connection.
7	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.27 Sensor (decurler cam HP) lag jam

Step	Action and questions	Yes	No
1	Check the sensor (decurler cam HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (decurler cam HP)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to step 3.	Go to step 2.
2	**Is the sensor (decurler cam HP) properly connected?**	Replace the sensor (decurler cam HP). Go to **"Sensor (decurler cam HP) removal" on page 4-325**.	Replace the connection.
3	Check the bridge decurler cam clutch for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Decurler cam clutch**. **Does the above component make an audible clicking sound?**	Go to step 5.	Go to step 4.
4	**Is the bridge decurler cam clutch properly connected?**	Replace the bridge decurler cam clutch. Go to **"Decurler clutch removal" on page 4-317**.	Replace the connection.

Step	Action and questions	Yes	No
5	Check the bridge drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Bridge unit motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	**Is the bridge drive motor properly connected?**	Replace the bridge drive motor. Go to **"Bridge drive motor removal" on page 4-310**.	Replace the connection.
7	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.30 Sensor (booklet front tamper HP) late jam

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface contact.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet motor interface cable assembly.
4	Check the booklet front tamper by moving it manually. **Does the above component slide back and forth properly?**	Go to step 5.	Remove obstructions.

Step	Action and questions	Yes	No
5	Check the sensor (booklet front tamper HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet front tamper HP)**. **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	**Is the sensor (booklet front tamper HP) properly connected?**	Replace the sensor (booklet front tamper HP). Go to **"Sensor (booklet front tamper HP) removal" on page 4-390**.	Replace the connection.
7	Check the booklet front tamper motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet tamper front motor (reverse)**. 5. Touch **Booklet tamper front motor (reverse)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
8	**Is the booklet front tamper motor properly connected?**	Replace the booklet front tamper motor. Go to **"Booklet front tamper motor removal" on page 4-334**.	Replace the connection.
9	POR the machine. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
10	POR the machine. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.31 Sensor (booklet front tamper HP) lag jam

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface contact.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet motor interface cable assembly.
4	Check the booklet front tamper by moving it manually. **Does the above component slide back and forth properly?**	Go to step 5.	Remove obstructions.
5	Check the sensor (booklet front tamper HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet front tamper HP**. **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	**Is the sensor (booklet front tamper HP) properly connected?**	Replace the sensor (booklet front tamper HP). Go to **"Sensor (booklet front tamper HP) removal" on page 4-390**.	Replace the connection.

Step	Action and questions	Yes	No
7	Check the booklet front tamper motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet tamper front motor (reverse)**. 5. Touch **Booklet tamper front motor (reverse)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
8	**Is the booklet front tamper motor properly connected?**	Replace the booklet front tamper motor. Go to **"Booklet front tamper motor removal" on page 4-334**.	Replace the connection.
9	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
10	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.32 Sensor (booklet end guide HP) lag jam

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface contact.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet motor interface cable assembly.

Step	Action and questions	Yes	No
4	Check the booklet end guide by moving it manually. **Does the above component slide up and down properly?**	Go to step 5.	Remove obstructions.
5	Check the sensor (booklet end guide HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet end guide HP**. **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	**Is the sensor (booklet end guide HP) properly connected?**	Replace the sensor (booklet end guide HP). Go to **"Sensor (booklet end guide HP) removal" on page 4-390**.	Replace the connection.
7	Check the booklet end guide drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet end guide drive motor.** **Does the above component operate properly?**	Go to step 9.	Go to step 8.
8	**Is the booklet end guide drive motor properly connected?**	Replace the booklet end guide drive motor. Go to **"Booklet end guide drive motor removal" on page 4-331**.	Replace the connection.
9	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
10	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.33 Sensor (booklet rear tamper HP) late jam

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface contact.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet motor interface cable assembly.
4	Check the booklet rear tamper by moving it manually. **Does the above component slide back and forth properly?**	Go to step 5.	Remove obstructions.
5	Check the sensor (booklet rear tamper HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet rear tamper HP**. **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	**Is the sensor (booklet rear tamper HP) properly connected?**	Replace the sensor (booklet rear tamper HP). Go to **"Sensor (booklet rear tamper HP) removal" on page 4-394**.	Replace the connection.

Step	Action and questions	Yes	No
7	Check the booklet rear tamper motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet tamper rear motor (forward)**. 5. Touch **Booklet tamper rear motor (reverse)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
8	Check the booklet tamper rear motor. **Is the above component properly connected?**	Replace the booklet rear tamper motor. Go to **"Booklet rear tamper motor removal" on page 4-339**.	Replace the connection.
9	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
10	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.34 Sensor (booklet rear tamper HP) lag jam

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface contact.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet motor interface cable assembly.

Step	Action and questions	Yes	No
4	Check the booklet rear tamper by moving it manually. **Does the above component slide back and forth properly?**	Go to step 5.	Remove obstructions.
5	Check the sensor (booklet rear tamper HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet rear tamper HP.** **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	**Is the sensor (booklet rear tamper HP) properly connected?**	Replace the sensor (booklet rear tamper HP). Go to **"Sensor (booklet rear tamper HP) removal" on page 4-394**.	Replace the connection.
7	Check the booklet rear tamper motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet tamper rear motor (forward)**. 5. Touch **Booklet tamper rear motor (reverse)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
8	Check the booklet rear tamper motor. **Is the above component properly connected?**	Replace the booklet rear tamper motor. Go to **"Booklet rear tamper motor removal" on page 4-339**.	Replace the connection.
9	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
10	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.35 Sensor (booklet knife folding) failure

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface contact.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet motor interface cable assembly.
4	Check the sensor (booklet knife folding) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet knife folding)**. **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 (booklet knife folding). **Is the above component properly connected?**	Replace the sensor (booklet knife folding). Go to **“Sensor (booklet knife folding) removal” on page 4-391**.	Replace the connection.
6	Check the booklet folding/exit drive motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet folding/exit motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.

Step	Action and questions	Yes	No
7	Check the booklet folding/exit drive motor. **Is the above component properly connected?**	Replace the booklet folding/exit drive motor assembly. Go to **"Booklet folding/exit drive motor assembly removal" on page 4-333**.	Replace the connection.
8	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
9	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.36 Booklet unit fail

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface contact.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet motor interface cable assembly.
4	Check the sensor (booklet unit interlock) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet unit 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 6.	Go to step 5.
5	**Is the sensor (booklet unit interlock) properly connected?**	Replace the sensor (booklet unit interlock). Go to **"Sensor (booklet unit interlock) removal" on page 4-394**.	Replace the connection.

Step	Action and questions	Yes	No
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved

381.37 Sensor (booklet knife HP) late jam

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface contact.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet motor interface cable assembly.
4	Check the sensor (booklet knife HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet knife HP)**. **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 (booklet knife HP). **Is the above component properly connected?**	Replace the sensor (booklet knife HP). Go to **"Sensor (booklet knife HP) removal" on page 4-392**.	Replace the connection.

Step	Action and questions	Yes	No
6	Check the booklet knife solenoid for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet knife solenoid**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	**Is the booklet knife solenoid properly connected?**	Replace the booklet knife solenoid. Go to **"Booklet fold solenoid removal" on page 4-332**.	Replace the connection.
8	Check the booklet folding/exit drive motor assembly for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet folding/exit drive motor**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	**Is the booklet folding/exit drive motor assembly properly connected?**	Replace the booklet folding/exit drive motor assembly. Go to **"Booklet folding/exit drive motor assembly removal" on page 4-333**.	Replace the connection.
10	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
11	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.38 Sensor (booklet knife HP) lag jam

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface contact.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet motor interface cable assembly.
4	Check the sensor (booklet knife HP) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet knife HP)**. **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	**Is the sensor (booklet knife HP) properly connected?**	Replace the sensor (booklet knife HP). Go to **"Sensor (booklet knife HP) removal" on page 4-392**.	Replace the connection.
6	Check the booklet knife solenoid for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet knife solenoid.** **Does the above component operate properly?**	Go to step 8.	Go to step 7.

Step	Action and questions	Yes	No
7	Check the booklet knife solenoid. **Is the above component properly connected?**	Replace the booklet knife solenoid. Go to **"Booklet fold solenoid removal" on page 4-332**.	Replace the connection.
8	Check the booklet folding/exit drive motor assembly for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet folding/exit motor (forward)**. 5. Touch **Booklet folding/exit motor (forward)**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	**Is the booklet folding/exit drive motor assembly properly connected?**	Replace the booklet folding/exit drive motor assembly. Go to **"Booklet folding/exit drive motor assembly removal" on page 4-333**.	Replace the connection.
10	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
11	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.39 Booklet Staple Fail

Step	Action and questions	Yes	No
1	Check the booklet unit stapler assembly. **Is the above component properly inserted into the booklet maker unit assembly?**	Go to step 2.	Ensure that the booklet unit stapler assembly is properly inserted.
2	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet unit interface contact.

Step	Action and questions	Yes	No
3	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet sensor interface cable assembly.
4	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 5.	Replace the booklet motor interface cable assembly.
5	Check the booklet stapler interface cable assembly. **Is the above component free of damage?**	Go to step 6.	Replace the booklet stapler interface cable assembly.
6	Check the connector on the back of the booklet stapler unit assembly. **Is the above component free of damage.**	Replace the booklet folding/exit drive motor assembly. Go to **"Booklet folding/exit drive motor assembly removal" on page 4-333**.	Go to step 7.
7	Perform a print test booklet stapled document. **Does the error remain?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
8	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.40 Sensor (booklet compiler media present) error

Step	Action and questions	Yes	No
1	Check the booklet unit interface connector assembly. **Is the above component free of damage?**	Go to step 2.	Replace the booklet unit interface connector assembly.
2	Check the main connector on the booklet unit sensor interface cable assembly. **Is the above component free of damage?**	Go to step 3.	Replace the booklet unit sensor interface cable assembly.
3	Check the main connector on the booklet unit motor interface cable assembly. **Is the above component free of damage?**	Go to step 4.	Replace the booklet unit motor interface cable assembly.

Step	Action and questions	Yes	No
4	Check the sensor (booklet compiler media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet compiler media present)**. **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	**Is the sensor (booklet compiler media entrance) properly connected?**	Replace the sensor (booklet compiler media entrance). Go to **"Sensor (booklet compiler media entrance) removal" on page 4-389**.	Replace the connection.
6	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
7	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

381.41 Communication error with booklet controller card assembly

Step	Action and questions	Yes	No
1	Check the booklet controller card assembly and the finisher controller card assembly for proper connection. **Is the above component properly connected?**	Go to step 2.	Replace the connection.
2	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the booklet controller card assembly. Go to **"Booklet controller card assembly removal" on page 4-329**.	Problem resolved
3	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

401.01 Sensor (finisher media entrance) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (finisher media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (finisher media entrance)**. **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 (finisher media entrance) for proper connection. **Is the above sensor properly connected?**	Replace the sensor (finisher media entrance). Go to **"Sensor (finisher media entrance) removal" on page 4-398**.	Replace the connection.
4	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to step 5.	Replace the connections.
5	Perform a print test. **Does the error remain?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

401.03 Sensor (bridge media entrance) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the bridge unit media transport rollers. **Are the bridge unit media transport rollers free of excess wear and contamination?**	Go to step 3.	Clean or replace the bridge unit assembly. Go to **"Bridge unit assembly removal" on page 4-312**.

Step	Action and questions	Yes	No
3	Check the sensor (bridge media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (bridge media entrance)**. **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 (bridge media entrance) for proper connection. **Is the above sensor properly connected?**	Replace the sensor (bridge media entrance). Go to **"Sensor (bridge media entrance) removal" on page 4-319**.	Replace the connection.
5	Check the bridge drive motor for proper operation. **Caution:** When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Bridge unit motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the bridge drive motor connection. **Is the above motor properly connected?**	Replace the bridge drive motor. Go to **"Bridge drive motor removal" on page 4-310**. Go to step 7.	Replace the connection.
7	Perform a print test. **Does the error remain?**	Replace the finisher controller card assembly. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

401.05 Sensor (bridge media entrance) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the bridge unit media transport rollers. **Are the bridge unit media transport rollers free of excess wear and contamination?**	Go to step 3.	Clean or replace the bridge unit assembly. Go to **"Bridge unit assembly removal" on page 4-312**.
3	Check the sensor (bridge media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (bridge media entrance)**. **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 (bridge media entrance) for proper connection. **Is the above sensor properly connected?**	Replace the sensor (bridge media entrance). Go to **"Sensor (bridge media entrance) removal" on page 4-319**.	Replace the connection.
5	Check the bridge drive motor for proper operation. **Caution:** When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Bridge unit motor**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the bridge drive motor connection. **Is the above motor properly connected?**	Replace the bridge drive motor. Go to **"Bridge drive motor removal" on page 4-310**. Go to step 7.	Replace the connection.
7	Perform a print test. **Does the error remain?**	Replace the finisher controller card assembly. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

402.01 Sensor (bridge media exit) static jam

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Step	Action and questions	Yes	No
1	Check the sensor (bridge unit media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (bridge 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 2.
2	Check the sensor (bridge unit media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (bridge 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 (bridge media exit) connection. **Is the above sensor properly connected?**	Replace the sensor (bridge media exit). Go to **"Sensor (bridge media exit) removal" on page 4-321**.	Replace the connection.
4	Check the bridge drive motor for proper operation. **Caution:** When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Bridge unit motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the bridge drive motor connection. **Is the above component properly connected?**	Replace the bridge drive motor. Go to **"Bridge drive motor removal" on page 4-310**. Go to step 6.	Replace the connection.

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Go Back

Step	Action and questions	Yes	No
6	Perform a print test. **Does the error remain?**	Replace the finisher controller card assembly. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

402.03 Sensor (bridge media exit) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (bridge media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (bridge media entrance)**. **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 (bridge media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor(bridge media exit). Go to **"Sensor (bridge media exit) removal" on page 4-321**.	Replace the connection.
4	Check the bridge drive motor for proper operation.  **Caution:** When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **Finisher Motor Tests**. 4. Touch **Bridge unit motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the bridge drive motor for proper connection. **Is the above component properly connected?**	Replace the bridge drive motor. Go to **"Bridge drive motor removal" on page 4-310**. Go to step 6.	Replace the connections.

Step	Action and questions	Yes	No
6	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the finisher controller card assembly. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved
7	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

481.01 Sensor (finisher media entrance) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (finisher media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (finisher media entrance)**. **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 (finisher media entrance) for proper connection. **Is the above component properly connected?**	Replace the sensor (finisher media entrance). Go to **"Sensor (finisher media entrance) removal" on page 4-398**.	Replace the connections.
4	Check the finisher controller card assembly for proper connection. **Is the above component properly connected?**	Go to step 5.	Replace the connections.
5	POR the machine, and perform a print test. Go to **"PRINT TESTS" on page 3-26**. **Does the error continue?**	Replace the finisher controller card assembly. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

481.03 Sensor (finisher media entrance) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (finisher media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (finisher media entrance)**. **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 (finisher media entrance) for proper connection. **Is the above component properly connected?**	Replace the sensor (finisher media entrance). Go to **"Sensor (finisher media entrance) removal" on page 4-398**.	Replace connections.
4	Check the finisher controller card assembly for proper connection. **Is the above component properly connected?**	Go to Step 5.	Replace connections.
5	POR the machine. **Does the error continue?**	Replace the finisher controller card assembly. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

482.01 Sensor (diverter gate) static jam A (to stacker bin)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the sensor (diverter gate) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (diverter gate)**. **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 (diverter gate) for proper connection. **Is the above component properly connected?**	Replace the sensor (diverter gate) Go to **"Sensor (diverter gate) removal" on page 4-397**.	Replace connections.
4	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 5.	Replace connections.
5	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

482.01 Sensor (diverter gate) static jam B (to top bin)

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (diverter gate) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (diverter gate)**. **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.

Step	Action and questions	Yes	No
3	Check the sensor (diverter gate) for proper connection. **Is the above component properly connected?**	Replace the sensor (diverter gate) Go to **"Sensor (diverter gate) removal" on page 4-397**.	Replace the connections.
4	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 5.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

482.03 Sensor (diverter gate) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (diverter gate) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (diverter gate)**. **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 (diverter gate) for proper connection. **Is the above component properly connected?**	Replace the sensor (diverter gate) Go to **"Sensor (diverter gate) removal" on page 4-397**.	Replace the connections.

Step	Action and questions	Yes	No
4	Check the buffer/transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Buffer/transport motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the buffer/transport motor for proper connection. **Is the above component properly connected?**	Replace the buffer/transport motor. Go to **"Stepper motor (buffer/transport) and belt (buffer/transport) removal" on page 4-421**.	Replace the connections.
6	Check the finisher diverter gate solenoid (upper bin) for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Finisher diverter gate solenoid (upper bin)**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the finisher diverter gate for proper connection. **Is the above component properly connected?**	Replace the finisher diverter gate solenoid (upper bin). Go to **"Finisher diverter gate solenoid removal" on page 4-354**.	Replace the connection.
8	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 9.	Replace the connections.
9	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

483.01 Sensor (buffer path) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (buffer path) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (buffer path)**. **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 (buffer path) for proper connection. **Is the above component properly connected?**	Replace the sensor (buffer path). Go to **"Sensor (buffer path) removal" on page 4-396**.	Replace connections.
4	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 5.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

483.03 Sensor (buffer path) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the sensor (buffer path) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (buffer path)**. **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 (buffer path) for proper connection. **Is the above component properly connected?**	Replace the sensor (buffer path). Go to **"Sensor (buffer path) removal" on page 4-396**.	Replace connections.
4	Check the entrance/paddle motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Entrance/paddle motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the entrance/paddle motor for proper connection. **Is the above component properly connected?**	Replace the entrance/paddle motor. Go to **"Stepper motor (entrance/paddle) and belt (entrance/paddle) removal" on page 4-423**.	Replace connections.
6	Check the exit stepper motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Exit motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.

Step	Action and questions	Yes	No
7	Check the stepper motor for proper connection. **Is the above component properly connected?**	Replace the stepper motor. Go to **"Stepper motor (exit) assembly and belt (exit) removal" on page 4-424**.	Replace the connection.
8	Check the buffer diverter gate solenoid for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Buffer diverter gate solenoid**. **Does the above component operate properly?**	Go to step 10.	Go to step 9.
9	Check the buffer diverter gate solenoid for proper connection. **Is the above component properly connected?**	Replace the buffer diverter gate solenoid. Go to **"Buffer diverter gate solenoid removal" on page 4-345**.	Replace the connection.
10	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 11.	Replace the connections.
11	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

484.01 Sensor (compiler media present) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the sensor (compiler media present) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (compiler media present)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to Step 3.	Go to Step 2.
3	Check the sensor (compiler media present) for proper connection. **Is the above component properly connected?**	Replace the sensor(compiler media present)	Replace connections.
4	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 5.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

485.01 Sensor (upper media exit) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (upper media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (upper 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.

Step	Action and questions	Yes	No
3	Check the sensor (upper media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (upper media exit). Go to **"Sensor (upper media exit) removal" on page 4-413**.	Replace connections.
4	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 5.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

485.03 Sensor (upper media exit) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (upper media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 3. Touch **Sensor (upper 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 (upper media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (upper media exit). Go to **"Sensor (upper media exit) removal" on page 4-413**.	Replace connections.

Step	Action and questions	Yes	No
4	Check the buffer/transport motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Buffer/transport motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the buffer/transport motor for proper connection. **Is the above component properly connected?**	Replace the buffer/transport motor. Go to **"Stepper motor (buffer/transport) and belt (buffer/transport) removal" on page 4-421**.	Replace the connection.
6	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 7.	Replace the connections.
7	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

485.05 Sensor (upper media exit) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (upper media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 3. Touch **Sensor (upper 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.

Step	Action and questions	Yes	No
3	Check the sensor (upper media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (upper media exit). Go to **"Sensor (upper media exit) removal" on page 4-413**.	Replace connections.
4	Check the buffer/transport motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Buffer/transport motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the buffer/transport motor for proper connection. **Is the above component properly connected?**	Replace the buffer/transport motor. Go to **"Stepper motor (buffer/transport) and belt (buffer/transport) removal" on page 4-421**.	Replace the connection.
6	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 5.	Replace the connections.
7	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

486.01 Sensor (lower media exit) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the sensor (lower media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 3. Touch **Sensor (lower 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 (lower media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (lower media exit). Go to **"Sensor (lower media exit) removal" on page 4-400**.	Replace connections.
4	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 5.	Replace the connections.
5	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

486.03 Sensor (lower media exit) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (lower media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 3. Touch **Sensor (lower 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.

Step	Action and questions	Yes	No
3	Check the sensor (lower media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (lower media exit). Go to **"Sensor (lower media exit) removal" on page 4-400**.	Replace connections.
4	Check the entrance/paddle motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Entrance/paddle motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the entrance/paddle motor for proper connection. **Is the above component properly connected?**	Replace the entrance/paddle motor. Go to **"Stepper motor (entrance/paddle) and belt (entrance/paddle) removal" on page 4-423**.	Replace the connection.
6	Check the exit stepper motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Exit motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the stepper motor for proper connection. **Is the above component properly connected?**	Replace the stepper motor. Go to **"Stepper motor (exit) assembly and belt (exit) removal" on page 4-424**.	Replace the connection.
8	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 9.	Replace the connections.

Step	Action and questions	Yes	No
9	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

486.05 Sensor (lower media exit) lag jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (lower media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 3. Touch **Sensor (lower 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 (lower media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (lower media exit). Go to **"Sensor (lower media exit) removal" on page 4-400**.	Replace connections.
4	Check the entrance/paddle motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Entrance/paddle motor**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the entrance/paddle motor for proper connection. **Is the above component properly connected?**	Replace the entrance/paddle motor. Go to **"Stepper motor (entrance/paddle) and belt (entrance/paddle) removal" on page 4-423**.	Replace the connection.

Step	Action and questions	Yes	No
6	Check the exit stepper motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Exit motor**. **Does the above component operate properly?**	Go to step 8.	Go to step 7.
7	Check the stepper motor for proper connection. **Is the above component properly connected?**	Replace the stepper motor. Go to **"Stepper motor (exit) assembly and belt (exit) removal" on page 4-424**.	Replace the connection.
8	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 9.	Replace the connections.
9	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

487.05 Sensor (compiler media present) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the eject shaft roll for damage and contamination. **Is the above component free of damage and contamination?**	Go to Step 3.	Replace the eject shaft roll. Go to **"Eject roll shaft removal" on page 4-349**.

Step	Action and questions	Yes	No
3	Check the clamp drive motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Media eject clamp motor (clamp)**. 5. Touch **Media eject clamp motor (unclamp)**. **Does the above component operate properly?**	Go to step 5.	Go to step 4.
4	Check the clamp drive motor for proper connection. **Is the above component properly connected?**	Replace the clamp drive motor. Go to **"Clamp drive motor removal" on page 4-347**.	Replace the connection.
5	Check the eject shaft roll motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Media eject motor (forward)**. 5. Touch **Media eject motor (reverse)**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the eject shaft roll motor for proper connection. **Is the above component properly connected?**	Replace the eject shaft roll motor. Go to **"Media eject motor assembly removal" on page 4-376**.	Replace the connection.

Step	Action and questions	Yes	No
7	Check the sensor (lower media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (lower 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 9.	Go to Step 8.
8	Check the sensor (lower media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (lower media exit). Go to **"Sensor (lower media exit) removal" on page 4-400**.	Replace connections.
9	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 10.	Replace the connections.
10	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

491.01 Sensor (booklet media entrance) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (booklet media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet media entrance)**. **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.

Step	Action and questions	Yes	No
3	Check the sensor (booklet media entrance) for proper connection. **Is the above component properly connected?**	Replace the sensor (booklet media entrance). Go to **"Sensor (booklet media entrance) removal" on page 4-393**.	Replace connections.
4	Check the booklet controller card assembly for proper connection. **Is the above component properly connected?**	Replace the booklet controller card assembly). Go to **"Booklet controller card assembly removal" on page 4-329**. If the error remains, then go to step 5.	Replace connections.
5	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 6.	Replace the connections.
6	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

491.03 Sensor (booklet media entrance) late jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (booklet media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet media entrance)**. **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 (booklet media entrance) for proper connection. **Is the above component properly connected?**	Replace the sensor (booklet media entrance). Go to **"Sensor (booklet media entrance) removal" on page 4-393**.	Replace connections.

Step	Action and questions	Yes	No
4	Check the booklet entrance motor for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet entrance motor**. **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 booklet entrance motor for proper connection. **Is the above component properly connected?**	Replace the booklet entrance motor. Go to **"Booklet media entrance drive motor removal" on page 4-336**.	Replace connections.
6	Check the booklet controller card assembly for proper connection. **Is the above component properly connected?**	Replace the booklet controller card assembly). Go to **"Booklet controller card assembly removal" on page 4-329**. If the error remains, then go to step 7.	Replace connections.
7	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to Step 8.	Replace the connections.
8	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

491.05 Sensor (booklet media entrance) lag jam

Step	Action and questions	Yes	No
1	Check the sensor (booklet media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS.** 3. Touch **FINISHER SENSOR TESTS**. 3. Touch **Sensor (booklet media entrance)**. **Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked?**	Go to Step 3.	Go to Step 2.
2	Check the sensor (booklet media entrance) for proper connection. **Is the above component properly connected?**	Replace the sensor (booklet media entrance). Go to **"Sensor (booklet media entrance) removal" on page 4-393**.	Replace connections.
3	Check the booklet entrance motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet entrance motor**. **Does the above component operate properly?**	Go to step 5.	Go to step 4.
4	Check the booklet entrance motor for proper connection. **Is the above component properly connected?**	Replace the booklet entrance motor. Go to **"Booklet media entrance drive motor removal" on page 4-336**.	Replace connections.
5	Check the booklet unit interface contact for proper connection. **Is the above component properly connected?**	Go to Step 6.	Replace the booklet unit interface contact.
6	Check the booklet controller card assembly for proper connection. **Is the above component properly connected?**	Replace the booklet controller card assembly). Go to **"Booklet controller card assembly removal" on page 4-329**. Go to step 7.	Replace the connections.

Step	Action and questions	Yes	No
7	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

492.01 Sensor (booklet compiler media present) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (booklet compiler media entrance) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 3. Touch **Sensor (booklet compiler media present)**. **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 (booklet compiler media entrance) for proper connection. **Is the above component properly connected?**	Replace the sensor (booklet compiler media entrance). Go to **"Sensor (booklet compiler media entrance) removal" on page 4-389**.	Replace connections.
4	Check the booklet controller card assembly for proper connection. **Is the above component properly connected?**	Replace the booklet controller card assembly). Go to **"Booklet controller card assembly removal" on page 4-329**. If the error remains, then go to step 5.	Replace the connections.
5	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to step 6.	Replace the connections.
6	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

493.01 Sensor (booklet media exit) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.
2	Check the sensor (booklet media exit)for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet 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 (booklet media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (booklet media exit) Go to **"Sensor (booklet unit media exit) removal" on page 4-395**.	Replace connections.
4	Check the booklet controller card assembly for proper connection. **Is the above component properly connected?**	Replace the booklet controller card assembly). Go to **"Booklet controller card assembly removal" on page 4-329**. If the error remains, then go to step 5.	Replace the connections.
5	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to step 6.	Replace the connections.
6	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

493.03 Sensor (booklet media exit) static jam

Step	Action and questions	Yes	No
1	Check the media path. **Is the media path free of any media fragments?**	Go to step 2.	Remove any media or media fragments.

Step	Action and questions	Yes	No
2	Check the sensor (booklet media exit)for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet 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 (booklet media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (booklet media exit) Go to **"Sensor (booklet unit media exit) removal" on page 4-395**.	Replace connections.
4	Check the booklet folding/exit motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet folding/exit motor (forward)**. 5. Touch **Booklet folding/exit motor (reverse)**. **Does the above component operate properly?**	Go to step 6.	Go to step 5.
5	Check the booklet folding/exit motor for proper connection. **Is the above component properly connected?**	Replace the booklet folding/exit motor. Go to **"Booklet folding/exit drive motor assembly removal" on page 4-333**.	Replace connections.
6	Check the booklet controller card assembly for proper connection. **Is the above component properly connected?**	Replace the booklet controller card assembly). Go to **"Booklet controller card assembly removal" on page 4-329**. If the error remains, then go to step 7.	Replace the connections.
7	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to step 8.	Replace the connections.

Step	Action and questions	Yes	No
8	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

493.05 Sensor (booklet media exit) lag jam

Step	Action and questions	Yes	No
1	Check the sensor (booklet media exit) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **FINISHER SENSOR TESTS**. 4. Touch **Sensor (booklet 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 3.	Go to step 2.
2	Check the sensor (booklet media exit) for proper connection. **Is the above component properly connected?**	Replace the sensor (booklet media exit) Go to **"Sensor (booklet unit media exit) removal" on page 4-395**.	Replace connections.
3	Check the booklet folding/exit motor for proper operation. When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet folding/exit motor (forward)**. 5. Touch **Booklet folding/exit motor (reverse)**. **Does the above component operate properly?**	Go to step 5.	Go to step 4.
4	Check the booklet folding/exit motor for proper connection. **Is the above component properly connected?**	Replace the booklet folding/exit motor. Go to **"Booklet folding/exit drive motor assembly removal" on page 4-333**.	Replace connections.

Step	Action and questions	Yes	No
5	Check the booklet fold solenoid for proper operation.  When performing motor tests, ensure that all cover and door interlock switches are overridden. 1. Enter the Diagnostics Menu. 2. Touch **MOTOR TESTS**. 3. Touch **FINISHER MOTOR TESTS**. 4. Touch **Booklet knife solenoid**. **Does the above component operate properly?**	Go to step 7.	Go to step 6.
6	Check the booklet fold solenoid for proper connection. **Is the above component properly connected?**	Replace the booklet fold solenoid. Go to **"Booklet fold solenoid removal" on page 4-332**.	Replace the connection.
7	Check the booklet controller card assembly for proper connection. **Is the above component properly connected?**	Replace the booklet controller card assembly). Go to **"Booklet controller card assembly removal" on page 4-329**. If the error remains, then go to step 8.	Replace the connections.
8	Check the finisher controller PCBA for proper connection. **Is the above component properly connected?**	Go to step 9.	Replace the connections.
9	POR the machine. **Does the error continue?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

841.00 Image pipeline ASIC failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.
2	Turn the printer off for 60 seconds. **Does the error occur when the power is turned off/on again?**	Replace the RIP card assembly. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

Step	Action and questions	Yes	No
3	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.

842.00 Scanner communication failure

Step	Action and questions	Yes	No
1	Check the scanner interface cable assembly connection between the RIP card assembly and the scanner unit assembly. **Is the scanner interface cable assembly connected properly?**	Go to step 2.	Replace the connection.
2	Check all connections of the scanner controller PCBA. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 3.	Connect each connector of the scanner controller card assembly properly.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**. Go to step 4.	Problem resolved
4	Perform a POR. **Does the error remain when the power is turned off/on again?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

842.01 Scanner communication failure

Step	Action and questions	Yes	No
1	Check the scanner interface cable assembly connection between the RIP card assembly and the scanner unit assembly. **Is the scanner interface cable assembly connected properly?**	Go to step 2.	Replace the connection.
2	Check all connections of the scanner controller PCBA. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 3.	Connect each connector of the scanner controller card assembly properly.

Step	Action and questions	Yes	No
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**. Go to step 4.	Problem resolved
4	Perform a POR. **Does the error remain when the power is turned off/on again?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

842.02 Scanner communication failure

Step	Action and questions	Yes	No
1	Check the scanner interface cable assembly connection between the RIP card assembly and the scanner unit assembly. **Is the scanner interface cable assembly connected properly?**	Go to step 2.	Replace the connection.
2	Check all connections of the scanner controller PCBA. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 3.	Connect each connector of the scanner controller card assembly properly.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**. Go to step 4.	Problem resolved
4	Perform a POR. **Does the error remain when the power is turned off/on again?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

842.03 Scanner communication failure

Step	Action and questions	Yes	No
1	Check the scanner interface cable assembly connection between the RIP card assembly and the scanner unit assembly. **Is the scanner interface cable assembly connected properly?**	Go to step 2.	Replace the connection.

Step	Action and questions	Yes	No
2	Check all connections of the scanner controller PCBA. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 3.	Connect each connector of the scanner controller card assembly properly.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**. Go to step 4.	Problem resolved
4	Perform a POR. **Does the error remain when the power is turned off/on again?**	Replace the RIP card assembly. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

842.04 Scanner communication failure

Step	Action and questions	Yes	No
1	Check the scanner interface cable assembly connection between the RIP card assembly and the scanner unit assembly. **Is the scanner interface cable assembly connected properly?**	Go to step 2.	Replace the connection.
2	Check all connections of the scanner controller PCBA. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 3.	Connect each connector of the scanner controller card assembly properly.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**. Go to step 4.	Problem resolved
4	Perform a POR. **Does the error remain when the power is turned off/on again?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

842.10 Scanner unit assembly - ADF communication failure

Step	Action and questions	Yes	No
1	Check all connections of the scanner controller card assembly. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 2.	Replace all connections.
2	Check all connections of the ADF controller PCBA. **Are the connections of the ADF controller card assembly connected properly?**	Go to step 3.	Replace all connections.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved
4	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

842.11 Scanner communication failure (by scanner)

Step	Action and questions	Yes	No
1	Check all connections of the scanner controller card assembly. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 2.	Replace all connections.
2	Check all connections of the ADF controller PCBA. **Are the connections of the ADF controller card assembly connected properly?**	Go to step 3.	Replace all connections.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved
4	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

842.12 Scanner unit assembly communication failure

Step	Action and questions	Yes	No
1	Check all connections of the scanner controller card assembly. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 2.	Replace all connections.
2	Check all connections of the ADF controller PCBA. **Are the connections of the ADF controller card assembly connected properly?**	Go to step 3.	Replace all connections.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved
4	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

843.00 Sensor (scanner HP) failure

Step	Action and questions	Yes	No
1	Check the scanner carriage rails. **Is there any foreign substance on the scanner rails?**	Clean and lubricate the scanner carriage rails.	Go to step 2.
2	Check the sensor (FB scanner HP) for operation. Perform the sensor (FB scanner HP) test. Remove the large platen glass. Go to **"Large platen glass removal" on page 4-239**. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER TESTS**. 4. Touch **Sensor (FB Scanner HP)**. Gently move the scanner carriage from side to side. **Does the display on the operator panel change every time the sensing area of the above sensor is blocked?**	Go to step 4.	Go to step 3.

Step	Action and questions	Yes	No
3	Check the sensor (FB scanner HP) for connection. **Is the above sensor connected properly?**	Replace the sensor (FB scanner HP). Go to **"Sensor (FB scanner HP) removal" on page 4-270**.	Replace the connection.
4	Check the scanner carriage motor for connection. **Is the above motor connected properly?**	Replace the scanner carriage motor. Go to **"Scanner carriage motor removal" on page 4-241**.	Replace the connection.
5	Place media on the large platen and perform a scanner test. **Does the error remain?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

843.05 Scanner carriage over run failure

Step	Action and questions	Yes	No
1	Check the connections of the scanner controller PCBA. **Are the connectors of the scanner controller card assembly connected properly?**	Go to step 2.	Connect each connector of the scanner controller card assembly properly.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

843.10 ADF RAM test failure

Step	Action and questions	Yes	No
1	Check the connection between the ADF controller PCBA and the scanner controller PCBA. **Are the ADF controller card assembly and the scanner controller card assembly connected properly?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Connect the ADF controller card assembly and the scanner controller card assembly properly.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Go to step 3.

843.11 ADF EEPROM failure

Step	Action and questions	Yes	No
1	Check the connection of each ADF controller card assembly connector. **Is each connector of ADF controller card assembly connected properly?**	Go to step 2.	Connect each connector of ADF controller card assembly properly.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

843.20 Scanner unit assembly connection failure

Step	Action and questions	Yes	No
1	Check the connection of each ADF controller card assembly connector. **Is each connector of ADF controller card assembly connected properly?**	Go to step 2.	Connect each connector of ADF controller card assembly properly.
2	Check the connection of each RIP card assembly connector. **Are the connectors of the RIP card assembly connected properly?**	Go to step 3.	Connect each connector of the RIP card assembly properly.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

843.21 Scanner unit assembly EEPROM failure

Step	Action and questions	Yes	No
1	Check the connections of the scanner controller card assembly connector **Is each connector of scanner controller card assembly connected properly?**	Go to step 2.	Connect each connector of the scanner controller card assembly properly.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the ADF controller PCBA. Go to **"ADF controller PCBA removal" on page 4-209**.	Problem resolved

843.22 Scanner unit assembly EEPROM sub system failure

Step	Action and questions	Yes	No
1	Check the connection of each scanner controller card assembly connector. **Are the connectors of the scanner controller card assembly connected properly?**	Go to step 2.	Connect each connector of the scanner controller card assembly properly.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller card assembly. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

843.24 Image processing failure

Step	Action and questions	Yes	No
1	Check the connections of the scanner controller card assembly. **Are the connectors of the scanner controller card assembly connected properly?**	Go to step 2.	Connect each connector of the scanner controller card assembly properly.
2	Check the software version for the scanner controller card assembly. **Is the version of the software of the scanner controller card assembly correct?**	Go to step 3.	Upgrade the software of the scanner controller card assembly.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

843.25 Scanner controller card assembly failure 1

Step	Action and questions	Yes	No
1	Check the connection of each scanner controller card assembly connector. **Is each connector of scanner controller card assembly connected properly?**	Go to step 2.	Connect each connector of the scanner controller card assembly properly.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

843.26 Scanner controller card assembly failure 2

Step	Action and questions	Yes	No
1	Check the connection of each scanner controller card assembly connector. **Is each connector of scanner controller card assembly connected properly?**	Go to step 2.	Connect each connector of scanner controller card assembly properly.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

844.00 Exposure lamp failure

Step	Action and questions	Yes	No
1	Check the exposure lamp for connection. **Is the above component connected properly?**	Replace the exposure lamp. Go to **"LED exposure bar removal" on page 4-240**.	Replace the connection.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

844.01 White reference/exposure lamp illumination failure

Step	Action and questions	Yes	No
1	Check the large platen glass. **Is the large platen glass installed properly?**	Go to step 2.	Remove and clean the large platen glass. Go to **"Large platen glass removal" on page 4-239**. Reinstall the large platen glass properly. Go to step 3.
2	Remove the large platen glass. Check the bottom of the large platen glass in the vicinity the white reference strip for contamination. **Is the vicinity of white reference strip contaminated?**	Clean the bottom of the large platen glass in the vicinity of the white reference strip. Reinstall the large platen glass properly. Go to step 3.	Go to step 4.
3	Perform a POR. **Does the error remain?**	Go to step 4.	Problem resolved

Step	Action and questions	Yes	No
4	Check the exposure lamp for connection. **Is the above component connected properly?**	Replace the exposure lamp. Go to **"LED exposure bar removal" on page 4-240**.	Replace the connection.
5	Perform a POR. **Does the error continue when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem resolved

845.00 LED CCD failure

Step	Action and questions	Yes	No
1	Check the LED CCD/lens assembly connection. **Is the CCD/lens assembly connected properly?**	Go to step 2.	Replace the connection.
2	Check all the connections on the scanner controller card assembly. **Are all the connections connected properly?**	Replace the LED CCD/lens assembly.	Replace the connection.
3	Perform a POR. **Does the error remain?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	

845.01 LED CCD initialization (lamp on) failure

Step	Action and questions	Yes	No
1	Check the exposure lamp for connection. **Is the above component connected properly?**	Replace the exposure lamp. Go to **"LED exposure bar removal" on page 4-240**.	Replace the connection.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem solved.

845.02 LED CCD initialization (lamp off) failure

Step	Action and questions	Yes	No
1	Check the connection of the scanner controller card assembly. **Are the connectors of the scanner controller card assembly connected properly?**	Go to step 2.	Connect each connector of the scanner controller card assembly properly.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem solved.

846.00 Scanner communication failure

Step	Action and questions	Yes	No
1	Check the scanner interface cable assembly connection between the RIP card assembly and the scanner unit assembly. **Is the scanner interface cable assembly connected properly?**	Go to step 2.	Replace the connection.
2	Check all connections of the scanner controller card assembly. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 3.	Connect each connector of the scanner controller card assembly properly.
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller PCBA. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem solved.

846.01 Scanner communication failure

Step	Action and questions	Yes	No
1	Check the scanner interface cable assembly connection between the RIP card assembly and the scanner unit assembly. **Is the scanner interface cable assembly connected properly?**	Go to step 2.	Replace the connection.
2	Check all connections of the scanner controller card assembly. **Are the connections of the scanner controller card assembly connected properly?**	Go to step 3.	Connect each connector of the scanner controller card assembly properly.

Step	Action and questions	Yes	No
3	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller card assembly. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem solved.

846.10 Sensor (ADF scan width [x]) failure

Step	Action and questions	Yes	No
1	Check the sensor (ADF scan width 1) for operation. Perform the sensor (ADF scan width 1) test. Open the ADF left cover assembly. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER TESTS**. 4. Touch **Sensor(ADF scan width 1)**. Operate the actuator of the sensor (ADF scan width 1). **Does the display on the operator panel change every time the sensing area of the above sensor is blocked?**	Go to step 3.	Go to step 2.
2	Check the sensor (ADF scan width 1) for connection. **Is the above sensor connected properly?**	Replace the sensor (ADF scan width 1). Go to **"Sensor (ADF scan width 1) removal" on page 4-256**.	Replace the connection.
3	Check the sensor (ADF scan width 2) for operation. Perform the sensor (ADF scan width 2) test. Open the ADF left cover assembly. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER TESTS**. 4. Touch **Sensor(ADF scan width 2)**. Operate the actuator of the sensor (ADF scan width 2). **Does the display on the operator panel change every time the sensing area of the above sensor is blocked?**	Go to step 5.	Go to step 4.

Step	Action and questions	Yes	No
4	Check the sensor (ADF scan width 2) for connection. **Is the above sensor connected properly?**	Replace the sensor (ADF scan width 2). Go to **"Sensor (ADF scan width 2) removal" on page 4-259**.	Replace the connection.
5	Check the sensor (ADF scan width 3) for operation. Perform the sensor (ADF scan width 3) test. Open the ADF left cover assembly. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER TESTS**. 4. Touch **Sensor(ADF scan width 3)**. Operate the actuator of the sensor (ADF scan width 3). **Does the display on the operator panel change every time the sensing area of the above sensor is blocked?**	Go to step 7.	Go to step 6.
6	Check the sensor (ADF scan width 3) for connection. **Is the above sensor connected properly?**	Replace the sensor (ADF scan width 3). Go to **"Sensor (ADF scan width 3) removal" on page 4-263**.	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. Go to **"ADF controller PCBA removal" on page 4-209**.	Go to step 8.

846.12 Scanner unit assembly software logic failure

Step	Action and questions	Yes	No
1	Check the software version for the scanner controller card assembly. **Is the version of the software of the scanner controller card assembly correct?**	Go to step 2.	Upgrade the software of the scanner controller card assembly.
2	Perform a POR. **Does the error remain when the power is turned off/on?**	Replace the scanner controller card assembly. Go to **"Scanner controller PCBA removal" on page 4-243**.	Problem solved.

846.13 Switch (platen interlock) open

Step	Action and questions	Yes	No
1	Check the ADF for opening and closing. **Does the ADF lay completely flush on the scanner unit when it is in its closed position?**	Go to step 2.	Inspect and adjust the ADF left hinge and right hinge as required.
2	Check the sensor (ADF angle) for proper installation. **Is the sensor (FB angle) installed correctly?**	Go to step 3.	Reinstall the sensor (ADF angle).
3	Check the sensor (ADF angle) for operation. Perform the sensor (ADF angle) test. 1. Enter the Diagnostics Menu. 2. Touch **SENSOR TESTS**. 3. Touch **ADF/SCANNER**. 4. Touch **Sensor (ADF angle)**. Open and close the ADF unit assembly. **Does the display on the operator panel change every time the sensing area of the above sensor is blocked?**	Go to step 5.	Go to step 4.
4	Check the sensor (ADF angle) for connection. **Is the above sensor connected properly?**	Replace the sensor (ADF angle). Go to **"Sensor (ADF angle) removal" on page 4-246**.	Replace the connection.
5	Place an undamaged document in the ADF, and perform an ADF test. **Does the error remain?**	Replace the scanner controller card assembly. Go to **"Scanner controller PCBA removal" on page 4-243**.	Go to step 6.

849.00 Hard drive failure

Step	Action and questions	Yes	No
1	Check the hard drive data and power connections. **Are the above connections connected properly?**	Replace the hard drive.	Replace the connections.
2	Perform a POR. **Does the error remain when the power is turned off/on again?**	Replace the RIP card assembly. Go to **"RIP PCBA removal" on page 4-156**.	Problem solved.

Steps before starting the 9yy service checks

Before starting the service checks in this section, you will need to retrieve certain information. This will aid your next level of support in diagnosing the problem before replacing the controller board.

Warning: Do not replace the controller board unless directed by your next level of support.

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

Note: Not all of the items can be retrieved from the printer you are working on.

A. Collecting the history information from the SE menu

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

1. From a Web browser, type **`http://printer_IP_address/se`**, and then press **Enter**.
   Notes:
   - **`printer_IP_address`** is the TCP/IP address of the printer
   - **`se`** is required to access the printer diagnostic information
2. Click **History Information**, copy all information, and then save it as a text file.
3. E-mail the text file to your next level of support.

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

Notes:

- Make sure your printer is connected to a network or to a print server.
- Some printers are designed to restart automatically after a 9yy error. On these printers, you can retrieve the secondary crash code information using the SE menu.
- Fwedebugs can also be referred to as LBtrace. If FWEdebugs does not appear in the list, then look for LBtrace. Mulitple LBtrace logs can appear in the list of links referred to in step 2.

1. From a Web browser, type **`http://printer_IP_address/se`**, and then press **Enter**.
2. Click **List Fwedebugs captured during reboots**. This will provide you a list of the secondary crash codes retrieved from prior reboots.
   Note: If there are Fwedebugs listed, click **Dump Fwedebug log0**, **Dump Fwedebug log1**, and **Dump Fwedebug log2**. Clicking these links will dump the debug logs to the computer. Take note of the destination folder where the logs are saved.
3. E-mail the logs to your next level of support.
   Note: Some machine SE menus give you the option of clicking **Logs Gzip Compressed**. If this option is shown in the menu, then click it and retrieve the compressed log file. Take note of the destination folder where the log file is saved.

C. Collecting the settings from the menu settings page

Note: The menu settings page is different for each printer. For more information see the *User's Guide*. Your next level of support will tell you which page they want to see.

Copying the menu settings page from the Embedded Web Server (EWS)

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

1. From a Web browser, type **`http://printer_IP_address`**, and then press **Enter**.
2. Click **Settings**, and then select one of the settings page from the links shown on the page.
3. Copy all information, and then save it as a text file.
4. E-mail the text file to your next level of support.

Printing the menu settings page

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

D. Collecting information from the user

Ask the user for information about the following:

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

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 of 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. • 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 Diagnostics 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.

Step	Action and questions	Yes	No
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.
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.

Step	Action and questions	Yes	No
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
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.

Step	Action and questions	Yes	No
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 the error appears to be isolated to a single file • File/Application used If the error is related to specific print file • Device Operating System • Driver used (PCL/PS) • Frequency of the occurrence of the error		

910.02–910.07 Data communication error

Step	Action and questions	Yes	No
1	Upgrade the firmware. **Does the problem persist?**	Go to step 2.	Problem resolved
2	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **“Upper printer engine PCBA removal” on page 4-193**.	Problem resolved

939.00 RIP card assembly communication failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.
2	Turn the printer off for 60 seconds. **Does the error occur when the power is turned off/on again?**	Go to step 3.	Problem solved.
3	Check the RIP PCBA for connection. **Is the above sensor connected properly?**	Replace the RIP PCBA. Go to **“RIP PCBA removal” on page 4-156**. Go to step 4.	Replace the connection.

Step	Action and questions	Yes	No
4	Perform a print test. **Does the error still occur?**	Replace the lower engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains, then go to step 5.	Problem solved.
5	Perform a print test. **Does the error still occur?**	Replace the upper engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem solved.

940.02 Clock signal communication error

Step	Action and questions	Yes	No
1	Check the upper printer engine PCBA connections. **Are the above connections properly connected and not damaged?**	Go to step 2.	Connect the components properly and replace damaged connections.
2	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the lower printer engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

940.03 Controller communication failure

Step	Action and questions	Yes	No
1	Check the bridge controller PCBA connections. **Are the above connections properly connected and not damaged?**	Go to step 2.	Connect the components properly and replace damaged connections.
2	Replace the bridge PCBA. Go to **"Bridge PCBA removal" on page 4-31**. **Does the error remain?**	Go to step 3.	Problem resolved
3	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

940.04 IM logic failure

Step	Action and questions	Yes	No
1	Install the correct firmware. **Does the problem persist?**	Go to step 2.	Problem resolved
2	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

951.xx RIP card assembly NVRAM failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.
2	Turn the printer off for 60 seconds. **Does the error occur when the power is turned off/on again?**	Replace the RIP card assembly. Go to **"RIP PCBA removal" on page 4-156**.	Problem solved.

953.xx Operator panel assembly NVRAM failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.
2	Turn the printer off for 60 seconds. **Does the error occur when the power is turned off/on again?**	Replace the operator panel assembly. Go to step 3.	Problem reolved
3	Perform a print test. **Does the error still occur?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

955.xx RIP card assembly NAND CRC failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.

Step	Action and questions	Yes	No
2	Turn the printer off for 60 seconds. **Does the error occur when the power is turned off/on again?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

956.00 RIP card assembly processor failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.
2	Turn the printer off for 60 seconds. **Does the error occur when the power is turned off/on again?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

956.01 RIP card assembly processor over temperature failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.
2	Turn the printer off for 60 seconds. **Does the error occur when the power is turned off/on again?**	Go to step 3.	Problem solved.
3	Check the RIP card cooling fan and heatsink for proper installation. **Is the RIP card cooling fan and heatsink installed correctly?**	Replace the RIP card assembly. Go to **"RIP PCBA removal" on page 4-156**.	Install the RIP card cooling fan and heatsink correctly.

956.02 RIP card assembly cooling fan failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.

Step	Action and questions	Yes	No
2	Turn the printer off for 60 seconds. **Does the error occur when the power is turned off/on again?**	Go to step 3.	Problem solved.
3	Check the RIP card assembly cooling fan and heatsink attachment. **Is the above fan attached properly?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Reattach the RIP card assembly cooling fan and heatsink.

956.03 RIP card assembly FPGA failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.
2	Turn the printer off for 60 seconds. **Does the error occur when the power is turned off/on again?**	Replace the RIP PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem solved.

980.04 Duplex controller card assembly communication failure

Step	Action and questions	Yes	No
1	Check the duplex unit for proper installation. Remove the duplex unit assembly, and reinstall it. Perform a 2-sided print test. **Does the error still occur?**	Go to step 2.	Problem solved.
2	Check the duplex controller card assembly and printer engine card assembly for proper connection. **Are the connections on the duplex controller card assembly and the connector P417 on the printer engine card assembly connected?**	Go to step 3.	Replace the connection.
3	Perform a 2-sided print test. **Does the error still occur?**	Replace the printer left duplex door assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**. Go to step 4.	Problem solved.

Step	Action and questions	Yes	No
4	POR the machine, and perform a print test. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Go to step 5.	Problem resolved
5	POR the machine, and perform a print test. **Does the error continue?**	Replace the lower printer engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

980.05 Engine flicker communication failure

Step	Action and questions	Yes	No
1	Perform a POR. **Does the error occur when the power is turned off/on?**	Go to step 2.	Perform several print tests. If the problem remains, then go to step 2.
2	POR the machine, and perform a print test. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. If the error remains, then go to step 3.	Problem resolved
3	POR the machine, and perform a print test. **Does the error continue?**	Replace the lower printer engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

957.01 BITZ1 initialize failure

Step	Action and questions	Yes	No
1	Check the printhead flat data cable connections. **Are the above connections properly connected and not damaged?**	Go to step 2.	Problem resolved.
2	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

957.02 BITZ2 initialize failure

Step	Action and questions	Yes	No
1	Check the printhead flat data cable connections. **Are the above connections properly connected and not damaged?**	Go to step 2.	Problem resolved
2	POR the machine. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

995.00 Finisher NVM R/W failure

Step	Action and questions	Yes	No
1	Turn the finisher off and on several times. **Does the error still occur when the power is on?**	Go to step 2.	Problem resolved
2	Check the finisher controller PCBA. **Are the connections of the finisher controller card assembly properly connected?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved

996.00 Finisher type failure

Step	Action and questions	Yes	No
1	Check the printer and finisher installation. **Is the finisher installed to the printer properly?**	Go to step 2.	Reinstall the finisher.
2	Turn the finisher on and off. **Does the error still occur when the power is back on?**	Go to step 3.	Problem resolved
3	Check the finisher controller PCBA. **Are the connections of the finisher controller card assembly properly connected?**	Replace the finisher controller PCBA. Go to **"Finisher PCBA removal" on page 4-360**.	Replace the connections.

997.00 Duplex controller card assembly type failure

Step	Action and questions	Yes	No
1	Check the duplex unit for proper installation. Remove duplex unit assembly, and reinstall it. Perform a 2-sided print test. **Does the error still occur?**	Go to step 2.	Problem resolved
2	Perform a 2-sided print test. **Does the error still occur?**	Replace the duplex controller card assembly. Go to **"Printer left duplex door assembly removal" on page 4-148**. Go to step 3.	Problem resolved
3	POR the machine, and perform a print test. **Does the error continue?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Go to step 4.	Problem resolved
4	POR the machine, and perform a print test. **Does the error continue?**	Replace the lower printer engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**.	Problem resolved

999.00 Finisher engine/RIP functional failure

Step	Action and questions	Yes	No
1	Turn the printer off and on several times. **Does the error still occur when the power is on?**	Go to step 2.	Problem resolved
2	Check the finisher controller card assembly connections. **Are the connections of the finisher controller card assembly properly connected?**	Replace the finisher controller card assembly. Go to **"Finisher PCBA removal" on page 4-360**.	Problem resolved
3	Check the upper printer engine card assembly connections. **Are the connections of the printer engine card assembly properly connected?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. If the error remains, then go to step 4.	Problem resolved

Step	Action and questions	Yes	No
4	Check the lower printer engine card assembly connections. **Are the connections of the printer engine card assembly properly connected?**	Replace the lower printer engine PCBA. Go to **"Lower engine PCBA removal" on page 4-109**. If the error remains, then go to step 5.	Problem resolved
5	Check the RIP card assembly connections. **Are the connections of the RIP card assembly properly connected?**	Replace the RIP card assembly. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

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Image quality troubleshooting

Printer-related troubleshooting

First, get a printout as a base, and then follow the symptom table to identify the possible failing FRUs.

Image quality symptoms

- Faint print (low contrast)— **“Faint print (Low contrast)” on page 2-276**.
- Blank print (no print)— **“Blank print (no print)” on page 2-278**.
- Solid black— **“Solid black” on page 2-280**.
- Vertical lines and bands (process direction)— **“Vertical lines and bands (process direction)” on page 2-281**.
- Horizontal white stripes or bands (side-to-side direction)—**“Horizontal white stripes or bands (side-to-side direction)” on page 2-282**
- Vertical stripes (process direction)— **“Vertical stripes (process direction)” on page 2-284**.
- Horizontal stripes (side-to-side)— **“Horizontal stripes (side to side direction)” on page 2-285**.
- Partial lack— **“Partial lack” on page 2-287**.
- Spots— **“Spots” on page 2-288**.
- After image (ghosting)— **“After image (ghosting)” on page 2-290**.
- Background fog— **“Background fog” on page 2-291**.
- Paper skew—**“Paper skew” on page 2-293**.
- Media damage— **“Media damage” on page 2-294**.
- No fuse—**“No fuse” on page 2-296**.
- Color misregistration—**“Color misregistration” on page 2-297**.
- Deletions—**“Deletions” on page 2-298**.
- High frequency bands—**“High frequency bands” on page 2-299**.

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 the circumference of the roll.

Image Quality

Faint print (Low contrast)

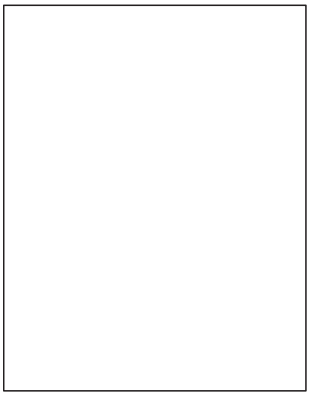
Before starting, check the media route for foreign objects, such as staples, clips, and scraps, in the media path.

Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media, and perform a print test. **Is the image density normal?**	Problem solved.	Go to step 2.
2	Check the four toner cartridges for proper installation. Reprint the defective image. **Is the image density normal?**	Problem solved.	Replace any empty toner cartridges.
3	Check the toner add chutes to ensure that they are not clogged. **Does the problem remain?**	Go to step 4.	Problem solved.
4	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 5.	Replace the 2nd transfer roller. Go to **“2nd transfer roller removal” on page 4-28**.
5	Check the four PC cartridges for proper installation. Check the PC cartridge connections. **Are the PC cartridge connections free of excess wear and contamination?**	Go to step 6.	Correct and clean contaminated pins, or replace the appropriate PC cartridge or connector.

Step	Check	Yes	No
6	Check the LED beam route. Check for debris between the LED printhead assembly and the PC drum. Check the four LED printhead assembly windows for contamination. Perform the printhead cleaning operation. **Is the LED beam route free of debris and the glass window, in the LED printhead assembly, free of contamination?**	Go to step 7.	Remove debris or clean the LED printhead assembly window.
7	Check the toner dispense motor assembly for proper operation. Replace the toner dispense motor assembly. Go to **"Toner dispense motor removal" on page 4-176**. **Does the problem remain?**	Go to step 8.	Problem resolved
8	Check the developer HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the developer HVPS PCBA. Go to **"Developer HVPS PCBA removal" on page 4-78**. Perform a print test. **Does the problem remain?**	Go to step 9.	Problem resolved
9	Check the transfer roll HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the transfer roll HVPS PCBA. Go to **"Transfer roll HVPS PCBA removal" on page 4-187**. Perform a print test. **Does the problem remain?**	Go to step 10.	Problem resolved
10	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem remain?**	Go to step 11.	Problem resolved
11	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**. **Does the problem remain?**	Go to step 12.	Problem resolved

Step	Check	Yes	No
12	POR the machine. **Does the problem remain?**	Replace the LED printhead assembly. Go to **"LED printhead removal" on page 4-108**.	Problem resolved

Blank print (no print)



Check the media path for foreign objects such as staples, clips, scraps of media.

Step	Check	Yes	No
1	Check the four toner cartridges for proper installation. Reprint the defective image. **Is the image density normal?**	Problem solved.	Replace any empty toner cartridges.
2	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 3.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.
3	Check the four PC cartridges for proper installation. Check the PC cartridge connections. **Are the PC cartridge connections free of excess wear and contamination?**	Go to step 4.	Correct and clean contaminated pins, or replace the appropriate PC cartridge or connector.
4	Check the toner dispense motor assembly for proper operation. Replace the toner dispense motor assembly. Go to **"Toner dispense motor removal" on page 4-176**. **Does the problem remain?**	Go to step 5.	Problem resolved

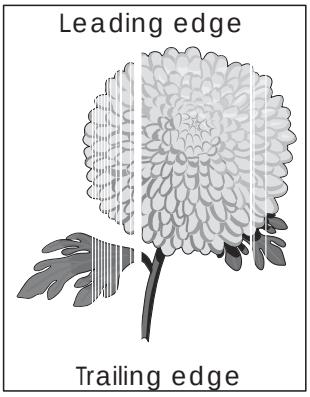
Step	Check	Yes	No
5	Check the LED printhead assembly installation. Install the LED printhead assembly properly, and perform a print test. **Does the problem remain?**	Go to step 6.	Problem resolved
6	Check the LED printhead assembly for connection. **Is the above component properly connected?**	Go to step 7.	Replace the connection.
7	Check the developer HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the developer HVPS PCBA. Go to **"Developer HVPS PCBA removal" on page 4-78**. Perform a print test. **Does the problem remain?**	Go to step 8.	Problem resolved
8	Check the transfer roll HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the transfer roll HVPS PCBA. Go to **"Transfer roll HVPS PCBA removal" on page 4-187**. Perform a print test. **Does the problem remain?**	Go to step 9.	Problem resolved
9	Replace the LED printhead assembly. Go to **"LED printhead removal" on page 4-108**. **Does the problem remain?**	Go to step 10.	Problem resolved
10	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem remain?**	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

Solid black

Check the media path for foreign objects such as staples, clips, scraps of media.

Step	Check	Yes	No
1	Check the four PC cartridges for proper installation. Check the PC cartridge connections. **Are the PC cartridge connections free of excess wear and contamination?**	Go to step 2.	Correct and clean contaminated pins, or replace the appropriate PC cartridge or connector.
2	Check the charge roll HVPS card PCBA connections. **Is the above component properly connected?**	Go to step 3	Replace the connection.
3	Replace the charge roll HVPS card PCBA. Go to **"Charge roll HVPS PCBA removal" on page 4-44**. Perform a print test. **Does the problem remain?**	Go to step 4.	Problem resolved
4	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem remain?**	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

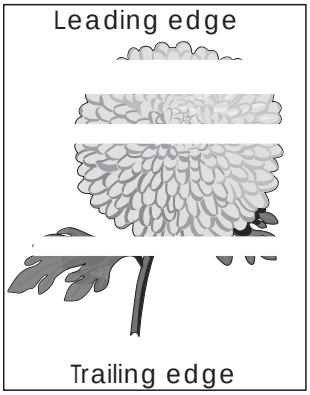
Vertical lines and bands (process direction)



Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 2.	Problem resolved
2	**Is the media transfer route and the media path clear of debris?**	Go to step 3.	Remove debris or contamination.
3	Check the LED beam route. Check for debris between the LED printhead assembly and the PC drum. Check the four LED printhead assembly windows for contamination. **Is the LED beam route free of debris and the glass window, in the LED printhead assembly, free of contamination?**	Go to step 4.	Remove debris or clean the LED printhead assembly window.
4	Check the four PC cartridges for proper installation. Check the PC cartridge connections. **Are the PC cartridge connections free of excess wear and contamination?**	Go to step 5.	Correct and clean contaminated pins, or replace the appropriate PC cartridge or connector.
5	Replace the transfer belt cleaner. Go to **"Transfer belt cleaner removal" on page 4-185**. **Does the problem remain?**	Go to step 6.	Problem resolved
6	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 7.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.

Step	Check	Yes	No
7	Replace the transfer belt assembly. Go to **"Transfer belt assembly removal" on page 4-181**. **Does the problem remain?**	Go to step 8.	Problem resolved
8	Check the LED printhead assembly. Replace the LED printhead assembly. Go to **"LED printhead removal" on page 4-108**. **Does the problem remain?**	Go to step 9.	Problem resolved
9	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem remain?**	Go to step 10.	Problem resolved
10	Check the RIP card PCBA for connection. **Is the component properly connected?**	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Replace the connection.

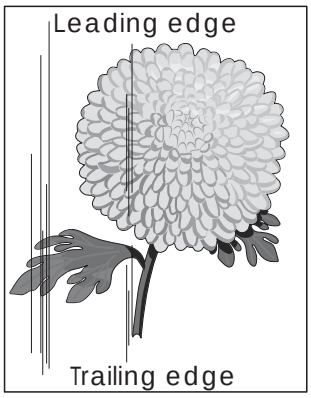
Horizontal white stripes or bands (side-to-side direction)



Step	Check	Yes	No
1	Check the media condition. Load new, dry, and recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 2.	Problem resolved
2	Are the media transfer route and the media path free of contamination and debris?	Go to step 3.	Remove debris or contamination.

Step	Check	Yes	No
3	Check the PC units for proper connection. **Does the problem remain?**	Go to step 4	Problem resolved
4	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 5.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.
5	Replace the four developer housings and four developer carriers. Go to **"Developer housing (C) removal" on page 4-52**, **"Developer housing (K) removal" on page 4-58**, **"Developer housing (M) removal" on page 4-64**, **"Developer housing (Y) removal" on page 4-70**,and **"Developer carrier removal and replacement" on page 4-49**. **Does the problem remain?**	Go to step 6.	Problem resolved
6	Check the developer HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the developer HVPS PCBA. Go to **"Developer HVPS PCBA removal" on page 4-78**,. Perform a print test. **Does the problem remain?**	Go to step 7.	Problem resolved
7	Check the transfer roll HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the transfer roll HVPS PCBA. Go to **"Transfer roll HVPS PCBA removal" on page 4-187**,. Perform a print test. **Does the problem remain?**	Go to step 8.	Problem resolved
8	Check the LED printhead assembly. Replace the LED printhead assembly. Go to **"LED printhead removal" on page 4-108**. **Does the problem remain?**	Go to step 9.	Problem resolved
9	Check the upper printer engine RIP card PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Perform a print test. **Does the problem remain?**	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

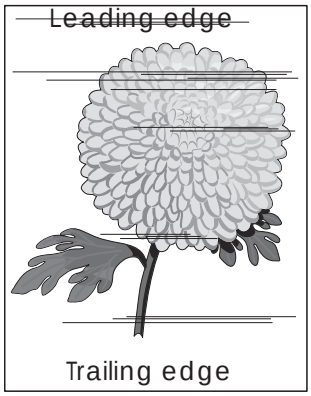
Vertical stripes (process direction)



Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 2.	Problem resolved
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 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 4.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.
4	Check the four PC cartridges for proper installation. Check the PC cartridge connections. **Are the PC cartridge connections free of excess wear and contamination?**	Go to step 5.	Correct and clean contaminated pins, or replace the appropriate PC cartridge or connector.
5	Replace the transfer belt cleaner. Go to **"Transfer belt cleaner removal" on page 4-185**. **Does the problem remain?**	Go to step 6.	Problem resolved
6	Check the heat belt and pressure roll in the fuser assembly for scratches or defects. **CAUTION**: The fuser assembly might be hot. Allow the fuser assembly to cool. Remove the fuser assembly. **Is there contamination or cracks on the heat belt and/or pressure roll?**	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.	Go to step 7.

Step	Check	Yes	No
7	Replace the transfer belt assembly. Go to **"Transfer belt assembly removal" on page 4-181**. **Does the problem remain?**	Go to step 8.	Problem resolved
8	Check the RIP card for proper connectivity. Perform a print test. **Does the problem remain?**	Problem solved.	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.

Horizontal stripes (side to side direction)



Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 2.	Problem resolved
2	Check the media transfer route. Check the media route for contamination or obstacles.	Go to step 3.	Remove obstacles or contamination.
3	Check the four PC cartridges for proper installation. Check the PC cartridge connections. **Are the PC cartridge connections free of excess wear and contamination?**	Go to step 4.	Correct and clean contaminated pins, or replace the appropriate PC cartridge or connector.
4	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 5.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.

Step	Check	Yes	No
5	Replace the transfer belt cleaner. Go to **"Transfer belt cleaner removal" on page 4-185**. **Does the problem remain?**	Go to step 6.	Problem resolved
6	Check the heat belt and pressure roll in the fuser assembly for scratches or defects.  **CAUTION**: The fuser assembly might be hot. Allow the fuser assembly to cool. Remove the fuser assembly. **Is there contamination or cracks on the heat belt and/or pressure roll?**	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.	Go to step 6.
7	Replace the transfer belt assembly. Go to **"Transfer belt assembly removal" on page 4-181**. **Does the problem remain?**	Go to step 8.	Problem resolved
8	Check the transfer roll HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the transfer roll HVPS PCBA. Go to **"Transfer roll HVPS PCBA removal" on page 4-187**. Perform a print test. **Does the problem remain?**	Go to step 9.	Problem resolved
9	Check the developer HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the developer HVPS PCBA. Go to **"Developer HVPS PCBA removal" on page 4-78**. Perform a print test. **Does the problem remain?**	Go to step 10.	Problem resolved
10	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem remain?**	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

Partial lack

Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 2.	Problem resolved
2	Check the four toner cartridges for proper installation. Reprint the defective image. **Is the image density normal?**	Problem solved.	Replace any empty toner cartridges.
3	Check the LED beam route. Check for debris between the LED printhead assembly and the PC drum. Check the four LED printhead assembly windows for contamination. **Is the LED beam route free of debris and the glass window, in the LED printhead assembly, free of contamination?**	Go to step 4.	Remove debris or clean the LED printhead assembly window.
4	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 5.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.
5	Replace the transfer belt cleaner. Go to **"Transfer belt cleaner removal" on page 4-185**. **Does the problem remain?**	Go to step 6.	Problem resolved
6	Replace the transfer belt assembly. Go to **"Transfer belt assembly removal" on page 4-181**. **Does the problem remain?**	Go to step 7.	Problem resolved

Step	Check	Yes	No
7	Check the LED printhead assembly for proper installation. Install the LED printhead assembly properly, and perform a print test. **Does the problem remain?**	Go to step 8.	Problem resolved
8	Check the LED printhead assembly. Replace the LED printhead assembly. Go to **"LED printhead removal" on page 4-108**. **Does the problem remain?**	Go to step 9.	Problem resolved
9	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem remain?**	Problem solved.	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.

Spots

Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 2.	Problem resolved
2	Check the media transfer route. **Is the media route free of contamination or debris?**	Go to step 3.	Remove debris or contamination.

Step	Check	Yes	No
3	Check the four PC cartridges for spots or other damage on the drum surfaces. Are the PC cartridges free of excess wear and contamination?	Go to step 4.	Replace the appropriate PC cartridge or connector.
4	Print the print quality page suite. **Do the spots repeat for a given color?**	Replace the appropriate printhead. Go to **"LED printhead removal" on page 4-108**.	Go to step 5.
5	Check the heat belt and pressure roll in the fuser assembly for scratches or defects.  **CAUTION**: The fuser assembly might be hot. Allow the fuser assembly to cool. Remove the fuser assembly. **Is there contamination or cracks on the heat belt and/or pressure roll?**	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.	Go to step 6.
6	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 7.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.
7	Replace the transfer belt assembly. Go to **"Transfer belt assembly removal" on page 4-181**. **Does the problem remain?**	Go to step 8.	Problem resolved
8	Check the LED printhead assembly. Replace the LED printhead assembly. Go to **"LED printhead removal" on page 4-108**. **Does the problem remain?**	Go to step 9.	Problem resolved
9	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem remain?**	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

After image (ghosting)

The ghost appears on the media which, may be the image from the previous page or part of the page currently printing.

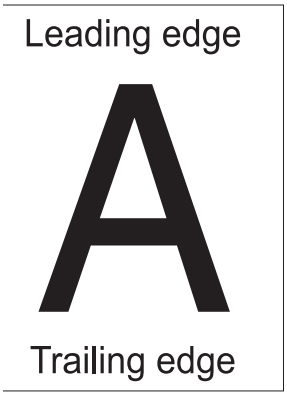
Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 2.	Problem resolved
2	Check the four toner cartridges for proper installation. Reprint the defective image. **Is the image density normal?**	Problem solved.	Replace any empty toner cartridges.
3	Check the heat belt and pressure roll in the fuser assembly for scratches or defects. **CAUTION**: The fuser assembly might be hot. Allow the fuser assembly to cool. Remove the fuser assembly. **Is there contamination or cracks on the heat belt and/or pressure roll?**	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.	Go to step 4.
4	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem remain?**	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

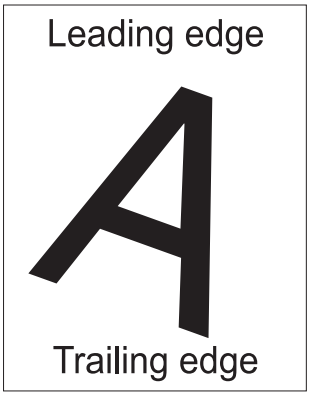
Background fog

Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 2.	Problem resolved
2	Check the media transfer route. **Is the media path free of contamination or debris?**	Go to step 3.	Remove debris or contamination.
3	Check the four PC cartridges for proper installation. Check the PC cartridge connections. **Are the PC cartridge connections free of excess wear and contamination?**	Go to step 4.	Correct and clean contaminated pins, or replace the appropriate PC cartridge or connector.
4	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 5.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.
5	Replace the transfer belt cleaner. Go to xxx. **Does the problem remain?**	Go to step 6.	Problem resolved
6	Check the developer HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the developer HVPS PCBA. Go to **"Developer HVPS PCBA removal" on page 4-78**. Perform a print test. **Does the problem remain?**	Go to step 7.	Problem resolved

Step	Check	Yes	No
7	Replace the four developer housings and four developer carriers. Go to **“Developer housing (C) removal” on page 4-52**, **“Developer housing (K) removal” on page 4-58**, **“Developer housing (M) removal” on page 4-64**, **“Developer housing (Y) removal” on page 4-70**,and **“Developer carrier removal and replacement” on page 4-49**. **Does the problem remain?**	Go to step 8.	Problem resolved
8	Check the transfer roll HVPS PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the transfer roll HVPS PCBA. Go to **“Transfer roll HVPS PCBA removal” on page 4-187**. Perform a print test. **Does the problem remain?**	Go to step 9.	Problem resolved
9	Check the LED printhead assembly. Replace the LED printhead assembly. Go to **“LED printhead removal” on page 4-108**. **Does the problem remain?**	Go to step 10.	Problem resolved
10	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **“Upper printer engine PCBA removal” on page 4-193**. Perform a print test. **Does the problem remain?**	Replace the RIP card PCBA. Go to **“RIP PCBA removal” on page 4-156**.	Problem solved.

Paper skew





The printed image is partially rotated as a result of the media not being fed straight into the device.

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 media into the media tray assembly and ensure all guides are set correctly. Properly install the media tray assembly into the printer. Reprint the defective image. **Does the problem remain?**	Go to step 3.	Problem resolved
3	Check for obstructions in the area of the media feed units. **Are the media feed unit assembly free from any obstructions?**	Go to step 4.	Remove obstructions.
4	**Is the printer left door assembly properly and evenly closed?**	Go to step 5.	Open, and then properly close the printer left door assembly.
5	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 6.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.

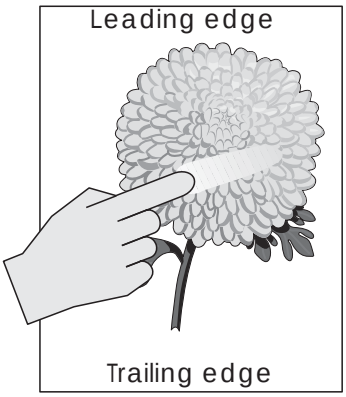
Step	Check	Yes	No
6	POR the machine. **Does the problem remain?**	Replace registration transport roller assembly. Go to **"Registration/ transport roller assembly removal" on page 4-155**.	Problem resolved

Media damage

Step	Check	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. Reprint the defective image. **Does the problem remain?**	Go to step 3.	Problem resolved
3	Check the printer media type settings. Ensure the settings match the media being used. **Does the problem remain?**	Go to step 4.	Problem resolved

Step	Check	Yes	No
4	Check the media condition. Ensure the recommended media is being used. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 5.	Problem resolved
5	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 6.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.
6	Check the registration transport roller assembly. **Are all drive rollers on the registration transport roller assembly free of contamination, wear and damage?**	Go to step 7.	Replace registration transport roller assembly. Go to **"Registration/ transport roller assembly removal" on page 4-155**.
7	Check the heat belt and pressure roll in the fuser assembly for scratches or defects.  **CAUTION**: The fuser assembly might be hot. Allow the fuser assembly to cool. Remove the fuser assembly. **Is there contamination or cracks on the heat belt and/or pressure roll?**	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.	Inspect the machine for obstructions in the media path.

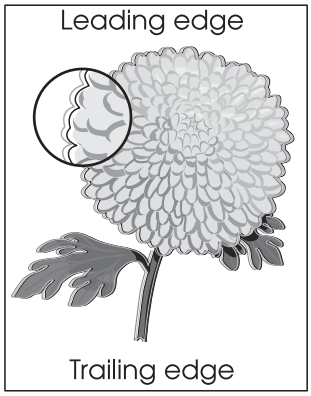
No fuse



Step	Check	Yes	No
1	Check the printer media type settings. Ensure the settings match the media being used. **Does the problem remain?**	Go to step 2.	Problem resolved
2	Check the fuser assembly installation. Check that the thumbscrews, on both sides of the fuser, are properly tightened. Reprint the defective image. **Does the problem remain?**	Go to step 3.	Problem resolved
3	Check the media condition. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 4.	Problem resolved
4	Check the heat belt and pressure roll in the fuser assembly for scratches or defects. **CAUTION**: The fuser assembly might be hot. Allow the fuser assembly to cool. Remove the fuser assembly. **Is there contamination or cracks on the heat belt and/or pressure roll?**	Replace the fuser assembly. Go to **"Fuser assembly removal" on page 4-90**.	Go to step 4.
5	Check the connections on the fuser driver PCBA. Replace the fuser driver PCBA. Go to **"Fuser driver PCBA removal" on page 4-96** **Does the problem remain?**	Go to step 5.	Problem resolved

Step	Check	Yes	No
6	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. **Does the problem remain?**	Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

Color misregistration

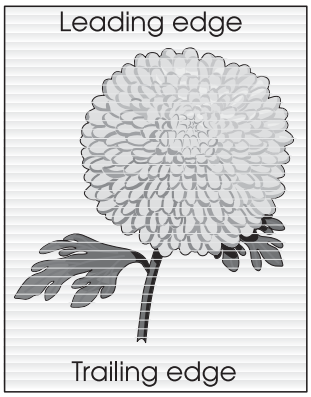


Step	Check	Yes	No
1	Replace the transfer belt assembly. Go to **"Transfer belt assembly removal" on page 4-181**. **Does the error remain?**	Go to step 2.	Problem resolved
2	Replace the printhead. Go to **"LED printhead removal" on page 4-108**. **Does the error remain?**	Go to step 3.	Problem resolved
3	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem remain?**	Replace the RIP card PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**.	Problem resolved

Deletions

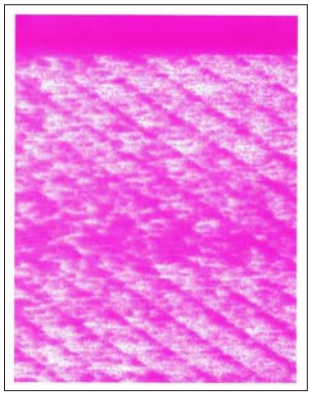
Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Reprint the defective image. **Does the problem remain?**	Go to step 2.	Problem resolved
2	Make sure the PC cartridges are properly installed. **Does the problem remain?**	Go to step 3.	Problem resolved
3	Check the 2nd transfer roller for contamination and wear. **Is the 2nd transfer roller free of excess wear and contamination?**	Go to step 4.	Replace the 2nd transfer roller. Go to **"2nd transfer roller removal" on page 4-28**.
4	POR the machine. **Does the problem remain?**	Replace the transfer belt assembly. Go to **"Transfer belt assembly removal" on page 4-181**.	Problem resolved

High frequency bands



Step	Check	Yes	No
1	Check the four PC cartridges for proper installation. Check the PC cartridge connections. **Are the PC cartridge connections free of excess wear and contamination?**	Go to step 2.	Correct and clean contaminated pins, or replace the appropriate PC cartridge or connector.
2	Replace the four developer housings and four developer carriers. Go to **"Developer housing (C) removal" on page 4-52**, **"Developer housing (K) removal" on page 4-58**, **"Developer housing (M) removal" on page 4-64**, **"Developer housing (Y) removal" on page 4-70**, and **"Developer carrier removal and replacement" on page 4-49**. **Does the problem remain?**	Go to step 3.	Problem resolved
3	Replace the printhead. Go to **"LED printhead removal" on page 4-108**. **Does the problem remain?**	Go to step 4.	Problem resolved
4	Check the upper printer engine PCBA for proper connectivity. Disconnect and reconnect all appropriate cables. Replace the upper printer engine PCBA. Go to **"Upper printer engine PCBA removal" on page 4-193**. Perform a print test. **Does the problem continue?**	Replace the RIP card PCBA. Go to **"RIP PCBA removal" on page 4-156**.	Problem resolved

Diagonal banding



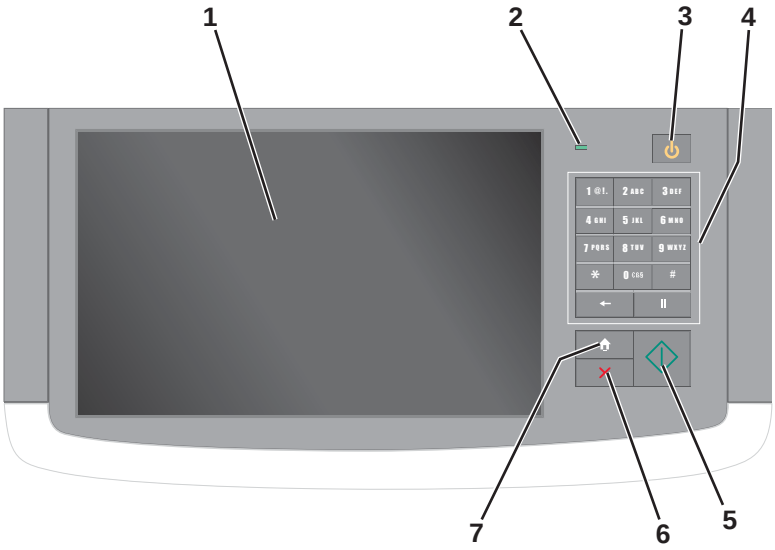
Step	Check	Yes	No
1	Perform a print quality suite test to produce solid fill for each color. Replace the appropriate developer unit housing for the color that is producing the diagonal banding. Go to **“Developer housing (C) removal” on page 4-52**, **“Developer housing (K) removal” on page 4-58**, **“Developer housing (M) removal” on page 4-64**, or **“Developer housing (Y) removal” on page 4-70**. **Did this fix the problem?**	Problem resolved	Contact a higher level of support.

3. Diagnostic aids

This chapter explains the tests and procedures to identify printer failures and verify if repairs have corrected the problem.

User operator panel, menus and messages

Understanding the operator panel



Callout	Item	Function
1	Display	Shows the status of the printer, and allows printer setup and operation
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. • Blinking red—The printer requires operator intervention is needed.
3	Sleep	Enables Sleep Mode or Hibernate Mode The following are the statuses of the indicator light and the Sleep button: • Entering or waking from Sleep Mode—The indicator light is illuminated solid green, Sleep button is unilluminated. • Operating in Sleep Mode—The indicator light is illuminated solid green, Sleep button is illuminated solid amber. • Entering or waking from Hibernate Mode—The indicator light is illuminated solid green, Sleep button is illuminated blinking amber. • Operating in Hibernate Mode—The indicator light is unilluminated, Sleep button is blinking amber for 1/10 of a second, then go completely unilluminated for 1.9 seconds in pulsing pattern. The following actions wake the printer from Sleep Mode: • Touching the screen or any hard button presses. • Opening an input tray, cover, or door. • Sending a print job from the computer. • Performing a Power On Reset (POR) with the main power switch.
4	Keypad	Lets the user enter numbers, letter, or symbols
5	Submit	Lets the user submit changes made in the printer settings

Callout	Item	Function
6	Stop/Cancel	Stops all printer activity Note: A list of option is displayed once Stopped appears on the display.
7	Home	Lets the user navigate back to the home screen

Understanding the home screen

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

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

Icon/Button	Function
Copy	Accesses the Copy menus and makes copies
E-mail	Accesses the E-mail menus and sends e-mails
Fax	Accesses the Fax menus and sends fax
	Accesses the printer menus **Note:** These menus are available only when the printer is in the **Ready** state.
FTP	Accesses the File Transfer Protocol (FTP) menus and scans documents directly to an FTP server
Status message bar	• Shows the current printer status such as **Ready** or **Busy** • Shows printer conditions such as **Toner Low** or **Cartridge Low** • Shows intervention messages so the printer can continue processing
Status/Supplies	• Displays a warning or error message whenever the printer requires intervention to continue processing • Accesses the messages screen for more information on the message, and how to clear it

Icon/Button	Function
USB or USB Thumbdrive	Views, selects, prints, scans, or e-mails photos and documents from a flash drive **Note:** This button appears only when the user returns to the home screen while a memory card or flash drive is connected to the printer.
Bookmarks	Creates, organizes, and saves a set of bookmarks (URL) into a tree view of folders and file links. **Note:** The tree view supports only bookmarks created from this function, and not from any other application.
Held Jobs	Displays all current held jobs.
Other buttons that may appear on the home screen:	
Search held jobs	Searches on any of the following items: • User name for held or confidential print jobs • Job names for held jobs, excluding confidential print jobs • Profile names • Bookmark container or print job names • USB container or print job names for supported file types
Release Held Fax	Accesses the list of held faxes **Note:** This button appears only when there are held faxes with a scheduled hold time previously set.
Lock Device	Opens a password entry screen. Enter the correct password to lock the printer control panel. **Note:** This button appears only when the printer is unlocked and password has been set.
Unlock Device	Opens a password entry screen. Enter the correct password to unlock the printer control panel. **Note:** This button appears only when the printer is locked. The printer control panel buttons and shortcuts cannot be used while this appears.
Cancel Jobs	Opens the Cancel Jobs screen. The Cancel Jobs screen shows three headings: Print, Fax, and Network. The following options are available under the Print, Fax, and Network headings: • Print job • Copy job • Fax profile • FTP • E-mail send Each heading has a list of jobs shown in a column under it which can show only three jobs per screen. If more than three jobs exist in a column, then an arrow appears enabling you to scroll through the jobs.
Change Language	Launches the Change Language pop-up window that allows you to change the primary language of the printer

Menu map

This menu map identifies menus available to the user. The diagram shows the menus on the operator panel and items available under each menu.

Some menu items or values are displayed only if a specific option or feature is installed on the printer. Other menu items may be effective only for a particular printer language. The values can be selected at any time, but

they affect printer function only when the user has the optional equipment, feature on your model, or the specified printer language.

Supplies	**Paper Menu**	**Reports**	**Settings**
Cyan Cartridge	Default Source	Menu Settings Page	General Settings
Magenta Cartridge	Paper Size/Type	Device Statistics	Copy Settings
Yellow Cartridge	Configure MP	Network Setup Page	Fax Settings
Black Cartridge	Substitute Size	Network [x] Setup Page	E-mail Settings
Cyan Photoconductor Unit	Paper Texture	Shortcut List	FTP Settings
Magenta Photoconductor Unit	Paper Weight	Fax Job Log	Flash Drive Menu
Yellow Photoconductor Unit	Paper Loading	Fax Call Log	Print Settings
Black Photoconductor Unit	Custom Types	Copy Shortcuts	
Separator Pick Assembly and Roller	Custom Names	E-mail Shortcuts	
Waste Toner Bottle	Custom Scan Sizes	Fax Shortcuts	
Fuser	Custom Bin Names	FTP Shortcuts	
Transfer Module	Universal Setup	Profiles List	
Staple Cartridge	Bin Setup	Print Fonts	
Hole Punch Box		Print Directory	
		Asset Report	

Security	**Network/Ports**	**Help**	**Manage Shortcuts**
Edit Security Setups	Active NIC	Print All Guides	Fax Shortcuts
Miscellaneous Security Settings	Network1	Copy Guide	E-mail Shortcuts
Confidential Print	Standard USB	E-mail Guide	FTP Shortcuts
Disk Wiping	Parallel [x]	Fax Guide	Copy Shortcuts
Security Audit Log	Serial [x]	FTP Guide	Profile Shortcuts
Set Date and Time	SMTP Setup	Print Defects Guide	
		Information Guide	
		Supplies Guide	

Accessing service menus

Access the following menus to identify problems with the printer and run diagnostic tests.

Configuration Menu	1. Turn off the printer. 2. Press and hold the **2** and **6** buttons simultaneously. 3. Turn on the printer. 4. Release the buttons after 10 seconds.	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 3-6** for more information.
Diagnostics Menu	1. Turn off the printer. 2. Press and hold the **3** and **6** buttons simultaneously. 3. Turn on the printer. 4. Release the buttons after 10 seconds.	The Diagnostics Menu group consists of menus, settings, and operations that are used to diagnose various printer problems. Note: While the Diagnostics Menu Group is active, all host interfaces are offline. See **"Diagnostics Menu" on page 3-17** for more information.
Invalid engine mode	1. Turn off the printer. 2. Press and hold the **3**, **4**, and **6** buttons simultaneously. 3. Turn on the printer. 4. Release the buttons after 10 seconds.	This mode is used if the machine has invalid code and needs the correct code loaded. After entering this mode, the firmware code can be updated.
Recovery mode	1. Turn off the printer. 2. Press and hold the **7**, **2**, and **8** buttons simultaneously. 3. Turn on the printer. 4. Release the buttons after 10 seconds.	This mode will allow the printer to boot from a secondary set of instructions to allow a code flash to the printer. Code can be flashed from a PC via USB.
Network SE Menu	1. Touch . 2. Navigate to **Networks/Ports > Standard Network > Std Network Setup**. 3. Press and hold **6**, **7**, and **9** simultaneously.	This menu contains settings for fine tuning the communication settings for the network interfaces and protocols.
Service Engineer (SE) Menu	From a Web browser on a host PC, add **/se** to the printer IP address.	See **"Service Engineer (SE) Menu" on page 3-32**.

Configuration Menu

Entering Configuration Menu

1. Turn off the printer.
2. Press and hold the **2** and **6** buttons simultaneously.
3. Turn on the printer.
4. Release the buttons after 10 seconds.

Available settings

Settings appear on the LCD in the order shown:

Reset Separator Roll and Pick Assembly Counter	See **“Reset Separator Roll and Pick Assembly Counter” on page 3-14**.
Reset Maintenance Counter	See **“Reset Maintenance Counter Value” on page 3-14**.
USB Scan to Local	See **“USB Scan to Local” on page 3-15**.
Black Only Mode	See **“Black Only Mode” on page 3-8**.
Print Quality Pages	See **“Print Quality Pages” on page 3-13**.
Reports	See **“Reports” on page 3-13**.
Color Trapping	See **“Color Trapping” on page 3-9**.
Tray Insert Msg	See **“Tray Insert Message Delay” on page 3-15**.
SIZE SENSING	See **“Size Sensing” on page 3-14**.
Exit Tray 2	See **“Exit Tray 2” on page 3-10**.
Panel Menus	See **“Panel Menus” on page 3-13**.
PPDS Emulation	See **“PPDS Emulation” on page 3-13**.
Download Emuls	
Factory Defaults	See **“Factory Defaults” on page 3-10**.
Energy Conserve	See **“Energy Conserve” on page 3-9**.
Fax Low Power Support	See **“Fax Low Power Support” on page 3-10**.
Min Copy Memory	See **“Min Copy Memory” on page 3-12**.
NumPad Job Assist	See **“NumPad Job Assist” on page 3-12**.
Format Fax Storage	See **“Format Fax Storage” on page 3-11**.
Fax Storage Location	See **“Fax Storage Location” on page 3-11**.
Auto Align Adj	See **“Automatic Alignment Adjust Calibration” on page 3-8**.
ADF Edge Erase	See **“ADF Edge Erase” on page 3-8**.
FB Edge Erase	See **“FB Edge Erase” on page 3-11**.
Disable Scanner	See **“Disable Scanner” on page 3-9**.

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Paper Prompts	See **"Paper Prompts" on page 3-13**.
Envelope Prompts	See **"Envelope Prompts" on page 3-9**.
Action for Prompts	See **"Action for prompts" on page 3-7**.
Jobs On Disk	See **"Jobs on Disk" on page 3-11**.
Disk Encryption	See **"Disk Encryption" on page 3-9**.
Erase All Information on Disk	See **"Erase all Information on Disk" on page 3-10**.
Wipe All Settings	See **"Wipe All Settings" on page 3-16**.
Font Sharpening	See **"Font Sharpening" on page 3-11**.
Require Standby	See **"Require Standby" on page 3-14**.
Short-edge Printing	See **"Short-edge Printing" on page 3-14**.
UI Automation	See **"UI Automation" on page 3-15**.
Key Repeat Initial Delay	See **"Key Repeat Initial Delay" on page 3-12**.
Key Repeat Rate	See **"Key Repeat Rate" on page 3-12**.
Clear Custom Status	See **"Clear Custom Status" on page 3-8**.
USB Speed	See **"USB Speed" on page 3-15**.
Automatically Display Error Screens	See **"Automatically Display Error Screens" on page 3-8**.
Booklet Adjustments	See **"Booklet Adjustments" on page 3-8**.
Exit Config Menu	

Action for prompts

This setting enables users to determine which input source would receive paper-related or envelope-related change prompts when they occurred. Regardless of the target source, the device always requires some type of user assistance to resolve the change prompt (examples: pushing a button to ignore the prompt and changing the source's installed media). However, this setting gives a user the option of having the device resolve change prompt situations without requiring any user assistance.

To change this setting:

1. From the Configuration Menu, navigate to **Action for prompts**.
2. Touch ◄ or ► to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

When set to **Prompt user**, the device behaves like the past implementation. When a change prompt occurs, the device stops printing, posts the change prompt to the target source, and waits for the user to select an action before continuing.

When set to **Continue**, the device automatically assumes that the user selects **Continue** every time a change prompt is encountered. Likewise, when the device is set to **Use Current**, all change prompts will perform as if **Use Current** was selected by the user.

ADF Edge Erase

The value of this setting determines the size in millimeters of the “no-print” zone around an ADF scan job.

To change this setting:

1. From the Configuration Menu, navigate to **ADF Edge Erase**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Automatic Alignment Adjust Calibration

This setting is for performing Toner Patch Sensing (TPS):a diagnostic mechanism that automatically adjusts the printer’s toner density. When TPS executes, the printer generates toner patches on the belt and then uses these to calculate if necessary, the appropriate amount of adjustment.When an event initiates a TPS operation, the device performs a toner density calibration.

To change this setting:

1. From the Configuration Menu, navigate to **Automatic Alignment Adjust Calibration**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Automatically Display Error Screens

To change this setting:

1. From the Configuration Menu, navigate to **Automatically Display Error Screens**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Black Only Mode

This mode enables a user to force the printer to always print color content in grayscale. Turning this setting **On** is equivalent to setting Print Mode to **Black Only**; the printer will ignore any PJL or datastream commands that attempt to change the Print Mode setting. If this setting is **Off**, then the printer will print color content as normal.

To change this setting:

1. From the Configuration Menu, navigate to **Black Only Mode**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Booklet Adjustments

The Booklet Adjustment menu enables the user to correct any folding overlap or skew overlap errors that occur when the device performs folding or saddlestitch finishing on a job that uses a specific combination of media size and total number of sheets (example: a 2-sheet, Letter-sized job).

Clear Custom Status

Executing this operation erases any strings that have been defined by the user for the Default or Alternate custom messages.

Color Trapping

Color trapping is used to compensate for mechanical misregistration in the printer. When small black text or fine black lines are being rendered, the printer checks to see if they are being rendered on top of a colored background. Rather than remove the color from beneath the black content, the printer leaves the color around the edge of the text or line. In this way, the "hole" in the colored region is reduced in size which prevents the characteristic "white gap" that is caused by misregistration.

The values 1 through 5 indicate the amount of color that will remain beneath the black content. The more inaccurate the registration setting, the higher this setting will need to be adjusted.

To change this setting:

1. From the Configuration Menu, navigate to **Color Trapping**.
2. Touch or to change the value.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Disable Scanner

With this setting, the user can choose to disable the entire scanner or only the ADF portion of it. In this way, an AIO can continue to function as a “print only” device even when its scanner is malfunctioning.

To change this setting:

1. From the Configuration Menu, navigate to **Disable Scanner**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Disk Encryption

This setting controls whether the device encrypts the information that it writes to its hard disk (when installed).

To change this setting:

1. From the Configuration Menu, navigate to **Disk Encryption**.
2. Select **Disable** or **Enable**.

Energy Conserve

This setting affects the values that display in the “Sleep Mode” setting. With Energy Conserve set to **Off**, this menu displays Disabled which, when selected, deactivates the Sleep feature. When Energy Conserve is set to **On**, Disabled does not appear in the Sleep Mode menu.

To change this setting:

1. From the Configuration Menu, navigate to **Energy Conserve**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Envelope Prompts

This setting controls the input source to which a device will direct an envelope change prompt. The device displays envelope prompts based on the size of the envelope requested by the user, not on the envelope type.

To change this setting:

1. From the Configuration Menu, navigate to **Envelope Prompts**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Erase all Information on Disk

To run this operation:

1. From the Configuration Menu, navigate to **Erase all Information on Disk**.
2. Touch **Single Pass Erase** or **Multiple Pass Erase**.

Exit Tray 2

To change this setting:

1. From the Configuration Menu, navigate to **Exit Tray 2**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Factory Defaults

Warning: This operation cannot be undone.

This setting enables a user to restore all of the device's settings to either the network settings (on network models only) or to the base device settings.

To restore the Factory Default settings:

1. From the Configuration Menu, navigate to **Factory Defaults > Restore Settings**.
2. Touch **Restore Printer Settings** to restore all non-critical base printer NVRAM settings.
3. Touch **Restore Network Settings** to restore all network NVRAM settings.
4. Touch **Restore Solutions** to remove all Lexmark Embedded Solution applications**.**

After this setting is changed, the device automatically performs a POR, and restores the appropriate settings to their factory default values.

Fax Low Power Support

To change this setting:

1. From the Configuration Menu, navigate to **Fax Low Power Support**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Fax Storage Location

This setting determines the location where faxes will be saved.

To change this setting:

1. From the Configuration Menu, navigate to **Fax Storage Location**.
2. Select the location where faxes will be saved.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

FB Edge Erase

The value of this setting determines the size in millimeters of the “no-print” zone around a flatbed scan job.

To change this setting:

1. From the Configuration Menu, navigate to **FB Edge Erase**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Font Sharpening

This setting allows a user to set a text point-size value from 0 to 150. For all font sizes in a print job equal or below the text point-size value set, the high frequency screens will be used. For example, if this setting’s value is “24” then all fonts sized 24 points or less will use the high frequency screens. The panel displays a numeric keypad interface to allow the user to adjust this setting’s value.

To change this setting:

1. From the Configuration Menu, navigate to **Font Sharpening**.
2. Touch or to change the value.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

This setting only affects the following emulators: PostScript, PCL, PDF, XL, and XPS.

Format Fax Storage

This setting when executed, deletes faxes that are stored in the location based on the value of the Fax Storage Location setting. Upon completion of the operation, the screen returns to the Configuration Menu.

To run this setting:

1. From the Configuration Menu, navigate to **Format Fax Storage**.
2. The screen displays Contents will be lost. Continue?.
3. Touch **Yes** to format the fax storage, or touch **No** to cancel the operation and return to the Configuration Menu without saving any changes.

Jobs on Disk

This setting is for clearing jobs that remain on the disk due to buffering.

To perform this function:

1. From the Configuration Menu, navigate to **Jobs on Disk**.
2. Touch **Do Not Delete** or **Delete**.

Key Repeat Initial Delay

The value of this setting determines the initial length of delay before a key could repeat.

To change this setting:

1. From the Configuration Menu, navigate to **Key Repeat Initial Delay**.
2. Touch or to change the value.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Key Repeat Rate

The value of this setting determines the number of repeating key presses allowed per second.

To change this setting:

1. From the Configuration Menu, navigate to **Key Repeat Rate**.
2. Touch or to change the value.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Min Copy Memory

The Interrupt process automatically pauses the printing of jobs in the “normal” print queue and instead prints the copy jobs that exist in a priority queue until that queue is empty; thereafter the device resumes printing the jobs in the “normal” print queue. Interrupt is activated by default but may be turned off through the configuration pages.

The value of this setting determines how much DRAM the device will allot to storing the copy jobs in the priority queue.

To change this setting:

1. From the Configuration Menu, navigate to **Min Copy Memory**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

NumPad Job Assist

This setting determines if a user can configure and initiate a job using the panel’s hard buttons. When activated, a user can choose a function like Copy, or Fax, enter specific values for a limited number of settings, and initiate the job with a series of key presses.

To change this setting:

1. From the Configuration Menu, navigate to **NumPad Job Assist**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Panel Menus

To change this setting:

1. From the Configuration Menu, navigate to **Panel Menus**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Paper Prompts

This setting determines the input source to which the device will direct a change paper prompt. The device displays paper prompts based on the size of the paper requested by the user, not on the paper type.

To change this setting:

1. From the Configuration Menu, navigate to **Paper Prompts**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

PPDS Emulation

The value of the PPDS Emulation menu item determines if a device can recognize and use the PPDS datastream.

To change this setting:

1. From the Configuration Menu, navigate to **PPDS Emulation**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Print Quality Pages

See **“PRINT TESTS” on page 3-26**.

Reports

This menu contains informational reports that are helpful when servicing a device.

Menu Settings Page

Print the menu settings pages to list the customer settings and to verify printer options are installed correctly. It is helpful to print the customer settings before you restore factory defaults or make major changes.

To print the menu settings:

1. From the Configuration Menu, navigate to **Reports > Menu Settings Page**.
2. Printing Menu Settings Page appears, and the pages print.

Event Log

This report lets the system support person print a limited set of the information contained in the Diagnostics Menu version of the printed Event Log. For a sample of a printout, see **“Print the Event Log” on page 3-21**. The limited Configuration log and the full Diagnostics log printed versions show the same operator panel messages when they print and follow the same layout guidelines.

To print the event log:

1. From the Configuration Menu, navigate to **Reports > Event Log**.
2. Printing EVENT LOG appears, and the pages print.

Require Standby

To change this setting:

1. From the Configuration Menu, navigate to **Require Standby**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Reset Maintenance Counter Value

This setting enables users to reset the selected Maintenance Count value to zero.

To reset:

1. From the Configuration Menu, navigate to **Reset Maintenance Counter Value**.
2. From the options displayed, select the maintenance kit to reset.
3. Touch **Yes** to reset the maintenance counter value. Touch **No** or **Back** to return to the previous menu.

Reset Separator Roll and Pick Assembly Counter

This setting enables users to reset the separator roller and pick assembly count value to zero.

Short-edge Printing

This setting enables a user to permit or to prohibit the printing of short-edge oriented paper on the device. The device's default paper feed orientation is long-edge fed (LEF). However, in order to support added finishing functionality, the MFP also supports printing with paper fed in the short-edge (SEF) orientation.

If the setting **Disabled** (default) is selected, letter and A4 paper can only be fed long-edge. If they are fed short-edge, a prompt will ask you to use the correct paper size. When the setting is **Enabled**, you can feed paper either long-edge or short-edge.

To change this setting:

1. From the Configuration Menu, navigate to **Short Edge Printing**.
2. Touch or to change the setting.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Size Sensing

This setting controls whether the device automatically registers the orientation, type, and size of paper installed in an input source equipped with size-sensing hardware.

Tray [x] sensing

By turning the tray [x] sensing setting to **Auto**, every input option equipped with size sensing hardware automatically registers what size of paper it contains. When this setting is turned **Off**, the printer ignores the size detected by the hardware and treats the input source as a non-sensing source. The media size can be set by the operator panel or the data stream.

To change this setting:

1. From the Configuration Menu, navigate to **SIZE SENSING**. The screen displays each size sensing equipped input source and its current Size Sensing setting.
2. Select the appropriate input source.
3. Touch or to change the setting.
4. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

A5/Statement

Due to engine limitations, Trays 1 through 4 cannot simultaneously sense A5- and statement-size paper. The value of this setting determines which of the two paper sizes these trays will sense automatically. This setting will apply to all automatic trays, but not to the MP Feeder. The MP Feeder can support these paper sizes regardless of the value of this setting.

B5/Executive

Due to engine limitations, Trays 1 through 4 cannot simultaneously sense executive and JIS-B5-size paper. The value of this setting determines which of the two paper sizes these trays will sense automatically. This setting will apply to all automatic trays, but not to the MP Feeder. The MP Feeder can support these paper sizes regardless of the value of this setting.

Tray Insert Message Delay

This setting determines how many seconds the panel will display Tray Insert after a user has inserted a tray into the printer.

To change this setting:

1. From the Configuration Menu, navigate to **Tray Insert Message Delay**.
2. Touch or to change the value.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

UI Automation

When set to **Enable**, this setting allows external developers to measure the stability of their applications by performing their own automated testing against the device.

To change this setting:

1. From the Configuration Menu, navigate to **UI Automation**.
2. Touch or to change the value.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

USB Scan to Local

To change this setting:

1. From the Configuration Menu, navigate to **USB Scan to Local**.
2. Touch or to change the value.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

USB Speed

To change this setting:

1. From the Configuration Menu, navigate to **USB Speed**.
2. Touch or to change the value.
3. Touch **Submit** to save the setting, or touch **Back** to return to the Configuration Menu without saving any changes.

Wipe All Settings

The purpose of this setting is to make any sensitive information that may exist on the device's storage completely indecipherable.

To run this setting:

1. From the Configuration Menu, navigate to **Wipe All Settings**.
2. The screen displays the following messages

Erase all information on the hard disk?
This will erase all settings, solutions, and jobs on this device.

3. Touch **Yes** to erase, or touch **No** to cancel the operation and return to the Configuration Menu without saving any changes.

Diagnostics Menu

Entering Diagnostics Menus

1. Turn off the printer.
2. Press and hold the **3** and **6** buttons simultaneously.
3. Turn on the printer.
4. Release the buttons after 10 seconds.

Available tests

Tests appear on the LCD in the order shown:

SCANNER CALIBRATION	See **"SCANNER CALIBRATION" on page 3-30**.
Adjust Calibration Values	
Copy Quick Test	
Print Testcase	
Reset Flatbed Calibration	
Reset ADF Front Calibration	
Reset ADF Back Calibration	
SENSOR TESTS	See **"SENSOR TESTS" on page 3-30**.
PRINTER SENSOR TESTS	See **"PRINTER SENSOR TESTS" on page 3-30**.
ADF/SCANNER SENSOR TESTS	See **"ADF/SCANNER SENSOR TESTS" on page 3-31**.
FINISHER SENSOR TESTS	See **"FINISHER SENSOR TESTS" on page 3-31**.
MOTOR TESTS	See **"MOTOR TESTS" on page 3-24**.
PRINTER MOTOR TESTS	See **"PRINTER MOTOR TESTS" on page 3-24**.
ADF/SCANNER MOTOR TESTS	See **"ADF/SCANNER MOTOR TESTS" on page 3-25**.
FINISHER MOTOR TESTS	See **"FINISHER MOTOR TESTS" on page 3-25**.
PRINT TESTS	See **"PRINT TESTS" on page 3-26**.
Tray [x]	See **"[Input Source] Print Test" on page 3-26**.
Multi-Purpose Feeder	
Print Quality Pages	See **"Print Quality Pages (Diagnostics Menu)" on page 3-26**.
Print defects guide	
HARDWARE TESTS	See **"HARDWARE TESTS" on page 3-23**.
Panel Test	See **"Panel Test" on page 3-23**.
Button Test	See **"Button Test" on page 3-23**.
DRAM Test	See **"DRAM Test" on page 3-23**.
Serial 1 Wrap	See **"Serial Wrap 1 Test" on page 3-23**.

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USB HS Test Mode	
DUPLEX TESTS	See **“DUPLEX TESTS” on page 3-21**.
Quick Test	See **“Quick Test (Duplex)” on page 3-21**.
INPUT TRAY TESTS	See **“INPUT TRAY TESTS” on page 3-24**.
Feed Tests	See **“Feed Tests (Input Tray)” on page 3-24**.

OUTPUT BIN TESTS	See **“OUTPUT BIN TESTS” on page 3-26**.
Feed Tests	See **“Feed Tests (Output Bin)” on page 3-26**.
Feed To All Bins	See **“Feed To All Bins” on page 3-26**.
FINISHER TESTS	See **“FINISHER TESTS” on page 3-22**.
Staple Test	See **“Staple Test” on page 3-22**.
Hole Punch Test	See **“Hole Punch Test” on page 3-22**.
Feed Test	See **“Feed Test (Finisher)” on page 3-22**.
DEVICE TESTS	See **“DEVICE TESTS” on page 3-19**.
Quick Disk Test	See **“Quick Disk Test” on page 3-19**.
Disk Test/Clean	See **“Disk Test/Clean” on page 3-19**.
Flash Test	See **“Flash Test” on page 3-19**.
PRINTER SETUP	See **“PRINTER SETUP” on page 3-27**.
Defaults	See **“U.S. / Non-U.S. Defaults” on page 3-27**.
Prt Color Pg Count	See **“Mono and Color Page Count” on page 3-27**.
Prt Mono Pg Count	
Perm Page Count	See **“Permanent Page Count” on page 3-27**.
Serial Number	See **“Serial Number” on page 3-27**.
Model Name	
Configuration ID	See **“Configuration ID” on page 3-27**.
Reset Color Cal	See **“Reset Color Calibration” on page 3-27**.
Par 1 Strobe Adj	See **“Parallel Strobe Adjustment (all parallel ports)” on page 3-27**.
REPORTS	See **“REPORTS” on page 3-28**.
Menu Settings Page	
EVENT LOG	See **“EVENT LOG (Diagnostics Menu)” on page 3-21**.
Display Log	See **“Display the Event Log” on page 3-21**.
Print Log	See **“Print the Event Log” on page 3-21**.
Clear Log	See **“Clear the Event Log” on page 3-21**.

DEVELOPMENT MENU	Do not use. For development use only.
Debug Port	
Print History	
SCANNER TESTS	See **“SCANNER TESTS” on page 3-28**.
ASIC Test	See **“ASIC Test” on page 3-28**.
Feed Test	See **“Feed Test (SCANNER TESTS)” on page 3-28**.
Scanner Manual Registration	See **“Scanner Manual Registration” on page 3-29**.

ENGINE ADJUST	
ATC SENSOR ADJUST AND SETUP	
Booklet Fold Adj	
Finisher Config	
EXIT DIAGS	

DEVICE TESTS

Flash Test

This test appears only when a non-defective flash memory is installed. Data is written to the flash card and read back to check the accuracy. This test destroys all data stored on the flash device.

Warning: This test deletes all data stored on the flash device. After the test is over, reformat the flash using **Format Flash** in the customer Utilities Menu.

To perform this test:

1. From the Diagnostics Menu, navigate to **DEVICE TESTS > Flash Test**.
2. Contents will be lost. Continue? appears. Touch **Yes** to continue, or touch **No** to return to **DEVICE TESTS**.
3. Flash Test Testing... appears while the test is running.
4. When the test is complete, Flash Test Test Passed or Flash Test Test Failed appears.

Quick Disk Test

This menu item appears only when a non-defective disk is installed. This test performs a non-destructive read/write on one block per track on the disk. Once executed, the test cannot be canceled.

To perform this test:

1. From the Diagnostics Menu, navigate to **DEVICE TESTS > Quick Disk Test**.
2. Quick Disk Test Testing DO NOT POWER OFF appears.
3. When the test is complete, Quick Disk Test Test Passed or Quick Disk Test Test Failed appears.

Disk Test/Clean

Warning: This test performs a low-level format of the hard disk which will destroy all data and should never be performed on a good disk. This test will only be used when the disk contains bad data and is unusable.

Note: This process does not erase any information stored on the device’s NAND.

To perform this test:

1. From the Diagnostics Menu, navigate to **DEVICE TESTS > Disk Test/Clean**.
2. Contents will be lost. Continue? appears. Touch **Yes** to continue, or touch **No** to return to **DEVICE TESTS**.
3. Once the test starts, it cannot be stopped.
4. When the test is complete, Disk Test/Clean Test Passed or Disk Test/Clean Test Failed appears.

DUPLEX TESTS

Quick Test (Duplex)

The Duplex Quick Test is used to verify the correct placement of the top margin on the back side of a duplexed page. When a user selects this setting, the device prints a duplexed version of the Quick Test page that can be used to adjust the duplex top margin setting.

To run the Quick Test:

1. From the Diagnostics Menu, navigate to **DUPLEX TESTS**.
2. Touch **Quick Test**.
3. Touch **Single** or **Continuous**. **Quick Test Printing...** appears on the LCD.
   - The single Duplex Quick test cannot be canceled.
   - The printer attempts to print the Quick Test Page from the default paper source. If the default paper source only supports envelopes, then the page is printed from Tray 1.
   - Check the Quick Test Page for the correct registration between the placement of the first scan line on the front and back side of a duplexed sheet.

The single test stops automatically when a single duplex sheet is printed, and the continuous test continues until you press **Stop**.

EVENT LOG (Diagnostics Menu)

The Event Log is a diagnostic tool that tracks the occurrence of various critical events in a device's functional history, such as paper jams and firmware updates.

Clear the Event Log

Use Clear the Event Log to remove the current information in the Event Log. This affects both the viewed log and the printed log information.

1. From the Diagnostics Menu, navigate to **EVENT LOG > Clear Log**.
2. Touch **YES** to clear the Event Log, or **NO** to exit the Clear Log menu.

Display the Event Log

Log entries are displayed, appearing in chronological order beginning with the most recent entry at the top of the list.

To view the event log, navigate to **EVENT LOG > Display Log**. If additional log entries exist, touch ▼ to view the next log entries. Continue following this procedure until you reach the end of the logged entries. To view earlier log entries, touch ▲.

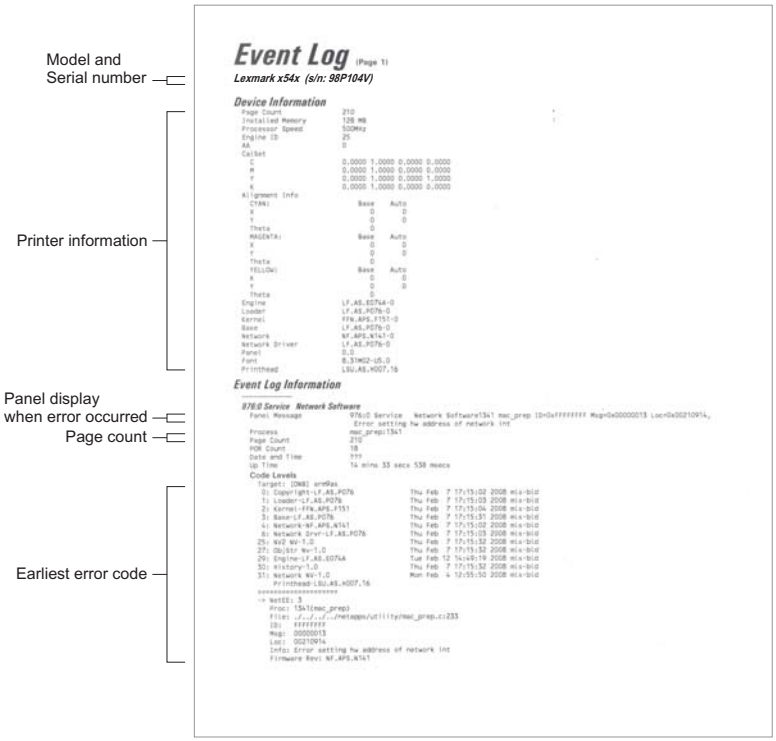
Touch **Back** to return to the EVENT LOG menu.

Print the Event Log

The Event Log printed from DIAGNOSTICS includes:

- Detailed printer information, including code versions
- Time and date stamps

- Page counts for most errors
- Additional debug information in some cases



The printed event log can be faxed to your next level of support for verification or diagnosis.

To print the event log, navigate to **EVENT LOG > Print Log**.

FINISHER TESTS

Feed Test (Finisher)

This test feeds one sheet of media from the device's default input source to a finisher output bin. The device can perform this test using any paper size that is supported by the finisher.

Hole Punch Test

This test is used to verify that media can be fed to a finisher output bin and then hole-punched. No information is printed on the feed test pages since the printhead LED isn't engaged during this test. Eight sheets of paper are fed, and then the pages are hole-punched with a 2-hole, a 3-hole or a 4-hole pattern depending on the selected punch test. Although the source searching algorithm may result in paper being fed from another source, media initially is requested from the default input source and then is transported to the finisher output bin.

Staple Test

This test is used to verify the functioning of the finisher's staple mechanism.

To perform the Staple Test:

1. From the Diagnostics Menu, navigate to **FINISHER TESTS**.
2. Touch **Staple Test**.

HARDWARE TESTS

Button Test

The Button Test is used to verify the operation of each button on the operator panel.

To perform the Button Test:

1. From the Diagnostics Menu, navigate to **HARDWARE TESTS**.
2. Select **Button Test**. The LCD displays a graphic of the operator panel buttons that matches the layout of the operator panel buttons.
3. Press any button on the operator panel. Every time a button is pressed, the equivalent button graphic on the LCD appears shaded. When the button is released, the shading is removed.

DRAM Test

The DRAM Test is used to check the validity of both the device's standard and optional DRAM. The test involves writing patterns of data to DRAM to verify that each bit in memory can be set and read correctly.

To run the DRAM Test:

1. From the Diagnostics Menu, navigate to **HARDWARE TESTS**.
2. Select **DRAM Test**. **DRAM Test Testing...** appears on the LCD, and then **Resetting the Printer** appears. The printer automatically performs a POR.

   The following type of message appears:

DRAM Test	**256MB**	**P:######**	**F:####**

   - P:###### represents the number of times the memory test has passed and finished successfully. Initially 000000 displays with the maximum pass count being 999,999.
   - F:##### represents the number of times the memory test has failed and finished with errors. Initially 0000 displays with the maximum fail count being 99,999. Initially only four digits appear, but additional digits appear as needed.

To stop this test before completion, turn the printer off.

Panel Test

After a user chooses this setting, the device automatically executes the operator panel test application which occupies the entire display panel. The test application automatically toggles each pixel in the display panel through every contrast level, beginning with the darkest (every pixel turned on and as dark as possible) and ending with the lightest (every pixel turned off). The panel then illuminates the backlight, and then it turns off.

Essentially, this test identifies any non-functioning pixels, since these appear as blank spaces during the test's darker stages.

This test is run by navigating to **HARDWARE TESTS** and then selecting **Panel Test**.

Serial Wrap 1 Test

The Serial Wrap Test is used to check the operation of the serial port hardware using a wrap plug. Each serial signal is tested.

INPUT TRAY TESTS

Feed Tests (Input Tray)

This test is used to observe the paper path of media as it passes through the printer. To observe the paper path, a user can open the upper rear door while this test executes. No information is printed on the feed test pages since the printhead LED isn't engaged during this test.

To run this test:

1. From the Diagnostics Menu, navigate to **INPUT TRAY TESTS**.
2. Select the appropriate input source from the following choices:
   - Tray 1
   - Tray 2
   - Tray 3
   - Tray 4
   - Multi-Purpose Feeder
3. Touch either **Single** or **Continuous**.
   - **Single**—Feeds one sheet of media from the selected source.
   - **Continuous**—Media continues feeding from the selected source until **Stop** is pressed.

MOTOR TESTS

PRINTER MOTOR TESTS

To run these tests:

1. From the Diagnostics Menu, navigate to **MOTOR TESTS**.
2. Select **PRINTER MOTOR TESTS**.
3. Select the test from the following options:

Available printer motor tests:

- Fuser/lower redrive/1st transfer retract motor
- Registration motor
- Tray 1 feed/lift motor (feed)
- Tray 1 feed/lift motor (lift)
- Tray 2 feed/lift motor (feed)
- Tray 2 feed/lift motor (lift)
- Tray 3 feed/lift motor (feed)
- Tray 3 feed/lift motor (lift)
- Tray 4 feed/lift motor (feed)
- Tray 4 feed/lift motor (lift)
- MPF feed/lift motor (feed)
- MPF feed/lift motor (pick)
- Registration clutch
- Upper redrive diverter gate
- Duplex motor (reverse)
- Upper redrive motor (forward)
- Upper redrive motor (reverse)
- Lower redrive shift motor (forward)
- Lower redrive shift motor (reverse)
- Printer transport motor
- HCF feed/lift motor (feed)
- HCF feed/lift motor (lift)
- HCF transport motor
- KCMY drum & transfer belt motor
- Y erase lamp
- M erase lamp
- C erase lamp
- K erase lamp
- Waste toner agitator motor
- Image density sensor shutter open
- Image density sensor shutter close
- Y toner dispense motor
- M toner dispense motor
- C toner dispense motor
- K toner dispense motor
- Developer motor
- Transfer belt motor
- 1st transfer rollers retract motor (contacted)

Available printer motor tests:

- Upper redrive shift motor (forward)
- Upper redrive shift motor (reverse)
- 1TM/3TM/TTM upper transport motor
- 1TM/3TM/TTM lower transport motor
- 1st transfer rollers retract motor (retracted)
- 2nd transfer rollers retract motor (contacted)
- 2nd transfer rollers retract motor (retracted)

ADF/SCANNER MOTOR TESTS

To run these tests:

1. From the Diagnostics Menu, navigate to **MOTOR TESTS**.
2. Select **ADF/SCANNER MOTOR TESTS**.
3. Select the test from the following options:

- ADF feed motor (forward)
- ADF feed motor (reverse)
- ADF registration motor
- ADF nip release solenoid
- ADF document set gate solenoid

FINISHER MOTOR TESTS

To run these tests:

1. From the Diagnostics Menu, navigate to **MOTOR TESTS**.
2. Select **FINISHER MOTOR TESTS**.
3. Select the test from the following options:

- Buffer/transport motor
- Entrance/paddle motor
- Exit motor
- Finisher diverter gate solenoid (upper bin)
- Finisher diverter gate solenoid (stacker bin)
- Sub paddle solenoid
- Buffer diverter gate solenoid
- Front tamper motor (forward)
- Front tamper motor (rearward)
- Rear tamper motor (forward)
- Rear tamper motor (rearward)
- Stapler carriage motor (forward)
- Stapler carriage motor (rearward)
- Media eject clutch
- Media eject clamp motor (unclamp)
- Media eject clamp motor (clamp)
- Media eject motor (forward)
- Media eject motor (reverse)
- Stacker bin lift motor (up)
- Stacker bin lift motor (down)
- Punch carriage shift motor (forward)
- Punch carriage shift motor (rearward)
- Punch unit motor
- Bridge unit motor
- Decurler cam clutch
- Booklet folding/exit motor (forward)
- Booklet folding/exit motor (reverse)
- Booklet knife solenoid
- Booklet end guide motor (down)
- Booklet stapler motor
- Booklet bin motor
- Booklet paddle motor
- Booklet tamper front motor (reverse)
- Booklet tamper front motor (forward)
- Booklet tamper rear motor (forward)
- Booklet tamper rear motor (reverse)
- Booklet entrance motor
- Booklet diverter gate solenoid (bin)
- Booklet diverter gate solenoid (booklet)

OUTPUT BIN TESTS

Feed Tests (Output Bin)

This test is used to verify that media from the device's default input source can be fed to a specific output bin. No information is printed on the feed test pages.

To run the Feed Tests for the output bins:

1. From the Diagnostics Menu, navigate to **OUTPUT BIN TESTS**.
2. Touch **Feed Tests**.
3. Touch the output bin you want the paper to exit into. The standard bin as well as any output option bin installed on the printer is shown on the menu.
   - Standard Bin
   - Output Bin [1-3]
4. Touch either **Single** or **Continuous**.
   - **Single**—Feeds one sheet of media from the selected source.
   - **Continuous**—Media continues feeding from the selected source until **Stop** is pressed.

Press **Stop** to return to the [Selected Output Bin].

While this test runs, **[Selected Output Bin] Feeding...**appears on the LCD. During Single tests, no buttons are active. However, during Continuous tests, you can press **Stop** to cancel the test.

Feed To All Bins

This test is used to verify that the device can feed media to all installed output destinations. No information is printed on the feed test pages since the printhead LED is not engaged during this test.

PRINT TESTS

This menu's settings enable a user to test the device's ability to generate printed output from each of its installed input sources and to test the device's current print quality.

[Input Source] Print Test

After a user selects an input source to test, the panel displays two testing options: **Single** or **Continuous**. A Single test feeds one sheet of media from the selected input and prints a test page on it; the Continuous test continuously feeds media from the selected input and prints test pages until the user presses **Stop**. During a Single test, none of the panel's buttons are active while the test page prints.

To run this test:

1. From the Diagnostics Menu, navigate to **PRINT TESTS**.
2. Select the input source from the following choices:
   - Tray 1
   - Tray 2
   - Tray 3
   - Tray 4
   - Multi-Purpose Feeder)
3. Touch either **Single** or **Continuous**.
   - **Single**—Feeds one sheet of media from the selected source.
   - **Continuous**—Media continues feeding from the selected source until **Stop** is pressed.

Print Quality Pages (Diagnostics Menu)

This setting enables a user to view the values of a broad range of the device's settings and to test the device's ability to generate acceptable printed output.

PRINTER SETUP

Configuration ID

This setting enables a user to change both Configuration ID 1 and Configuration ID 2.

Mono and Color Page Count

The values of these settings enable a user to gauge the amount and type of usage on a device. The Mono Page Count setting's value will equal the value of the Picked Sides meter. The Color Page Count setting's value will equal the value of the Total Color sub-meter within the Imaged Printed Sides meter.

Parallel Strobe Adjustment (all parallel ports)

This setting enables the user to adjust the amount of time the strobe is sampled in order to determine if valid data is available on the parallel port. Each time this value is incremented by 1, the strobe is sampled 50 nanoseconds longer. Each time this value is decreased by 1, the strobe is sampled 50 nanoseconds less. When the value of this setting is 0, the factory default value is used to determine the length of time the strobe is sampled.

To change this setting:

1. From the Diagnostics Menu, navigate to **PRINTER SETUP**.
2. Select **Par 1 Strobe Adj**.
3. Touch ◄ or ► to change the value.
4. Touch **Submit** to save the setting, or touch **Back** to return to the Diagnostics Menu without saving any changes.

Permanent Page Count

The value of this setting indicates the total number of pages that have been printed by the device.

Reset Color Calibration

This setting enables the device to adjust the alignment of its color planes using pre-programmed default values. Using this setting to adjust color plane linearization may not provide a calibration as effective as using Automatic Color Adjust Calibration. While this text executes, the panel posts Resetting.

Serial Number

This setting records the device's 13-character (last character is a null value) serial number that was assigned by manufacturing.

U.S. / Non-U.S. Defaults

The value of this setting determines whether the device uses the U.S. or Non-U.S. factory default value.

To change this setting:

1. From the Diagnostics Menu, navigate to **PRINTER SETUP**.
2. Select **Defaults**.
3. Touch ◄ or ► to change the value.
4. Touch **Submit** to save the setting, or touch **Back** to return to the Diagnostics Menu without saving any changes.

REPORTS

This menu contains informational reports that are helpful when servicing a device.

The Menu Settings Page report generates a list of the Diagnostic Menu settings and each setting's current value.

SCANNER TESTS

ASIC Test

This setting initiates a scan of the scanner ASIC's memory.

Feed Test (SCANNER TESTS)

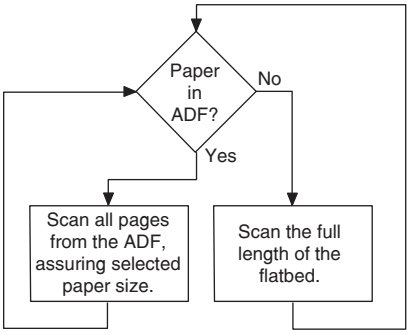
This setting enables a user to execute a continuous feed test from either the ADF or the flatbed.

To perform the Feed Test:

1. Touch **SCANNER TESTS** from the Diagnostics Menu.
2. Touch **Feed Test**.

You are prompted to select a paper size for the ADF. For flatbed scans, the full length of the flatbed is traversed.

The device decides whether to run the flatbed or the ADF according to the following flowchart:



During the test, **Running... Flatbed:xxxxx ADF:xxxxx** appears on the LCD. The Flatbed number increases each time the scanner performs a flatbed scan, and the ADF number increases each time the scanner performs an ADF scan.

Press **Stop** to end this test.

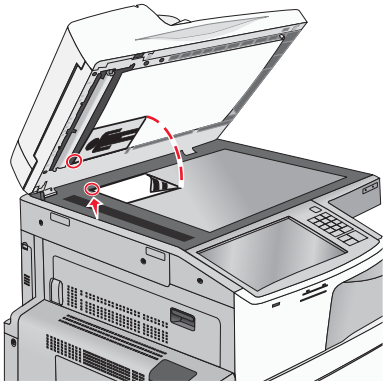
If an error occurs (such as a scanner jam), **Feed Test Failed Flatbed:xxxxx ADF:xxxxx** appears on the LCD. To clear the message, press **Stop**.

Scanner Manual Registration

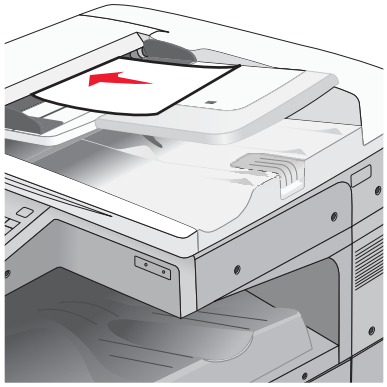
This setting is for making adjustments to control the scanner's alignment.

To manually register the scanner and the ADF:

1. Scan a sample document to produce a digital image.
   Note: For the scanner registration, the sample document must be placed facedown on the scanner glass in the corner with the arrow.



   Note: For the ADF registration, the sample document must be placed faceup on the input bin.



2. Touch **SCANNER TESTS** from the Diagnostics Menu.
3. Touch **Scanner Manual Registration**.
4. Check the alignment of the top and left edges of the digital image produced in step 1. Adjust the scanner and ADF registration by changing the settings below:
   Note: *Lead* refers to the edge of the paper parallel to the scanner carriage. Adjusting *FLATBED SS REGI ADJUST*, *ADF SIDE1 LEAD REGI ADJUST* and *ADF SIDE2 LEAD REGI ADJUST* changes the left margin settings. Adjusting *FLATBED FS REGI ADJUST*, *ADF SIDE1 LEAD OFFSET ADJUST* and *ADF SIDE2 LEAD OFFSET ADJUST* changes the top margin settings.

   - FLATBED SS REGI ADJUST
   - FLATBED FS REGI ADJUST
   - ADF SIDE1 LEAD REGI ADJUST
   - ADF SIDE1 LEAD OFFSET ADJUST
   - ADF SIDE2 LEAD REGI ADJUST
   - ADF SIDE2 LEAD OFFSET ADJUST

5. Touch or to adjust the settings.
6. Touch **Submit** to save the changes or touch **Back** to return to **Scanner Manual Registration** without saving any changes.

7. POR the machine and repeat step 1 to verify the adjustments.
8. Repeat steps 2–6 to make further adjustments.

SCANNER CALIBRATION

Adjust Calibration Values

This setting adjusts the black value for the mono and color bands used in the gamma curve for a specific scan source. Use this setting to manually tune the black gamma value of the replacement scanner.

To view the effects of adjusting a scan source's value:

- **ADF front adjustments**—Place the test page image side up in the ADF and select **Copy Quick Test**.
- **ADF front adjustments**—Place the test page image side up in the ADF and select **Copy Quick Test**.
- **Flatbed adjustments**—Remove all pages from the ADF, places the test page on the flatbed, and select **Copy Quick Test**.

Copy Quick Test

The printer performs a copy using the following value when this this option is selected:

- Content Type: text/photo
- Content Source: color laser
- Darkness:5
- Background Removal: -4
- Contrast: best for content
- Shadow Detail: 4
- Sharpness: 3
- Deskew: false

Print Testcase

The printer generates a report to use with the Copy Quick Test setting when this option is selected.

Reset Flatbed Calibration

This setting resetes the flatbed calibration.

Reset ADF Front Calibration

This setting resetes the ADF front calibration.

Reset ADF Back Calibration

This setting resetes the ADF back calibration.

SENSOR TESTS

PRINTER SENSOR TESTS

This test verifies that the sensors in the base machine are operating properly.

To run these tests:

1. From the Diagnostics Menu, navigate to **SENSOR TESTS**.
2. Select **PRINTER SENSOR TESTS**.

3. Select the test from the following options:

- Sensor (transparency detect)
- Sensor (transfer belt HP)
- Sensor (tray 1 media out)
- Sensor (tray 1 media level)
- Sensor (tray 1 media size switch)
- Sensor (tray 1 pre feed)
- Sensor (tray 2 media out)
- Sensor (tray 2 media level)
- Sensor (tray 2 feed out)
- Sensor (tray 2 media size)
- Sensor (tray 3 media out)
- Sensor (tray 3 media level)
- Sensor (tray 3 feed out)
- Sensor (tray 3 media size)
- Sensor (tray 3 pre feed) TTM only
- Sensor (tray 4 media out)
- Sensor (tray 4 media level)
- Sensor (tray 4 feed out)
- Sensor (tray 4 media size)
- Sensor (tray 4 pre feed) TTM only
- Sensor (MPF media out)
- Sensor (MPF media level)
- Sensor (upper redrive)
- Sensor (fuser exit)
- Sensor (paper on belt)
- Sensor (registration)
- Sensor (MPF feed out)
- Sensor (duplex wait)
- Sensor (lower redrive shift HP)
- Sensor (upper redrive shift HP)
- Sensor (standard bin 1 media full)
- Sensor (standard bin 2 media full)
- Sensor (printer left door interlock)
- Sensor (upper redrive door interlock)
- Sensor (printer front door interlock)
- Sensor (duplex door interlock)
- Sensor (tray module left door interlock)
- Sensor (waste toner bottle present)
- Sensor (waste toner bottle full)
- Sensor (1st transfer rolls retract HP)
- Sensor (2nd transfer roll retract HP)

ADF/SCANNER SENSOR TESTS

This test verifies that the sensors in the ADF/Scanner are operating properly.

To run these tests:

1. From the Diagnostics Menu, navigate to **SENSOR TESTS**.
2. Select **ADF/SCANNER SENSOR TESTS**.
3. Select the test from the following options:

- Sensor (ADF document set)
- Sensor (ADF registration)
- Sensor (ADF feed out)
- Sensor (ADF pre registration)
- Sensor (ADF inverter)
- Sensor (ADF top door interlock)
- Sensor (ADF closed interlock)
- Sensor (ADF document tray width 1)
- Sensor (ADF document tray width 2)
- Sensor (ADF document tray width 3)
- Sensor (ADF scan width 1)
- Sensor (ADF scan width 2)
- Sensor (ADF scan width 3)
- Sensor (ADF document tray length 1)
- Sensor (ADF document tray length 2)
- Sensor (FB scanner HP)
- ADF connection detected
- Sensor (FB platen length 1)
- Sensor (FB platen length 2)
- Sensor FB angle)

FINISHER SENSOR TESTS

This test verifies that the sensors in the finisher are operating properly.

To run these tests:

1. From the Diagnostics Menu, navigate to **SENSOR TESTS**.
2. Select **FINISHER SENSOR TESTS**.
3. Select the test from the following options:

Available finisher sensor tests:

- Sensor (booklet knife HP)
- Sensor (booklet compiler media present)
- Sensor (booklet media exit)
- Sensor (booklet unit interlock)
- Sensor (booklet front staple low)
- Sensor (booklet rear staple low)
- Sensor (booklet bin media present)
- Sensor (booklet front tamper HP)
- Sensor (booklet media entracne)
- Sensor (booklet rear tamper HP)
- Sensor (booklet end guide HP)
- Sensor (booklet knife folding)
- Sensor (finisher media entrance)
- Sensor (buffer path)
- Sensor (diverter gate)
- Sensor (upper media exit)
- Sensor (lower media exit)
- Sensor (compiler media present)
- Sensor (bridge media entrance)
- Sensor (bridge media exit)
- Sensor (punch side reg 1)
- Sensor (punch side reg 2)
- Sensor (upper media bin full)
- Sensor (front tamper HP)
- Sensor (rear tamper HP)
- Sensor (stapler carriage HP)
- Sensor (staple low)
- Sensor (staple self priming)
- Sensor (staple motor HP)
- Sensor (media eject clamp HP)
- Sensor (media eject shaft HP)
- Sensor (stacker bin upper limit)
- Sensor (stacker bin no media)
- Sensor (stacker bin level encoder)
- Sensor (stacker bin level 1)
- Sensor (stacker bin level 2)
- Sensor (punch carriage shift HP)
- Sensor (punch cam HP)
- Sensor (punch cam front)
- Sensor (punch cam hole select)
- Sensor (punch unit motor encoder)
- Sensor (punch waste box set)
- Sensor (bridge bin exit)
- Sensor (deculer cam HP)
- Sensor (eject cover interlock)
- Sensor (finisher front door interlock)
- Sensor (bridge top door interlock)

Service Engineer (SE) Menu

Print SE Menus

General

Copyright—Displays copyright information
Optra Forms mode—On or off

Code Revision Info

Network Code Level—Displays network code level
Network Compile Info—Displays compile information
Printer Code Level—Displays printer code information

Printer Compile Info—Displays compile information

History

Print History
Mark History
History Mode

MAC

Set Card Speed
Set LAA
Keep Alive

NVRAM

Dump NVRAM
Reinit NVRAM

NPAP

Print Alerts

TCP/IP

netstat -r
arp -a
Allow SNMP Set
Set MTU
Meditech Mode
Raw LPR Mode
Gather Debug
Enable Debug

Paper jams

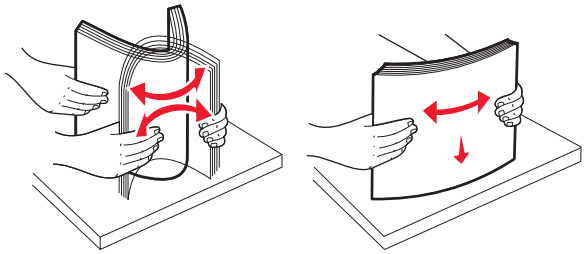
Avoiding jams

Paper tray recommendations

- Make sure the paper lies flat in the tray.
- Do not remove a tray while the printer is printing.
- Do not load a tray while the printer is printing. Load it prior to printing, or wait for a prompt to load it.
- Do not load too much paper. Make sure the stack height does not exceed the indicated maximum height.
- Make sure the guides in the tray or the multipurpose feeder are properly positioned, and are not pressing too tightly against the paper or envelopes.
- Push the tray in firmly after loading paper.

Paper recommendations

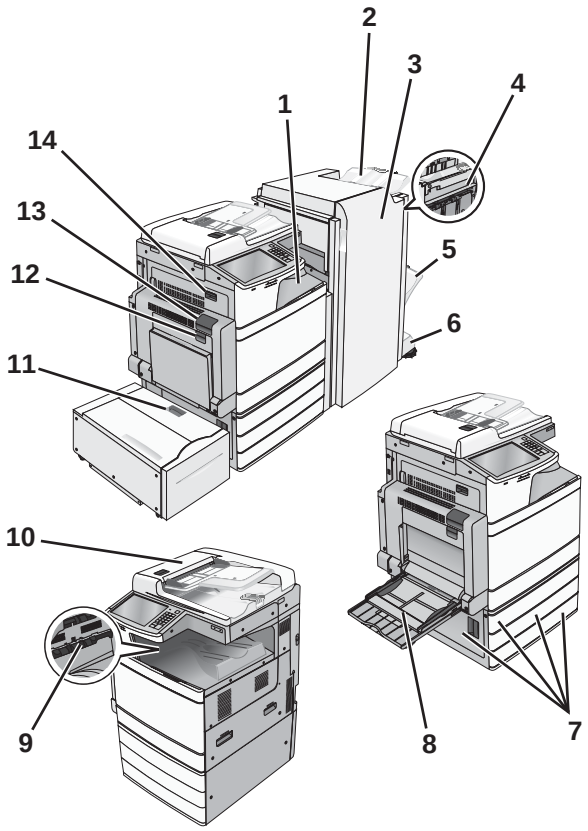
- Use only recommended paper or specialty media.
- Do not load wrinkled, creased, damp, bent, or curled paper.
- Flex and straighten paper before loading it.



- Do not use paper that has been cut or trimmed by hand.
- Do not mix paper sizes, weights, or types in the same stack.
- Make sure all sizes and types are set correctly in the printer control panel menus.
- Store paper per manufacturer recommendations.

Understanding jam numbers and locations

When a jam occurs, a message indicating the jam location appears on the display. Open doors and covers and remove trays to access jam locations. To resolve any paper jam message, you must clear all jammed paper from the paper path.



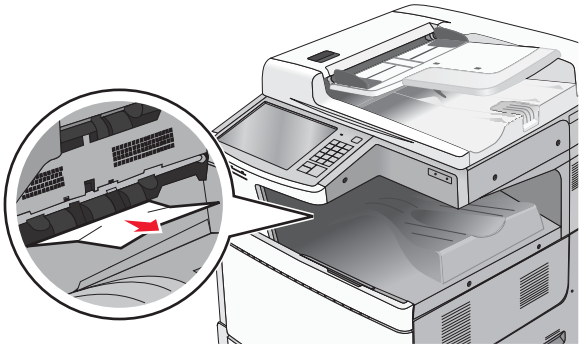
#	Area name	Error code	Instructions	Go to page
1	Cover F (paper transport)	4yy.xx, 455	Open cover F, and then removed the jammed paper. Open door G and H, and then remove the jammed paper. Open staple door, remove the staple cartridge, and then remove the jammed staple.	3-52, 3-56
2	Standard finisher bin			
3	Door G			
4	Door H			
5	Finisher bin 1			
6	Finisher bin 2			
7	Door C Trays 1–4	24x	Open door C, and then remove the jammed paper Open each tray, and then remove the jammed paper.	3-43
8	Multipurpose feeder	250	Remove all paper from the multipurpose feeder, and then remove the jammed paper.	3-49
9	Standard exit bin	201–202, 203	Remove all paper from the standard exit bin, and then remove the jammed paper.	3-36, 3-39
10	Automatic Document Feeder (ADF)	28y.xx	Remove all paper from the ADF, and then remove the jammed paper.	3-58

#	Area name	Error code	Instructions	Go to page
11	Tray 5 (high-capacity feeder)	24x	Open the tray, and then remove the jammed paper. Open the top cover, and then remove the jammed paper. Gently move the tray to the left until it stops, and then remove the jammed paper.	3-45
12	Door B	230	Open door B, and then remove the jammed paper.	3-40
13	Door A	201-202 231 281	Open door A, and then remove the jammed paper. Remove all paper from the fuser, and then remove the jammed paper.	3-36, 3-41, 3-49
14	Door D	203	Open door A, and then door D, and then remove the jammed paper.	3-39

201-202 paper jams

If the jammed paper is visible in the standard exit bin, then firmly grasp the paper on each side, and then gently pull it out.

Note: Make sure all paper fragments are removed.

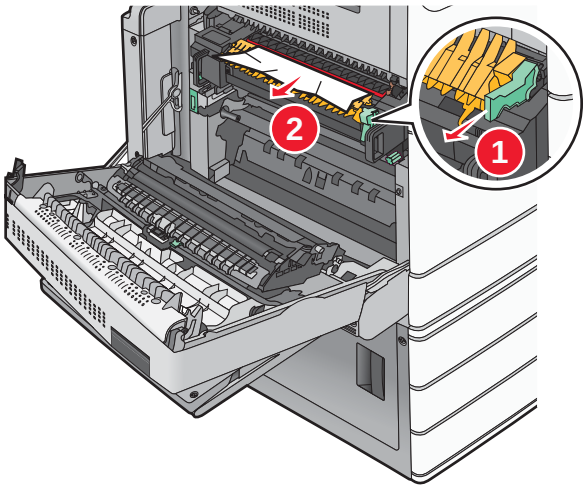


Paper jam in the fuser

1. Open door A by lifting the release latch and lowering the door.

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

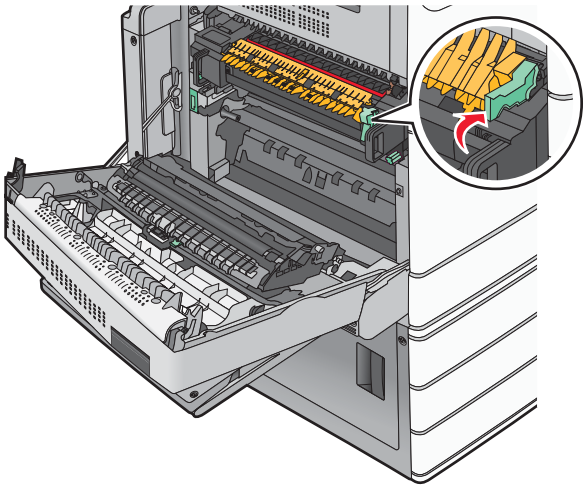
2. Pull the green lever down.



3. 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.

4. Push the green lever back into place.



5. Close door A.
6. If necessary, touch **Continue** from the printer control panel.

Paper jam under the fuser

1. Open door A by lifting the release latch and lowering the door.

CAUTION—HOT SURFACE:

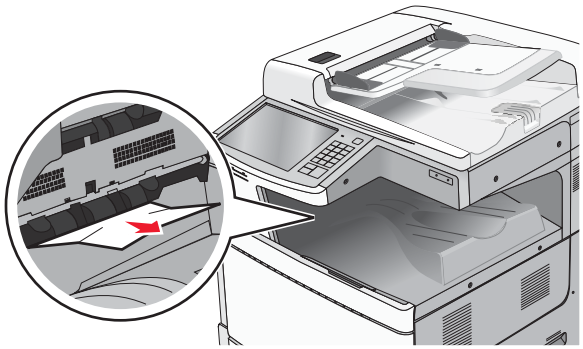
The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching.

2. If the jammed paper is visible under the fuser, then firmly grasp the paper on each side, and then gently pull it out.
   Note: Make sure all paper fragments are removed.
3. Close door A.
4. If necessary, touch **Continue** from the printer control panel.

203 paper jam

If the jammed paper is visible in the standard exit bin, then firmly grasp the paper on each side, and then gently pull it out.

Note: Make sure all paper fragments are removed.

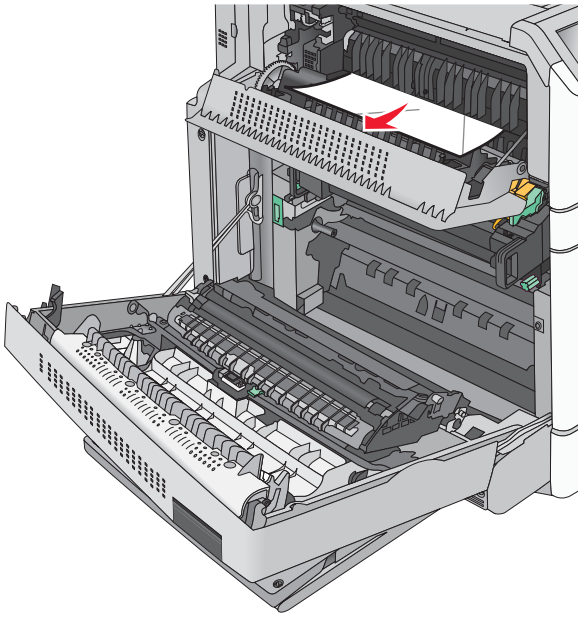


1. Open door A and then door D by lifting the release latch of each door and lowering the doors.

CAUTION—HOT SURFACE:

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

2. Firmly grasp the jammed paper on each side, and then gently pull it out.

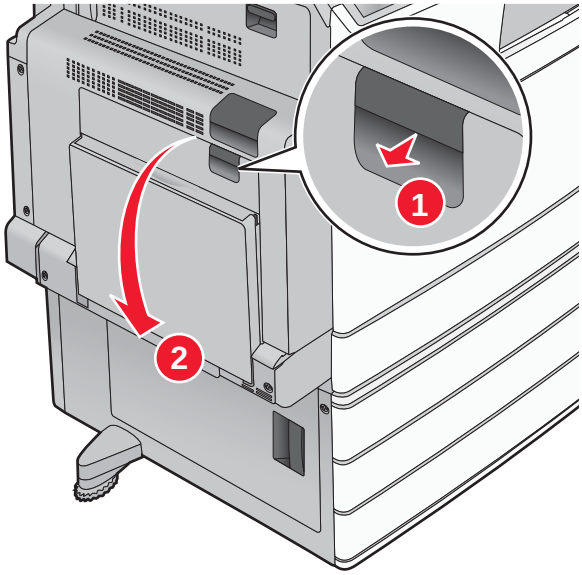


Note: Make sure all paper fragments are removed.

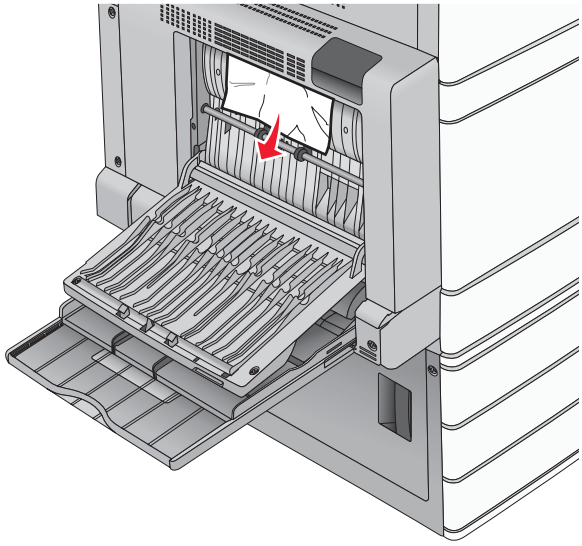
3. Close door D, and then close door A.
4. If necessary, touch **Continue** from the printer control panel.

230 paper jam

1. Lower the multipurpose feeder, and then open door B.



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

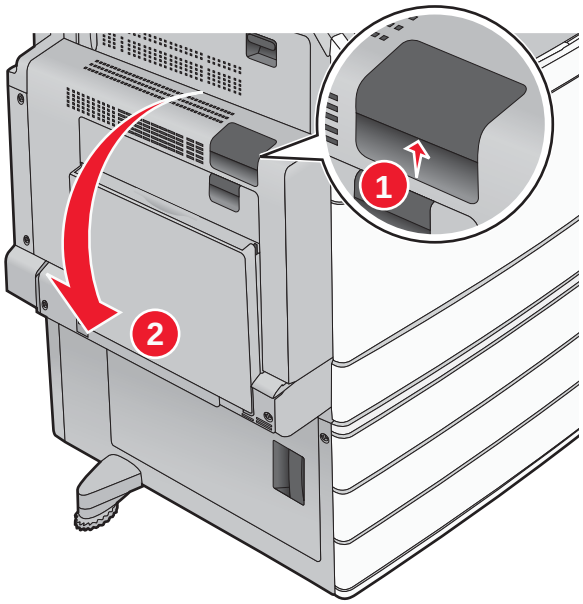


3. Close door B.
4. If necessary, touch **Continue** from the printer control panel.

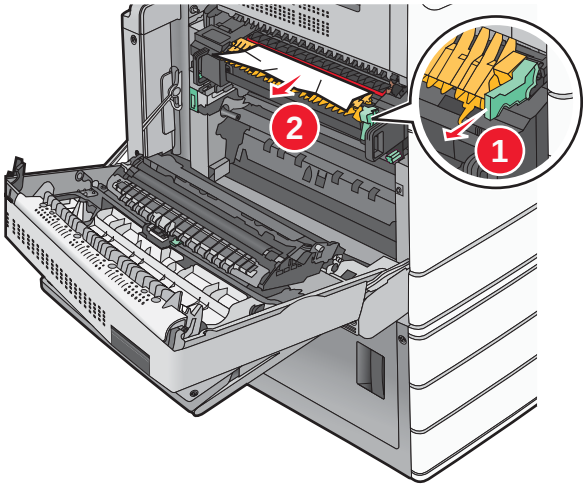
231 paper jam

1. Open door A by lifting the release latch, and then lowering the door.

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



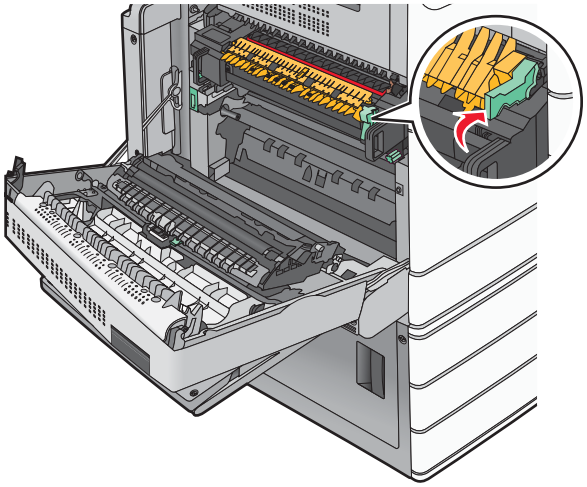
2. Pull the green lever down.



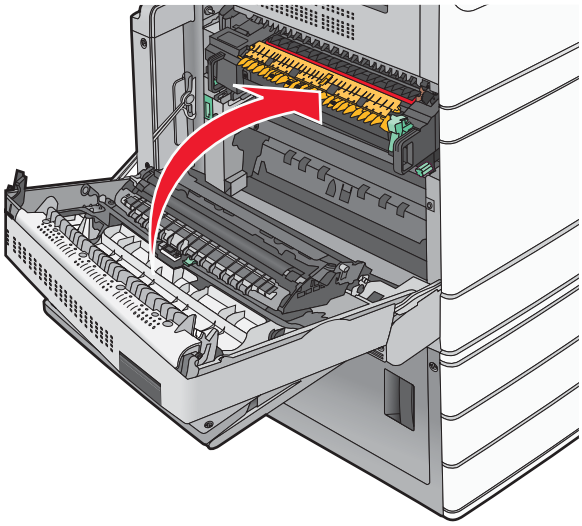
Note: Make sure all paper fragments are removed.

3. Firmly grasp the jammed paper on each side, and then gently pull it out.

4. Push the green lever back into place.



5. Close door A.

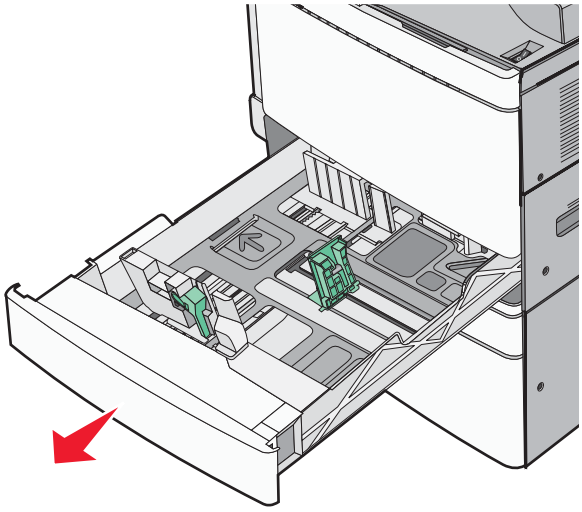


6. If necessary, touch **Continue** from the printer control panel.

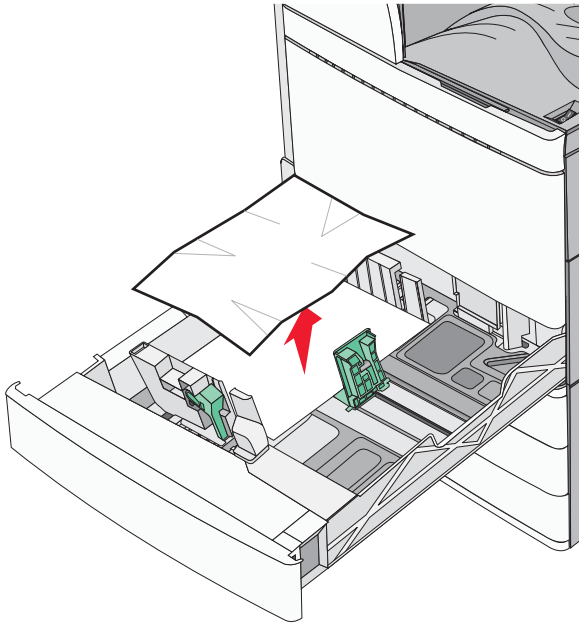
24x paper jam

Paper jam in Tray 1

1. Open Tray 1.



2. Firmly grasp the jammed paper on each side, and then gently pull it out.

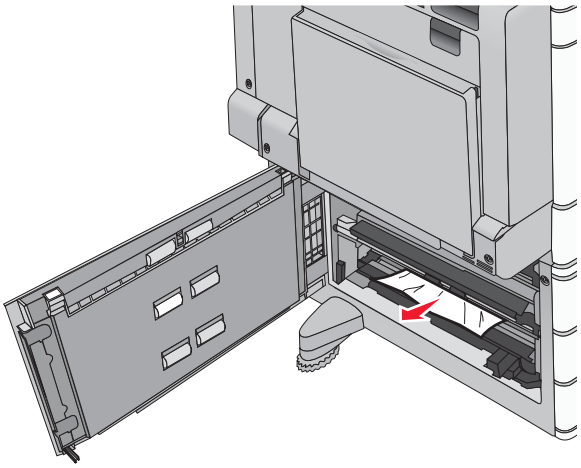


Note: Make sure all paper fragments are removed.

3. Close Tray 1.
4. If necessary, touch **Continue, jam cleared** from the printer control panel.

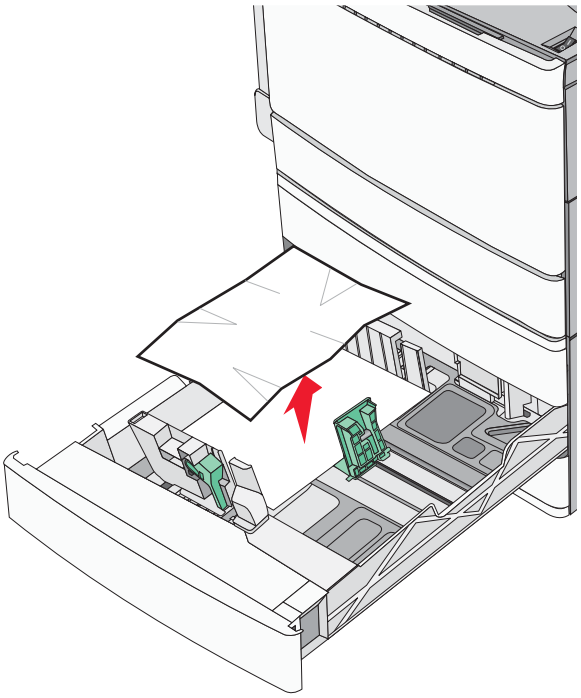
Paper jam in one of the optional trays (Trays 2–4)

1. Check door C, and then firmly grasp the jammed pages and then pull it out.



Note: Make sure all paper fragments are removed.

2. Open the specified tray.
3. Firmly grasp the jammed paper on each side, and then gently pull it out.



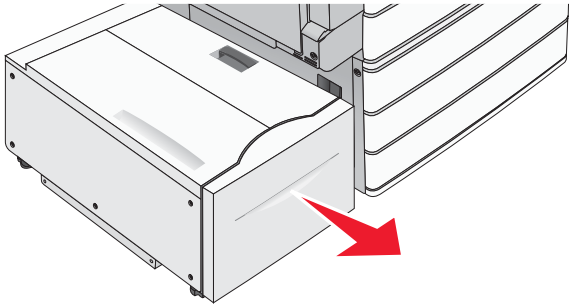
Note: Make sure all paper fragments are removed.

4. Close the tray.
5. If necessary, touch **Continue, jam cleared** from the printer control panel.

Paper jam in Tray 5 (high-capacity feeder)

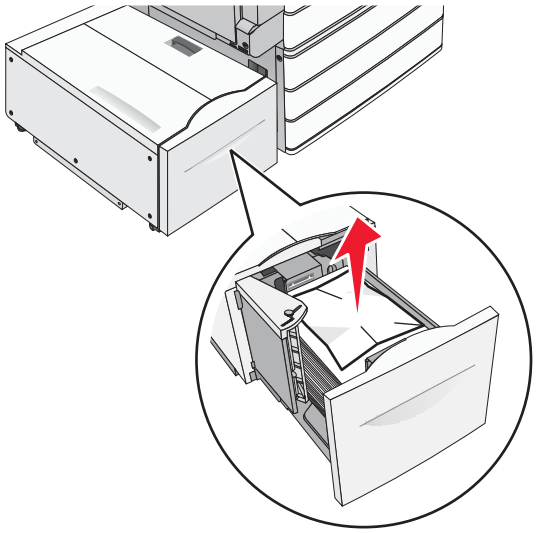
Paper jam inside the tray

1. Pull out the tray until it stops.



	CAUTION Do not pull out the tray with too much force. Doing so may hit and injure your knees.

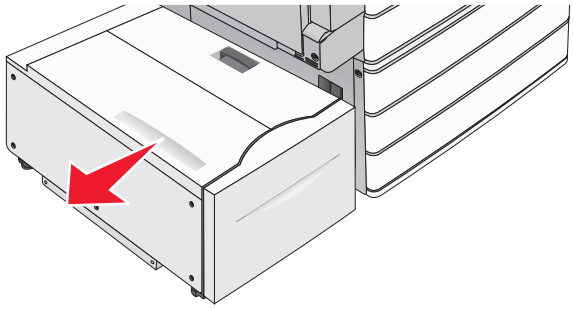
2. Firmly grasp the jammed paper on each side, and then gently pull it out.



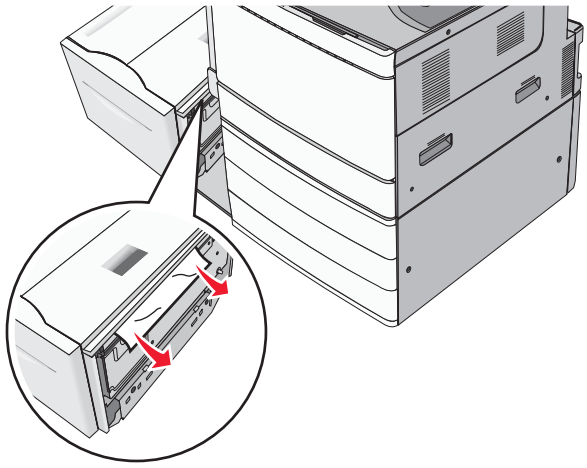
3. Push the tray gently until it stops.
4. If necessary, touch **Continue, jam cleared** from the printer control panel.

Paper jam in the tray exit

1. Gently move the tray to the left until it stops.



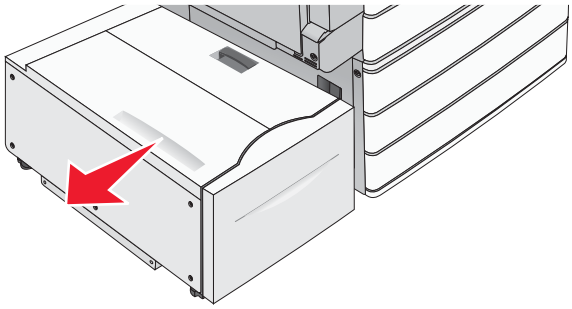
2. Firmly grasp the jammed paper on each side, and then gently pull it out.



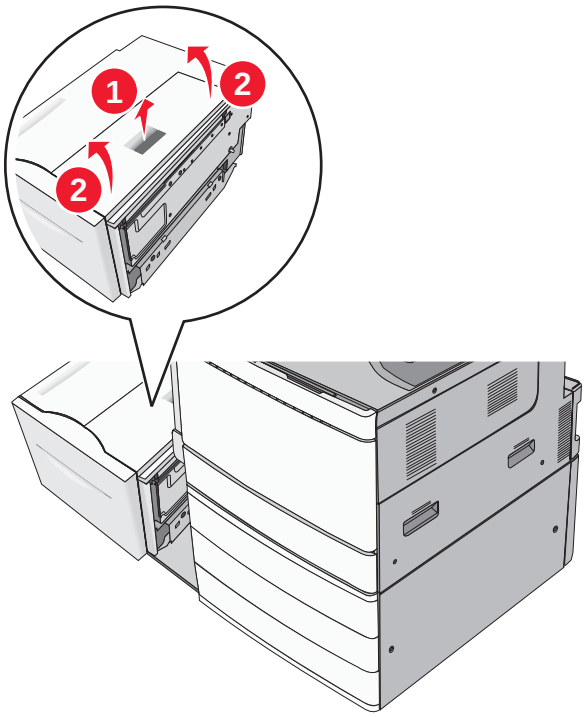
3. Gently put the tray back into position.
4. If necessary, touch **Continue, jam cleared** from the printer control panel.

Paper jam in the top cover

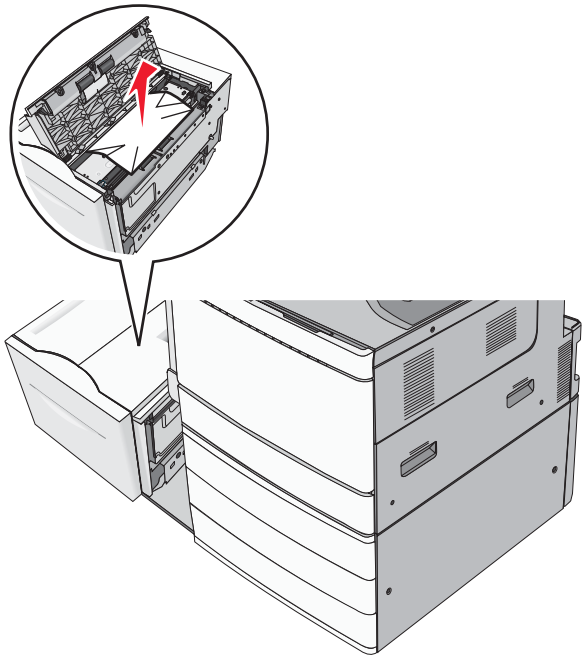
1. Gently move the tray to the left until it stops.



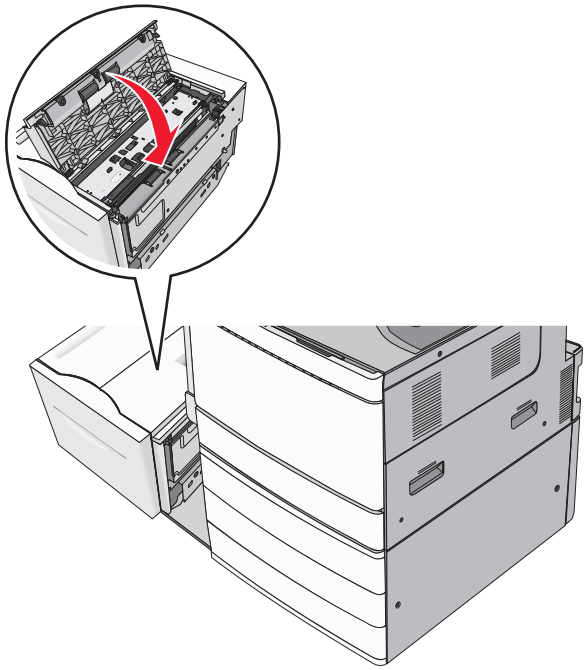
2. Open the top cover.



3. Firmly grasp the jammed paper on each side, and then gently pull it out.



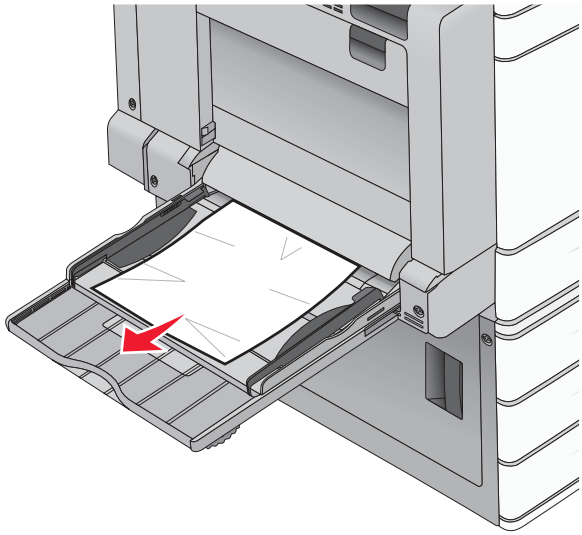
4. Close the top cover.



5. Gently put the tray back into position.
6. If necessary, touch **Continue, jam cleared** from the printer control panel.

250 paper jam

1. Remove any jammed pages from the multipurpose feeder.



2. Load paper into the multipurpose feeder.
3. If necessary, touch **Continue, jam cleared** from the printer control panel.

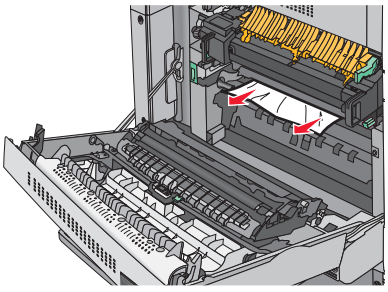
281 paper jam

Paper jam in door A

1. Open door A.

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

2. Determine where the jam is located, and then remove it:
   2.1 If the paper is visible under the fuser, then firmly grasp it on each side, and pull it out.
   Note: Make sure all paper fragments are removed.

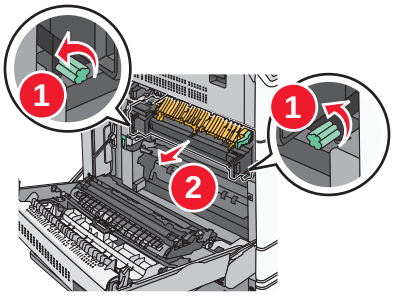


   2.2 If the paper is not visible, then you will need to remove the fuser unit.

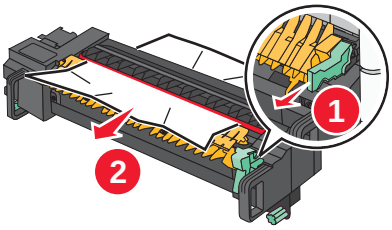
Warning: Do not touch the center of the fuser unit. Doing so will damage the fuser.

a. Remove the thumbscrew from each side of the fuser unit by rotating each one counterclockwise.

b. Lift the handles on each side of the fuser, and then pull to remove the fuser unit.



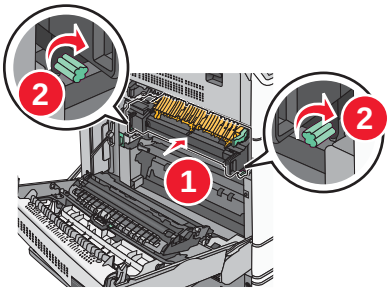
2.3 Firmly grasp the jammed paper on each side, and then gently pull it down and out.



Notes:

- Make sure all paper fragments are removed.
- If the paper is in the fuser, then lower the fuser nip release lever, and switch it to envelope mode.
- After removing the jammed paper, return the lever to the proper position.

2.4 Align the fuser unit using the handles on each side, and then place it back into the printer.

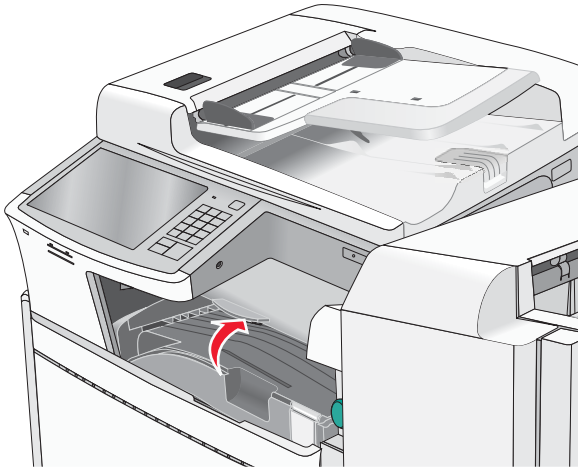


3. Close door A.

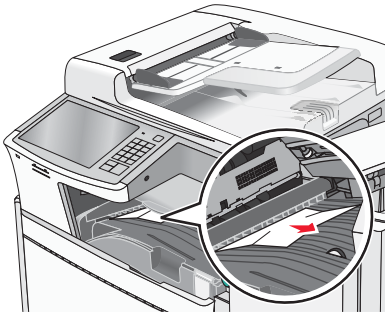
4. If necessary, touch **Continue** from the printer control panel.

Paper jam in cover F (paper transport)

1. Open cover F.

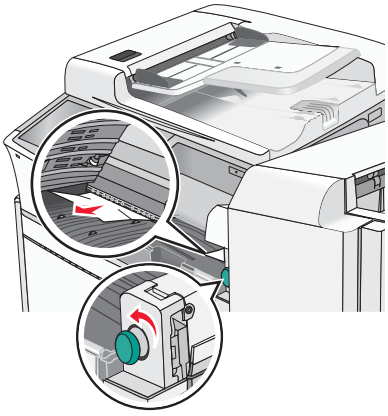


2. Firmly grasp the jammed paper on each side, and then gently pull it out.



Note: Make sure all paper fragments are removed.

Note: If the paper jam is difficult to remove, then rotate the knob counterclockwise.

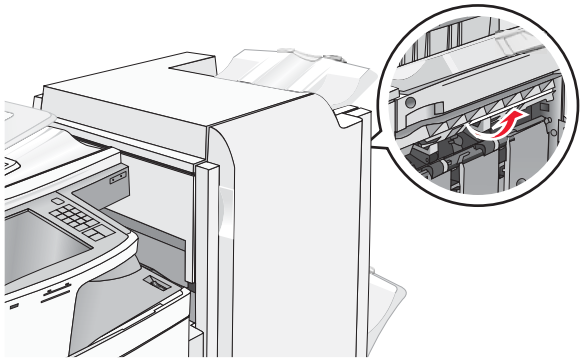


3. Close cover F.
4. If necessary, touch **Continue** from the printer control panel.

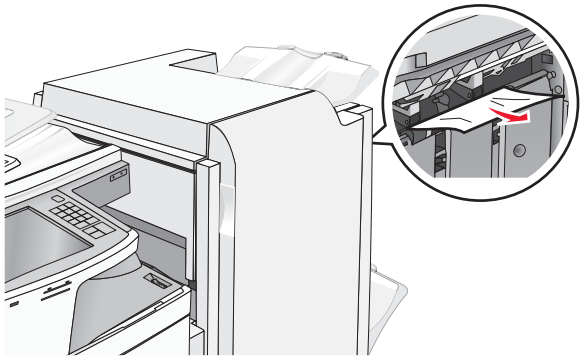
4yy.xx paper jams

Paper jam in door H

1. Open door H.
   Note: Door H is located between the finisher exit bins.



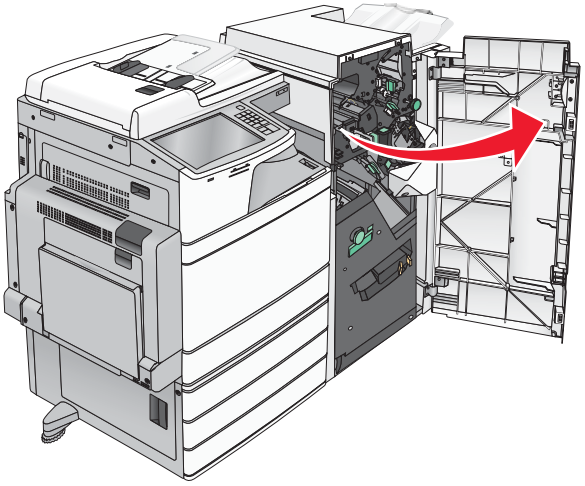
2. Firmly grasp the jammed paper on each side, and then gently pull it out.
   Note: Make sure all paper fragments are removed.

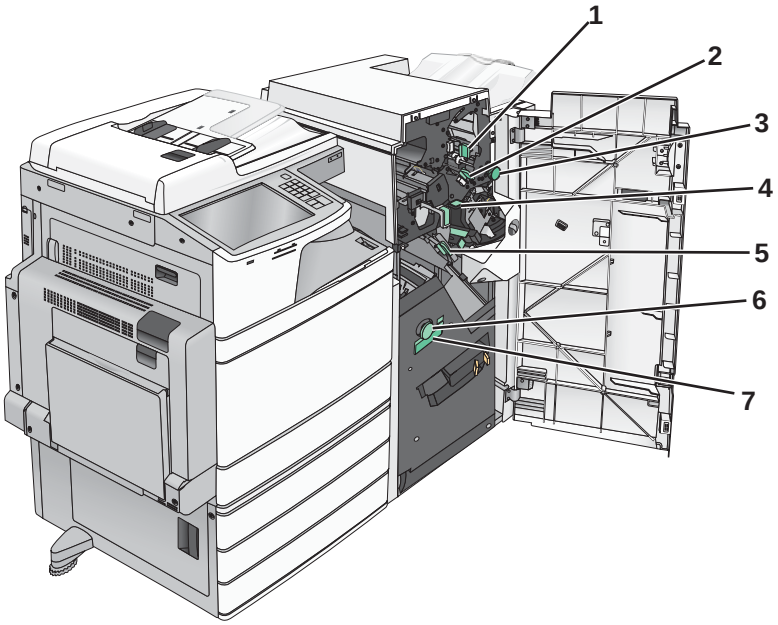


3. Close door H.
4. If necessary, touch **Continue** from the printer control panel.

Paper jam in door G

1. Open door G.

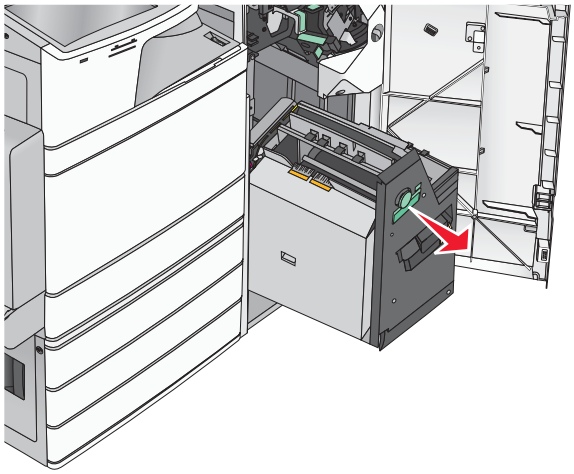




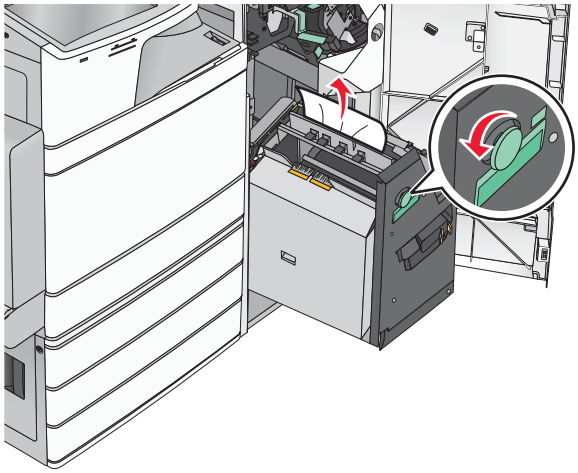
Area	Cover, knob, or handle name
1	Cover G1
2	Cover G2
3	Knob G3
4	Cover G4
5	Cover G7
6	Knob G8
7	Handle G9

2. Lift cover G1 lever.
3. Firmly grasp any jammed paper, and then gently pull it out.
   Note: Make sure to remove all paper fragments after gently pulling out any jammed paper inside door G.

4. Move cover G2 to the right, and then remove any jammed paper.
   Note: If the paper is jammed in the rollers, then rotate knob G3 counterclockwise.
5. Move cover G4 down, and then remove any jammed paper.
6. Move cover G7 to the left, and then remove any jammed paper.
7. Pull handle G9 until the tray is completely open.



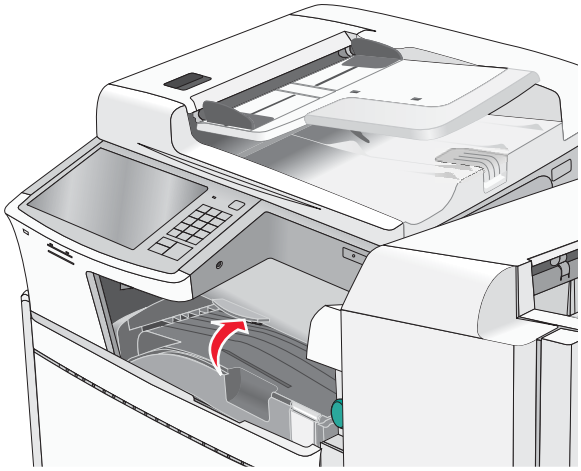
8. Lift the inside cover. If the paper is jammed in the rollers, then rotate knob G8 counterclockwise, and then remove the jammed paper.



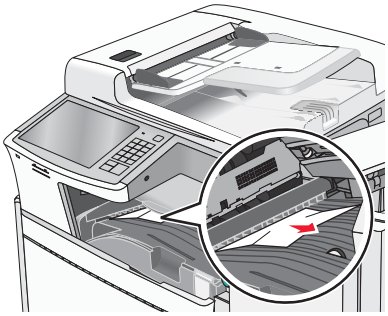
9. Close door G.
10. If necessary, touch **Continue** from the printer control panel.

Paper jam in cover F (paper transport)

1. Open cover F.

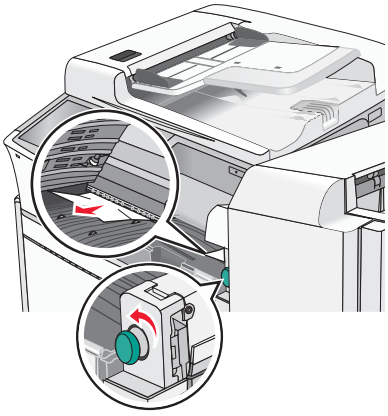


2. Firmly grasp the jammed paper on each side, and then gently pull it out.



Note: Make sure all paper fragments are removed.

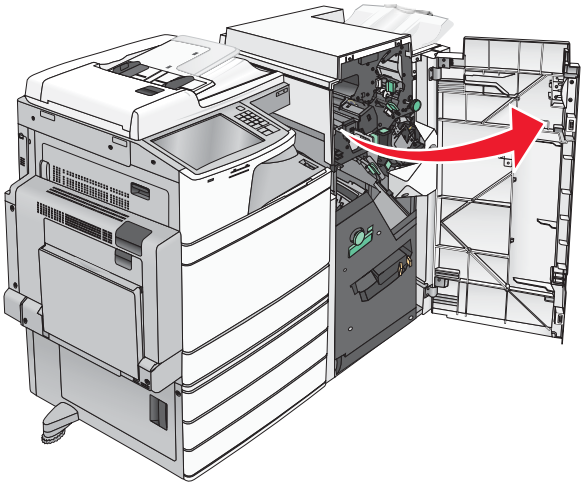
Note: If the paper jam is difficult to remove, then rotate the knob counterclockwise.



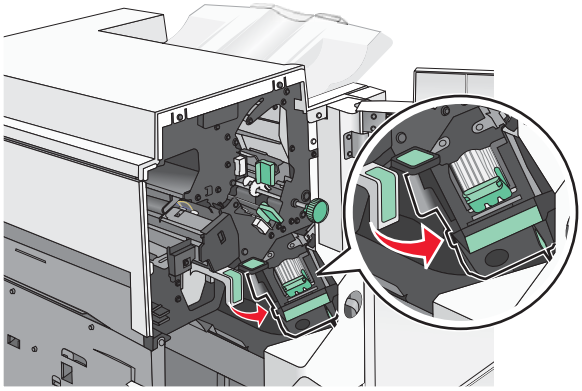
3. Close cover F.
4. If necessary, touch **Continue** from the printer control panel.

455 staple jam

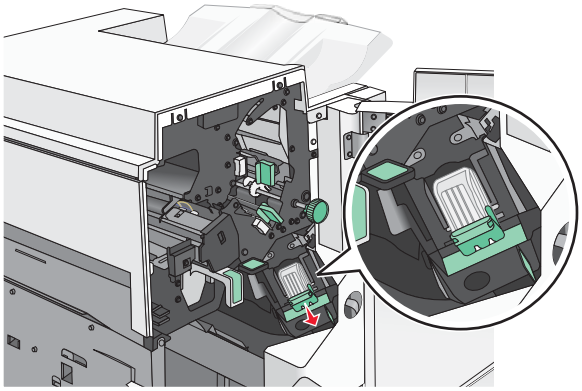
1. Open door G.



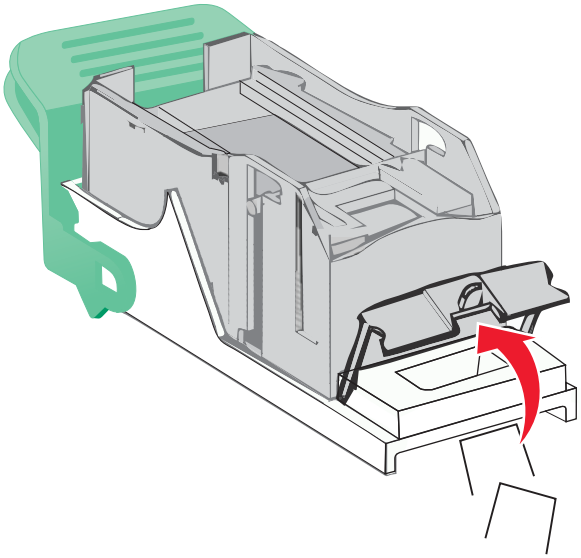
2. Press the latch to open the stapler door.
   Note: The stapler door is located behind the finisher.



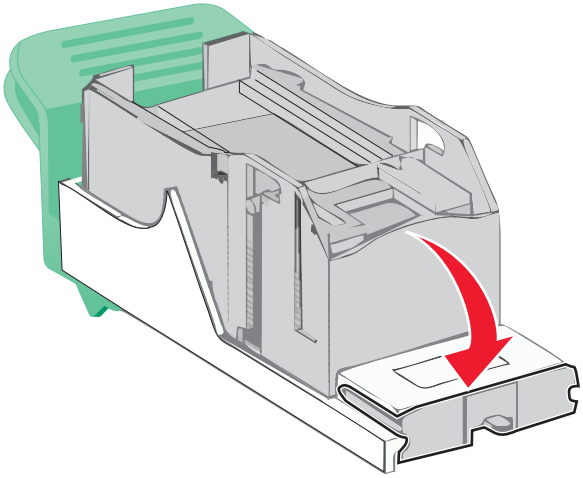
3. Lower the latch of the staple cartridge holder, and then pull the staple cartridge holder out of the printer.



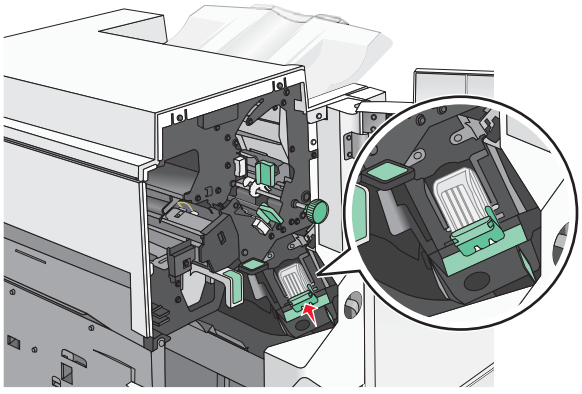
4. Use the metal tab to lift the staple guard, and then remove any jammed or loose staples.



5. Close the staple guard.



6. Press down on the staple guard until it *clicks* into place.
7. Push the staple cartridge holder firmly back into the stapler unit until the staple cartridge holder *clicks* into place.



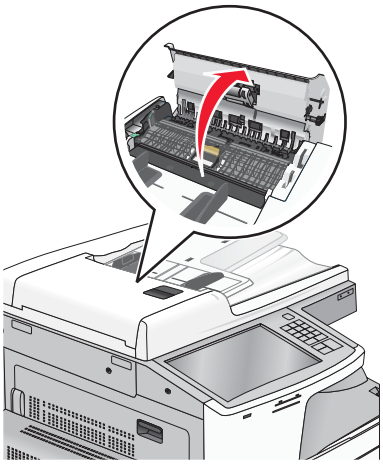
8. Close the stapler door.

9. Close door G.
10. If necessary, touch **Continue, jam cleared** from the printer control panel.

28y.xx paper jams

The scanner failed to feed one or more pages through the ADF.

1. Remove all original documents from the ADF.
   Note: The message clears when the pages are removed from the ADF.
2. Open the ADF cover.



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 ADF cover.
5. Reload original documents into the ADF, straighten the stack, and then adjust the paper guide.

Security reset jumper

Each device contains a hardware jumper with which an administrator can:

- Erase all security templates, building blocks, and access controls that a user has defined (i.e. the factory default configuration); or
- Force the value of each function access control to “No Security” (all security templates and building blocks are preserved but not applied to any function).

Note: If the “Enable Audit ” setting in the Security Audit Log section of the “Security Menu ” is activated,

the device logs a message each time that the jumper is used.

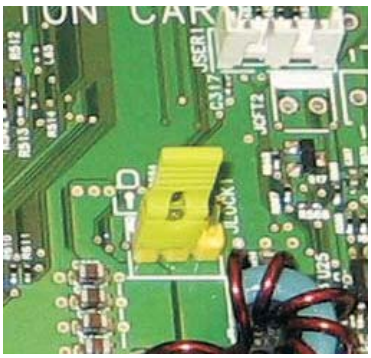
A small lock icon identifies the jumper’s position on the RIP card. Also, to make it easier to separate the small yellow plastic jumper from the 3-pin connector, a looped handle is attached to the top of the small yellow jumper that covers the 3-pin connector.

An administrator controls how a jumper reset affects a device by configuring the jumper-related setting on the Security Web page.

Note: Administrators can discourage tampering with the jumper by securing the entire RIP card cage (of which the jumper is a part) with a Kensington lock. or, to completely negate the effects of a jumper reset, an administrator can select the “No Effect ” value for the jumper-related setting on the Security Web page or in the “Security Reset Jumper ” setting in the “ Security Menu”.

To perform a jumper reset operation:

1. Power the device off.
2. Remove the Kensington lock from the card cage (if installed).
3. Remove the small yellow jumper that covers a pair of the jumper’s pins.



4. Replace the small yellow jumper so that it covers the pins adjacent to its original position.
5. Replace and secure the Kensington lock on the card cage (if installed).
6. Power the device on.

Note: The movement of the small yellow jumper from position A to position B triggers the reset, not the specific positions. When the device is powered on, it labels the current position of the small yellow jumper (let’s say position A) as the “home ” position. If, at the next POR, the device detects that the small yellow jumper has moved from its previous “home ” position (position A) to the “ other ” position (position B), then it performs a jumper reset. After performing the reset, the device also relabels the “ other ” position (position B) as the “ home ” position (now position A is the “other ” location).

Note: The admin's security settings are lost when the RIP card is replaced. Secure settings are those that are configured under the Settings->Security->Edit Security Setups menu. These are all the PINs, Passwords, and other Building Blocks and Security Templates that define the device's protection of functions and menus. In other words, if the customer is using LDAP to authenticate users to use the Copy function, then after the RIP card is replaced, the device will no longer have that LDAP configuration or the Copy function protected.

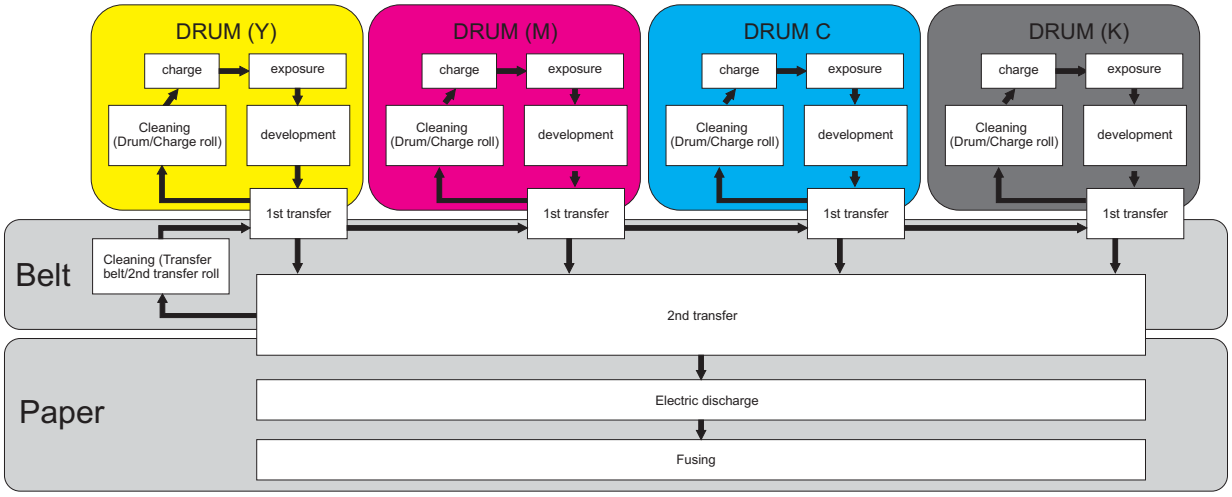
Printer theory of operations

Print engine theory

Four toner cartridges (cyan, yellow, magenta, and black) are used to create text and images on media. Each of the colors has a photoconductor drum and an image transfer unit (ITU). To obtain a print output, each drum will undergo the following processes:

1. Charge
2. Exposure
3. Development
4. 1st transfer
5. Cleaning (Drum/Charge roll)
6. 2nd Transfer
7. Electric Discharge
8. Cleaning (Transfer belt/2nd transfer roll)
9. Fusing

Printing process flow



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.

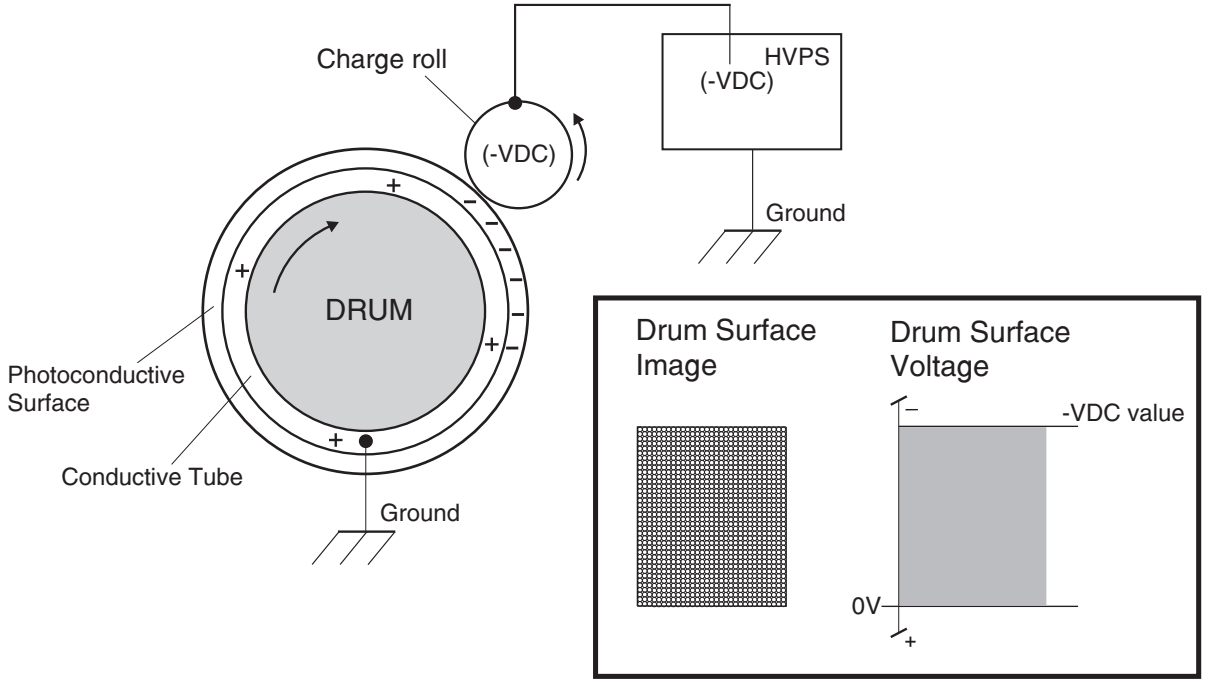
The high-voltage power supply sends a charge to various components in the EP process. The printhead LED arrays fire on the photoconductors and alter the surface charge relative to the planed image for each photoconductor. Each photoconductor rotates past its respective developer roll, and toner is developed on the surface of each photoconductor. The four separate color images are then transferred to the transfer belt 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 roll. Media is picked up from the tray and carried to the transfer roll where the image is then transferred from the transfer belt to the media. The timing of the paper pick is determined by the speed of the transfer belt.

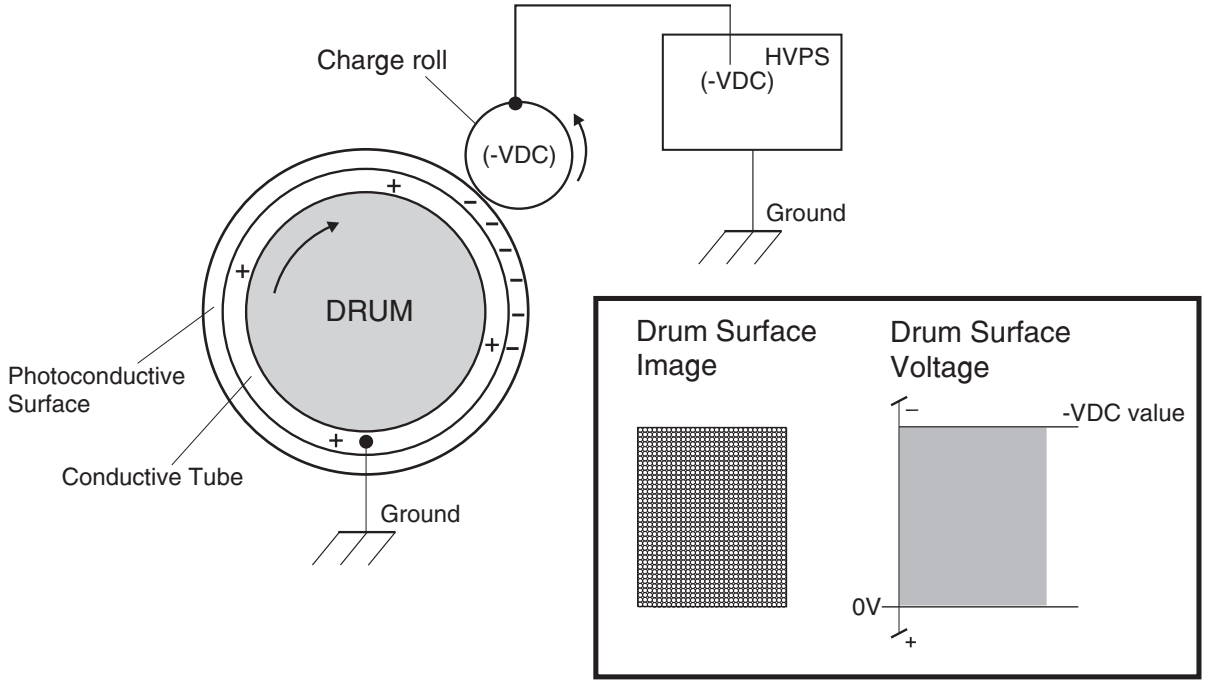
The media is carried to the fuser belt and roller where heat and pressure are applied to the page to permanently bond the toner to the page. The fuser rollers push the media into the output bin. The transfer unit is cleaned and the process begins again for the next page.

Step 1: Charge

Voltage is sent from the high-voltage power supply (HVPS) to the charge roll, which places a uniform negative electrostatic charge on the surface of the drum. The drum surface is made of a photoconductive material that holds an electrical charge as long as the drum is not exposed to light. Light striking the drum causes the surface charge to neutralize.



The charge roll is a conductive roll that is positioned slightly above the surface of the drum. The HVPS supplies the charge roll with two voltages: a negative DC charge voltage and an AC discharge voltage that is used for electrically cleaning the drum.



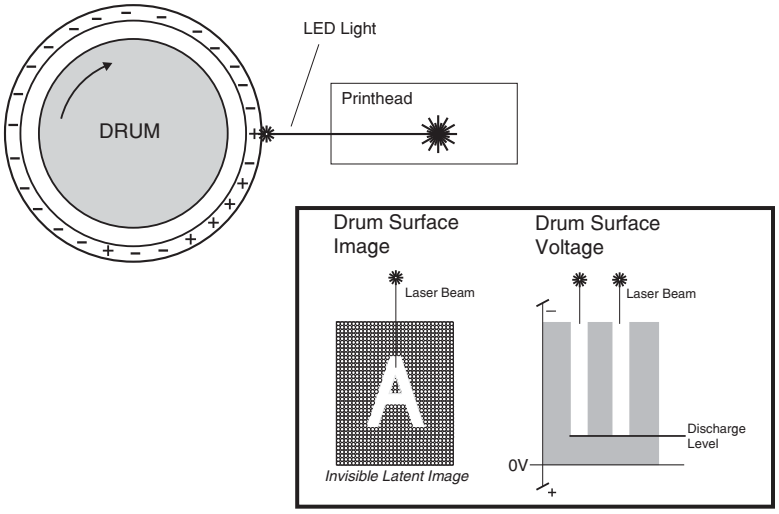
Service tips

- If the surface of the charge roller is damaged (for example, if it has a nick or a pit), it will cause the charge to be uneven on the photoconductor. 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 charged properly, 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: Exposure

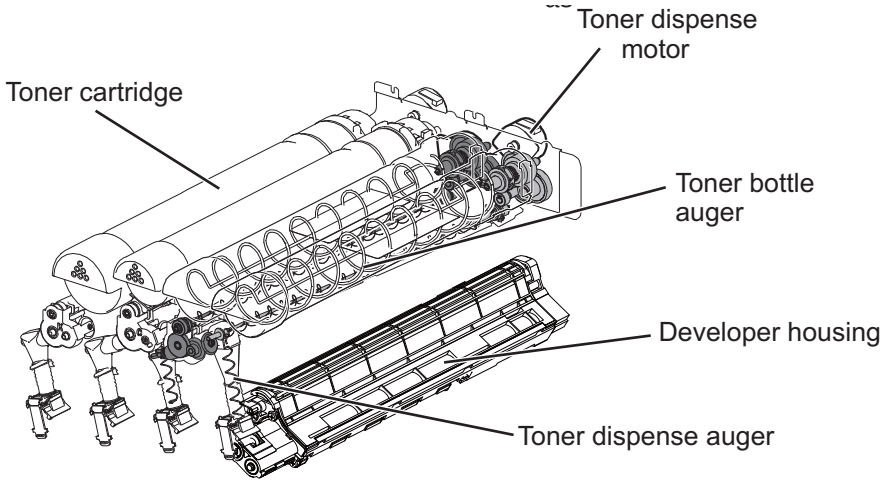
The printhead LED generates a scan line of LED light. Image data received from the RIP card assembly modulates this scan line, turning it on and off according to image information that is received from the host computer and software.

Through the use of a series of rotating and stationary mirrors within the printhead, the scan lines are applied on the negatively charged drum surface. Whenever the print controller sends a command to print a black pixel, the printhead LED switches on long enough to shine onto the drum at a single pixel point. That point is now discharged and slightly less negative than the surrounding negative charge. The less negative areas are considered positive. This discharge/no discharge process creates an invisible, electrostatic image on the surface of the drum. This image is called a **latent** image.

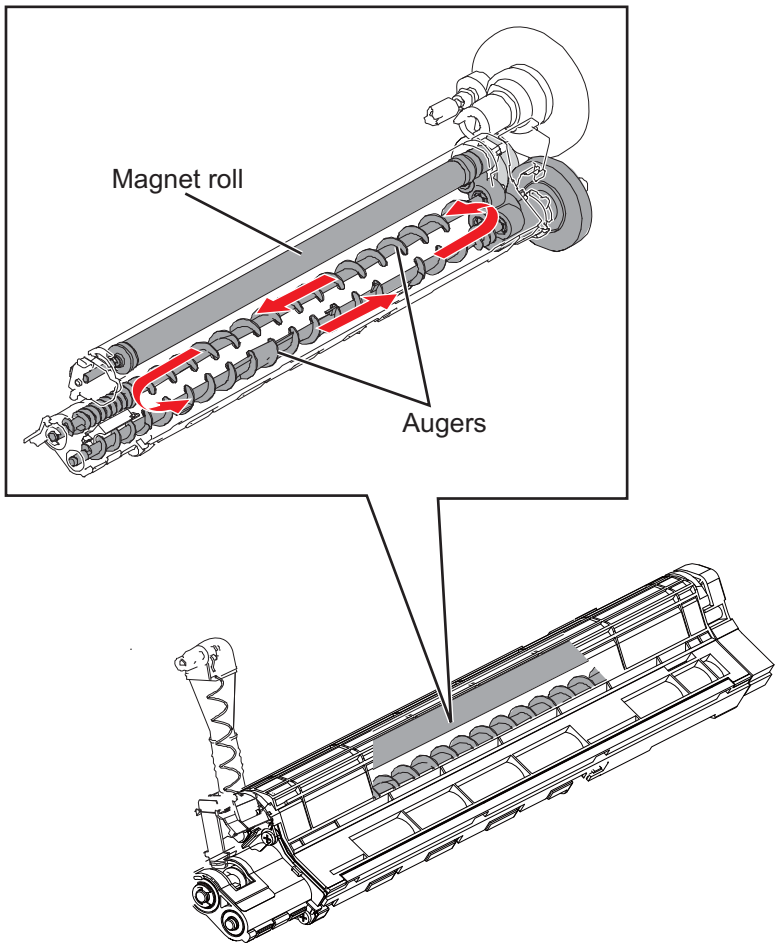


Step 3: Development

The toner inside the cartridge is circulated using a toner bottle auger driven by the toner dispense motor. The toner particles then travel through the toner dispense auger and to the developer housing.



Inside the developer unit, the augers circulate and distribute the toner particles into the magnet roll surface before they reach the photoconductor drum.



The toner contained within the PC cartridge has a magnetic property that causes it to adhere to the magnet roll. The metering blade spreads the toner into a very thin layer on the magnet roll. Friction between the magnet roll and the blade generates a small electrical charge that is transferred to the toner.

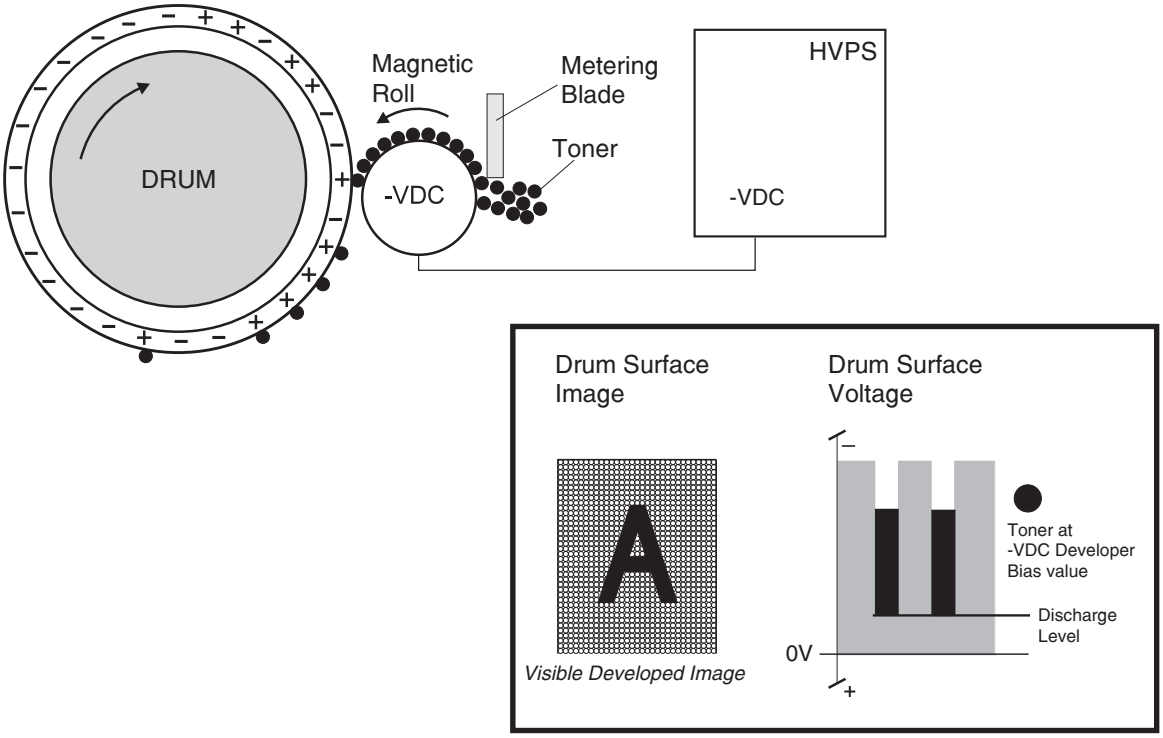
The surface of the magnet roll is made up of a thin sheet of conductive material. The HVPS supplies the magnet roll with two voltages: a DC voltage and an AC voltage. The DC voltage is used to transfer toner from the magnet roll to the surface of the drum. The AC voltage agitates the toner on the magnet roll, making toner transfer easier.

The magnet roll maintains a negative DC electrical potential. Negatively charged areas of the drum have a lower electrical potential, or a higher relative negative value than the magnet roll. Discharged areas of the drum have a higher electrical potential, or a lower relative negative value, than the magnet roll. A discharged point on the surface of the drum now appears *less negative* in relation to the negative charge on the magnet roll.

The toner adhering to the magnet roll is always in contact with the drum surface. When a *less negative* point on the drum (a discharged area) comes in contact with the *more negative* charged toner on the magnet roll, toner transfers from the magnet roll to that point on the drum.

The toner will attract only to the area of the photoconductor drum that was exposed to the printhead LED scan line. 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.

There is now a visible toner image on the drum surface. The image is called a *developed* image.

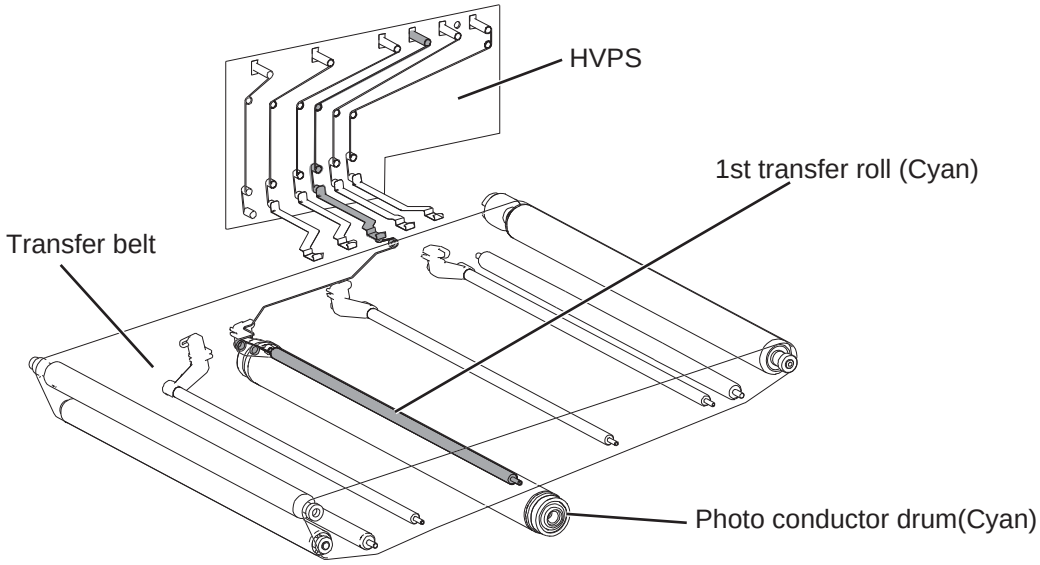


Service tips

- 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. To solve this, the affected cartridge must 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 4: 1st Transfer

When the latent images are developed on each photoconductor, the high-voltage power supply sends voltage to the 1st transfer rollers inside the transfer belt. 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 transfer belt for each color. This takes place by a direct surface-to-surface contact between the photoconductors and the transfer belt.

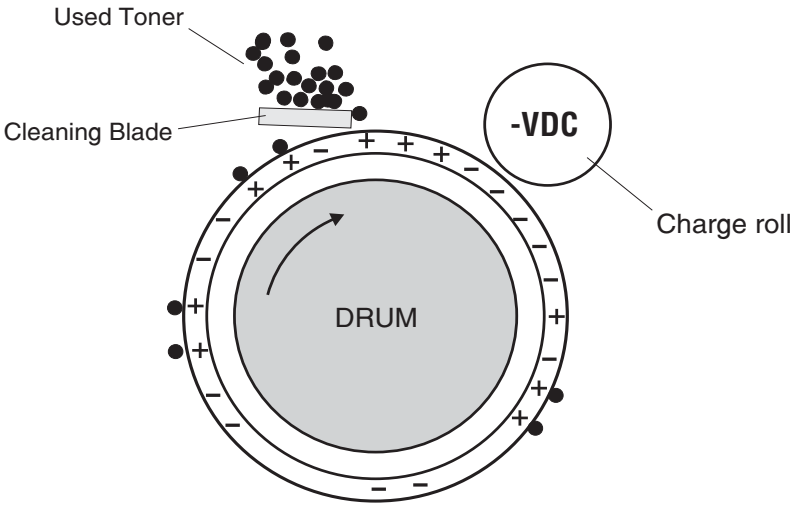


Service tips

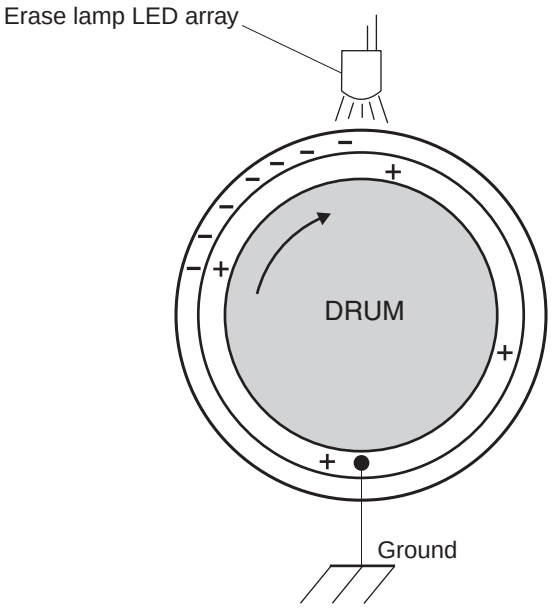
- Never touch the surface of the transfer belt with your bare hand. The oil from your skin will cause a charge differential on the surface, and toner will not stick properly. The result would be repeating blotches of voids/light print on a page. To solve this, the transfer belt must be replaced.
- Don’t use solvents or other cleaners to clean the transfer belt surface. No matter how careful you are, the surface will be compromised, causing scratches or a charge differential that will produce a void or light blotch on the printed page. To solve this, the transfer belt must be replaced.

Step 5: Cleaning (Drum/Charge roll)

The Cleaning Blade removes any toner that remains on the drum after the transfer process. The toner that the Cleaning Blade removes is collected inside the sealed PC Cartridge and reused. This is performed after each plane of color has been transferred to the transfer belt from the photoconductors.



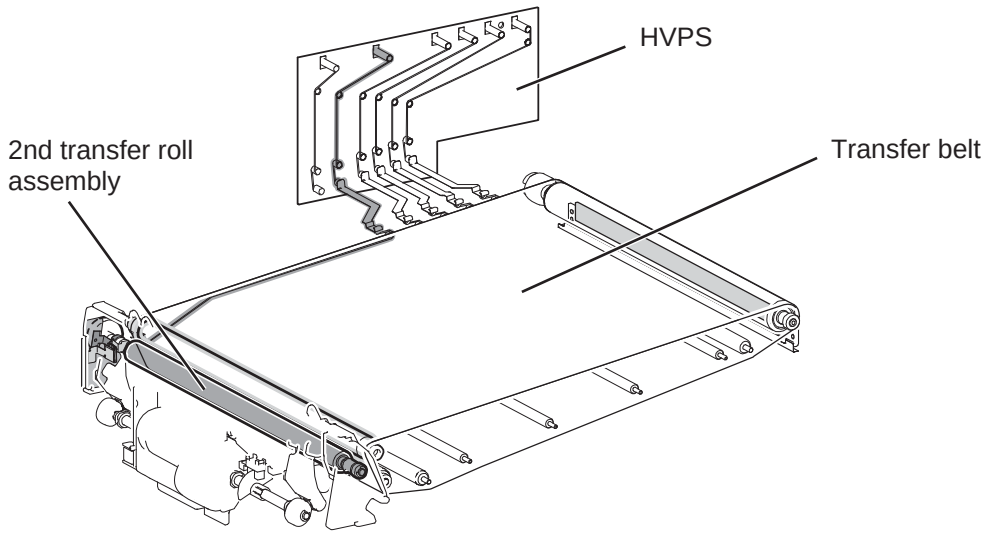
An erase lamp also electrically cleans the drum. The drum is discharged by exposure of light from the erase lamp.



Step 6: 2nd Transfer

As the paper travels and makes contact with the transfer belt, the 2nd transfer roll assembly is charged with negative DC voltage from the HVPS. This causes the toner image to transfer from the transfer belt to the surface

of the paper. The toner image is now on the paper and the paper is now stuck to the transfer belt due to the relative electrical differences.



Service tips

- If the transfer roller has nicks, pits, or flat spots on it, the surface doesn't come into contact with the media and transfer unit properly. This will cause voids or light spots on the page or repeating voids/light areas, because the toner can't be fully transferred due to the charge difference in the areas of damage.
- If the transfer roller does not engage the transfer unit, or does not have voltage coming from the high-voltage power supply, the toner will not fully transfer from the transfer unit. As a result, 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 high-voltage power supply contacts to the transfer roller.

Step 7: Electric Discharge

A detack saw evenly neutralizes the charge on the paper in order to separate the paper from the belt.

Step 8: Cleaning (Transfer belt/2nd transfer roll)

Some of the unwanted toner will remain on the 2nd transfer roll. To remove these, a positive voltage from the HVPS is applied to transfer the unwanted toner to the transfer belt.

A cleaning blade comes into contact with the transfer belt and scrapes off the remaining toner on the belt surface. The scraped toner is then transported to the waste toner cartridge.

Step 9: Fusing

The paper with the toner image has to go through fusing in order to bond the toner particles to the paper surface. The paper passes to a heat belt, which is heated by the inner heater to melt the toner particles on the paper surface. At the same time, pressure is also applied to permanently fuse the toner onto the media. The fuser then moves the printed media to the redrive rolls, which transport the media to the output bin.

The fuser is equipped with a pressure roll retract mechanism that retracts the fuser pressure roll from the fuser heat belt when printing is not taking place or when the fuser is removed from the machine. This feature reduces

the possibility of the fuser pressure roll receiving flat spots that can result in abnormal thumping noises and possible print quality issues.

Service tips

- If the fuser belt or rollers are damaged, they can cause toner to be pulled off the page or cause paper jams.
- Toner that does not properly adhere to a printed page can be a sign of a malfunctioning fuser or an improper media 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.

Paper path theory

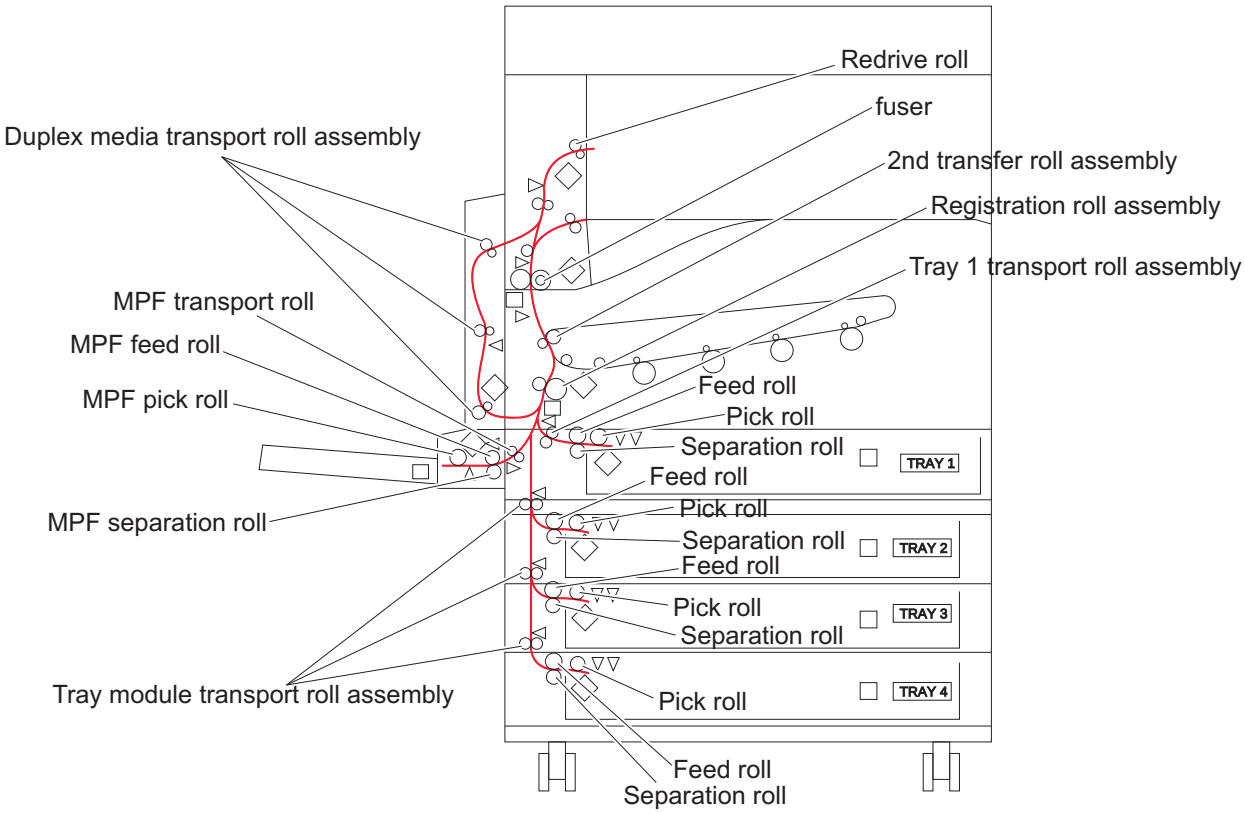
MFP paper path

For an image to be printed, the media has to be moved from an input source (such as a tray) into the printer and eventually exit into an output source.

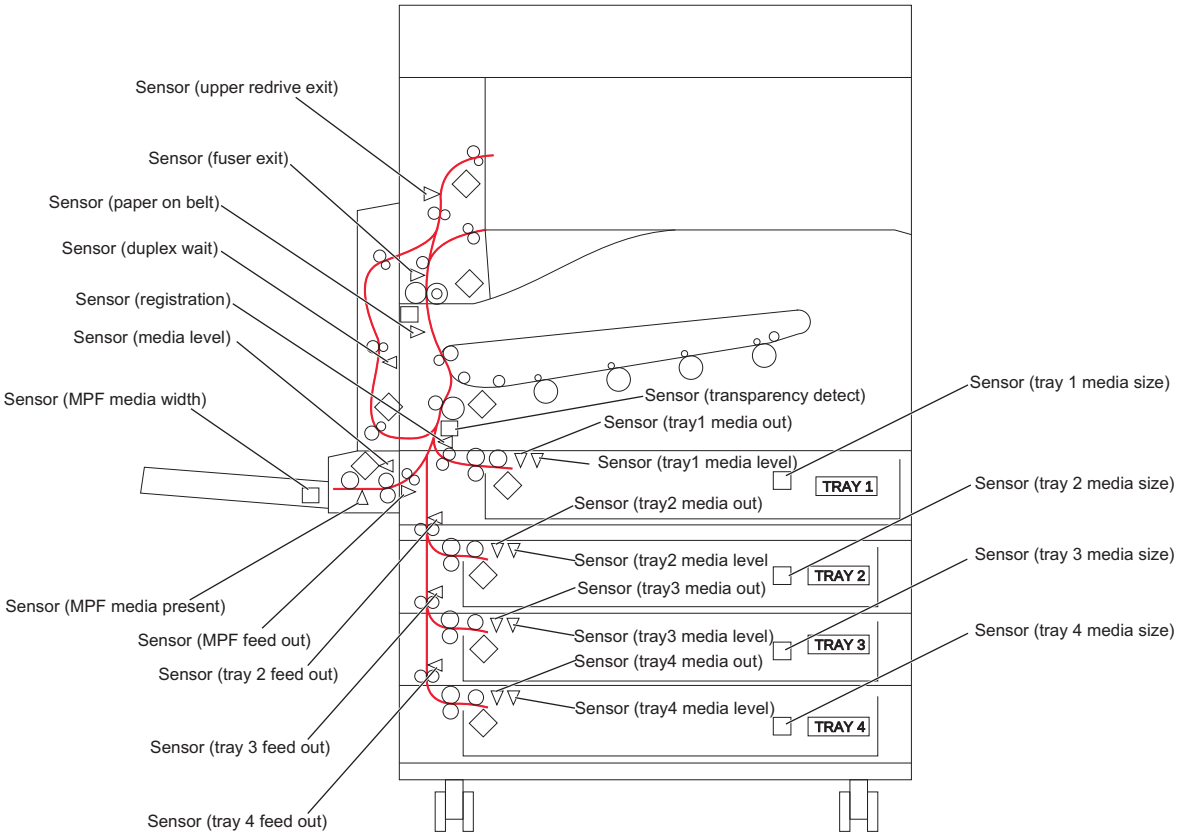
The most important component in this process is the media. Old, damaged, or out-of-specification media can and will cause feed and transport problems. If problems are encountered, then the media should always be checked first. See **“Media input size specifications” on page 1-7** and **“Media input type specifications” on page 1-9**. In addition, it is always a good practice to check the printer and driver settings to see if the media 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.

MFP paper path rolls



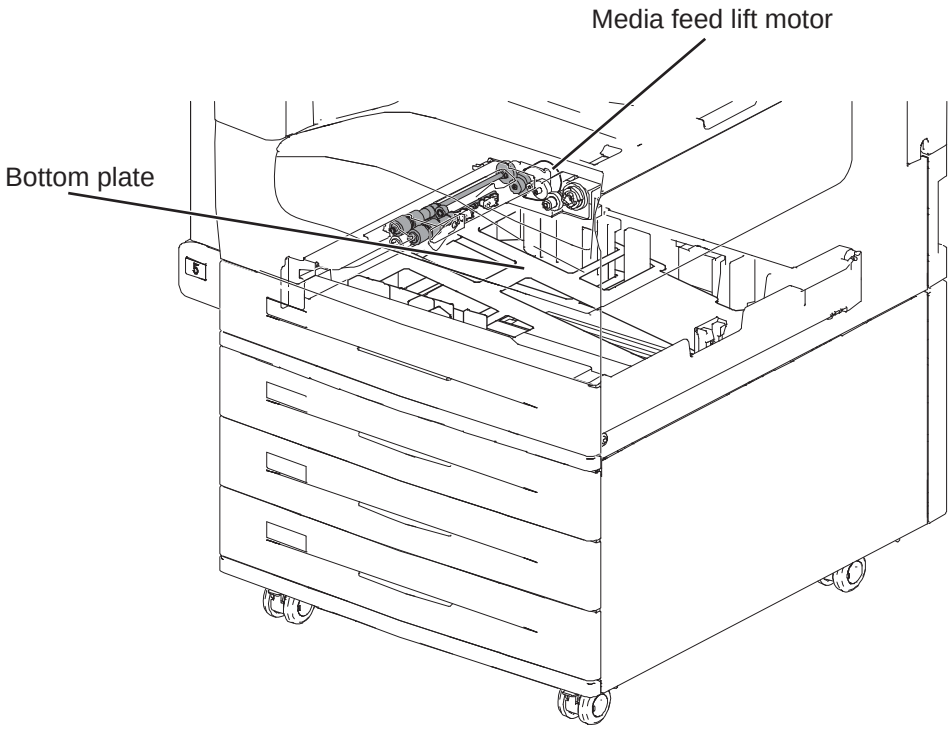
MFP Sensors


Sensor (upper redrive exit)
Sensor (fuser exit)
Sensor (paper on belt)
Sensor (duplex wait)
Sensor (registration)
Sensor (media level)
Sensor (MPF media width)
Sensor (MPF media present)
Sensor (MPF feed out)
Sensor (tray 2 feed out)
Sensor (tray 3 feed out)
Sensor (tray 4 feed out)
Sensor (transparency detect)
Sensor (tray1 media out)
Sensor (tray1 media level)
Sensor (tray2 media out)
Sensor (tray2 media level
Sensor (tray3 media out)
Sensor (tray3 media level)
Sensor (tray4 media out)
Sensor (tray4 media level)
Sensor (tray 1 media size)
Sensor (tray 2 media size)
Sensor (tray 3 media size)
Sensor (tray 4 media size)
TRAY 1
TRAY 2
TRAY 3
TRAY 4

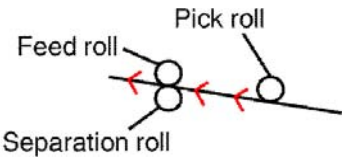
Paper feed process

Media tray paper feed

When the media tray is inserted into the printer, the media feed lift motor causes the bottom plate of the tray to elevate, in order to press the media against the feed roller. At the same time, the pick roller is also lowered and pressed against the media, in preparation for feeding.

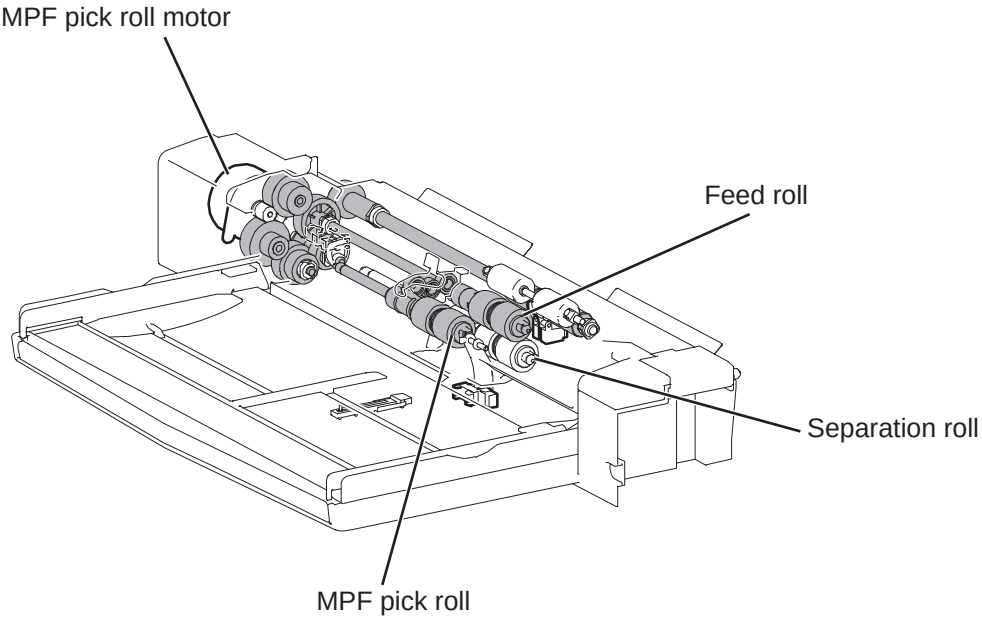


As the paper feed is starting, the pick roller rotates to insert the media between the feed roller and the separation roller. The separation roller separates the media to make sure that only one sheet at a time is fed.



MPF paper feed

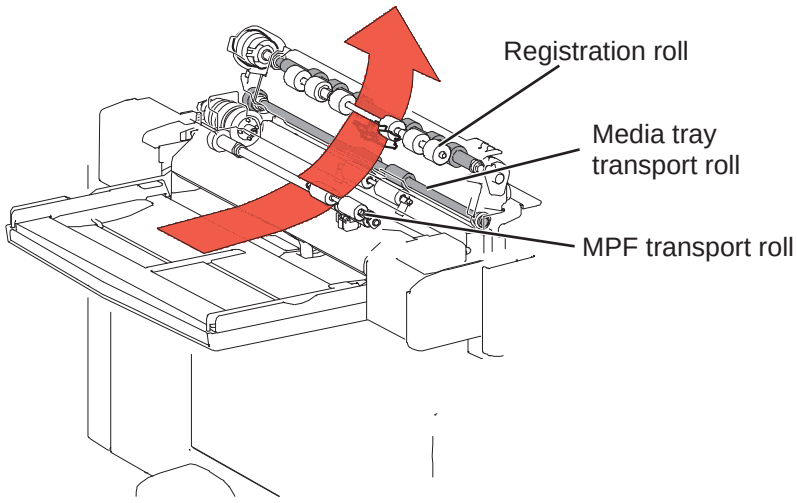
In an MPF paper feed, the MPF pick roller lowers to make contact with the media. The MPF pick roller rotates to insert the media between the feed roller and the separation roller. The separation roller separates the media to make sure that only one sheet at a time is fed.



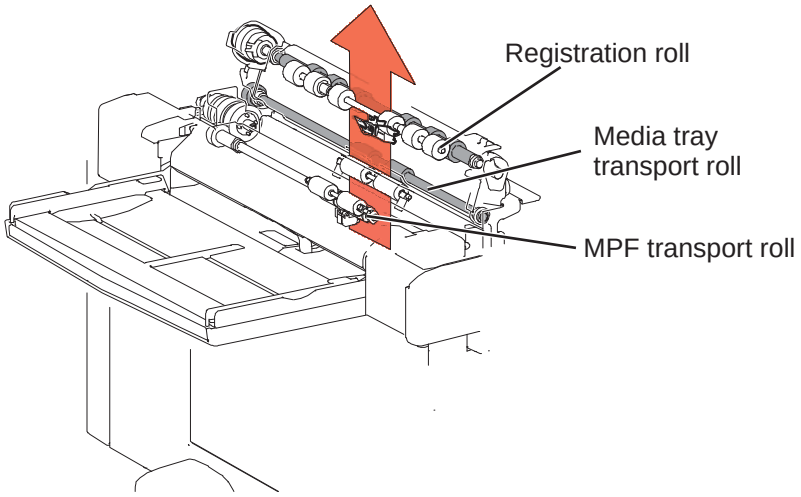
Registration

Paper that was fed from the media tray or MPF is picked up by their corresponding transport rolls, feeding the sheet to the registration roll assembly. The media is pushed against the registration roll, putting pressure on the media until its lead edge is properly aligned.

MPF registration path

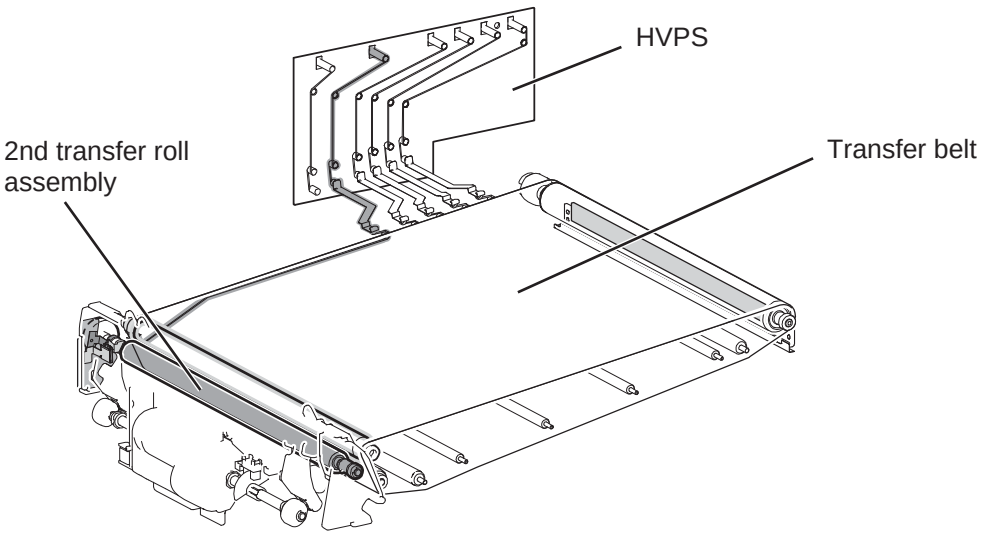


Media tray registration path



Transfer

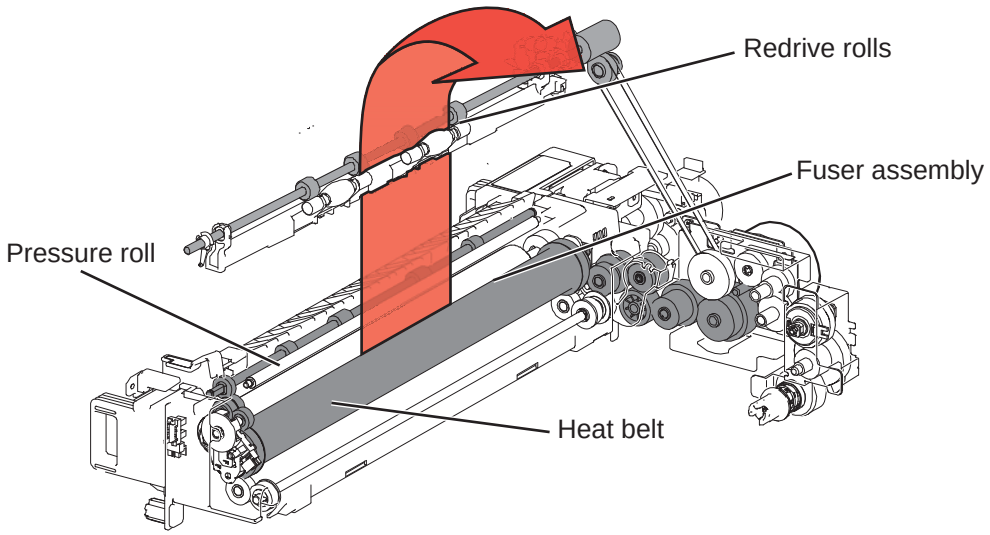
After the edge of the media is aligned, the registration roll feeds the media between the 2nd transfer roll and the transfer belt in preparation for toner transfer. At this point, a toner image is already embedded on the transfer belt. As the media passes between the transfer belt and the 2nd transfer roll, the toner image is also transferred to the media.



Fusing/exit

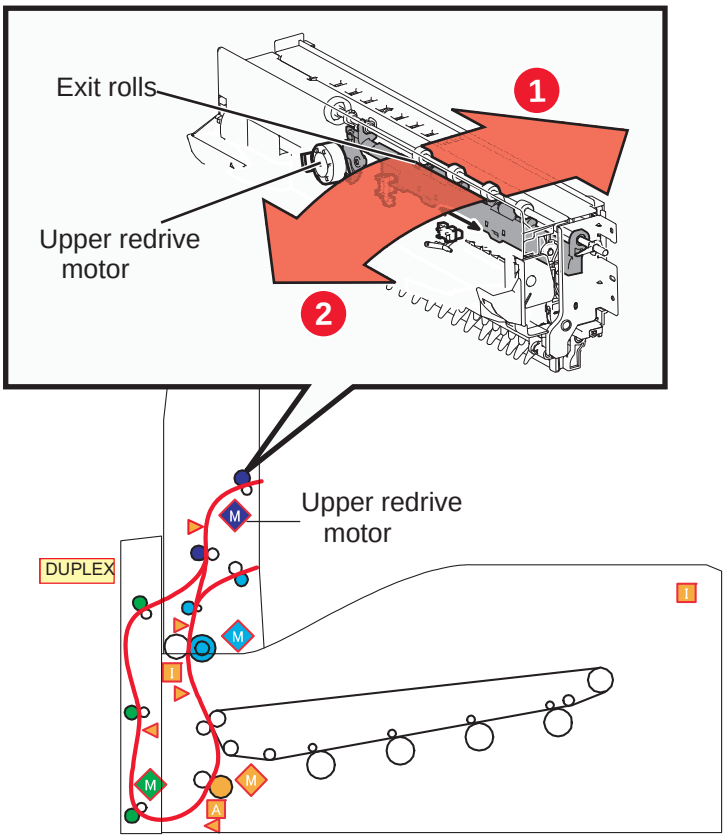
The media with the embedded toner image needs to go through the fuser assembly to permanently bond the toner image to the sheet. When the sheet passes between the heat belt and the pressure roll, the combination of

applied heat and pressure fuses the toner image to the media. At the same time, the fuser assembly rolls also move the media to the redrive rolls, which transport the media to the output bin.

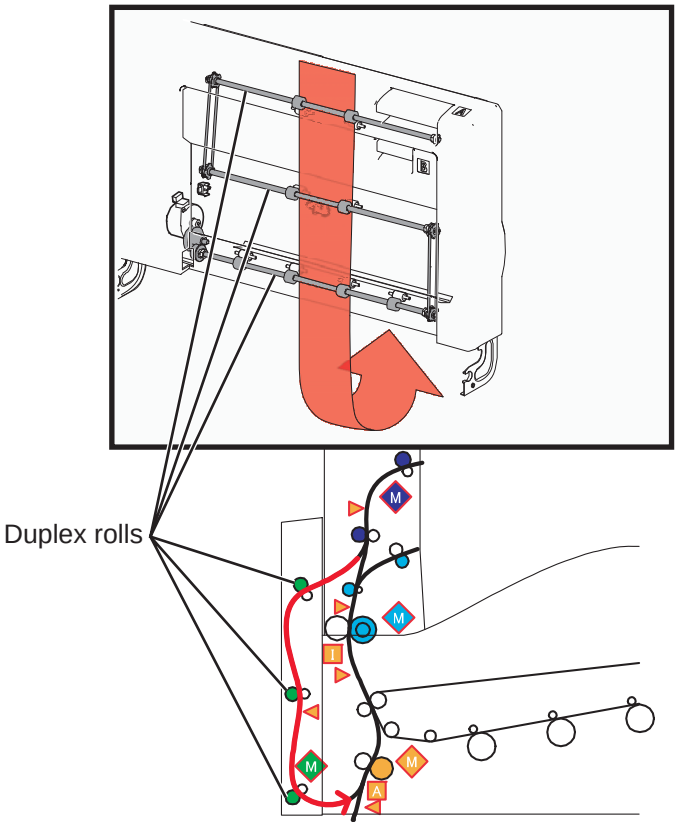


Duplexing

After one side of the media has finished printing, the exit rolls push the printed sheet towards the output bin (1). Then the upper redrive motor reverses direction, pulling the sheet with its trailing edge first, towards the opposite direction (2) into the duplexing area.



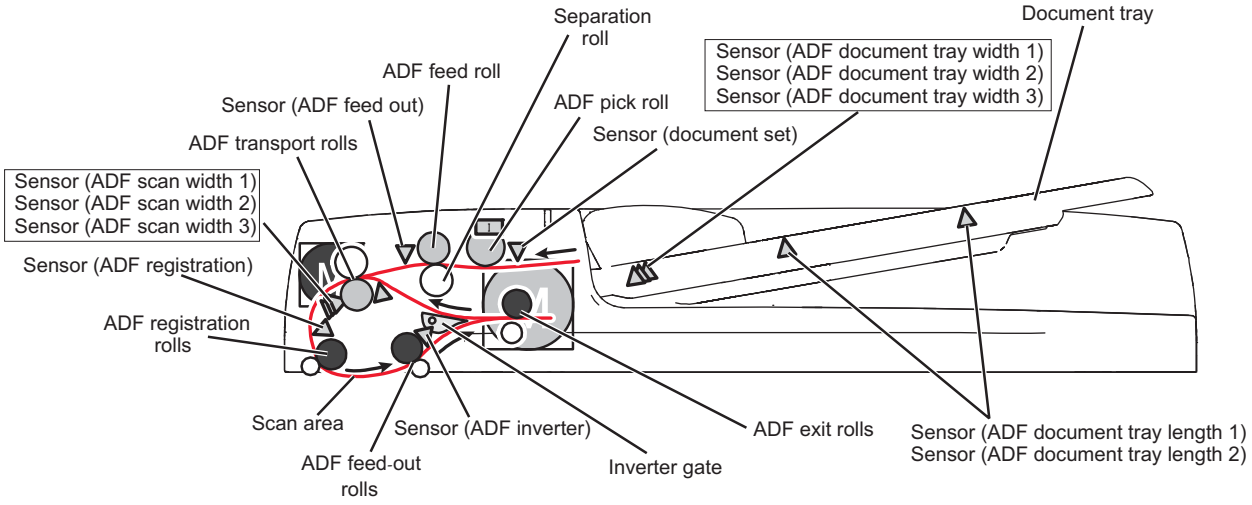
The exit rolls feed the sheet to the duplex rolls, which transport the media again to the registration rolls. The printing cycle is performed again, this time on the other side of the same sheet.



Scanner theory

The duplex ADF enables the user to create duplex scans automatically, eliminating the need to stop the scanning process to flip over the media that is being duplicated. The ADF uses step motors and a series of sensors to determine the media's size and position in the paper path during the scan process.

ADF paper path



The document set sensor on the ADF tray determines if a sheet is set and correctly positioned on the ADF document tray. At the same time, a set of sensors also detect the sheet dimensions: the width is determined by the adjustments on the tray guides, and the length is determined by actuating the photo sensors on the tray surface.

After executing the command to start scanning, the ADF pick roller rotates to transport the document one by one to the ADF feed roller and separation roller. As the feed roller moves the sheet towards the ADF transport rolls, the ADF feed-out sensor detects if the sheet has completely exited the feed roller. At the ADF transport rolls, the skew of the sheet is corrected in preparation for registration. When the ADF transport rolls feed the sheet towards the registration rolls, the size of the media is detected and confirmed by the ADF scan width sensors.

In preparation for scanning, the registration sensor detects and confirms if the sheet is correctly positioned on the ADF registration rolls. Scanning begins when the ADF registration rolls move the sheet to the scan area where the image will be copied. The scanned sheet is then transported by the ADF feed-out rolls towards the ADF exit rolls.

If it's a simplex scan job, the scanned sheet is moved by the ADF exit rolls to the ADF output bin.

If it's a duplex scan job, the scanned sheet is fed to the ADF exit rolls. As the trailing edge of the scanned sheet actuates the ADF inverter sensor, the inverter gate changes position to reroute the paper path. At the same time, the exit rolls reverse directions to feed the document through the inverter gate, then towards the ADF transport rolls. The media is fed again and the scanning cycle repeats, this time on the other side of the document.

Color theory

What is RGB color?

Red, green, and blue light can be added together in various amounts to produce a large range of colors observed in nature. For example, red and green can be combined to create yellow. Televisions and computer monitors create colors in this manner. RGB color is a method of describing colors by indicating the amount of red, green, or blue needed to produce a certain color.

What is CMYK color?

Cyan, magenta, yellow, and black inks or toners can be printed in various amounts to produce a large range of colors observed in nature. For example, cyan and yellow can be combined to create green. Printing presses, inkjet printers, and color printhead LED printers create colors in this manner. CMYK color is a method of

describing colors by indicating the amount of cyan, magenta, yellow, and black needed to reproduce a particular color.

How is color specified in a document to be printed?

Software programs typically specify document color using RGB or CMYK color combinations. Additionally, they allow users to modify the color of each object in a document. For more information, see the software program Help topics.

How does the printer know what color to print?

When a user prints a document, information describing the type and color of each object is sent to the printer. The color information is passed through color conversion tables that translate the color into the appropriate amounts of cyan, magenta, yellow, and black toner needed to produce the desired color. The object information determines the application of color conversion tables. For example, it is possible to apply one type of color conversion table to text while applying a different color conversion table to photographic images.

Why doesn't the printed color match the color I see on the computer screen?

The color conversion tables used in Auto Color Correction mode generally approximate the colors of a standard computer monitor. However, because of technology differences that exist between printers and monitors, there are many colors that can also be affected by monitor variations and lighting conditions. For recommendations on how the printer color sample pages may be useful in solving certain color-matching problems, see the question, “How can I match a particular color (such as a corporate logo)?”

The printed page appears tinted. Can I adjust the color?

Sometimes a printed page may appear tinted (for example, everything printed seems to be too red). This can be caused by environmental conditions, paper type, lighting conditions, or user preference. In these instances, adjust the Color Balance setting to create a more preferable color. Color Balance provides the user with the ability to make subtle adjustments to the amount of toner being used in each color plane. Selecting positive or negative values for cyan, magenta, yellow, and black (from the Color Balance menu) will slightly increase or decrease the amount of toner used for the chosen color. For example, if a printed page has a red tint, then decreasing both magenta and yellow could potentially improve the color balance.

My color transparencies seem dark when they are projected. Is there anything I can do to improve the color?

This problem most commonly occurs when projecting transparencies with reflective overhead projectors. To obtain the highest projected color quality, transmissive overhead projectors are recommended. If a reflective projector must be used, then adjusting the Toner Darkness setting to 1, 2, or 3 will lighten the transparency. Make sure to print on the recommended type of color transparencies.

What is manual color correction?

When manual color correction is enabled, the printer employs user-selected color conversion tables to process objects. However, Color Correction must be set to Manual, or no user-defined color conversion will be implemented. Manual color correction settings are specific to the type of object being printed (text, graphics, or images), and how the color of the object is specified in the software program (RGB or CMYK combinations).

Notes:

- Manual color correction is not useful if the software program does not specify colors with RGB or CMYK combinations. It is also not effective in situations in which the software program or the computer operating system controls the adjustment of colors.
- The color conversion tables—applied to each object when Color Correction is set to Auto—generate preferred colors for the majority of documents.

To manually apply a different color conversion table:

1. From the Quality menu, select Color Correction, and then select Manual.
2. From the Quality menu, select Manual Color, and then select the appropriate color conversion table for the affected object type.

Manual Color Menu

Object type	Color conversion tables
RGB Image RGB Text RGB Graphics	• Vivid—Produces brighter, more saturated colors and may be applied to all incoming color formats. • sRGB Display—Produces an output that approximates the colors displayed on a computer monitor. Black toner usage is optimized for printing photographs. • Display—True Black—Produces an output that approximates the colors displayed on a computer monitor. Uses only black toner to create all levels of neutral gray. • sRGB Vivid—Provides an increased color saturation for the sRGB Display color correction. Black usage is optimized for printing business graphics. • Off—No color correction is implemented.
CMYK Image CMYK Text CMYK Graphics	• US CMYK—Applies color correction to approximate the SWOP (Specifications for Web Offset Publishing) color output. • Euro CMYK—Applies color correction to approximated EuroScale color output. • Vivid CMYK—Increases the color saturation of the US CMYK color correction setting. • Off—No color correction is implemented.

How can I match a particular color (such as a corporate logo)?

From the printer Quality menu, nine types of Color Samples sets are available. These are also available from the Color Samples page of the Embedded Web Server. Selecting any sample set generates a multiple-page printout consisting of hundreds of colored boxes. Either a CMYK or RGB combination is located on each box, depending on the table selected. The observed color of each box is obtained by passing the CMYK or RGB combination labeled on the box through the selected color conversion table.

By examining Color Samples sets, a user can identify the box whose color is the closest to the desired color. The color combination labeled on the box can then be used for modifying the color of the object in a software program. For more information, see the software program Help topics. Manual color correction may be necessary to utilize the selected color conversion table for the particular object.

Selecting which Color Samples set to use for a particular color-matching problem depends on the Color Correction setting being used (Auto, Off, or Manual), the type of object being printed (text, graphics, or images), and how the color of the object is specified in the software program (RGB or CMYK combinations). When the printer Color Correction setting is set to Off, the color is based on the print job information; and no color conversion is implemented.

Note: The Color Samples pages are not useful if the software program does not specify colors with RGB or CMYK combinations. Additionally, certain situations exist in which the software program or the computer operating system adjusts the RGB or CMYK combinations specified in the program through color management. The resulting printed color may not be an exact match of the Color Samples pages.

What are detailed Color Samples and how do I access them?

Detailed Color Samples sets are available only through the Embedded Web Server of a network printer. A detailed Color Samples set contains a range of shades (displayed as colored boxes) that are similar to a user-defined RGB or CMYK value. The likeness of the colors in the set are dependent on the value entered in the RGB or CMYK Increment box.

To access a detailed Color Samples set from the Embedded Web Server:

1. Type the printer IP address or host name in the address field of your Web browser.
   Note: If you do not know the IP address or host name of the printer, then you can:
   - View the information on the printer control panel home screen, or in the TCP/IP section under the Networks/Ports menu.
   - Print a network setup page or menu settings page and locate the information in the TCP/IP section.
2. Click **Configuration > Color Samples > Detailed Options**.
3. Select a color conversion table.
4. Enter the RGB or CMYK color number.
5. Enter an increment value from 1–255.
   Note: The closer the value is to 1, the narrower the color sample range will appear.
6. Click **Print**.

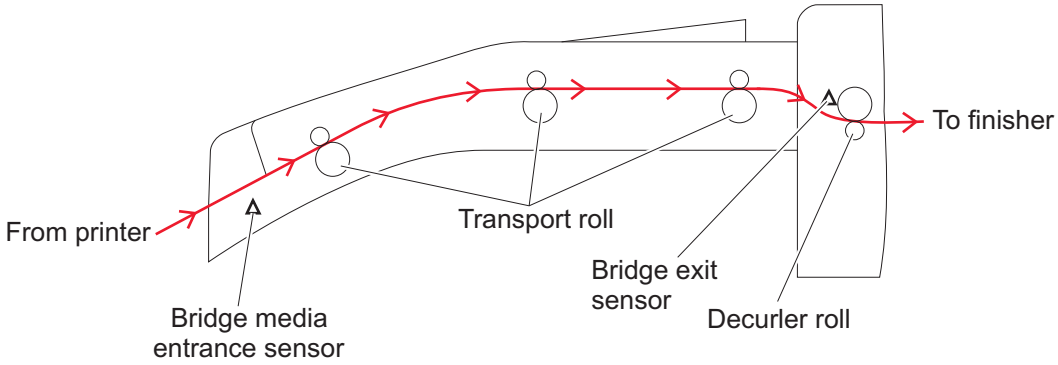
Finisher theory of operations

Media transport

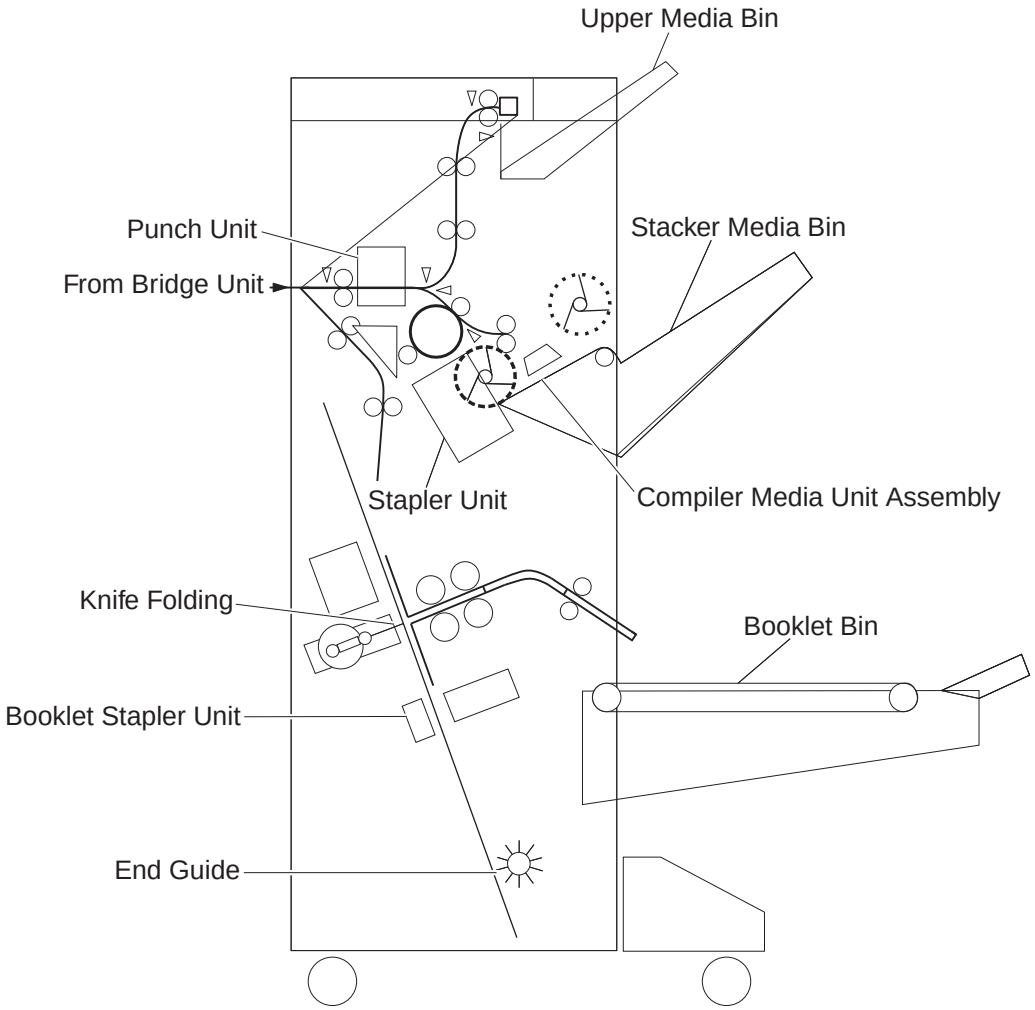
This section describes the transfer of media from the printer to a specified bin.

The following figures illustrate layouts (front view) of sensors, rollers, and main blocks, as well as a layout (rear view) of the main components.

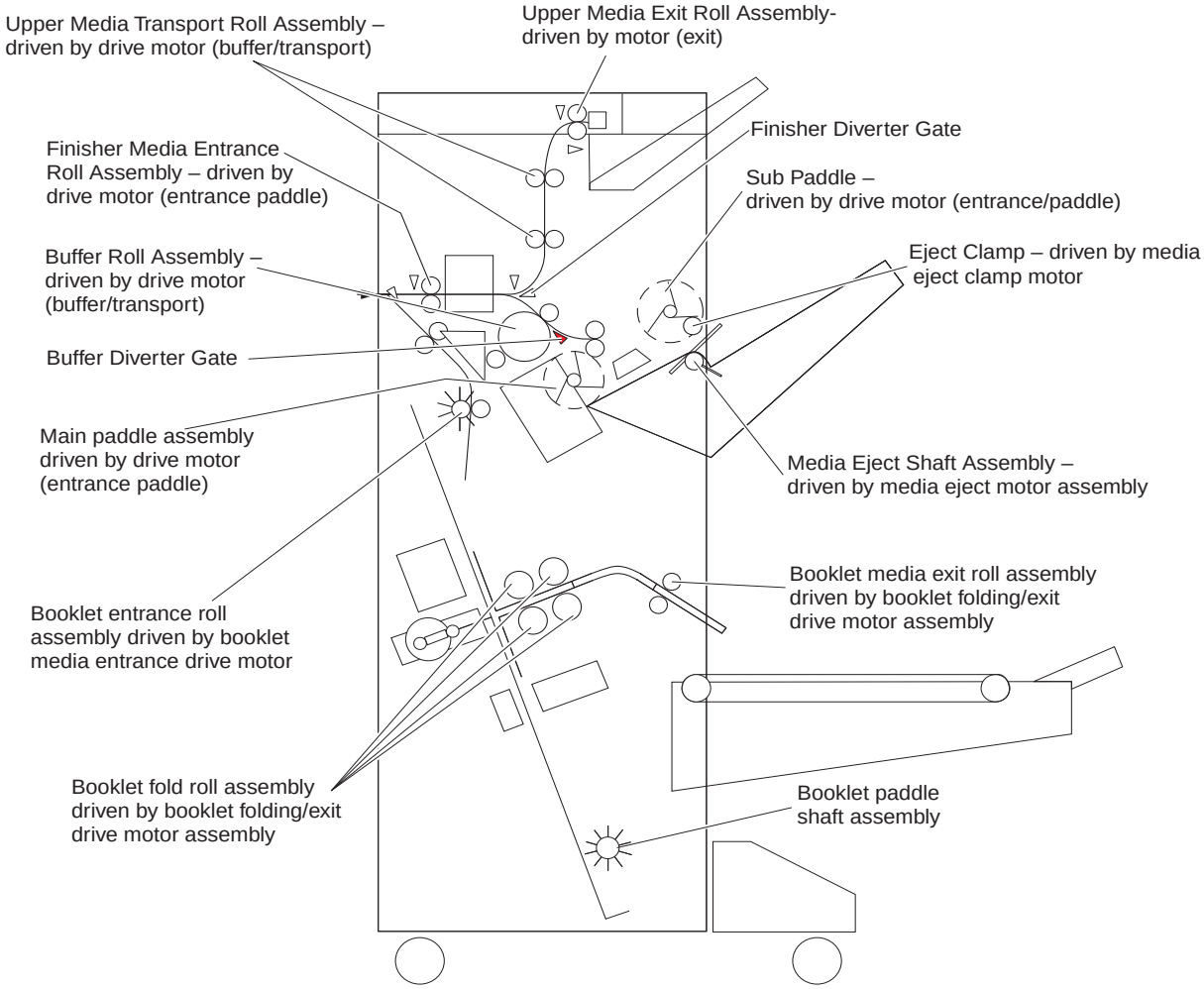
Bridge unit assembly paper path



Finisher media path

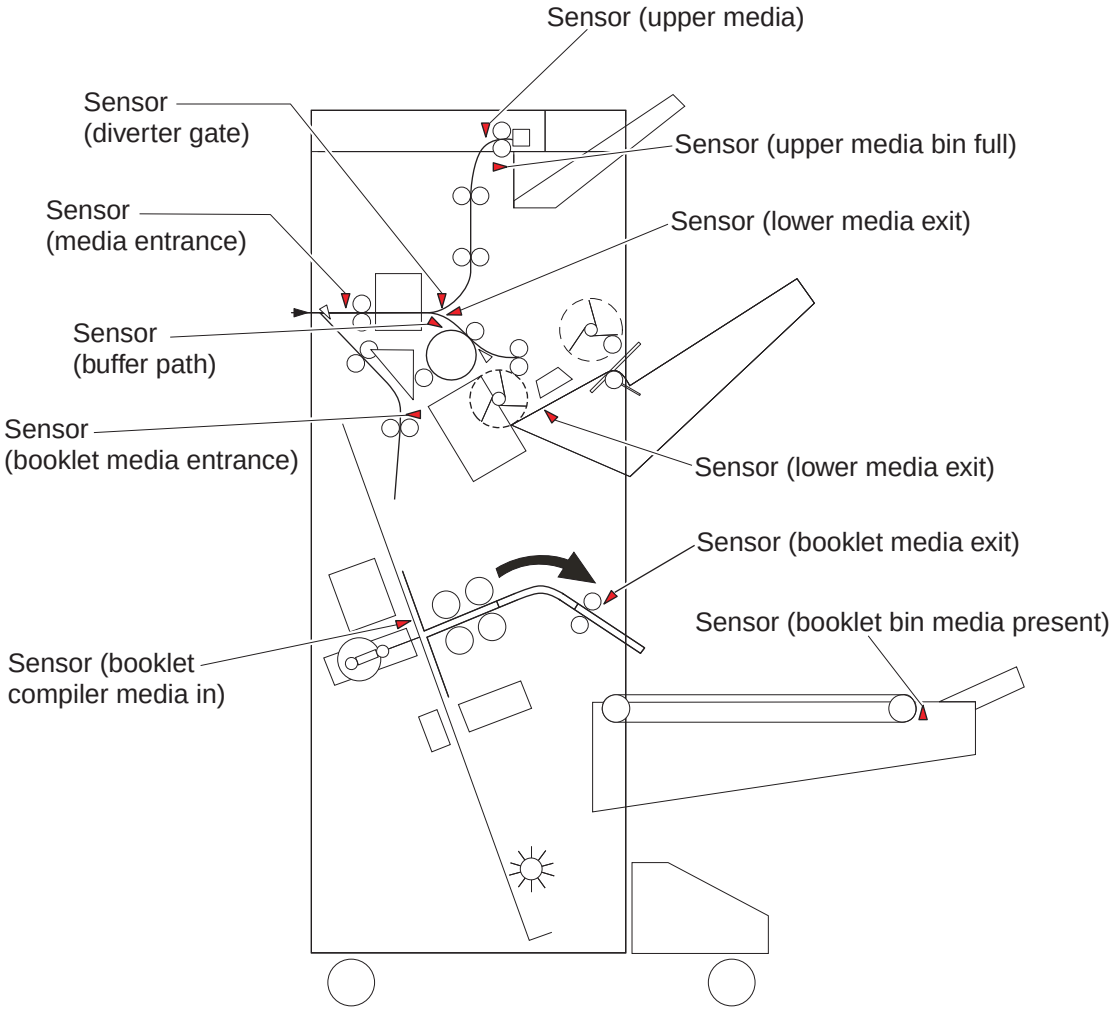


Finisher roll assemblies

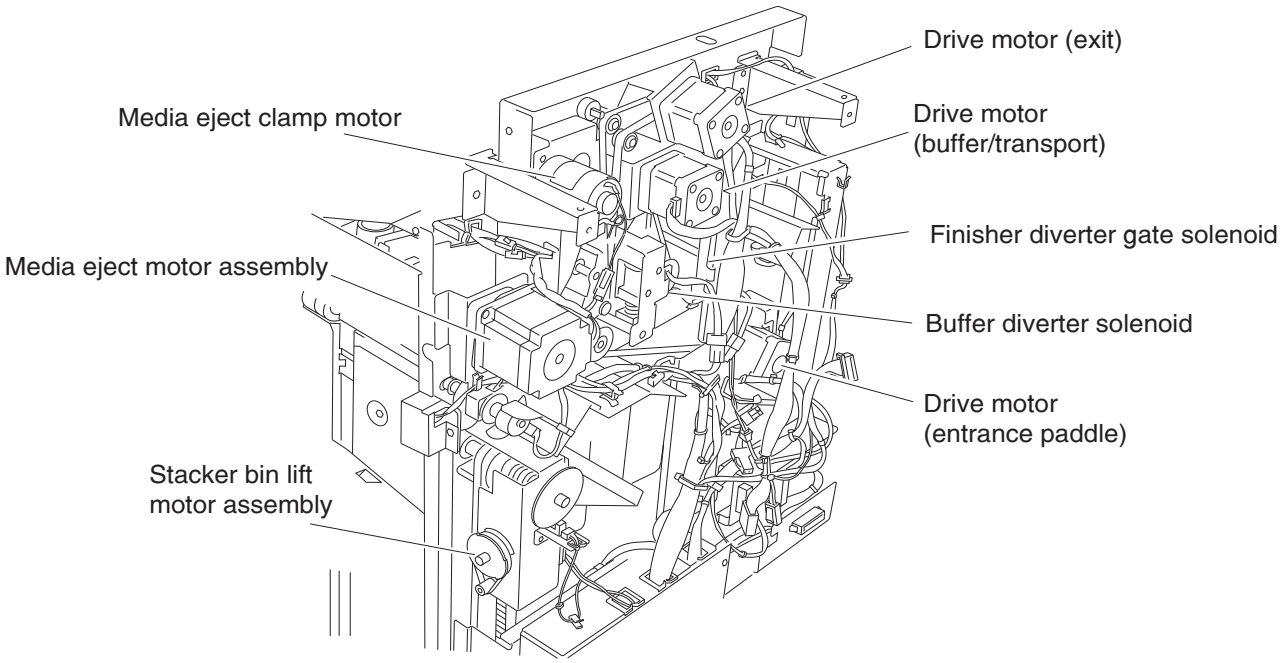


Previous
Next
Go Back

Finisher media path sensors



Finisher motors

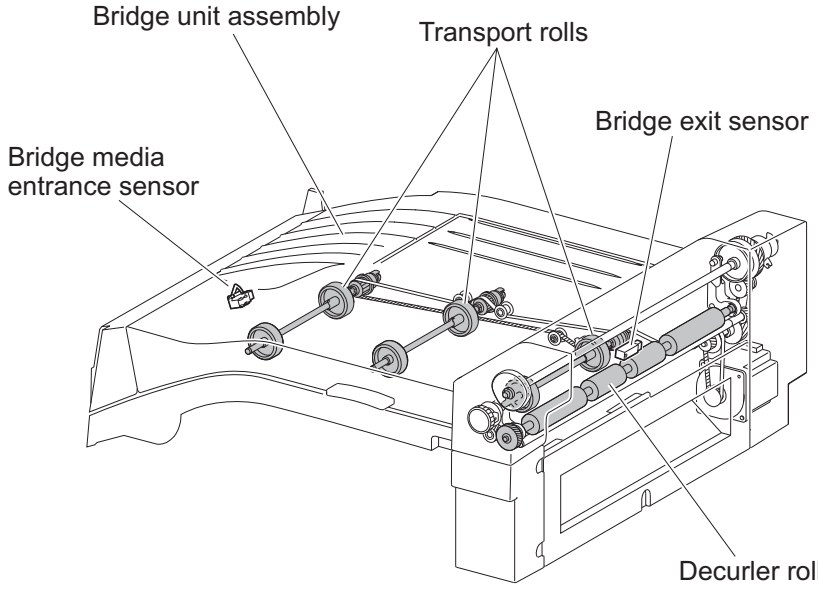


Bridge unit assembly

When the printer designates the finisher, the media diverter gate in the printer activates, and media is fed from the printer into the bridge unit assembly.

The bridge unit drive motor is activated by the trigger of the printer's registration clutch, which drives the transport belts in the bridge unit assembly. The motor power is transmitted to the two belts between the bridge unit right shaft assembly and the bridge unit left shaft assembly.

The media fed to the bridge unit assembly is securely held between the transport belts and the pinch rolls, and fed to the finisher.



From bridge unit assembly to punch

The media fed from the bridge unit assembly is fed into the finisher by the media entrance roll assembly located on the entrance section of the finisher which is driven by the drive motor (entrance/paddle).

The media route inside the finisher is determined by the finisher diverter gate.

The finisher diverter gate is activated by the finisher diverter gate solenoid controlled by the printer.

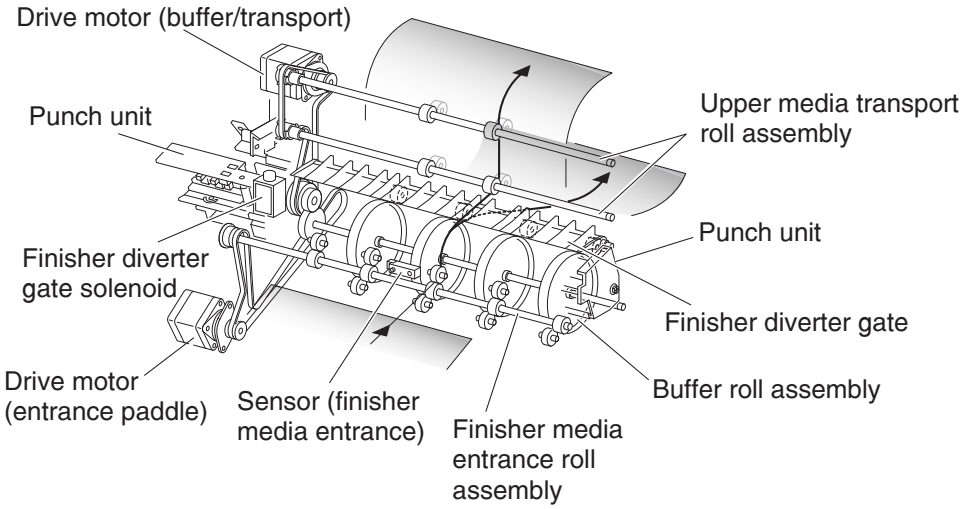
The media is further fed in the finisher by the two upper media transport roll assemblies, or the buffer roll assemblies that are driven by the motor (buffer/transport), and passes through the punch unit.

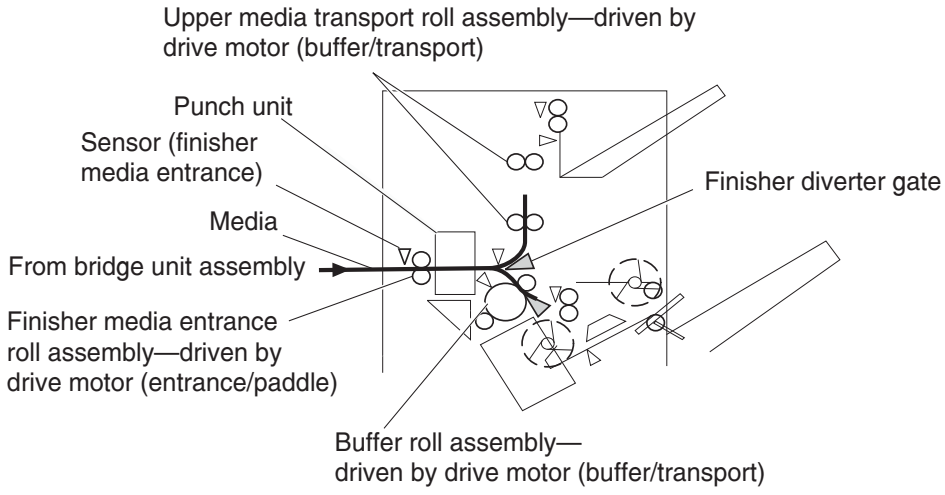
The sensor (finisher media entrance) becomes low upon detecting media. After a certain amount of time has passed and the level has changed to high, the motor (buffer/transport) that drives the upper media transport roll assembly or the buffer roll assembly starts reverse rotation.

The media is returned to the punch unit by the upper media transport roll assembly or the buffer roll assembly, and is stopped with its end gently pressed against the three punch media stopper assemblies.

The three punch media stopper assemblies in the punch unit drop to let media pass through when media is fed to the exit (while the motor (buffer/transport) is rotating forward), but rise when media is returned (while the motor (buffer/transport) is rotating reversely) to stop the media.

Thus, punch hole positions in the media feed direction are determined.





From punch to compiler unit assembly

The media is transferred to the compiler unit assembly by the buffer roll assembly (driven by the motor (buffer/transport)) and by the lower media exit roll assembly (driven by the drive motor (exit)).

When the first media reaches the compiler unit assembly, the media eject clamp motor is activated to lower the media eject clamp so that the media eject clamp and the media eject shaft assembly can clamp the media.

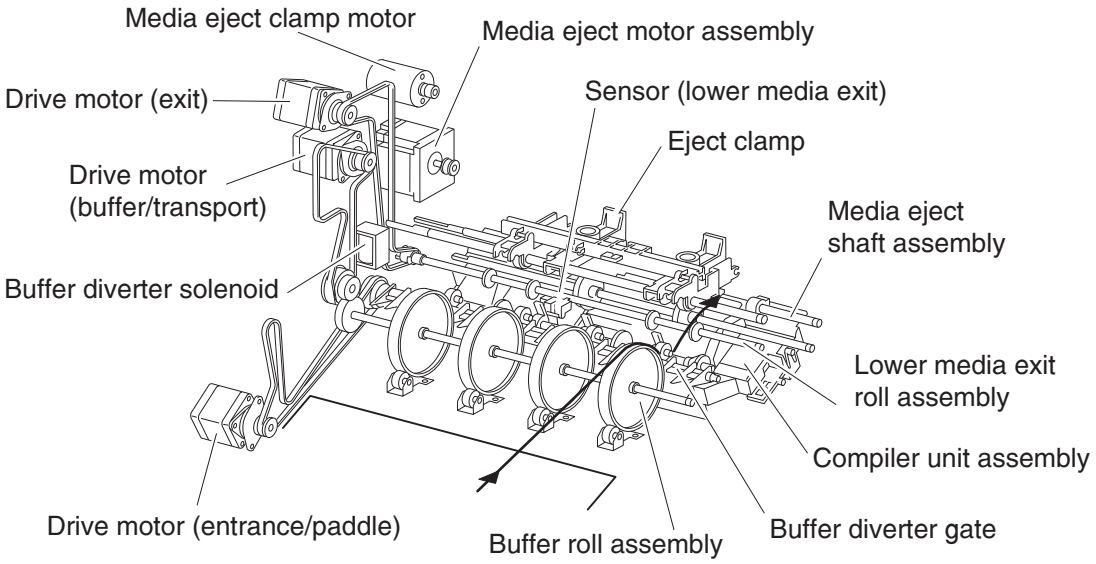
Thus, the media transferred from the punch unit is held by the media eject shaft assembly and the media eject clamp (driven by the media eject motor assembly) and is fed to the exit.

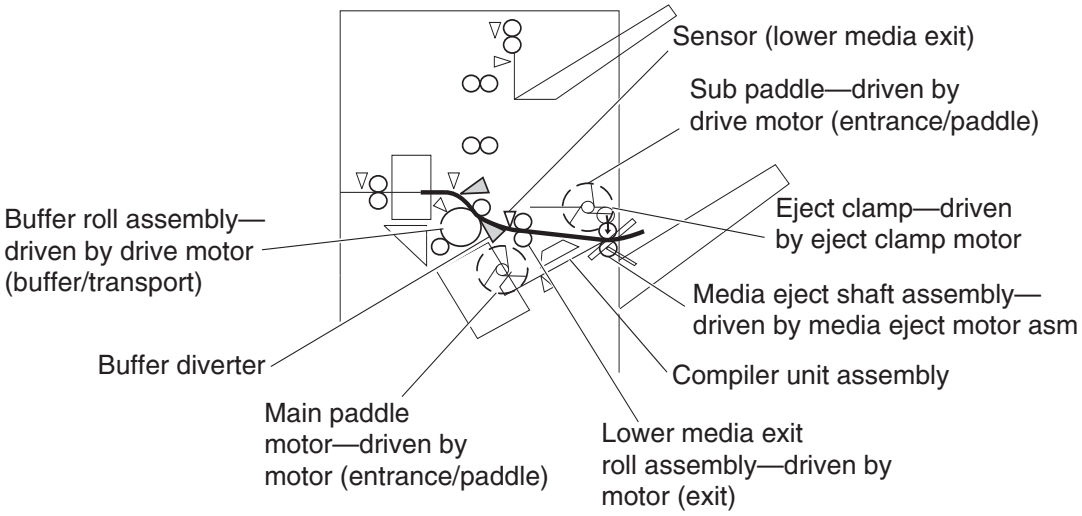
When the media trailing edge passes through the sensor (lower media exit), the media eject motor assembly starts reverse rotation to return the media to the compiler unit assembly.

When the following media reaches the compiler unit assembly, the media eject clamp is raised, and the media that has passed through the lower media exit roll assembly falls on the compiler unit assembly.

At this time, the three main paddles are rotated by the main paddle shaft assembly to feed the media so that the media trailing edge butts against the rear wall of the compiler unit assembly.

The sub paddle solenoid of the media eject unit assembly is activated to lower the sub paddle so that the media can be fed to the compiler unit assembly.





When printing multiple sets, while stapling the first set on the compiler unit assembly or ejecting it to the stacker media bin, the first media of the second set will not be fed to the compiler unit assembly.

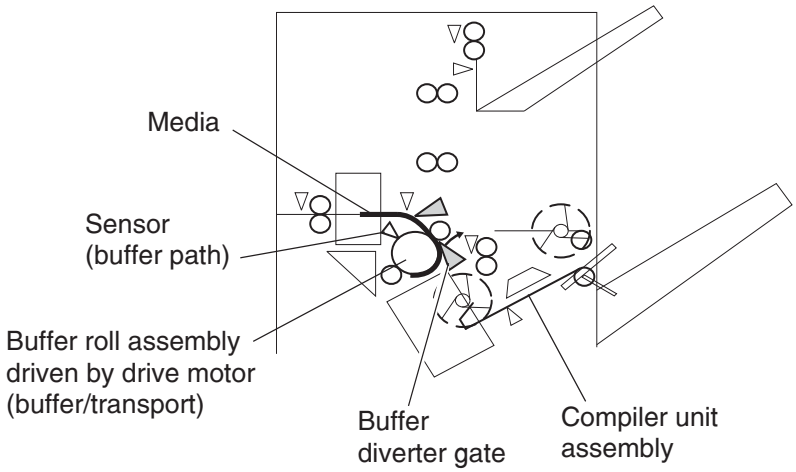
When the first media of the second set reaches the finisher, the buffer diverter solenoid is activated by the printer command and by the sensor (finisher media entrance) to switch the buffer diverter gate.

Thus, the media route is switched into the buffer roll assembly's circumferential direction. (This operation is called the buffer path.)

The first media of the second set is aligned with the second media, and then they are fed together to the compiler unit assembly.

Even for one sheet of media, the buffer path operation is executed in the same way. The media is stacked temporarily on the compiler unit assembly, and then ejected in the stacker media bin.

After the buffer path is executed for the first media, if a second media of a different size comes, the first media is fed to the compiler unit assembly, but the second one is fed to the compiler unit assembly without the buffer path. At this time, a certain delay time is provided to prevent the second media from colliding with the first one.



From compiler unit assembly to stacker media bin

Stapled media on the compiler unit assembly (stapling mode) or aligned media (non-stapling mode) are held between the media eject clamp and the media eject shaft assembly.

The media eject shaft assembly is driven by the media eject motor assembly to transfer media to the stacker media bin.

After media is transferred to the stacker media bin, it is held by the clamp paddle attached to the media eject shaft assembly.

From punch to upper media bin

The media to be ejected to the upper media bin is switched in the media path by the finisher diverter gate located behind the punch and fed in the upper media transport roll assembly direction.

The finisher diverter gate is switched by the finisher diverter gate solenoid. While the solenoid is activated, media is fed in the upper media transport roll assembly direction.

The two upper media transport roll assemblies driven by the motor (buffer/transport) feed media to the upper media exit roll assembly top at the top of the finisher.

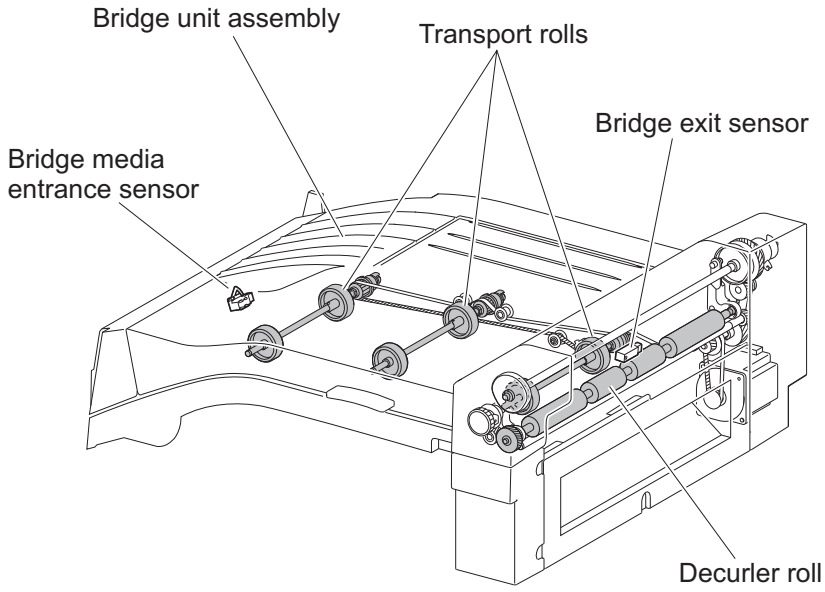
The upper media exit roll assembly top driven by the drive motor (exit) ejects the media to the upper media bin.

The upper media exit roll assembly decelerates after a specified period of time from the following trigger events.

Functions of sensors along the media path

Bridge unit assembly

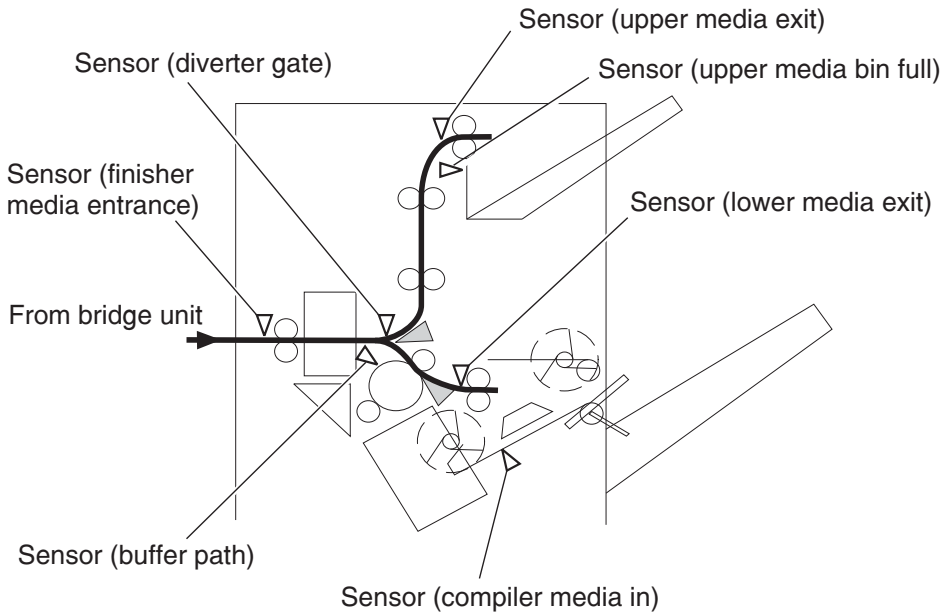
- Sensor (bridge unit media entrance)
  - A photo-interrupter sensor that detects whether media is fed from the printer to the bridge unit assembly.
  - It turns high (+5 V dc) (light receiving) when media enters the bridge unit assembly.
- Sensor (bridge unit media exit)
  - A photo-interrupter sensor that detects whether media passes through the bridge unit assembly.
  - It turns high (+5 V dc) (light receiving) when media reaches this sensor, and turns low (0 V dc) when media exits from the bridge unit assembly.
- Sensor (bridge unit top cover interlock)
  - A photo-interrupter sensor that detects open/close of the bridge top cover assembly of the bridge unit assembly.
  - It turns high (+5 V dc) (light receiving) when the bridge top cover assembly opens.



Finisher

- Sensor (finisher media entrance)
  - A photo-reflective sensor detects whether media is fed from the bridge unit assembly to the finisher.
  - It turns high (+5 V dc) while media is present within the sensing area.
  - When the level turns high due to the first media of the second set during multi-set printing, this sensor activates the buffer diverter solenoid to switch the buffer diverter gate so that the media goes in the buffer roll assembly's circumferential direction.
- Sensor (diverter gate)
  - A photo-reflective sensor that detects the leading edge of the media.
  - It turns low (0 V) when the front end reaches the sensing area.
- Sensor (lower media exit)
  - A photo-interrupter sensor that detects whether media passes through the sensor (lower media exit).
  - It turns high (+5 V) (light receiving) when the actuator is driven out of the sensing area by the media.
  - When the level turns high, this sensor activates the front tamper motor and the rear tamper motor on the compiler unit assembly.
  - This sensor is also used to control on/off of the media eject motor assembly.
- Sensor (compiler media present)
  - A photo-interrupter sensor that detects whether media is present or not on the compiler unit assembly.
  - While media is present, the actuator is outside the sensing area, and the sensor turns high (+5 V dc) (light receiving).
- Sensor (buffer path)
  - A photo-interrupter sensor that detects whether media is fed toward the buffer roll assembly.
  - While media is present, the actuator is outside the sensing area, and the sensor turns at high (+5 V dc) (light receiving).
- Sensor (upper media exit)
  - A photo-interrupter sensor that detects whether media is fed to the upper media exit roll assembly top at the exit side of the upper media bin.
  - When the media is fed, the actuator leaves from the sensing area, and the sensor turns high (+5 V dc).
- Sensor (upper media bin full)

  A photo-reflective sensor that detects the stack volume of media in the upper media bin.



Punch unit

This section describes the media punching operation of the punch.

Two types of punch are provided: the 2/3-hole type and the 2/4-hole type.

The following explains the 2/3-hole type (2-hole/3-hole auto-switching).

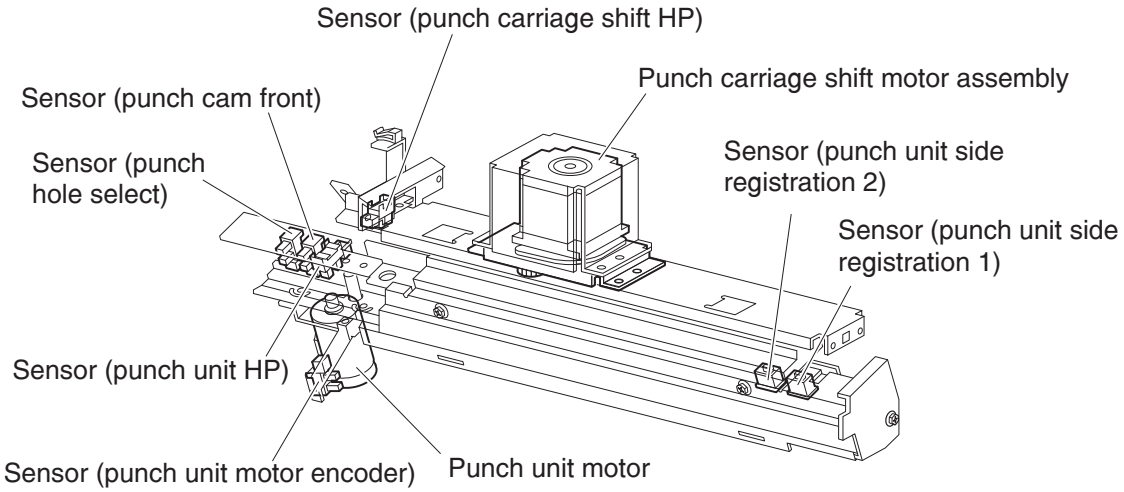
Every type has the same construction, except for the sensor (punch hole select) that is provided for the 2-hole type and 3-hole type only.

Adjusting punching positions

The punching positions from the media edge in the direction of feed are determined by gently pressing the media against the three punch media stopper assemblies.

The three punching positions from the media edge in the direction of media width are determined by the following method.

- Activate the punch carriage shift motor assembly, and move the punch to the front side until the sensor (punch carriage shift HP) turns low.
- Reversely rotate the motor, and move the punch to the rear side until the sensor turns high to determine the home position.
- The punch carriage shift motor assembly is activated to move the punch to the front until the sensor (punch unit side registration 1) and the sensor (punch unit side registration 2) detects the media edge, and then the punch is further moved to the front according to the pulse-number determined by the media size. (The punch carriage shift motor assembly stops at this position.)



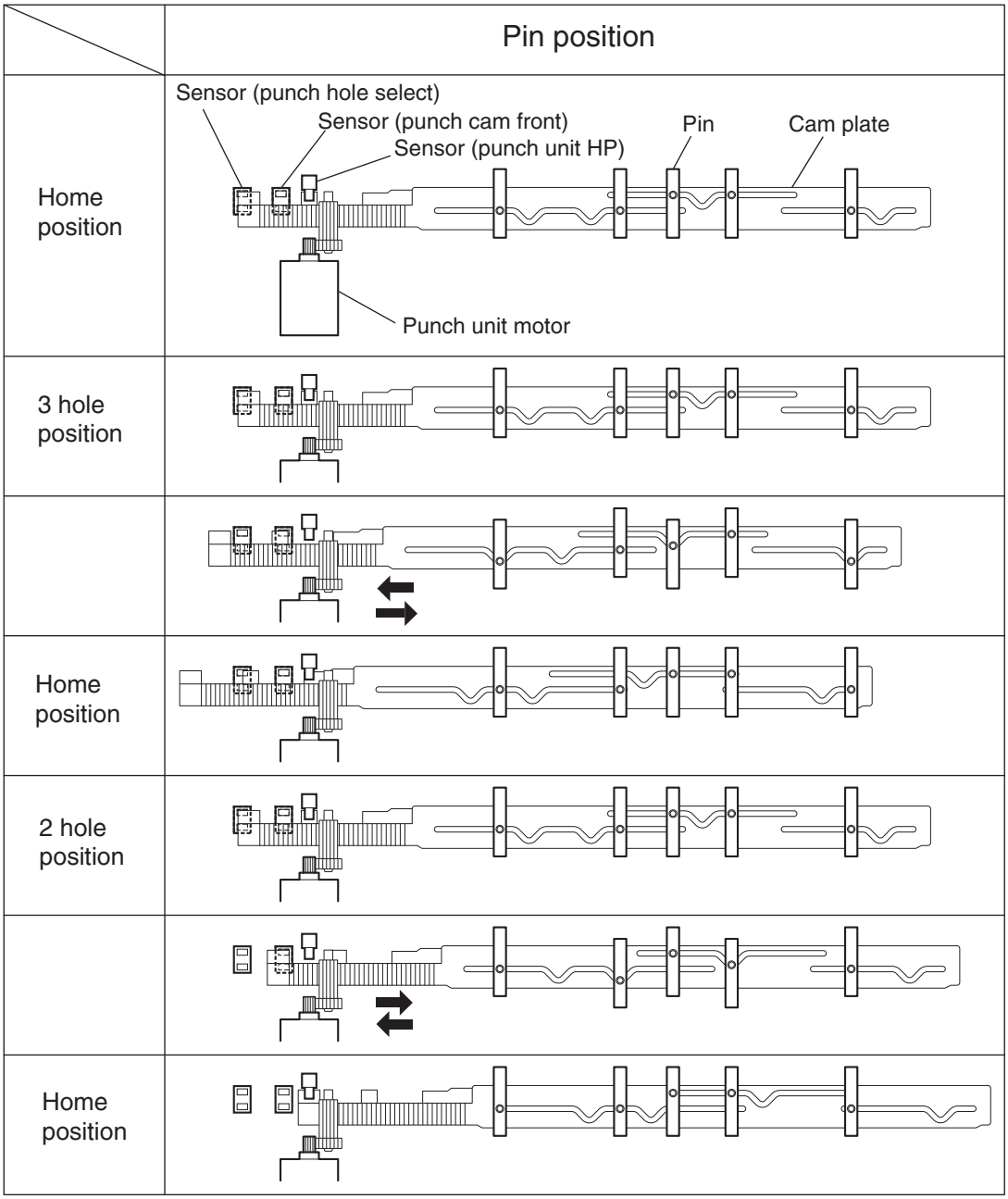
Punching

After punching positions are determined, the punch unit motor is activated to move the cam plate. With the movement of the cam plate, the pins descend along the guide holes to punch the media.

This operation is performed for each sheet of media.

The cam plate can lower the pins even while it is moving to the front or rear side.

The punch unit motor is rotated forward or reversely for each sheet of media, which is triggered by the sensor (punch cam front) being turned on/off.



Detecting punch waste full

Punch waste is stored in the punch waste box.

A sensor is provided to detect punch waste full.

When punch waste full is detected, it is notified to the operator only once.

Even if punch waste is not removed, the finisher can still punch media. However, it can spread punch waste inside the machine.

Detecting punch waste box

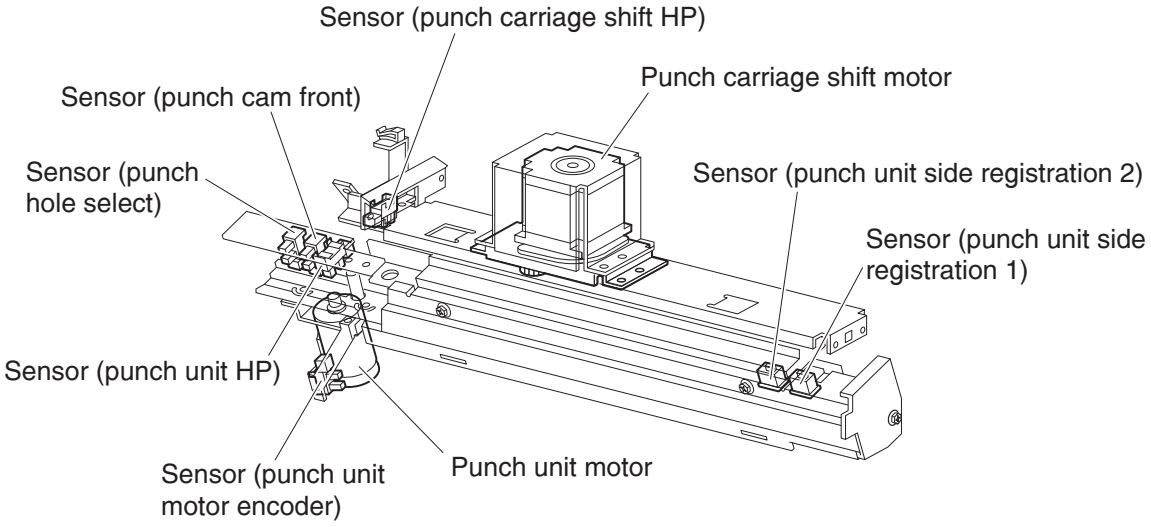
The sensor (punch waste box set) detects whether the punch waste box is properly set.

When the sensor (punch waste box set) does not detect that the punch waste box is properly set for four seconds, the punch waste box count is reset.

Functions of punch sensors/motors

- Sensor (punch unit side registration 1)
  - A photo-reflective sensor that detects the side edge of large media.
  - Media side edge is detected by On/Off of this sensor while shifting the punch (containing this sensor) in the direction of media width.
  - The sensor remains at high (+5 V dc) while media is present, and turns low when media side edge is detected.
- Sensor (punch unit side registration 2)
  - A photo-reflective sensor that detects the side edge of small media.
  - This sensor has the same function as the sensor (punch unit side registration 1).
- Sensor (punch carriage shift HP)
  - A photo-interrupter sensor that detects the home position of the moving punch.
  - It turns high (+5 V dc) (light blocking) when the home position is detected.
- Sensor (punch unit HP)
  - A photo-interrupter sensor that detects the home position of the cam plate that lowers the punching pins.
  - It turns high (+5 V dc) when the home position is detected.
- Sensor (punch hole select)
  - A photo-interrupter sensor that detects the rear position of the cam plate.
  - It turns high (+5 V dc) when the rear position is detected.
  - This sensor also detects the cam position to switch punch holes (2-hole/3-hole).
- Sensor (punch cam front)
  - A photo-interrupter sensor that detects the front position of the cam plate.
  - It turns high (+5 V dc) when the front position is detected.
  - This sensor is used to determine to which side (front or rear) the cam plate should be moved.
- Sensor (punch unit motor encoder)
  - A photo-interrupter sensor that detects pulse generated by the encoder attached to the punch unit motor.
  - It counts punch unit motor revolutions and becomes a trigger to stop the motor (by shutting off the current).
- Punch carriage shift motor assembly
  - A stepping motor to move the punch in the media width direction.
- Punch unit motor
  - A DC motor to move the cam plate that lowers the punching pins.
  - Forward rotation of the motor moves the cam plate to the front side, and reverse rotation moves it to the rear side.
- Sensor (punch waste box set)
  - A photo-interrupter sensor that detects whether the waste box is properly set.
  - When the punch waste box is properly set, the actuator of the box blocks the light transmission of the sensor, which turns the sensor to high (+5 V dc).
- Sensor (punch waste box full)

A photo-interrupter sensor that detects whether the punch waste box is filled with punch waste.



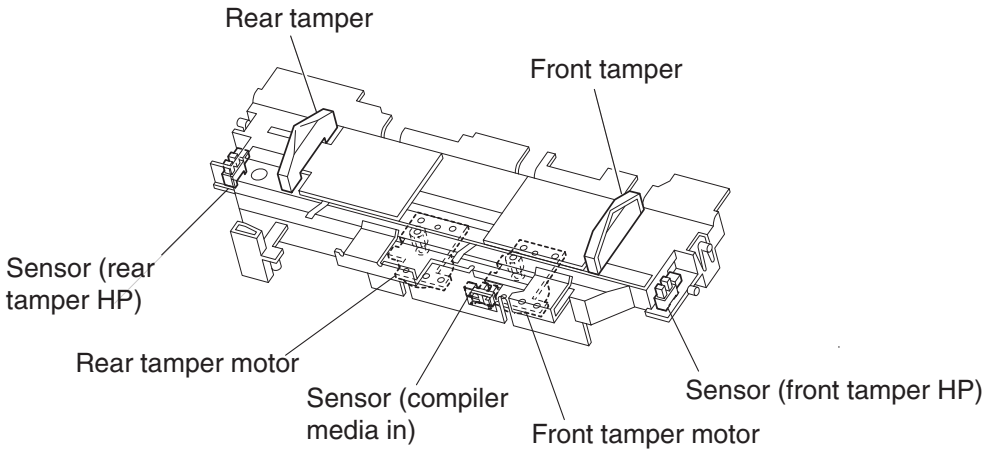
Compiler unit assembly

This section describes the operation of the compiler unit assembly which aligns the media edge transferred from the punch unit.

Outline of operation

When media is fed onto the compiler unit assembly, tamping is performed to align the media edge in the media width direction.

When ejecting stapled sets of media to the stacker media bin, if they are stacked in the stacker media bin with the same staple position, the height of the stapled portion will increase. This will cause improper compiling of media due to butting of the following media. To prevent such improper compiling, offsetting is required by shifting the staple position between sets of media.



Capacity of compiler unit assembly

Media volume that can be stacked on the compiler unit assembly is limited as shown in the table below.

The number of sheets depends on whether media is stapled or not, as well as on media size.

If the number of sheets of one set to be stapled exceeds the limit, the exceeding sheets are not stacked on the compiler unit assembly, and are forcibly ejected to the stacker media bin without being stapled.

This forcible ejection is performed to prevent damage to the staple assembly.

When feeding large media in the non-staple mode, there may be a misalignment depending on media characteristics. For this reason, the default media capacity is set to a smaller value.

Compiler unit assembly media capacity

Condition	Min.	Default	Max.
Staple mode	2	50	75
For small media (less than 216 mm in the feed direction) in non-staple mode	10	50	100
For large media (216 mm or more in the feed direction) in non-staple mode	10	25	100

Compiler unit assembly operation with multiple media sizes

When two or more media sizes are used and their widths are the same (example: A4L and A3S), all the sheets are compiled and stapled as a set on the compiler unit assembly, and then ejected to the stacker media bin.

When two or more media sizes with different media width are used, stapling media on the compiler unit assembly is stopped when a different size is detected. Such different-sized sheets of media are forcibly ejected to the stacker media bin.

Tamping

When media is fed from the punch to the compiler unit assembly, tamping is performed to align the media in the media width direction on the compiler unit assembly.

Tamping is an operation to align media to the specified position on the compiler unit assembly. The front tamper or rear tamper is moved to the end of the media by its motor.

Tamping is executed each time when a sheet of media reaches the compiler unit assembly. Additional tamping is executed after the last sheet is tamped.

There are three types of tamping:

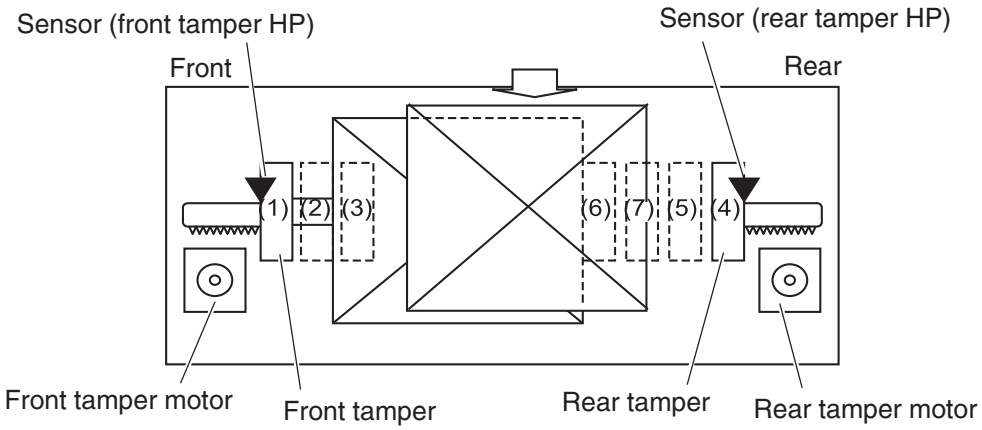
- Front tamping—Tamping by the rear tamper with the front tamper fixed at the home position.
- Rear tamping—Tamping by the front tamper with the rear tamper fixed at the home position.
- Center tamping—Tamping by the front and rear tampers to align media to the center.

Front tamping

Front tamping is used in the following cases.

- In the non-staple mode
- When executing front stapling (corner)

The tamper positions during front tamping are shown below.



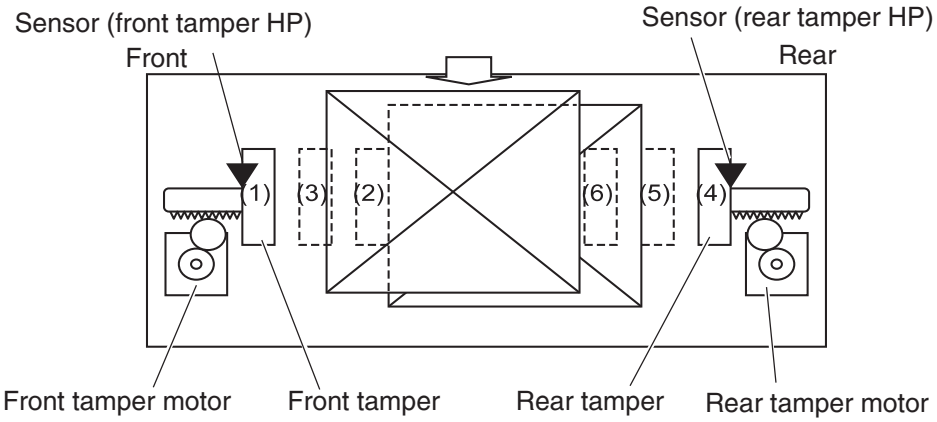
Position	Description
1	Front tamper home position—sensor (front tamper HP)
2	Front tamper size position
3	Front tamper offset position
4	Rear tamper home position—sensor (rear tamper HP)
5	Rear tamper standby position
6	Rear tamper tamping position
7	Rear tamper offset position

Rear tamping

Rear tamping is used in the following cases.

- When executing rear stapling (corner)
- When executing dual stapling

The tamper positions during rear tamping are shown below.

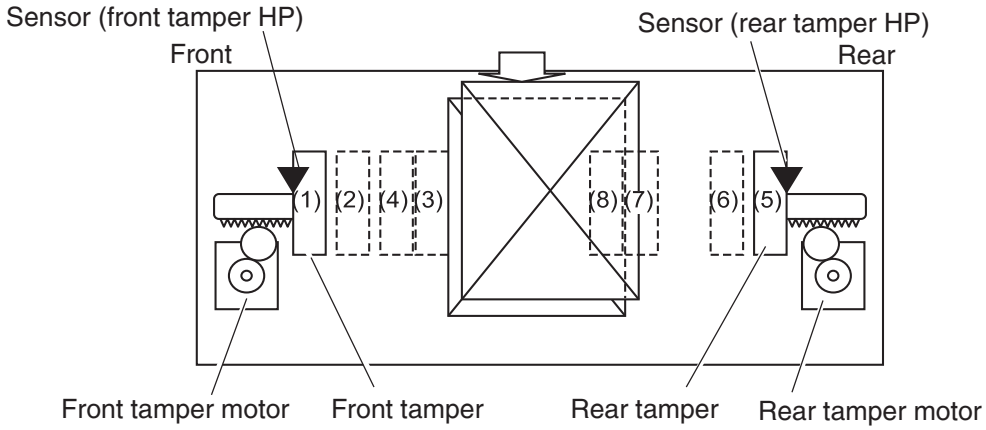


Position	Description
1	Front tamper home position—sensor (front tamper HP)
2	Front tamper tamping position
3	Front tamper offset position
4	Rear tamper home position—sensor (rear tamper HP)
5	Rear tamper size position
6	Rear tamper offset position

Center tamping

Center tamping is used when executing rear stapling (straight).

The tamper positions during center tamping are shown below.



Position	Description
1	Front tamper home position—sensor (front tamper HP)
2	Front tamper standby position
3	Front tamper tamping position
4	Front tamper offset position
5	Rear tamper home position—sensor (rear tamper HP)

Position	Description
6	Rear tamper standby position
7	Rear tamper size position
8	Rear tamper offset position

Determining tamper home position

When the sensor (lower media exit) turns high (+5 V dc) (light receiving), the front and rear tamper motors on the compiler unit assembly are activated, and the front and rear tampers start moving.

The front tamper home position is determined when the front tamper enters the sensor (front tamper HP) sensing area.

In the same way, the rear tamper home position is determined when the rear tamper enters the sensor (rear tamper HP) sensing area.

Tamping

Tamping is executed after a preset time has passed after the sensor (compiler media present) turns high (+5 V dc) when media is detected on the compiler unit assembly.

Offsetting

Offsetting is an operation to shift the position of media to be ejected to the stacker media bin so that boundaries between media units (sets of media, job units, etc.) can be easily recognized.

Offsetting is executed for staple positions:

- During front stapling (corner)—Shifts stapled sheets using the front tamper by 20 mm to the rear side before ejecting them to the stacker media bin
- During rear stapling (corner/straight)
  - For media with a width of 216 mm or more [rear staple (corner)]—Shifts stapled sheets using the rear tamper by 20 mm to the front side before ejecting them to the stacker media bin
  - For media with a width of less than 216 mm [rear staple (straight)]—Shifts stapled sheets using the front tamper by 9 mm to the rear side before ejecting them to the stacker media bin.

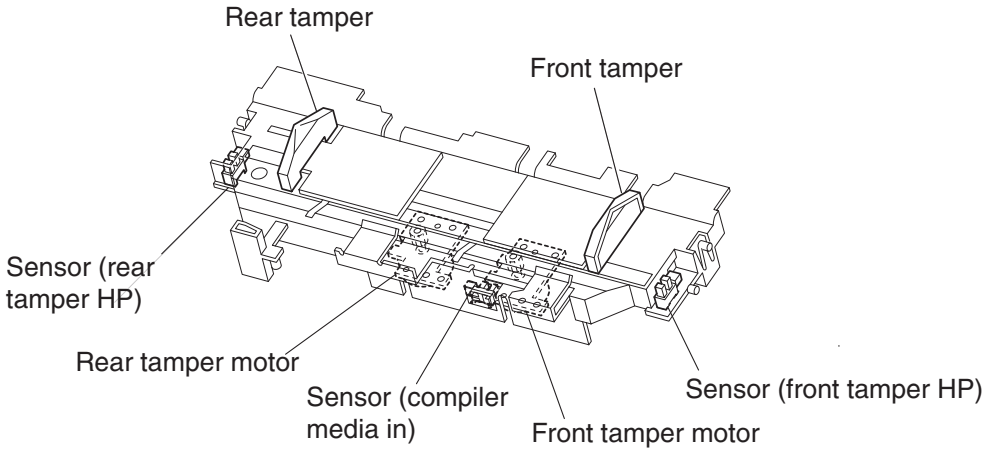
During dual stapling:

- Shifts stapled sheets using the front tamper by 9 mm to the rear side before ejecting them to the stacker media bin.
- Offsetting is not executed (0 mm) for small media.

Functions of compiler unit assembly sensors/motors

- Sensor (compiler media in)
  - A photo-interrupter sensor that detects whether media is present or not on the compiler unit assembly.
  - When media is detected, the actuator leaves the sensing area, which turns the sensor to high (+5 V dc) (light receiving).
- Sensor (front tamper HP)
  - A photo-interrupter sensor that detects the front tamper home position.
  - When the front tamper comes to the home position, it enters the sensor’s sensing area, which turns the sensor to high (+5 V dc) (light blocking).
- Sensor (rear tamper HP)
  - A photo-interrupter sensor that detects the rear tamper home position.
  - When the rear tamper comes to the home position, it enters the sensor’s sensing area, which turns the sensor to high (+5 V dc) (light blocking).

- Front tamper motor
  - A stepping motor that moves the front tamper for tamping.
  - Clockwise rotation of this motor moves the front tamper to the rear side. Counterclockwise rotation of this motor moves the tamper to the front side.
- Rear tamper motor
  - A stepping motor that moves the rear tamper for tamping.
  - Clockwise rotation of this motor moves the rear tamper to the front side. Counterclockwise rotation of this motor moves the tamper to the rear side.



Stapler

This section describes the operation of the stapler.

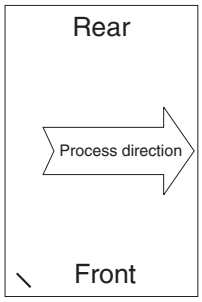
Stapling operation

Sheets of media fed from the punch are tamped on the compiler unit assembly, and then stapled at specified positions by the command of the printer.

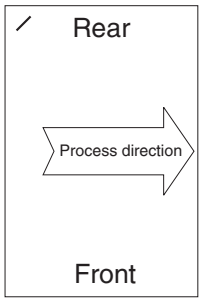
Staple positions

There are four stapling modes:

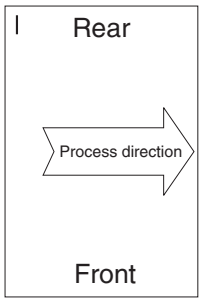
- Front staple (corner) [front corner]
  The stapler staples a set of media obliquely (45 degrees) after the rear tamper aligns the media to the front side.



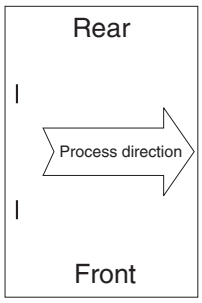
- Rear staple (corner) [rear corner]
  This type of stapling is applied for media with a width of 216 mm or more.
  The stapler moves to the rear corner and staples a set of media obliquely (45 degrees) after the front tamper aligns the media to the rear side.



- Rear Staple (Straight) [rear straight]
  This type of stapling is applied for media with a width of less than 216 mm.
  The Stapler staples a set of media in parallel with the media edge after the front tamper aligns the media to the rear side.



- Dual Staple [dual]
  The Stapler staples a set of media at fixed positions (front/rear sides) in parallel with the media edge after the front tamper aligns the media to the specified position for each media size.



Media sizes that allow stapling

Media size that allows stapling depends on stapling positions.

The following table shows media sizes and the applicability of stapling for each staple position.

	Front corner	Rear corner	Rear straight	Dual
A3 SEF	Yes	Yes	No	Yes
A4 LEF	Yes	Yes	No	Yes
11 x 17 in. SEF	Yes	Yes	No	Yes
8.5 x 11 in. LEF	Yes	Yes	No	Yes
8K SEF(GCO), 16K LEF(GCO)	Yes	Yes	No	Yes
B4 SEF, B5 LEF	Yes	Yes	No	Yes
8 x 10 in. LEF	Yes	Yes	No	Yes
8.5 x 14 in. SEF / 8.5 x 13 in. SEF / 8.5 x 11 in. SEF	Yes	No	Yes	Yes
A4 SEF	Yes	No	Yes	Yes
8 x 10 in. SEF	Yes	No	Yes	Yes
Yes: Applicable, No: Not applicable				

Stapling one sheet

Upon receiving the stapling command from the printer with one sheet remaining on the compiler unit assembly, the finisher ejects the media to the stacker media bin without stapling it.

Stapling multiple size media

When sheets with different sizes and the same width (example: A4L and A3S) are present on the compiler unit assembly, all the sheets are stapled and then ejected to the stacker media bin.

When sheets with different widths are present on the compiler unit assembly, stapling is stopped when a different width is detected. Such different-width sheets are forcibly ejected to the stacker media bin.

Media limits for stapling

The number of sheets to be stapled is limited to prevent damage to the stapler.

- If the number of sheets of one set to be stapled exceeds the limit of the compiler unit assembly, the exceeding sheets are not stacked on the compiler unit assembly, and are forcibly ejected to the stacker media bin without being stapled.
- After the forcible ejection of media, if the number of following sheets of one set to be stapled exceeds the limit of the compiler unit assembly, the exceeding sheets are also ejected forcibly to the stacker media bin without being stapled.
- After that, even if the number of following sheets of one set to be stapled falls within the limit, the sheets are also ejected forcibly to the stacker media bin without being stapled.

The upper limit (and default) of the compiler unit assembly media capacity when stapling is 50 (variable (10 to 100) by the non-volatile memory).

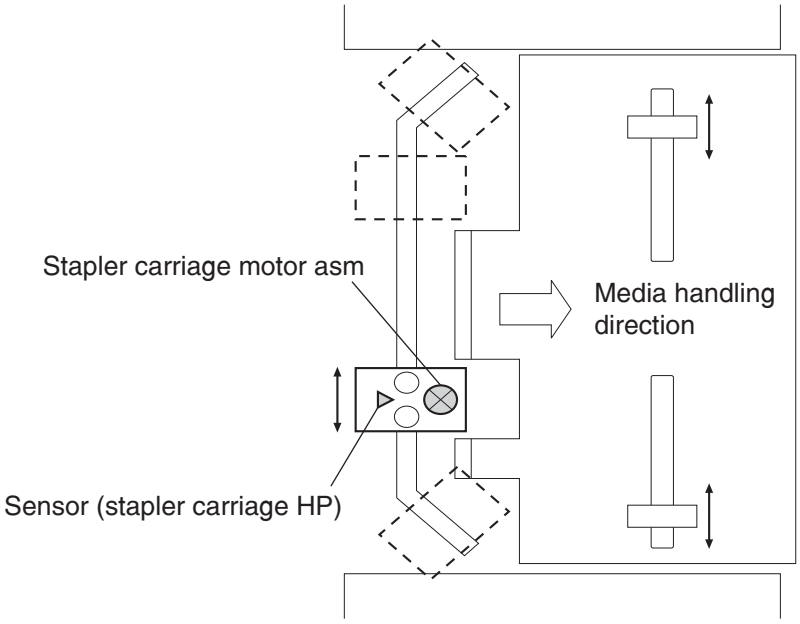
Stapler operation

The stapler stays at the front home position, that is, at the front staple (corner) position when the power is turned on.

The stapler starts stapling when a set of sheets to be stapled is stacked on the compiler unit assembly.

The stapler does not move during stapling in the front staple mode.

In any mode other than the front staple mode, the stapler moves to the specified position, and then performs stapling.



Stapler unit assembly

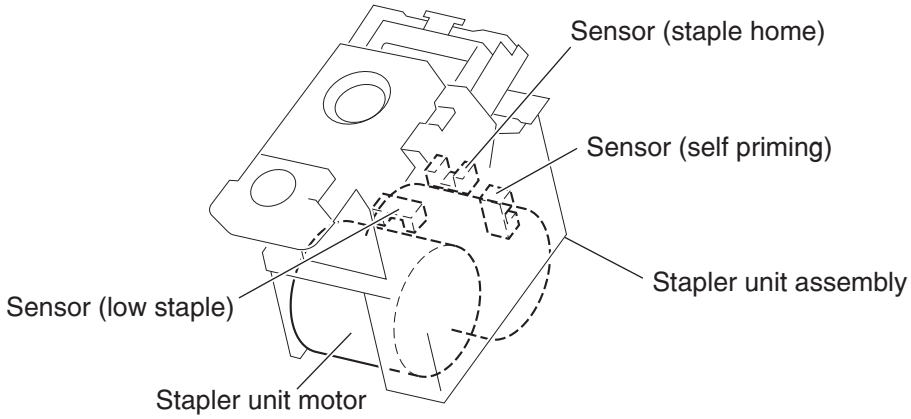
The stapling operation is executed by closing the stapler unit assembly.

The stapler unit assembly, containing the staple motor, the sensor (staple home), the sensor (self priming), and the sensor (low staple), is activated by the staple motor.

Forward (clockwise) rotation of the motor drives the stapler to staple a set of sheets, and returns the stapling unit to the home position.

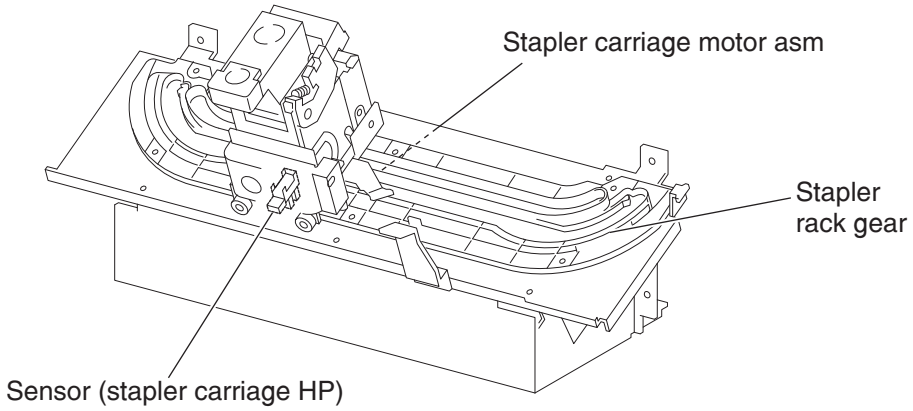
If stapling fails, the motor rotates reversely (counterclockwise) to return the stapler unit assembly to the home position.

When staples become low, the low staple sensor detects it, and stapling stops automatically, displaying an alarm message. The message is also displayed when the staple cartridge is not installed.



Functions of stapler sensors/motors

- Sensor (stapler carriage HP)
  - A photo-interrupter sensor that detects the stapler home position, rear staple (corner) position, and rear staple (straight) position.
  - It turns high (+5 V dc) (light blocking) when the stapler comes to the specified position.
- Stapler carriage motor assembly
  - A stepping motor that moves the stapler unit assembly.
  - Clockwise rotation of this motor moves the stapler unit assembly to the rear side, while counterclockwise rotation moves the stapler unit assembly to the front side.
- Sensor (low staple) in the stapler unit assembly
  - A photo-interrupter sensor that detects when the stapler unit assembly is nearly out of staples.
  - It turns high (+5 V dc) when 20 staples are left.
- Sensor (self priming) in the stapler unit assembly
  - A photo-interrupter sensor that detects that staples are at the stapler unit assembly end; it also detects failure in stapling.
  - It turns low (0 V dc) (light blocking) when stapling is ready.
- Sensor (staple home) in the stapler unit assembly
  - A photo-interrupter sensor that detects the stapler unit assembly home position; it also detects failure in stapling.
  - This sensor also functions as a trigger to stop the staple motor.
  - It turns low (0 V dc) (light blocking) while the stapler unit assembly stays at the home position.
- Stapler unit motor (in the stapler unit assembly)
  - A DC motor to activate the stapler unit assembly for stapling.
  - Clockwise rotation of this motor enables stapling, while counterclockwise rotation returns the stapler unit assembly.



Booklet Operation

The booklet media entrance roll assembly driven by the booklet media entrance drive motor will deliver media from the finisher entrance and stack it against the booklet end guide in the booklet unit. When the booklet end guide is at the bottom of the booklet unit it will continue to accept media. Once the proper amount of media is reached, stapling will occur and booklets will be delivered in sets to the booklet media bin.

The booklet media exit roll assembly is driven by booklet folding/exit drive motor assembly and delivers booklets to the booklet media bin. During printing, paper drawn to the booklet compiler is aligned by the booklet paddle shaft assembly which is driven by booklet paddle shaft drive Motor.

When a sheet of paper enters the booklet compiler, tamping operation is performed by two moving tampers moving towards the front and rear. The front tamper is driven by front booklet tamper drive motor; rear booklet tamper drive motor. Tamping operation will be performed a final time after the last sheet is received.

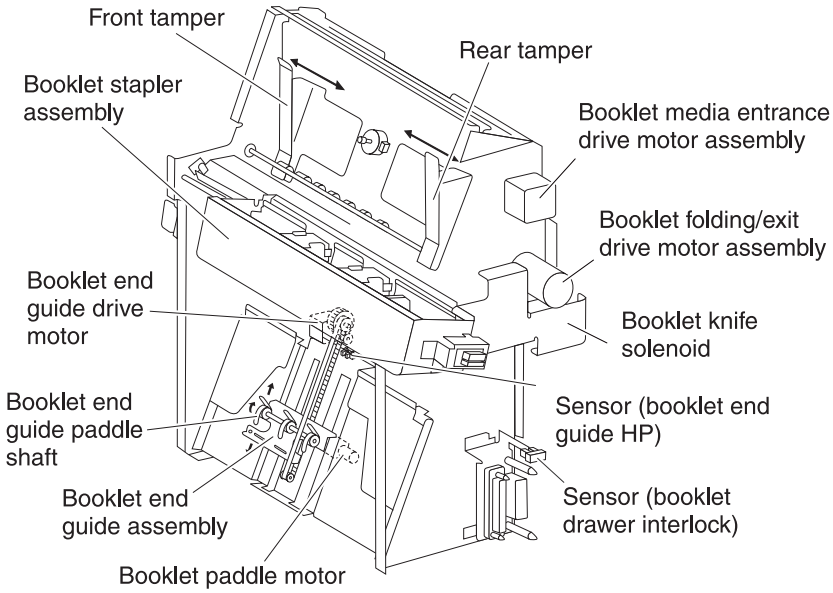
Documents in the compiler tray are assembled towards the front. For center stapling and folding positions, one set of document is assembled and moved to the center.

The booklet end guide is lifted to where the fold will divide the paper into two equal halves. When the printouts are stapled, the booklet end guide will be raised so that the stapled position is at the folding position. The stapling position is slightly lower than the folding position center line.

When the movement from the booklet folding/exit drive motor is transferred to the knife through the engagement of the sector gear, the knife will thrust forward and then return to the original position after one full rotation. At the folding position, the knife is thrust forward to fold the paper between booklet folding roll and booklet folding nip roll.

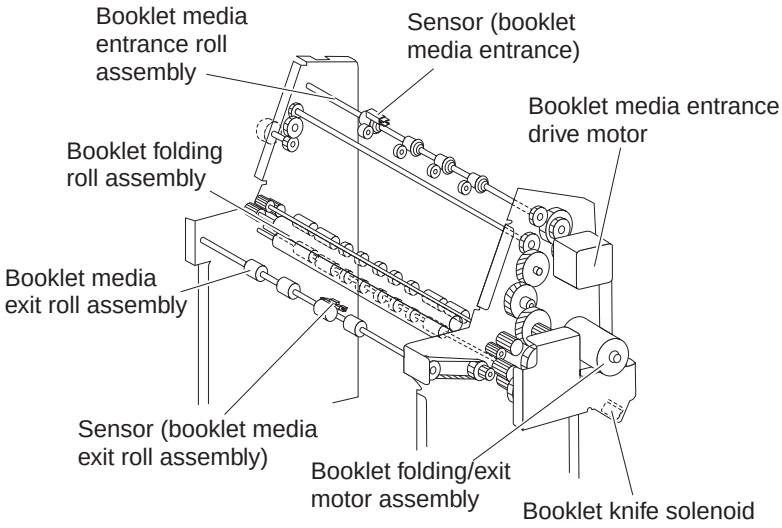
Paper is folded into two halves by the booklet folding roll driven by the booklet folding/exit drive motor and is delivered to the booklet media bin by the booklet media exit roll assembly. The booklet media bin belt will move at a fixed interval for every set of booklets that are created.

Functions of booklet sensors and motors

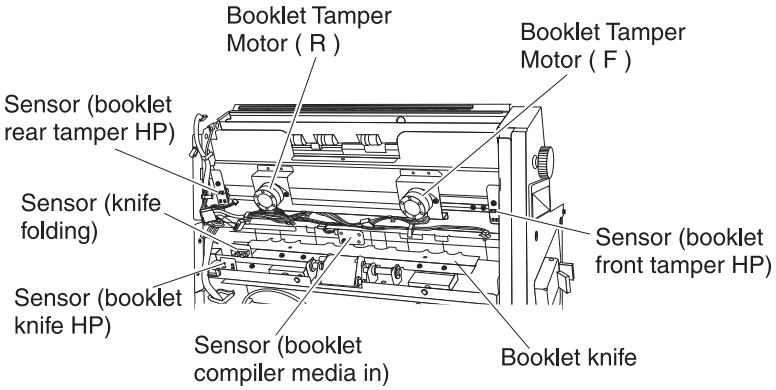


- Sensor (booklet media entrance)
  - This photo sensor detects the media delivery to the booklet unit.
- Sensor (booklet media exit)
  - This photo sensor detects paper delivery to booklet media bin.
- Booklet media entrance drive motor assembly
  - This stepping motor drives the booklet media entrance roll assembly.
- Booklet folding/exit drive motor assembly
  - This DC motor drives booklet folding roll, booklet media exit roll assembly, and knife.

- Booklet knife solenoid
  - This solenoid transfers the booklet folding/exit drive motor assembly to the knife through the gear.



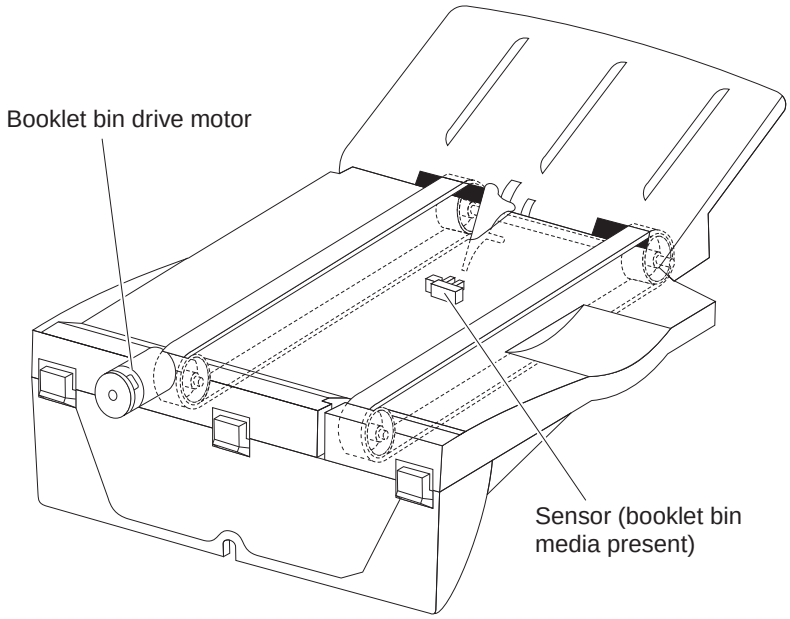
- Sensor (booklet front tamper HP)
  - This photo sensor detects the home position of the booklet front tamper.
- Sensor (booklet rear tamper HP)
  - This photo sensor detects the home position of the booklet Rear tamper.
- Sensor (booklet compile media in)
  - This photo sensor detects paper present in the booklet compiler tray.
  - Booklet front tamper motor
  - This stepping motor drives the booklet front tamper.
- Booklet rear tamper motor
  - This stepping motor drives the booklet rear tamper.
- Sensor (booklet knife HP)
  - This photo sensor detects the home position (stored condition) of knife.
- Sensor (knife folding)
  - This photo sensor detects the fold position (protruded condition) of knife.
- Booklet staple assembly



  - This booklet stapler consist of two stapler units (including stapler low switch) and booklet stapler head motor.
- Booklet paddle motor
  - This DC motor drives the paddle at the booklet section.
- Sensor (booklet end guide HP)
  - This photo sensor detects the home position of the booklet end guide.
- Booklet end guide drive motor
  - This stepping motor moves the booklet end guide up and down.

- Sensor (booklet drawer interlock)
  - This photo sensor detects when the booklet unit is set.
- Sensor (booklet bin media present)
  - This photo sensor detects paper availability on the booklet media bin. If 15 sets of printouts are detected in the booklet media bin, it will be considered as Full Stack.

Booklet media bin



Operation

The upper media bin contains the sensor (upper media bin full) to detect the media stack volume in the upper media bin.

Once the sensor detects a full stack (500 sheets) in the upper media bin, ejection of media to the upper media bin is inhibited until a full stack is reset.

Functions of upper media bin sensors

- Sensor (upper media exit)
  - A photo-interrupter sensor that detects that media has come to the upper media exit roll assembly top at the exit of the upper media bin.
  - When media reaches the upper media exit roll assembly top, the actuator leaves the sensing area, which turns the sensor to high (+5 V dc).
- Sensor (upper media bin full)
  - A photo-reflective sensor that detects the media stack volume in the upper media bin.
  - It turns high (+5 V dc) when it detects a full stack.

Stacker media bin

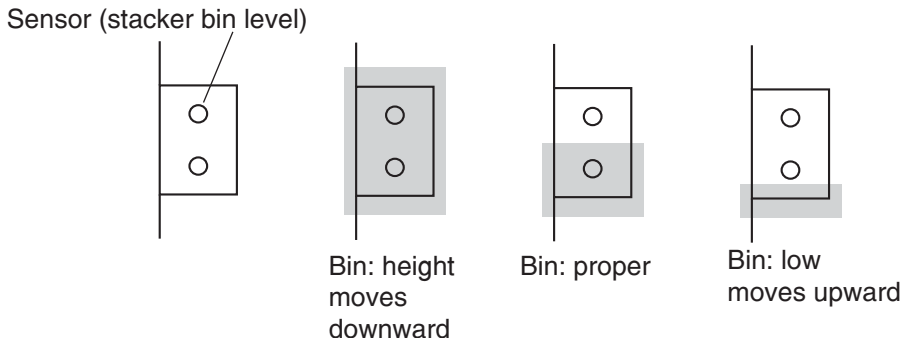
The stacker media bin goes up and down to an appropriate position according to the volume of media fed from the compiler unit assembly so as to properly stack media to a full stack.

Operation

The stacker media bin moves to an appropriate position according to the volume of media fed from the compiler unit assembly. The sensor (stacker bin level 1) and the sensor (stacker bin level 2) detect the height of media in the stacker media bin, and the sensor (stacker bin level encoder) determines the volume of media in the tray.

When media or the stacker media bin comes between the light emitter and the photo-receiver of the sensor (stacker bin level 1) and sensor (stacker bin level 2), the emitted light is blocked, and the sensors turn high. The height of media or the stacker media bin is detected based on the levels of these sensors.

This sensor information is used to control the elevator motor. The motor is activated to move the stacker media bin while the sensor (stacker bin level) turns from the light blocking state to the light receiving state.

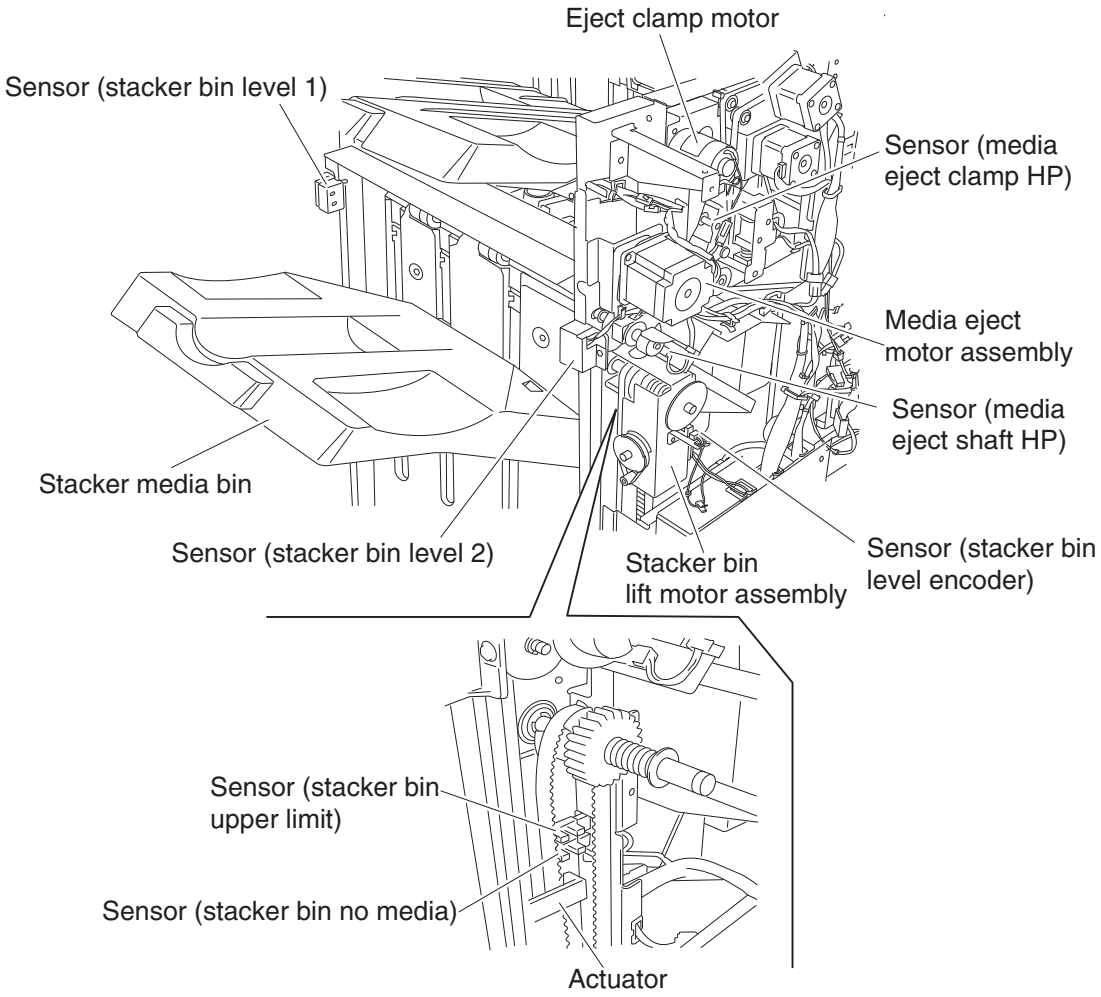


The sensor (stacker bin no media) is turned On or Off by the actuator attached to the carriage assembly right on the rear side of the finisher. In case the stacker media bin abnormally goes up above the sensor (stacker bin no media), the sensor (stacker bin upper limit) is installed above the sensor (stacker bin no media) for protection against abnormal operation.

If an operator removes media from the stacker media bin during printing, it is detected by the sensor (stacker bin level 2), and the ejection of media to the stacker media bin is inhibited. Then the elevator motor is activated to move the stacker media bin to the sensor (stacker bin level 1) sensing area. Thus, the ejection of media to the stacker media bin is restored.

If an operator removes media from the stacker media bin while printing is stopped, it is detected by the sensor (stacker bin level 2). After three seconds have passed, the elevator motor is activated to move the stacker media bin to the sensor (stacker bin level 1) sensing area. Thus, the ejection of media to the stacker media bin is restored.

The stacker media bin lowers according to the volume of media it contains. If any obstacle under the tray hinders the tray from lowering, the stacker lower safety warning is detected, and the stacker media bin is stopped.



Full stack detection

A full stack is detected when media in the stacker media bin becomes full to prevent media jam or falling of media to the floor. The stacker media bin can stack up to approximately 3000 sheets.

The media volume in the stacker media bin is detected at every 10% (approximately 300 sheets) and notified to the Controller.

Furthermore, the stacker media bin can stack up to 200 sets (default) of stapled media.

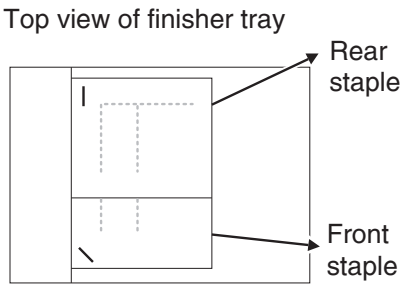
The stacker media bin can continue to stack media until media volume reaches either of the limits above.

In the mix stacking mode, all the sizes are allowed until a media volume of approximately 300 sheets in the stacker media bin is detected.

The mix stacking mode indicates one of the following cases:

- A larger (any size of media) sheet of media is stacked on a smaller sheet.
  For example: A4LEF (297x210) media is stacked on A4SEF (210x297) media.
  Note: When B5LEF (257x182) media is stacked on A4LEF (297x210) media, this is not mix stacking.

- A sheet of media of less than 11 inches is stacked in the stacker media bin with the Staple Mode changed.

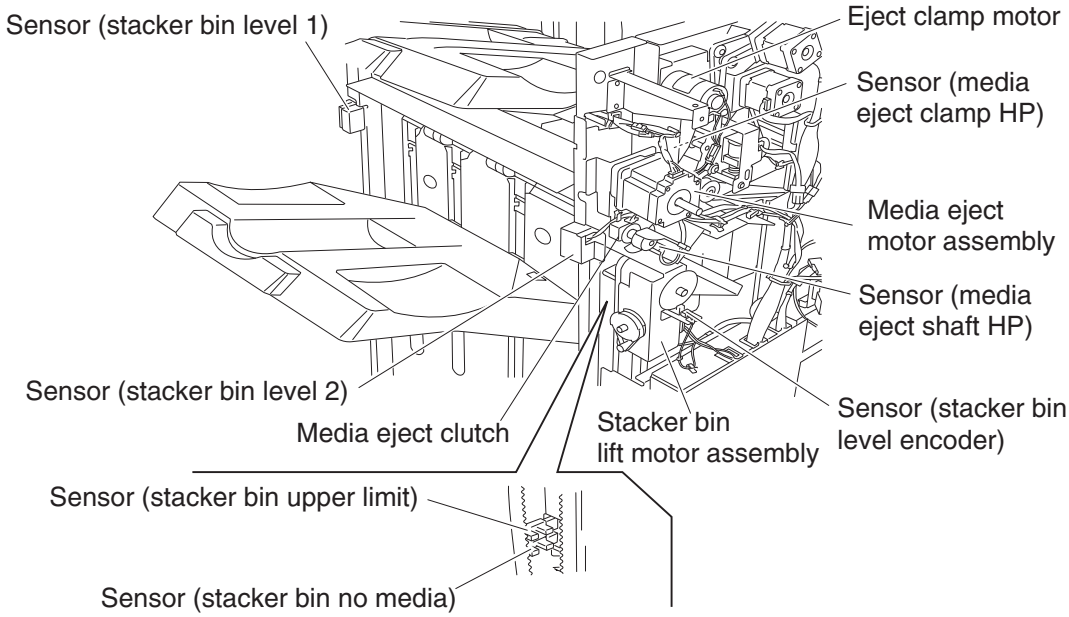


- An operator put a sheet (or sheets) when no media is remaining in the stacker media bin. (The size and condition of media stacked in the tray are not identified.)
- Media was present in the stacker media bin when power was turned on. (The size and condition of media stacked in the tray are not identified.)
- The finisher entered the Sleep Mode with mix stacking and then has exited the Sleep Mode.
- The post-processing mode has changed.

Functions of stacker media bin sensors/motors

- Sensor (stacker bin level 1)
  - A light emitter and photo-receiver paired together to detect the height of media in the stacker media bin.
  - This sensor is used to control the elevator motor.
  - When blocked by media or the tray, this sensor turns high, deciding that the stacker media bin is above the reference level.
  - To the contrary, when receiving light, this sensor turns low, deciding that the stacker media bin is below the reference level.
  - The high to low turning point of the sensor is defined as the reference level.
- Sensor (stacker bin level 2)
  - A light emitter and photo-receiver paired together to detect the height of media in the stacker media bin (same function as sensor (stacker bin level 1)).
  - This sensor is also used to control the elevator motor.
  - When blocked by media or the tray, this sensor turns high, deciding that the stacker media bin is above the reference level.
  - To the contrary, when receiving light, this sensor turns low, deciding that the stacker media bin is below the reference level.
- Sensor (stacker bin no media)
  - A photo-interrupter sensor that detects that the stacker media bin is at the highest position; it also detects no media.
  - When the actuator attached to the carriage assembly right enters the sensing area, the emitted light is blocked, which turns the sensor to high (+5 V).
- Sensor (stacker bin upper limit)
  - A photo-interrupter sensor that detects the stacker media bin's abnormal elevation above the top position (sensor (stacker bin no media) position).
  - When the actuator attached to the carriage assembly right enters the sensing area, the emitted light is blocked, which turns the sensor to high (+5 V).
- Sensor (stacker bin level encoder)
  - A photo-interrupter sensor that counts the pulse of the Encoder attached to the Shaft-Elevator.
  - The media volume in the stacker media bin is detected based on this count.
- Stacker bin lift motor
  - A DC motor that elevates or lowers the stacker media bin.
  - Clockwise rotation elevates the tray, and counterclockwise rotation lowers the tray.
- Media eject motor assembly
  - A stepper motor that ejects stapled or non-stapled media to the stacker media bin.
  - Clockwise rotation ejects media to the stacker media bin, and counterclockwise rotation reverses the eject roll to feed the media from the punch to the compiler unit assembly.

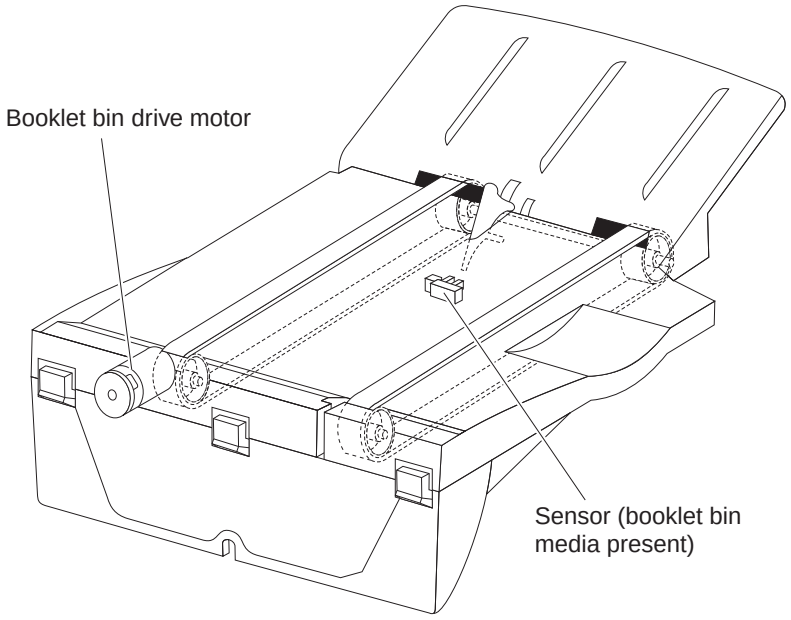
- Media eject clamp motor
  - A DC motor that elevates or lowers the media eject clamp when feeding media from the punch to the compiler unit assembly or from the compiler unit assembly to the stacker media bin.
- Sensor (media eject clamp HP)
  - A photo-interrupter sensor that detects the set clamp home position.
  - This sensor functions as a trigger to control On/Off of the set clamp clutch.
- Media eject clutch
  - When this clutch is activated, it transmits the media eject motor assembly rotating power to the media eject shaft assembly.



Booklet tray

Paper is folded into two by the booklet folding roll driven by the booklet Fold Roll Motor and booklet Eject Roll, and delivered to the booklet tray. Booklet tray is at a position lower than the paper delivery exit. Paper delivery belt will move at fixed interval for every set of output. When two sets or more are being delivered, one set at a time is being delivered.

When the front of the booklet tray is facing down, the printout will fall automatically below the tray. When removing paper, press booklet tray belt switch to move the paper delivery belt to the position for paper removal.

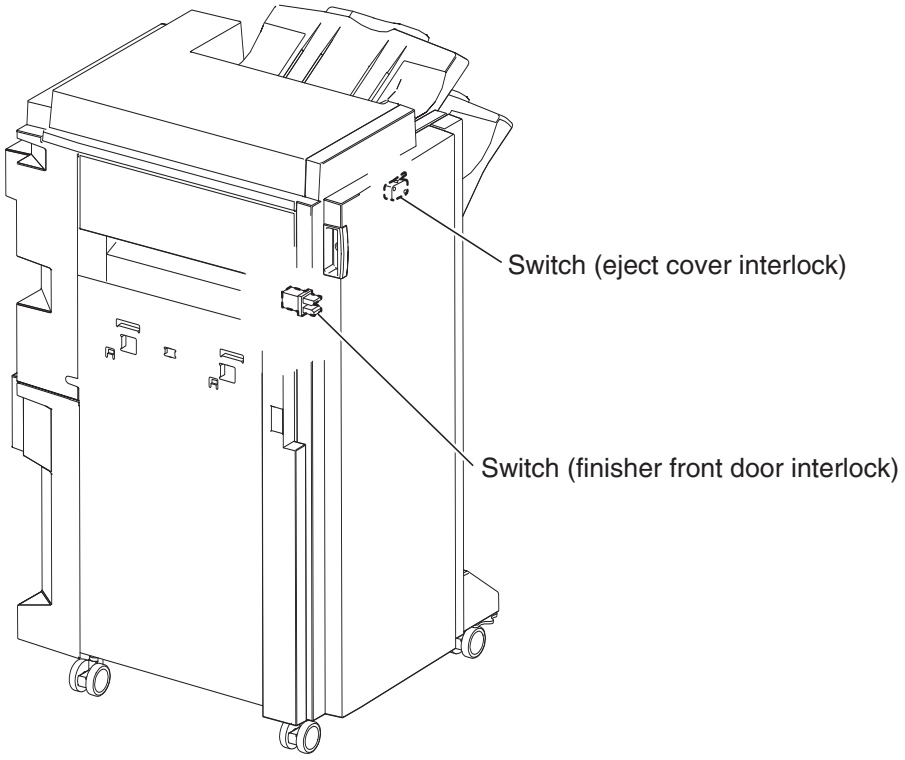


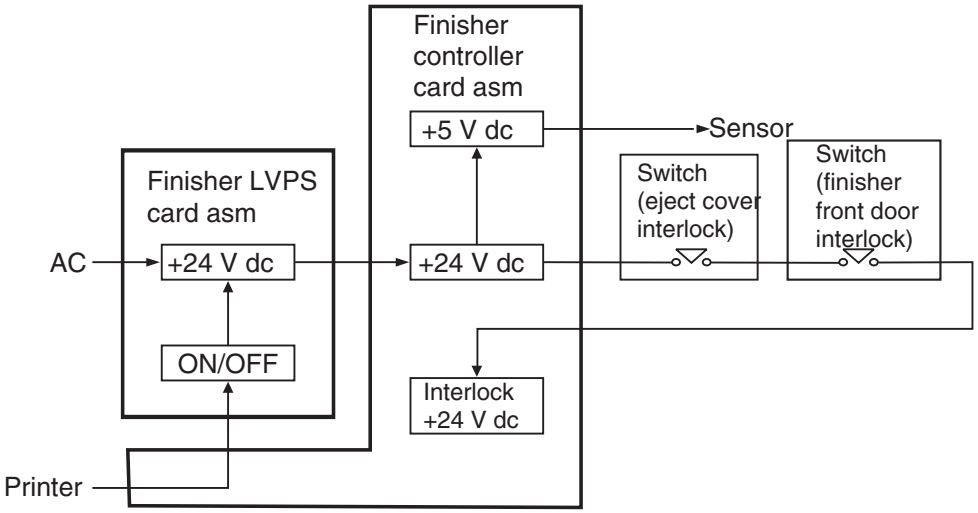
Power supply and interlock

The finisher is equipped with the following interlock switches.

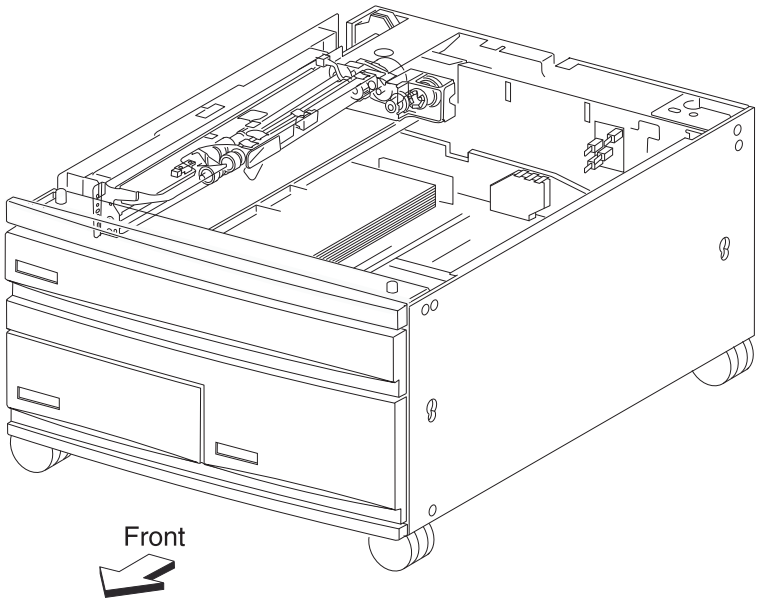
- Switch (finisher front door interlock)—Turns off when the cover assembly front opens, shutting off the Interlock +24 V dc line in the finisher.

- Switch (eject cover interlock)—Turns off when the cover eject on the right side opens, shutting off the Interlock +24 V dc line in the finisher.





TTM theory of operations

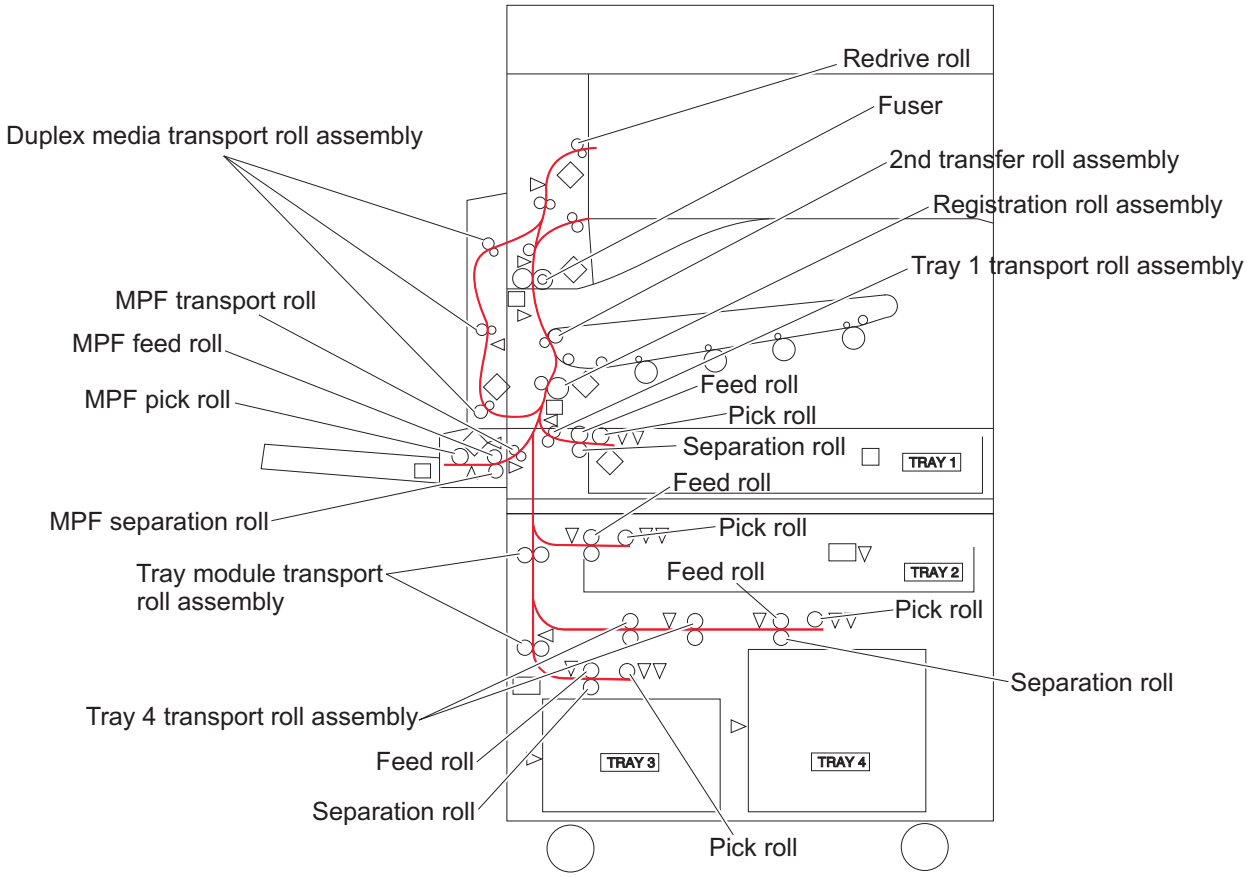


Media transport

Media transport path

Media is supplied from tray 2, tray 3 or tray 4, and is transported to the printer along the media transport path.

The following is a cross section of the printer and the TTM, showing the main components directly associated with the media path and transport.



Functions of main components

When the TTM is installed under the printer, additional trays are available.

Media tray assembly

It is necessary to adjust the rear side guides in the media tray assembly to match the media size.

Rear media guide

The rear media guide can be adjusted to different media sizes by moving it to the front or rear. The guide comes into contact with the rear edge of the media and holds it in position.

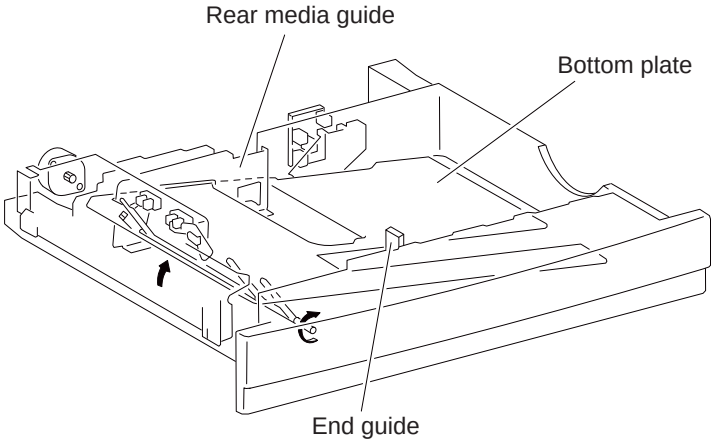
Bottom plate

The force pushing up the bottom plate is transmitted by the driving force of the motor on the media feed unit assembly. The bottom plate is pushed up by the rotation of the lift up shaft, which causes the supplied media to come in contact with the pick roller.

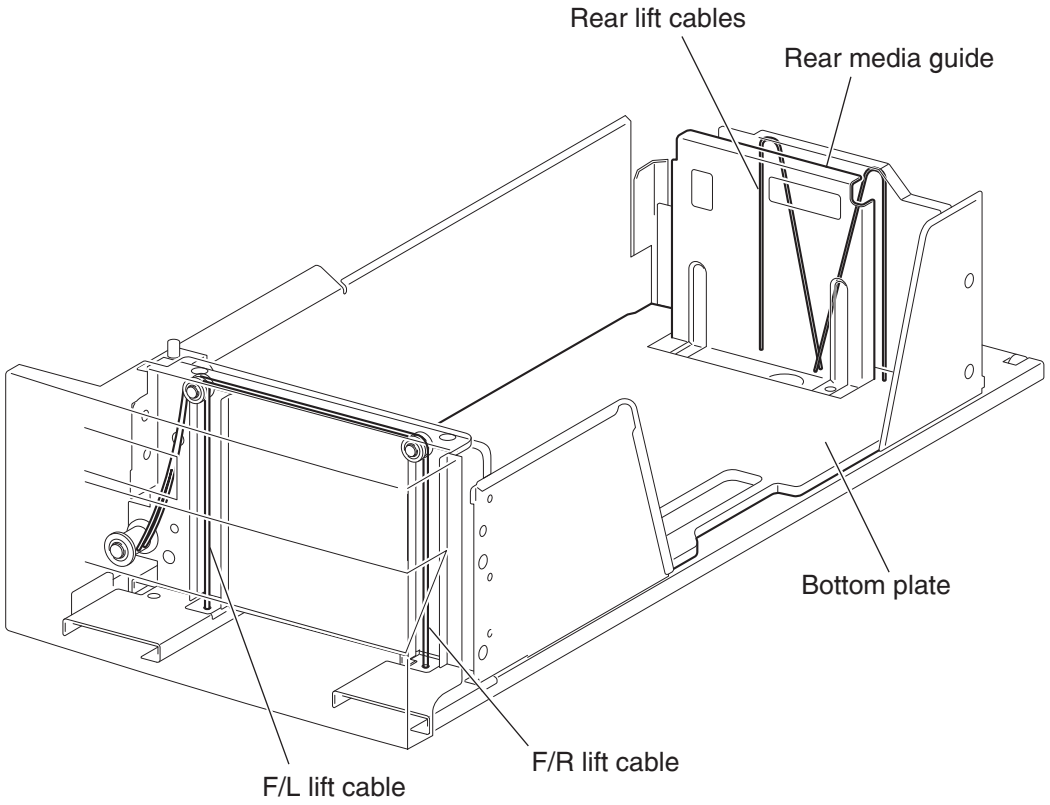
The force pushing up the bottom plate of tray 3 is transmitted by the driving force of the media feed lift motor on the media feed unit assembly to the media lift shaft assembly through the tray lift gear assembly 3. The bottom plate is lifted up via the rear tray cables, front right cable and front left cable by the rotation of the tray lift shaft assembly, which causes the supplied media to come into contact with the pick roller.

The force pushing up the bottom plate of tray 4 is transmitted to the tray lift shaft assembly through the tray lift gear assembly 4. The bottom plate is lifted up via the front tray cables and rear tray cables by the rotation of the tray lift shaft assembly, which causes the supplied media to contact the pick roller.

Tray 2 media tray assembly



Tray 3 or 4 media tray assembly



TTM media feed units

Media feed unit assembly

Since the tray 3 and tray 4 are functionally equivalent in terms of the switch (TTM media size), sensor (media out), sensor (media level) and sensor (pre-feed), only the components of one tray are described here.

The media feed unit assembly is a mechanical unit supplying media from the media tray assembly to the printer. The driving force from the media feed lift motor on the media feed unit assembly is transmitted to the three roller assemblies to feed media.

When the pick roller picks up sheets of media and the remaining media decreases, the media level actuator of the sensor (media level) lowers accordingly.

Media feed lift motor

The media feed lift motor is activated to feed media and to lift the bottom plate. While feeding media, it rotates forward to drive the pick roller. When lifting the bottom plate, it rotates in reverse to drive the tray module gears to turn the lift up shaft.

Switch (media size)

This switch (media size) sets the size of media supplied from each media tray assembly. A signal indicating the media size is transmitted as a voltage to the printer engine card assembly.

Switch (TTM media size)

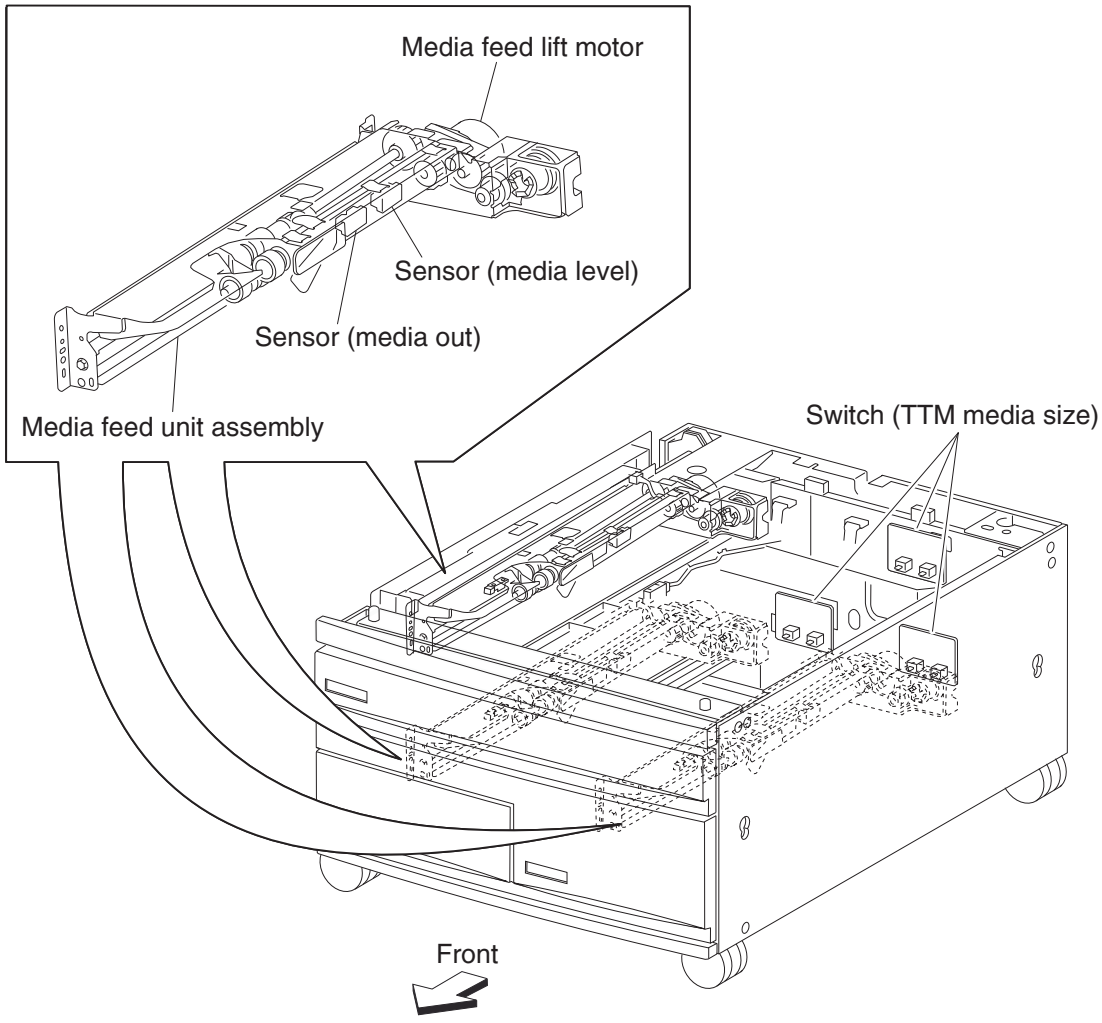
The switch (TTM media size) switches the setting of the size of media supplied from each media tray assembly. A signal indicating the set size is transmitted as a voltage to the printer engine card assembly.

Sensor (media out)

If there is no media in the media tray assembly, the media out actuator lowers and the flag of the media out actuator that has stayed in the sensor (media out) sensing area leaves there. Thus, the light of the sensor is transmitted. When the sensing area is blocked (media is present), the signal turns off.

Sensor (media level)

This sensor detects by the actuator position whether media in the media tray assembly is lifted. When the flag of the actuator leaves the sensor (media level) sensing area, the sensor detects that the media has been lifted.



Main components

Switch (tray module left door interlock)

The switch (tray module left door interlock) detects open/close of the tray module left door assembly.

Sensor (tray 2 feed-out)

The sensor (tray 2 feed-out) detects media fed from trays 2, 3, or 4.

Sensor (tray 3 feed-out)

The sensor (tray 3 feed-out) detects media fed from the tray 3 or tray 4.

Sensor (tray 4 feed-out)

The sensor (tray 4 feed-out) detects media fed from the tray 4.

Tray module media transport roll assembly

The tray module transport roll assembly feeds media from the tray 3 or tray 4 to the printer.

Tray module drive motor

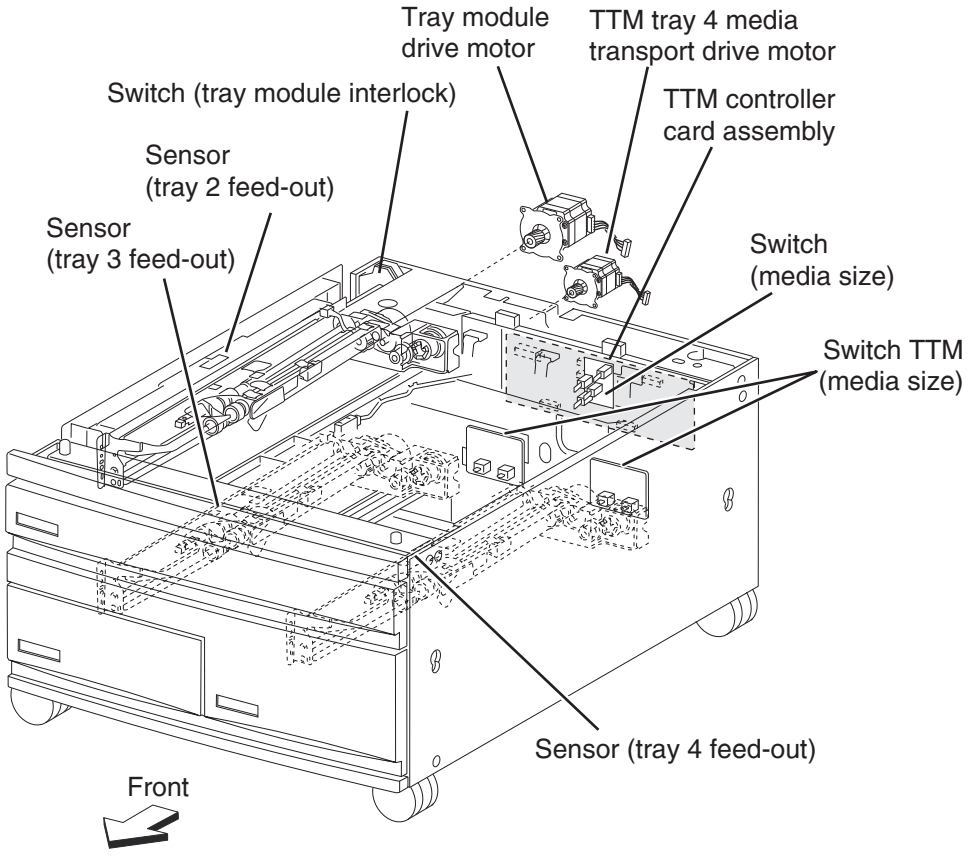
This motor is used to drive the media transport mechanism in the tray module.

TTM tray 4 media transport motor

This motor is used in the TTM to transport media from the tray 4 towards the tray module left door assembly.

TTM controller card assembly

The TTM controller card assembly, which contains a CPU, controls media feed in the tandem tray module upon receiving a command from the upper printer engine card assembly and sensor/switch information.



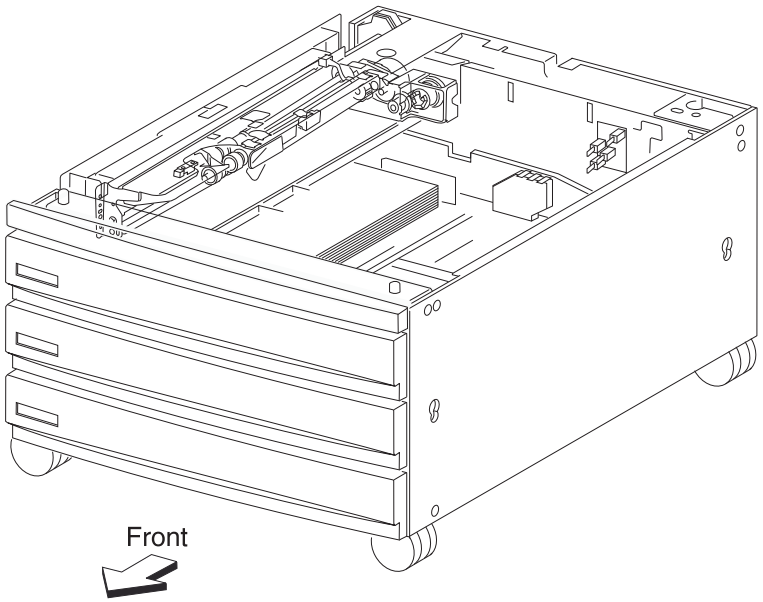
Switch (TTM media size)

The following table gives on/off states of the switches on the switch (TTM media size), corresponding to the media sizes of the media tray assembly.

Note: The switches (TTM media size) are denoted by “S/W1” and “S/W3” respectively from the left side.

Media Size	Analog switch	
	S/W1	S/W3
No Tray	Off	Off
B5L/7.25” x 10.5”L	Off	On
8.5” x 11”L	On	Off
A4L	On	On

3TM theory of operations



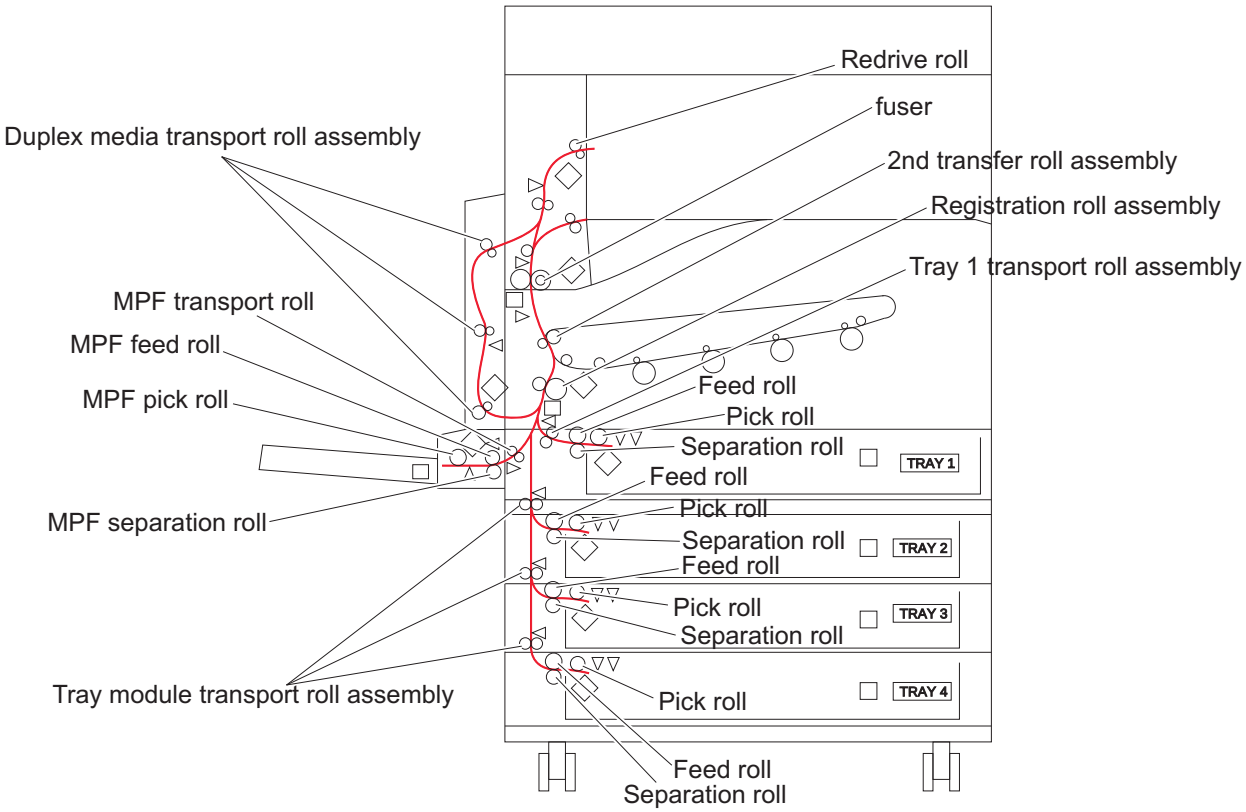
Media transport

Media transport path

Media is supplied from tray 3 or tray 4, and is transported to the printer along the media transport path.

Media transport path

The following is a cross section of the printer and the 3TM, showing the main components directly associated with the media path and transport.



Functions of main components

When the 3TM is installed under the printer, additional trays are available.

Media tray assembly

Media feed unit assembly

It is necessary to adjust the guide and the end guide in the media tray assembly to match the media size.

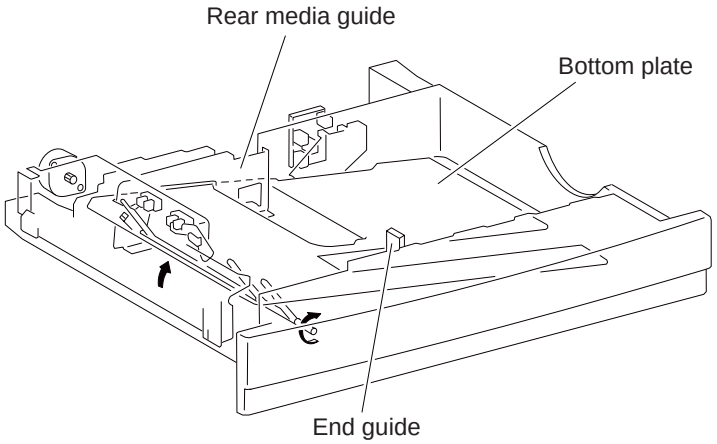
Rear media guide

The rear media guide can be adjusted to different media sizes by moving it to the front or rear. The guide comes into contact with the rear edge of the media and holds it in position.

Bottom plate

The force pushing up the bottom plate is transmitted by the driving force of the motor on the media feed unit assembly. The bottom plate is pushed up by the rotation of the lift up shaft, which causes the supplied media to come in contact with the pick roller.

Tray 2, 3, 4 media tray assembly



3TM media feed units

Media feed unit assembly

Since the tray 2, tray 3, and tray 4 are functionally equivalent in terms of the switch (media size), sensor (media out), sensor (media level) and sensor (pre-feed), only the components of one tray are described here.

The media feed unit assembly is a mechanical unit supplying media from the media tray assembly to the printer. The driving force from the media feed lift motor on the media feed unit assembly is transmitted to the three roller assemblies to feed media.

When the pick roller picks up sheets of media and the remaining media decreases, the media level actuator of the sensor (media level) lowers accordingly.

Media feed lift motor

The media feed lift motor is activated to feed media and to lift the bottom plate. While feeding media, it rotates forward to drive the pick roller. When lifting the bottom plate, it rotates in reverse to drive the tray module gears to turn the lift up shaft.

Switch (media size)

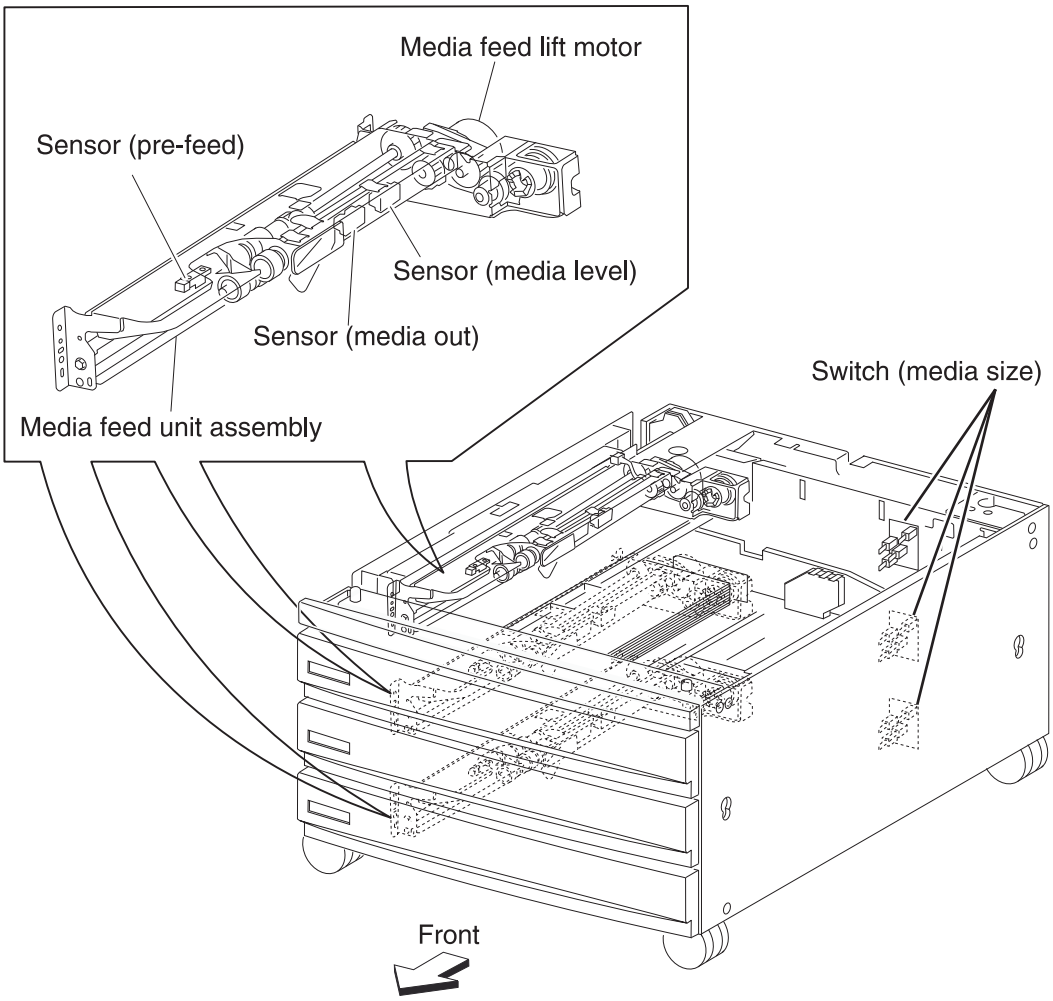
The switch (media size) switches the setting of the size of media supplied from each media tray assembly. A signal indicating the set size is transmitted as a voltage to the printer engine card assembly.

Sensor (media out)

If there is no media in the media tray assembly, the media out actuator lowers and the flag of the media out actuator that has stayed in the sensor (media out) sensing area leaves there. Thus, the light of the sensor is transmitted. When the sensing area is blocked (media is present), the signal turns off.

Sensor (media level)

This sensor detects by the actuator position whether media in the media tray assembly is lifted. When the flag of the actuator leaves the sensor (media level) sensing area, the sensor detects that the media has been lifted.



Main components

Switch (tray module left door interlock)

The switch (tray module left door interlock) detects open/close of the tray module left door assembly.

Sensor (tray 2 feed-out)

The sensor (tray 2 feed-out) detects media fed from trays 2, 3, or 4.

Sensor (tray 3 feed-out)

The sensor (tray 3 feed-out) detects media fed from the tray 3 or tray 4.

Sensor (tray 4 feed-out)

The sensor (tray 4 feed-out) detects media fed from the tray 4.

Tray module media transport roll assembly

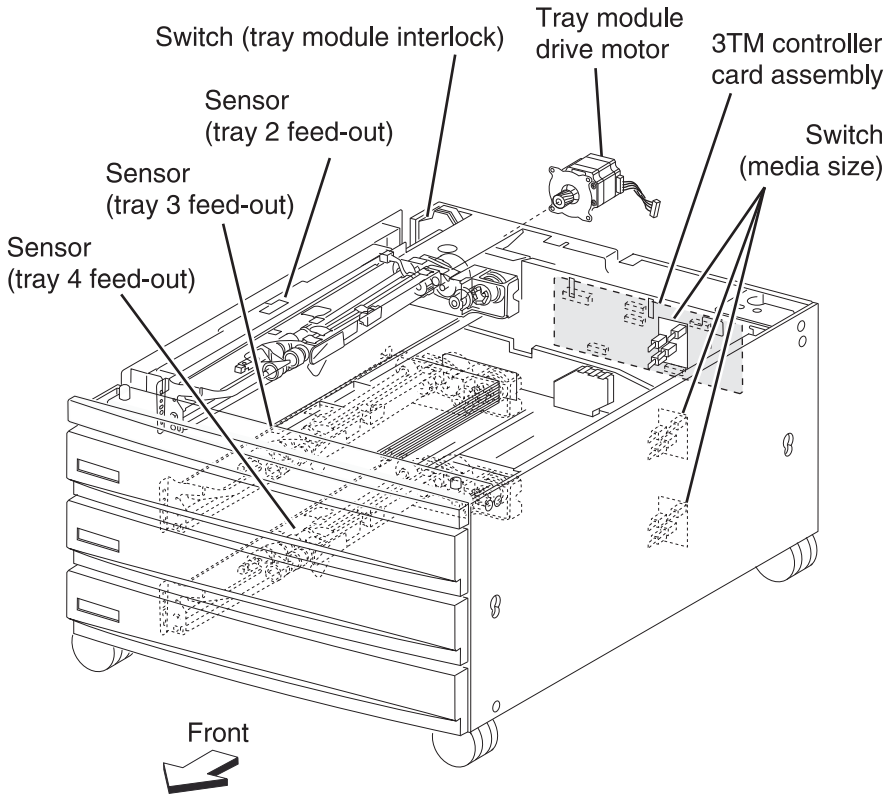
The tray module transport roll assembly feeds media from the tray 3 or tray 4 to the printer.

Tray module drive motor

This motor is used to drive the media transport mechanism in the tray module.

3TM controller card assembly

The 3TM controller card assembly, which contains a CPU, controls media feed in the tandem tray module upon receiving a command from the upper printer engine card assembly and sensor/switch information.



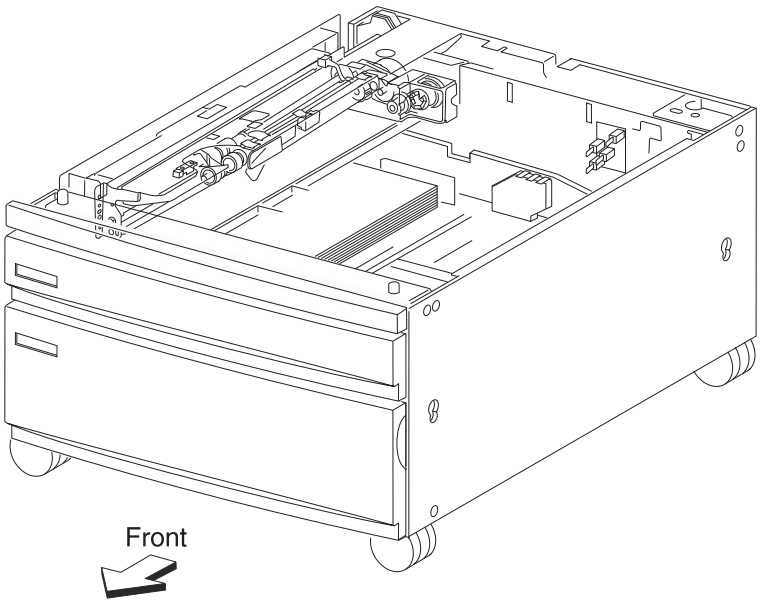
Switch (media size)

The following table gives on/off states of the switches on the switch (media size), corresponding to the media sizes of the media tray assembly.

Note: The switches (media size) are denoted by “S/W1” and “S/W3” respectively from the left side.

Media Size	Analog switch	
	S/W1	S/W3
No Tray	Off	Off
B5L/7.25” x 10.5”L	Off	On
8.5” x 11”L	On	Off
A4L	On	On

1TM theory of operations



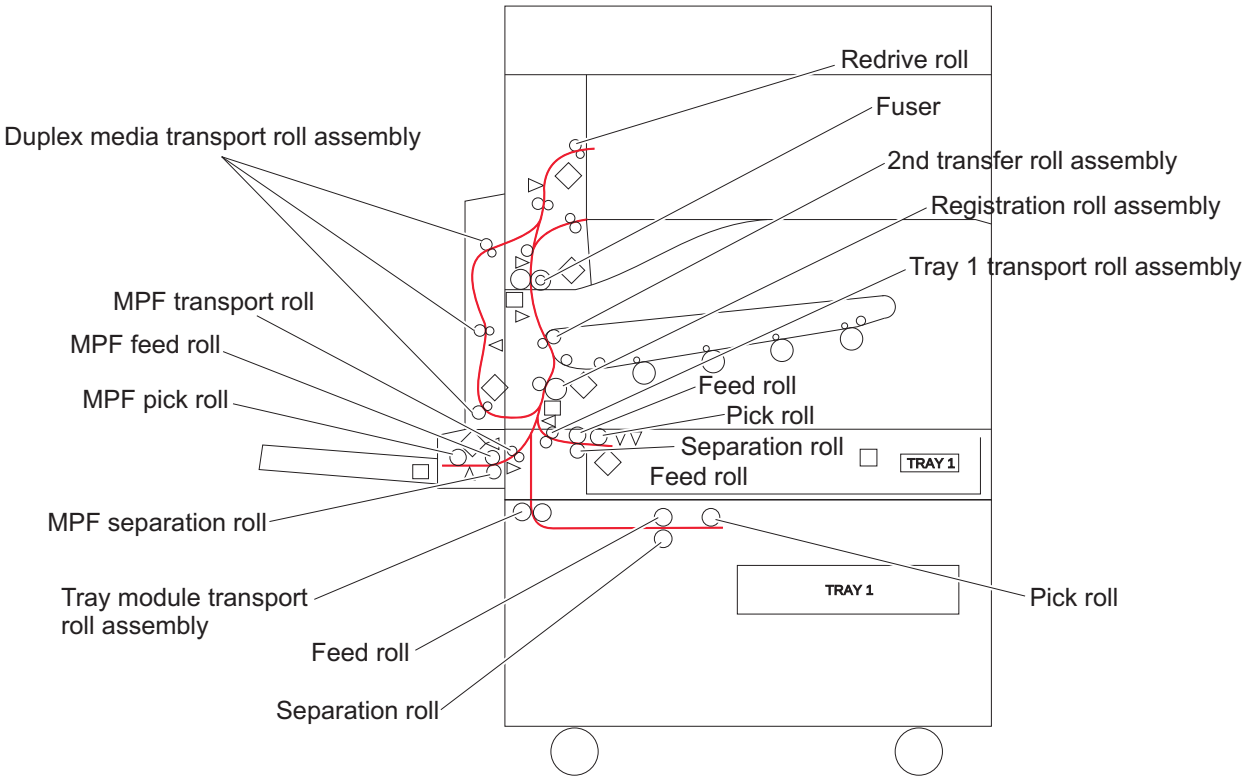
Media transport

Media transport path

Media is supplied from tray 3 or tray 4, and is transported to the printer along the media transport path.

Media transport path

The following is a cross section of the printer and the 1TM, showing the main components directly associated with the media path and transport.



Functions of main components

When the 1TM is installed under the printer, additional trays are available.

Media tray assembly

It is necessary to adjust the rear and the end guide in the media tray assembly to match the media size.

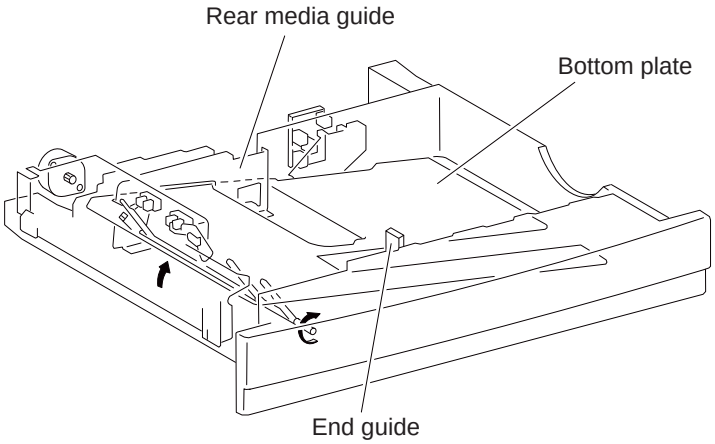
Rear media guide

The rear media guide can be adjusted to different media sizes by moving it to the front or rear. The guide comes into contact with the rear edge of the media and holds it in position.

Bottom plate

The force pushing up the bottom plate is transmitted by the driving force of the motor on the media feed unit assembly. The bottom plate is pushed up by the rotation of the lift up shaft, which causes the supplied media to come in contact with the pick roller.

Tray 2 media tray assembly



1TM media feed units

Media feed unit assembly

The media feed unit assembly is a mechanical unit supplying media from the media tray assembly to the printer. The driving force from the media feed lift motor on the media feed unit assembly is transmitted to the three roller assemblies to feed media.

When the pick roller picks up sheets of media and the remaining media decreases, the media level actuator of the sensor (media level) lowers accordingly.

Media feed lift motor

The media feed lift motor is activated to feed media and to lift the bottom plate. While feeding media, it rotates forward to drive the pick roller. When lifting the bottom plate, it rotates in reverse to drive the tray module gears to turn the lift up shaft.

Switch (media size)

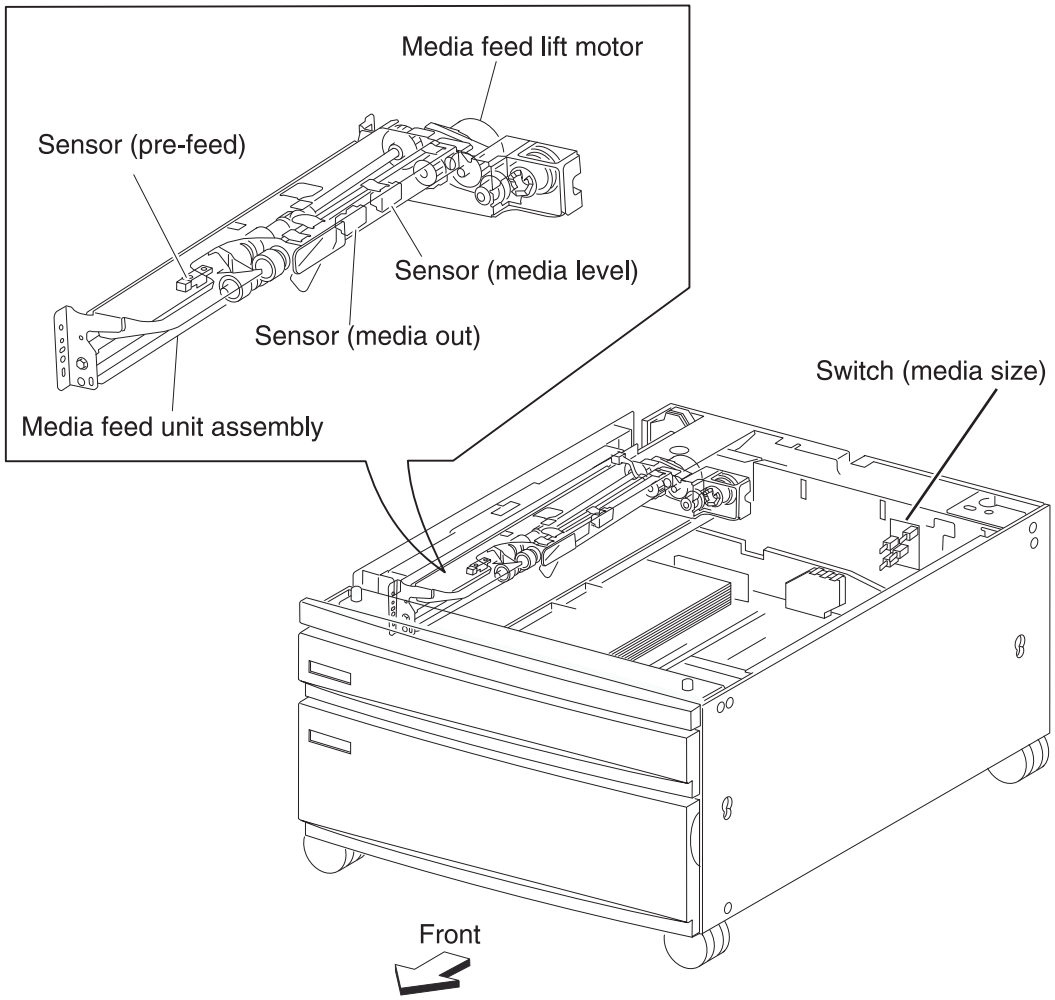
The switch (media size) switches the setting of the size of media supplied from each media tray assembly. A signal indicating the set size is transmitted as a voltage to the printer engine card assembly.

Sensor (media out)

If there is no media in the media tray assembly, the media out actuator lowers and the flag of the media out actuator that has stayed in the sensor (media out) sensing area leaves there. Thus, the light of the sensor is transmitted. When the sensing area is blocked (media is present), the signal turns off.

Sensor (media level)

This sensor detects by the actuator position whether media in the media tray assembly is lifted. When the flag of the actuator leaves the sensor (media level) sensing area, the sensor detects that the media has been lifted.



Main components

Switch (tray module left door interlock)

The switch (tray module left door interlock) detects open/close of the tray module left door assembly.

Sensor (tray 2 feed-out)

The sensor (tray 2 feed-out) detects media fed from the tray 2.

Tray module media transport roll assembly

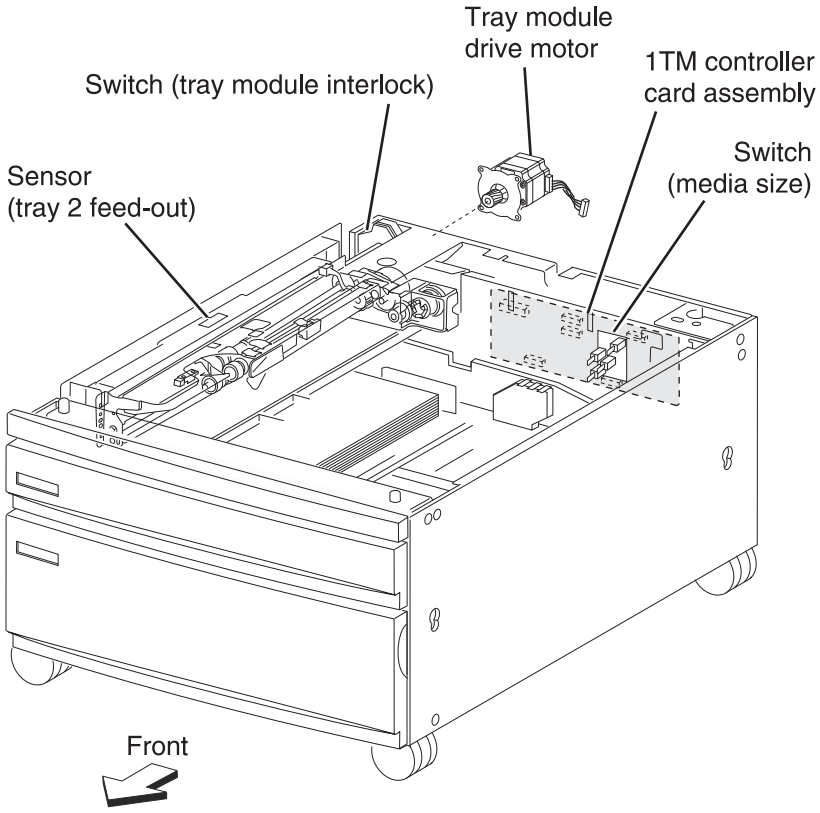
The tray module transport roll assembly feeds media from the tray 2.

Tray module drive motor

This motor is used to drive the media transport mechanism in the tray module.

1TM controller card assembly

The 1TM controller card assembly, which contains a CPU, controls media feed in the 1TM upon receiving a command from the upper printer engine card assembly and sensor/switch information.



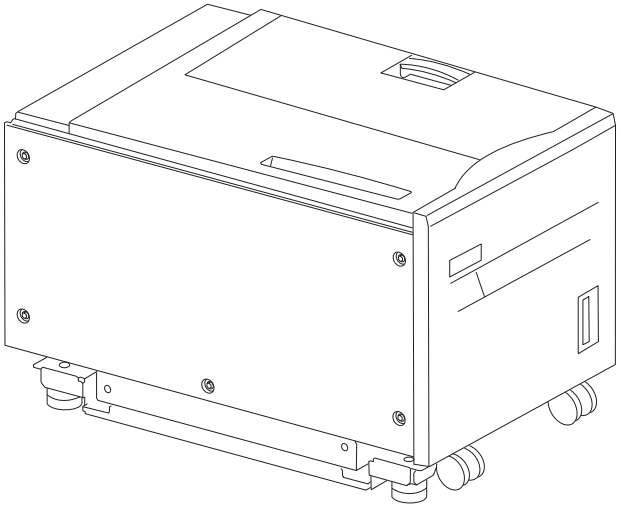
Switch (media size)

The following table gives on/off states of the switches on the switch (media size), corresponding to the media sizes of the media tray assembly.

Note: The switches (media size) are denoted by “S/W1” and “S/W3” respectively from the left side.

Media Size	Analog switch	
	S/W1	S/W3
No Tray	Off	Off
B5L/7.25” x 10.5”L	Off	On
8.5” x 11”L	On	Off
A4L	On	On

High capacity feeder theory of operations



Media feeding

Outline

The HCF feeds media from the tray to the printer through the HCF media feed unit assembly and the HCF media transport roll assembly.

HCF media feed unit assembly

The pick roller feeds media from the tray. The feed roller and the separation roller feed media from the pick roller to the HCF media transport roll assembly.

Rollers are driven by the media feed lift motor on the media feed unit assembly at prescribed timings.

The media fed by the feed roller and separation roller passes through the sensor (pre-feed).

The sensor (pre-feed) detects the presence of media fed from the tray.

The sensor (pre-feed) controls the HCF media feed lift motor speed and on/off operation of the HCF pick solenoid assembly.

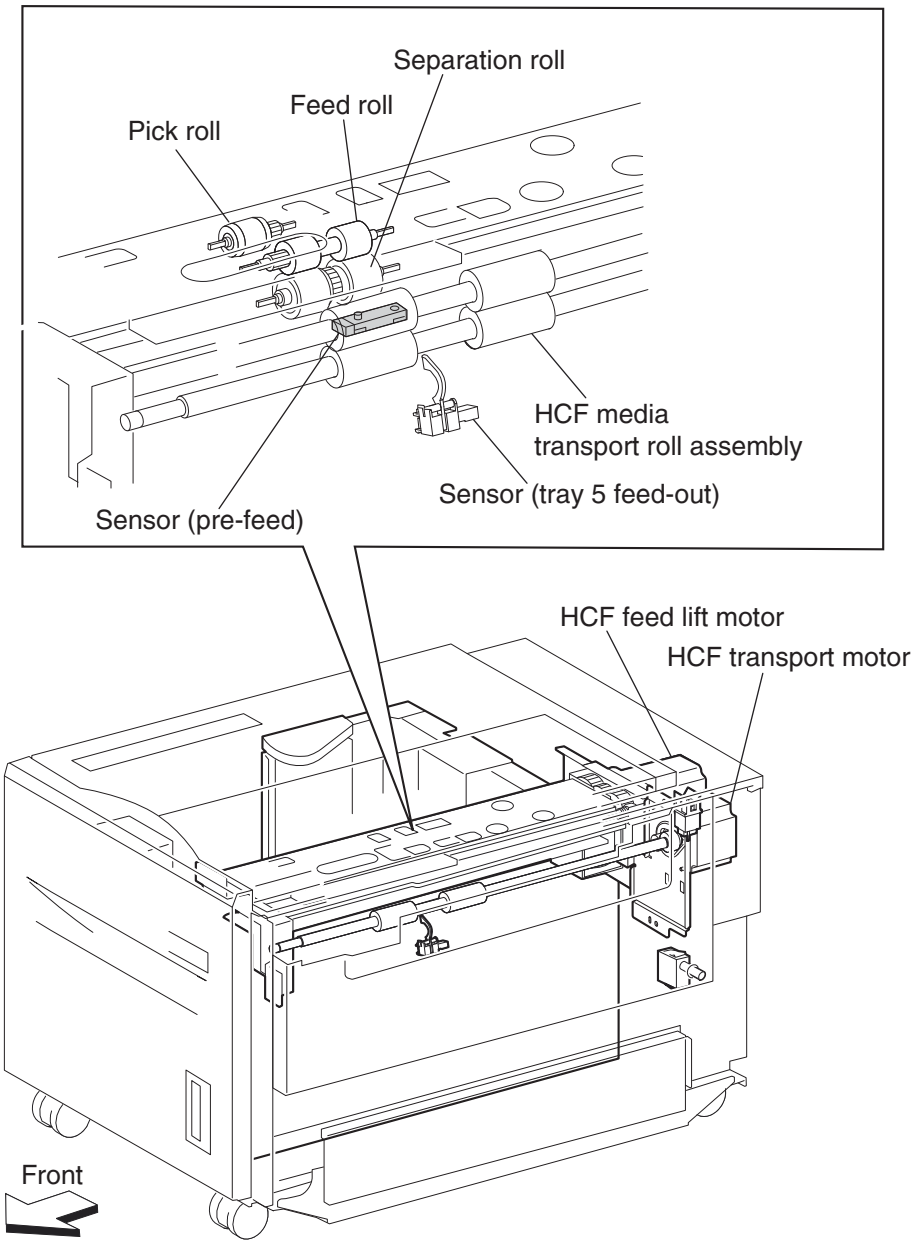
HCF media transport roll assembly

This HCF media transport assembly roll transfers media fed from the HCF media feed unit assembly to the printer.

The HCF media transport roll assembly is driven by the transport motor installed on the rear side.

The media fed with the HCF media transport roll assembly passes through the sensor (tray 5 feed-out).

The sensor (tray 5 feed-out) detects the presence of media fed from the tray and controls the media feed lift motor stop and the transport motor speed. It also detects media jams to identify the media jam zone.



HCF media feed unit assembly operation

Upon receiving the feed start signal from the controller, the HCF activates the pick solenoid after a preset time has passed to press the pick roller against the media in the tray.

After a preset time has passed, after receiving the feed start signal, the HCF feed lift motor rotates forward to feed media from the tray to the feed roller side with the pick roller.

When the end of the media reaches the sensor (pre-feed) and the sensor turns on, the pick solenoid is deactivated so that the pick roller separates from the media in the tray.

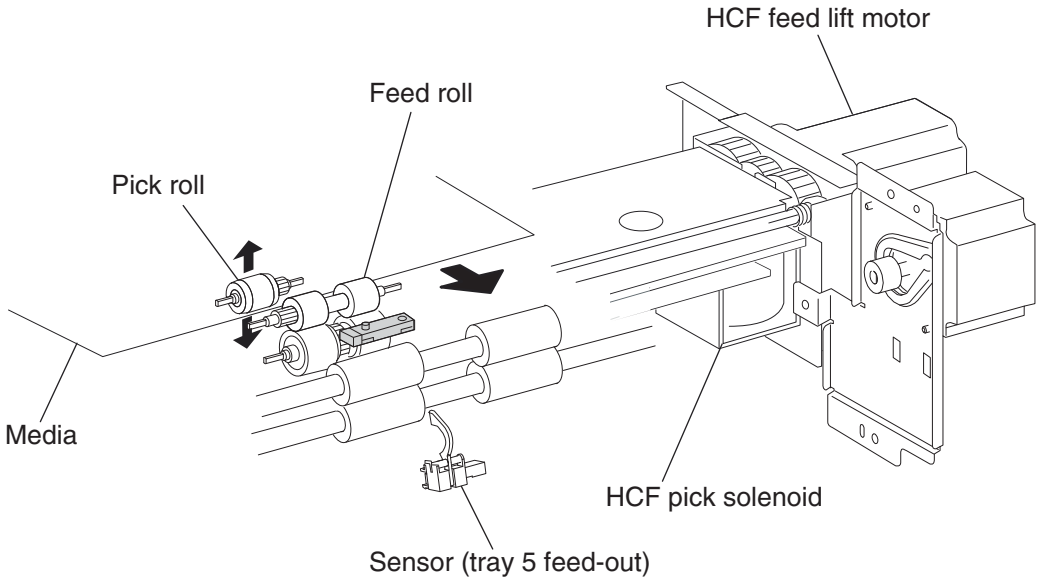
The pick solenoid remains activated at a high voltage for a specified time from its actuation. After that, it is activated at a low voltage until it is deactivated. If the HCF receives the feed start signal for the next media while

the solenoid is activated at low-voltage, it maintains the actuation state at the low voltage, while pressing the pick roller against the media in the tray.

When the media is transferred to the printer and the sensor (tray 5 feed-out) turns on, the pick solenoid is reactivated for a preset time.

Media feed lift motor start/stop timing and revolutions are controlled based on the timing of the HCF feed lift motor start signal and the sensor (pre-feed).

Thus, media is fed from the tray to the HCF media transport roll assembly.



HCF media transport roll assembly operation

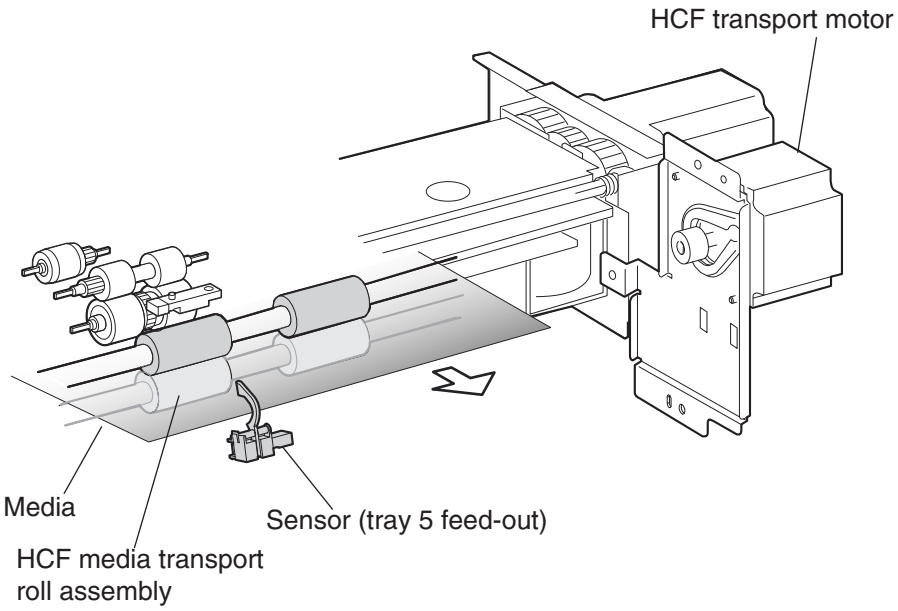
Upon receiving the feed start signal from the controller the HCF activates the HCF transport motor at a high speed after a preset time has passed. This rotating power of the HCF transport motor is transmitted to the HCF media transport roll assembly, and the media from the HCF media feed unit assembly is transferred to the printer.

When the sensor (tray 5 feed-out) is turned on by the media fed with the HCF media transport roll assembly, the HCF transport motor speed decreases after a preset time has passed.

When the sensor (registration) in the printer is turned on by the media fed from the HCF, the HCF transport motor turns off.

When the next feed start signal is received, before the HCF transport motor is turned off, the transport motor continues to rotate.

Thus, media is transferred from the HCF media transport roll assembly to the laser printer.

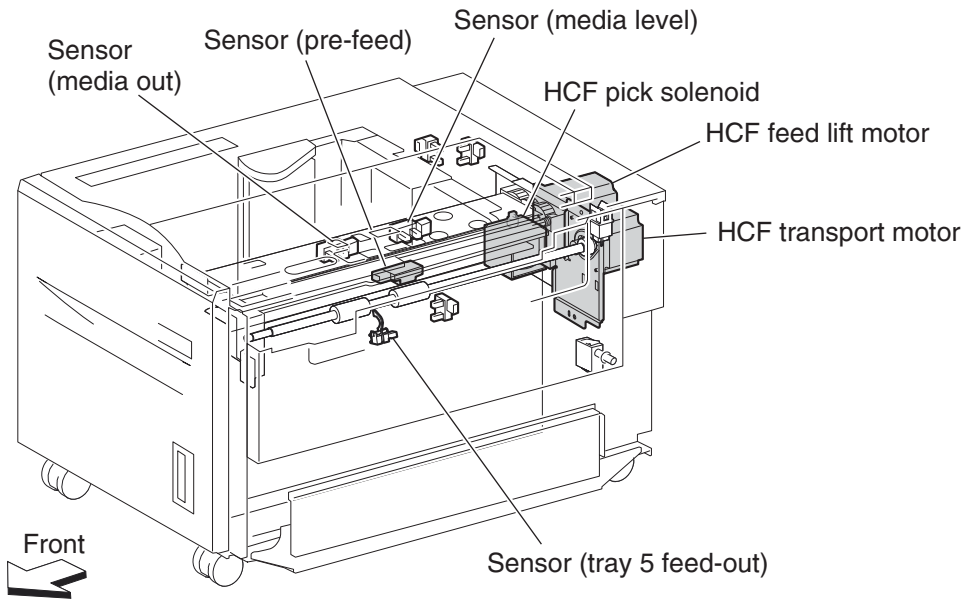


HCF media feed unit assembly sensor/motor functions

Functions of the sensors and motors of the media feed unit assembly are outlined below.

- **HCF media feed lift motor**—is a stepping motor that rotates (forward) the pick roller and feed roller to send media from the tray to the HCF media transport roll assembly. The motor also lifts the tray by reverse rotation.
- **HCF pick solenoid**—Raises or lowers the pick roller. The HCF pick solenoid stays activated from the beginning of media feed until the sensor (pre-feed) turns on. The HCF pick solenoid is activated when the tray is inserted and when the power is turned on to check the presence of media in the tray.
- **Sensor (pre-feed)**—Detects whether media has been fed from the tray, and controls the HCF feed lift motor speed. The sensor also becomes a trigger to deactivate the HCF pick solenoid. The sensor turns on upon detecting media, and determines that media is present.
- **HCF transport motor**—is a stepping motor that rotates the HCF media transport roll assembly to feed media to the printer.
- **Sensor (tray 5 feed-out)**—Detects whether media has been fed from the tray, becomes a trigger to stop the HCF feed lift motor, and controls the HCF transport motor speed.

The sensor turns on (light receiving) upon detecting media, and determines that media is present.



Status monitoring

This function includes detection of static media jams, interlocking, and insertion of the HCF media tray assembly.

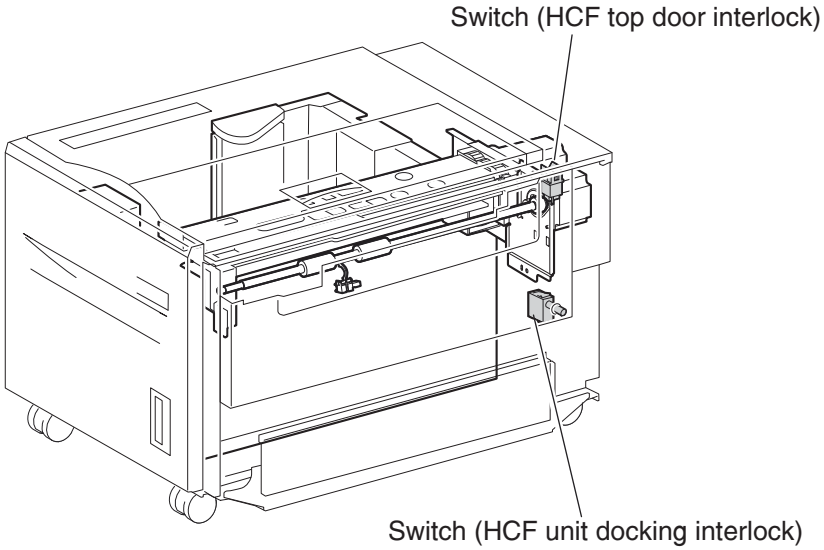
Static media jam detection

This function checks the status of all relevant sensors on the media path to detect media jams. When media is present on the sensor, it is treated as a static jam. This detection of media jam is carried out during the start-up procedure and at every jam/fail detection. The status of all relevant sensors are checked during the start-up procedure. In addition, the sensor states are checked constantly for the jam/fail detection in order to monitor the variation in sensor levels.

Interlock detection

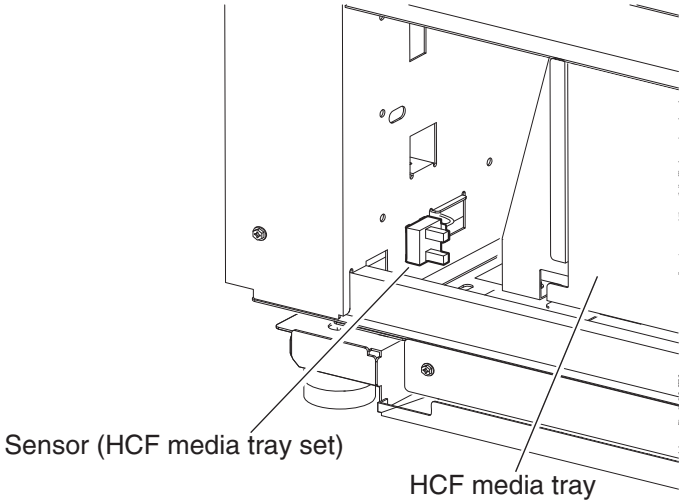
This function checks the open state of the switch (top door interlock) and the switch (HCF unit docking interlock). This detection is constant while the power is on.

When open, the switch (top door interlock) is detected, printing operation is inhibited, and the 24 V supply to the media feed lift motor and the transport motor is shut off. When open, the switch (HCF unit docking interlock) is detected, and transfer of media from the HCF is inhibited.



Tray insertion detection

The sensor (HCF media tray set) checks whether the tray is properly set. This check is constant while the power is on. Printing operation is inhibited if the sensor (HCF media tray set) off (tray is not present) is detected before printing starts.



Functions of sensors used for status monitoring

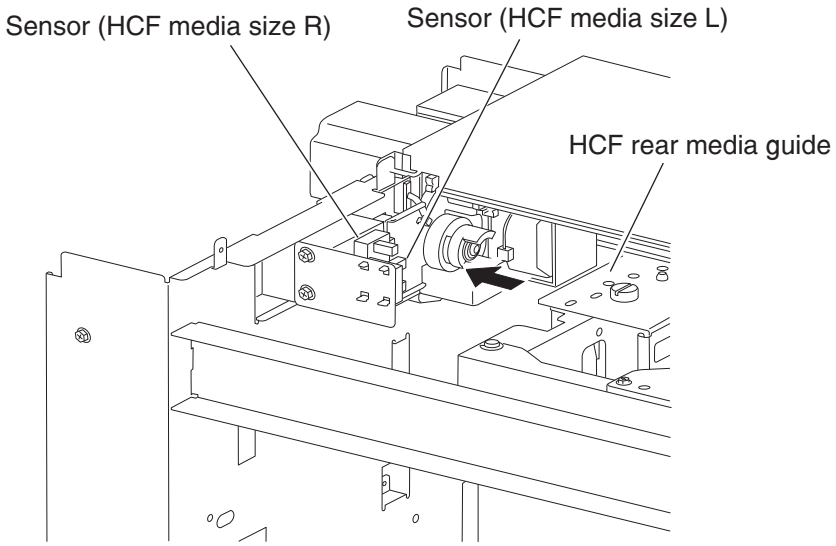
- **Switch (HCF top door interlock)**—Detects open/close of the HCF top door. The on state of this switch indicates the top door is closed.
- **Switch (HCF unit docking interlock)**—Detects the docking of the HCF with the printer. The off state of this switch indicates that the HCF is separated from the printer. In this case, transfer of media is inhibited.
- **Sensor (HCF media tray set)**—Detects insertion of the HCF media tray into the HCF. The sensor turns on when the HCF media tray is properly inserted. While it is off, media fed from the HCF medial tray is inhibited.

Media size detection

When media is loaded in the tray, the media size is automatically detected by the rear media edge guide that is attached to the media tray assembly and aligned with the side of the media. The position of the rear media edge guide is detected by the sensor (HCF media size L) and the sensor (HCF media size R).

Media size	Sensor (HCF media size R)	Sensor (HCF media size L)
B5L	off	off
7.25” x 10.5” L		
8.5” x 11” L	on	off
A4L	off	on

Note: B5L and 7.25” x 10.5” L can be switched by the NVM.



The media size is detected during the start-up procedure and —with the tray inserted—once a specified amount of time has passed since the sensor (HCF tray set) level was change from off to on. The media size loaded in the tray is determined when the same media size has been detected a certain number of consecutive times.

If a sensor level pattern does not match the above table, media size cannot be determined. In this case, though the tray is lifted, starting a print job by feeding media from the tray is inhibited.

Sensor for media size detection

Size sensors

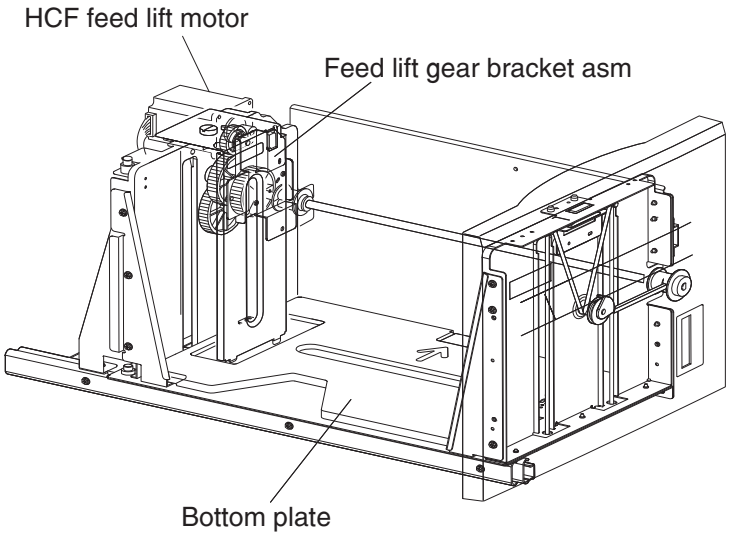
There are two size sensors: sensor (HCF media size R) and sensor (HCF media size L).

Media size can be determined by moving the HCF rear media edge guide to turn on/off these sensors and by using the sensor level patterns.

Tray lifting

Tray lift operation starts automatically when the HCF media tray is inserted with media loaded.

Media is lifted and stops at the feeding position. At the same time, detection of no media and remaining media volume becomes available.



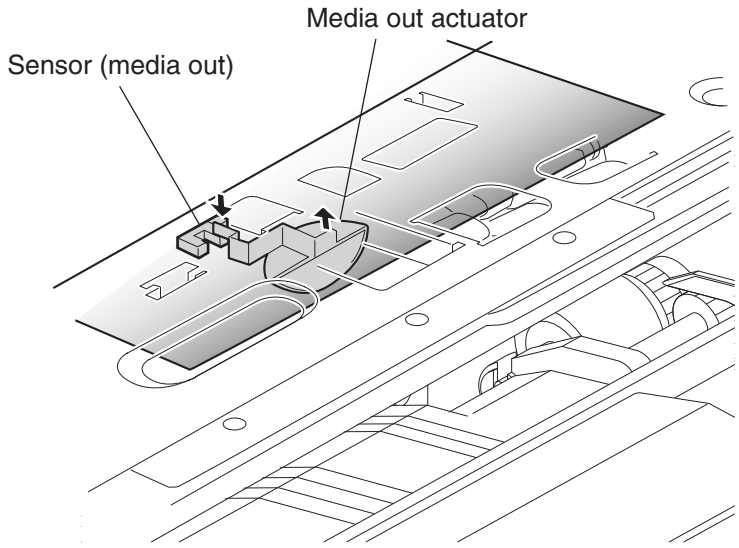
Media out detection

This function checks whether media is loaded in the HCF media tray.

When media is present, the media out actuator in the middle of the HCF is raised as media is lifted, and leaves the sensing area of the sensor (media out), which makes the sensor light-receivable. The presence of media is detected.

On the other hand, if media out occurs when the HCF media tray is at the feeding position, the media out actuator comes inside the sensing area of the sensor (media out), which blocks the light transmission of the sensor (media out). Media out is detected.

If the HCF media tray is not lifted, the media out actuator remains in the sensing area of the sensor (media out), while blocking the light transmission of the sensor (media out). Media out is detected regardless of the presence of media in the tray.



Detection of media out is carried out constantly after the lifting operation is completed.

When media out is detected, media transfer from the HCF is inhibited.

If media out is detected during printing, print operation of the next media is stopped. However, when the printer is operating in the Auto Tray Select mode and there is media of the same size in another tray, media is automatically fed out of the tray.

Sensor (media out)

Detects whether media is present in the HCF media tray.

When this sensor (media out) is off while the tray is at the feeding position, the presence of media is detected.

Remaining media volume detection

This function determines the media volume remaining in the HCF media tray by using the HCF feed lift motor rotation time and the sensor (media level) during the tray lifting time. The printer notifies operators of remaining media volume as 25%, 50%, 75%, full, or 0 (zero).

If the remaining media volume becomes zero before no media is detected, the indication remains at (25%).

When the sensor (media level) detects no media, the indication becomes (0) (zero).

When a fault occurs, determination of remaining media volume is carried out as shown below.

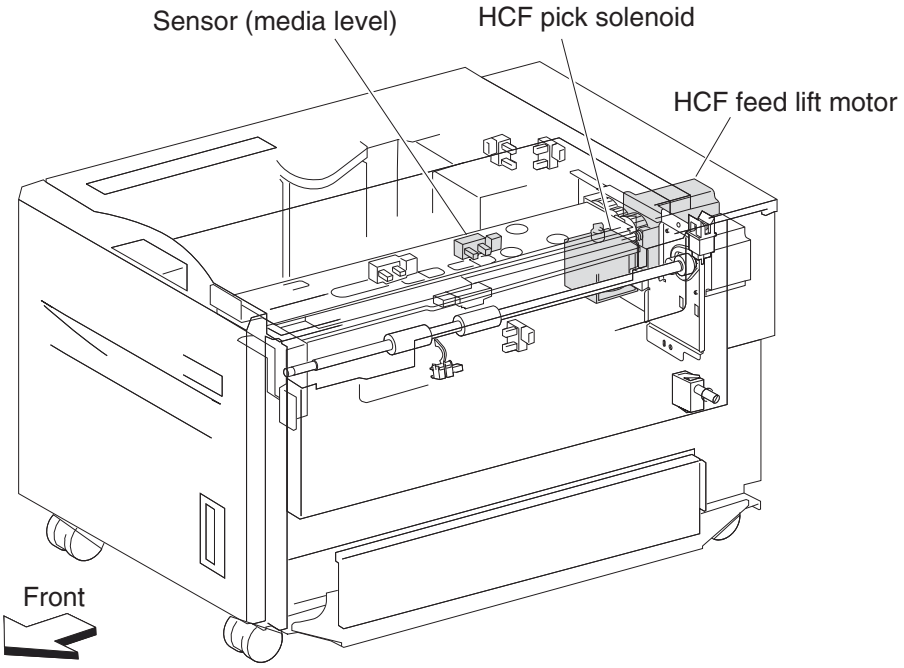
- When the interlock is opening during the lifting operation, the remaining media volume is determined based on the total of the time it takes for the interlock to open, plus the amount of time that transpires from the media feed lift motor forward/reverse rotation until the sensor comes on.
- When the power is turned off and on during the lifting operation, the remaining media volume is determined by the lifting time after the power comes on. (The actual volume of media in the tray may differ from the indication.)

- When the power is turned off and on while the tray is at the feeding position, the sensor (media level) is on when the power is turned on, and the remaining media volume before the previous power off is regarded as the remaining media volume.
- If the sensor (media level) is off when the power is turned on, the HCF regards the HCF media tray as having been removed, and determines the remaining media volume based on the time from the media feed lift motor forward/reverse rotation until the sensor (media level) comes on.

Sensor (media level)

Detects the media feeding position in the tray in order to control the media position.

While this sensor (media level) is off, lifting the tray is continued until the sensor (media level) turns on.



4. Repair information

Warning: Read the following before handling electronic parts.

Handling ESD-sensitive parts

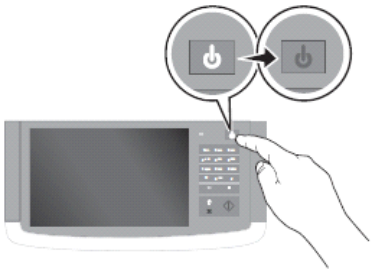
Many electronic products use parts that are known to be sensitive to electrostatic discharge (ESD). To prevent damage to ESD-sensitive parts, use the following instructions in addition to all the usual precautions, such as turning off power before removing logic boards:

- 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.

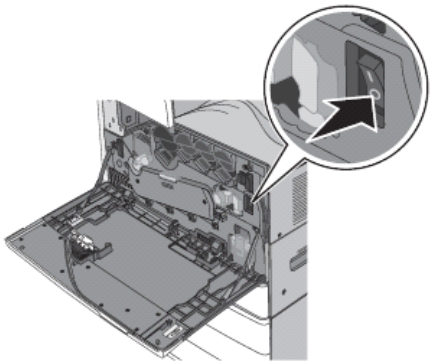
Turning the printer off

Note: This procedure is performed to preserve the operator panel memory settings.

1. Press the sleep button to turn off the operator panel.

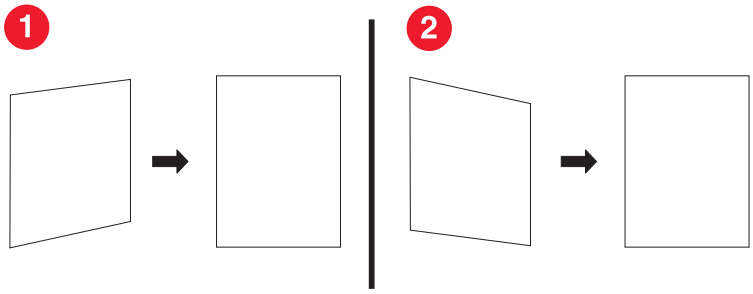


2. Open the front door and switch off the printer.



ADF skew adjustment

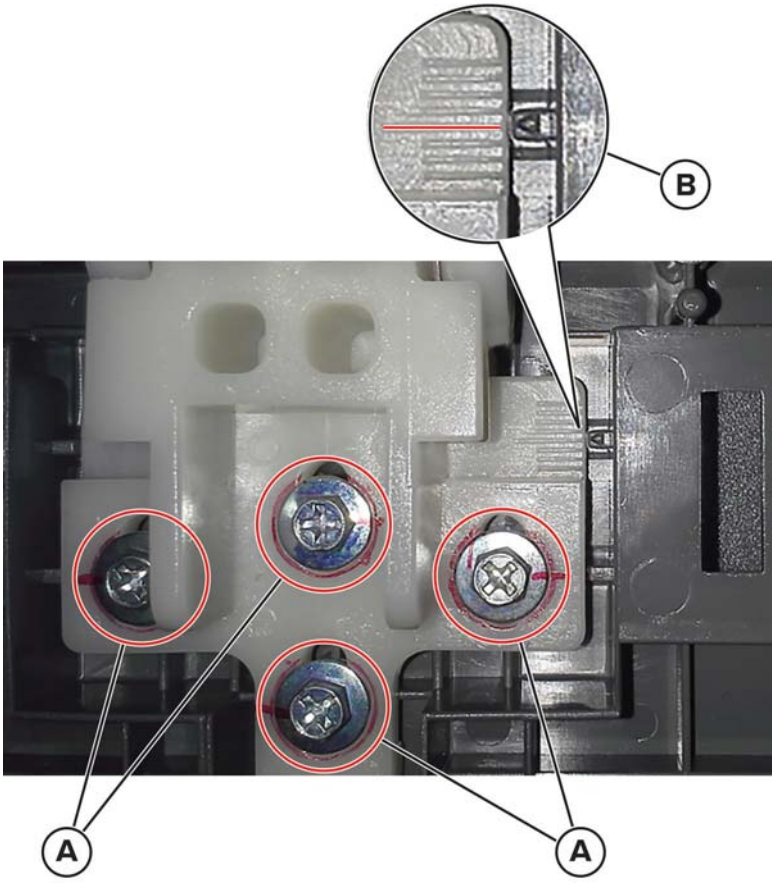
1. Determine which correction to apply.



1	To correct, shift the ADF towards the rear.
2	To correct, shift the ADF towards the front.

2. Remove the ADF rear cover. See **"ADF rear cover removal" on page A-224**.

3. Loosen the four screws (A), and then shift the ADF in the required direction.
   Note: Make sure to observe proper alignment (B) of the arrow with the appropriate line.



4. After the skew has been corrected, tighten the four screws.
5. Reinstall the ADF rear cover.

Removal procedures

	**CAUTION** Remove the power cord from the electrical outlet before you connect or disconnect any cable or electronic board or assembly for personal safety and to prevent damage to the printer. Disconnect any connections between the printer and PCs/peripherals.

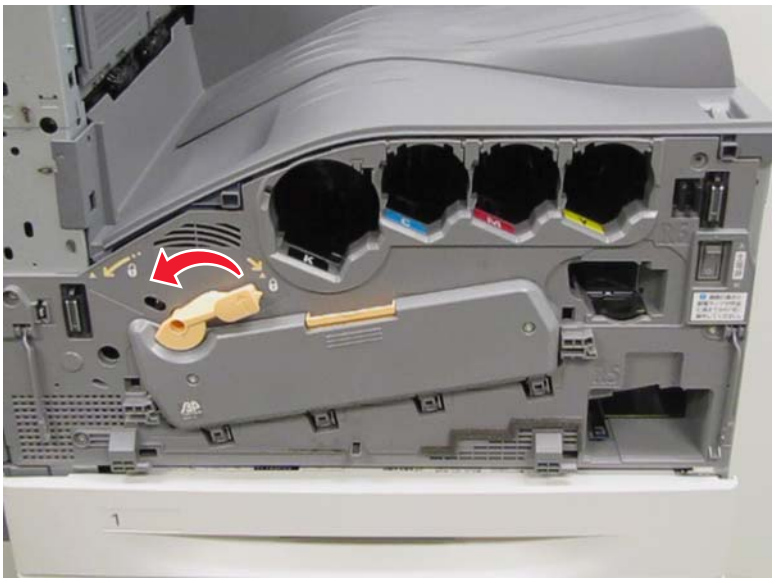
Notes:

- Some removal procedures require removing cable ties. You must replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.
- Remove the waste toner bottle, color toner cartridges, imaging unit, and media tray before removing other printer parts. The imagine unit should be carefully set on a clean, smooth, and flat surface. It should also be protected from light while out of the device.
- Disconnect all external cables from the printer to prevent possible damage during service.
- Unless otherwise stated, reinstall the parts in reverse order of removal.
- When reinstalling a part held with several screws, start all screws before the final tightening.

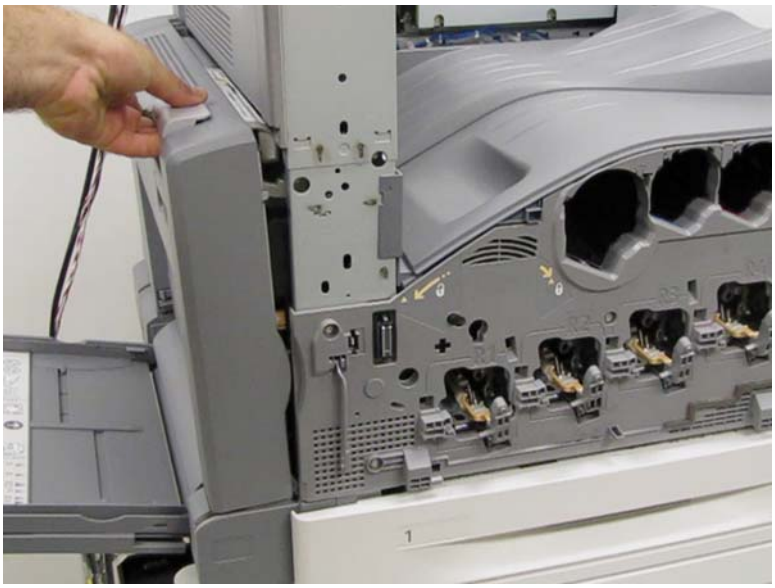
Cover removal procedures

Inner cover removal

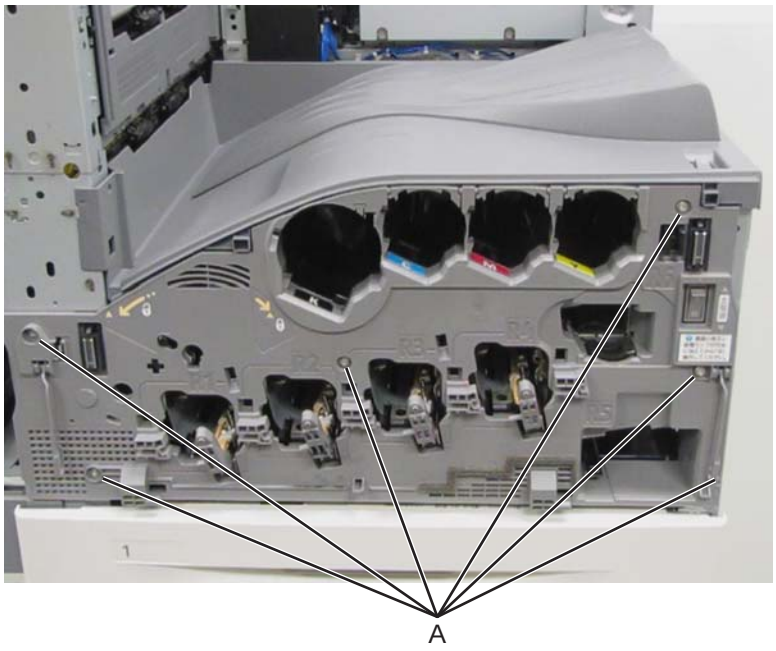
1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Rotate the transfer belt lever counterclockwise to the unlock position.



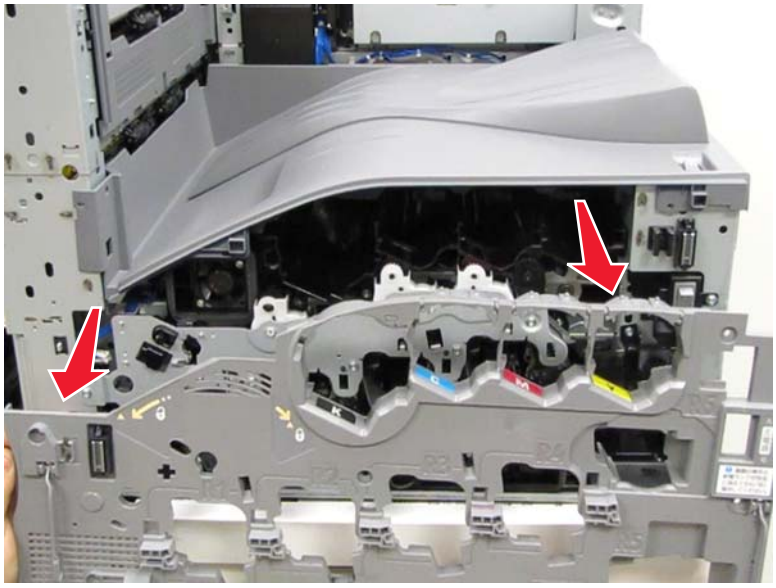
5. Open the printhead retract door.
6. Remove the four photoconductor units.
7. Remove the four toner supplies.
8. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
9. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
10. Open the printer left duplex door.



11. Remove the six screws (A) from the inner cover.

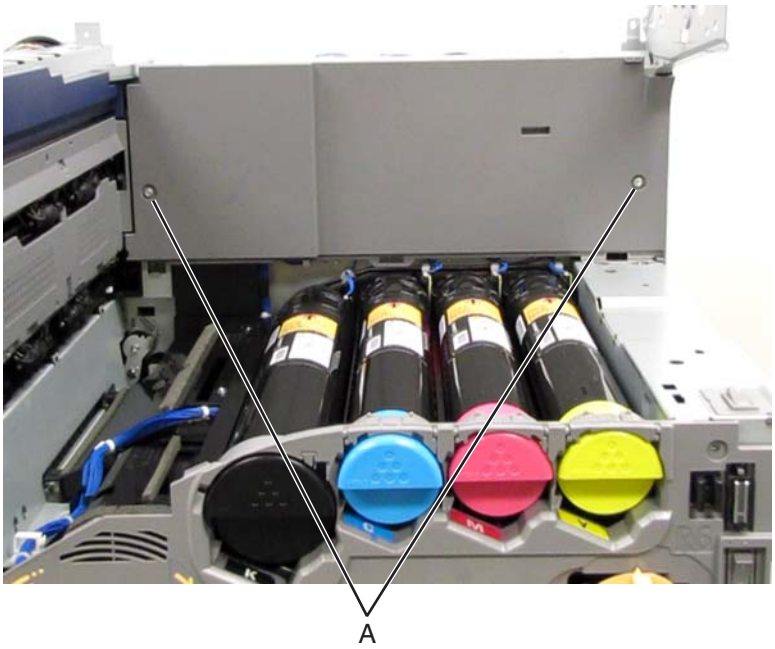


12. Remove the inner cover.



Internal rear cover removal

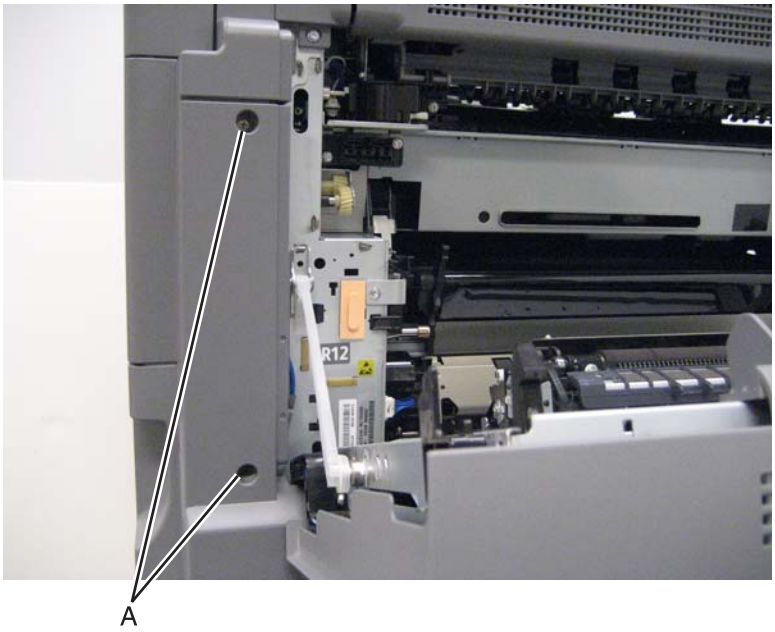
1. Remove the top cover. See **“Printer top cover removal” on page 4-15**.
2. Remove the two screws (A) from the internal rear cover.



3. Remove the internal rear cover.

Left rear lower cover removal

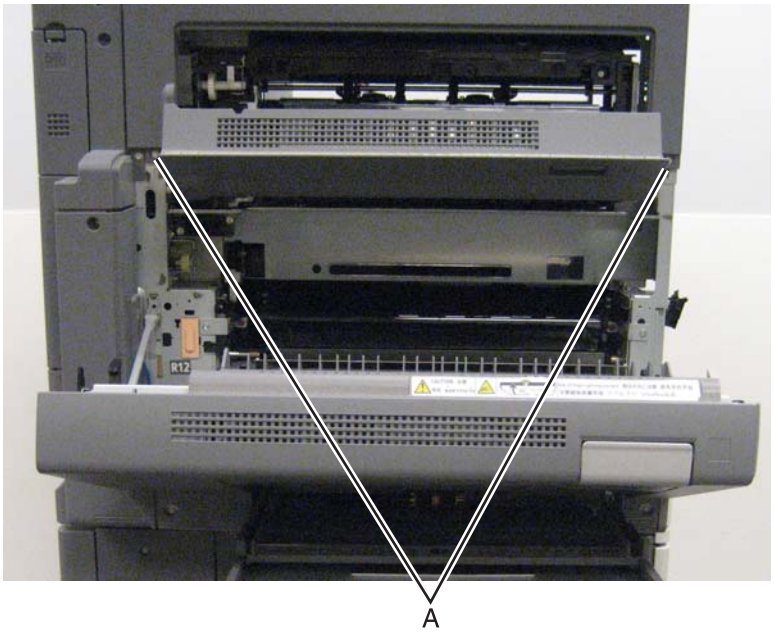
1. Open the printer left duplex door.
2. Remove the two screws (A).



3. Remove the left rear lower cover.

Left upper cover removal

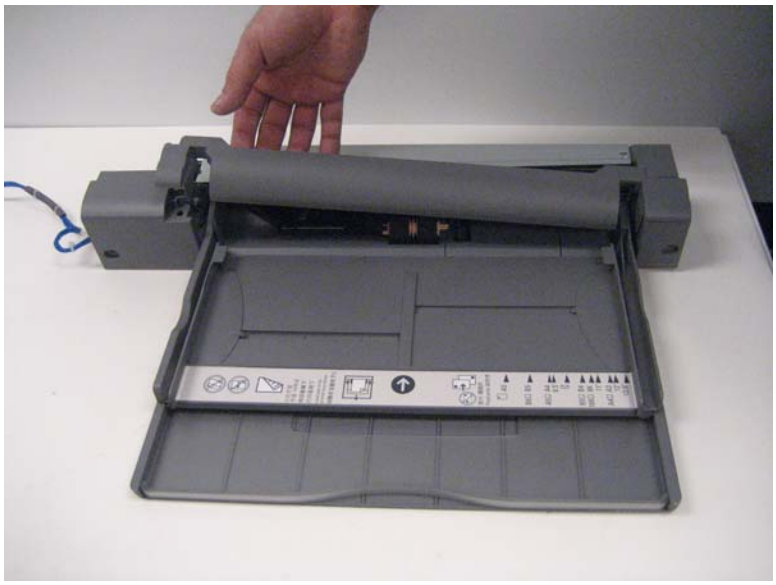
1. Open the printer left duplex door.
2. Open the upper redrive door.
3. Remove the two screws (A).



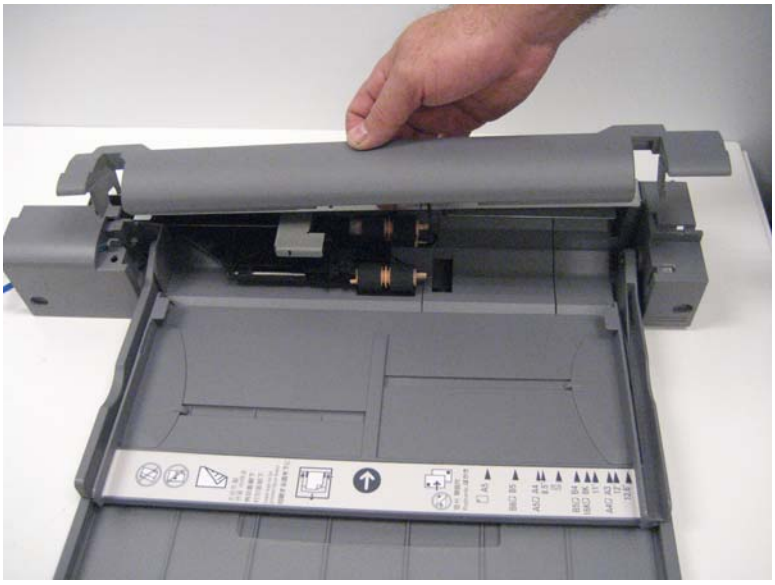
4. Remove the left upper cover.

MPF top cover removal

1. Remove the left rear lower cover. See **“Left rear lower cover removal” on page 4-7**.
2. Remove the MPF tray feeder. See **“MPF tray feeder removal” on page 4-134**. (Optional.)
3. Gently detach the MPF top cover from the MPF tray assembly.



4. Remove the MPF top cover.



Operator panel front cover (MFP) removal

1. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
2. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
3. Remove the rubber screw covers.

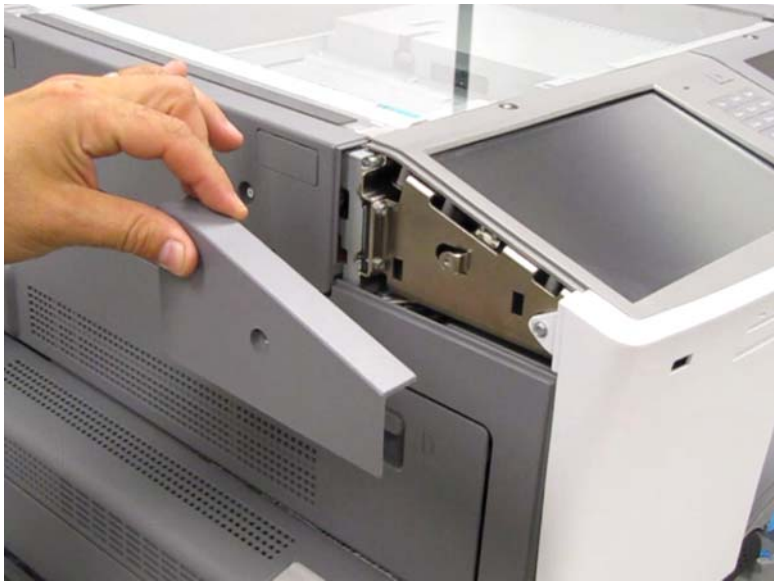
4. Remove the three screws (A) from the operator panel front cover.

5. Remove the operator panel front cover.

Operator panel left cover removal

1. Remove the screw (A) from the operator panel left cover.

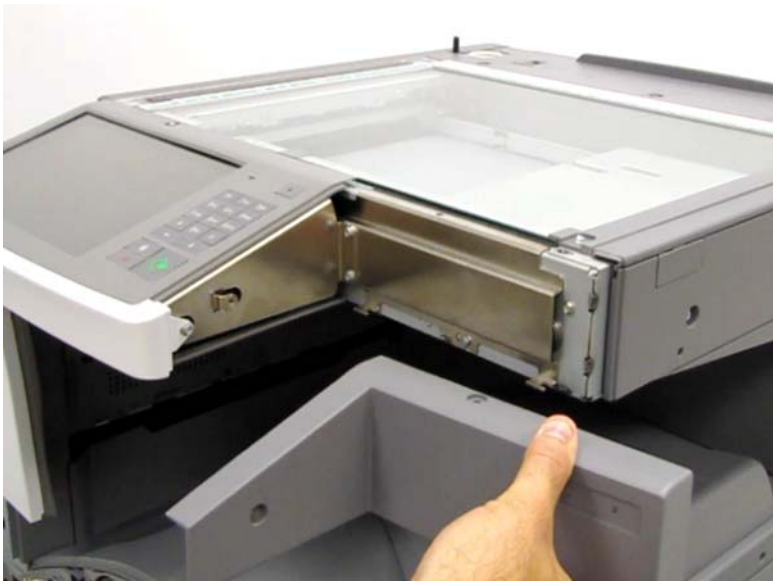
2. Remove the operator panel left cover.



Operator panel right cover removal

1. Remove the two screws (A) from the operator panel right cover.

2. Remove the operator panel right cover.



Operator panel top cover (MFP) removal

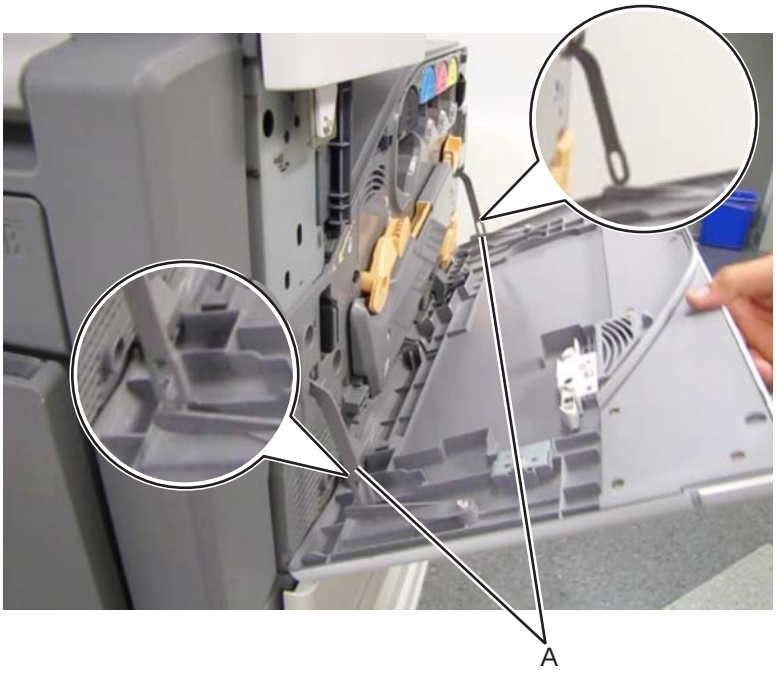
1. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
2. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
3. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
4. Remove the operator panel. See **“Operator panel top cover (MFP) removal” on page 4-11**.
5. Remove the touch screen. See **“Touch screen (MFP) removal” on page 4-180**.

6. Remove the operator panel top cover.

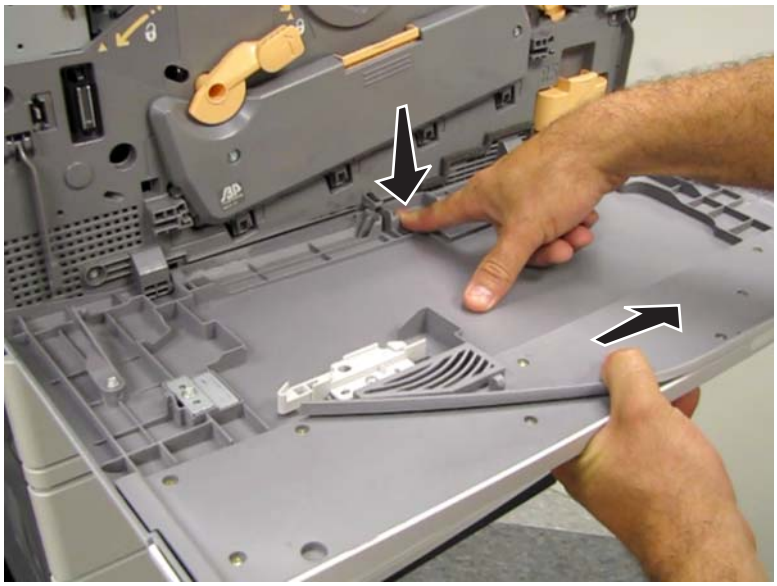
Printer front door removal

1. Open the printer front door, and position it to an angle approximately 45 degrees from the printer.

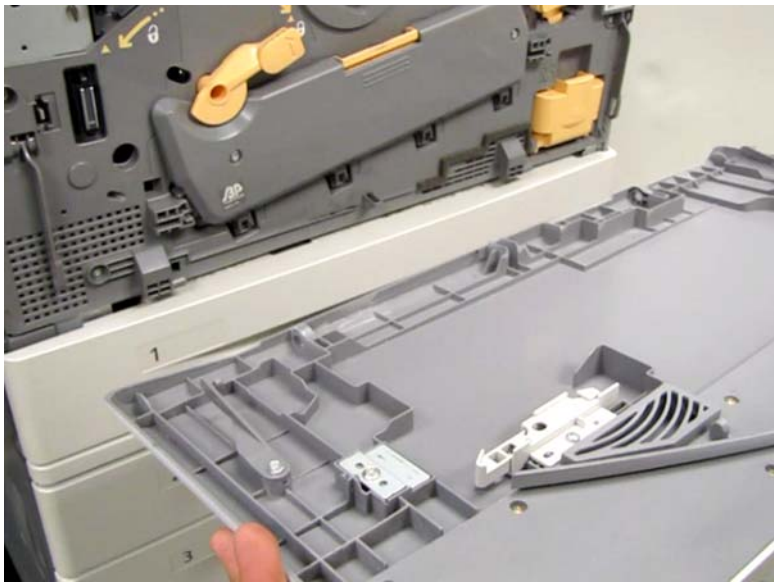
2. Disengage the two links (A) connecting the printer front door to the printer.



3. Lower the printer front door to its lowest position, slightly flex the printer front door by pushing down on the middle portion, and then pull to the right to disengage.



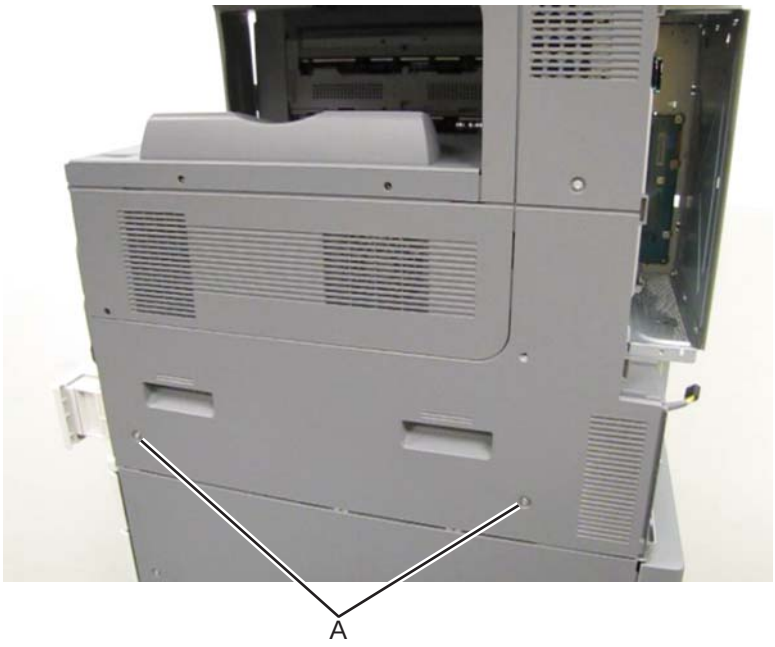
4. Remove the printer front door.



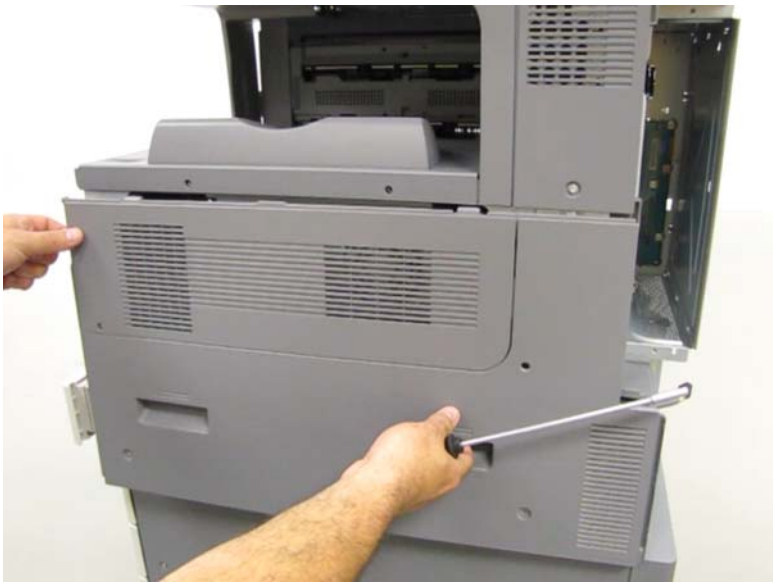
Printer right cover removal

1. Open the printer front door.
2. Remove media tray 1.
3. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
4. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

5. Remove the two screws (A) from the printer right cover.



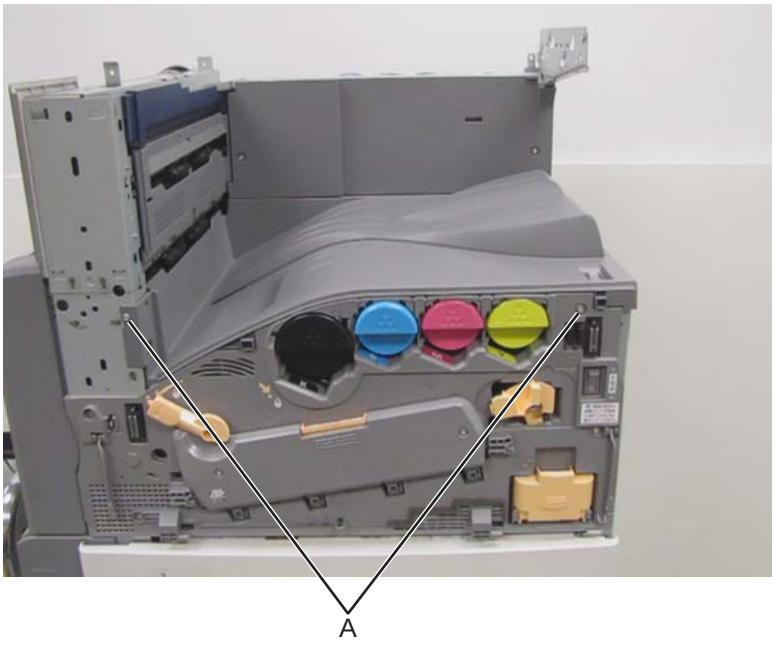
6. Remove the printer right cover.



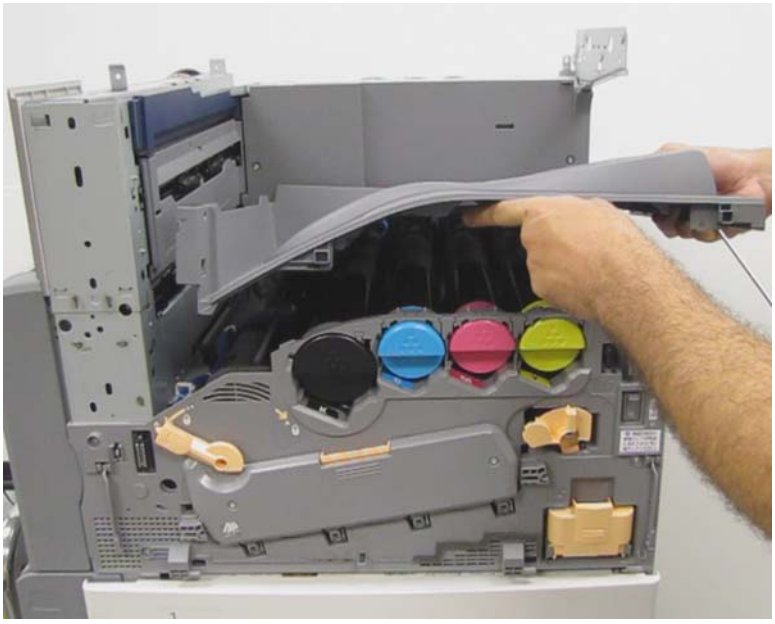
Printer top cover removal

1. Open the printer front door.
2. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
3. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
4. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.

5. Remove the two screws (A) from the printer top cover.



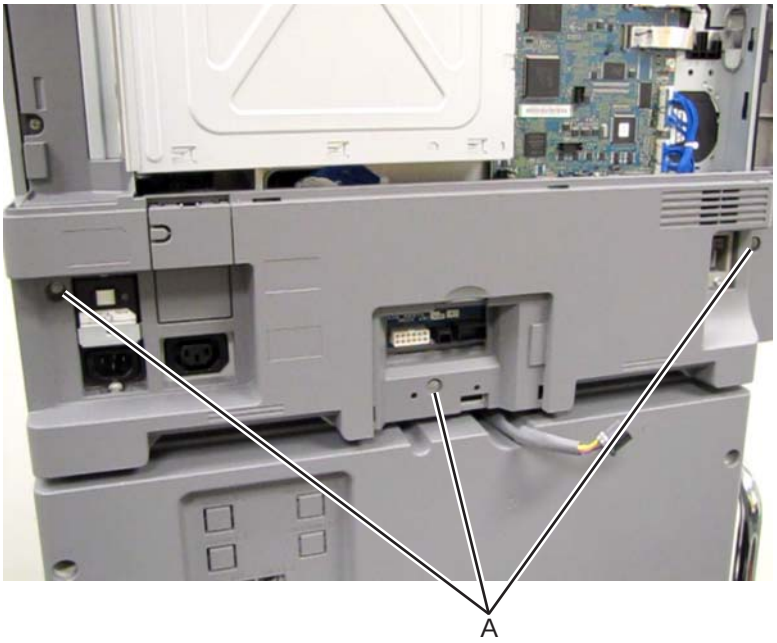
6. Remove the printer top cover.



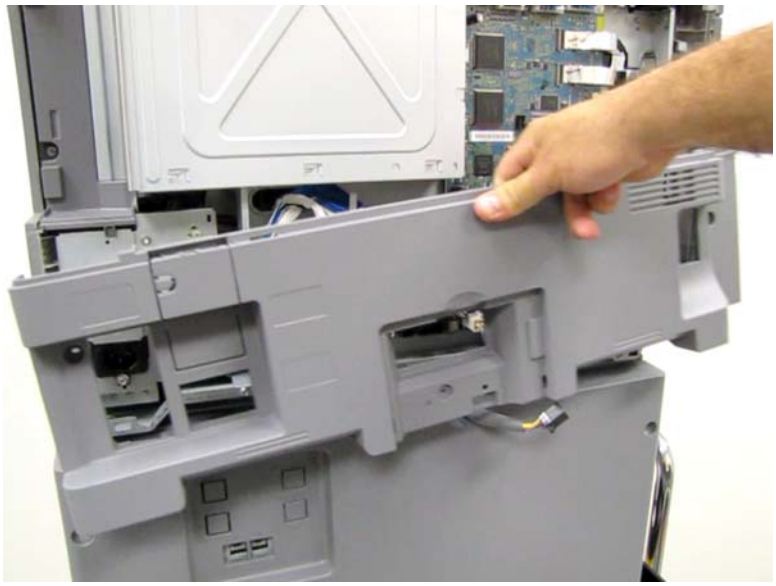
Rear lower cover removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the input tray interface cover.

3. Disconnect all the cables connected from input trays and options.
4. Remove the three screws (A) from the rear lower cover.



5. Remove the rear lower cover.



Rear upper cover removal

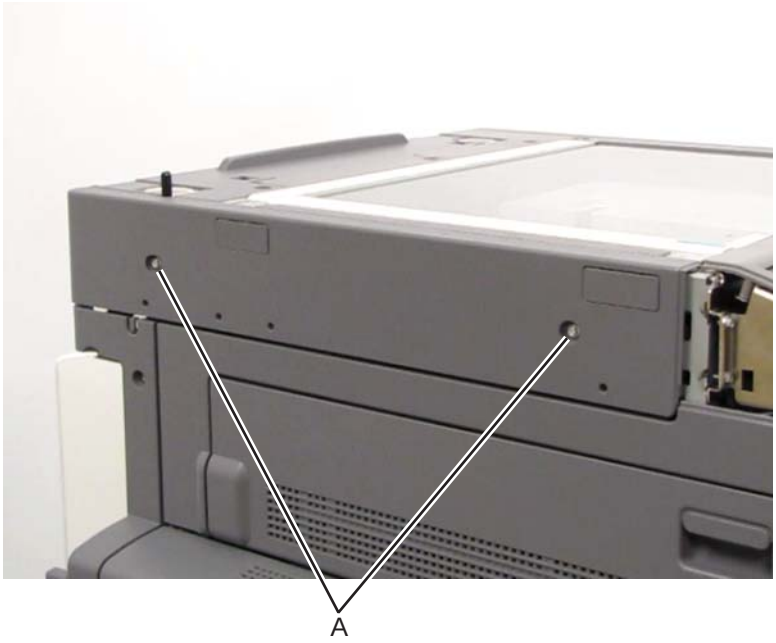
1. Remove the two screws (A) from the rear upper cover.

2. Remove the rear upper cover.

Scanner left cover removal

1. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
2. Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-20**.

3. Remove the two screws (A) from the scanner left cover.

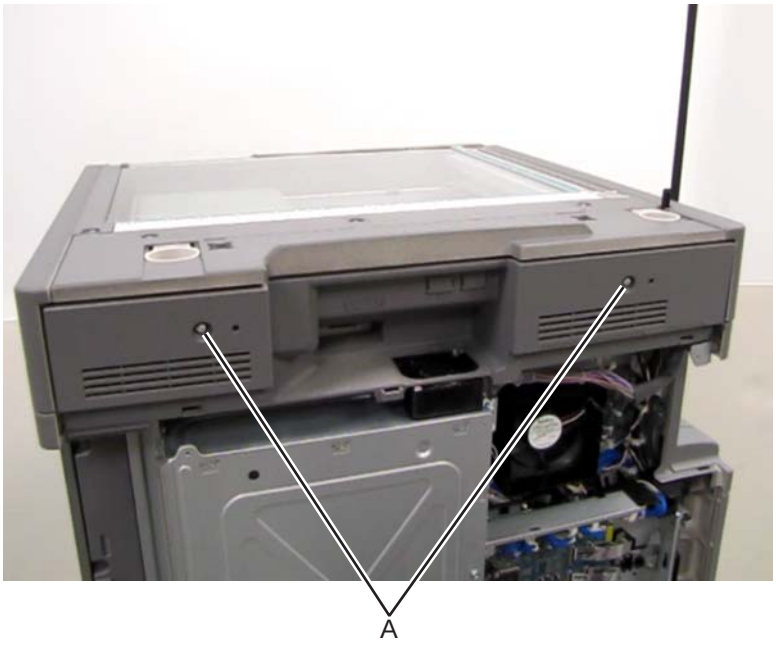


4. Remove the scanner left cover.

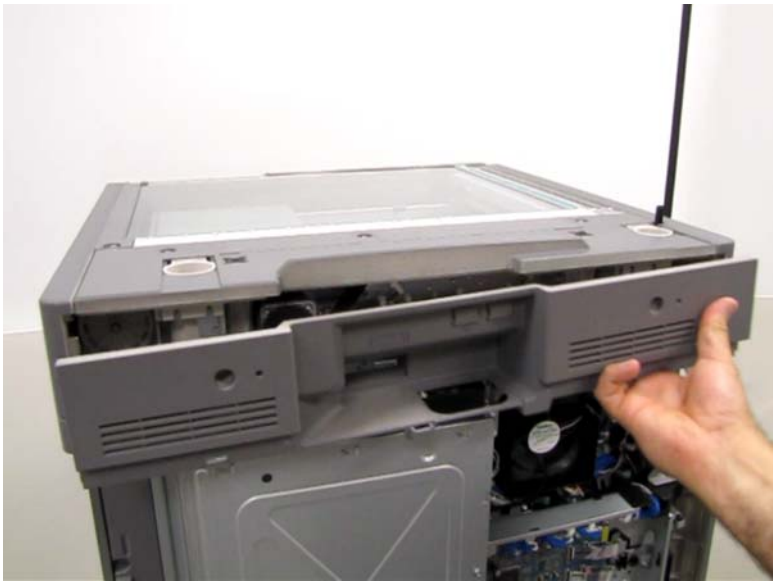
Scanner rear cover removal

1. Disconnect all cables connected to the ADF.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.

3. Remove the two screws (A) from the scanner rear cover.



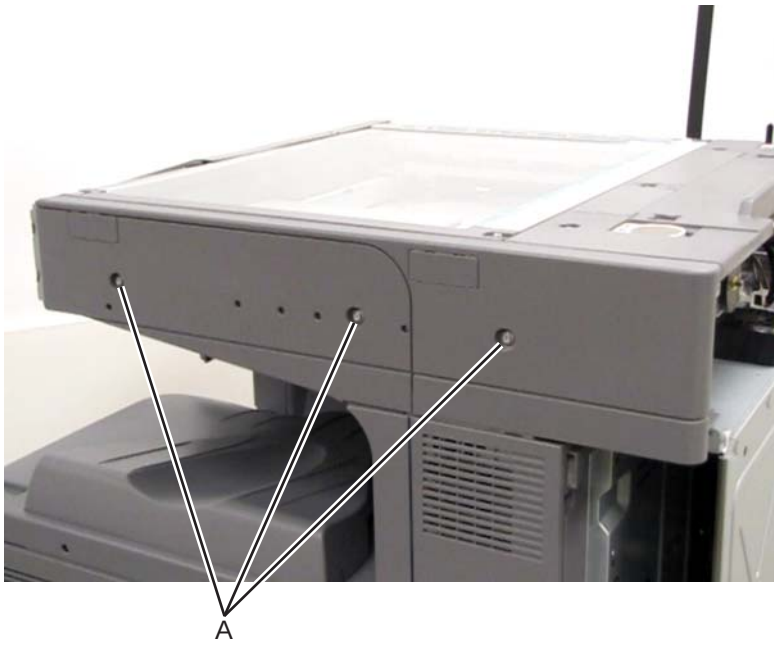
4. Remove the scanner rear cover.



Scanner right cover removal

1. Remove the operator panel right cover. See **"Operator panel right cover removal" on page 4-11**.
2. Remove the scanner rear cover. See **"Scanner rear cover removal" on page 4-20**.

3. Remove the three screws (A) from the scanner right cover.

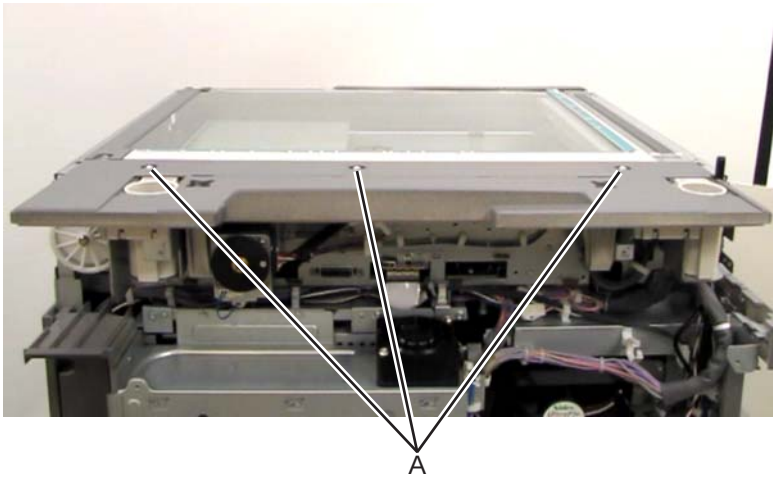


4. Remove the scanner right cover.

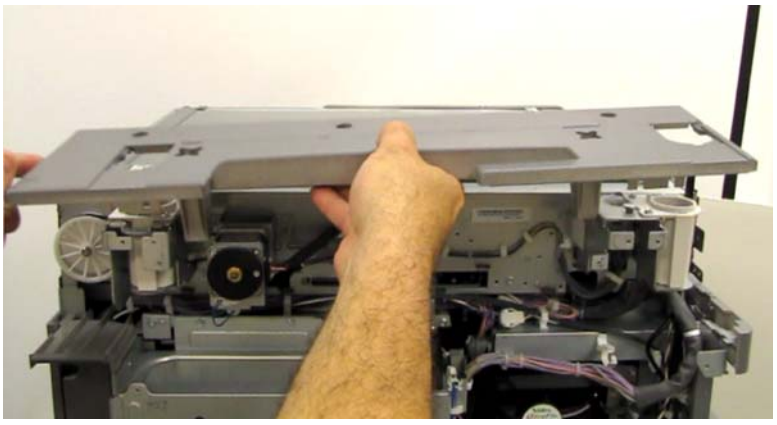
Scanner top cover removal

1. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
2. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
3. Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-20**.
4. Remove the ADF. See **“Automatic document feeder (ADF) assembly removal” on page 4-233**.
5. Remove the scanner left cover. See **“Scanner left cover removal” on page 4-19**.
6. Remove the scanner right cover. See **“Scanner right cover removal” on page 4-21**.

7. Remove the three screws (A) from the scanner top cover.



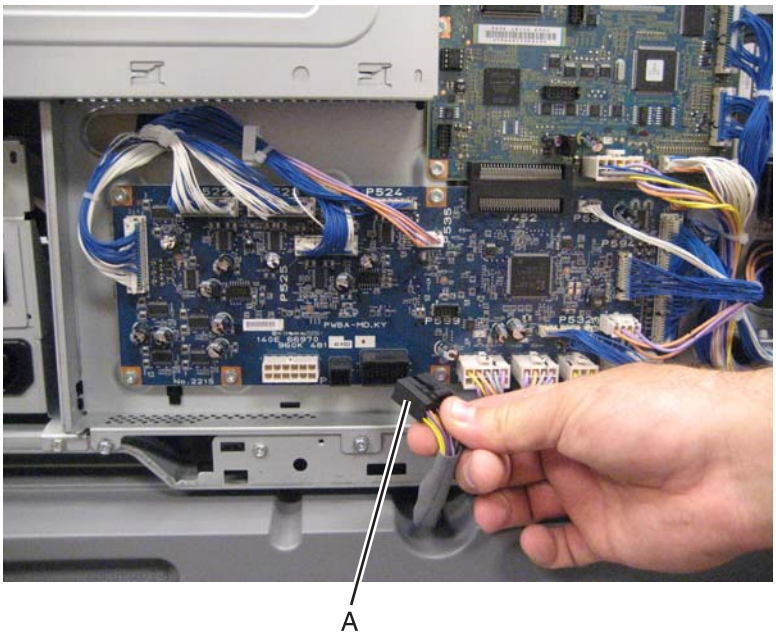
8. Remove the scanner top cover.



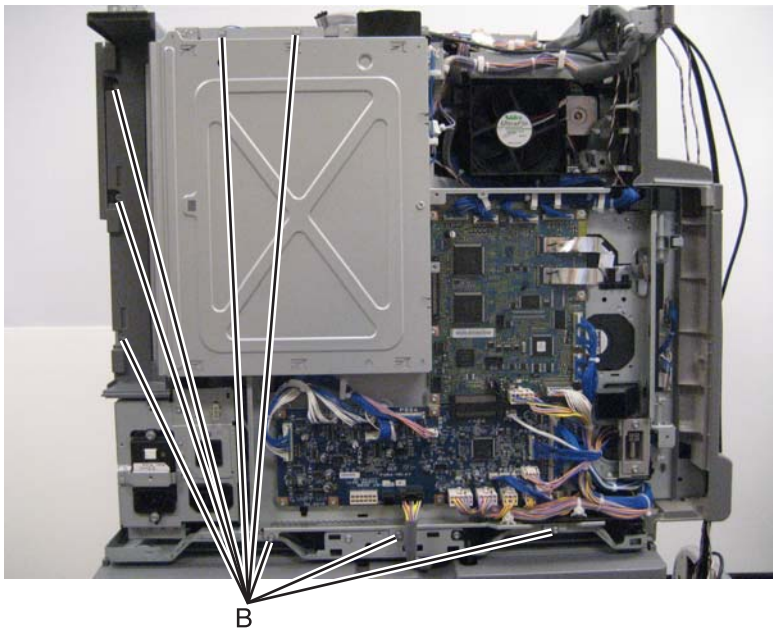
Print engine removal procedures

1st transfer conductor housing removal

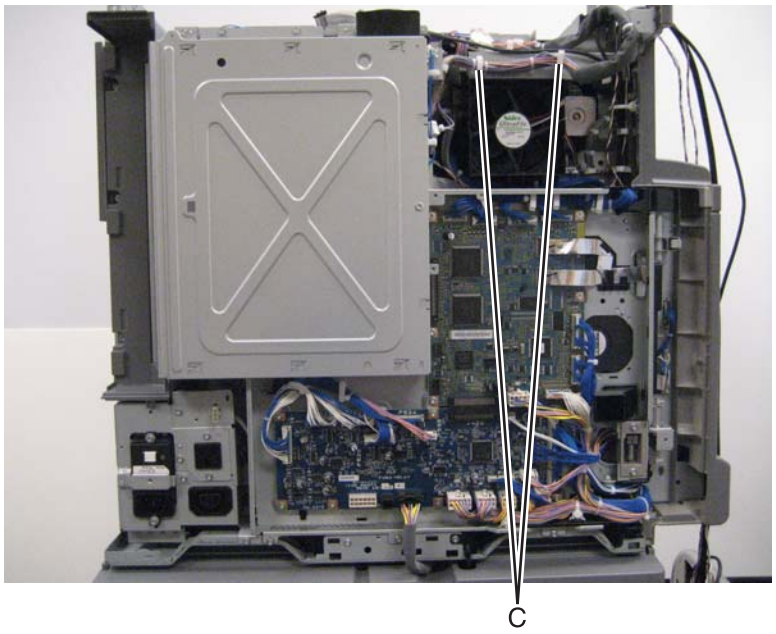
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.
3. Disconnect the input option cable (A).



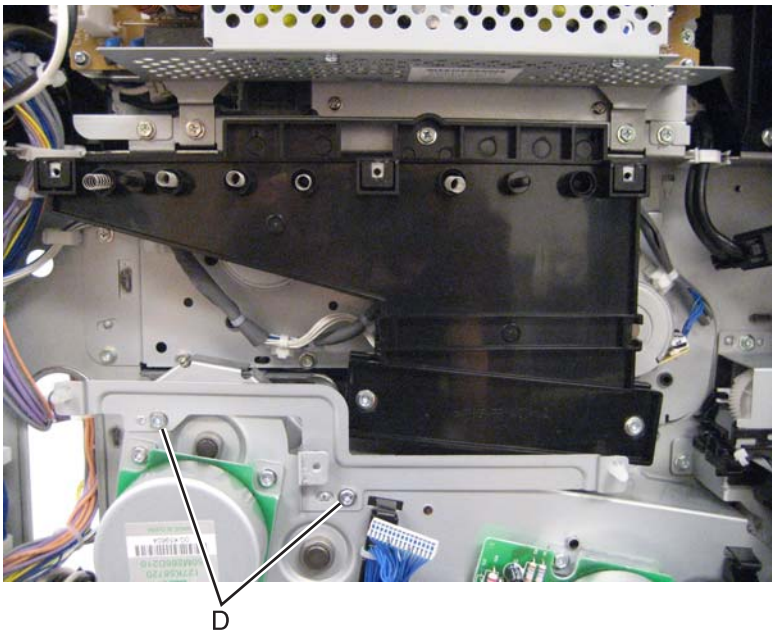
4. Remove the eight screws (B) securing the PCBA door to the machine.



5. Release the two clamps (C) to release the harness.

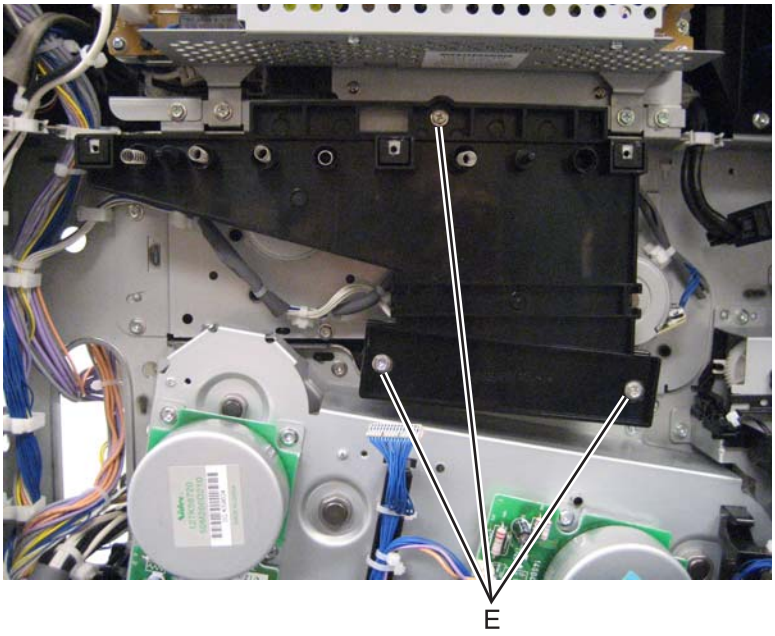


6. Swing the PCBA door open.
7. Remove the transfer roll HVPS PCBA. See **“Transfer roll HVPS PCBA removal” on page 4-187**.
8. Remove the two screws (D) securing the bracket to the machine.



9. Remove the bracket.

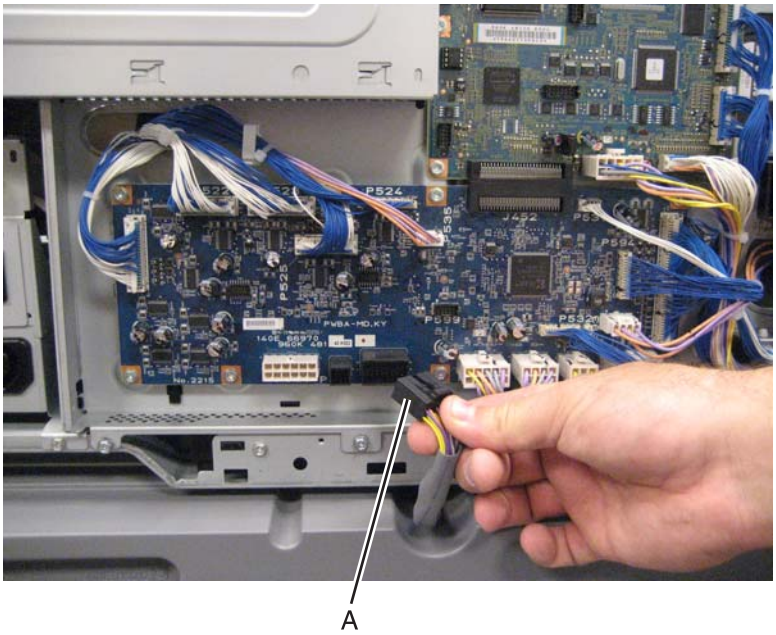
10. Remove the three screws (E) securing the 1st transfer conductor housing to the machine.



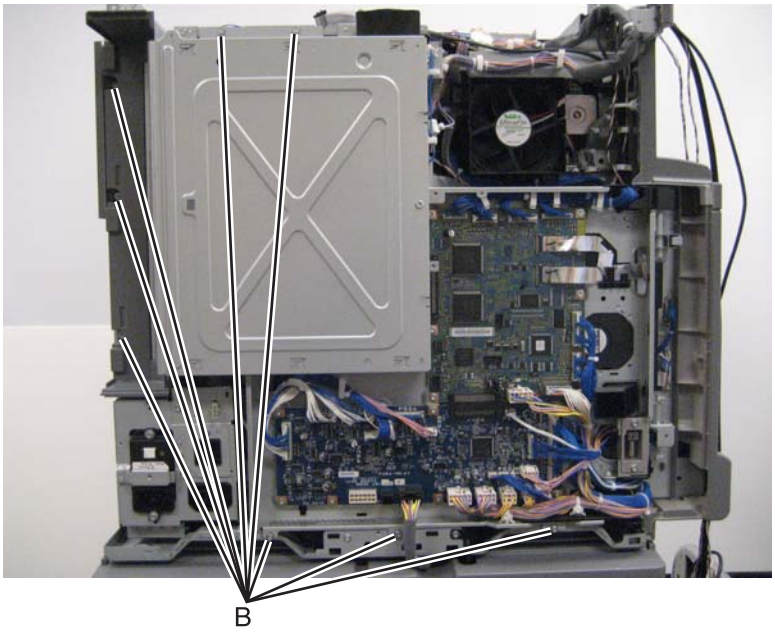
11. Remove the 1st transfer conductor housing.

1st transfer retract clutch assembly removal

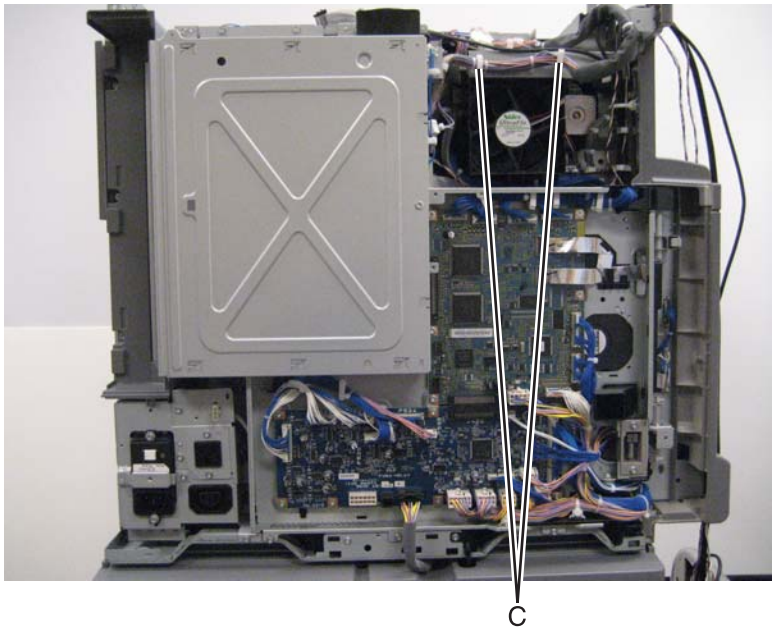
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.



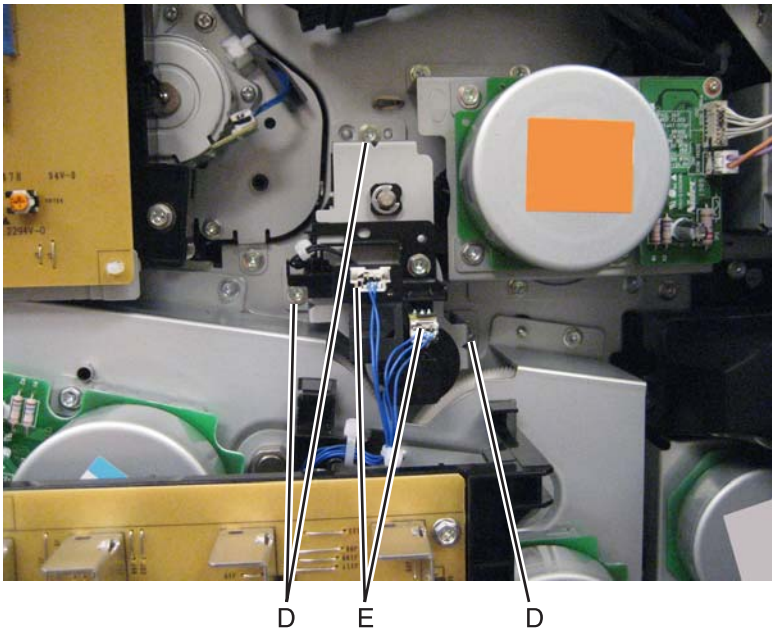
5. Release the two clamps (C) to release the harness.



6. Swing the PCBA door open.

7. Remove the three screws (D) securing the 1st transfer retract clutch assembly to the machine.

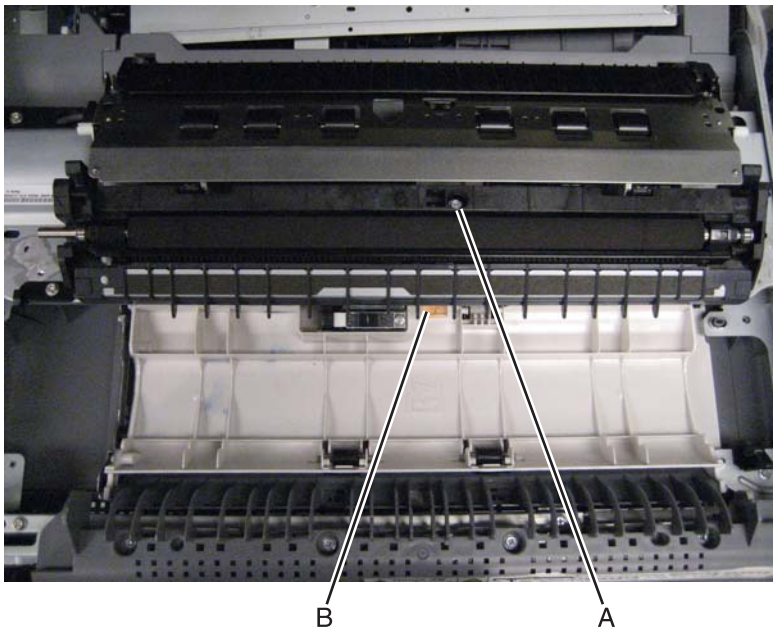
8. Disconnect the two cables (E).



9. Remove the 1st transfer retract clutch assembly.

2nd transfer roller removal

1. Open the printer left duplex door assembly.
2. Remove the screw (A) that secures the 2nd transfer roller.
3. Push the latch (B) to release the 2nd transfer roller.

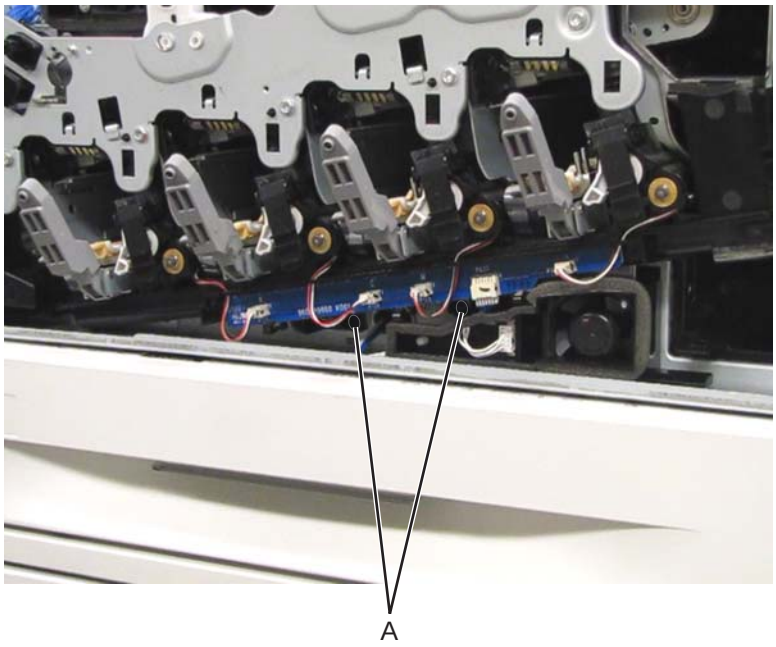


4. Remove the 2nd transfer roller.

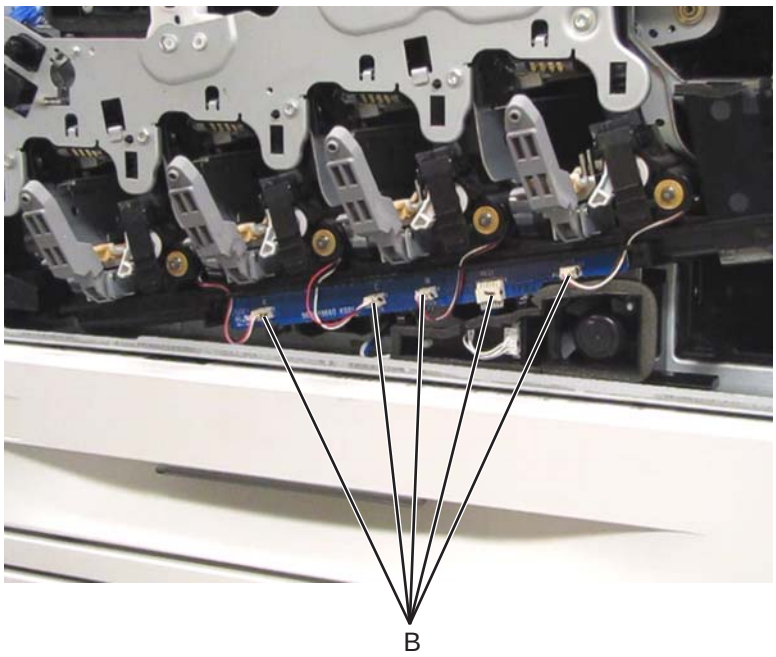
Reinstallation note: When replacing the 2nd transfer roller, ensure that the screw is properly reinstalled.

ATC sensor PCB bracket removal

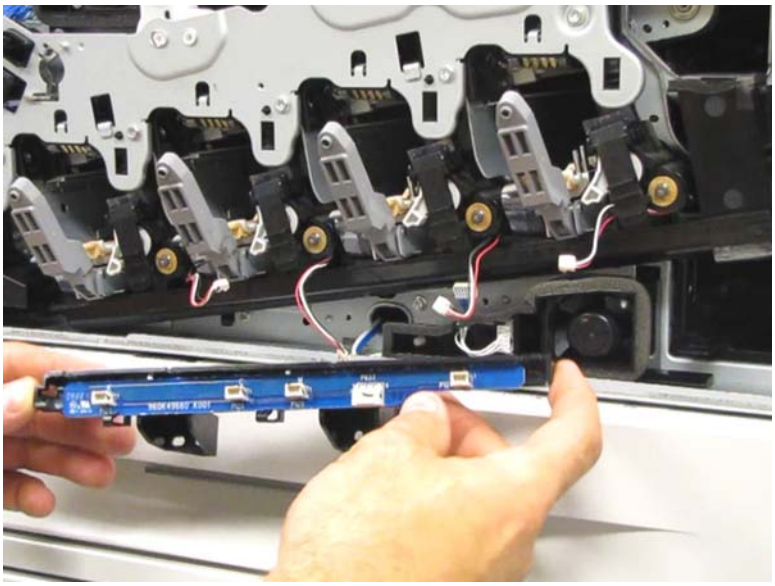
1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the two screws from the ATC sensor PCB bracket (A).



10. Disconnect the five cables (B) from the ATC sensor PCB bracket.

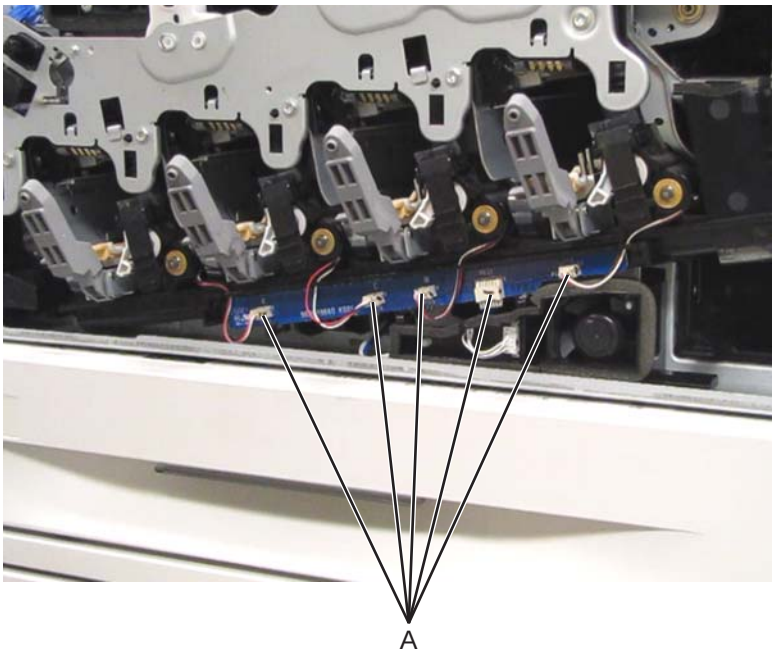


11. Detach the ATC sensor PCB bracket from the machine and remove.

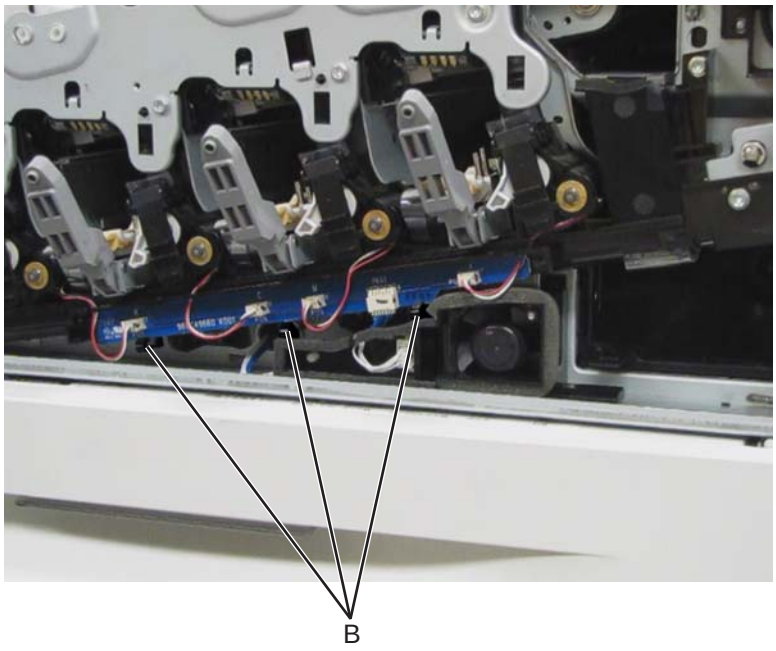


ATC sensor PCB removal

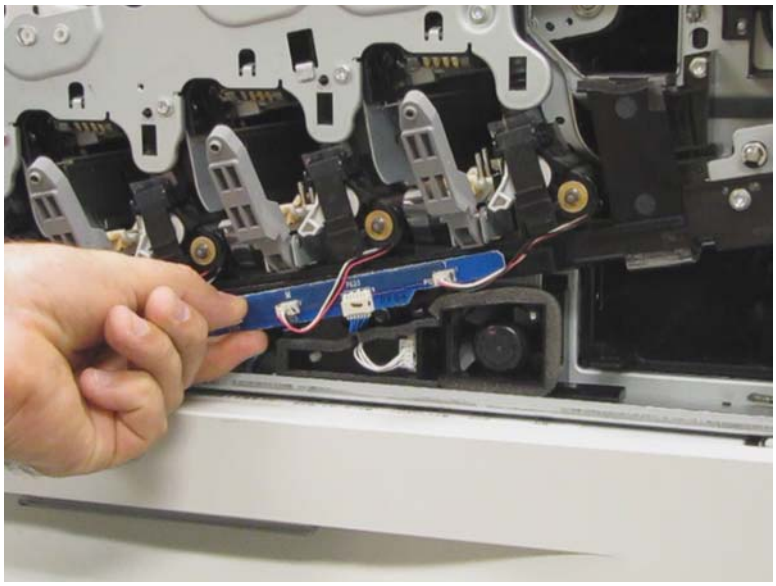
1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Disconnect the five cables (A) from the ATC sensor PCB.



10. Using a flat-blade screwdriver, release the three hooks (B) securing the ATC sensor PCB to the machine.



11. Remove the ATC sensor PCB.

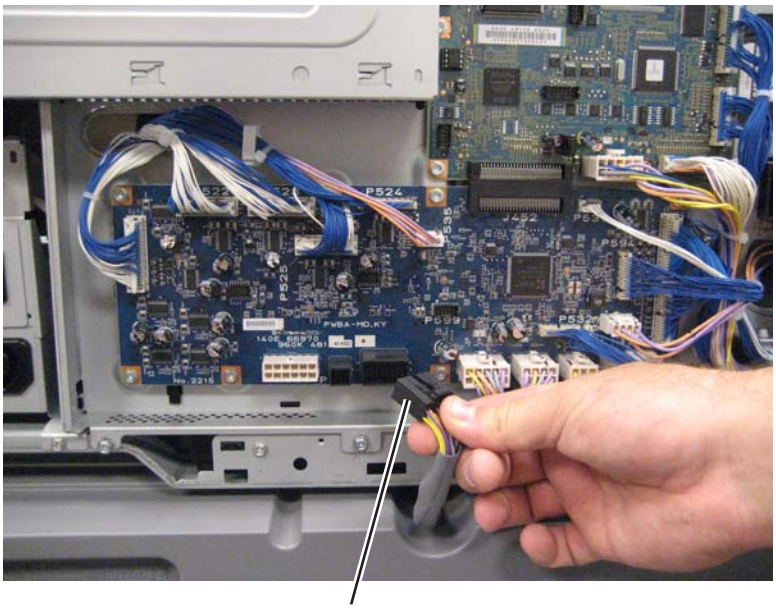


Re-installation note: When replacing the ATC sensor PCB, ensure that the five connections are properly reconnected.

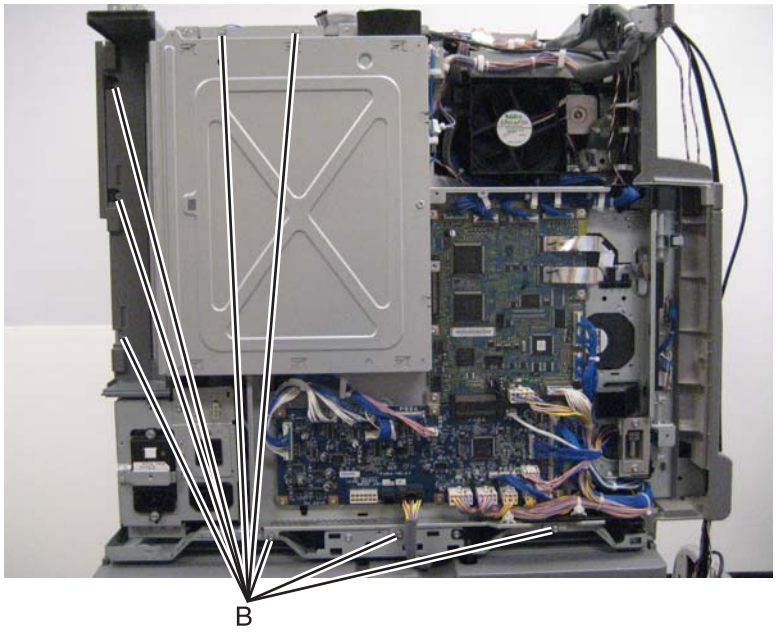
Bridge PCBA removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

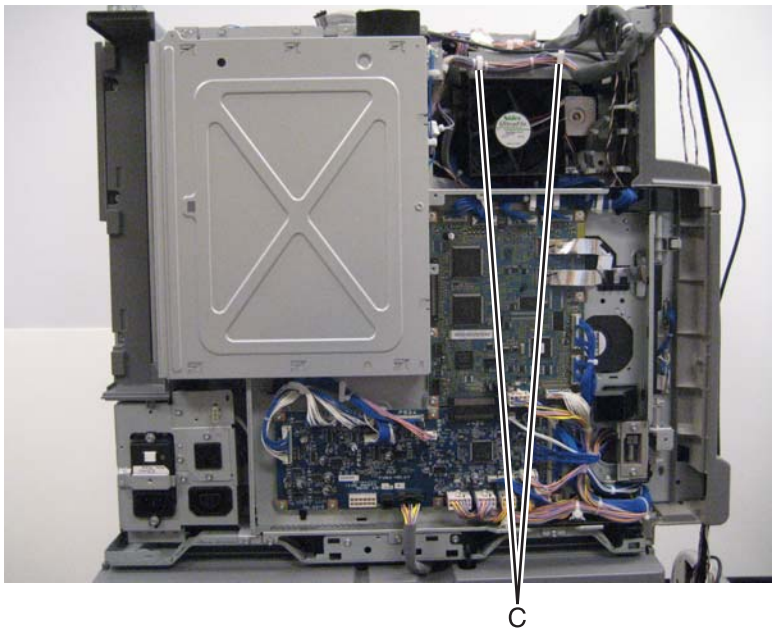
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.

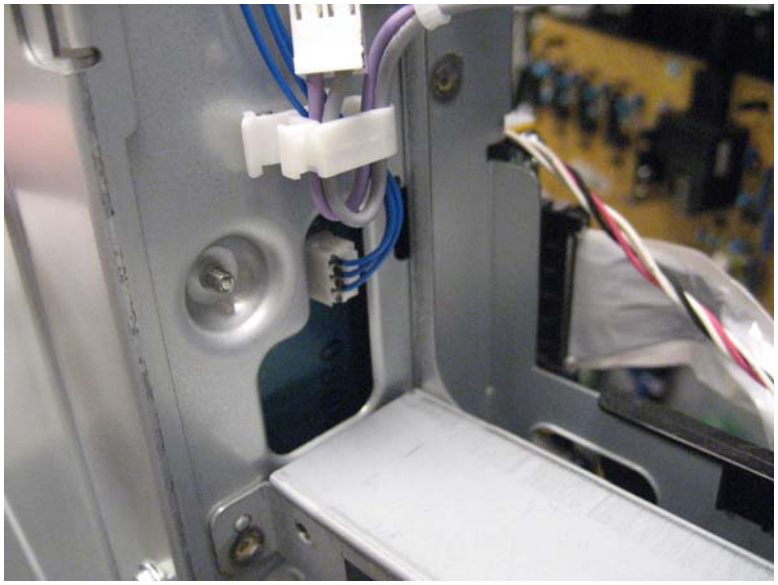


5. Release the two clamps (C) to release the harness.

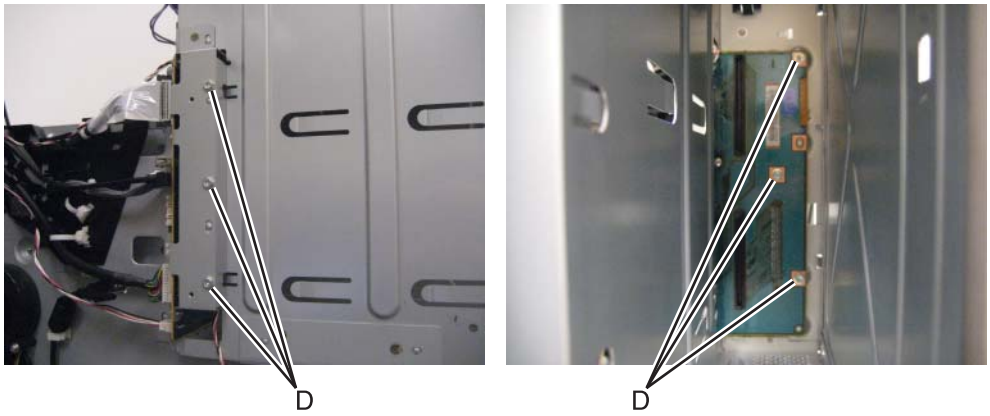


6. Swing the PCBA door open.
7. Remove the RIP PCBA. See **“RIP PCBA removal” on page 4-156**.

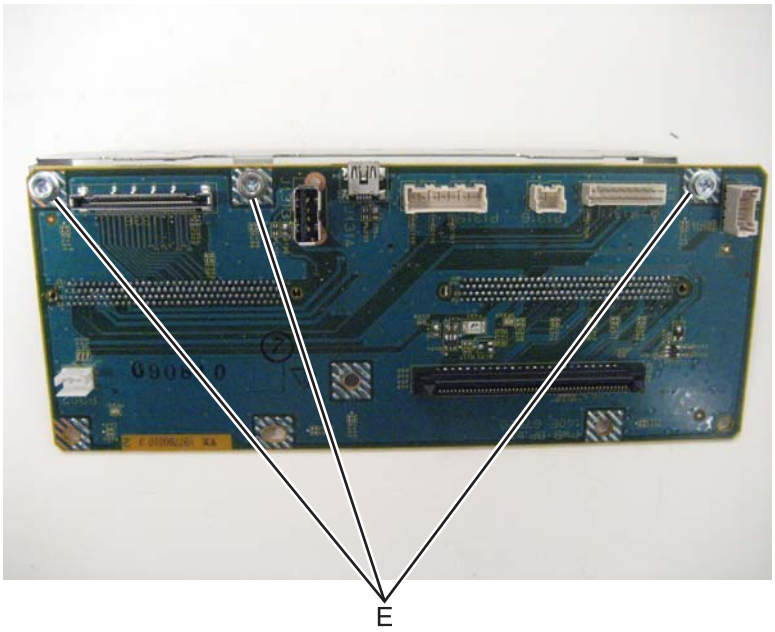
8. Disconnect all the cables from the bridge PCBA.



9. Remove the six screws (D) securing the bracket.



10. Gently detach the bridge PCBA from the upper engine PCBA.
11. Remove the bracket.
12. Remove the three screws (E) securing the bridge PCBA to the bracket.

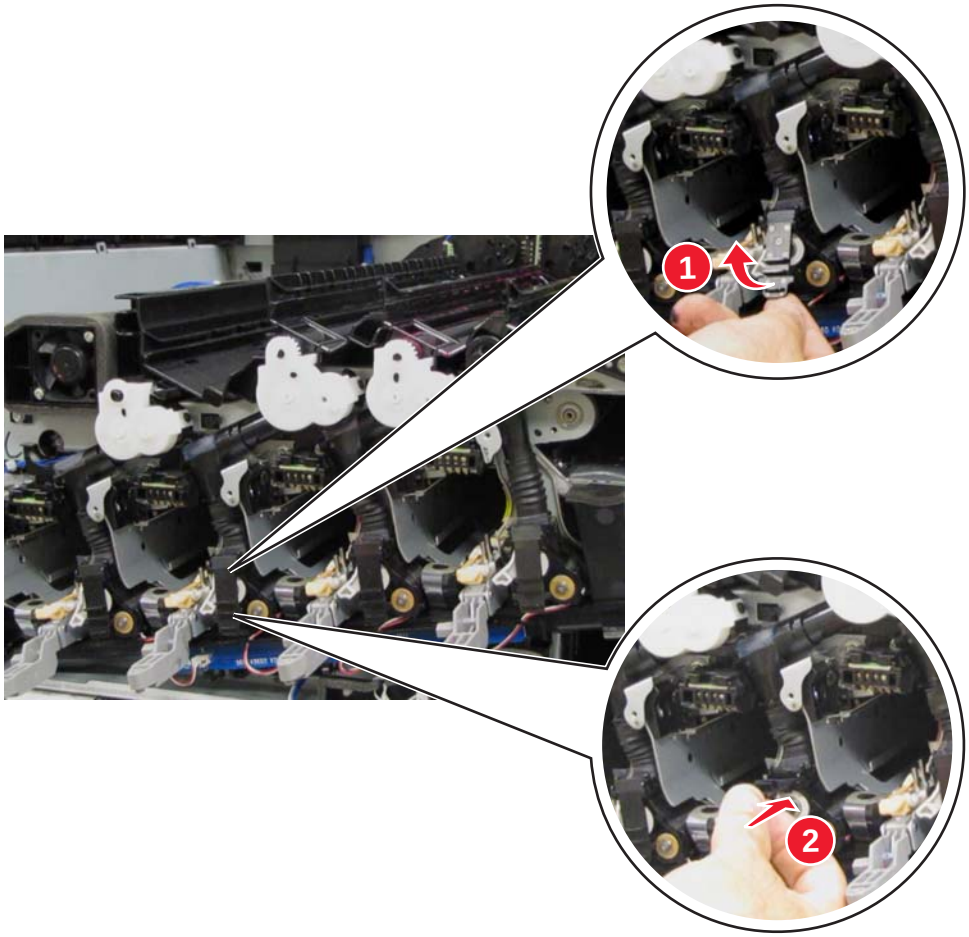


13. Remove the bridge PCBA.

C toner auger removal

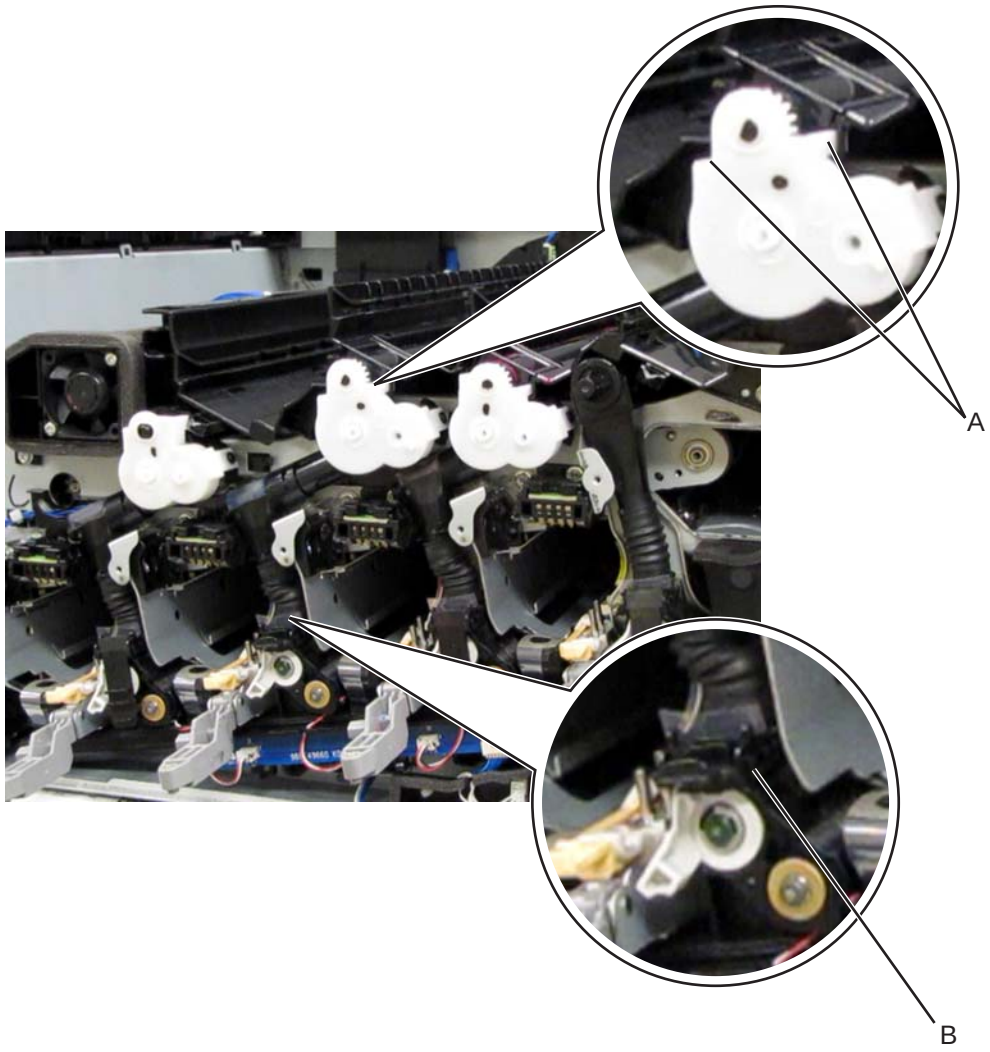
1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the inner plate. See **“Inner plate removal” on page 4-104**.

10. Lift the plastic gate, and push it in to prevent the toner from spilling.

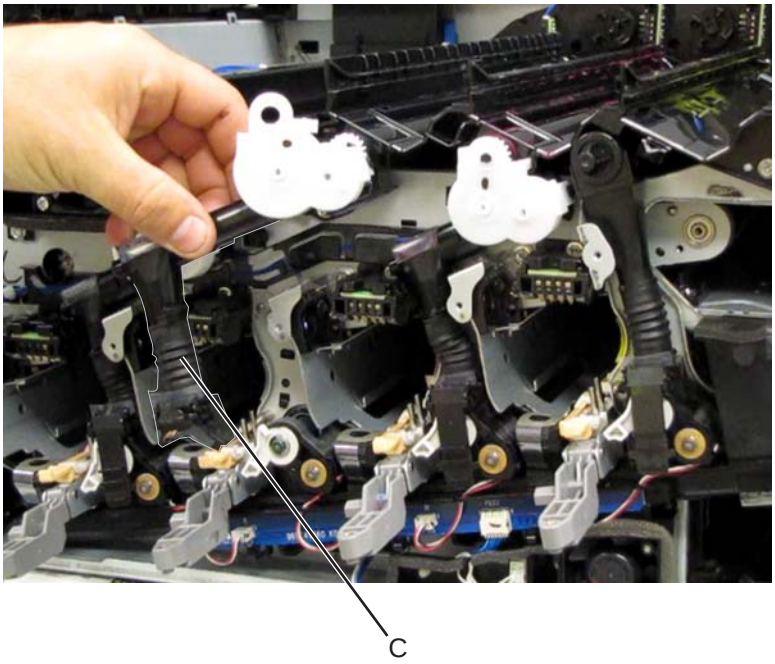


11. Squeeze the two latches (A) to release the upper part of the auger.
12. Detach the lower portion (B) of the auger from the developer unit.

Warning: The lower portion (B) of the auger is prone to damage. Extra care is required in handling this part.



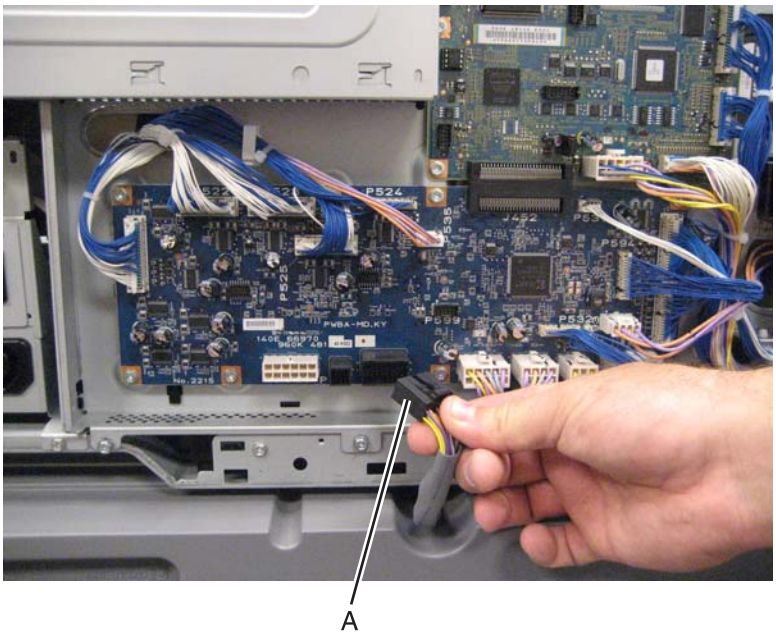
13. Remove the C toner auger.



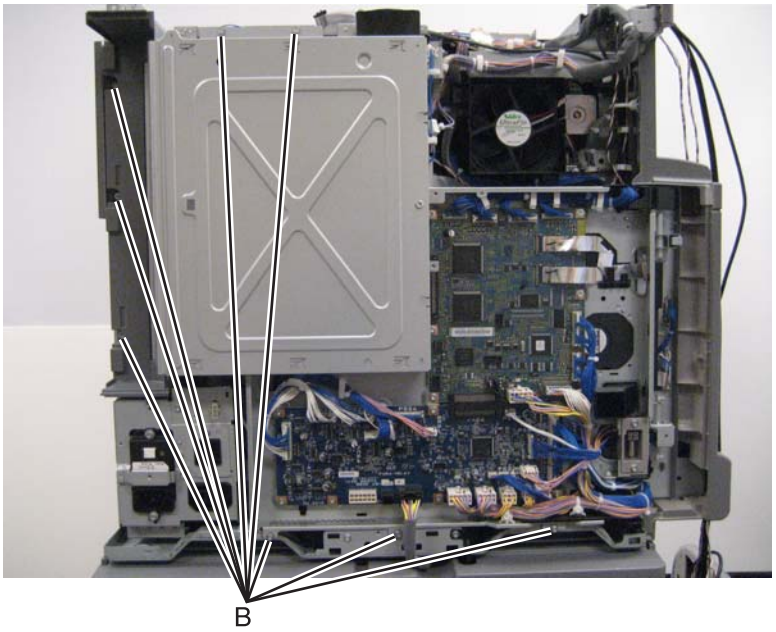
Re-installation note: Ensure that the rubber sleeve (C) is attached properly to prevent toner spillage.

Center exhaust fan removal

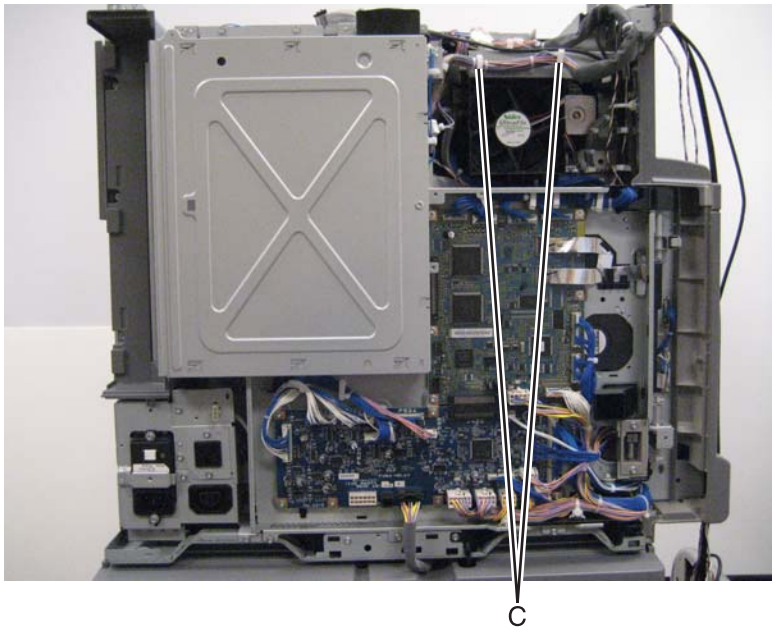
1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-19**.
2. Remove the rear lower cover. See **"Rear lower cover removal" on page 4-17**.
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.

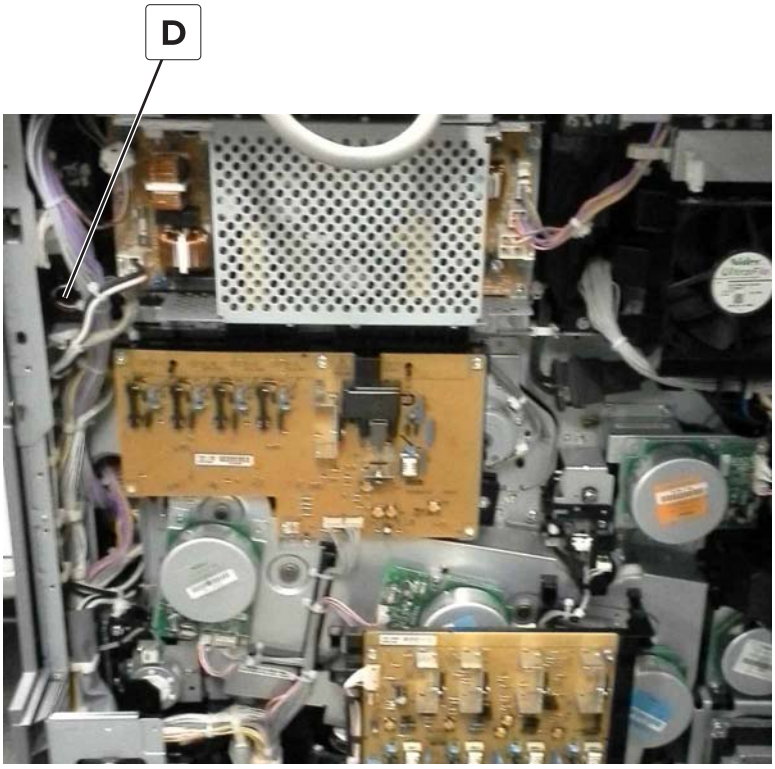


5. Release the two clamps (C) to release the harness.

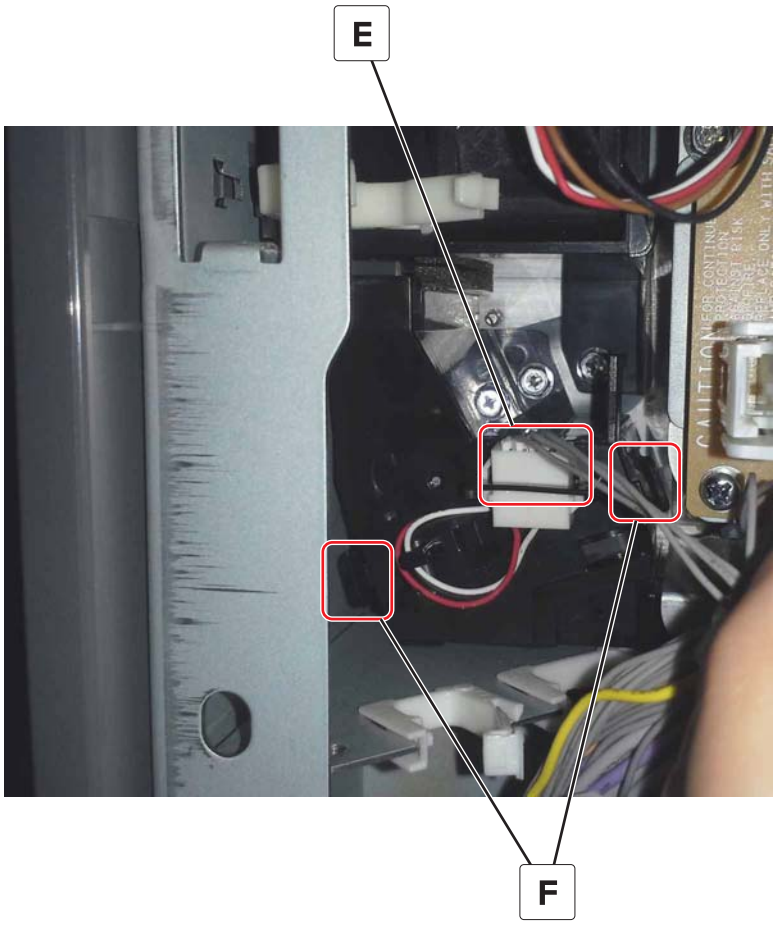


6. Swing the PCBA door open.

7. Locate the fan (D).



8. Disconnect the cable (E) and then push the two latches (F) to release the fan.

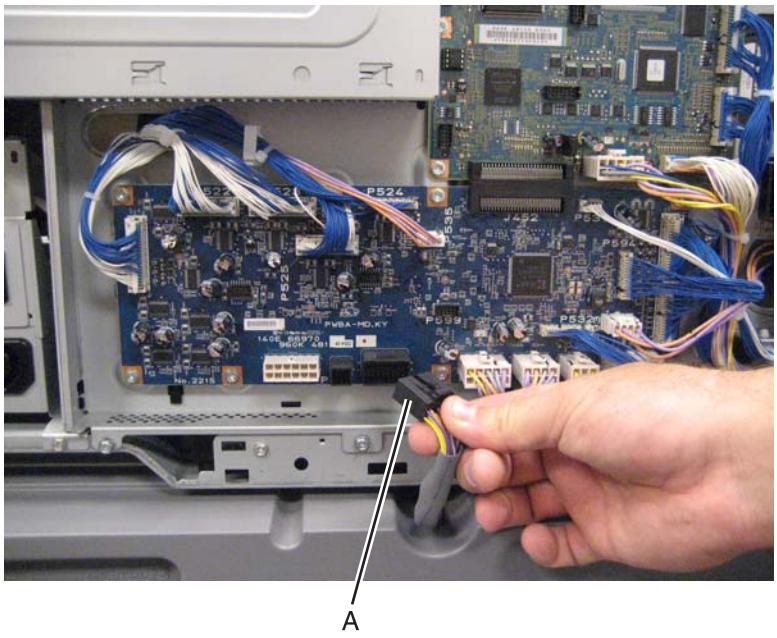


9. Remove the center exhaust fan.

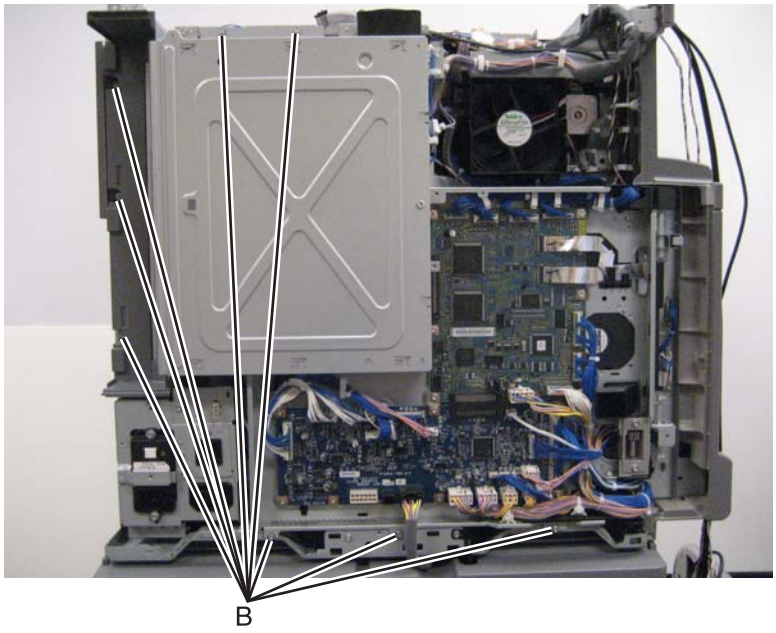
Charge roll HVPS cooling fan removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

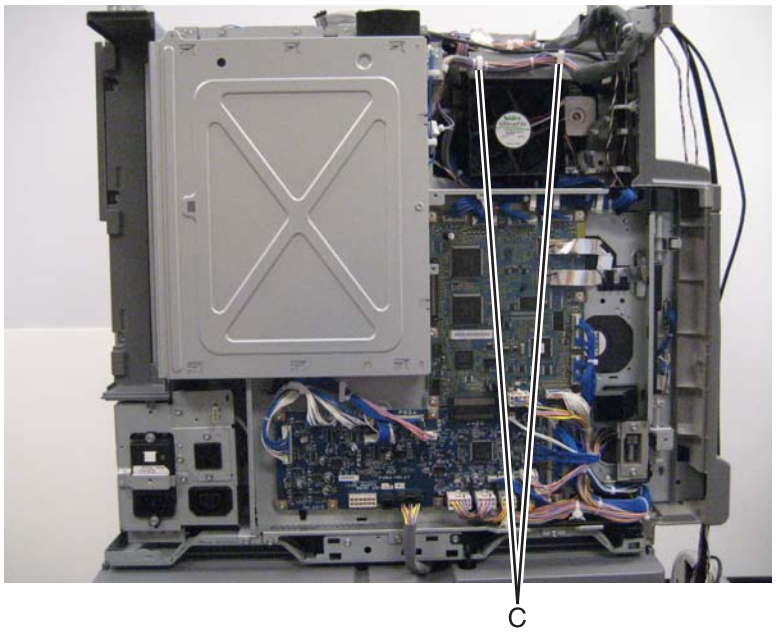
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.



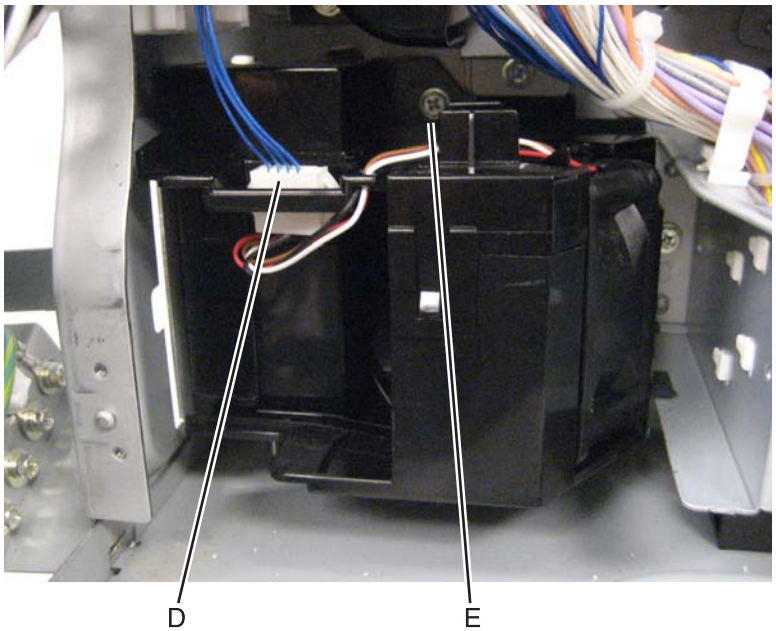
5. Release the two clamps (C) to release the harness.



6. Swing the PCBA door open.

Note: The cables do not have to be removed from the main power GFI interface to remove this part. Just pull the main power GFI interface out of the machine and swing it out of the way.

7. Remove the main power GFI interface, or just move it so that you can get to the charge roll HVPS cooling fan. See the **"Main power GFI interface removal" on page 4-124**.
8. Disconnect the cable (D) from the charge roll HVPS cooling fan.
9. Remove the screw (E) securing the charge roll HVPS cooling fan to the machine.



10. Gently raise the large cable harness and remove the charge roll HVPS cooling fan.

Charge roll HVPS PCBA removal

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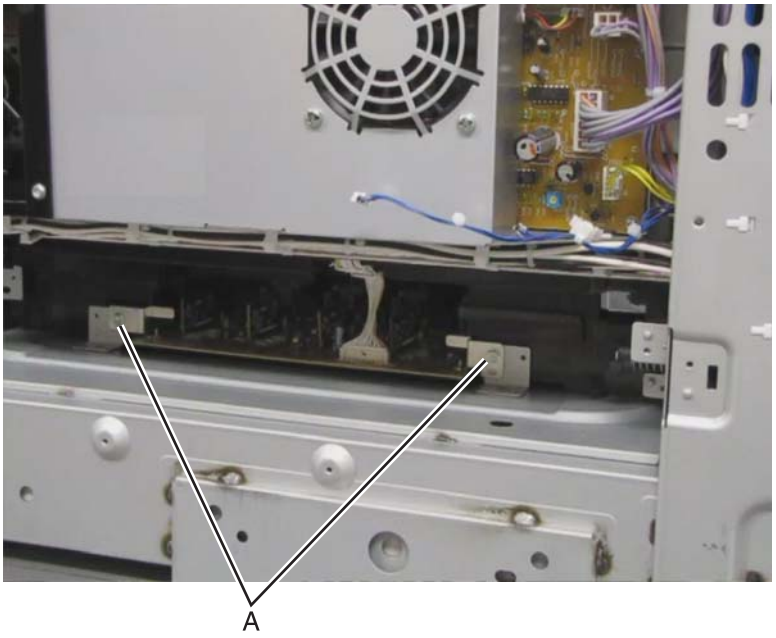
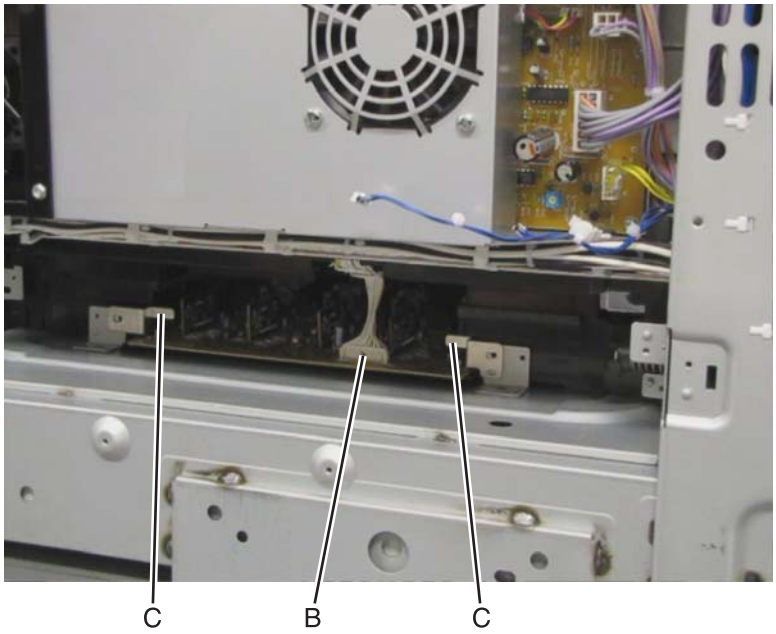
1. Remove the printer right side cover. See **“Printer right cover removal” on page 4-14**.
2. Remove the waste toner sensor guide. See **“Waste toner sensor guide removal” on page 4-202**.
3. Remove the two screws (A) securing the charge roll HVPS PCBA.



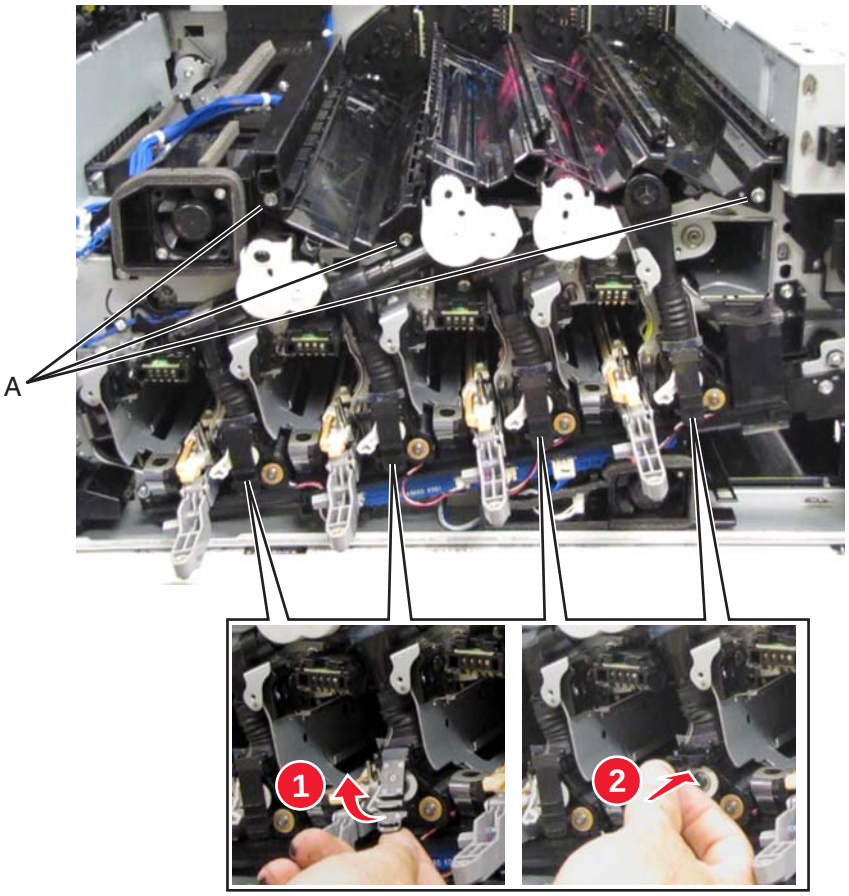
4. Remove the connection (B) from the charge roll HVPS PCBA.
5. Using the metal tabs (C), gently pull the charge roll HVPS PCBA and remove from the machine.



Re-installation note: When replacing the charge roll HVPS PCBA, ensure that it is properly inserted into the socket in the machine.

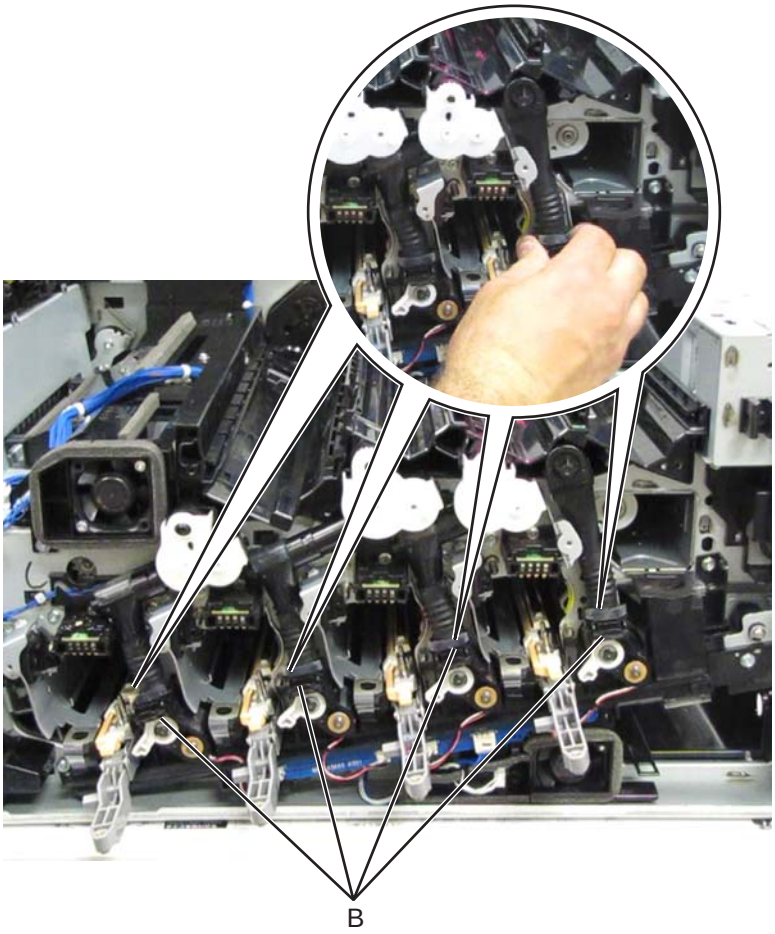
CMYK toner dispense auger assembly removal

1. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
2. Remove the top cover. See **“Printer top cover removal” on page 4-15**.
3. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
4. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
5. Remove the waste toner box.
6. Remove the four photoconductor units.
7. Remove the four toner supplies.
8. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
9. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
10. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
11. Remove the three screws (A) securing the CMYK toner dispense auger assembly to the printer.

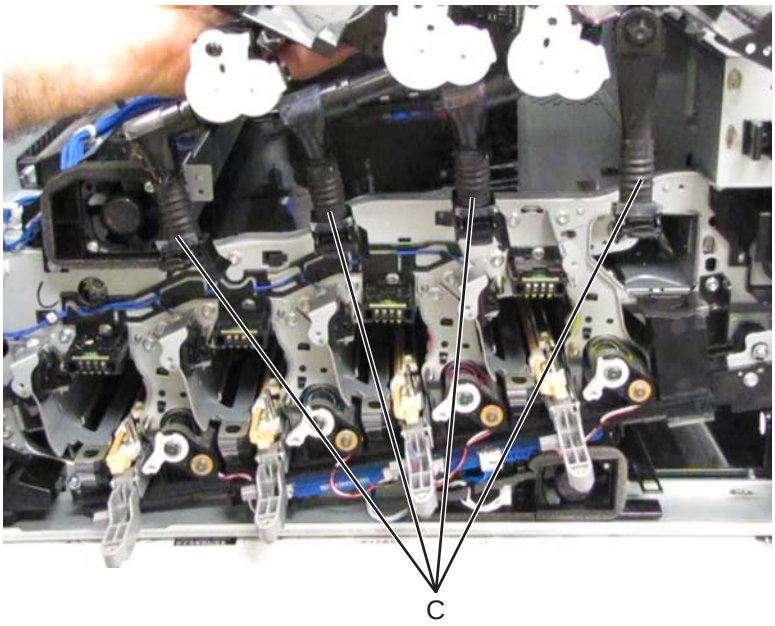


12. Lift the four plastic gates and push them into their corresponding toners to prevent the toner from spilling.
13. Gently detach the lower portions (B) of the four augers from the developer housings.

Warning: The lower portion (B) of the augers are prone to damage. Extra care is required in handling these parts.



14. Disengage the CMYK toner dispense auger assembly and remove.

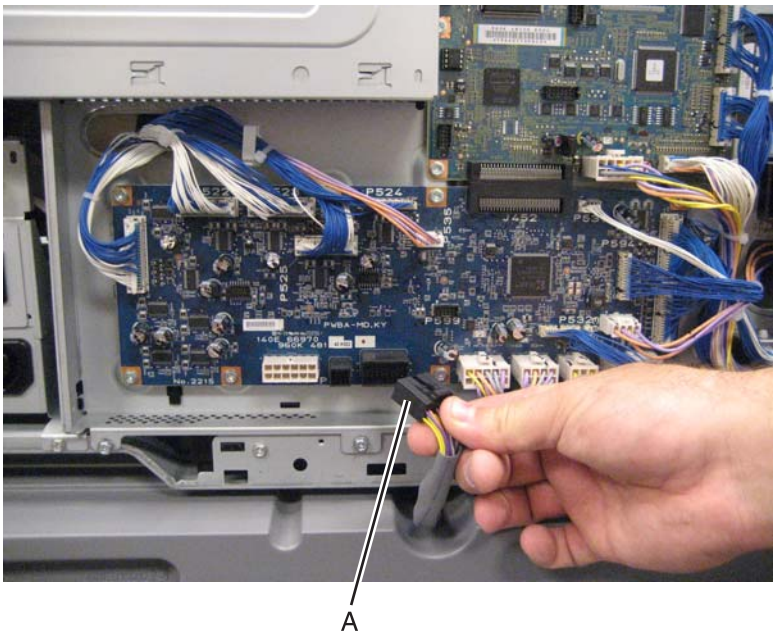


Note: After removal of the CMYK toner dispense auger assembly, be sure to clean up all visible toner spillage.

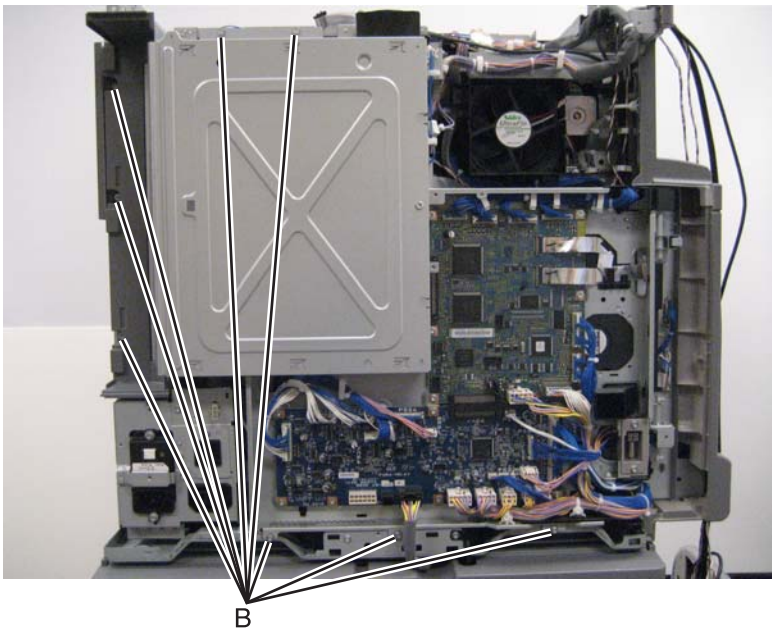
Re-installation note: Be sure to attach the rubber sleeves (C) properly to prevent toner spillage.

Controller cooling fan removal

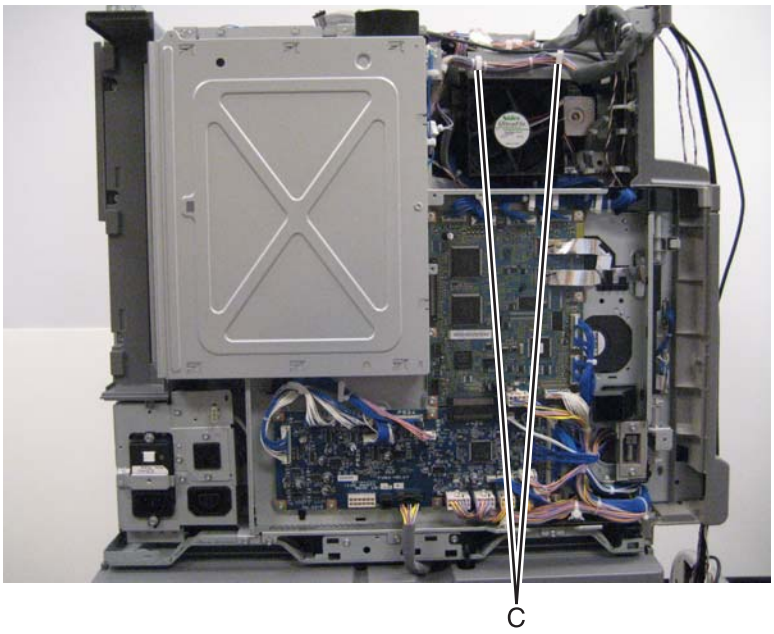
1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-19**.
2. Remove the rear lower cover. See **"Rear lower cover removal" on page 4-17**.
3. Disconnect the input option cable (A).



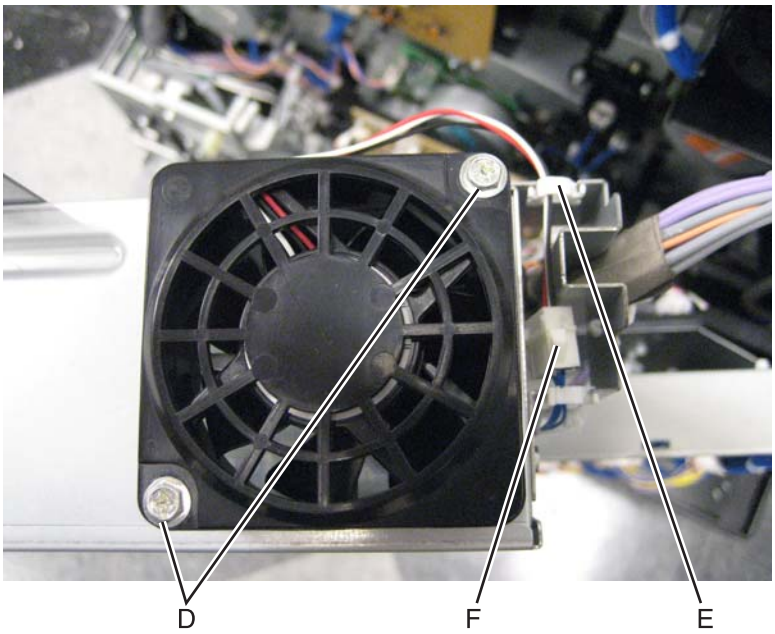
4. Remove the eight screws (B) securing the PCBA door to the machine.



5. Release the two clamps (C) to release the harness.



6. Swing the PCBA door open.
7. Remove the two screws (D) securing the controller cooling fan.
8. Remove the controller cooling fan from the machine.
9. Disconnect the harness from the clamp (E).
10. Disconnect the cable (F) from the controller cooling fan.



Developer carrier removal and replacement

Note: The following procedure can be applied to the C, M, Y, and K developer carriers.

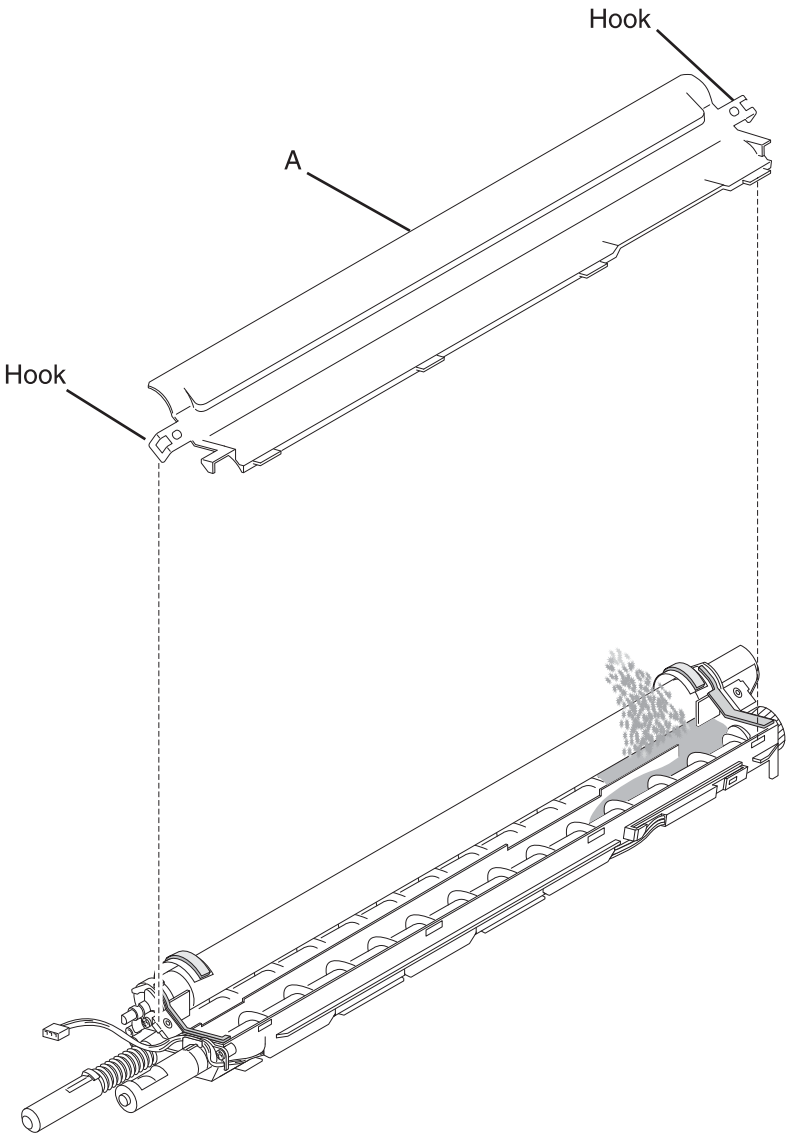
Warning: Always perform the sensor (ATC sensor) setup and adjustment if required or print quality problems may occur. Go to **"Sensor (ATC) setup" on page 4-464**.

1. Remove the appropriate developer housing. See **"Developer housing (C) removal" on page 4-52**, **"Developer housing (M) removal" on page 4-64**, **"Developer housing (Y) removal" on page 4-70**, or **"Developer housing (K) removal" on page 4-58**.
2. Remove the printer front door. See **"Printer front door removal" on page 4-13**.
3. Remove the transfer belt cleaner. See **"Transfer belt cleaner removal" on page 4-185**.
4. Remove the waste toner box.
5. Remove the four photoconductor units.
6. Remove the four toner supplies.

   Note: When removing the toner supply cartridges, ensure that all toner spillage and contamination is completely removed using an approved toner vacuum.

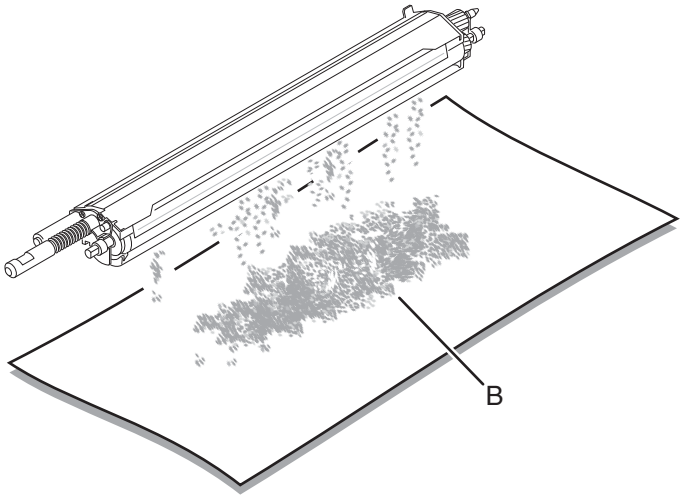
7. Remove the operator panel left cover. See **"Operator panel left cover removal" on page 4-10**.
8. Remove the operator panel right cover. See **"Operator panel right cover removal" on page 4-11**.
9. Remove the operator panel front cover. See **"Operator panel front cover (MFP) removal" on page 4-8**.
10. Remove the printhead retract door. See **"Printhead retract door removal" on page 4-151**.
11. Remove the inner cover. See **"Inner cover removal" on page 4-4**.
12. Remove the inner plate. See **"Inner plate removal" on page 4-104**.
13. Using a prying tool, gently release the two hooks securing the top cover (A) to the assembly.

14. Remove the top cover (A).



15. Completely remove the carrier (B) from the assembly by dumping it and using a toner vacuum or if installing a new developer unit assembly, go to next step.

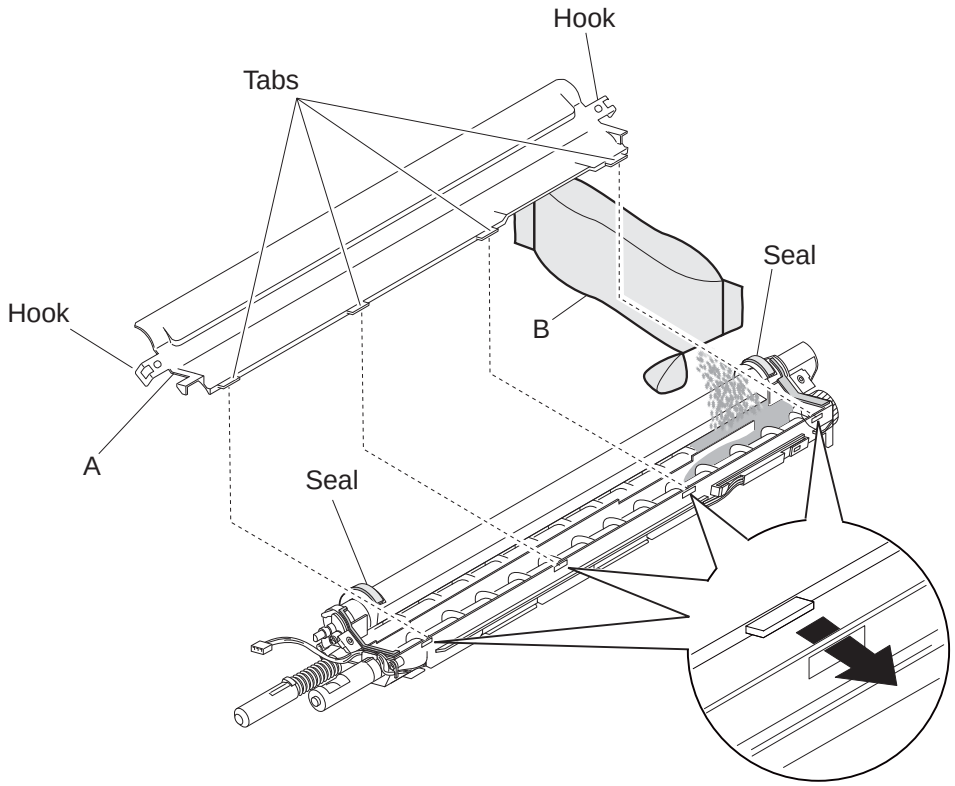
Replacement warning: If reusing an existing developer unit assembly, ensure that all traces of old carrier (B) are removed from the developer unit assembly, or print quality issues may occur.



To install the new carrier (B):

Warning: Ensure that the carrier is installed evenly and uniformly in the assembly, or spillage may occur.

1. Open the appropriate bag, and dump the appropriate carrier into the appropriate assembly.



2. Rotate the gears in the assembly to evenly distribute the carrier (B).
   Warning: Ensure that the two seals are properly positioned in the assembly before replacing the top cover (A), or spillage may occur which may lead to print quality problems.

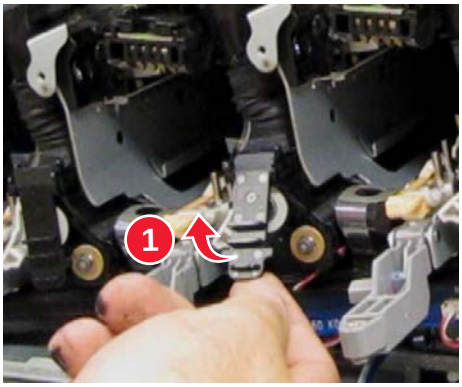
   Warning: Ensure that the four plastic tabs in the top cover (A), are inserted into the four holes in the developer unit or the carrier (B) will be ejected from the developer unit assembly which will result in carrier contamination and print quality problems.

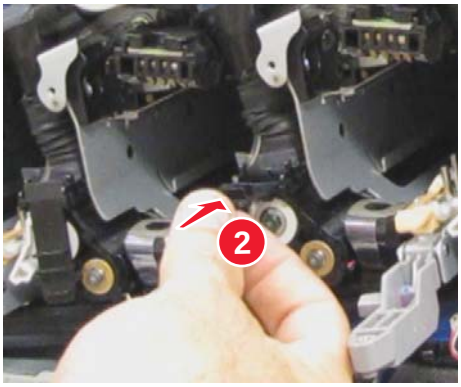
3. Replace the top cover (A).
4. Perform the ATC sensor setup and adjustment. Go to **"Sensor (ATC) setup" on page 4-464**.

Developer housing (C) removal

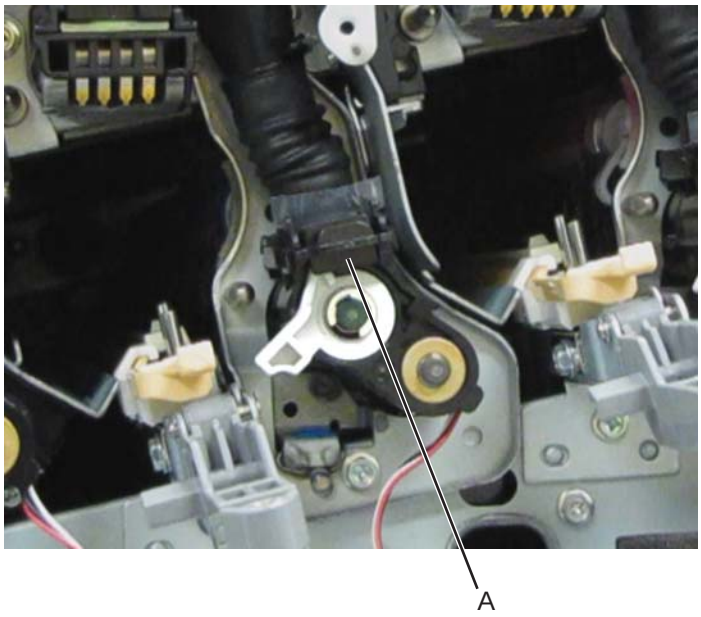
1. Remove the printer front door. See **"Printer front door removal" on page 4-13**.
2. Remove the transfer belt cleaner. See **"Transfer belt cleaner removal" on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel left cover. See **"Operator panel left cover removal" on page 4-10**.
7. Remove the operator panel right cover. See **"Operator panel right cover removal" on page 4-11**.
8. Remove the operator panel front cover. See **"Operator panel front cover (MFP) removal" on page 4-8**.
9. Remove the printhead retract door. See **"Printhead retract door removal" on page 4-151**.
10. Remove the inner cover. See **"Inner cover removal" on page 4-4**.
11. Remove the inner plate. See **"Inner plate removal" on page 4-104**.
12. Remove the ATC sensor PCB bracket. See **"ATC sensor PCB bracket removal" on page 4-29**.
13. Remove the waste toner auger chute. See **"Waste toner auger chute removal" on page 4-200**.

14. Lift the appropriate plastic gate, and push it in to reduce toner spillage.

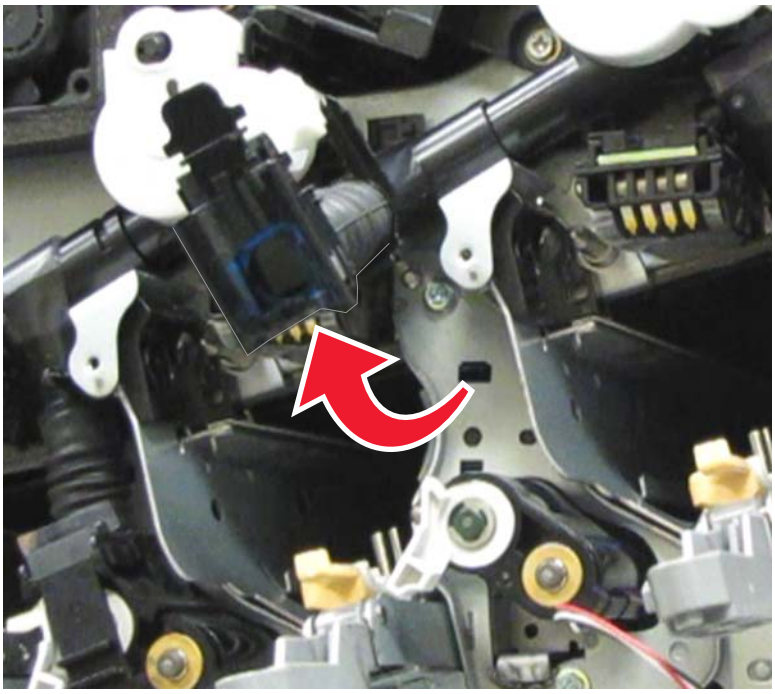




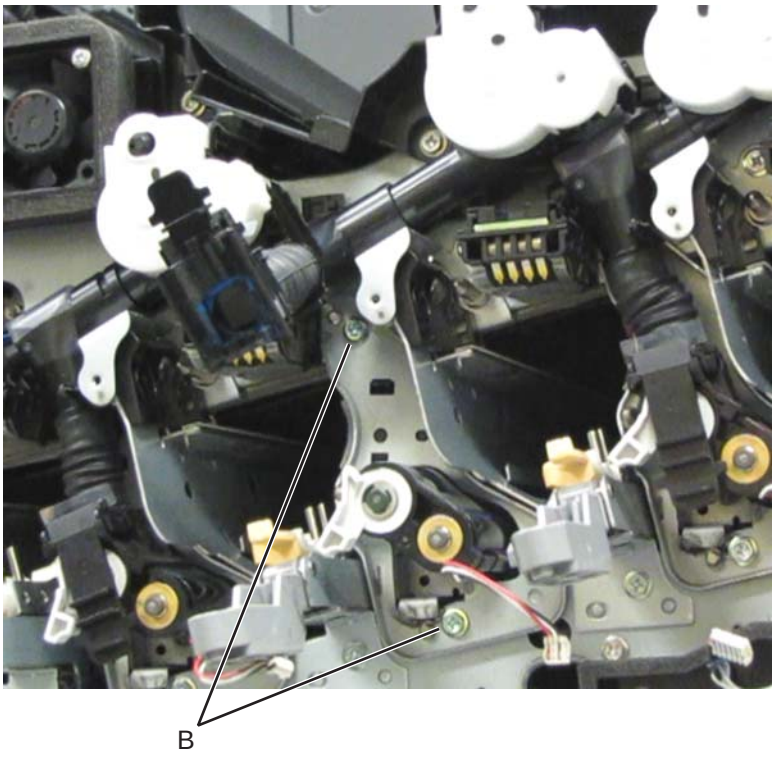
15. Detach the lower portion (A) of the auger from the appropriate developer housing.



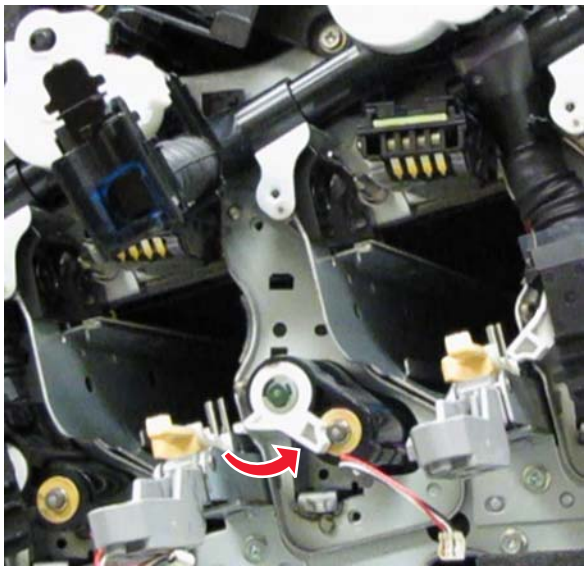
16. Swing away the lower portion of the auger to enable access to the two screws.



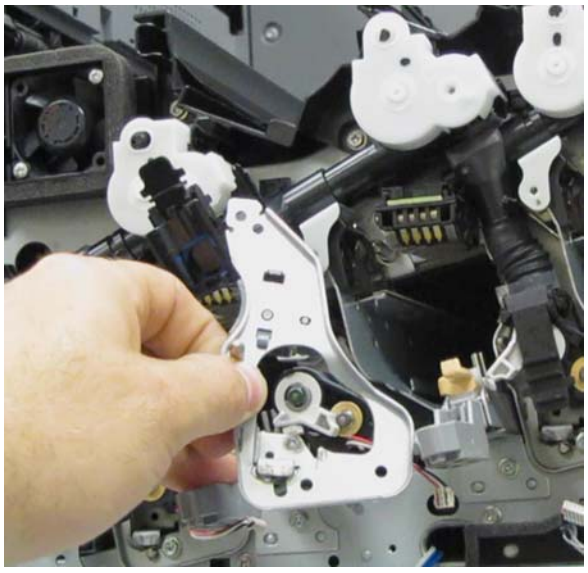
17. Remove the two screws (B) from the bracket.



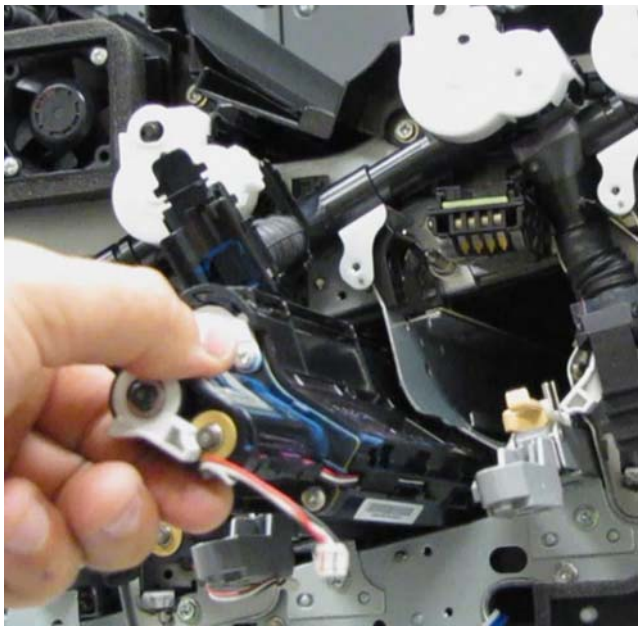
18. Move the lever counterclockwise.



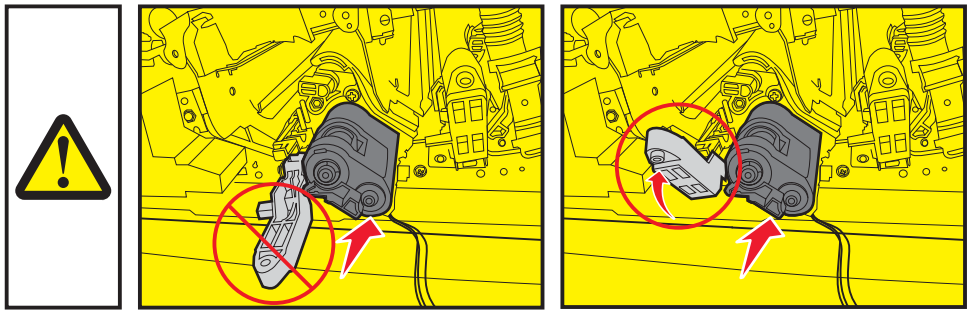
19. Remove the bracket mounted over the developer housing.



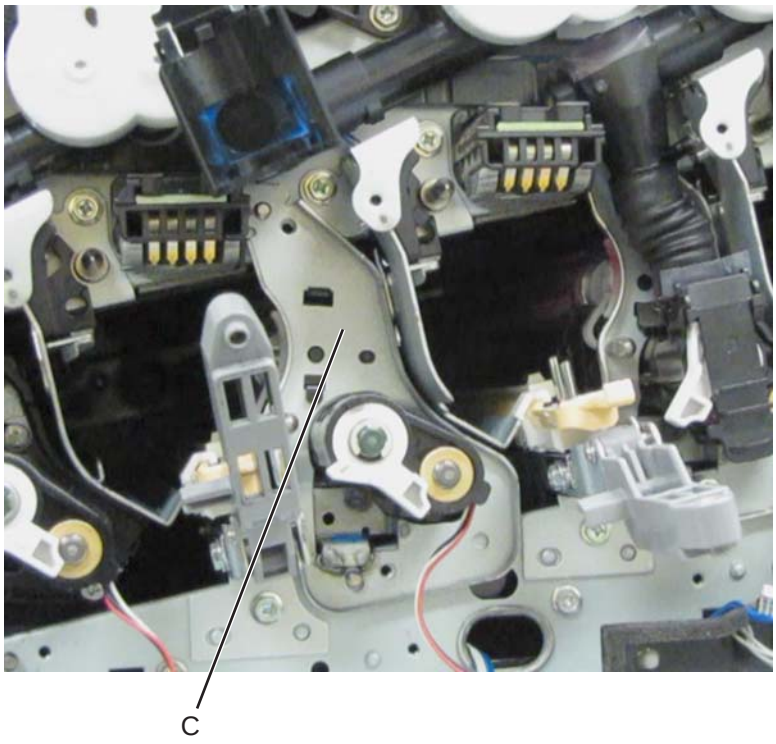
20. Remove the developer housing.



Reinstallation warning: When reinstalling the developer housing, ensure that the printhead retract levers are in their uppermost position as shown in the following image, or damage will occur to the machine.

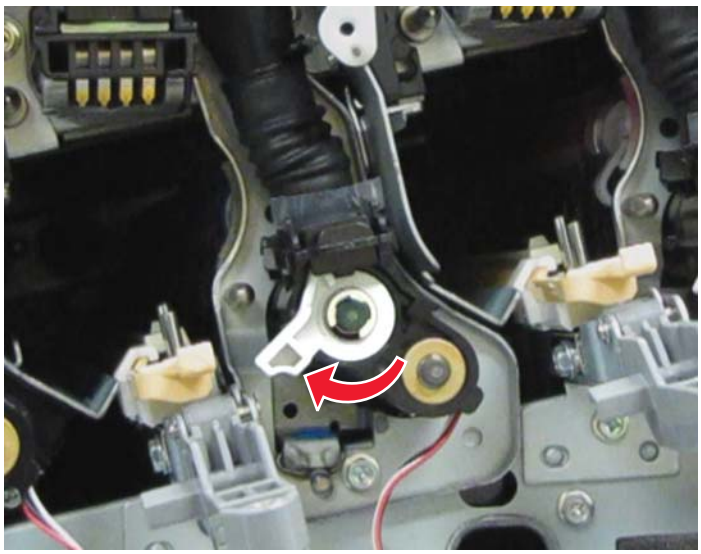


If the developer housing is installed correctly, the bracket (C) can be mounted over the developer housing without difficulty. If the developer housing does not seem to install easily, do not force the part into the machine. Ensure that the printhead retract lever is in the uppermost position, and try to slide it in again.

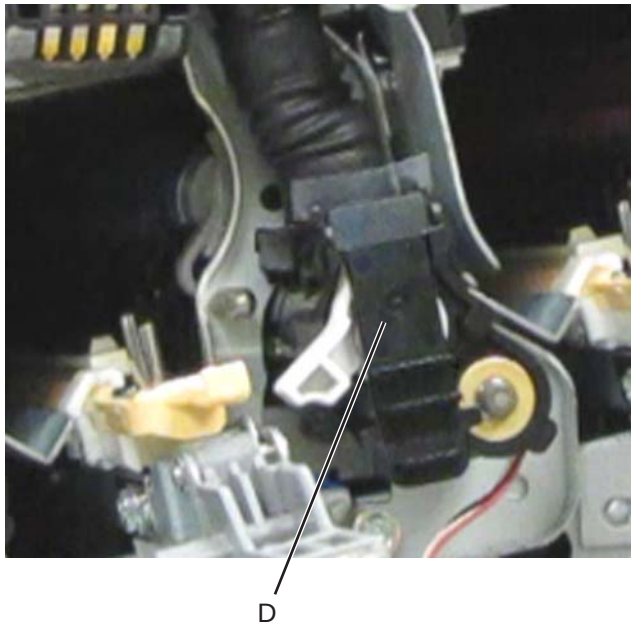


Reinstallation notes:

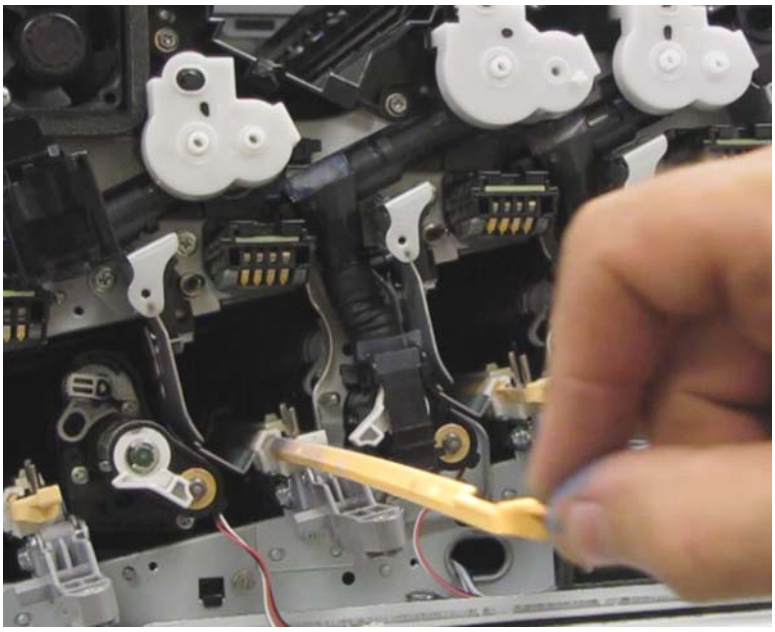
- To complete the re-installation, do the following:
  - **a.** Be sure to attach the lower part of the auger properly to reduce toner spillage.
  - **b.** Move the lever clockwise.



c. Pull the plastic gate (D), and move it to its lowest position.



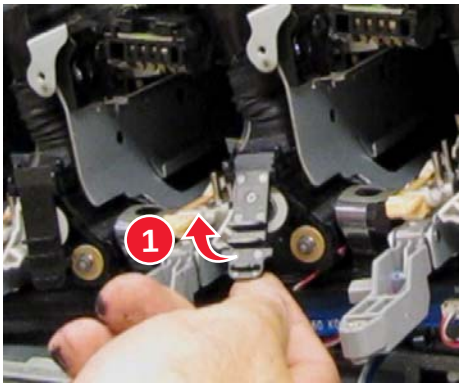
- Move the appropriate wiper in and out to clean the printhead.

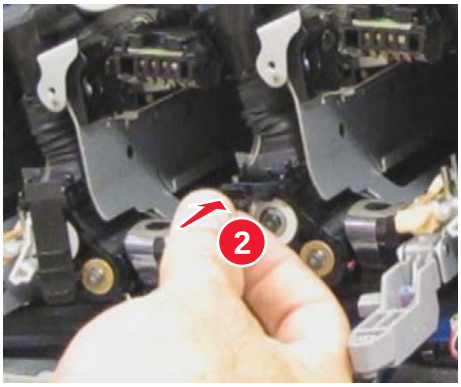


Developer housing (K) removal

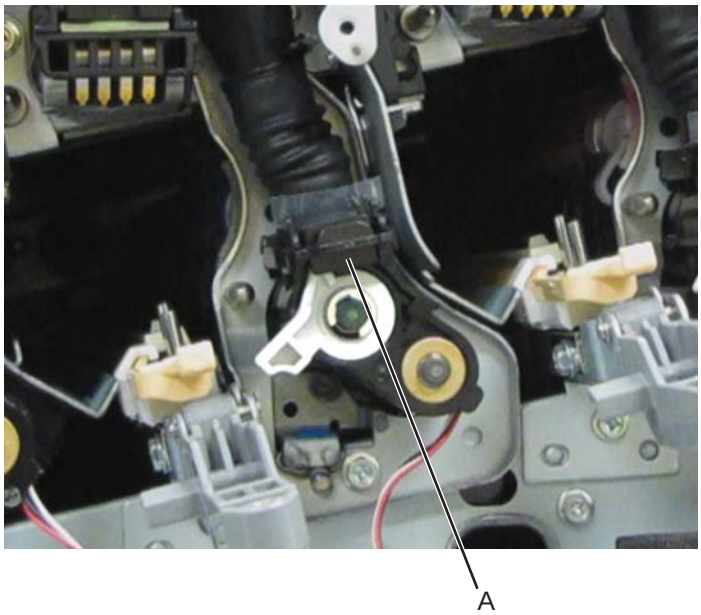
1. Remove the printer front door. See **"Printer front door removal" on page 4-13**.
2. Remove the transfer belt cleaner. See **"Transfer belt cleaner removal" on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel left cover. See **"Operator panel left cover removal" on page 4-10**.
7. Remove the operator panel right cover. See **"Operator panel right cover removal" on page 4-11**.

8. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
9. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
10. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
11. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
12. Remove the ATC sensor PCB bracket. See **“ATC sensor PCB bracket removal” on page 4-29**.
13. Remove the waste toner auger chute. See **“Waste toner auger chute removal” on page 4-200**.
14. Lift the appropriate plastic gate, and push it in to reduce toner spillage.

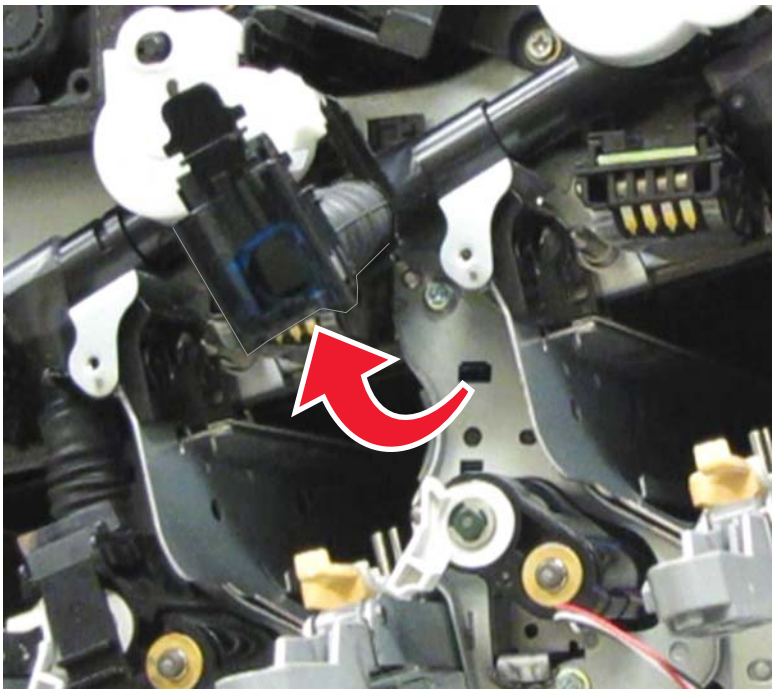




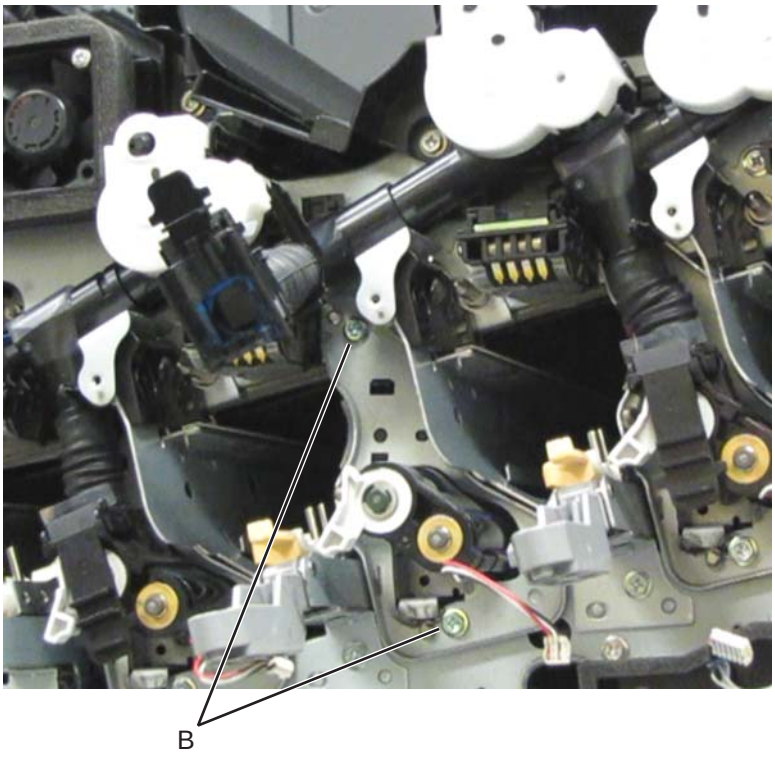
15. Detach the lower portion (A) of the auger from the appropriate developer housing.



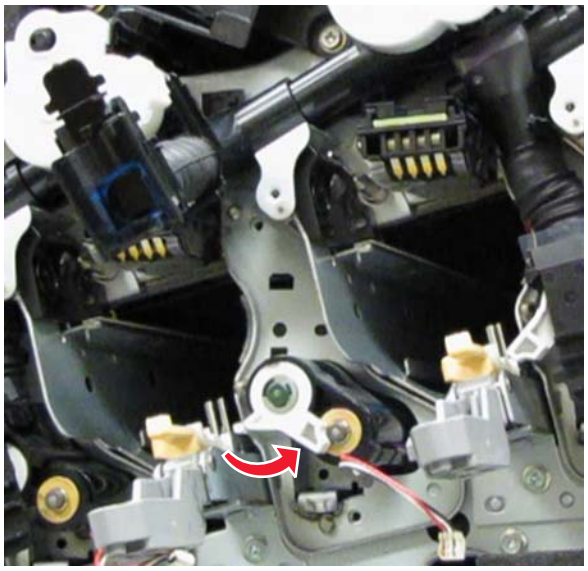
16. Swing away the lower portion of the auger to enable access to the two screws.



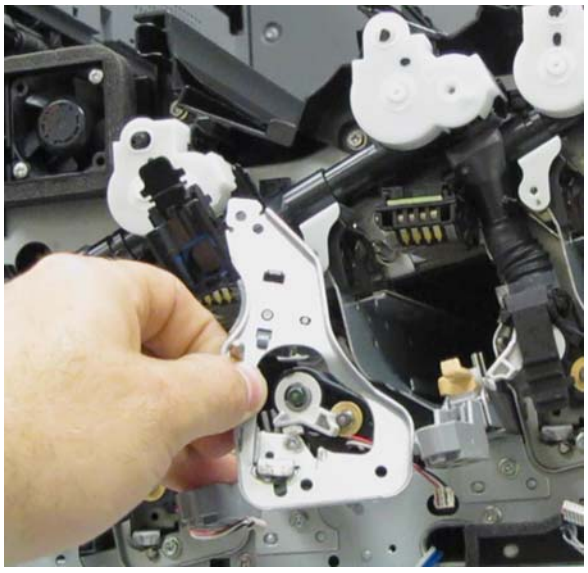
17. Remove the two screws (B) from the bracket.



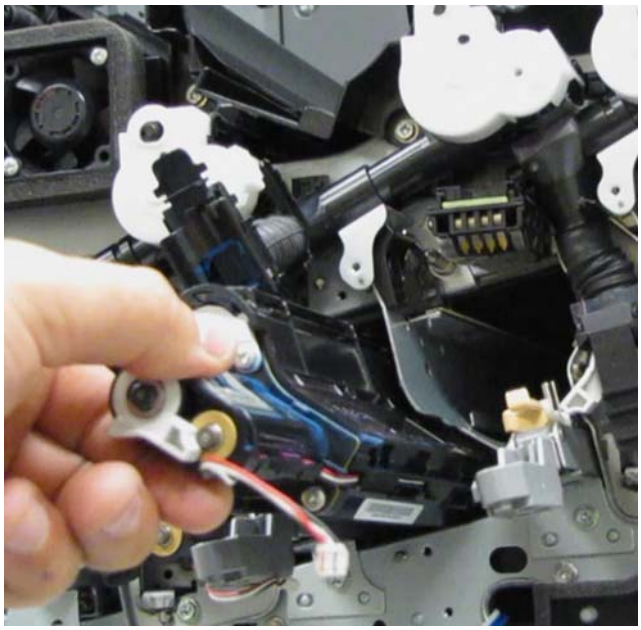
18. Move the lever counterclockwise.



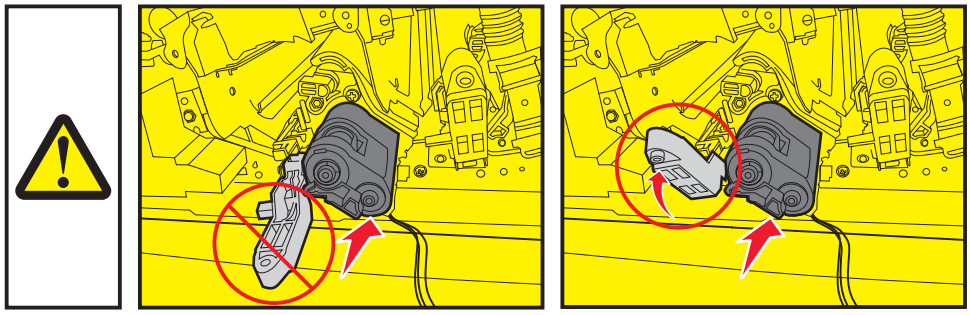
19. Remove the bracket mounted over the developer housing.



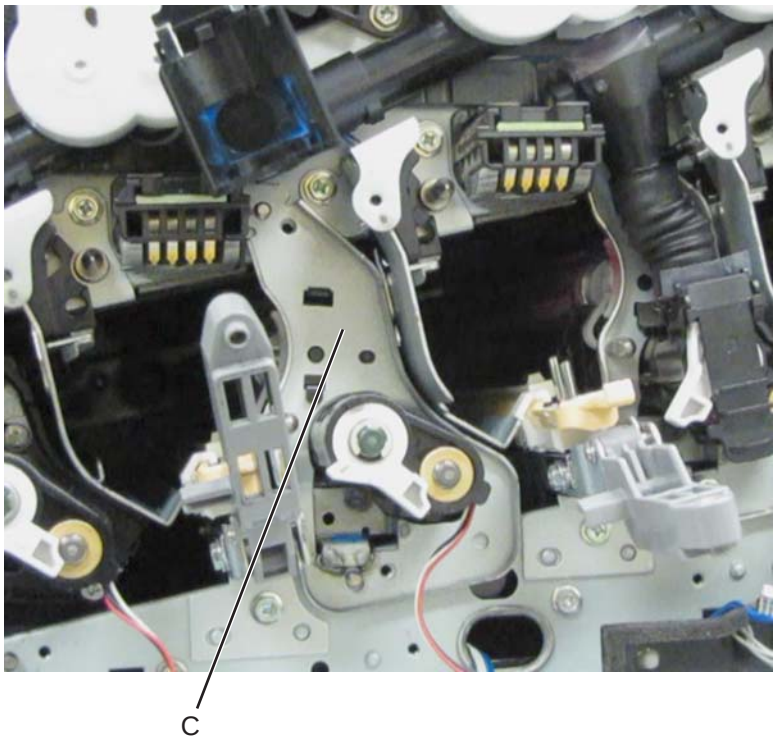
20. Remove the developer housing.



Reinstallation warning: When reinstalling the developer housing, ensure that the printhead retract levers are in their uppermost position as shown in the following image, or damage will occur to the machine.

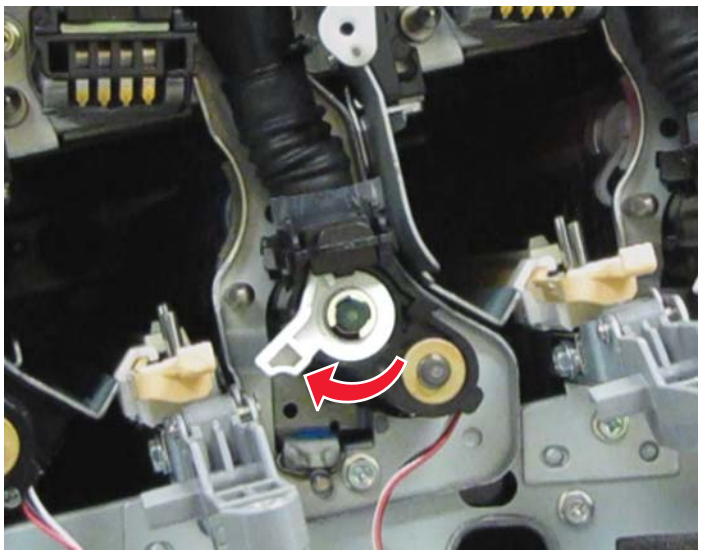


If the developer housing is installed correctly, the bracket (C) can be mounted over the developer housing without difficulty. If the developer housing does not seem to install easily, do not force the part into the machine. Ensure that the printhead retract lever is in the uppermost position, and try to slide it in again.

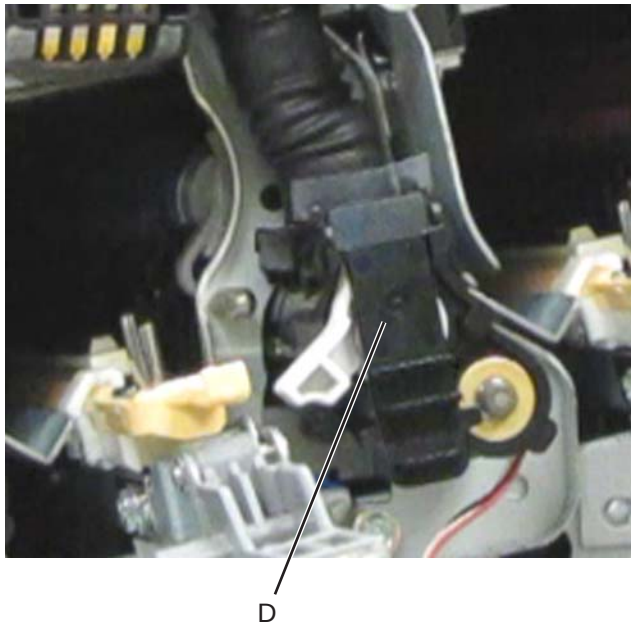


Reinstallation notes:Re-installation notes:

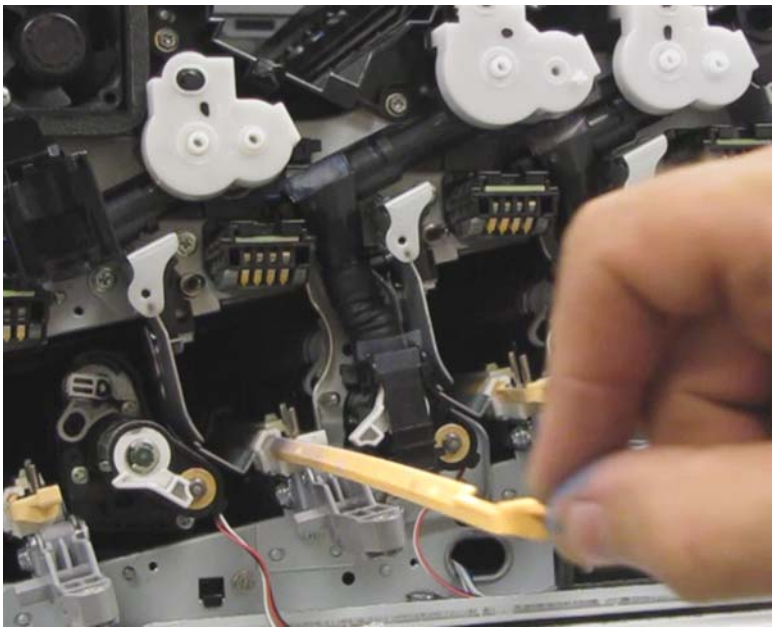
- To complete the re-installation, do the following:
  - **a.** Be sure to attach the lower part of the auger properly to reduce toner spillage.
  - **b.** Move the lever clockwise.



c. Pull the gate (D), and move it to its lowest position.



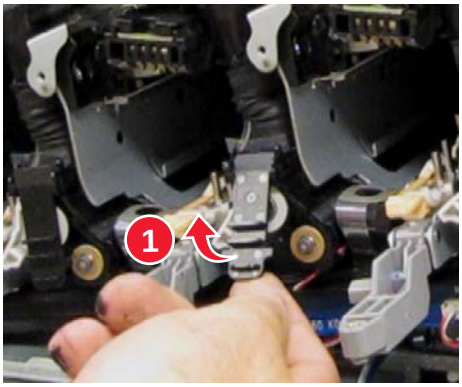
- Move the appropriate wiper in and out to clean the printhead.

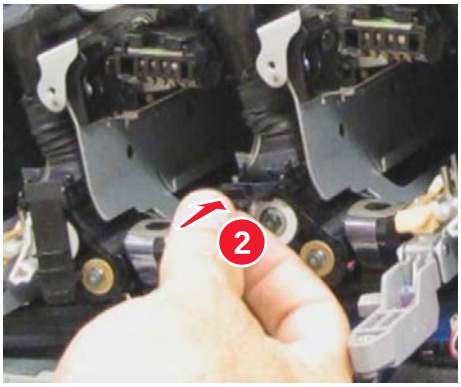


Developer housing (M) removal

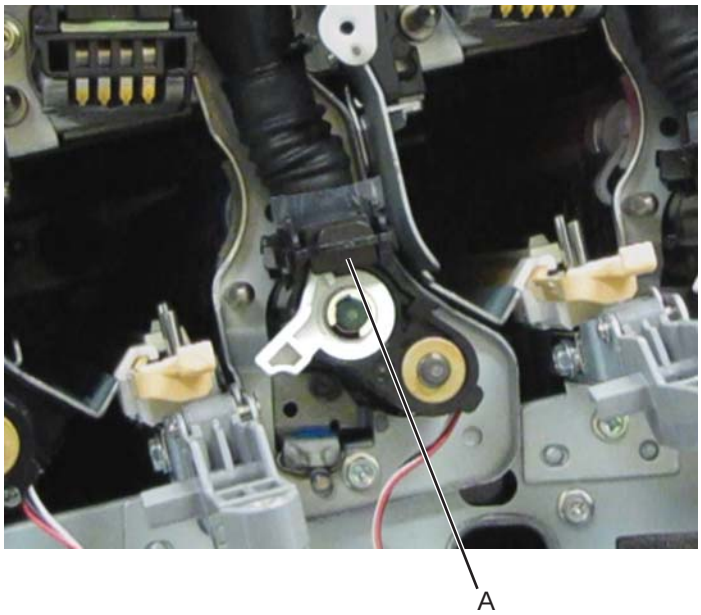
1. Remove the printer front door. See **"Printer front door removal" on page 4-13**.
2. Remove the transfer belt cleaner. See **"Transfer belt cleaner removal" on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel left cover. See **"Operator panel left cover removal" on page 4-10**.
7. Remove the operator panel right cover. See **"Operator panel right cover removal" on page 4-11**.

8. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
9. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
10. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
11. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
12. Remove the ATC sensor PCB bracket. See **“ATC sensor PCB bracket removal” on page 4-29**.
13. Remove the waste toner auger chute. See **“Waste toner auger chute removal” on page 4-200**.
14. Lift the appropriate plastic gate, and push it in to reduce toner spillage.

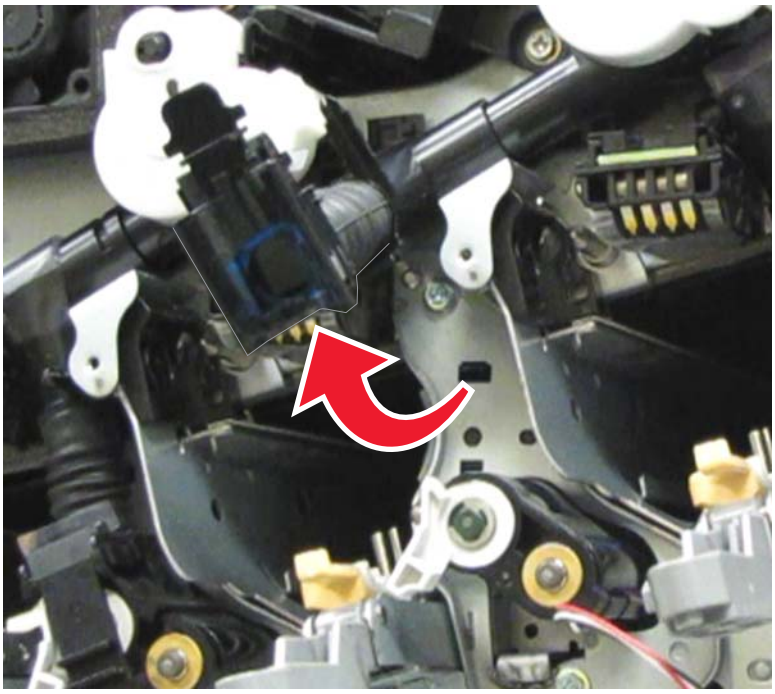




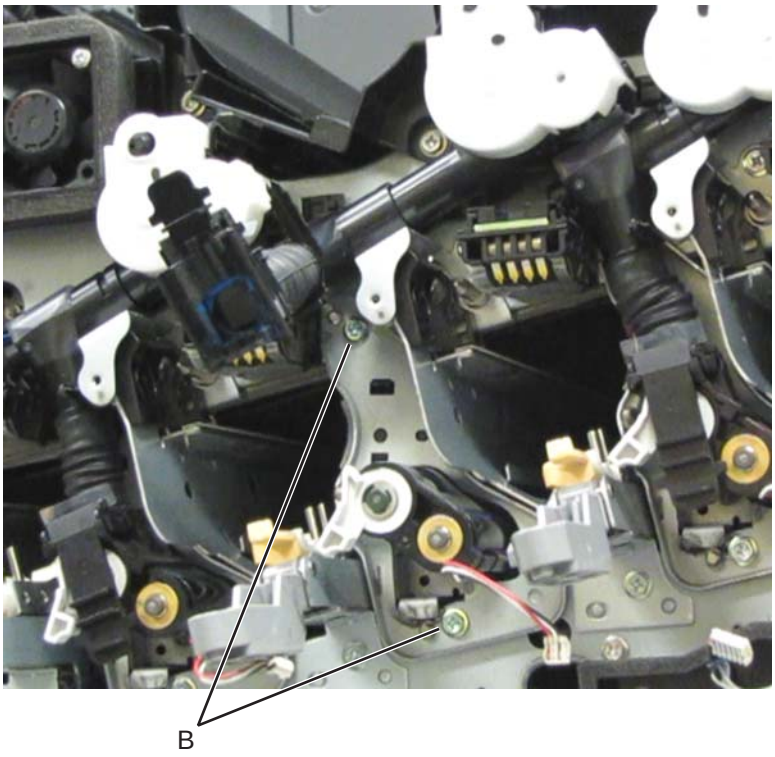
15. Detach the lower portion (A) of the auger from the appropriate developer housing.



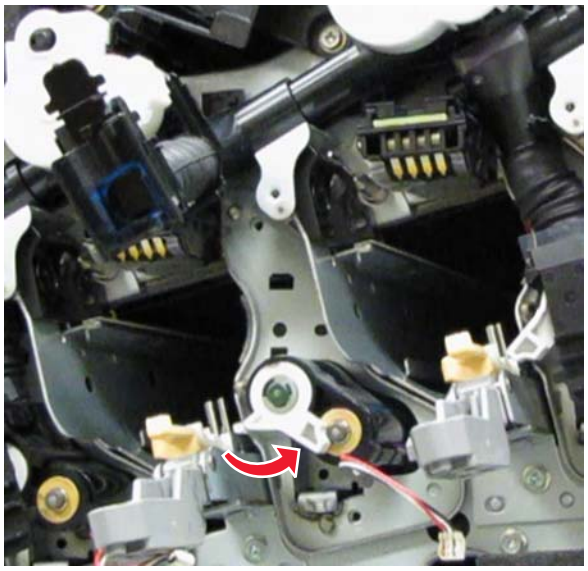
16. Swing away the lower portion of the auger to enable access to the two screws.



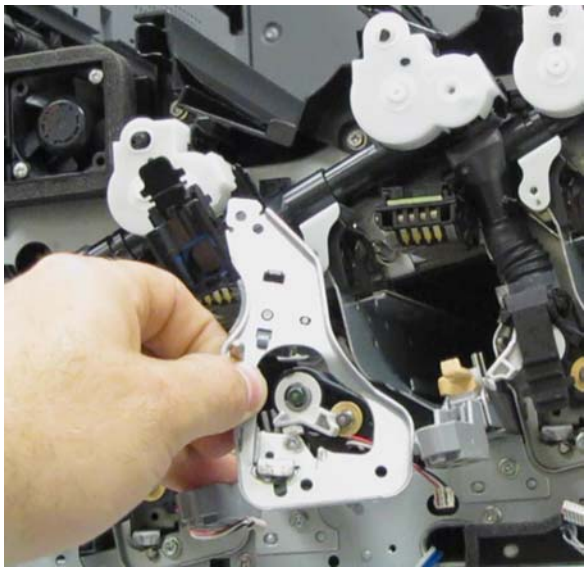
17. Remove the two screws (B) from the bracket.



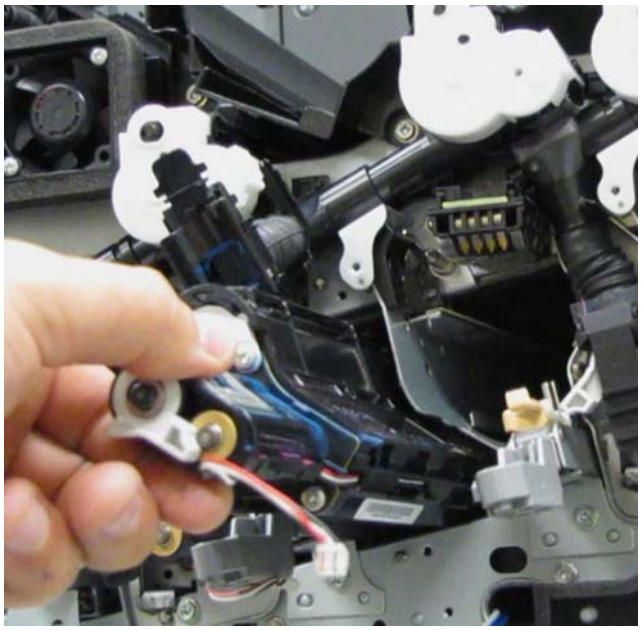
18. Move the lever counterclockwise.



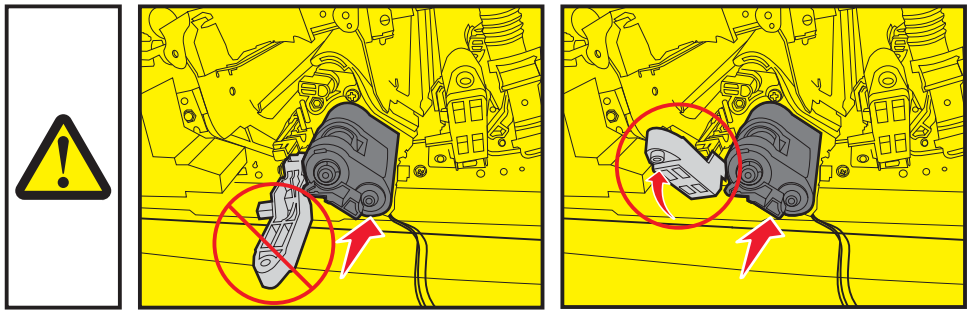
19. Remove the bracket mounted over the developer housing.



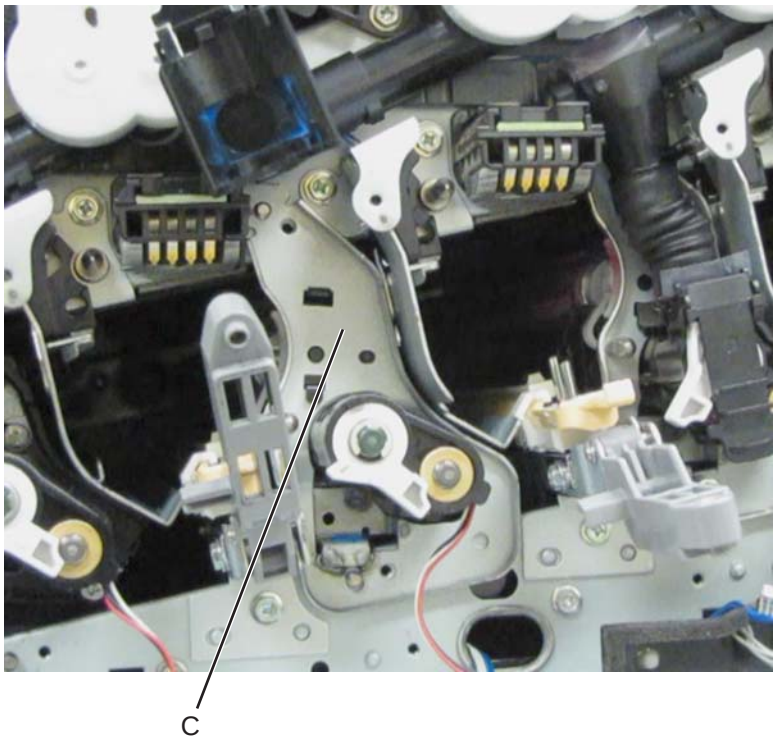
20. Remove the developer housing.



Reinstallation warning: When reinstalling the developer housing, ensure that the printhead retract levers are in their uppermost position as shown in the following image, or damage will occur to the machine.

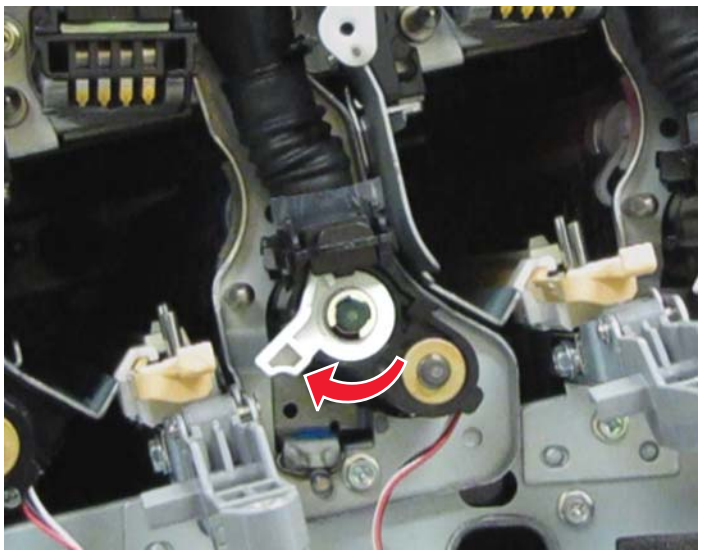


If the developer housing is installed correctly, the bracket (C) can be mounted over the developer housing without difficulty. If the developer housing does not seem to install easily, do not force the part into the machine. Ensure that the printhead retract lever is in the uppermost position, and try to slide it in again.

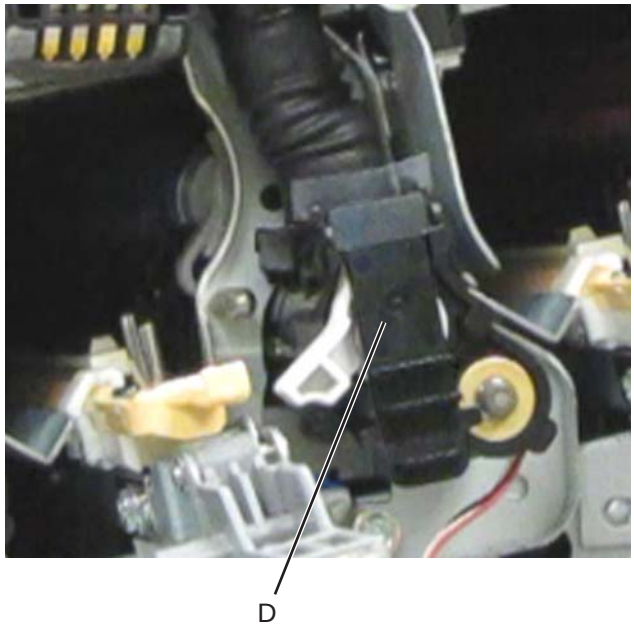


Reinstallation notes:Re-installation notes:

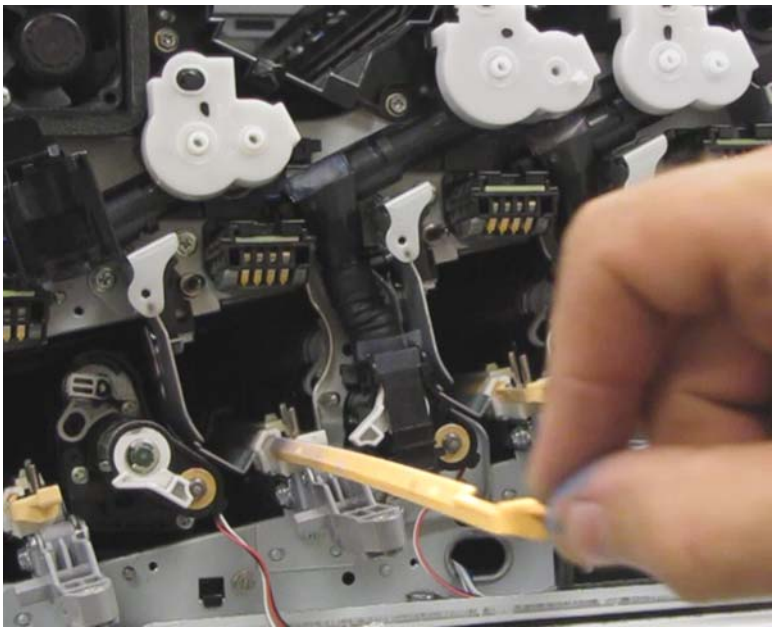
- To complete the re-installation, do the following:
  - **a.** Be sure to attach the lower part of the auger properly to reduce toner spillage.
  - **b.** Move the lever clockwise.



c. Pull the plastic gate (D), and move it to its lowest position.



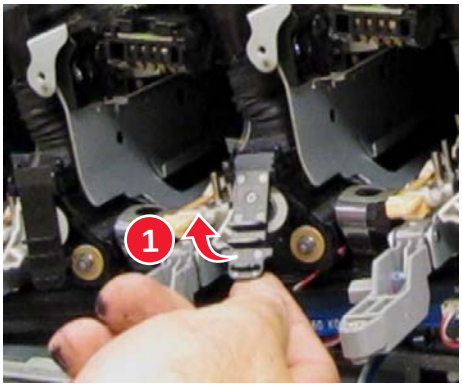
- Move the appropriate wiper in and out to clean the printhead.

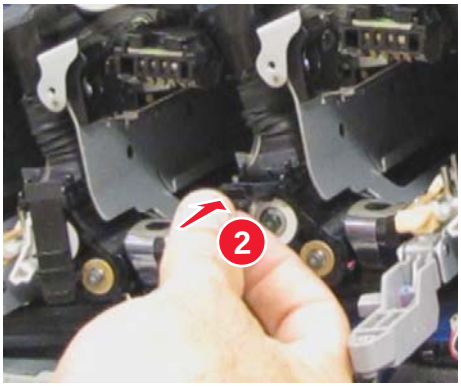


Developer housing (Y) removal

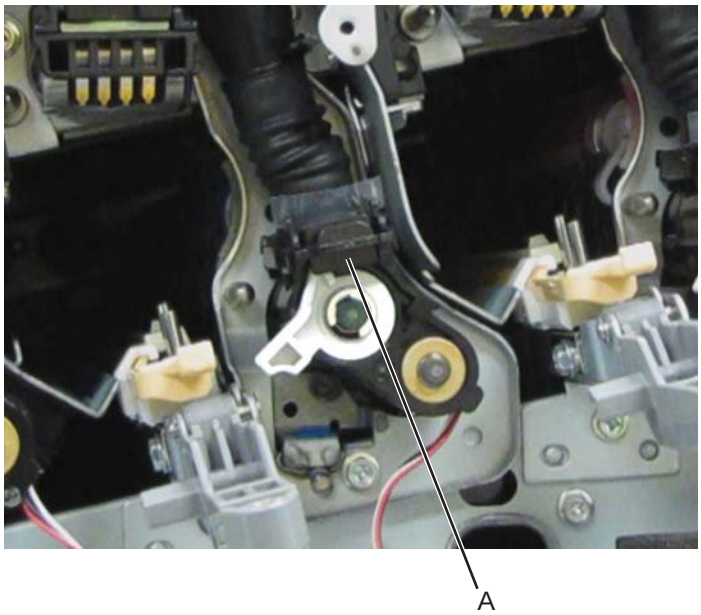
1. Remove the printer front door. See **"Printer front door removal" on page 4-13**.
2. Remove the transfer belt cleaner. See **"Transfer belt cleaner removal" on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel left cover. See **"Operator panel left cover removal" on page 4-10**.
7. Remove the operator panel right cover. See **"Operator panel right cover removal" on page 4-11**.

8. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
9. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
10. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
11. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
12. Remove the ATC sensor PCB bracket. See **“ATC sensor PCB bracket removal” on page 4-29**.
13. Remove the waste toner auger chute. See **“Waste toner auger chute removal” on page 4-200**.
14. Lift the appropriate plastic gate, and push it in to reduce toner spillage.



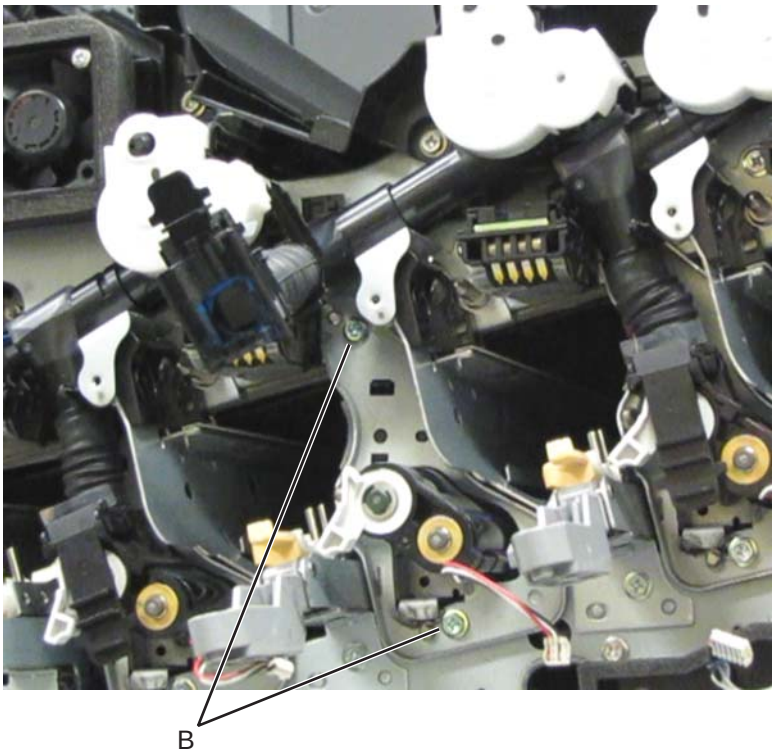


15. Detach the lower portion (A) of the auger from the appropriate developer housing.

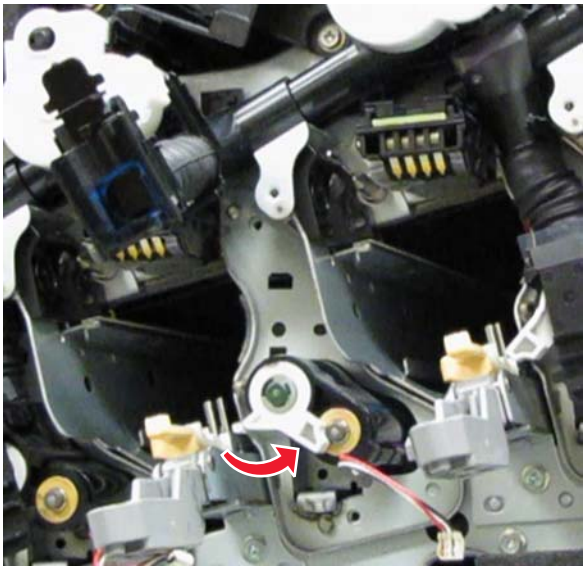


16. Swing the lower portion of the auger to the right to enable access to the two screws.

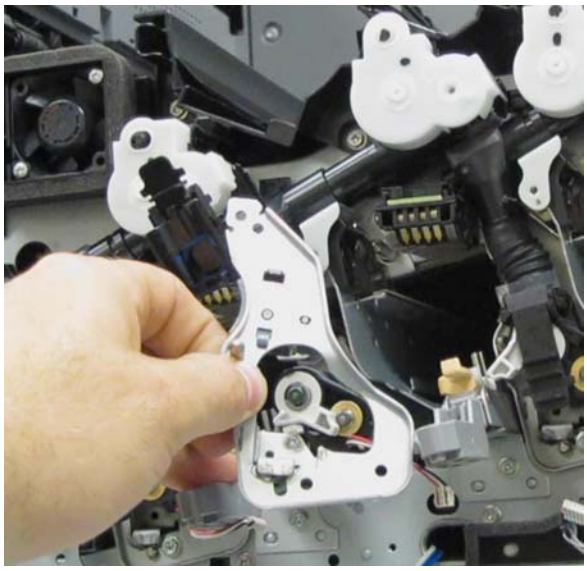
17. Remove the two screws (B) from the bracket.



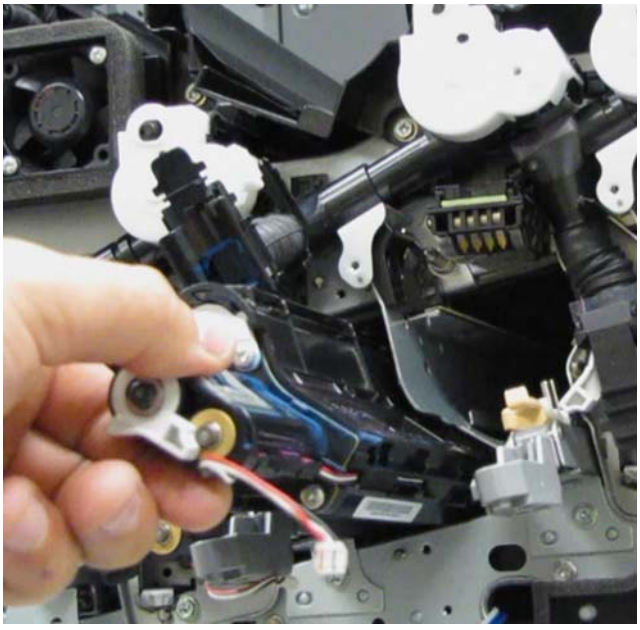
18. Move the lever counterclockwise.



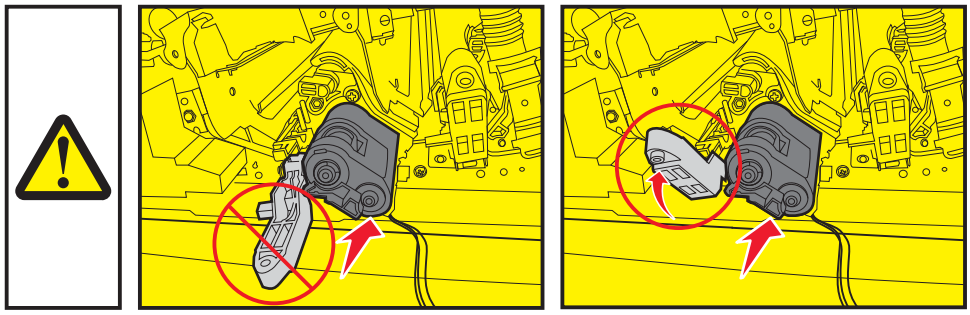
19. Remove the bracket mounted over the developer housing.



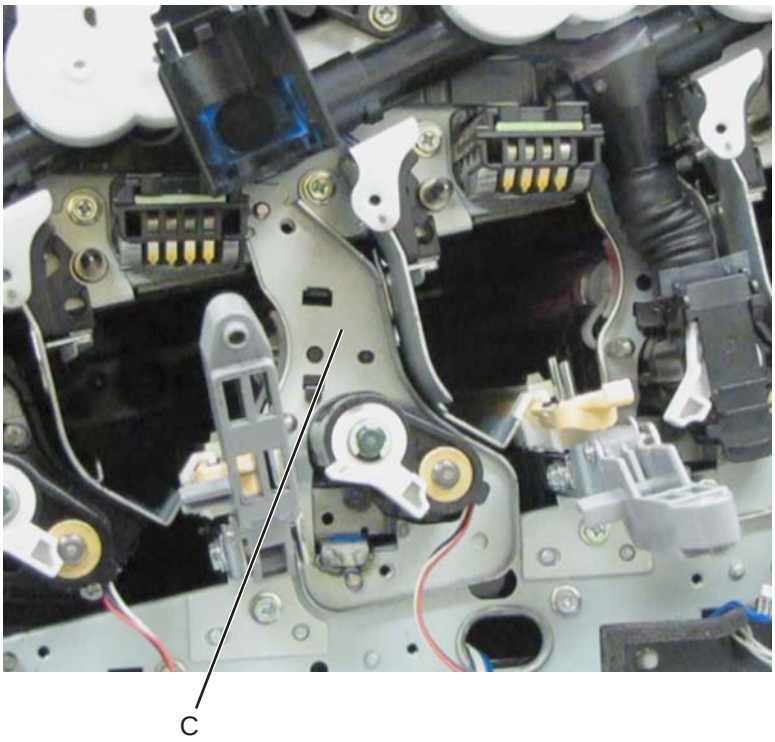
20. Remove the developer housing.



Reinstallation warning: When reinstalling the developer housing, ensure that the printhead retract levers are in their uppermost position as shown in the following image, or damage will occur to the machine.

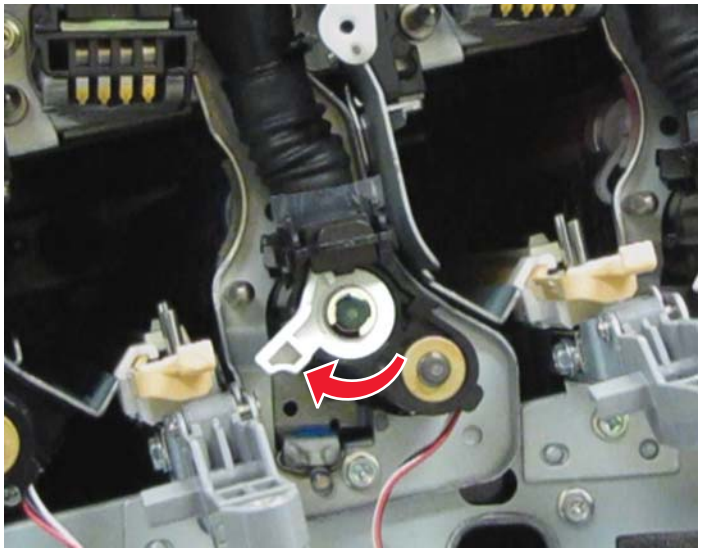


If the developer housing is installed correctly, the bracket (C) can be mounted over the developer housing without difficulty. If the developer housing does not seem to install easily, do not force the part into the machine. Ensure that the printhead retract lever is in the uppermost position, and try to slide it in again.

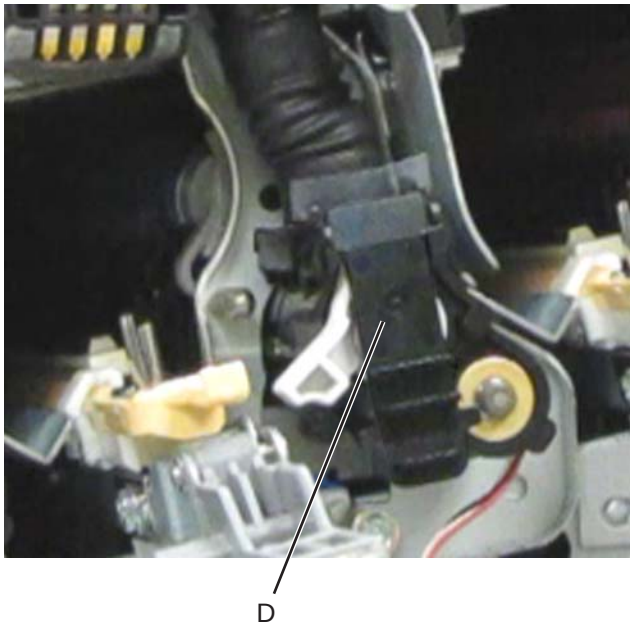


Reinstallation notes:Re-installation notes:

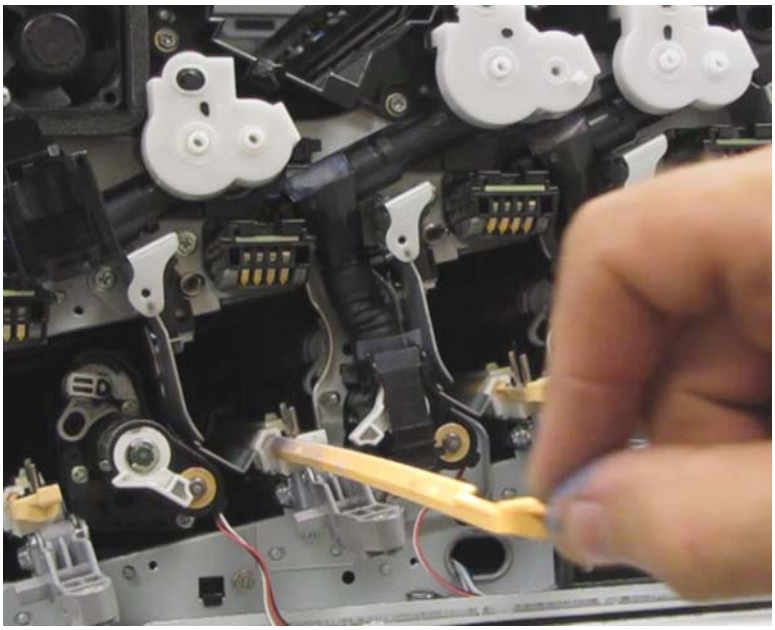
- To complete the re-installation, do the following:
  - **a.** Be sure to attach the lower part of the auger properly to reduce toner spillage.
  - **b.** Move the lever clockwise.



  - **c.** Pull the gate (D), and move it to its lowest position.



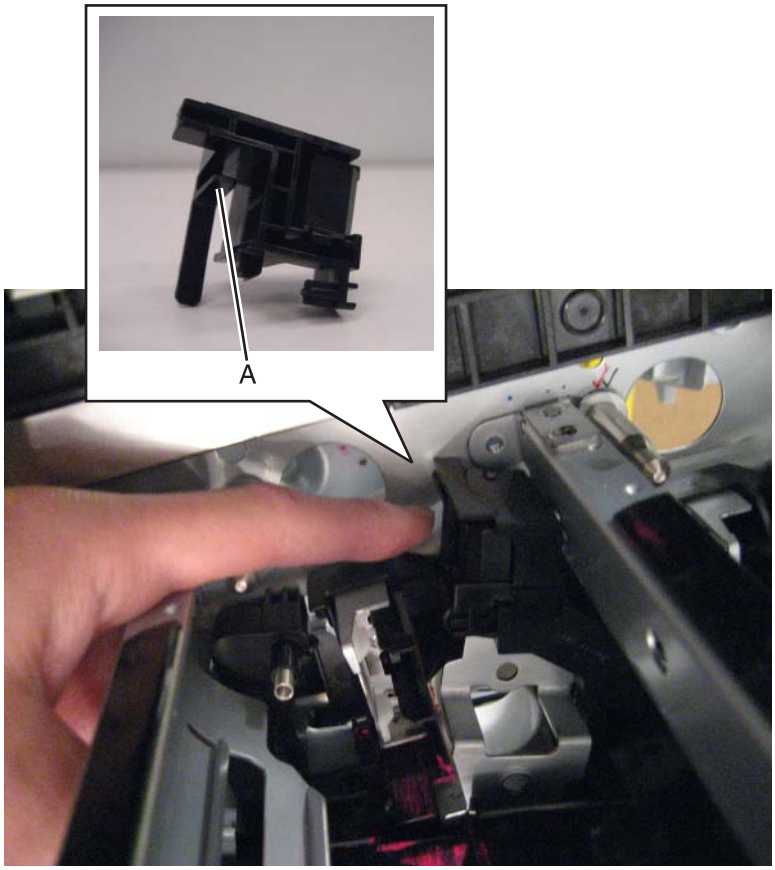
- Move the appropriate wiper in and out to clean the printhead.



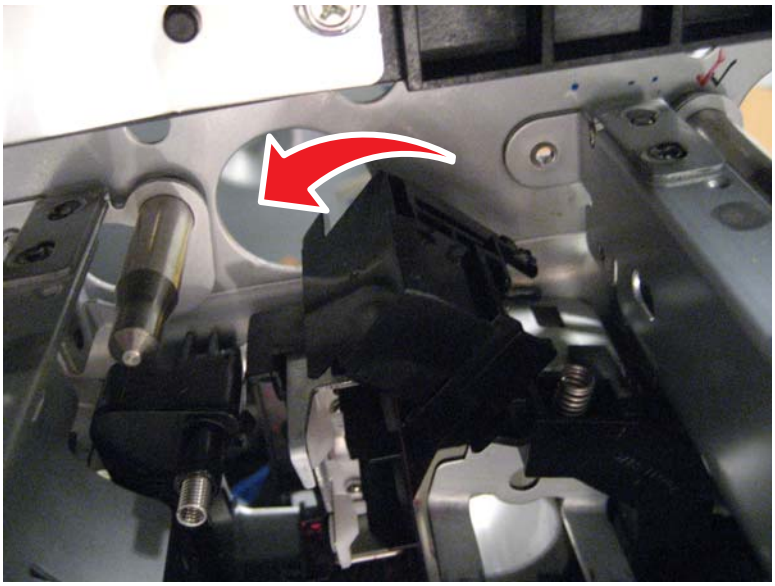
Developer housing rear plunger removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the PC/developer drive motor. See **“PC/developer drive motor removal” on page 4-143**.
1. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
2. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
3. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
4. Remove the top cover. See **“Printer top cover removal” on page 4-15**.
5. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
6. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
7. Remove the waste toner box.
8. Remove the four photoconductor units.
9. Remove the four toner supplies.
10. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
11. Remove the CMYK toner dispense auger assembly. See **“CMYK toner dispense auger assembly removal” on page 4-45**.

12. Press the plastic tab (A) on the developer housing rear plunger to release it from the machine.



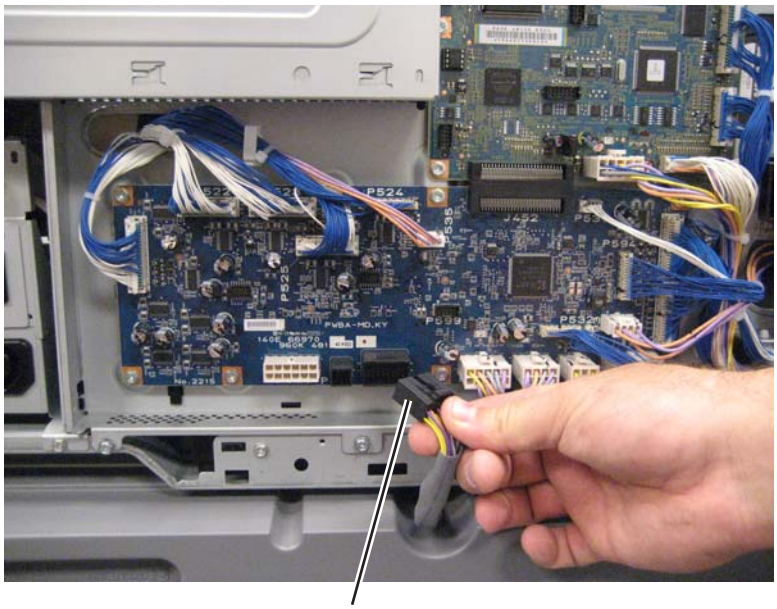
13. While pressing the plastic tab, rotate the developer housing rear plunger counterclockwise, as shown in the following image.



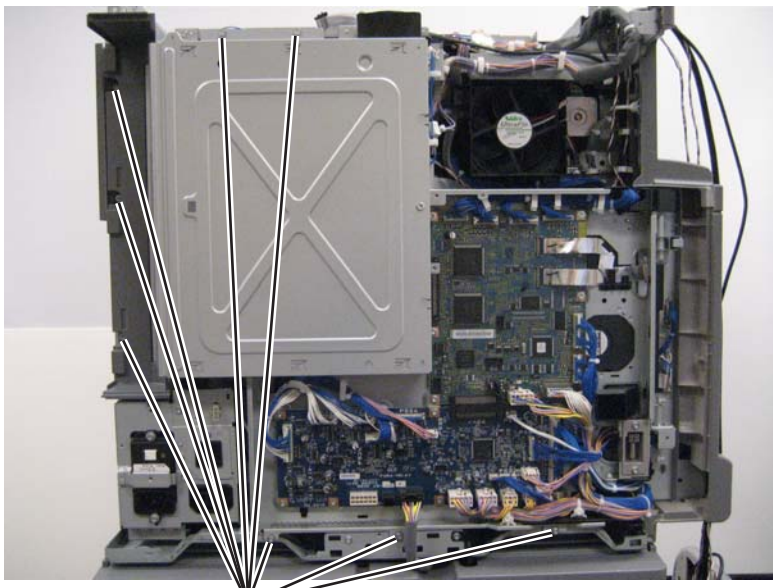
14. Remove the developer housing rear plunger.

Developer HVPS PCBA removal

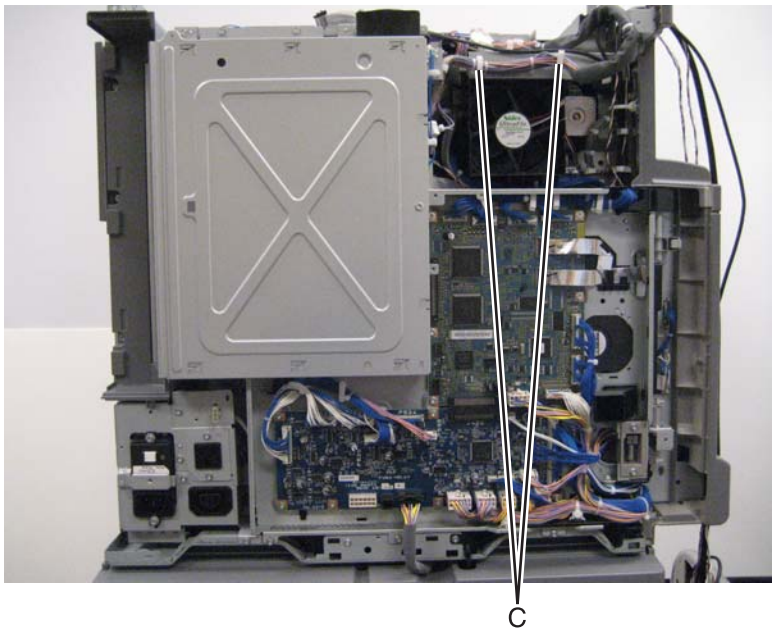
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.
3. Disconnect the input option cable (A).



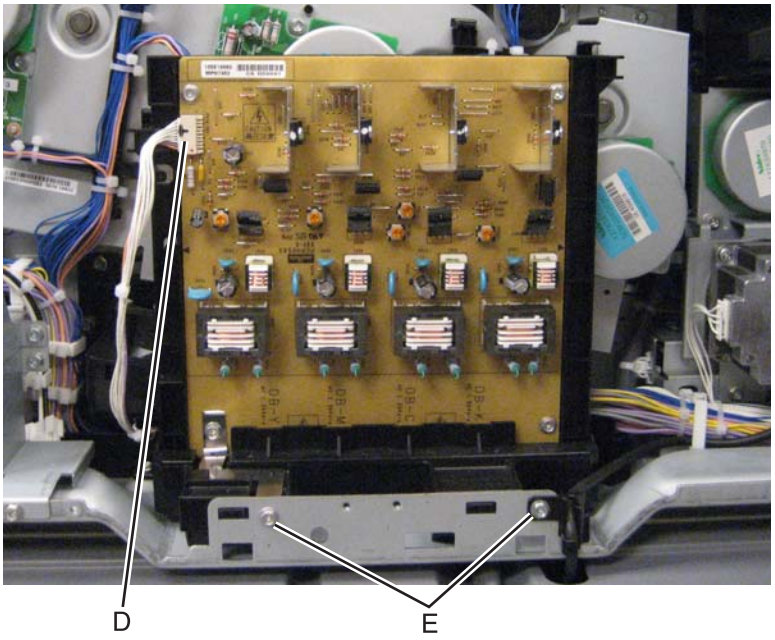
4. Remove the eight screws (B) securing the PCBA door to the machine.



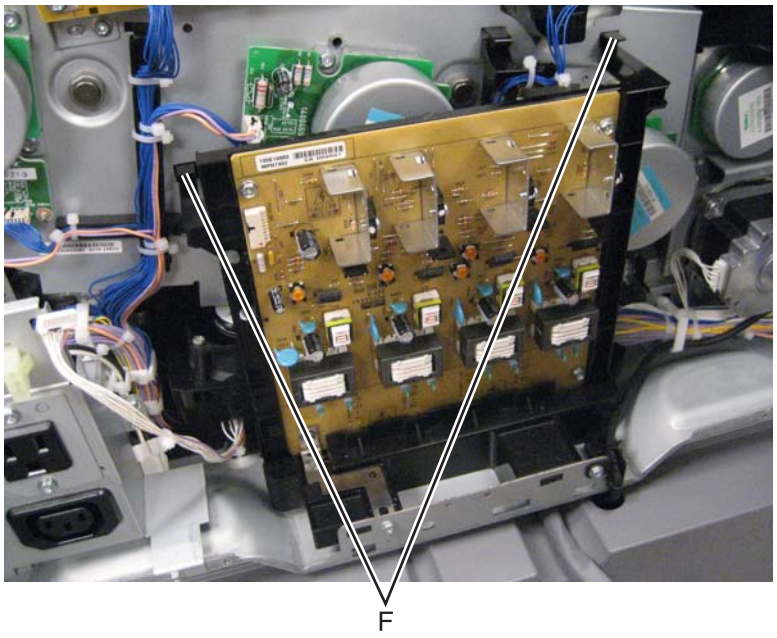
5. Release the two clamps (C) to release the harness.



6. Swing the PCBA door open.
7. Disconnect the cable (D) from the developer HVPS PCBA.
8. Remove the two screws (E) securing the developer HVPS PCBA to the machine.



9. Release the two hooks (F) securing the developer HVPS PCBA to the machine.

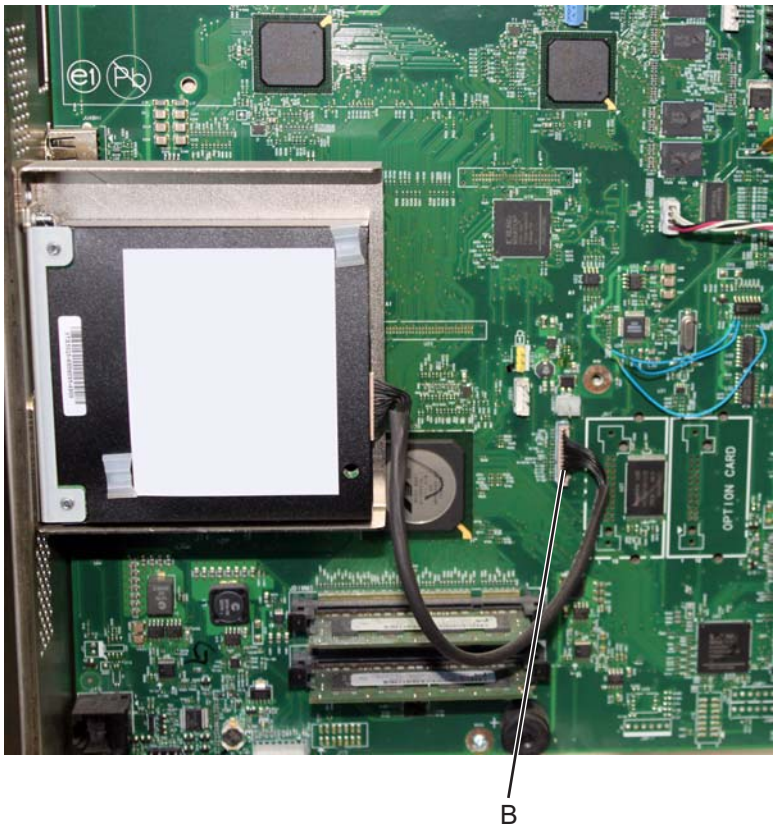


10. Remove the developer HVPS PCBA.

Fax card removal

1. Remove the two screws (A) securing the RIP PCBA to the machine.

2. Pull the RIP PCBA to access the fax card, then disconnect the fax card cable (B).



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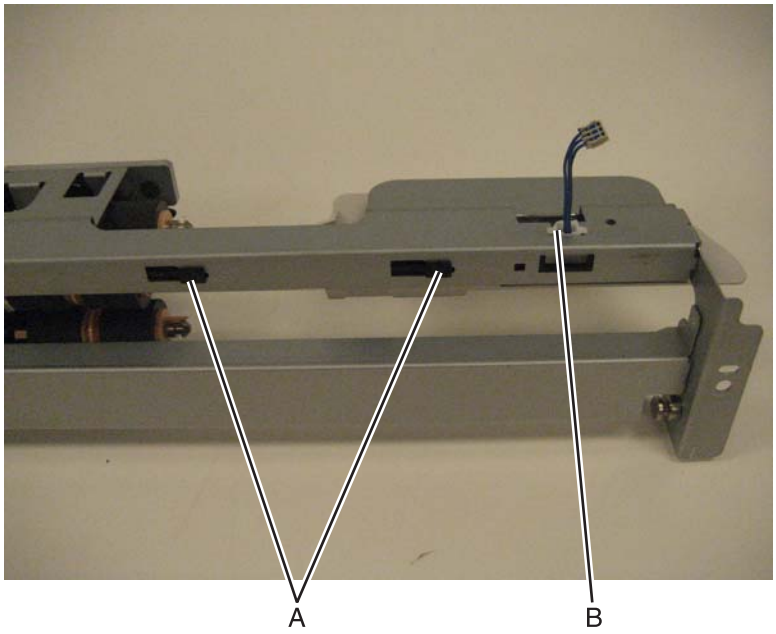
3. Remove the two screws, then remove the fax card.

Feeder slide guide removal

1. Remove the appropriate feeder unit. See **“Printer tray 1 feeder removal” on page 4-150**, **“Tray module media feeder removal” on page 4-288**, **“TTM tray 4 media feeder removal” on page 4-301**, or **“TTM tray 3 feeder removal” on page 4-297**.
2. Slide the plastic rail to detach the two tabs (A) securing the feeder slide guide to the assembly.

3. Detach the harness from the clamp (B).

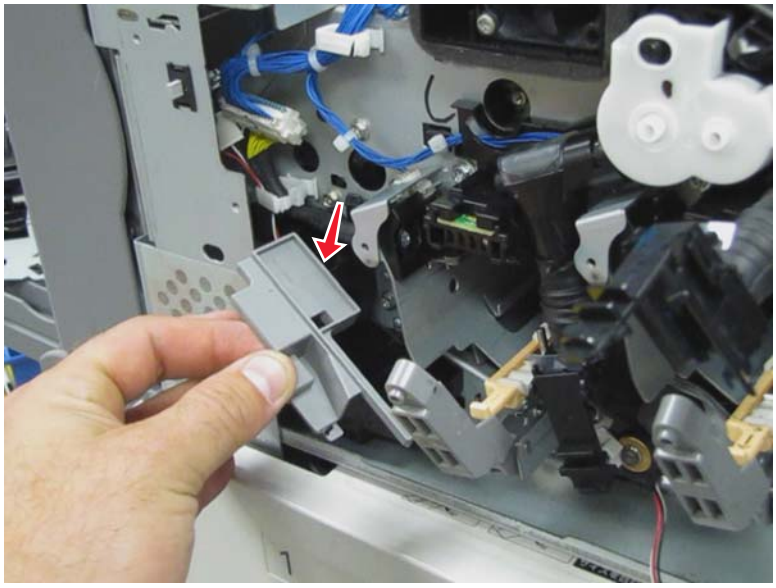


4. Remove the feeder slide guide.

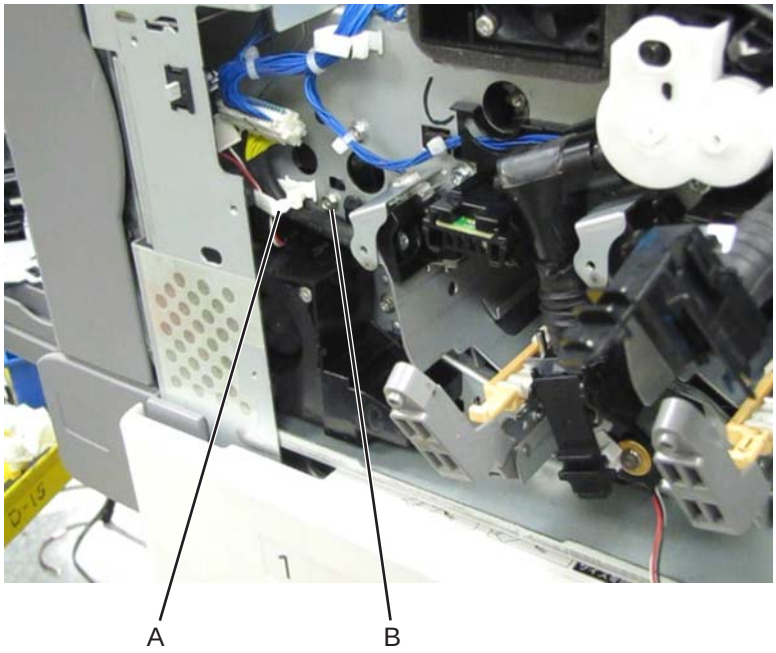
Front left cooling fan removal

1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
10. Remove the waste toner auger chute. See **“Waste toner auger chute removal” on page 4-200**.

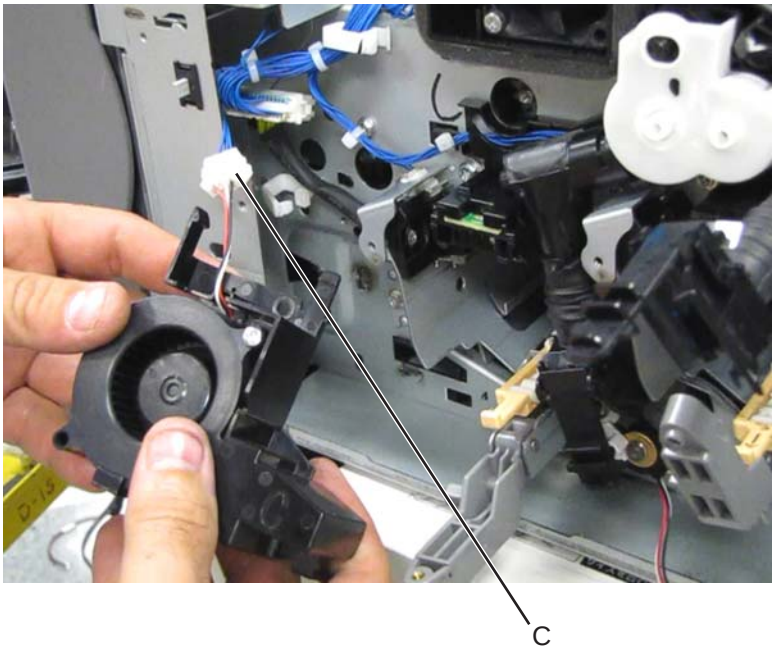
11. Release the two latches securing the plastic bracket to the machine, and remove the plastic bracket.



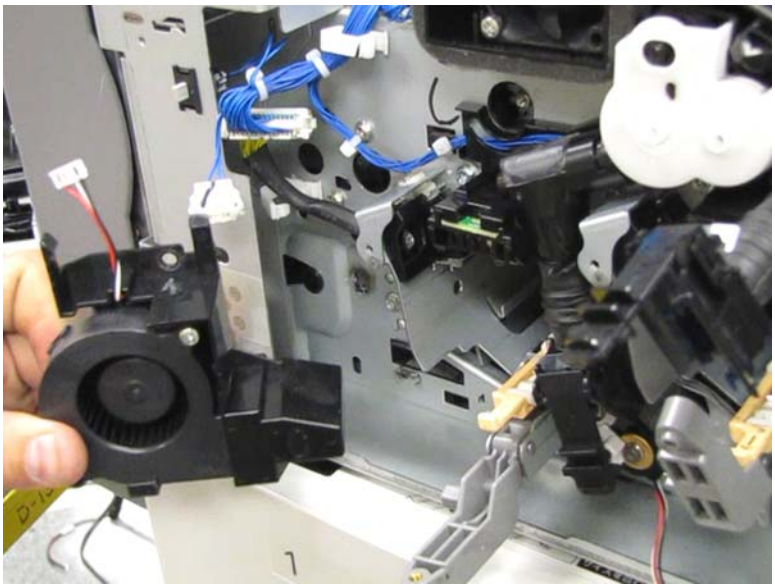
12. Release the clamp (A) securing the cable connected to the fan.
13. Remove the screw (B) from the front left cooling fan.



14. Detach the front left cooling fan, and disconnect the cable (C).



15. Remove the front left cooling fan.



Front right cooling fan removal

1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.

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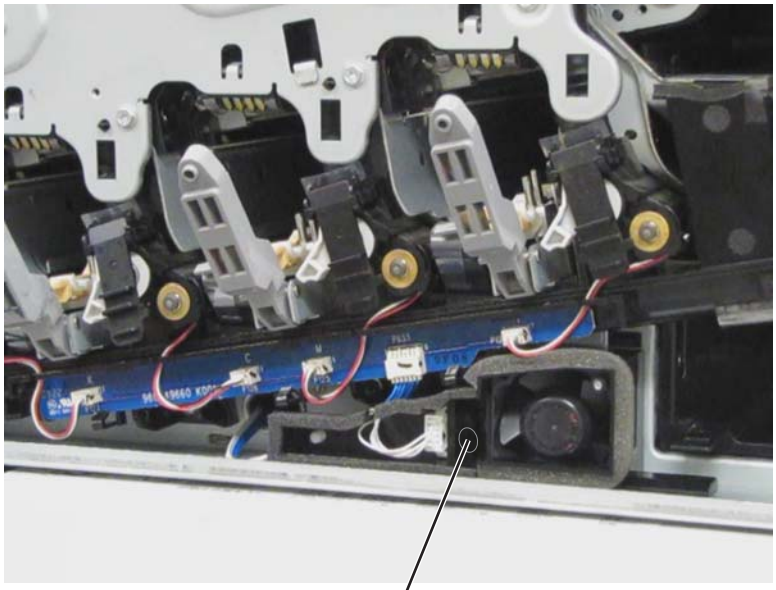
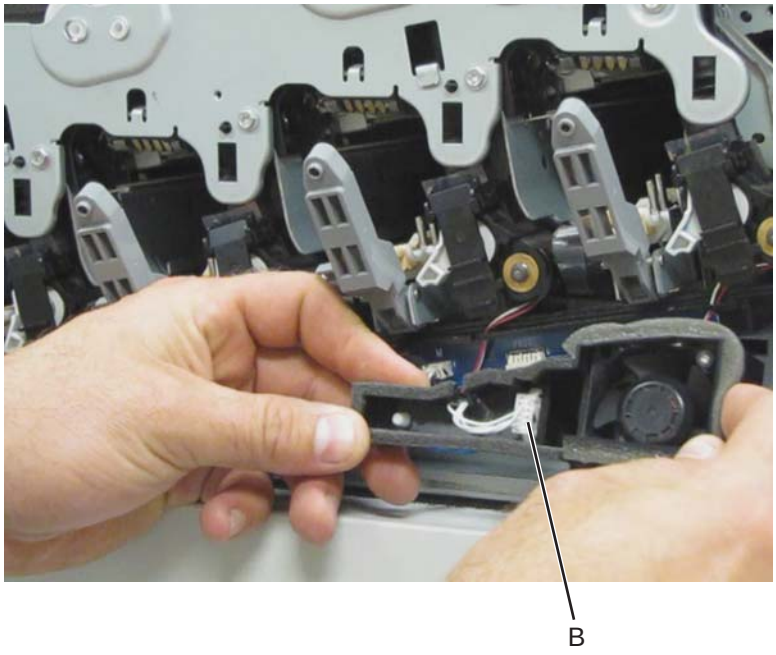
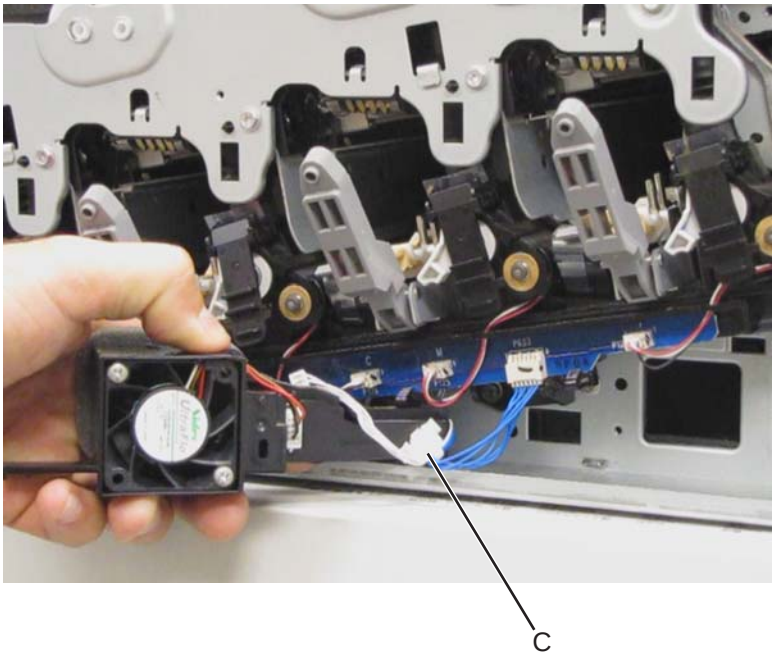
9. Remove the ATC sensor PCB bracket. See **"ATC sensor PCB bracket removal" on page 4-29**.
10. Remove the screw (A) from the cooling fan.



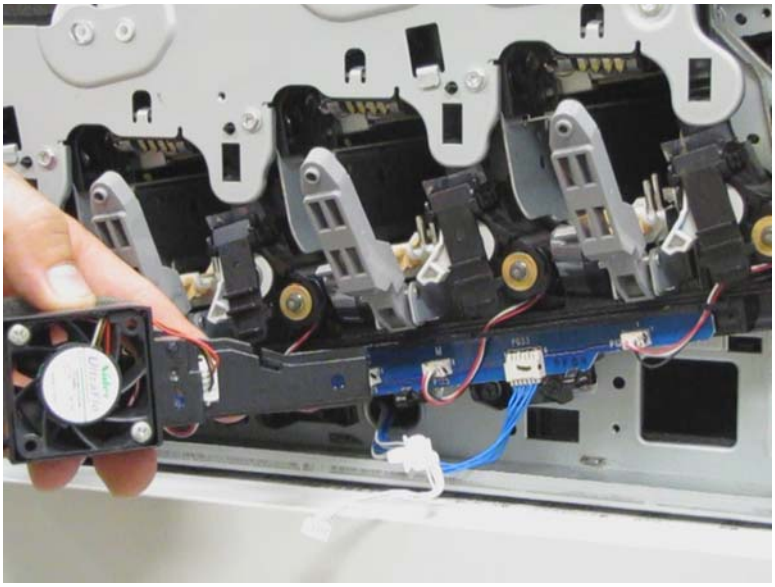
11. Pull the fan away from the machine, and disconnect the cable (B).



12. Ease the cable off the fan, and release the clamp (C) connecting the fan to the machine.



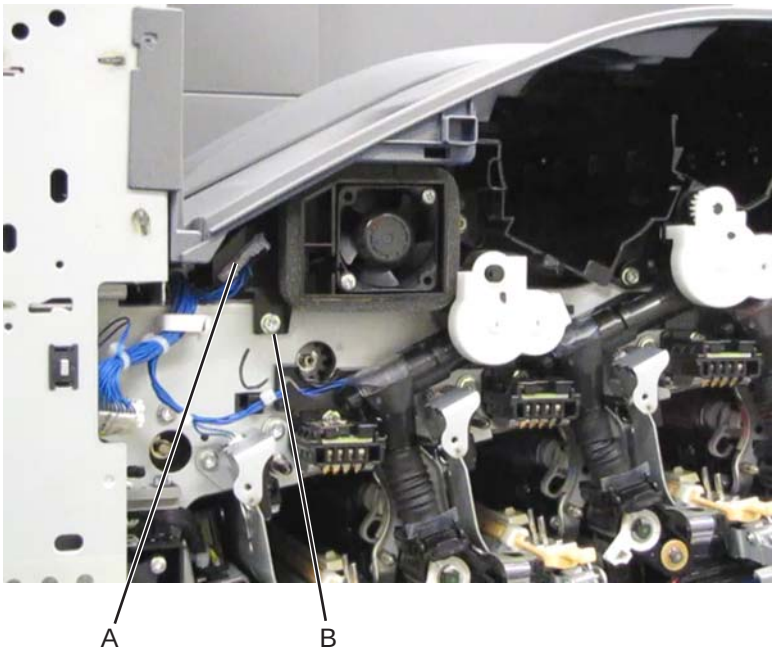
13. Remove the front right cooling fan.



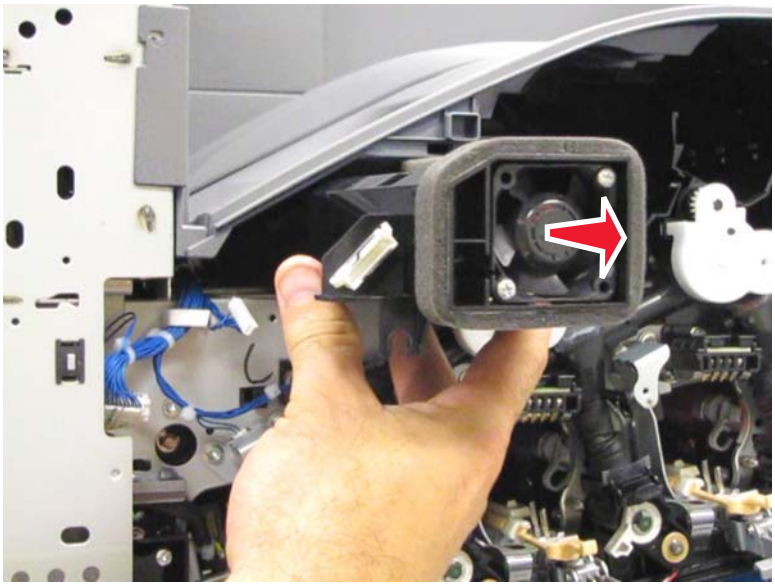
Front upper cooling fan removal

1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.

9. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
10. Disconnect the cable (A).
11. Remove the screw (B) from the front upper cooling fan.



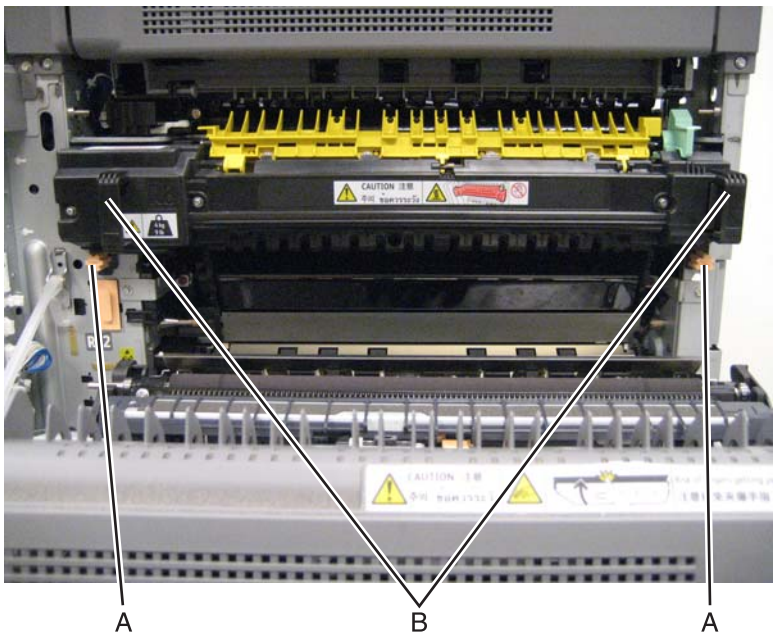
12. Slide the front upper cooling fan out of the machine and remove.



Fuser assembly removal

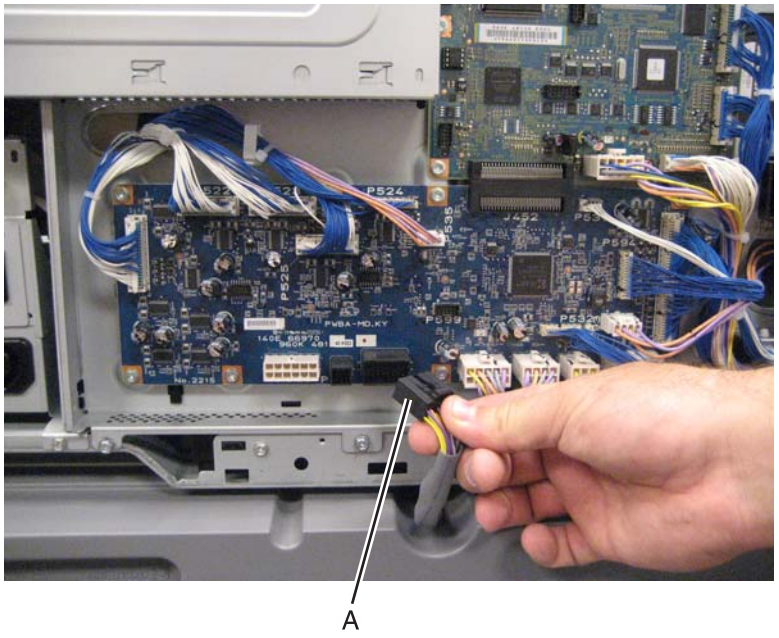
This removal procedure applies to the100V, 110V, and 220V fuser assemblies.

1. Open the printer left duplex door assembly.
2. Remove the two thumbscrews (A).
3. Use the handles (B) to pull the fuser assembly out of the machine.

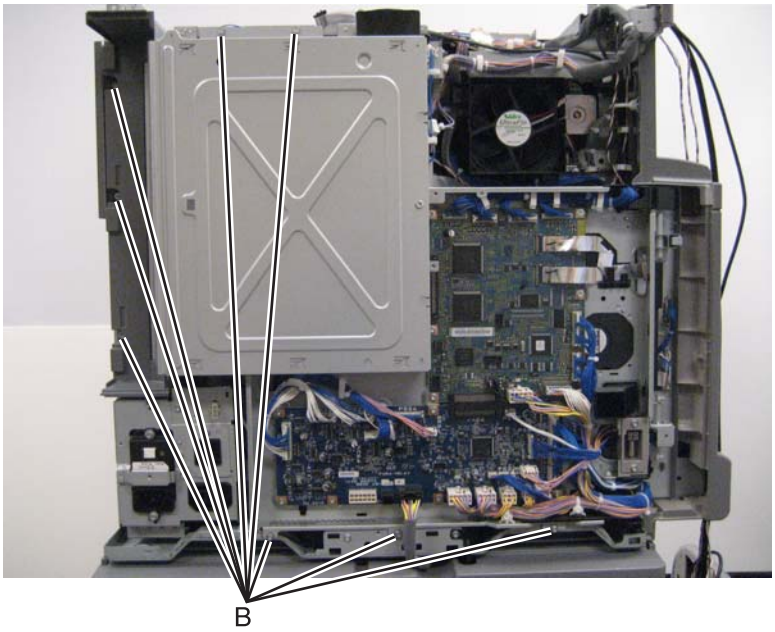


Fuser cooling fan removal

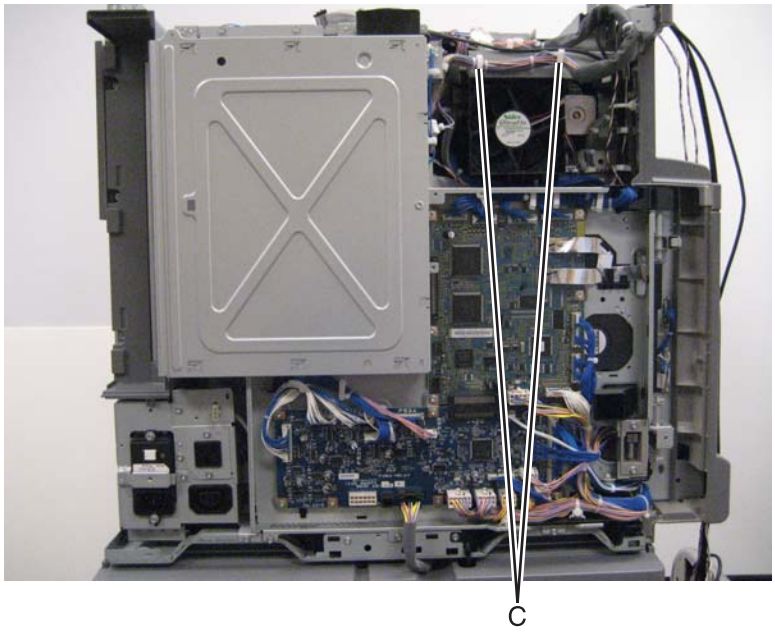
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.

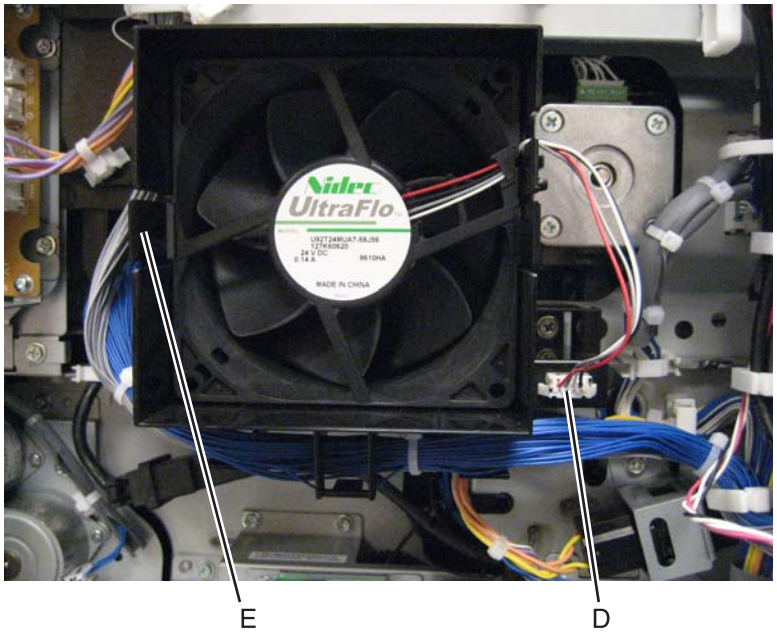


5. Release the two clamps (C) to release the harness.



6. Swing the PCBA door open.
7. Disconnect the cable (D) from the fuser cooling fan.

8. Release the two latches (E).



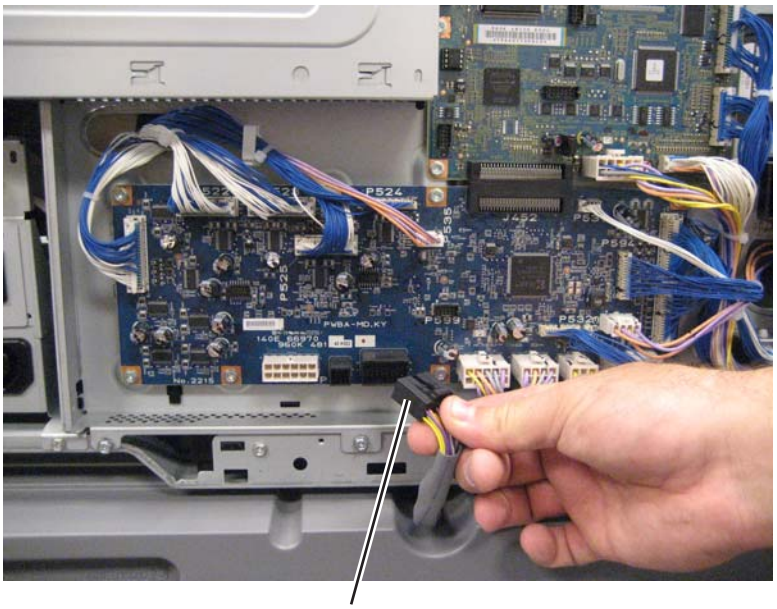
9. Remove the fuser cooling fan.

Replacement warning: When replacing the fuser cooling fan, make sure the fan is properly installed so that air flow is directed away from the machine.

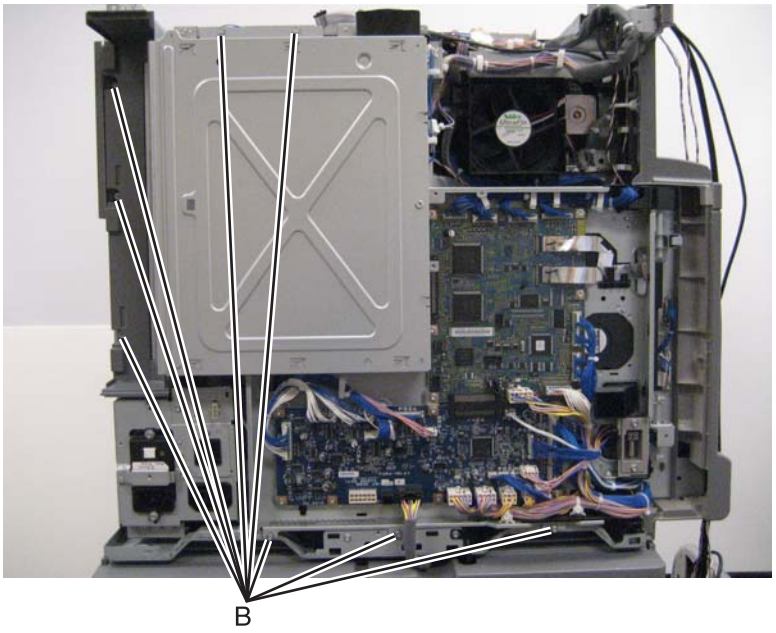
Fuser driver PCBA cooling fan removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-19**.
2. Remove the rear lower cover. See **"Rear lower cover removal" on page 4-17**.

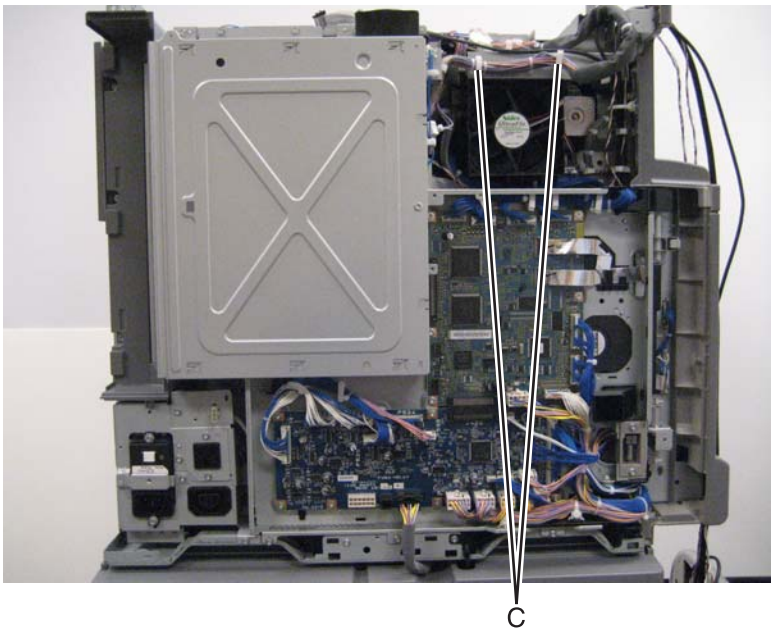
3. Disconnect the input option cable (A).



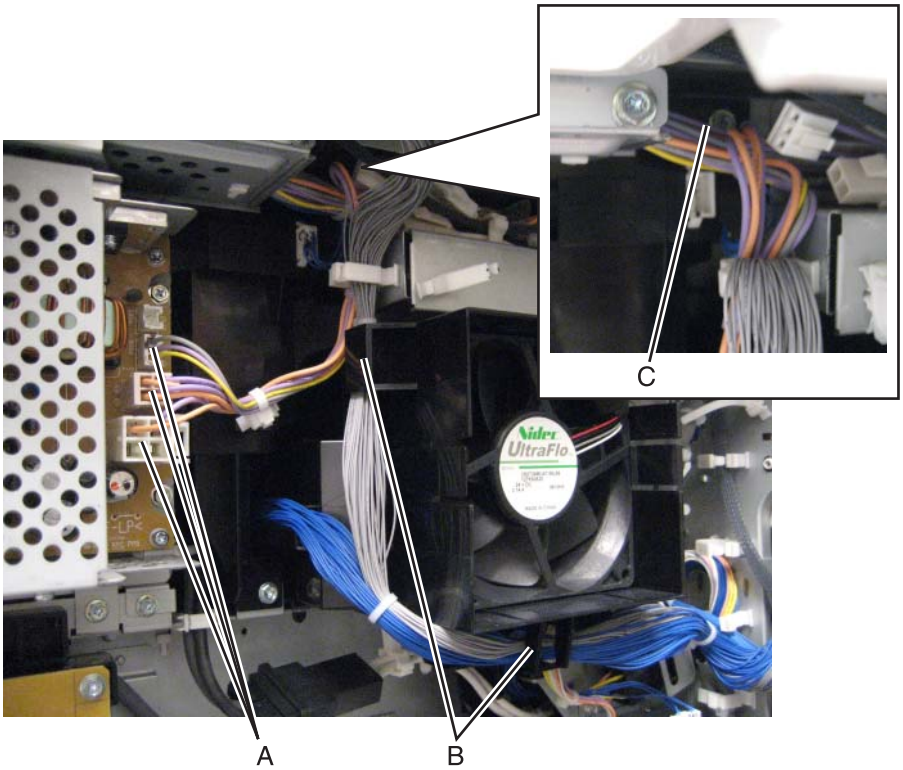
4. Remove the eight screws (B) securing the PCBA door to the machine.



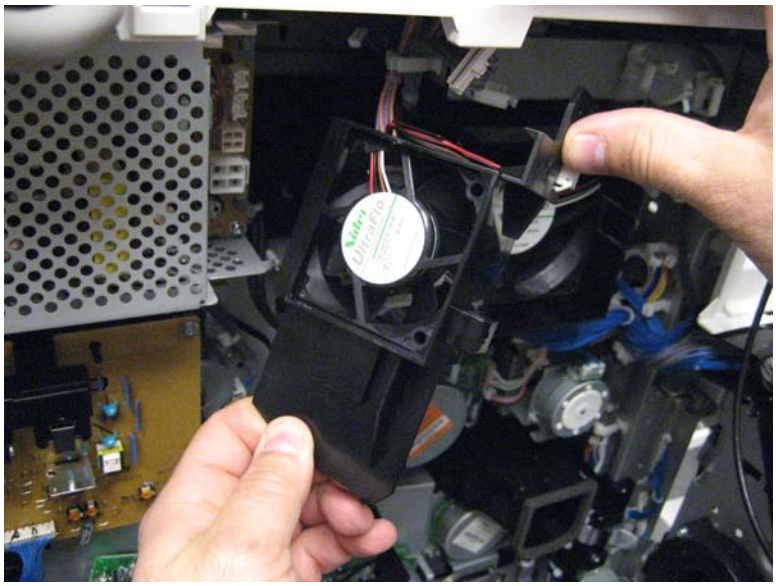
5. Release the two clamps (C) to release the harness.



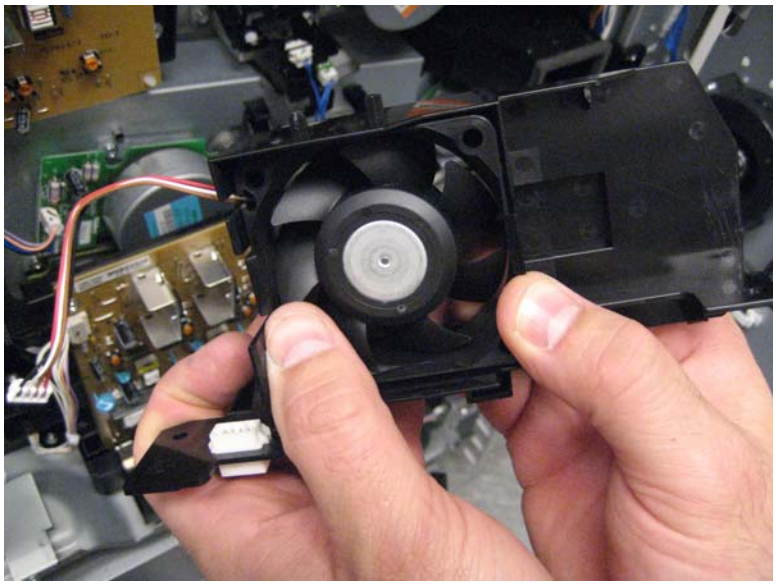
6. Swing the PCBA door open.
7. Disconnect the four connections (A).
8. Release the harness from the clamps (B).
9. Remove the two screws (C) securing the duct to the machine.



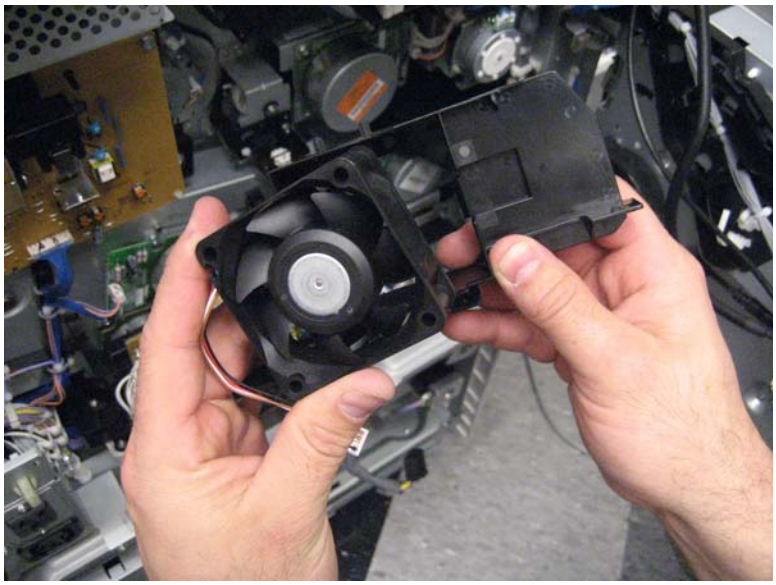
10. Remove the duct from the machine.



11. Release the two hooks.

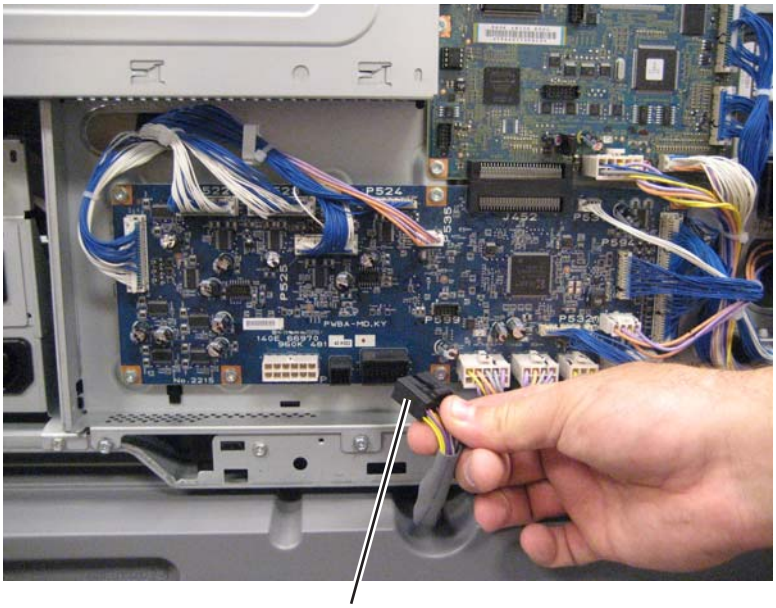


12. Remove the fuser driver PCBA cooling fan from the duct.

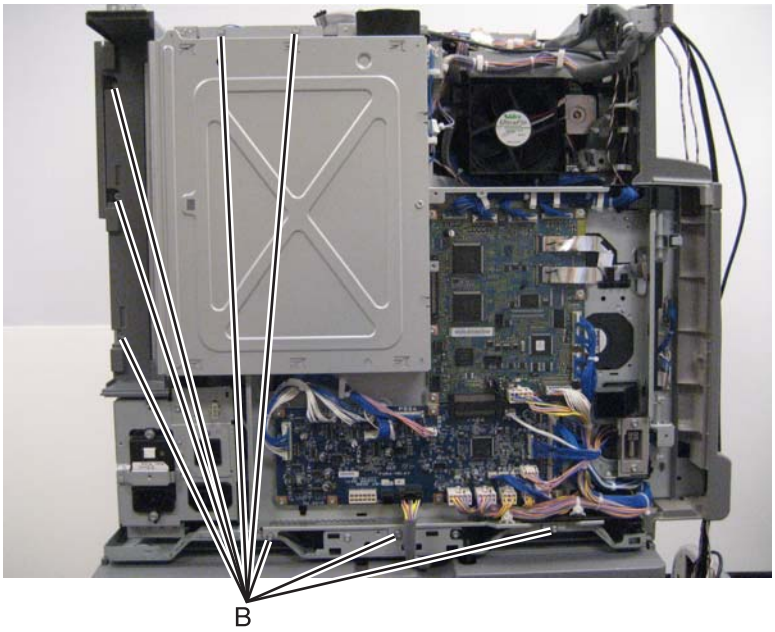


Fuser driver PCBA removal

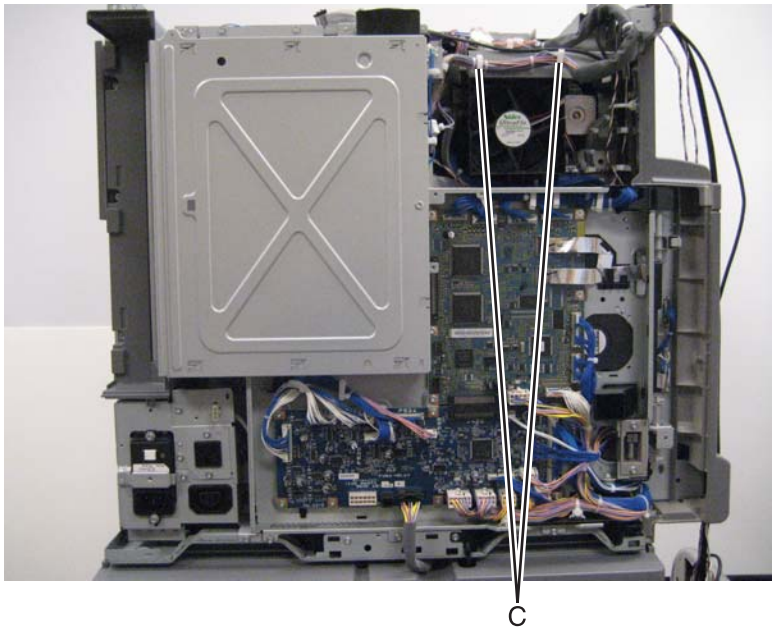
1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-19**.
2. Remove the rear lower cover. See **"Rear lower cover removal" on page 4-17**.
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.

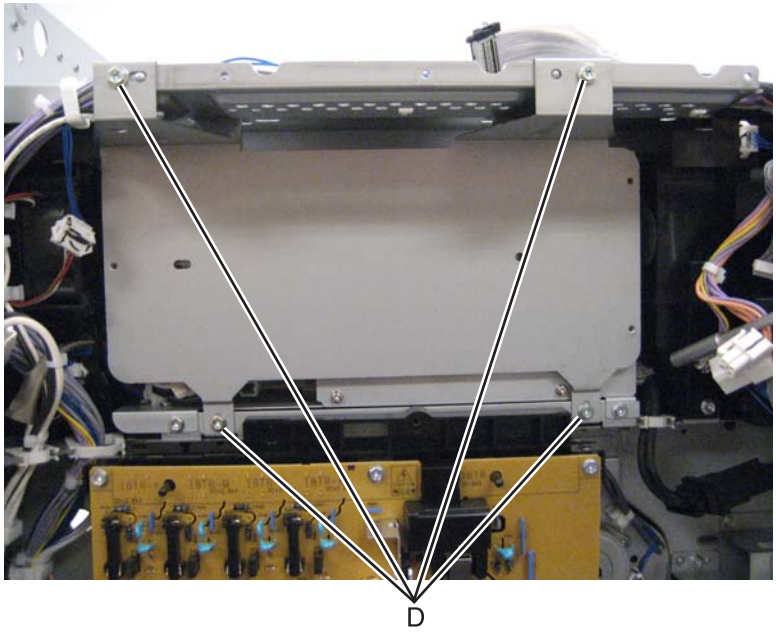


5. Release the two clamps (C) to release the harness.

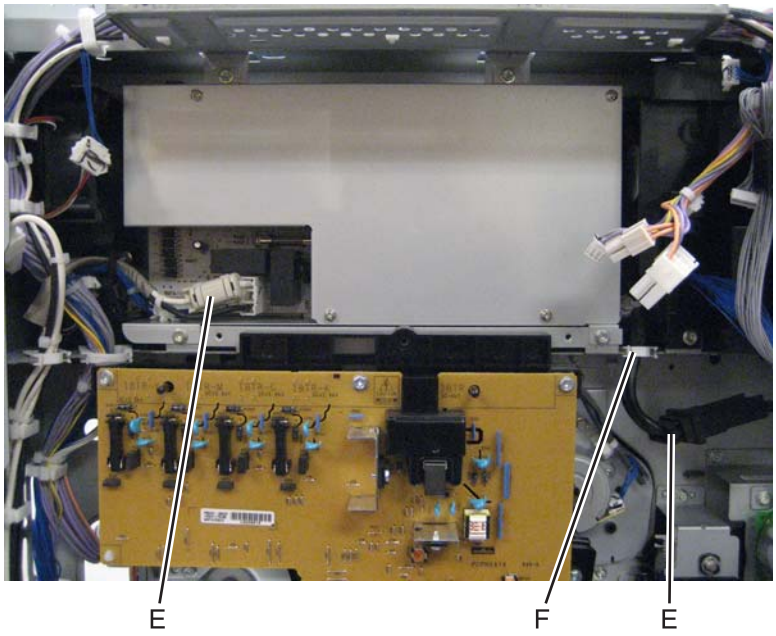


6. Swing the PCBA door open.
7. Remove the sub LVPS PCBA. See **“Sub LVPS PCBA removal” on page 4-171**.

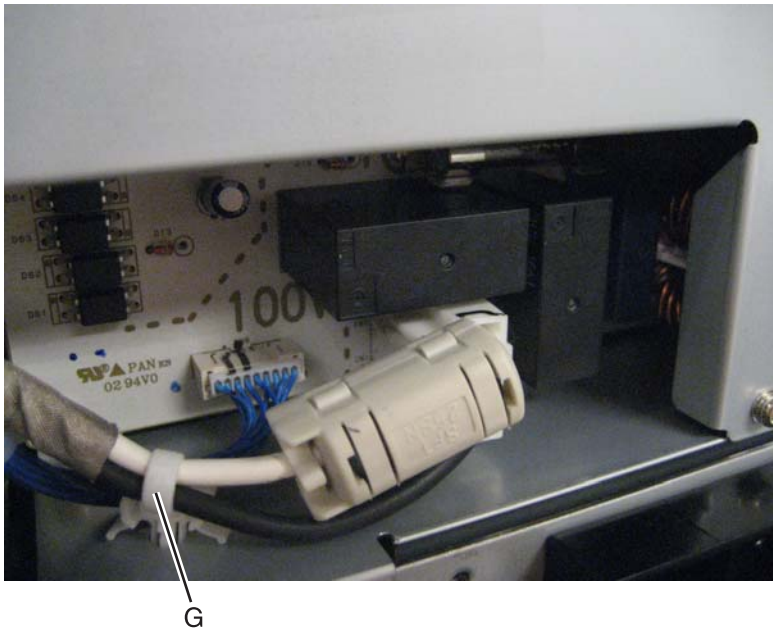
8. Remove the four screws (D) securing the bracket to the machine.



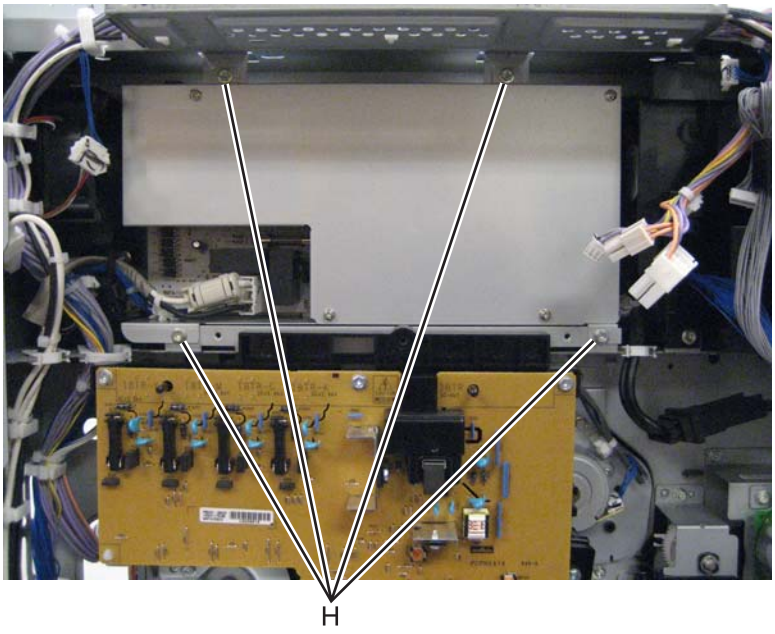
9. Remove the bracket from the machine.
10. Disconnect the two cables (E) from the board.
11. Release the harness from the clamp (F).



12. Release the clamp (G) from the card.



13. Remove the four screws (H) securing the fuser driver PCBA to the machine.

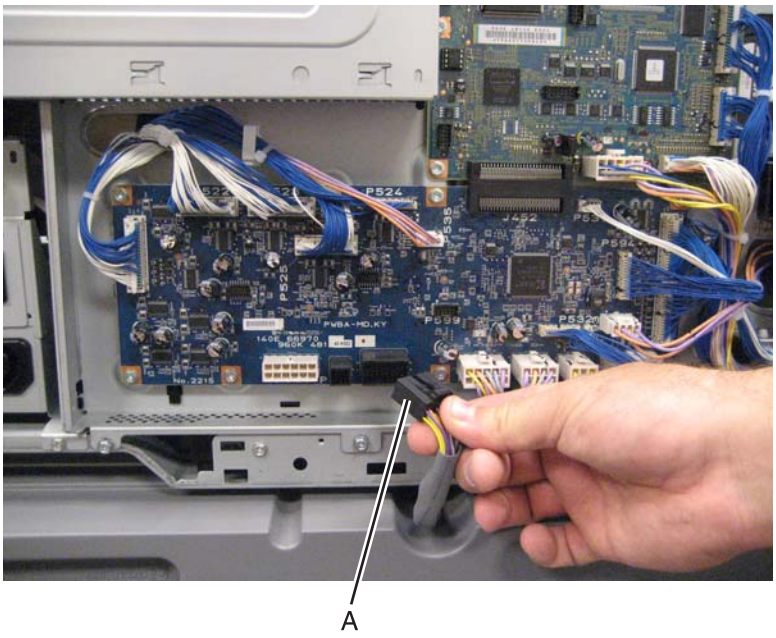


14. Remove the fuser driver PCBA.

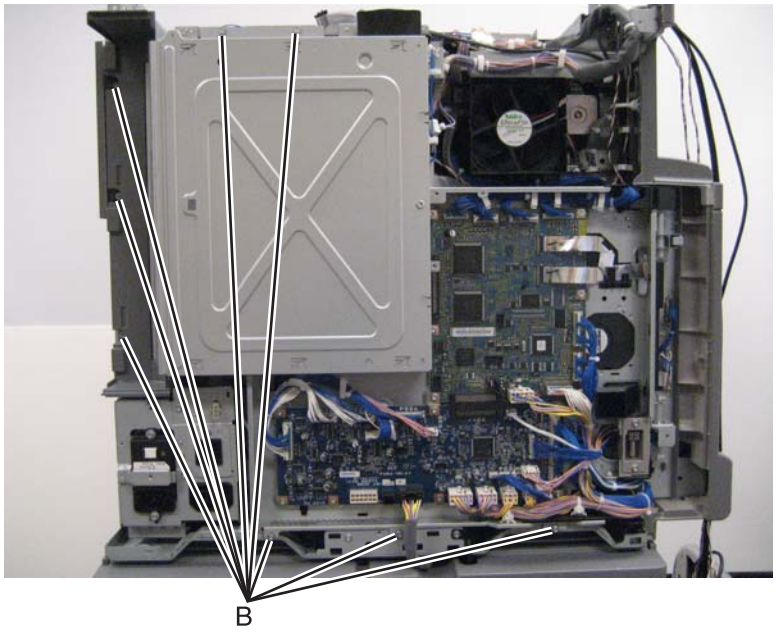
Fuser pressure roll retract motor removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

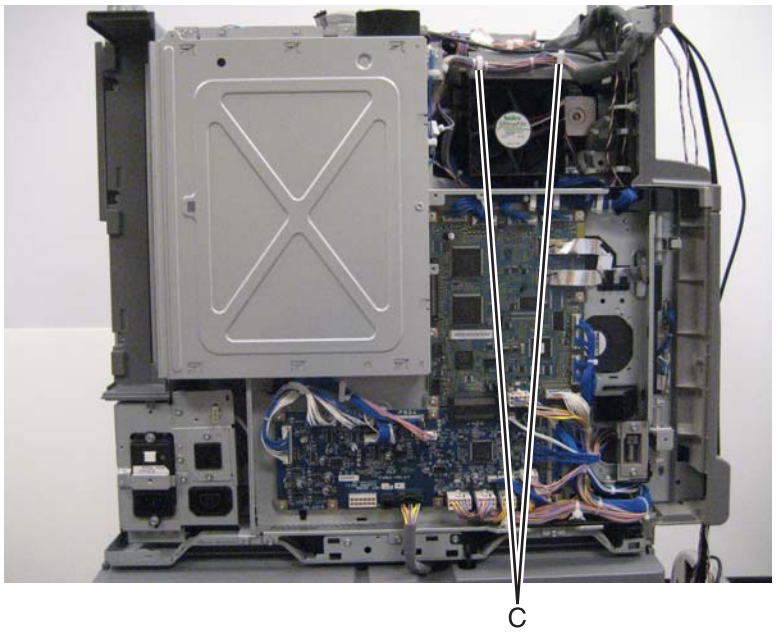
3. Disconnect the input option cable (A).



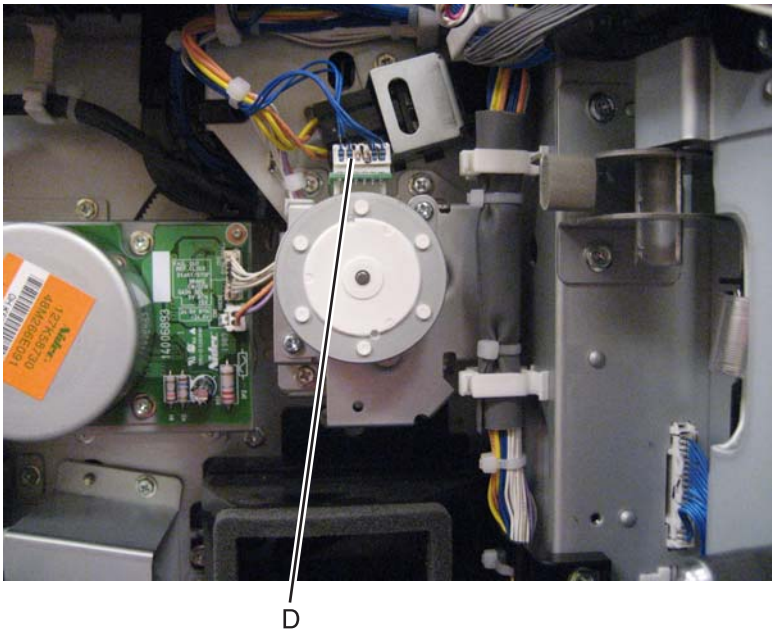
4. Remove the eight screws (B) securing the PCBA door to the machine.



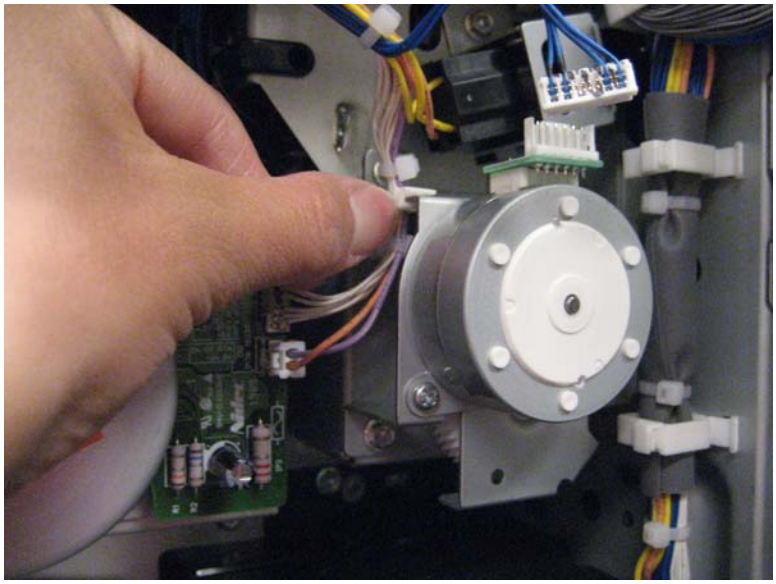
5. Release the two clamps (C) to release the harness.



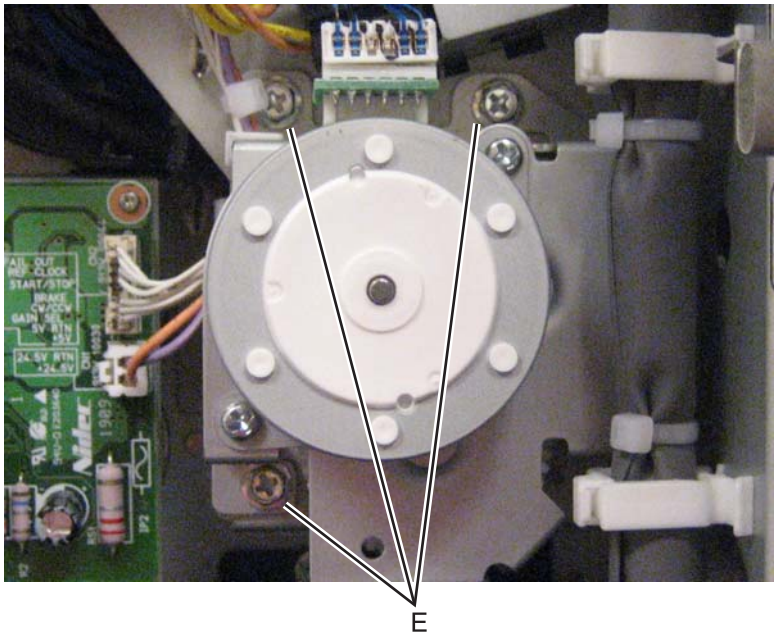
6. Swing the PCBA door open.
7. Disconnect the cable (D) from the fuser pressure roll retract motor.



8. Release the harness from the clamp.



9. Remove the three screws (E) securing the fuser pressure roll retract motor to the machine.

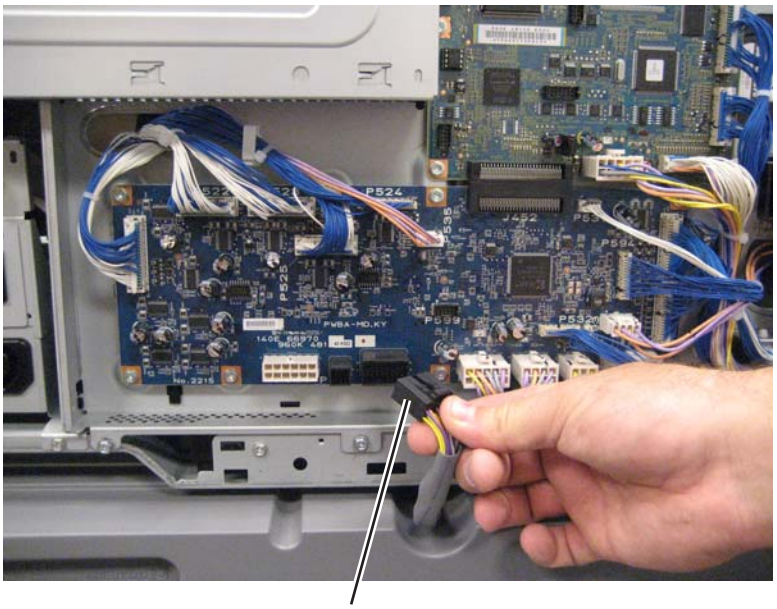


10. Remove the fuser pressure roll retract motor.

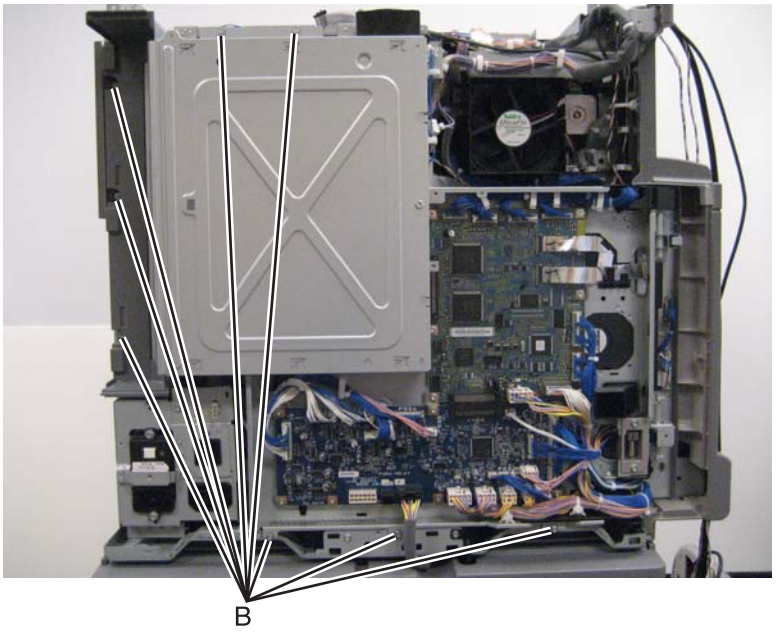
Fuser/lower redrive/1st BTR retract motor removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

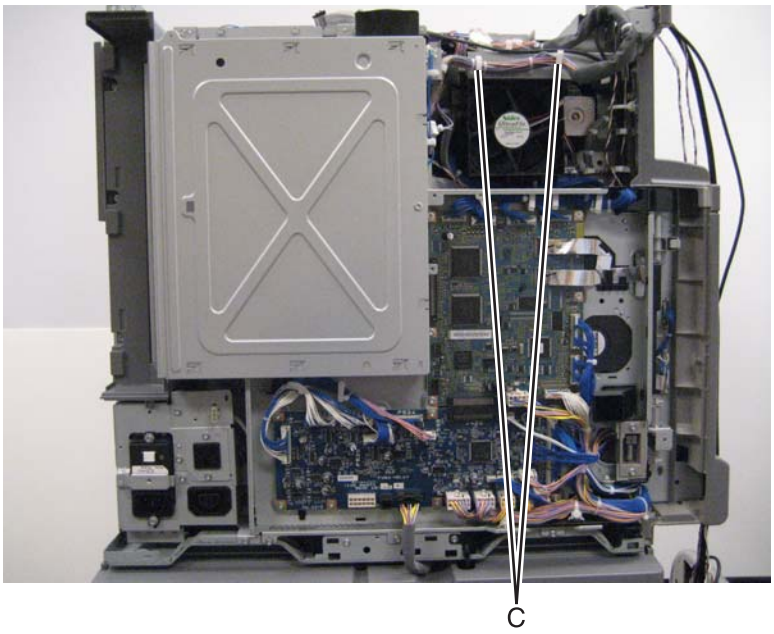
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.



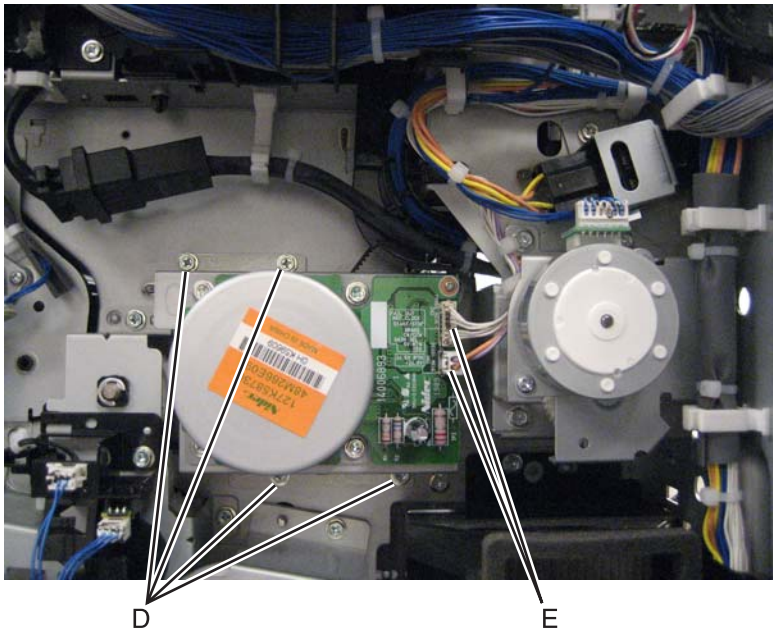
5. Release the two clamps (C) to release the harness.



6. Swing the PCBA door open.
7. Remove the two cables (D).

Warning: When disconnecting the two wire harnesses from the motor, make sure that the release hook is pressed or the connections will be damaged.

8. Remove the four screws (E) securing the fuser/lower redrive/1st BTR retract motor to the machine.

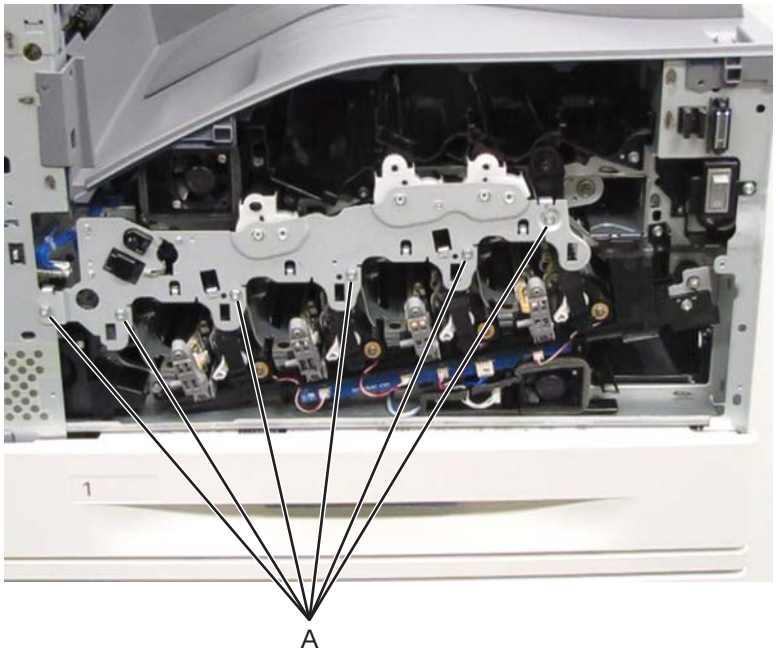


9. Remove the fuser/lower redrive/1st BTR retract motor from the machine.

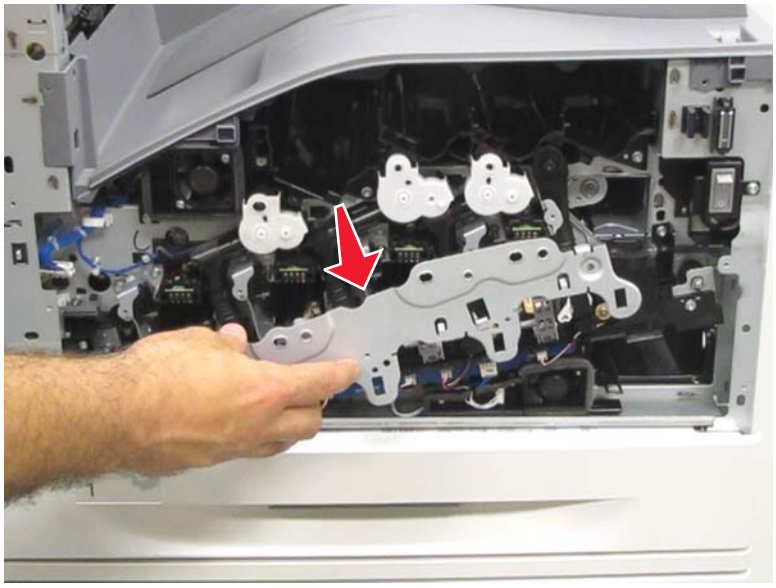
Inner plate removal

1. Remove the printer front door. See **"Printer front door removal" on page 4-13**.
2. Remove the transfer belt cleaner. See **"Transfer belt cleaner removal" on page 4-185**.
3. Remove the waste toner box.

4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the six screws (A) from the inner plate.



10. Remove the inner plate.

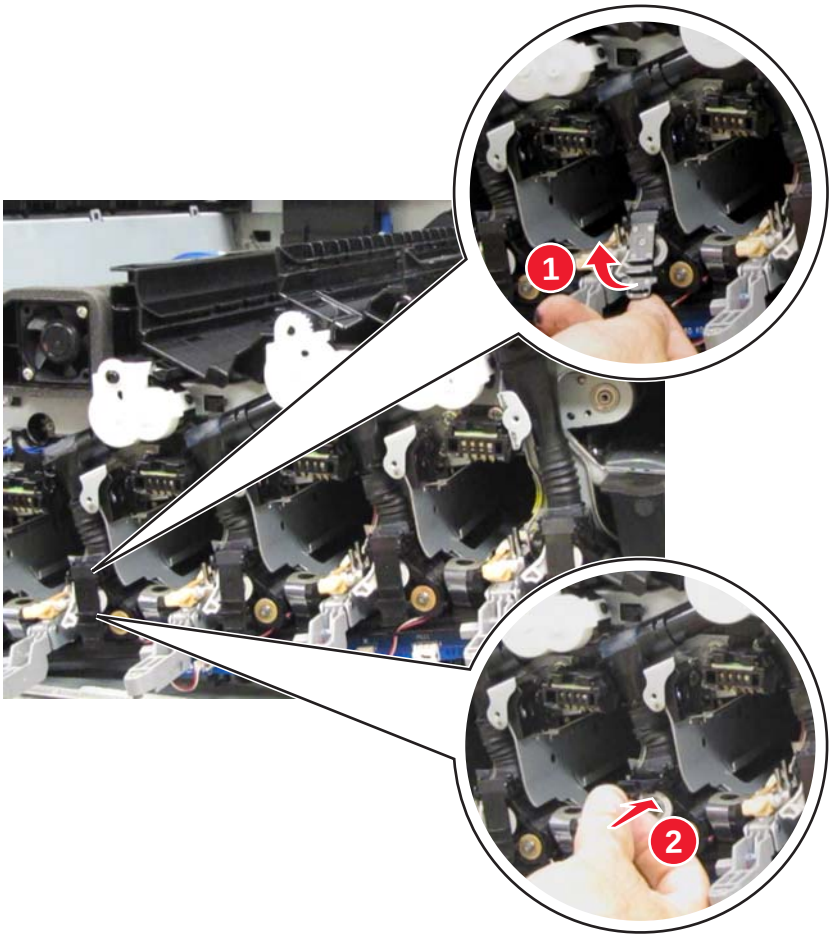


Re-installation note: When replacing the inner plate, ensure that the posts on the toner augers are properly aligned with the plate, or the plate cannot be installed.

Re-installation note: When replacing the inner plate, ensure that the plastic gates on each of the toner augers are pulled out and lowered to their lowest positions, or the plate cannot be installed.

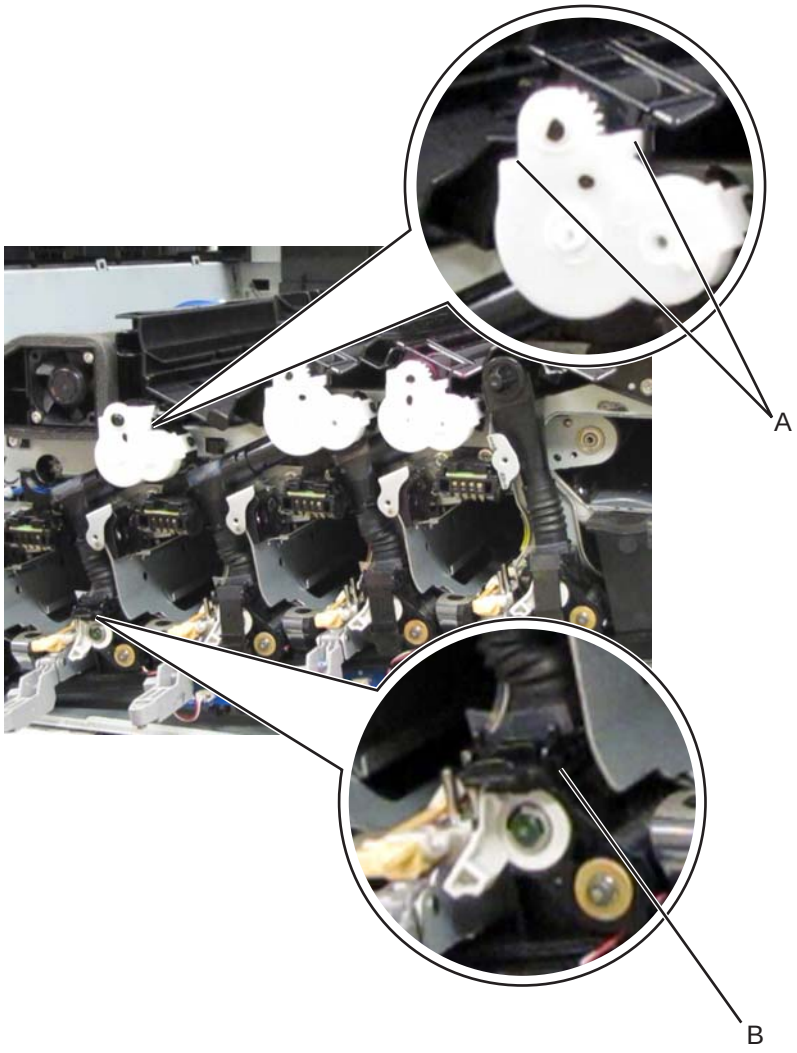
K toner auger removal

1. Remove the printer front door. See “Printer front door removal” on page 4-13.
2. Remove the transfer belt cleaner. See “Transfer belt cleaner removal” on page 4-185.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See “Operator panel front cover (MFP) removal” on page 4-8.
7. Remove the printhead retract door. See “Printhead retract door removal” on page 4-151.
8. Remove the inner cover. See “Inner cover removal” on page 4-4.
9. Remove the inner plate. See “Inner plate removal” on page 4-104.
10. Lift the plastic gate, and push it in to prevent the toner from spilling.

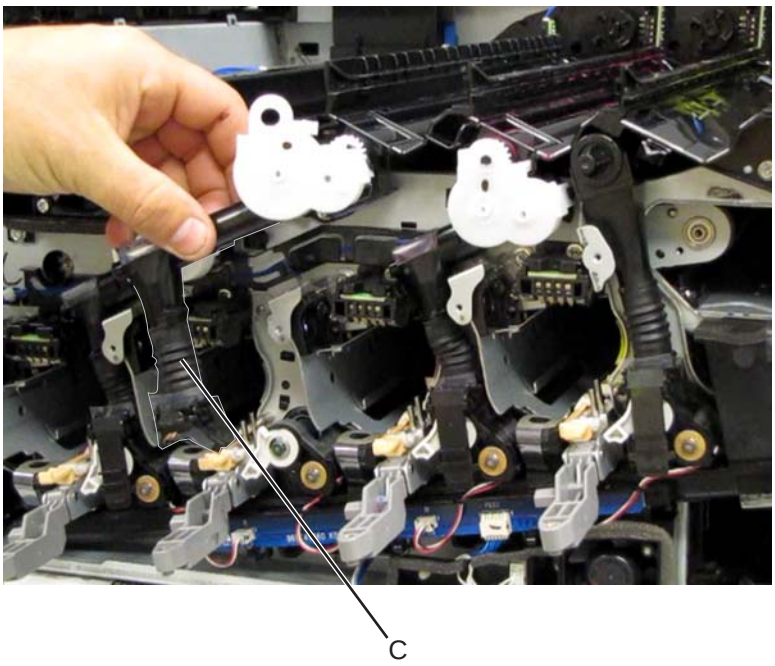


11. Squeeze the two latches (A) to release the upper part of the auger.
12. Detach the lower portion (B) of the auger from the developer unit.

Warning: The lower portion (B) of the auger is prone to damage. Extra care is required in handling this part.



13. Remove the K toner auger.

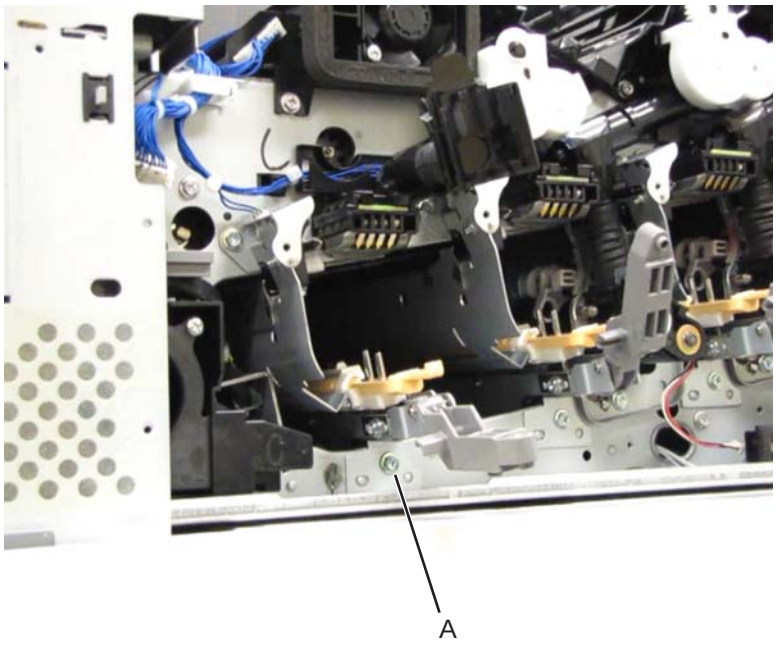


Re-installation note: Ensure that the rubber sleeve (C) is attached properly to prevent toner spillage.

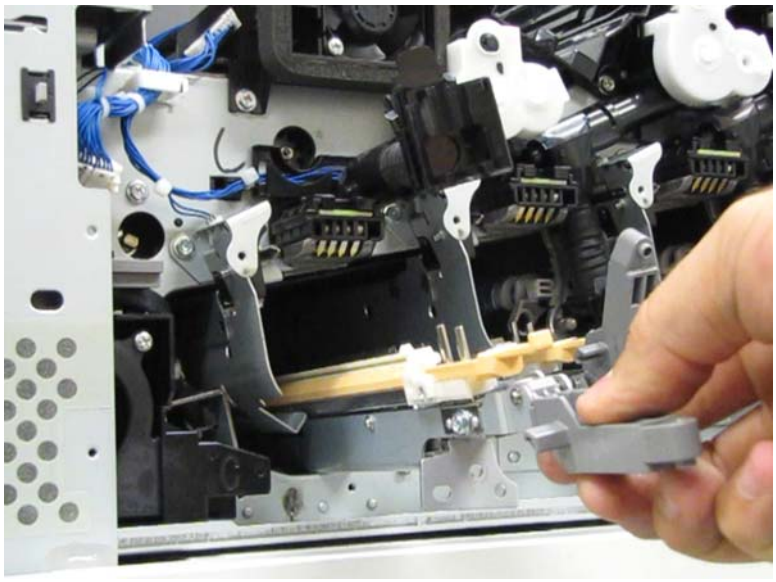
LED printhead removal

1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
10. Remove the appropriate developer unit. See **“Developer housing (C) removal” on page 4-52**, **“Developer housing (M) removal” on page 4-64**, **“Developer housing (Y) removal” on page 4-70**, or **“Developer housing (K) removal” on page 4-58**.

11. Remove the screw (A) from the appropriate printhead.



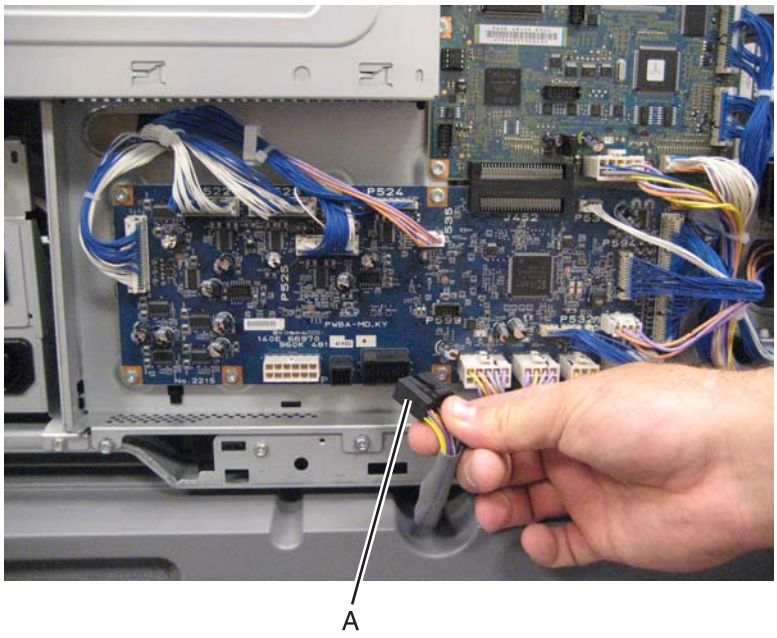
12. Gently pull the printhead out of the machine and remove.



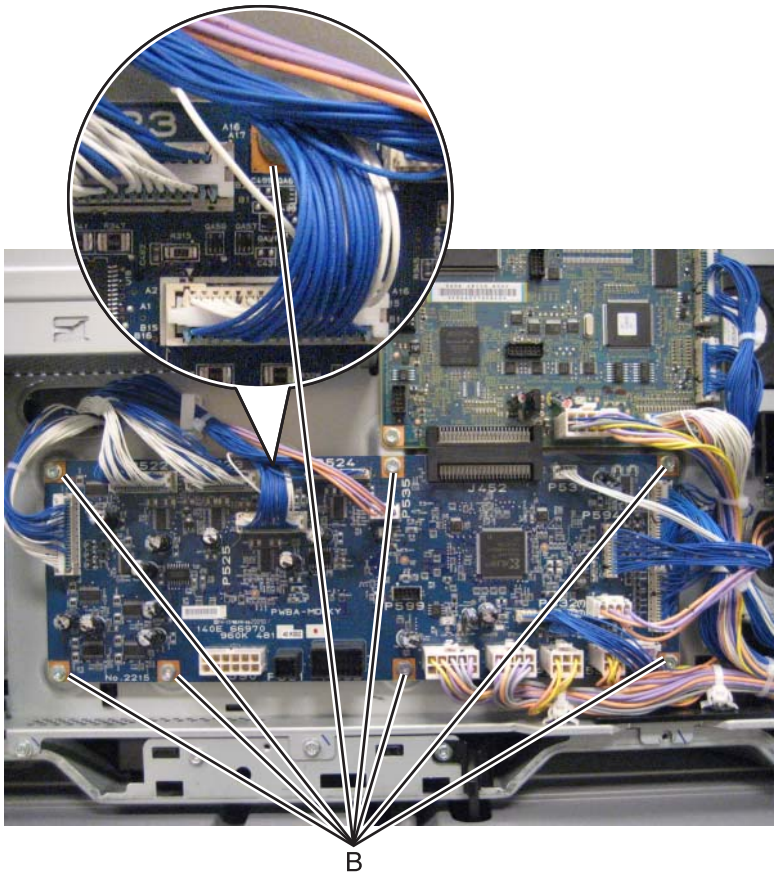
Lower engine PCBA removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-19**.
2. Remove the rear lower cover. See **"Rear lower cover removal" on page 4-17**.

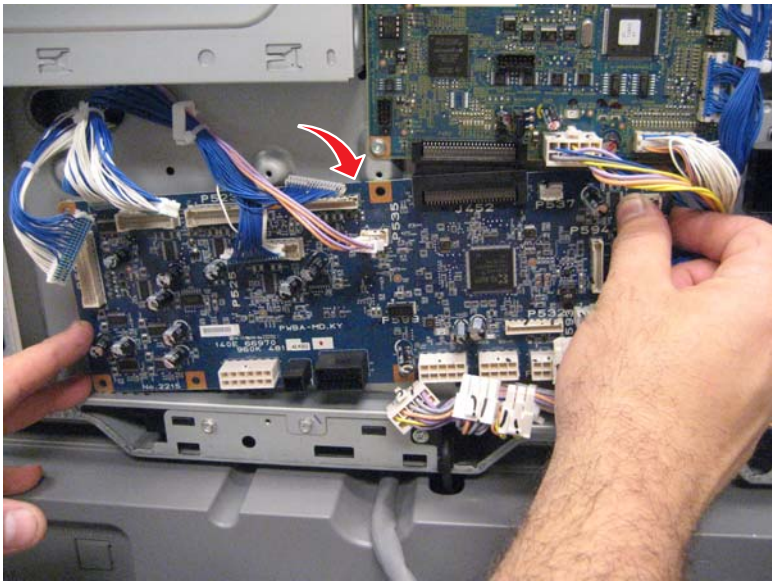
3. Disconnect the input option cable (A).



4. Disconnect all the cables from the lower engine PCBA.
5. Remove the eight screws (D).



6. Detach the lower engine PCBA from the upper engine PCBA by moving it downward.

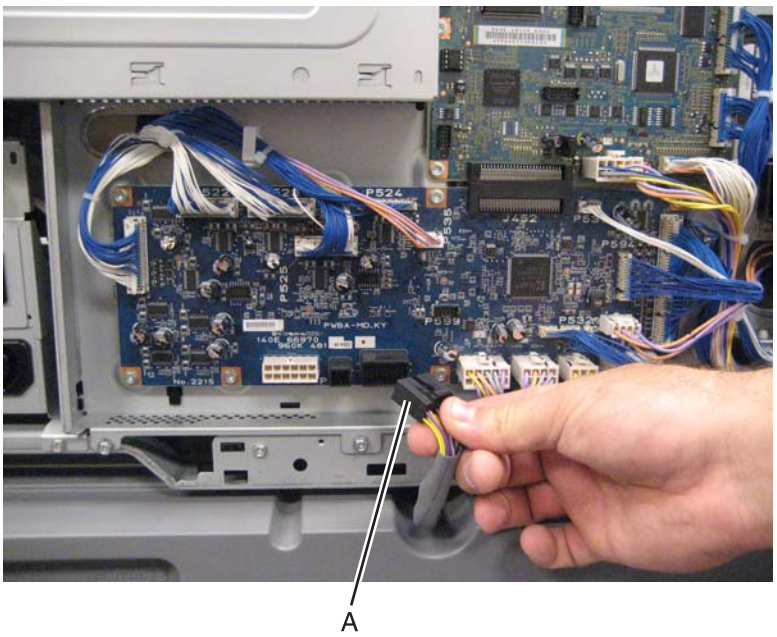


7. Remove the lower engine PCBA.

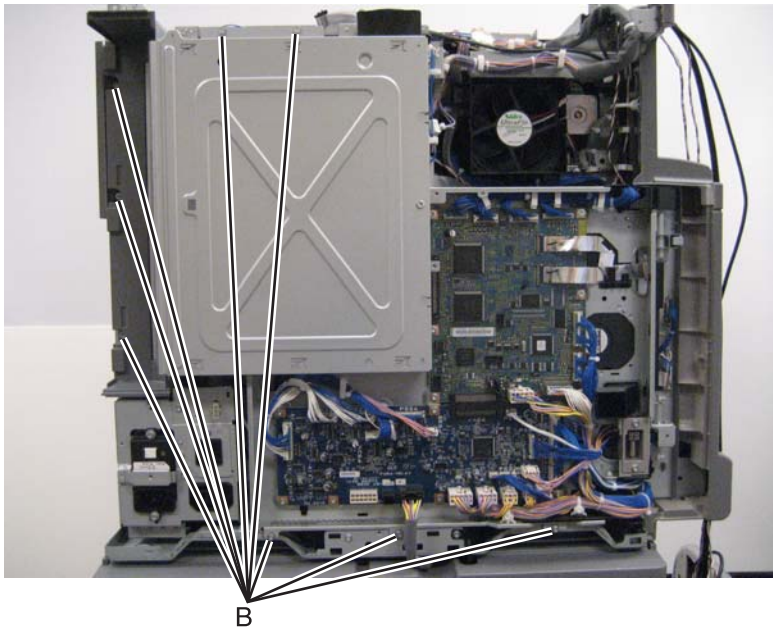
Replacement warning: When replacing the lower engine PCBA, ensure that all of the cables are properly reconnected.

Lower redrive shift motor assembly removal

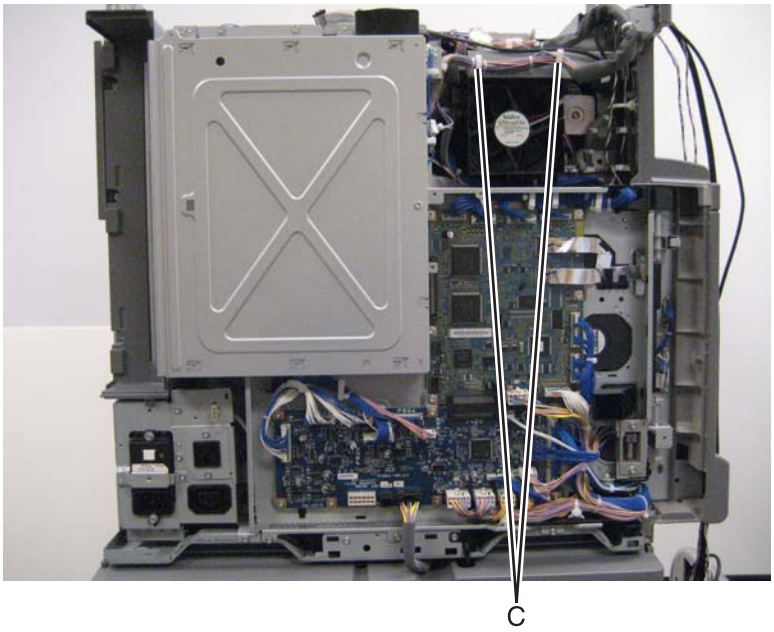
1. Remove the left upper cover. See **"Left upper cover removal" on page 4-7**.
2. Remove the upper redrive assembly. See **"Upper redrive assembly removal" on page 4-195**.
3. Remove the fuser. See **"Fuser assembly removal" on page 4-90**.
4. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-19**.
5. Remove the rear lower cover. See **"Rear lower cover removal" on page 4-17**.
6. Disconnect the input option cable (A).



7. Remove the eight screws (B) securing the PCBA door to the machine.

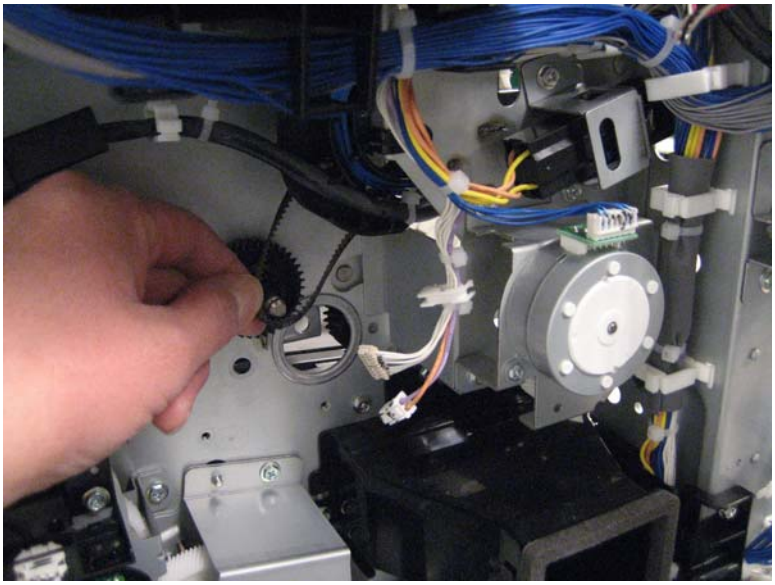


8. Release the two clamps (C) to release the harness.

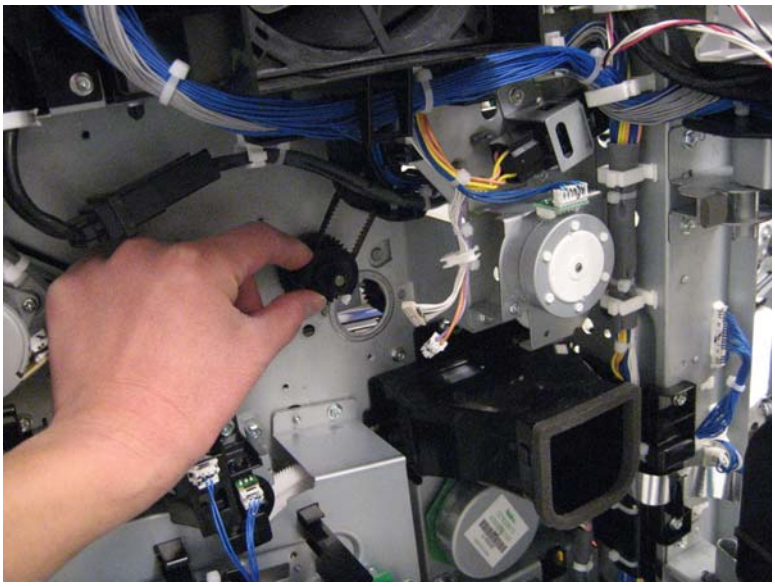


9. Swing the PCBA door open.
10. Remove the fuser redrive/lower redrive/1st BTR retract motor. See **"Fuser/lower redrive/1st BTR retract motor removal" on page 4-102**.

11. Gently pull the belt guide to detach it from the machine.

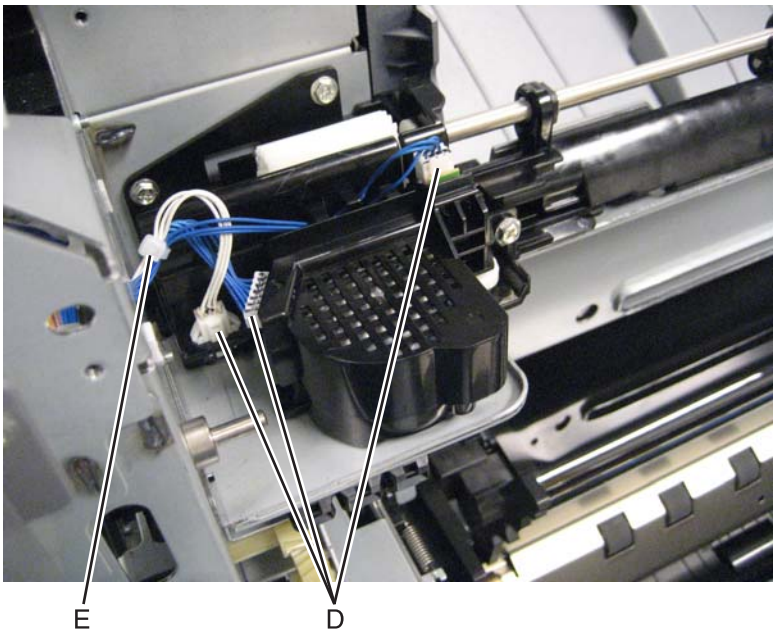


12. Remove the belt guide.

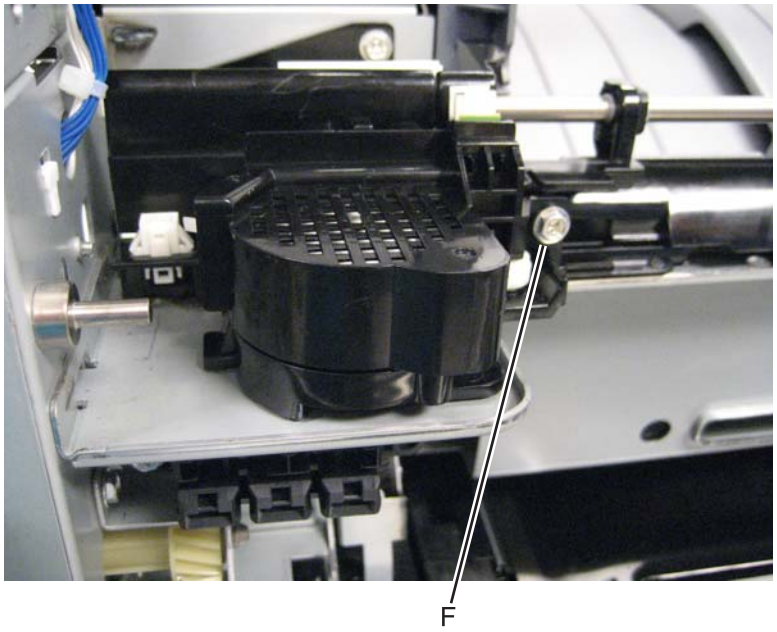


13. Detach the drive belt from the pulley.
14. Disconnect the three cables (D) from the lower redrive shift motor assembly.

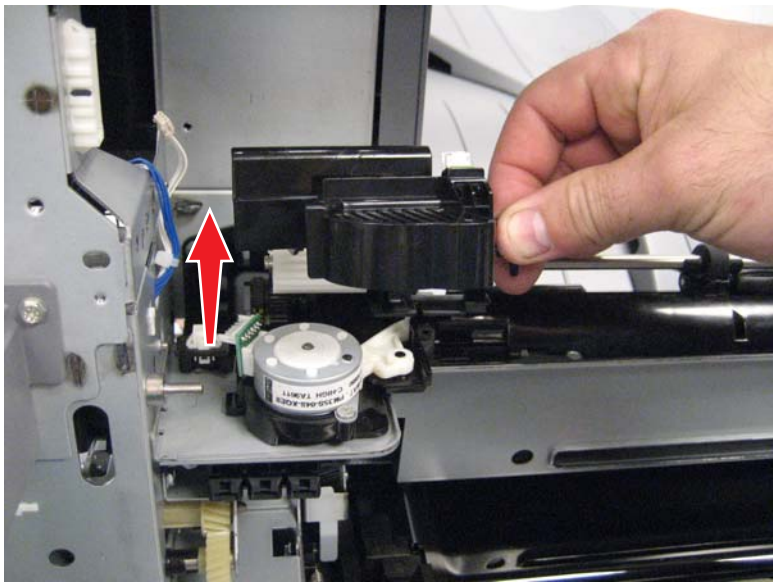
15. Release the harness from the clamp (E).



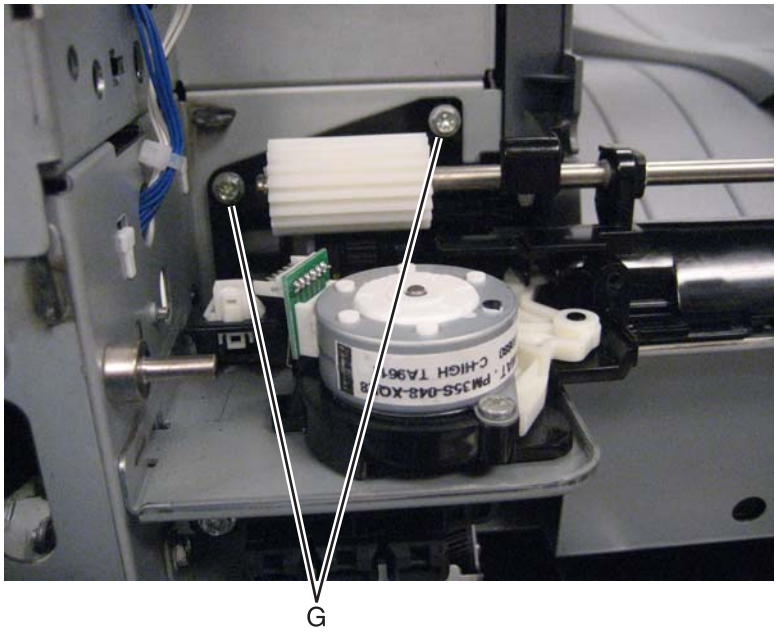
16. Remove the screw (F) securing the plastic motor cover.



17. Remove the plastic motor cover.

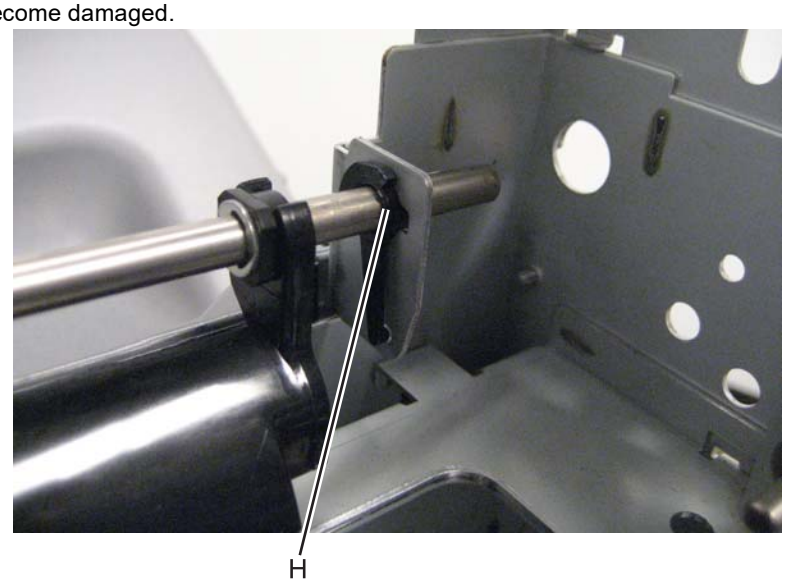


18. Remove the two screws (G) securing the lower redrive shift motor assembly.

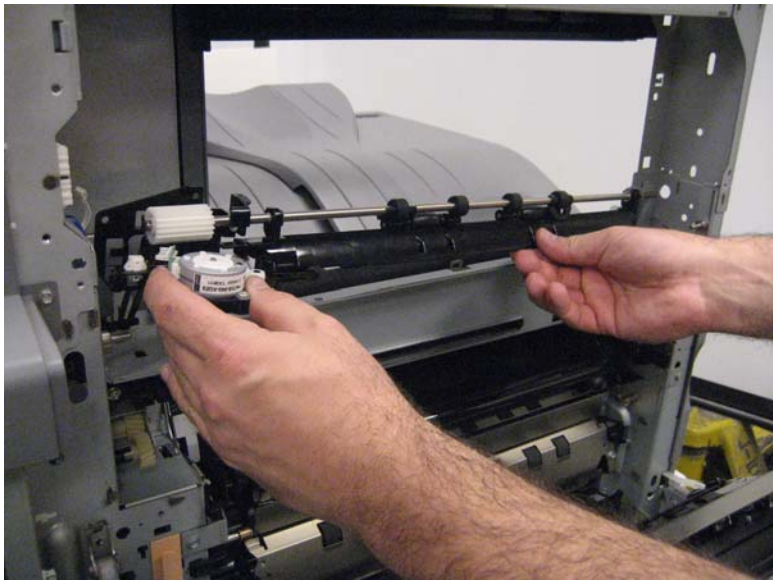


Note: Move the shaft to its midmost position to provide access to the screws.

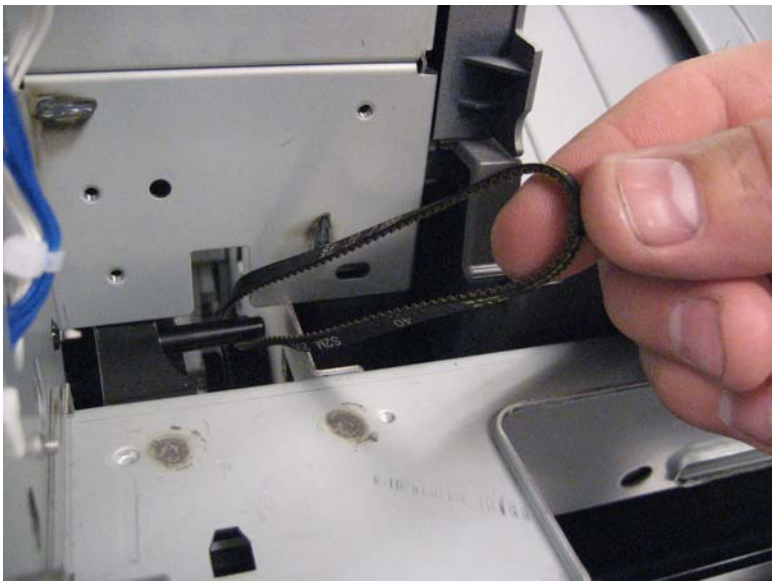
Warning: When removing the lower redrive shift motor assembly, ensure that the front bushing (H) does not become damaged.



19. Gently remove the lower redrive shift motor assembly.



20. Remove the drive belt.



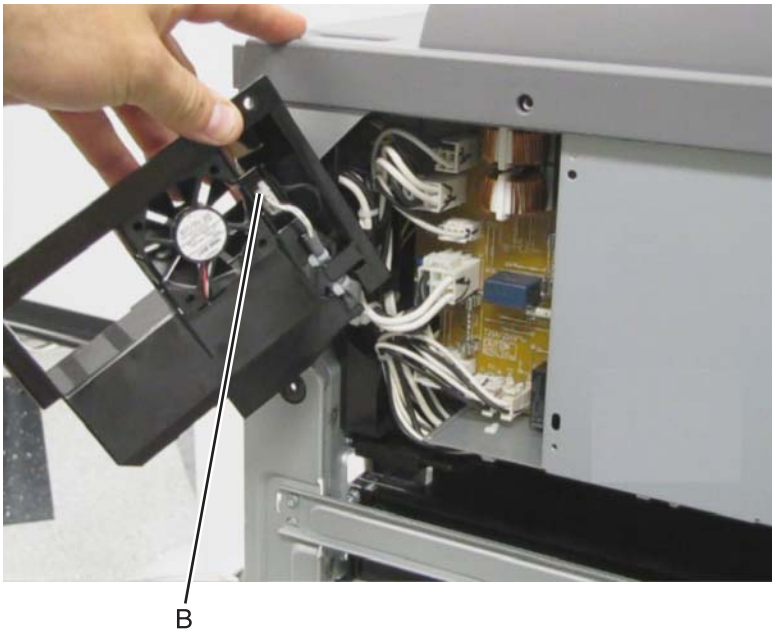
Re-installation tip: To make the reinstallation of the lower redrive shift motor assembly easier, ensure that the drive belt is placed on the lower redrive shift motor assembly drive pulley and that the plastic motor cover is attached to the lower redrive shift motor assembly as you reattach it to the machine. This will prevent the drive belt from slipping. After you have reattached the lower redrive shift motor assembly to the machine, you will need to remove the plastic motor cover to replace both screws, and then reattach the motor cover.

LVPS front fan guide removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.
3. Remove the printer right over. See **“Printer right cover removal” on page 4-14**.
4. Remove the two screws (A) securing the LVPS front fan guide to the machine.

5. Pull out the LVPS front fan guide.

6. Disconnect the cable (B) from the LVPS front fan guide.

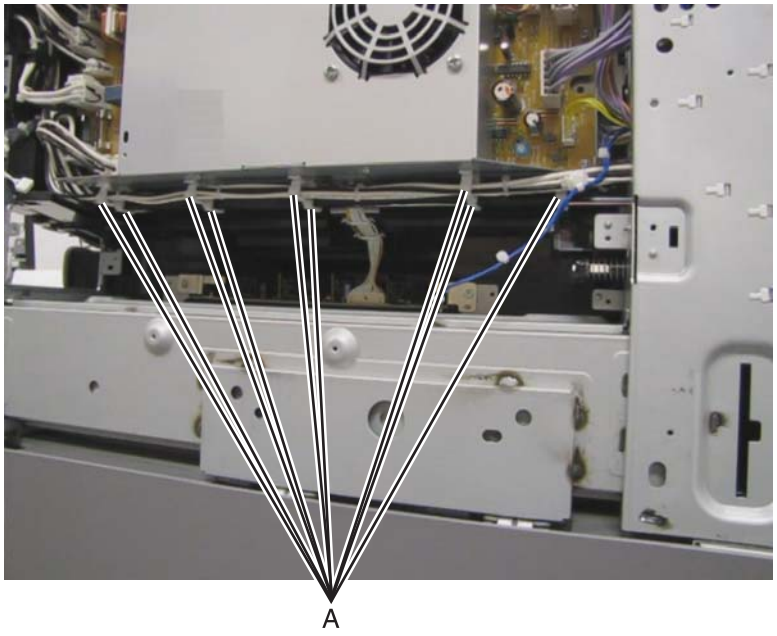


7. Detach the harness from the LVPS front fan guide.
8. Remove the LVPS front fan guide.

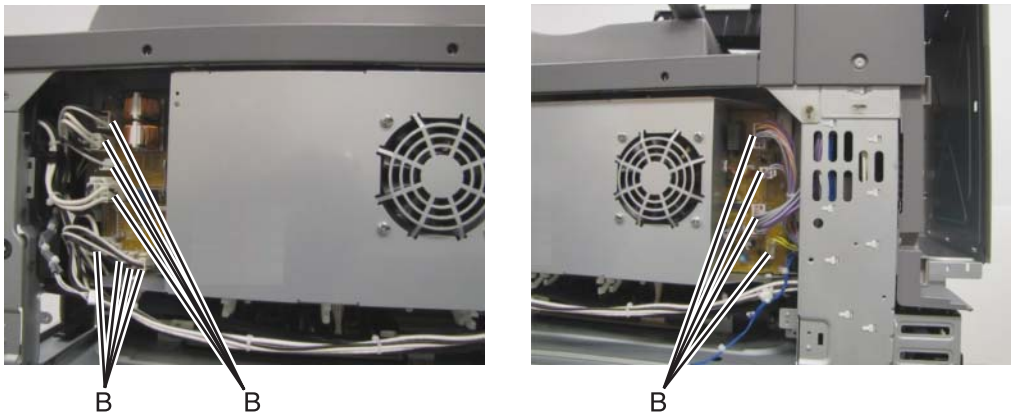
LVPS PCBA removal

1. Remove the printer right side cover. See **“Printer right cover removal” on page 4-14**.
2. Remove the LVPS subfan guide. See **“LVPS front fan guide removal” on page 4-117**.
3. Remove the waste toner sensor guide. See **“Waste toner sensor guide removal” on page 4-202**.

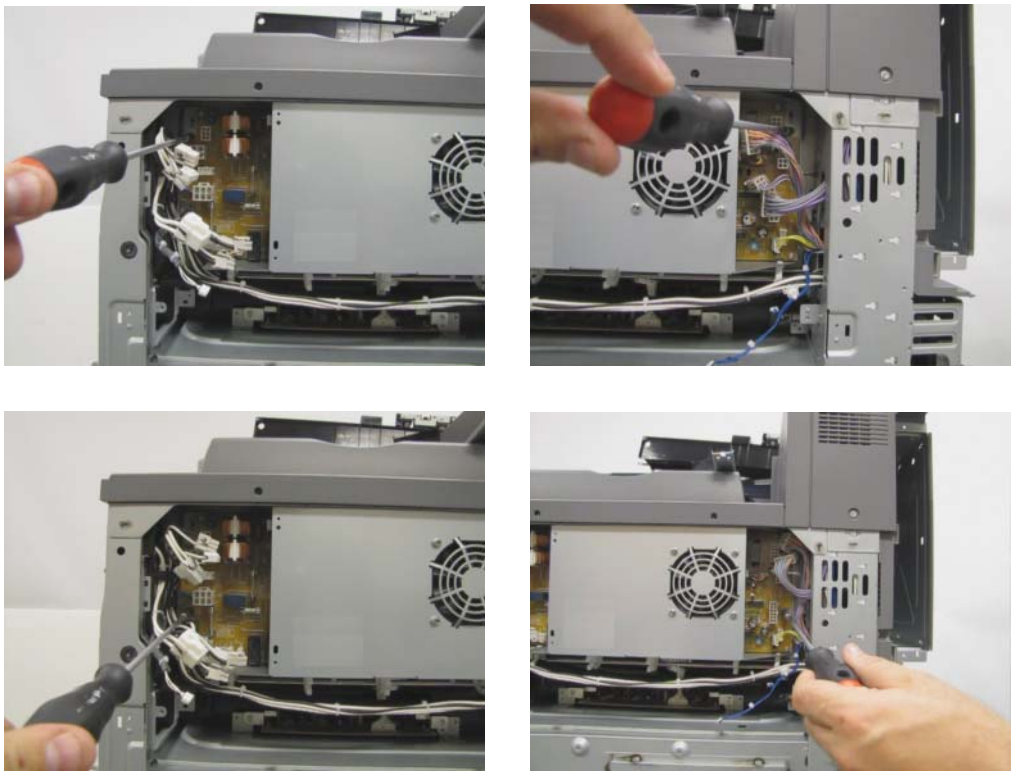
4. Remove the harnesses from the nine clamps (A) under the LVPS PCBA.



5. Disconnect the twelve cables (B) from the LVPS PCBA.



6. Remove the four screws securing the LVPS PCBA to the machine.

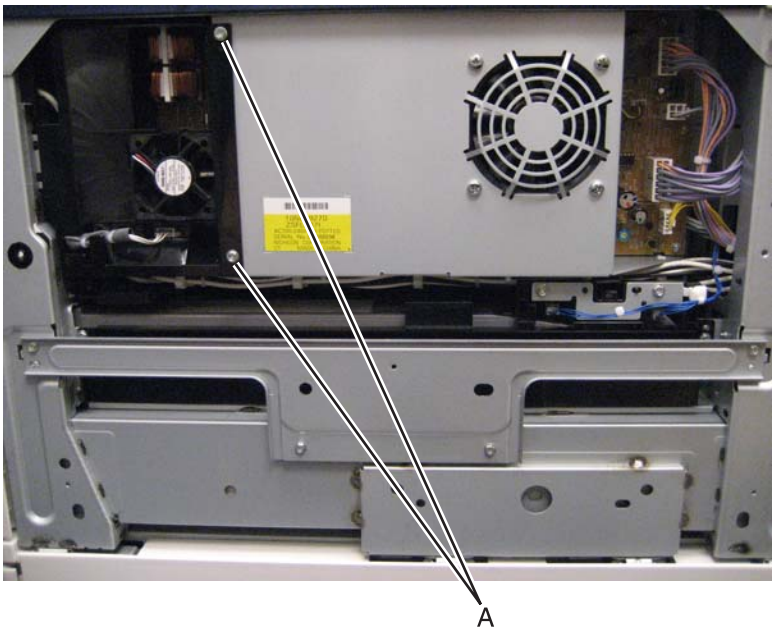


7. Remove the LVPS.

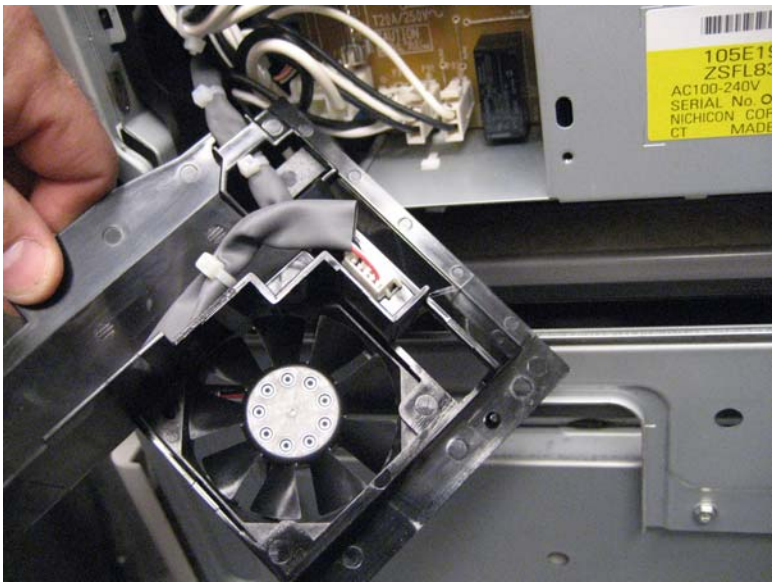
Re-installation warning: When replacing the LVPS PCBA, ensure that the connections for P91 and P92 are properly replaced. If the cables are not reconnected properly, damage will occur to the machine, and the machine will not function.

LVPS sub cooling fan removal

1. Remove the printer right cover.
2. Remove the two screws (A) securing the LVPS fan guide to the machine.

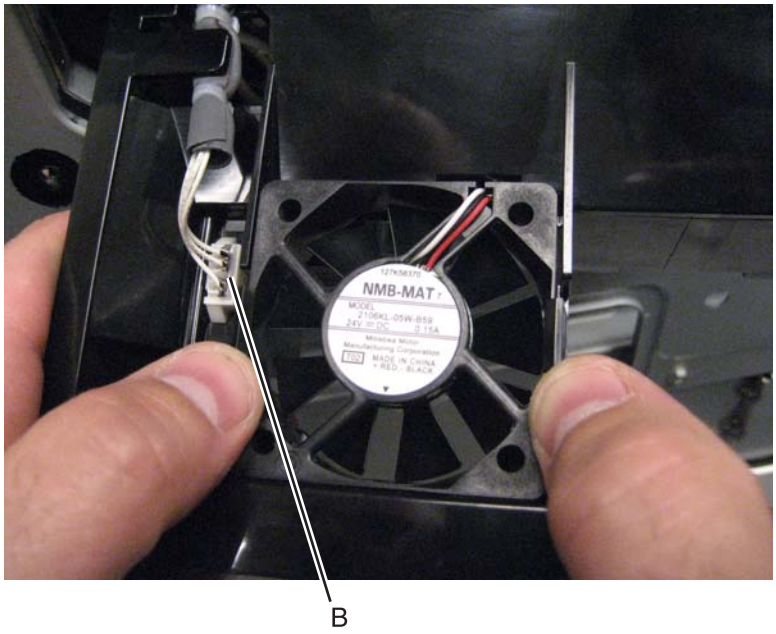


3. Remove the LVPS fan guide.

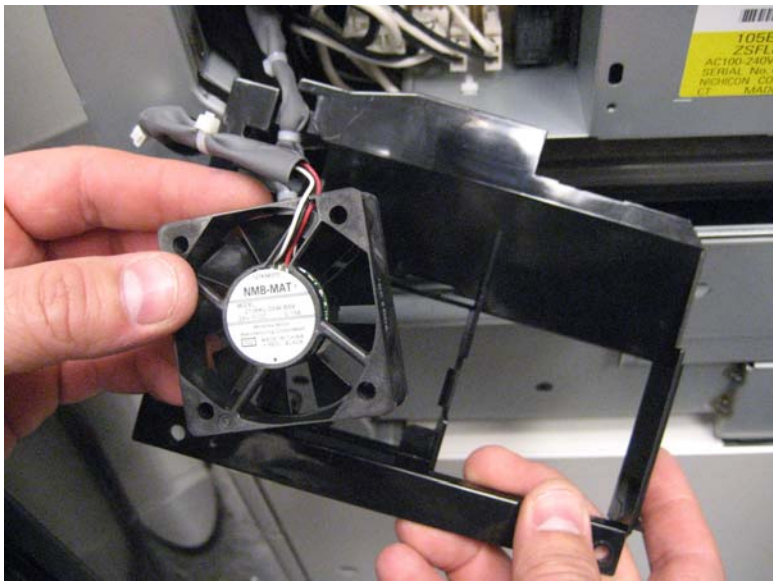


4. Disconnect the cable (B).

5. Release the two hooks securing the fan to the guide.



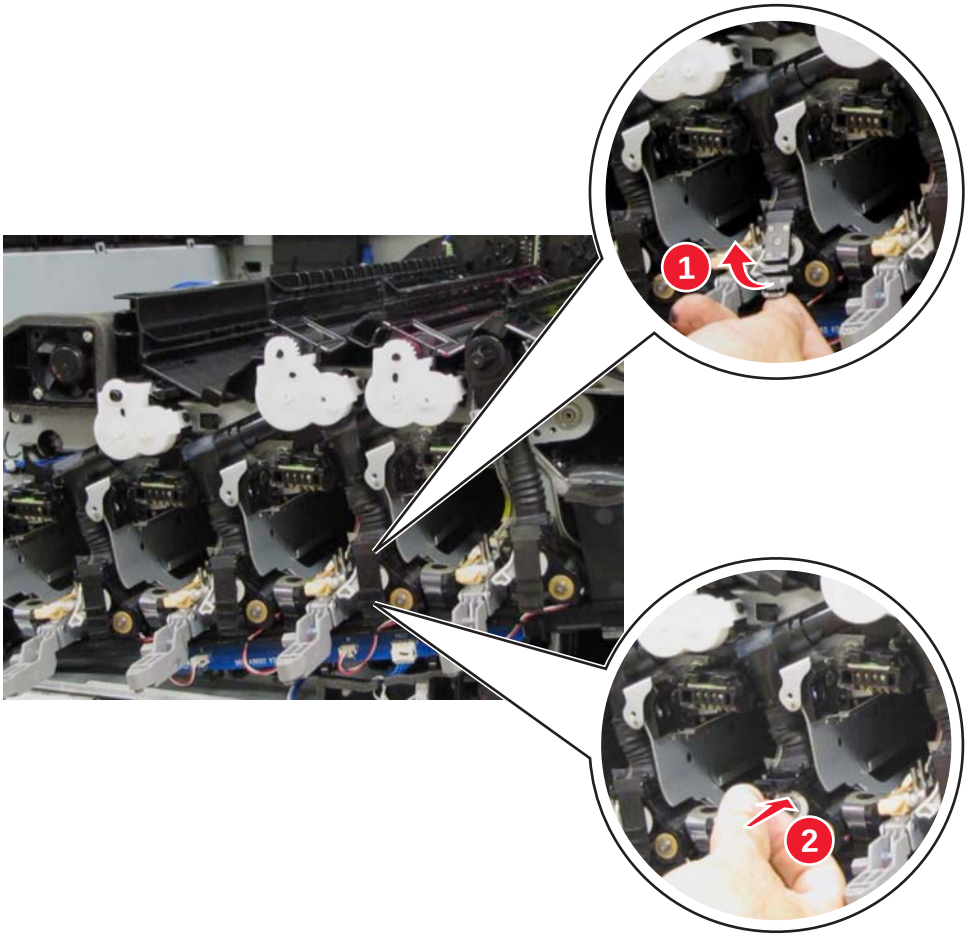
6. Remove the LVPS sub cooling fan.



M toner auger removal

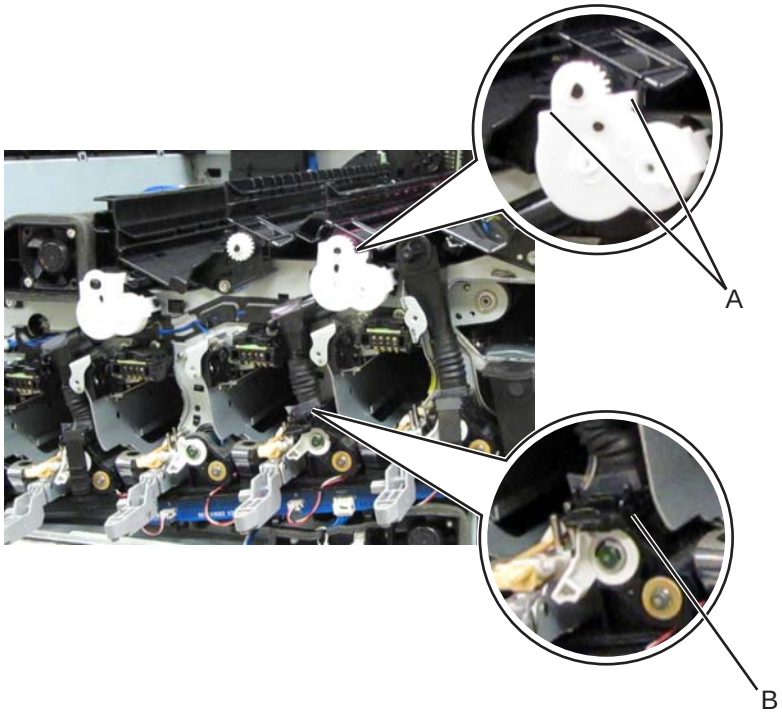
1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the inner plate. See **“Inner plate removal” on page 4-104**.

10. Lift the plastic gate, and push it in to prevent the toner from spilling.

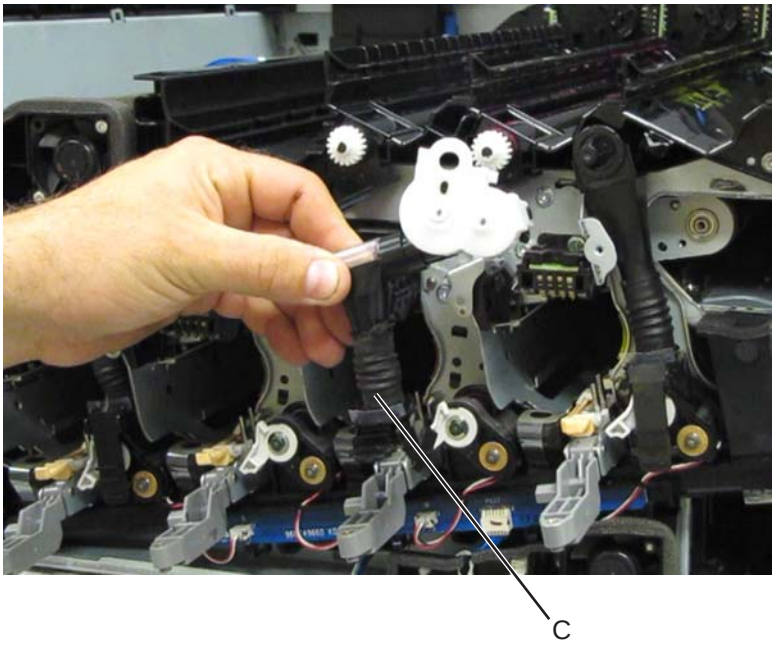


11. Squeeze the two latches (A) to release the upper part of the auger.
12. Detach the lower portion (B) of the auger from the developer unit.

Warning: The lower portion of the auger (B) is prone to damage. Extra care is required in handling this part.



13. Remove the M toner auger.

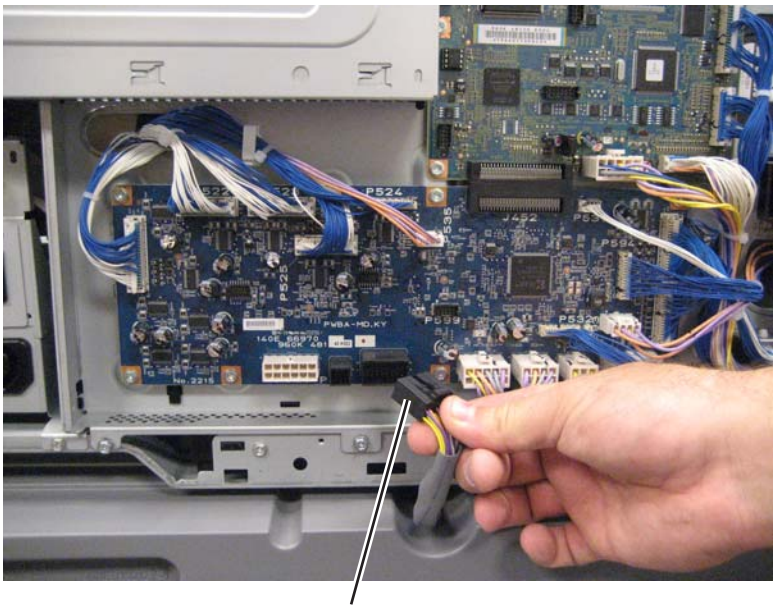


Re-installation note: Ensure that the rubber sleeve (C) is attached properly to prevent toner spillage.

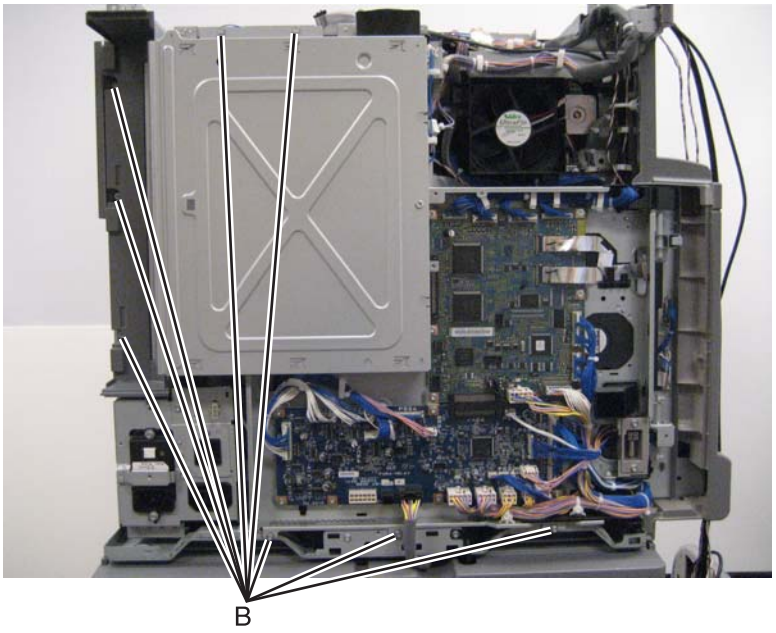
Main power GFI interface removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-19**.
2. Remove the rear lower cover. See **"Rear lower cover removal" on page 4-17**.

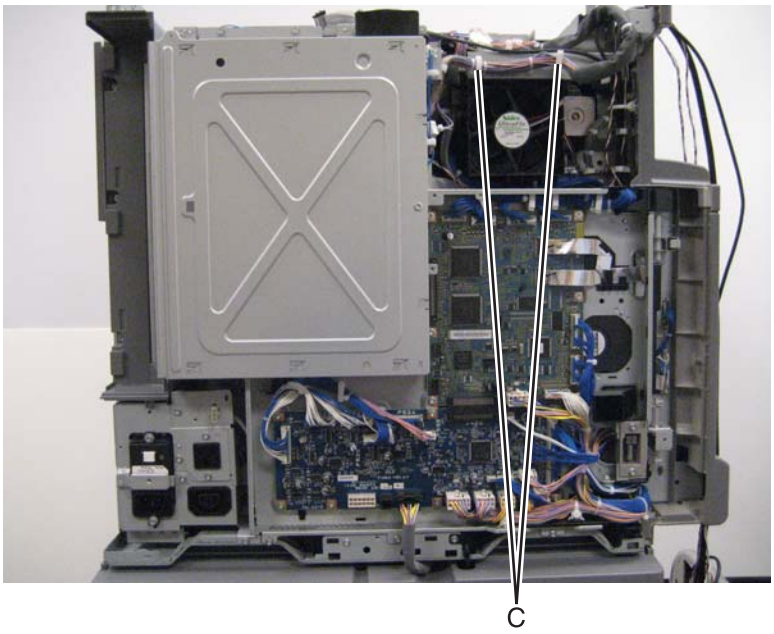
3. Disconnect the input option cable (A).



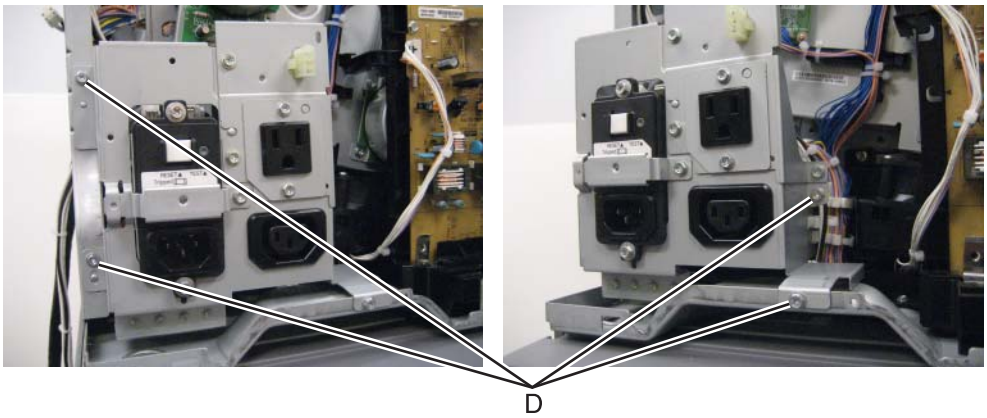
4. Remove the eight screws (B) securing the PCBA door to the machine.



5. Release the two clamps (C) to release the harness.

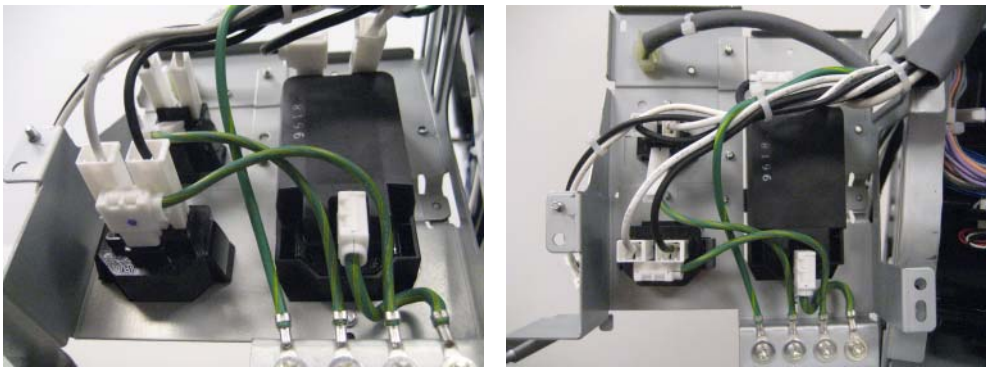


6. Swing the PCBA door open.
7. Remove the four screws (D) securing the main power GFI interface to the machine.



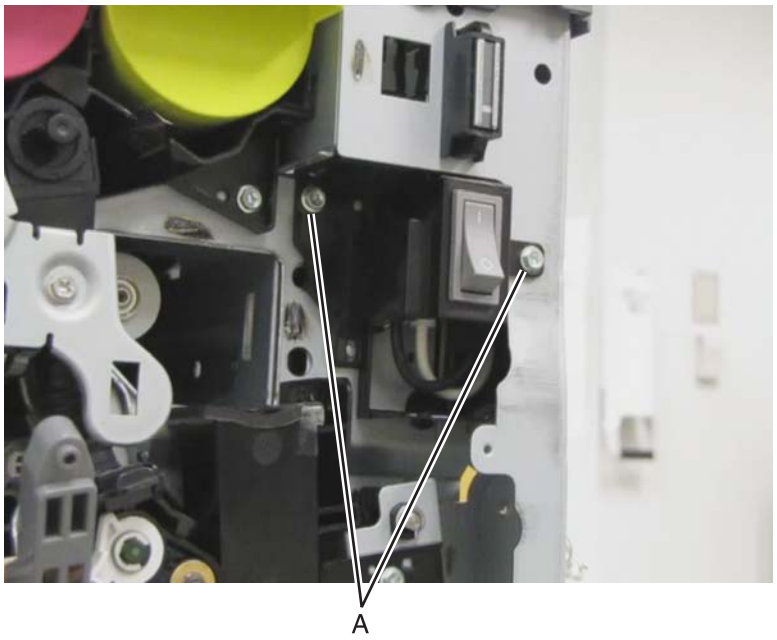
8. Pull the main power GFI interface out of the machine.
9. Disconnect all the cables and remove the main power GFI interface.

Warning: Damage may occur if the main power GFI interface is not re-installed correctly. Make sure that all cables are properly reconnected. Use the following photos as a guide when reconnecting the cables:



Main power switch removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.
3. Remove the printer right cover. See **“Printer right cover removal” on page 4-14**.
4. Remove the LVPS front fan guide. See **“LVPS front fan guide removal” on page 4-117**.
5. Remove the waste toner sensor guide. See **“Waste toner sensor guide removal” on page 4-202**.
6. Remove the LVPS. See **“LVPS PCBA removal” on page 4-118**.
7. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
8. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
9. Remove the inner cover. **“Inner cover removal” on page 4-4**.
10. Remove the two screws (A) securing the main power switch to the machine.

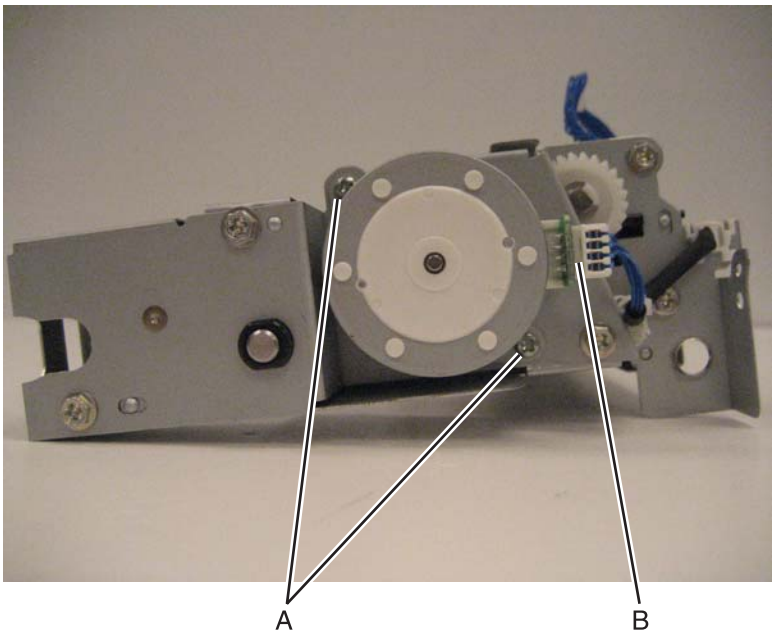


11. Remove the main power switch.

Media feed lift motor removal

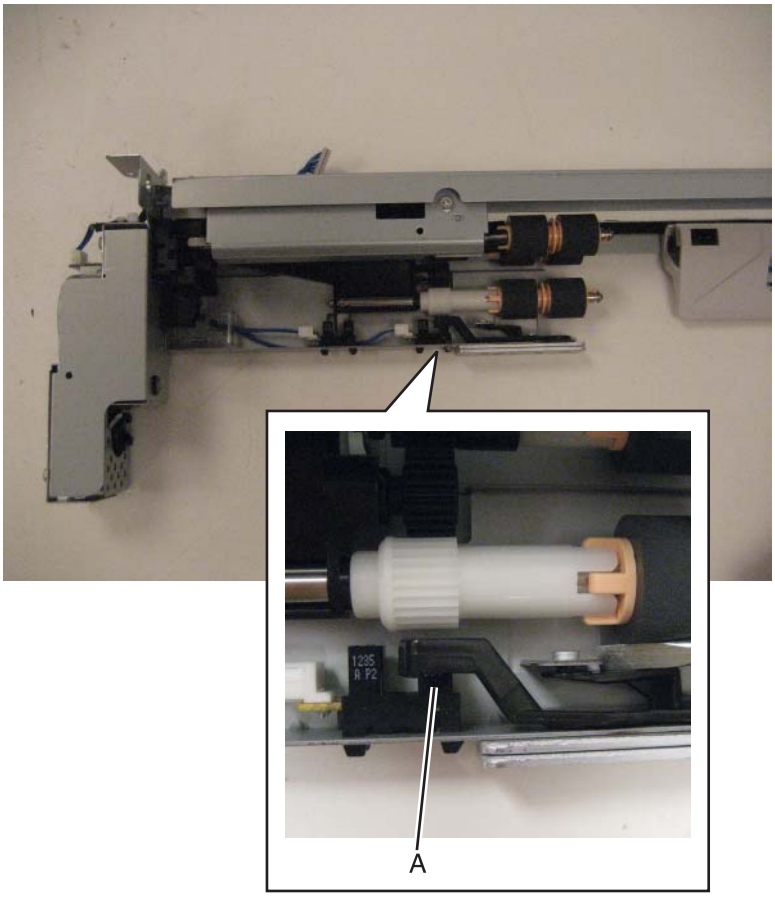
1. Remove the appropriate feeder unit. See **“Printer tray 1 feeder removal” on page 4-150**, **“Tray module media feeder removal” on page 4-288**, **“TTM tray 4 media feeder removal” on page 4-301**, or **“TTM tray 3 feeder removal” on page 4-297**.
2. Remove the two screws (A).
3. Disconnect the cable (B).

4. Detach the media feed lift motor.



Media out actuator removal

1. Remove the appropriate feeder unit. See **“Printer tray 1 feeder removal” on page 4-150**, **“Tray module media feeder removal” on page 4-288**, **“TTM tray 4 media feeder removal” on page 4-301**, or **“TTM tray 3 feeder removal” on page 4-297**.
2. Release the tab (A) securing the media out actuator to the assembly.

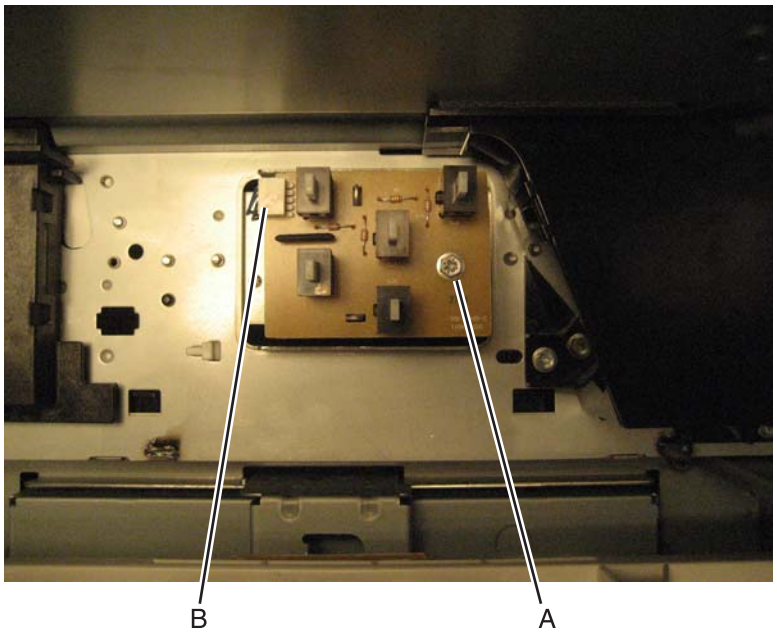


3. Remove the media out actuator.

Media size switch PCB removal

1. Remove the Media tray 1 from the machine.
2. Remove the screw (A).

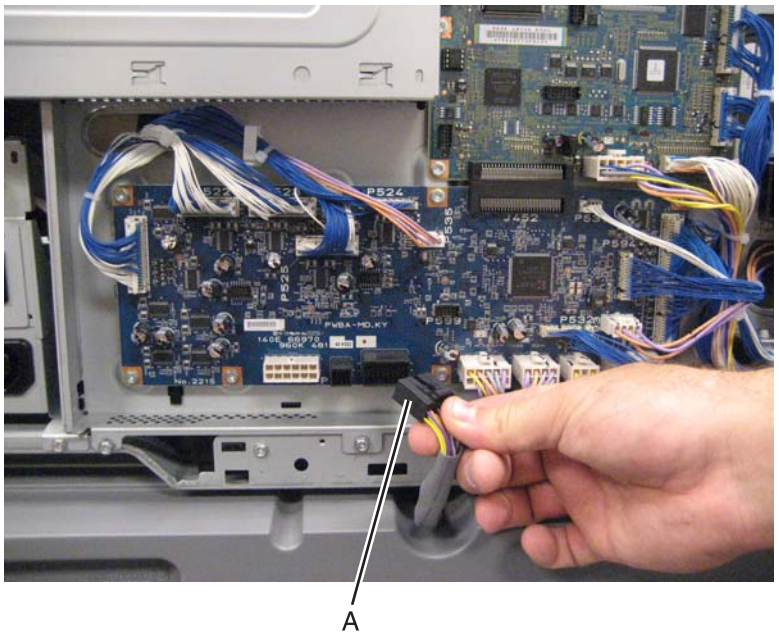
3. Disconnect the cable (B).



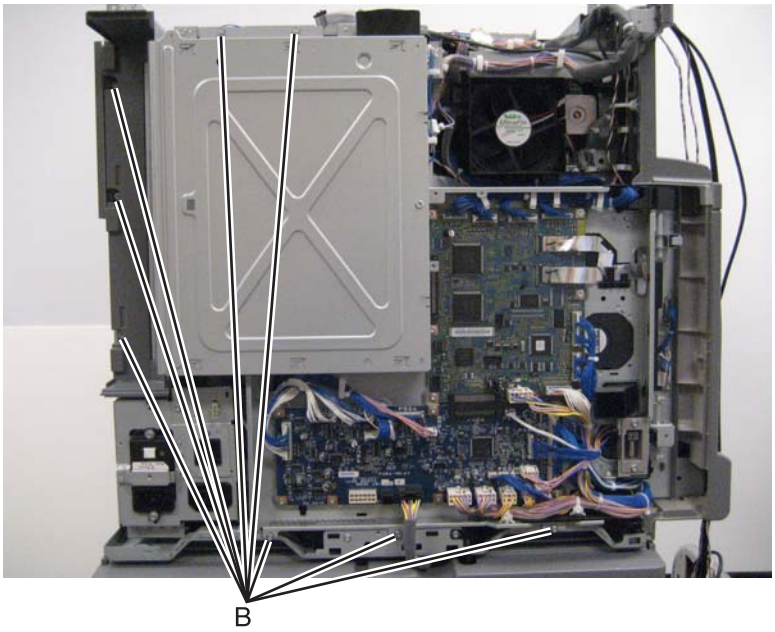
4. Remove the media size switch PCB.

Media transport/MPF drive motor removal

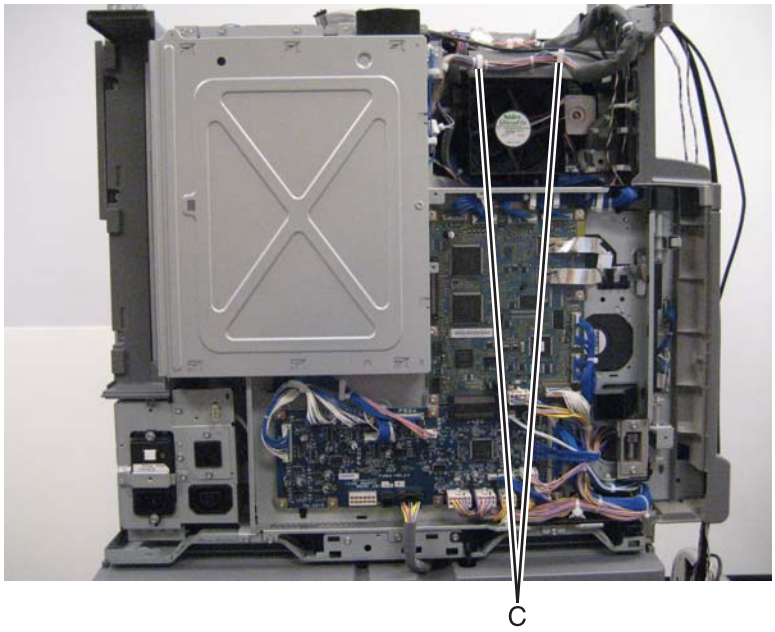
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.

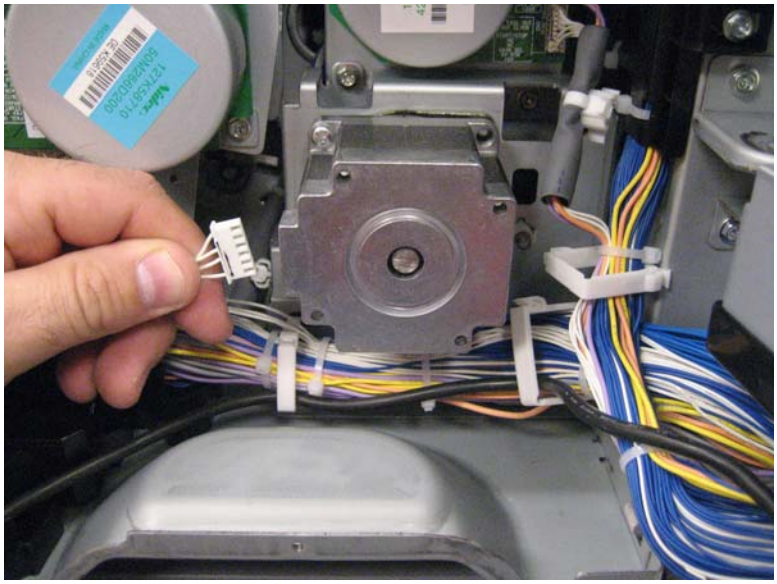


5. Release the two clamps (C) to release the harness.

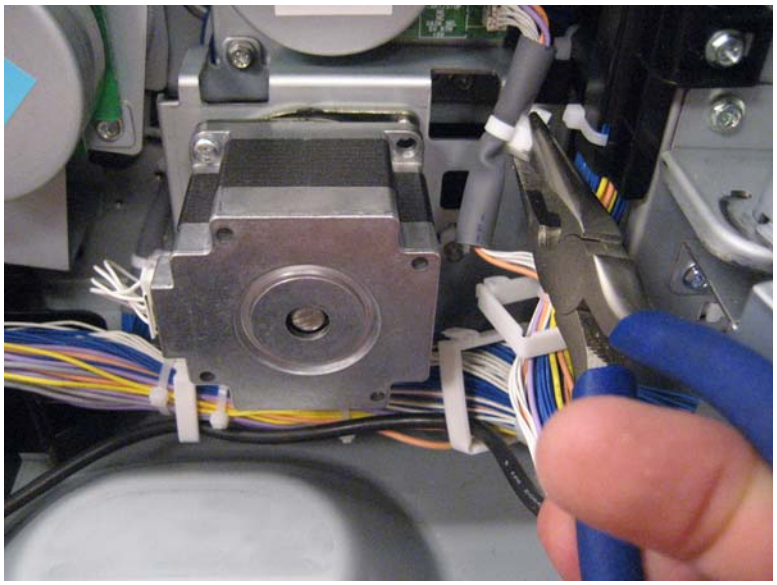


6. Swing the PCBA door open.

7. Disconnect the cable from the media transport/MPF drive motor.

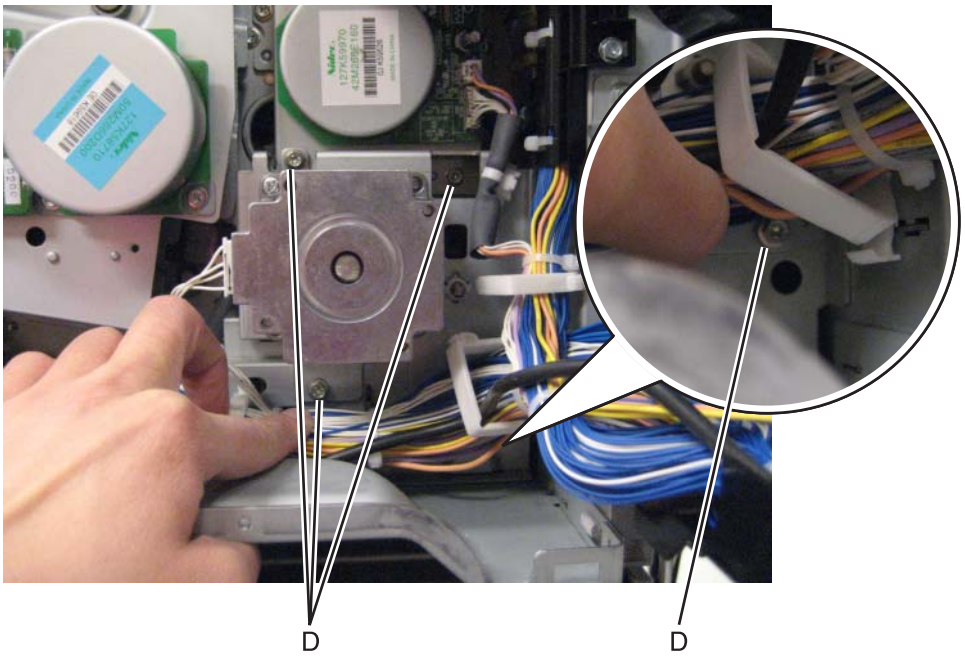


8. Release the clamp securing the harness to the machine.



Note: The lower right screw is obscured by the large harness.

9. Remove the four screws (D) securing the media transport/MPF drive motor to the machine.



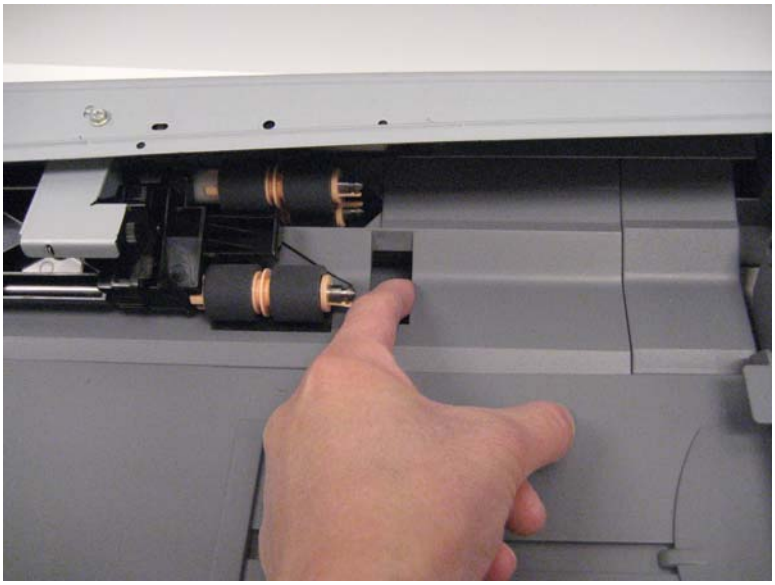
Warning: When removing the media transport/MPF drive motor, ensure that the plastic bushing does not become damaged.

10. Remove the media transport/MPF drive motor from the machine.

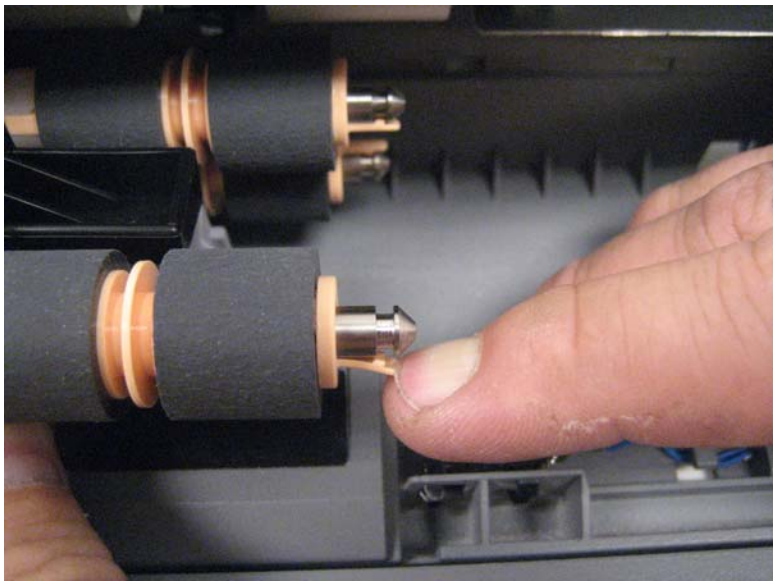
Replacement warning: When replacing the media transport/MPF drive motor, ensure that the shaft, gears, and bushing are properly aligned or damage may occur.

MPF roller removal

1. Remove the left rear lower cover. See **"Left rear lower cover removal" on page 4-7**.
2. Remove the MPF tray feeder. See **"MPF tray feeder removal" on page 4-134**.
3. Remove the MPF top cover. See **"MPF top cover removal" on page 4-8**.
4. Gently detach the access cover.



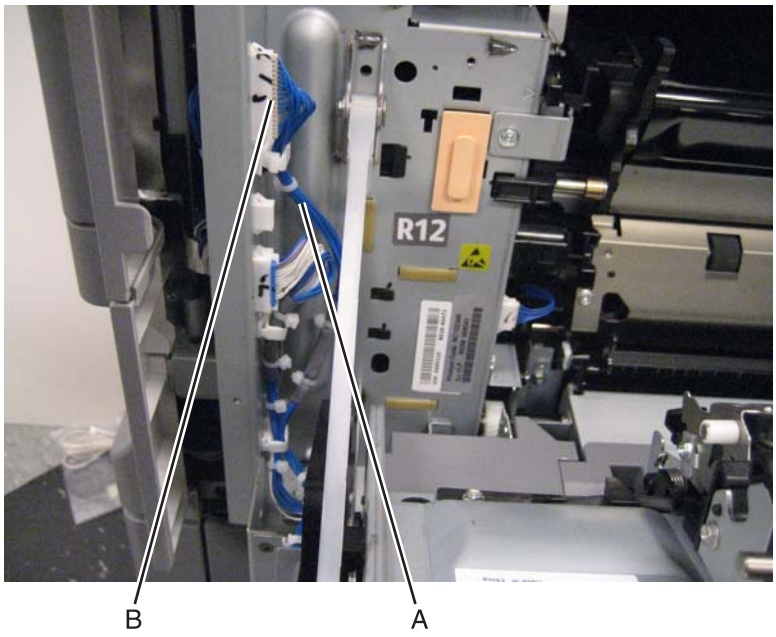
5. Press the three latches on each MPF feed roller.



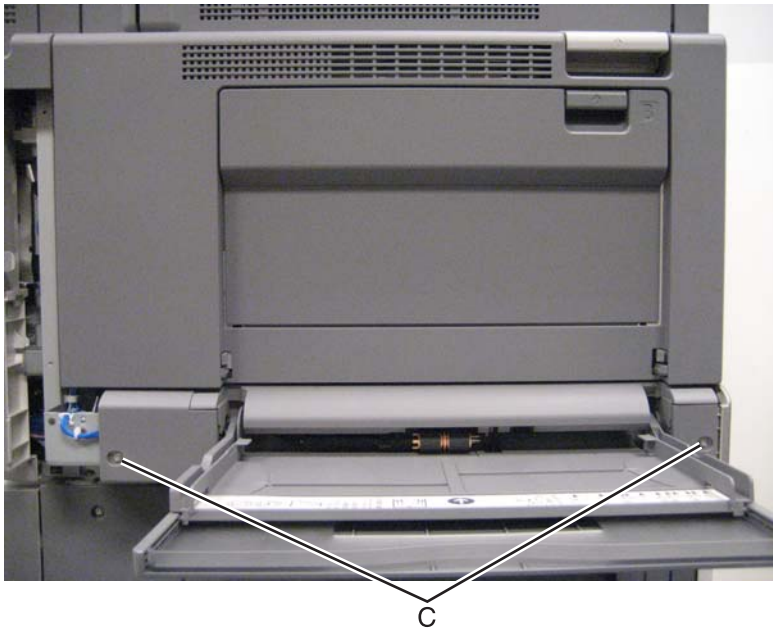
6. Remove the MPF feed rollers.

MPF tray feeder removal

1. Remove the left rear lower cover. See **"Left rear lower cover removal" on page 4-7**.
2. Open the printer left duplex door.
3. Release the harness (A) from the clamps.
4. Close the printer left duplex door.
5. Disconnect the cable (B).



6. Remove the two screws (C).

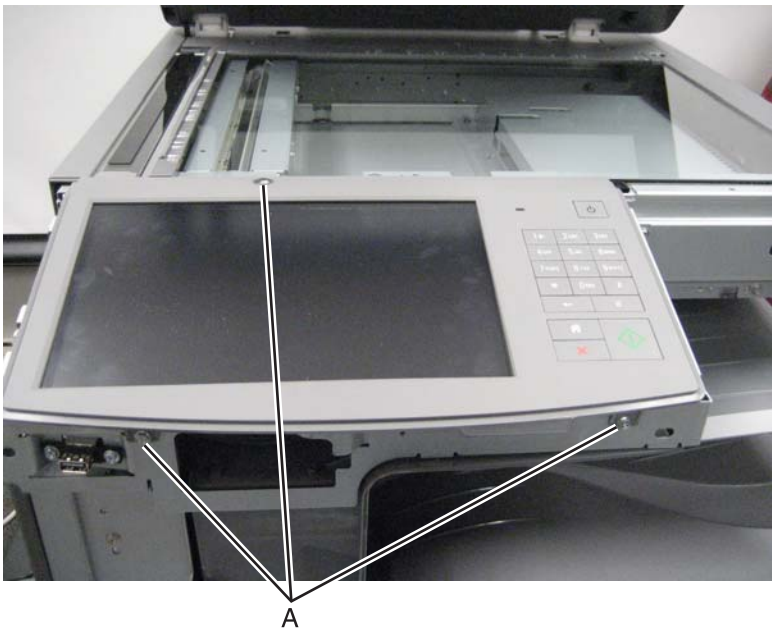


7. Remove the MPF tray feeder.

Operator panel assembly removal

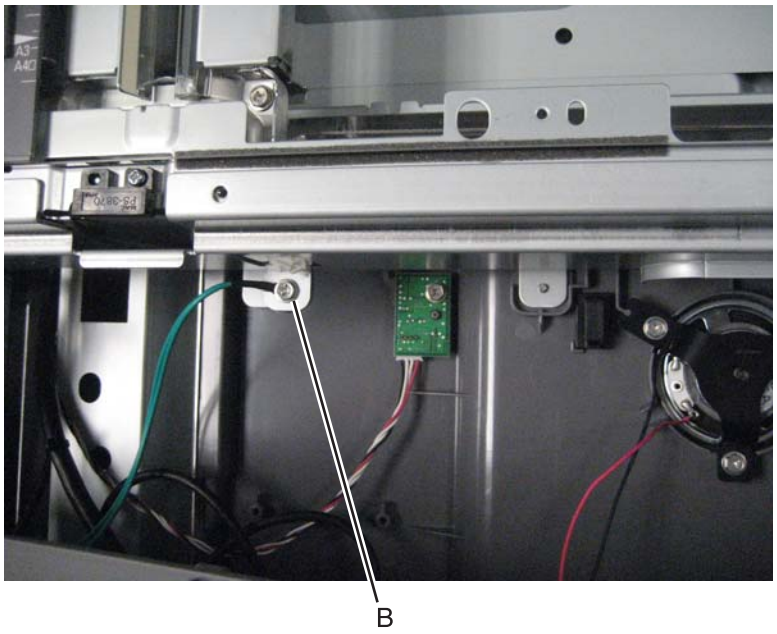
Warning: If you are replacing the operator panel in addition to the RIP PCBA or the operator panel PCBA, you must replace one component at a time. After you replace one component, perform a POR on the device before replacing a second component. If you replace the components simultaneously, the printer will be rendered inoperable.

1. Remove the operator panel right cover. See **"Operator panel right cover removal" on page 4-11**.
2. Remove the operator panel left cover. See **"Operator panel left cover removal" on page 4-10**.
3. Remove the operator panel front cover. See **"Operator panel front cover (MFP) removal" on page 4-8**.
4. Remove the three screws (A).

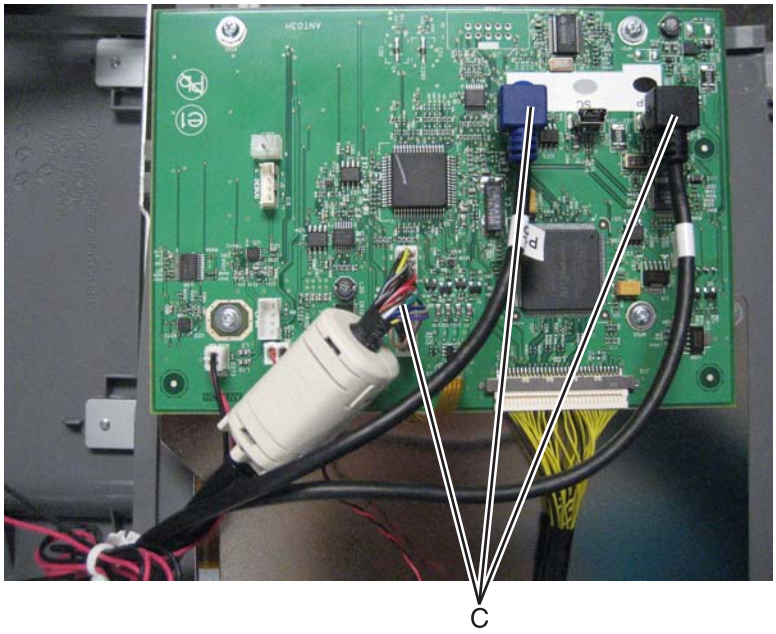


5. Remove the operator panel assembly from the machine.

6. Remove the screw (B) securing the ground wire to the machine.



7. Disconnect the four cables (C) from the operator panel.

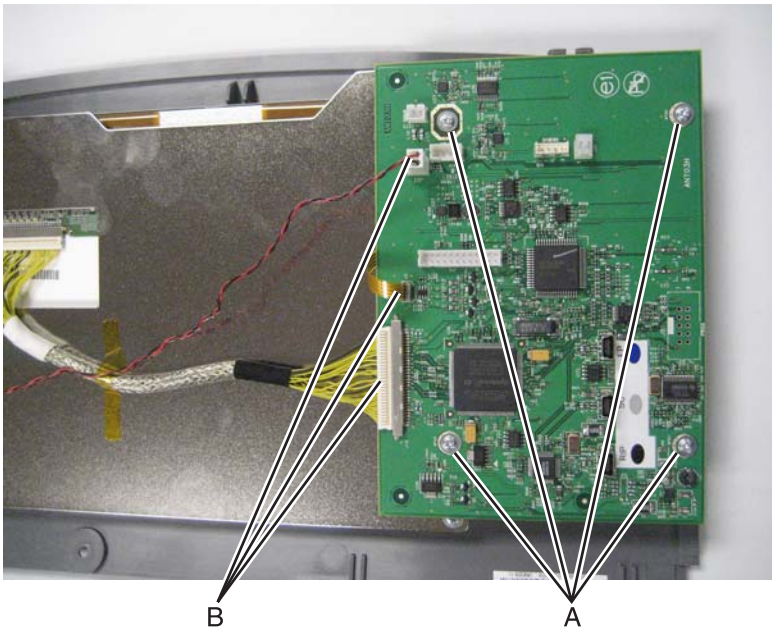


Operator panel PCBA (MFP) removal

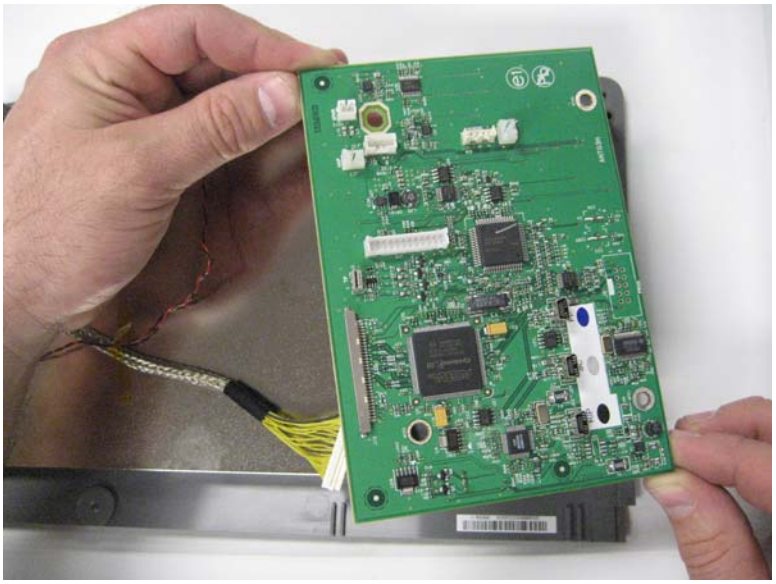
Warning: If you are replacing the operator panel PCBA in addition to the operator panel or the RIP PCBA, you must replace one component at a time. After you replace one component, perform a POR on the device before replacing a second component. If you replace the components simultaneously, the printer will be rendered inoperable.

1. Remove the operator panel right cover. See **"Operator panel right cover removal" on page 4-11**.
2. Remove the operator panel left cover. See **"Operator panel left cover removal" on page 4-10**.
3. Remove the operator panel front cover. See **"Operator panel front cover (MFP) removal" on page 4-8**.
4. Remove the operator panel. See **"Operator panel top cover (MFP) removal" on page 4-11**.
5. Remove the four screws (A) securing the operator panel to the assembly.

6. Disconnect the three cables (B).



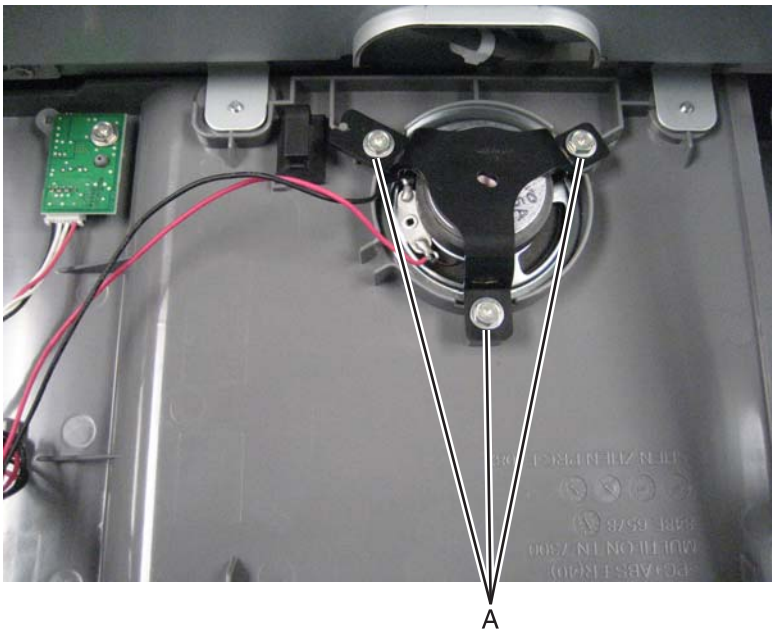
7. Remove the operator panel PCBA.



Operator panel speaker (MFP) removal

1. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
2. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
3. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
4. Remove the operator panel. See **“Operator panel top cover (MFP) removal” on page 4-11**.

5. Remove the three screws (A) securing the bracket to the machine.



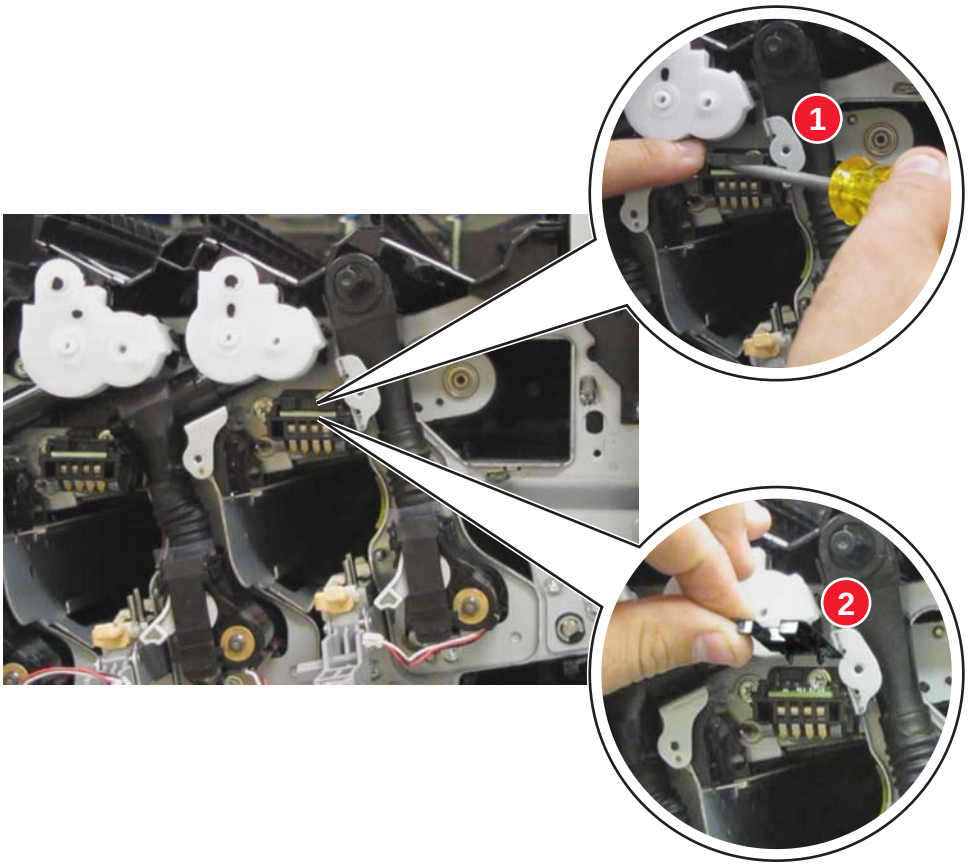
6. Remove the bracket.

7. Remove the operator panel speaker.

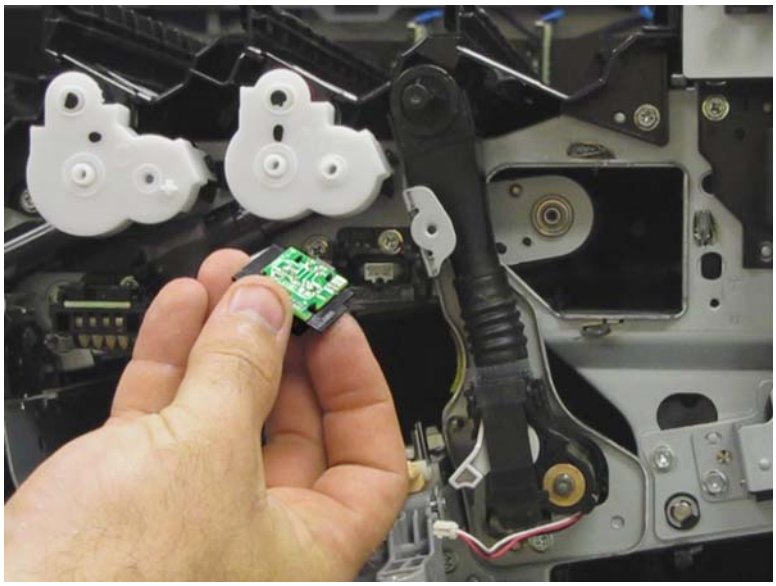
PC smart chip socket (C, M, Y, K) removal

1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the inner plate. See **“Inner plate removal” on page 4-104**.

10. Using a flat-blade screwdriver, pry the plastic cover off the socket and remove.

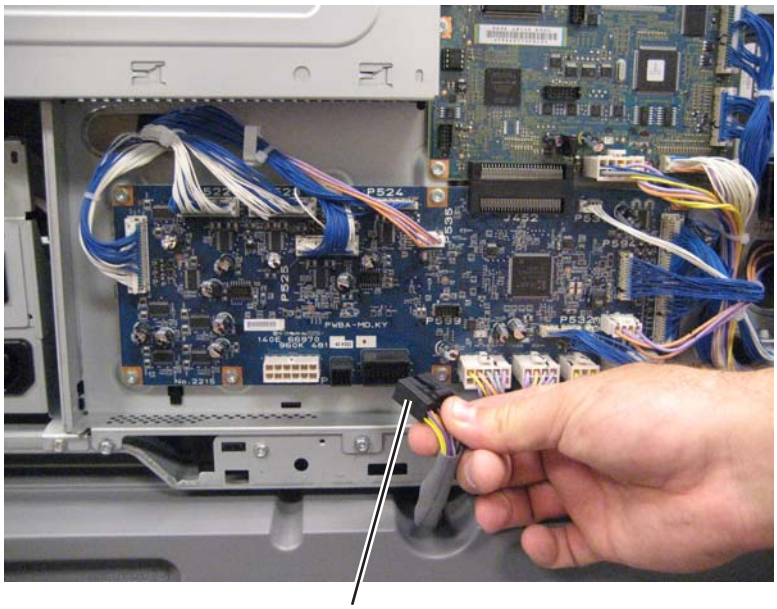


11. Pull the PC smart chip socket and remove.

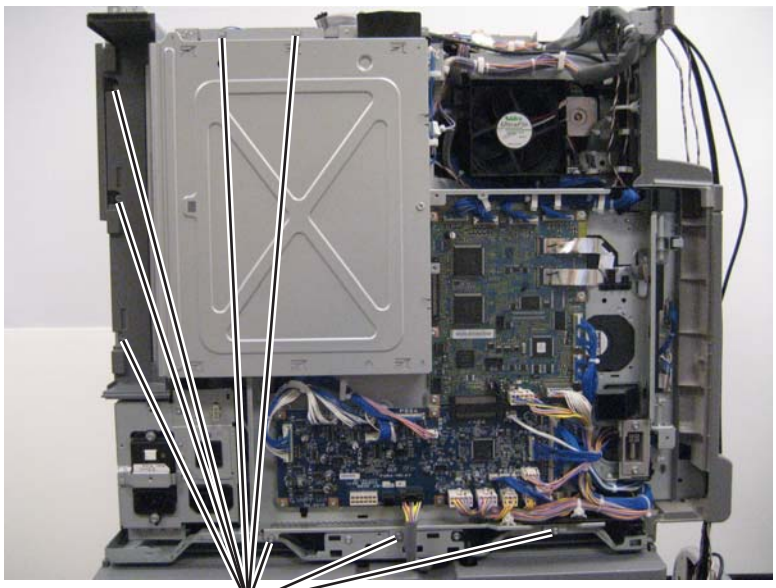


PC/developer drive motor cooling fan removal

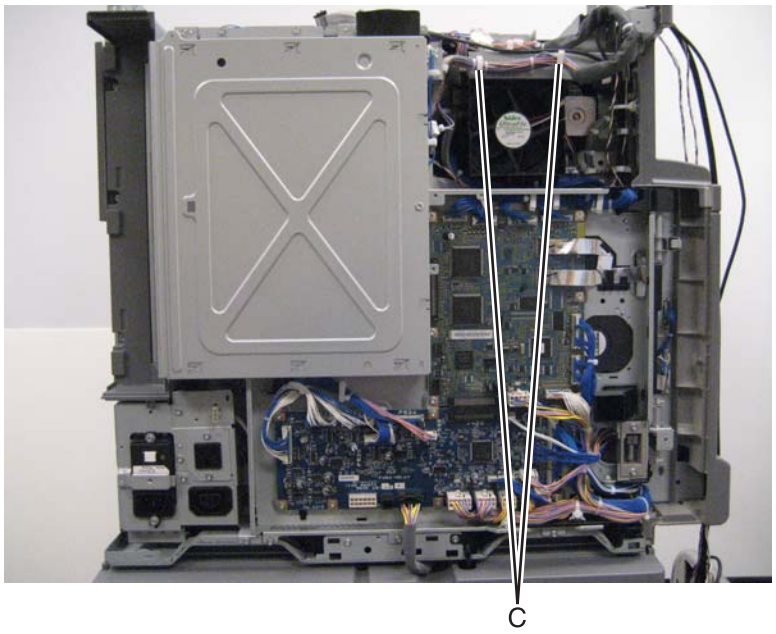
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.
3. Disconnect the input option cable (A).



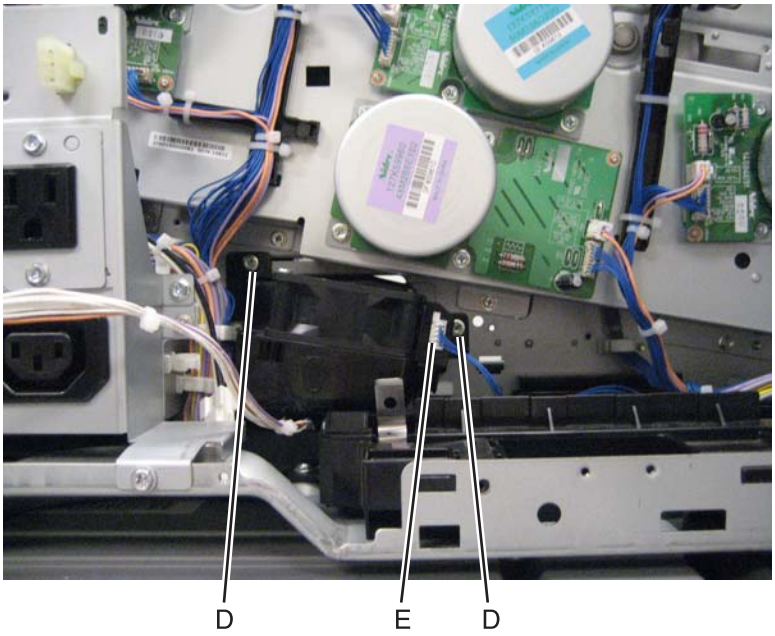
4. Remove the eight screws (B) securing the PCBA door to the machine.



5. Release the two clamps (C) to release the harness.



6. Swing the PCBA door open.
7. Remove the developer HVPS PCBA. See **“Developer HVPS PCBA removal” on page 4-78**.
8. Remove the two screws (D) securing the PC/developer drive motor cooling fan to the machine.
9. Disconnect the cable (E).

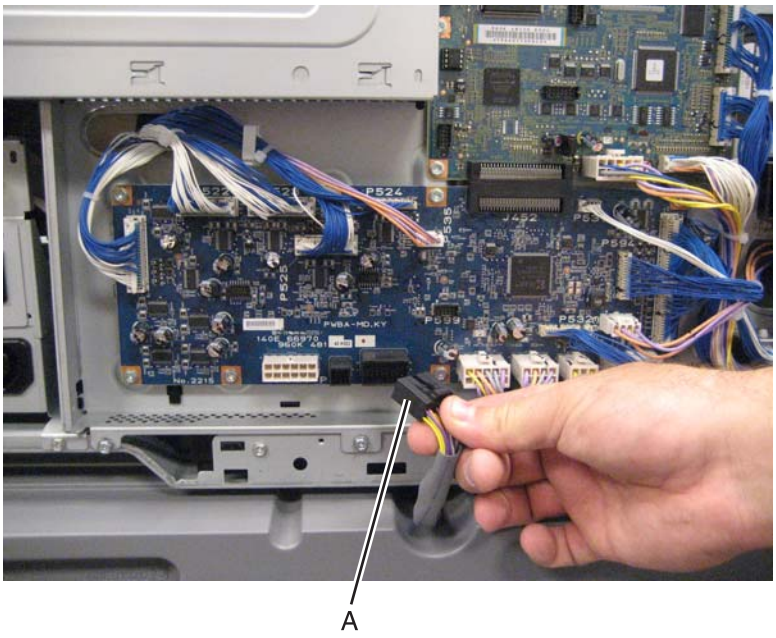


10. Remove the PC/developer drive motor cooling fan.

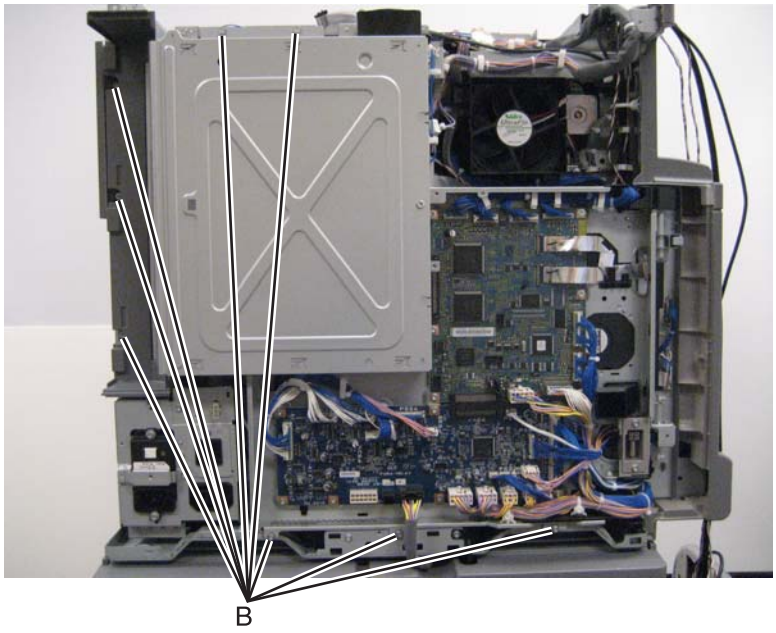
PC/developer drive motor removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

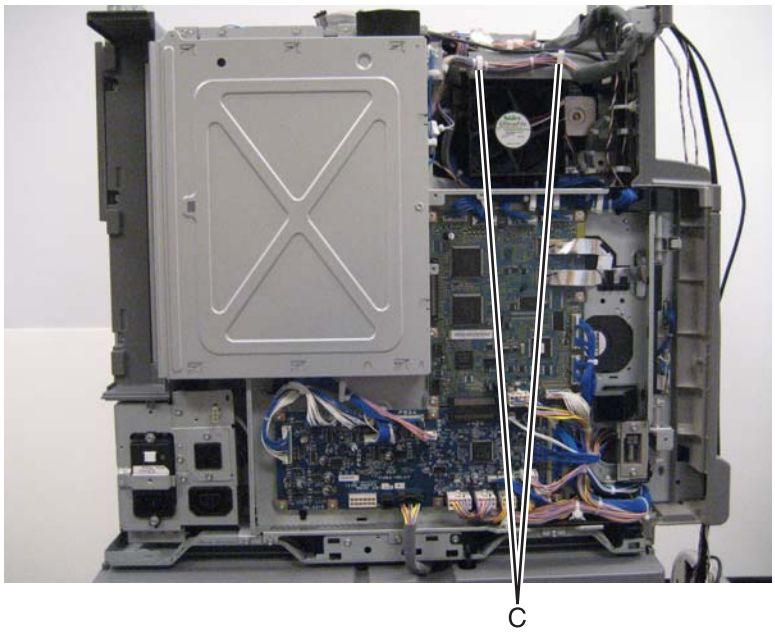
3. Disconnect the input option cable (A).



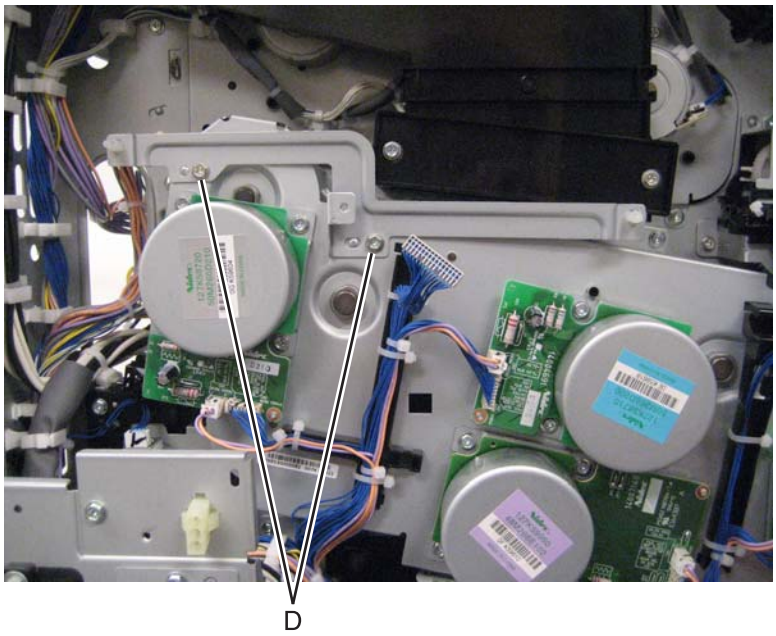
4. Remove the eight screws (B) securing the PCBA door to the machine.



5. Release the two clamps (C) to release the harness.



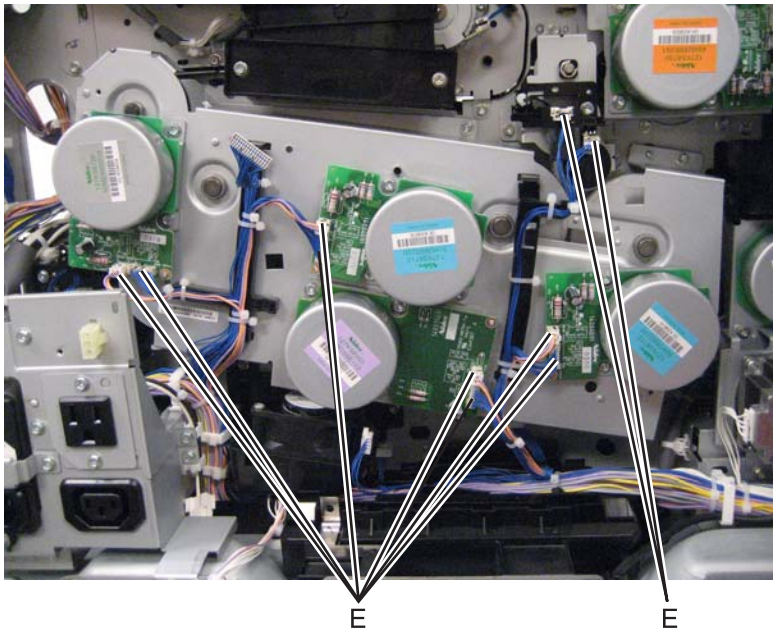
6. Swing the PCBA door open.
7. Remove the transfer roll HVPS PCBA. See the **"Transfer roll HVPS PCBA removal" on page 4-187** section.
8. Remove the developer HVPS PCBA. See the **"Developer HVPS PCBA removal" on page 4-78** section.
9. Remove the two screws (D) securing the bracket to the machine.



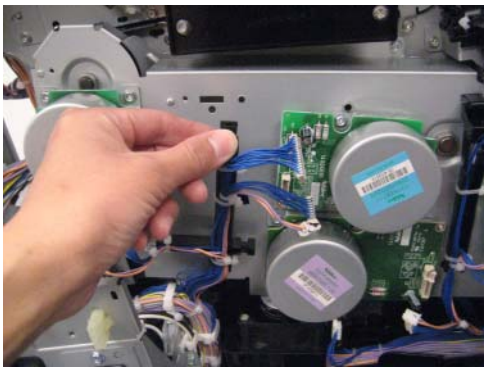
10. Remove the bracket.

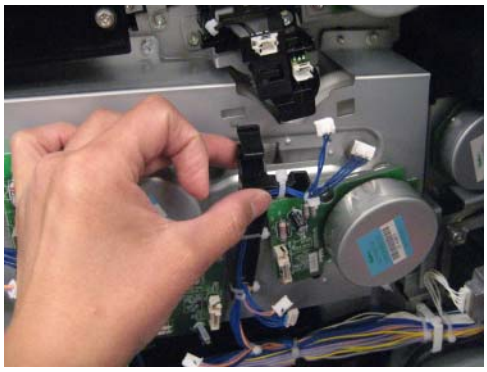
Warning: When disconnecting the two wire harnesses from the motors, make sure that the release hook is pressed or the connections will be damaged.

11. Disconnect the ten cables (E).



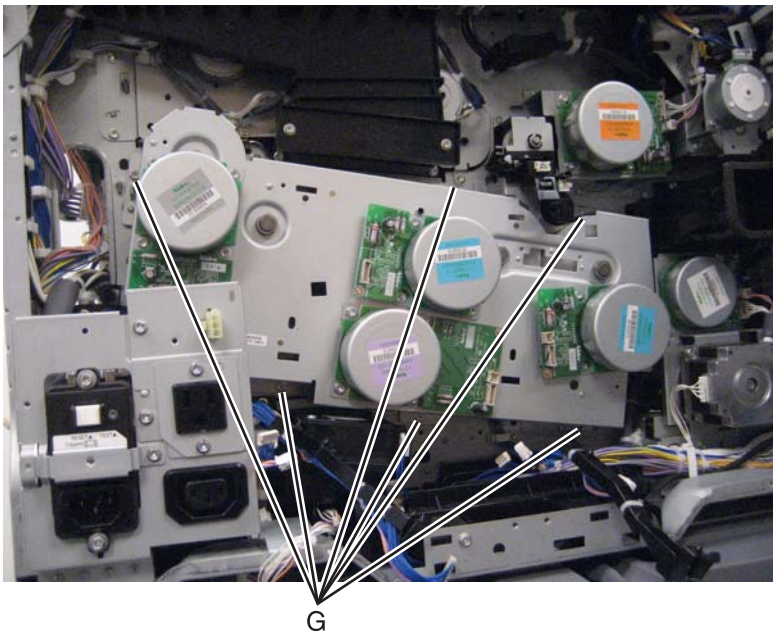
12. Release the two latches securing the two harness guides to the machine.





13. Move the two harness guides away from main drive motor.

14. Remove the six screws (G) securing the PC/developer drive motor to the machine.

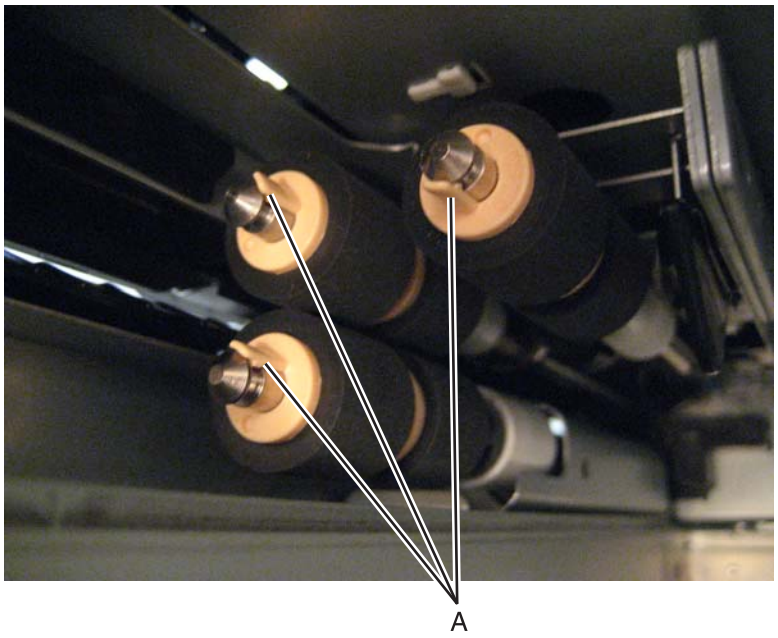


15. Remove the PC developer drive motor from the machine.

Pick roller removal

1. Remove the appropriate feeder unit. See **“Printer tray 1 feeder removal” on page 4-150**, **“Tray module media feeder removal” on page 4-288**, **“TTM tray 4 media feeder removal” on page 4-301**, or **“TTM tray 3 feeder removal” on page 4-297**.
2. Slide the plastic media guide toward the front of the machine.

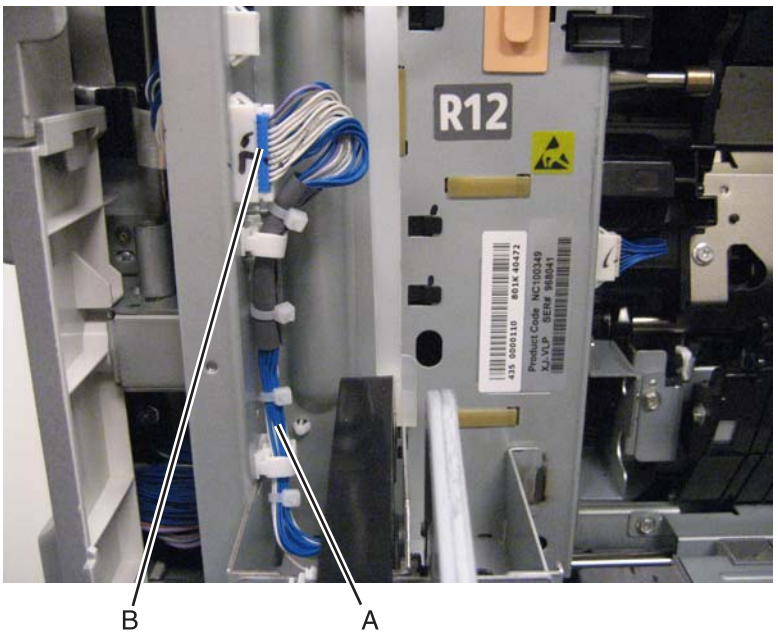
3. Release the hook (A) on each of the three pick rollers.



4. Slide the pick rollers off of the shaft to remove.

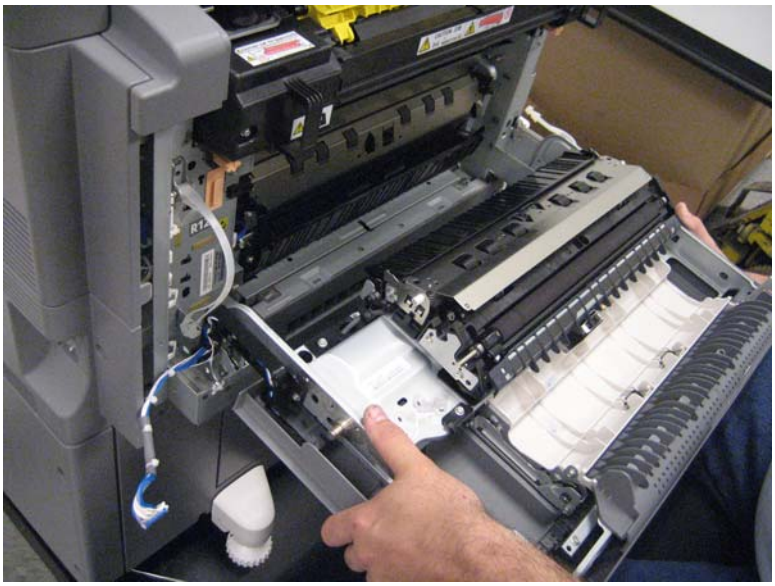
Printer left duplex door assembly removal

1. Remove the left rear lower cover. See **"Left rear lower cover removal" on page 4-7**.
2. Remove the MPF tray feeder. See **"MPF tray feeder removal" on page 4-134**.
3. Remove the e-clip securing the rear plastic support strap to the printer left duplex door assembly.
4. Remove the rear plastic support strap.
5. Rotate the front plastic support strap 90 degrees and remove it from the machine.
6. Disconnect the harness from the clamps (A).
7. Disconnect the cable (B).



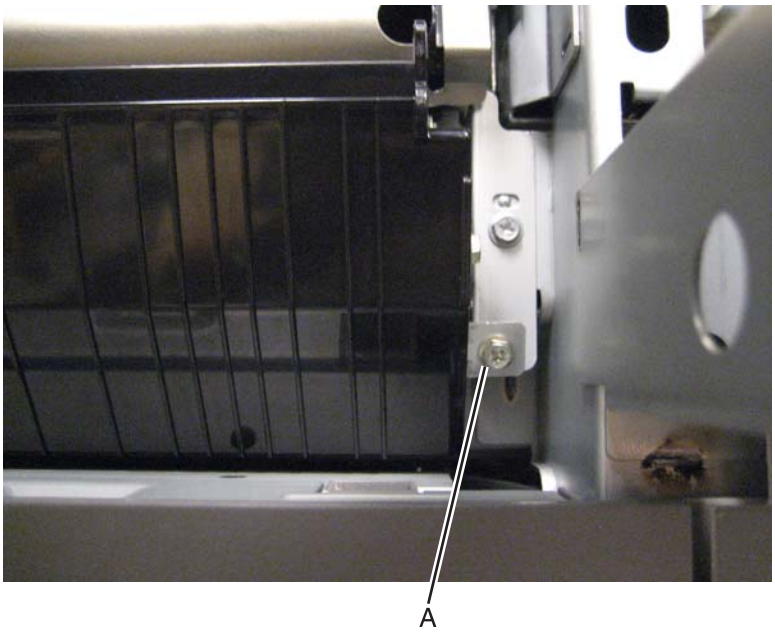
8. Lift the printer left duplex door assembly straight up to detach it from the machine.

9. Remove the printer left duplex door assembly.

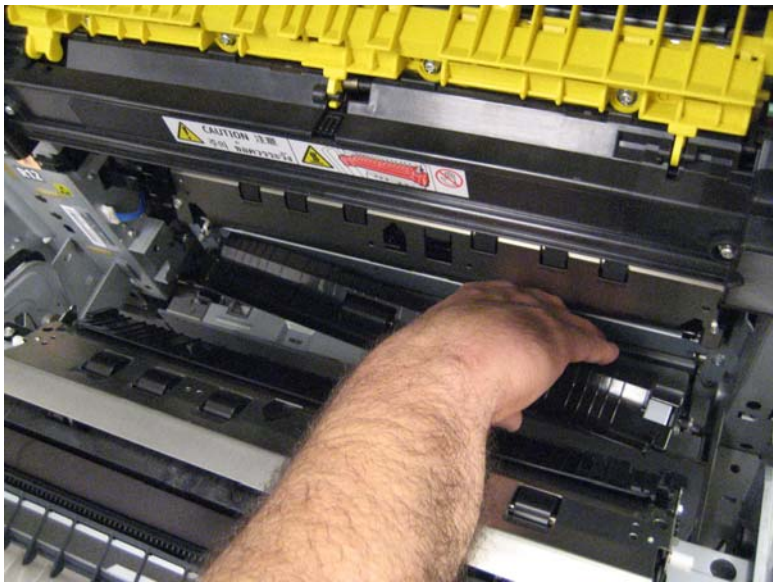


Printer media turn guide removal

1. Remove the left rear lower cover. See **“Left rear lower cover removal” on page 4-7**.
2. Remove the MPF tray feeder. See **“MPF tray feeder removal” on page 4-134**.
3. Open the printer left duplex door.
4. Loosen the screw (A) on the front of the printer media turn guide.



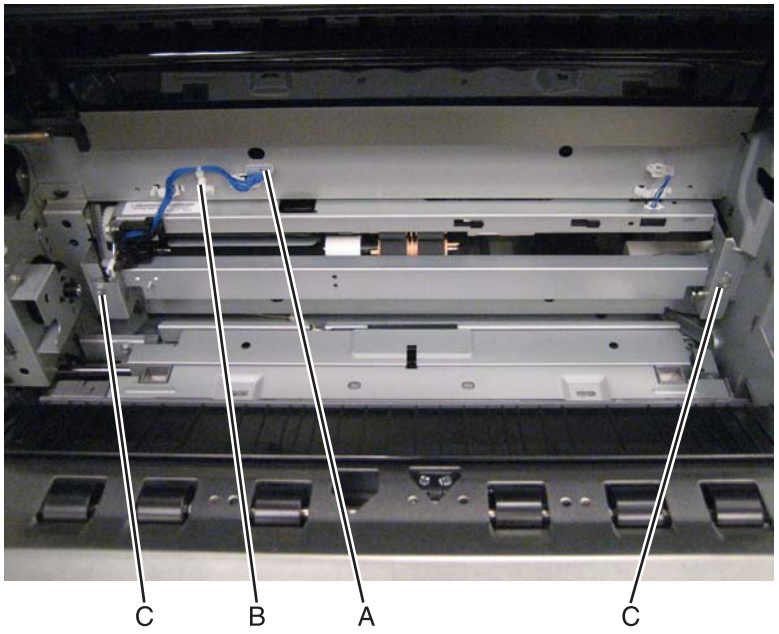
5. Detach the front of the printer media turn guide, and then detach the back of the printer media turn guide.



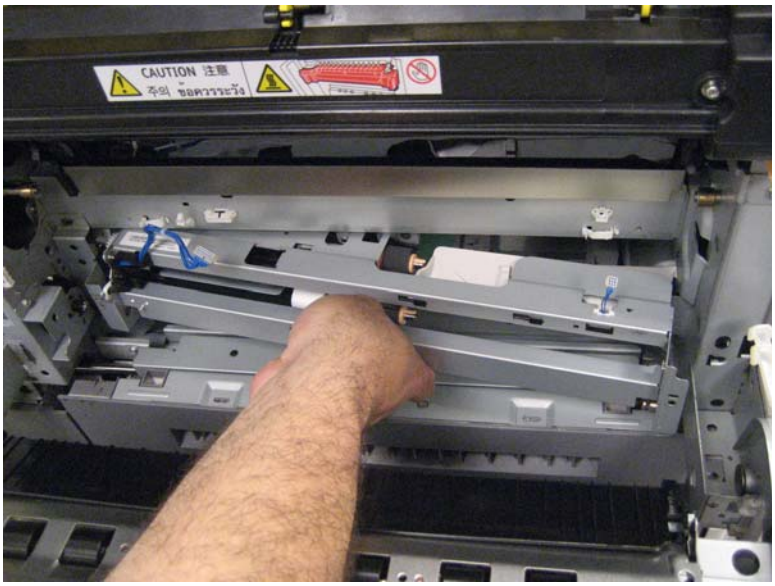
6. Remove the printer media turn guide.

Printer tray 1 feeder removal

1. Pull the media tray 1 out from the machine.
2. Remove the left rear lower cover. See **"Left rear lower cover removal" on page 4-7**.
3. Remove the MPF tray feeder. See **"MPF tray feeder removal" on page 4-134**.
4. Remove the printer media turn guide. See **"Printer media turn guide removal" on page 4-149**.
5. Remove the registration transport roller. See **"Registration/transport roller assembly removal" on page 4-155**.
6. Disconnect the cable (A).
7. Release the two harness from the clamps (B).
8. Remove the two screws (C).

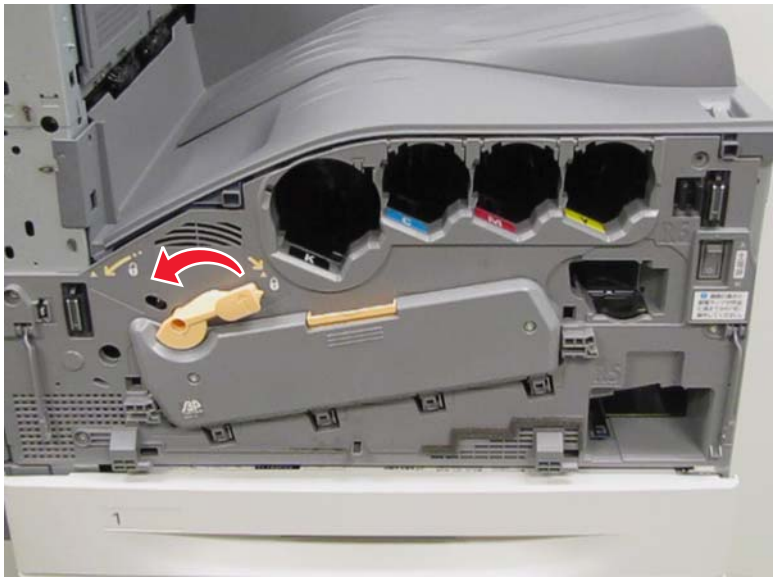


9. Remove the printer tray 1 feeder.

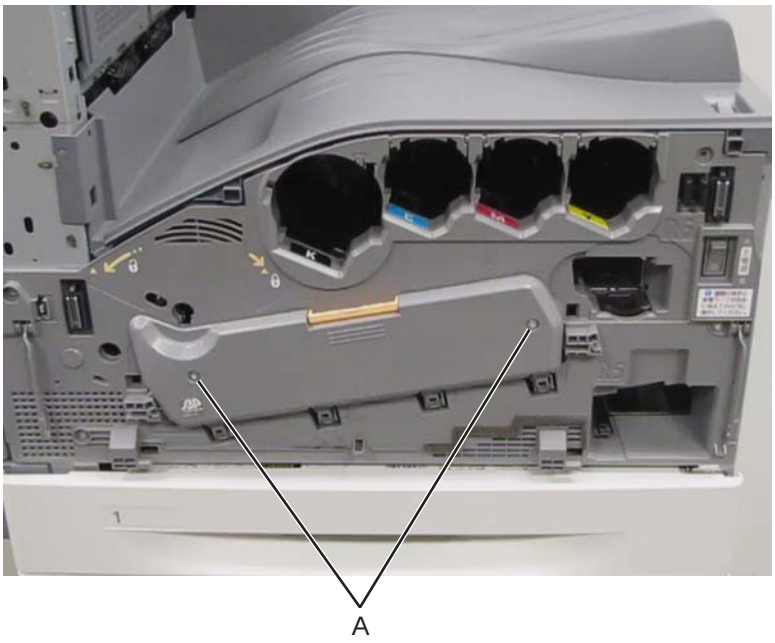


Printhead retract door removal

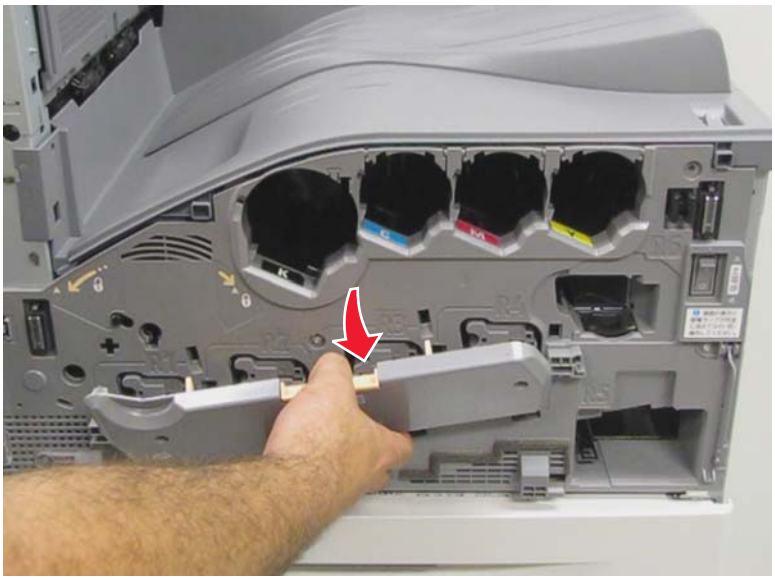
1. Open the front door.
2. Rotate the transfer belt lever counterclockwise to the unlock position.



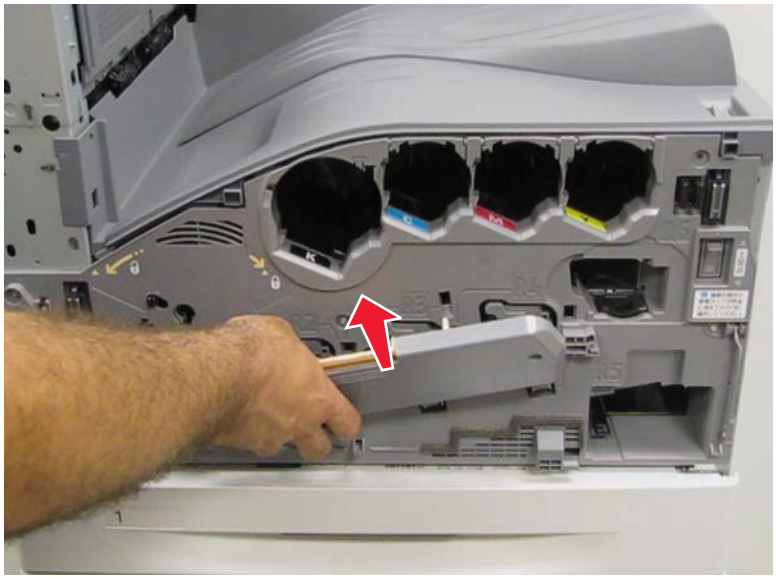
3. Remove the two screws (A) from the printhead retract door.



4. Press the latch to release the door.

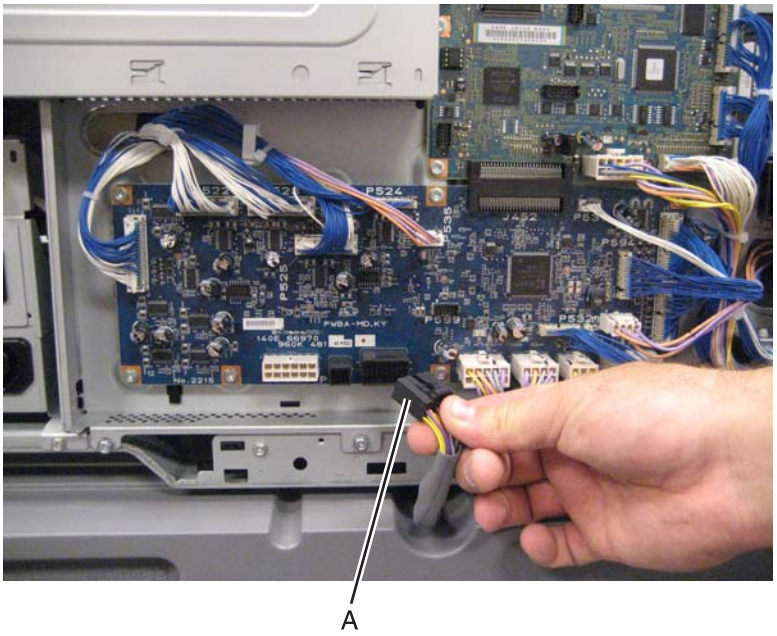


5. Remove the printhead retract door.

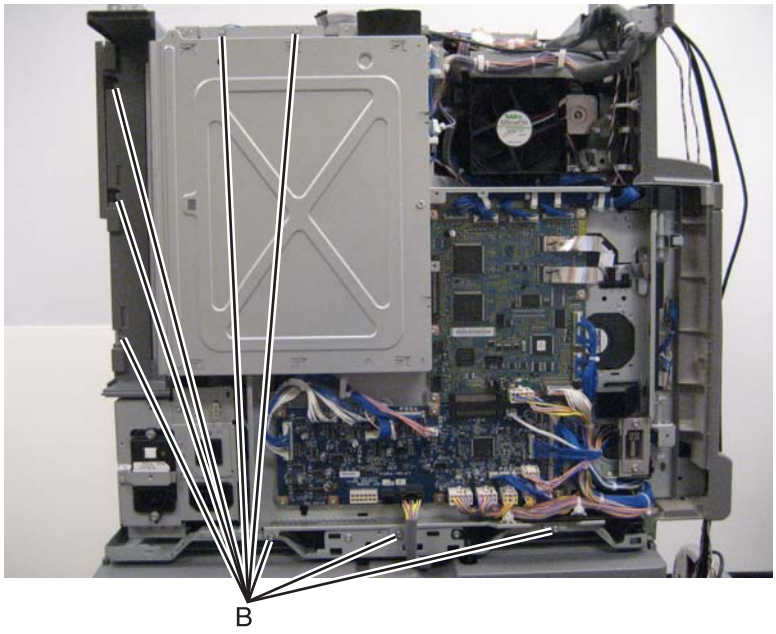


Registration drive motor removal

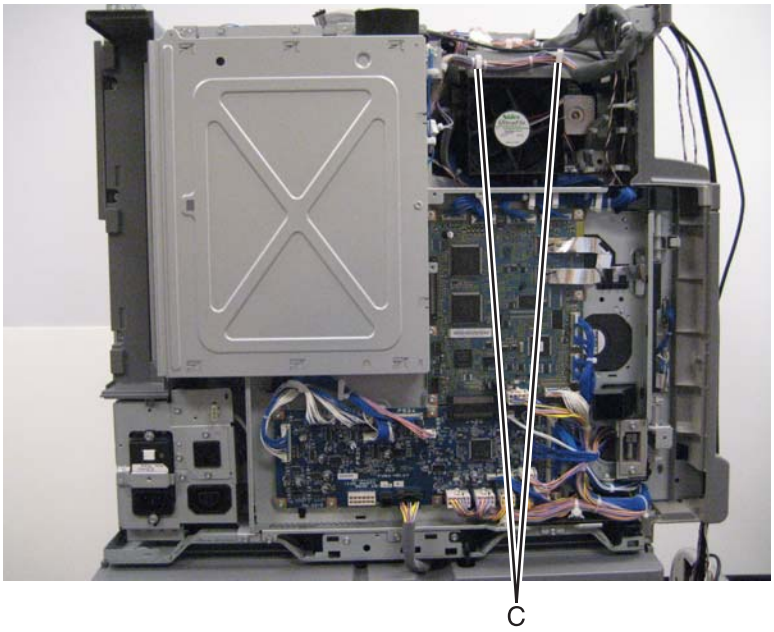
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.

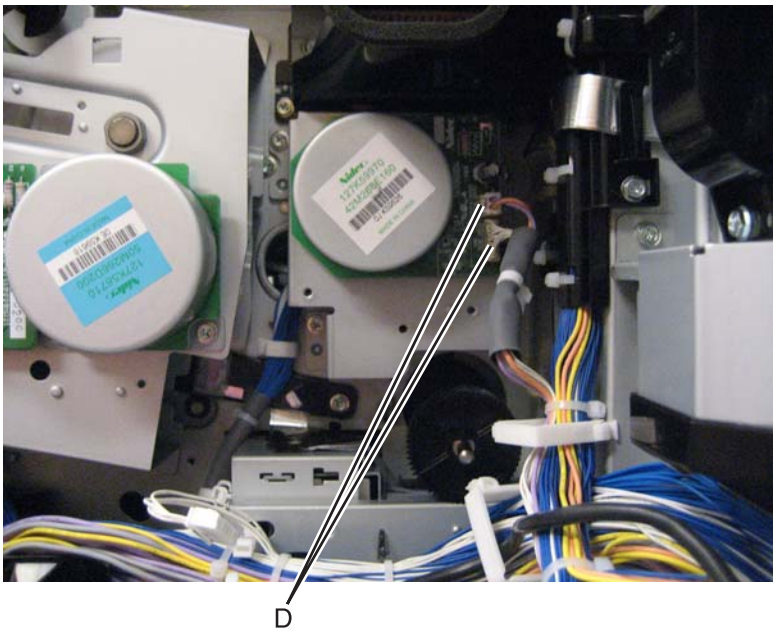


5. Release the two clamps (C) to release the harness.

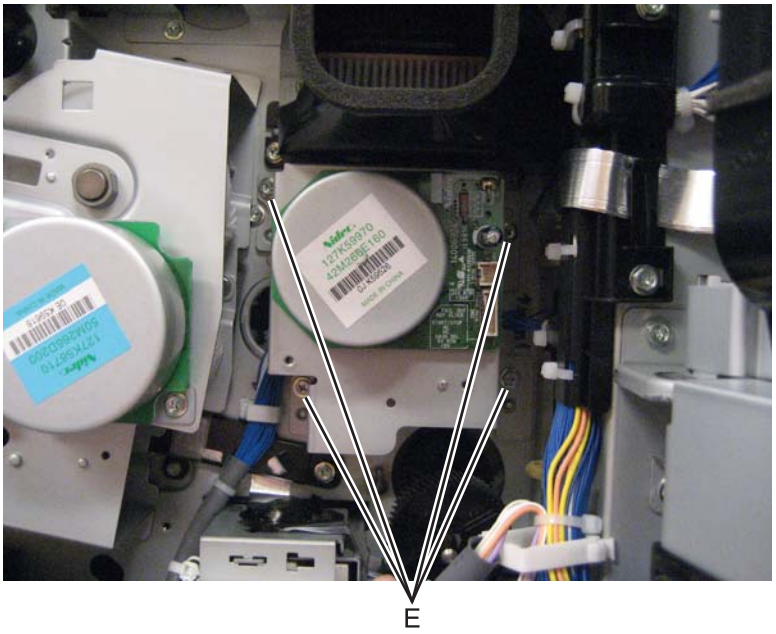


6. Swing the PCBA door open.
7. Remove the media transport/MPF drive motor. See the **“Media transport/MPF drive motor removal” on page 4-130**.

8. Disconnect the two cables (D).



9. Remove the four screws (E) securing the registration drive motor to the machine.

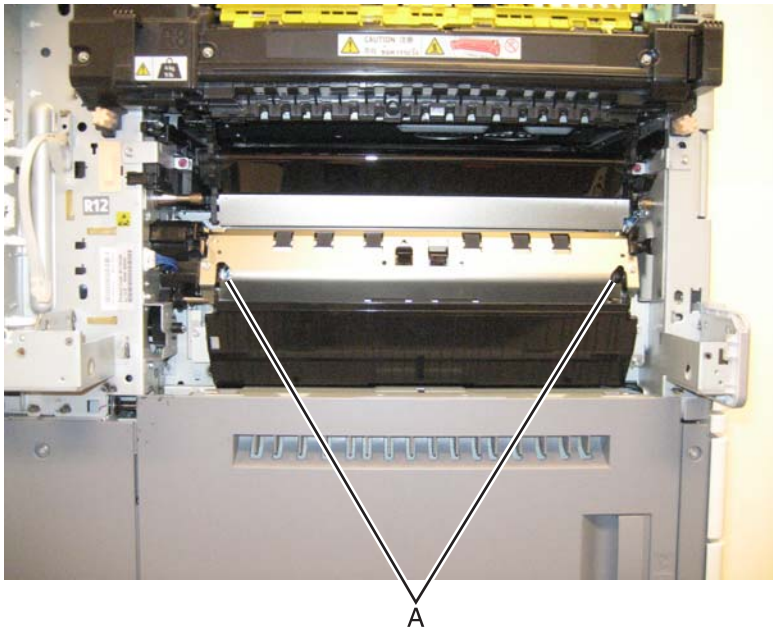


10. Remove the registration drive motor.

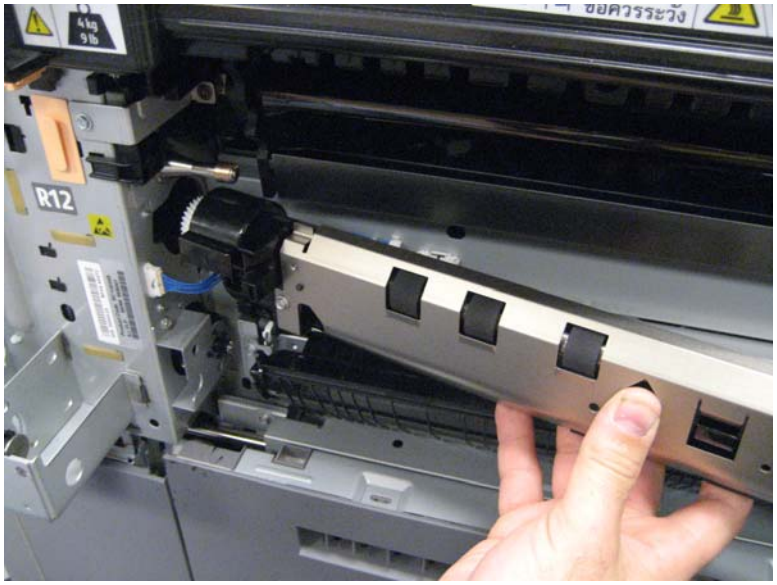
Registration/transport roller assembly removal

1. Remove the left rear lower cover. See **"Left rear lower cover removal" on page 4-7**.
2. Remove the MPF tray feeder. See **"MPF tray feeder removal" on page 4-134**.
3. Open the printer left duplex door assembly.
4. Remove the e-clip securing the rear plastic support strap to the printer left duplex door assembly.
5. Remove the rear plastic support strap.
6. Rotate the front plastic support strap 90 degrees and remove it from the machine.

7. Remove the two screws (A).



8. Disconnect the cable (B).



9. Remove the registration/transport roller assembly.

RIP PCBA removal

Before you replace the RIP PCBA, make sure you back up the eSF solutions and settings. See **"eSF solutions backup" on page 4-158**.

Warning: If you are replacing the RIP PCBA in addition to the operator panel or the operator panel PCBA, you must replace one component at a time. After you replace one component, perform a POR on the

device before replacing a second component. If you replace the components simultaneously, the printer will be rendered inoperable.

1. Remove the two screws (A) securing the RIP PCBA to the machine.

2. Remove the RIP PCBA.

Important: The replacement RIP PCBA does not contain an NVRAM card. Remove the NVRAM card from the old RIP PCBA and install on the replacement RIP PCBA to restore the NVRAM settings.

eSF solutions backup

If a technician needs to replace the RIP PCBA, the steps below should be taken to back up the eSF solutions and settings:

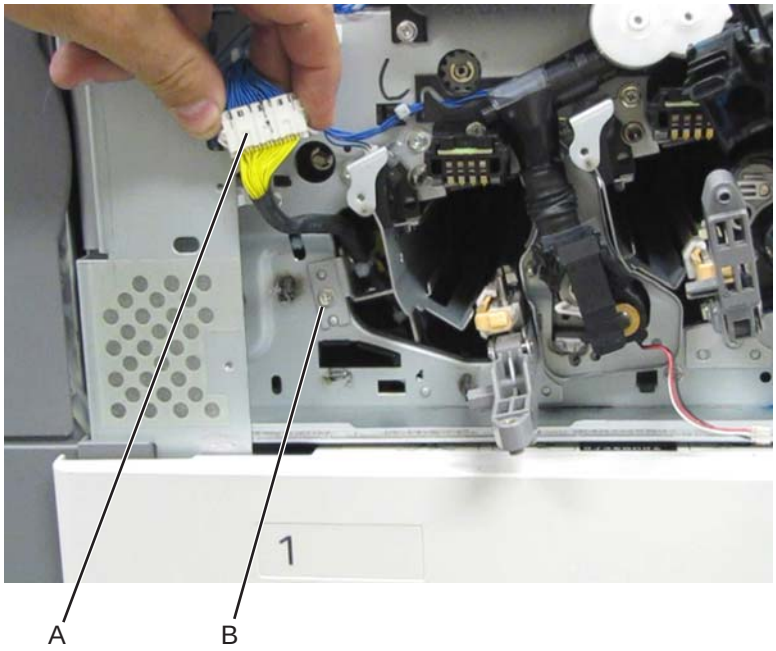
1. POR the printer into invalid engine code mode.
2. Open a Web browser and navigate to the printer's Web page.
3. Navigate to **Settings**, and click the link.
4. Navigate to **Solutions** and click the link.
5. Navigate to Embedded Solutions and click the link.
6. On the Embedded Solutions page, select the apps to be exported by clicking the selection box next to the app.
7. Choose **Export**.

If the Web page cannot be accessed, or an error persists despite trying to boot in Invalid Engine code mode, then there is no way to backup the eSF apps. The technician needs to make the customer aware that the applications and their setting could not be saved.

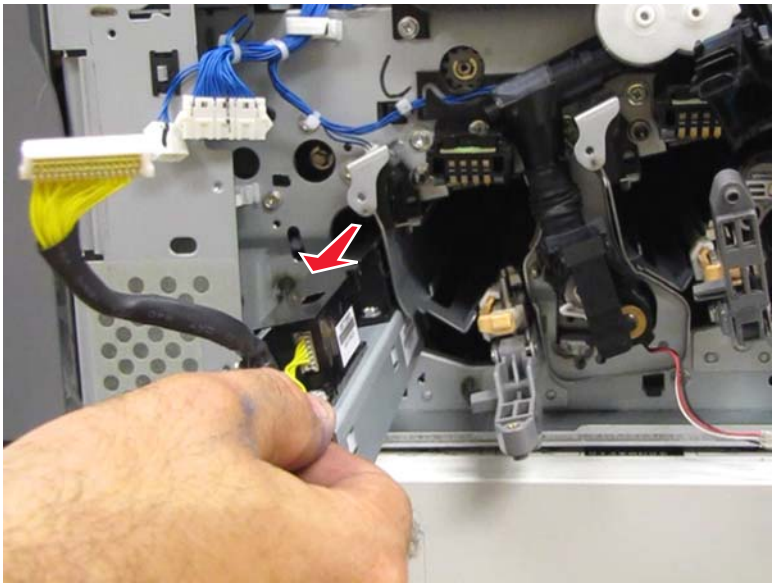
> **Note:** There is a size limit on the export file - 128kb. Because of this, it is recommended that you don't use the “global” backup found in **Settings --> Import/Export --> Export Shortcuts File, Export Settings File, Export Embedded Solutions Settings File and Export Security Setups File**. Customers with a large number of applications or settings may exceed the file size limit and have information truncated in the exported file.

Sensor (image calibration) removal

1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
10. Remove the waste toner add chute. See **“Waste toner auger chute removal” on page 4-200**.
11. Remove the front left cooling fan. See **“Front left cooling fan removal” on page 4-84**.
12. Disconnect the cable (A) from the sensor (image calibration).
13. Remove the screw (B) from the sensor (image calibration).



14. Gently slide the sensor (image calibration) out and remove it.

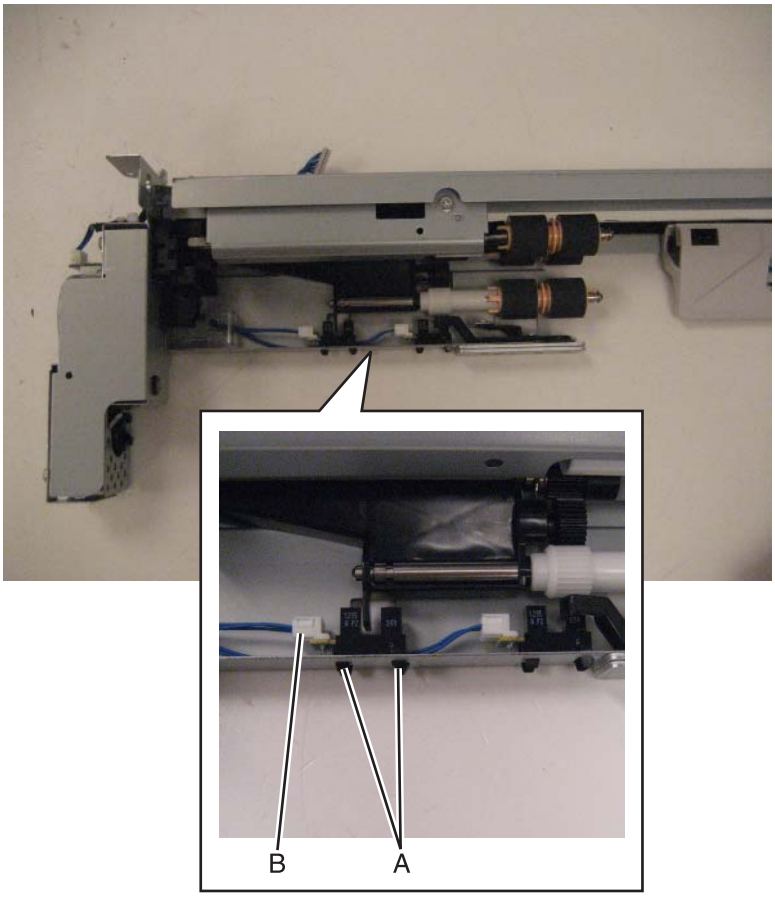


Sensor (media level) removal

This removal procedure applies to trays 1–4.

1. Remove the appropriate feeder unit. See **“Printer tray 1 feeder removal” on page 4-150**, **“Tray module media feeder removal” on page 4-288**, **“TTM tray 4 media feeder removal” on page 4-301**, or **“TTM tray 3 feeder removal” on page 4-297**.
2. Release the tabs (A) securing the sensor (media level) to the assembly.
3. Remove the sensor (media level).

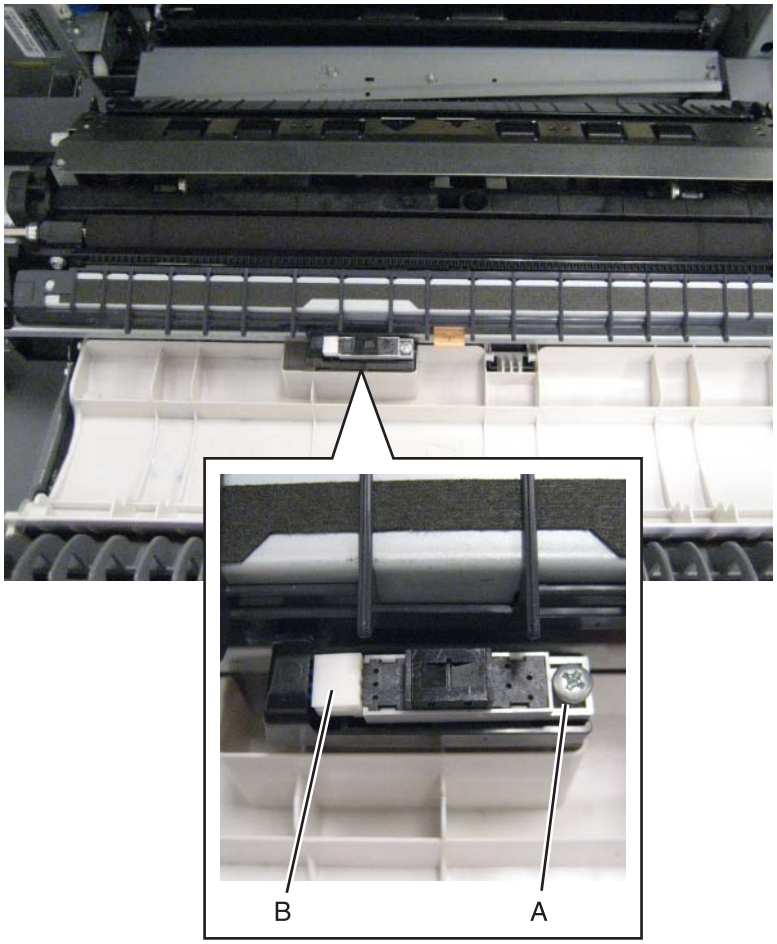
4. Disconnect the harness (B).



Sensor (media on belt) removal

1. Open the printer left duplex door assembly.
2. Remove the screw (A) securing the sensor (media on belt) to the machine.

3. Disconnect the cable (B).

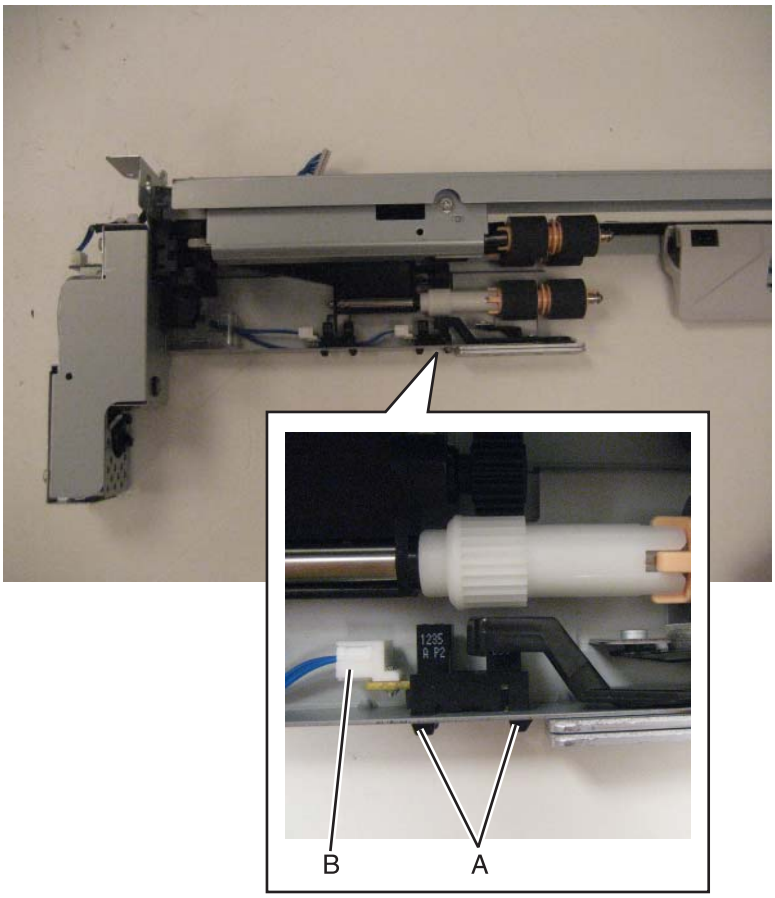


4. Remove the sensor (media on belt).

Sensor (media out) removal

1. Remove the appropriate feeder unit. See **“Printer tray 1 feeder removal” on page 4-150**, **“Tray module media feeder removal” on page 4-288**, **“TTM tray 4 media feeder removal” on page 4-301**, or **“TTM tray 3 feeder removal” on page 4-297**.
2. Remove the media out actuator. See **“Media out actuator removal” on page 4-129**.
3. Release the tab (A) securing the sensor (media out) to the assembly.

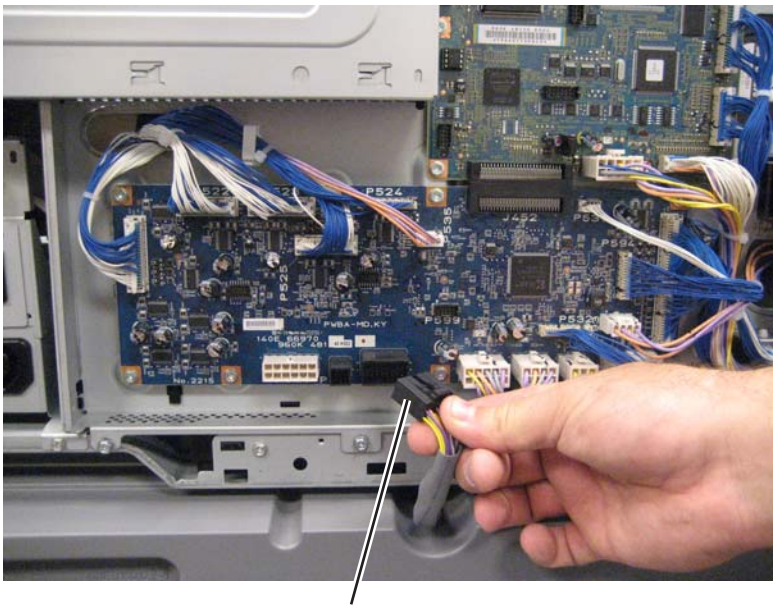
4. Remove the sensor (media out).
5. Disconnect the cable (B).



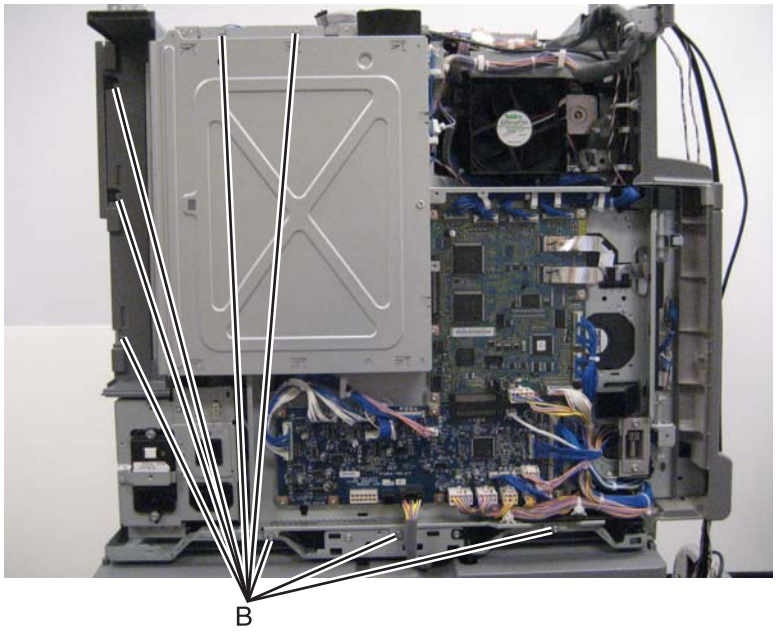
Sensor (printer left duplex door interlock) removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

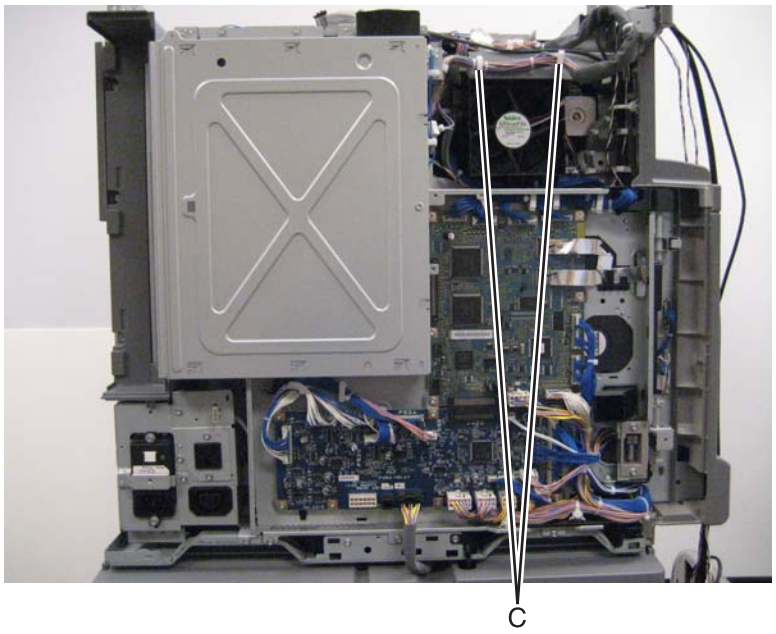
3. Disconnect the input option cable (A).



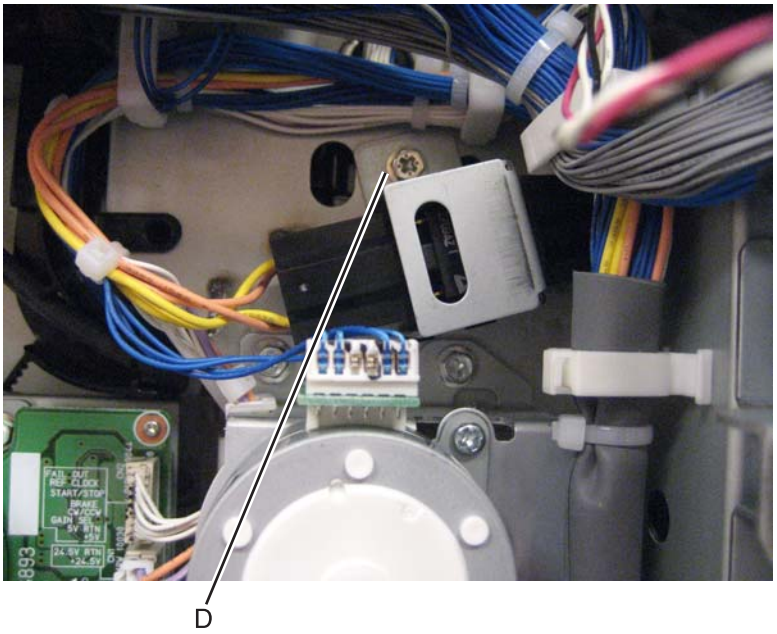
4. Remove the eight screws (B) securing the PCBA door to the machine.



5. Release the two clamps (C) to release the harness.

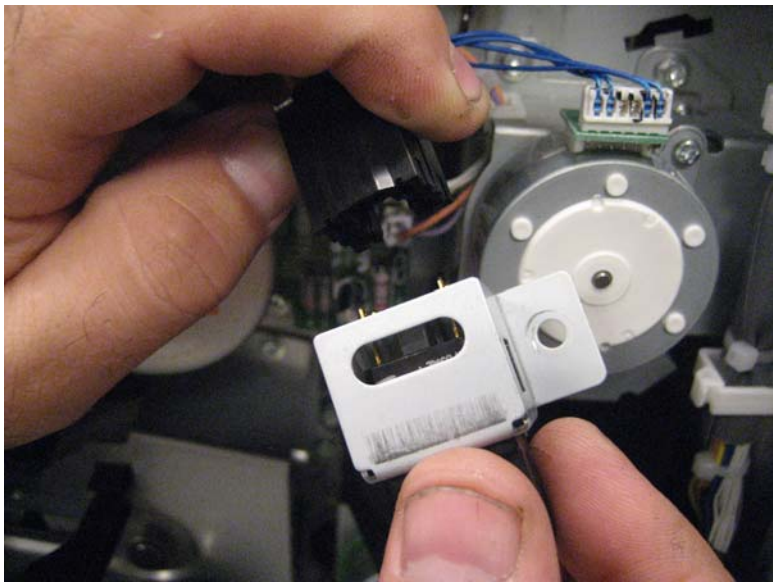


6. Swing the PCBA door open.
7. Remove the screw (D) securing the bracket to the machine.

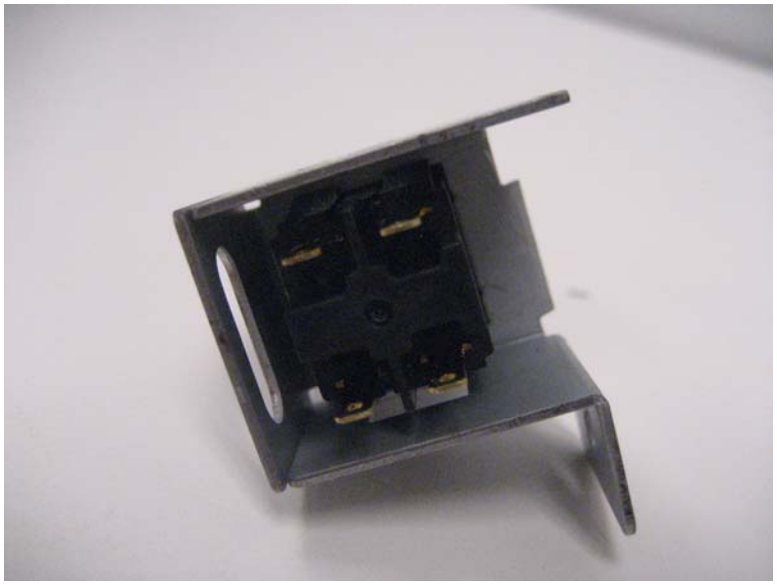


8. Remove the bracket.

9. Disconnect the cable from the sensor (printer left duplex door interlock).



10. Release the four tabs securing the sensor (printer left duplex door interlock) to the bracket.

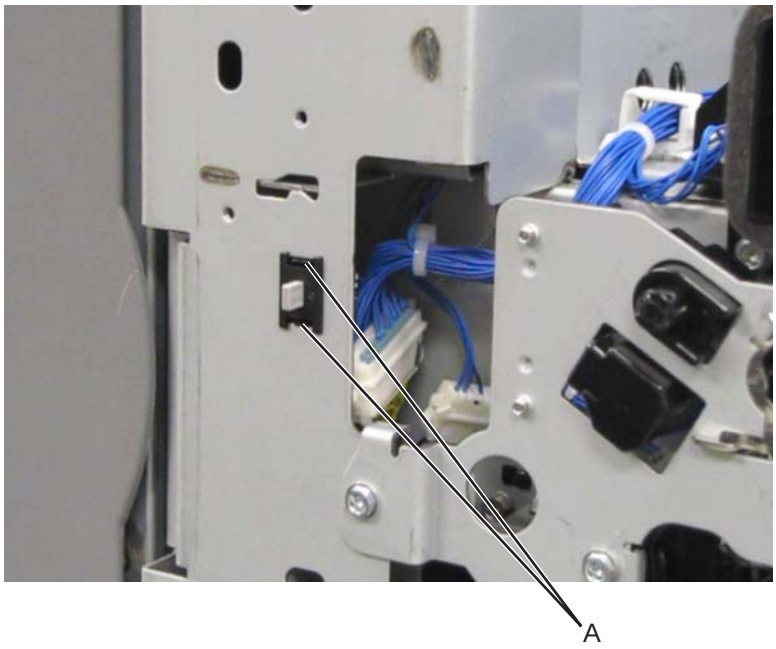


11. Remove the sensor (printer left duplex door interlock) from the bracket.

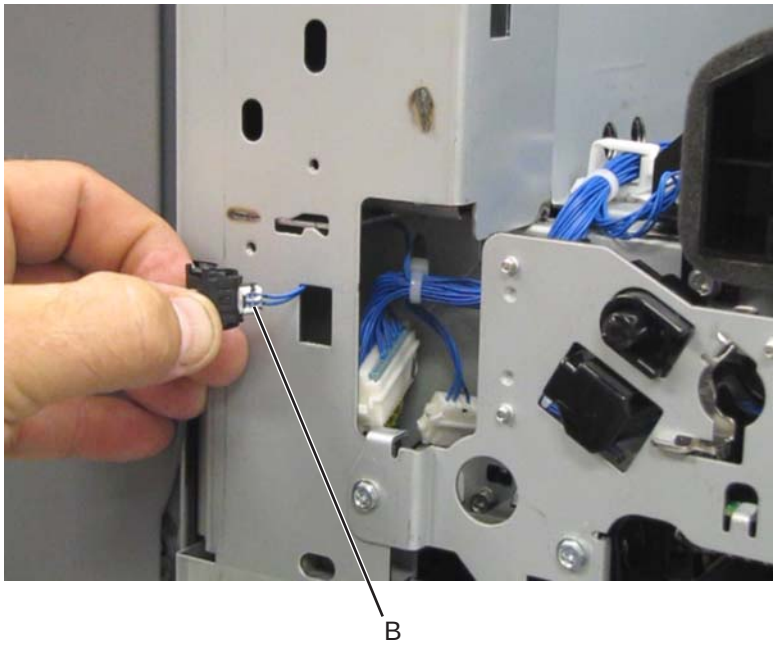
Sensor (printer left front door interlock) removal

1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.

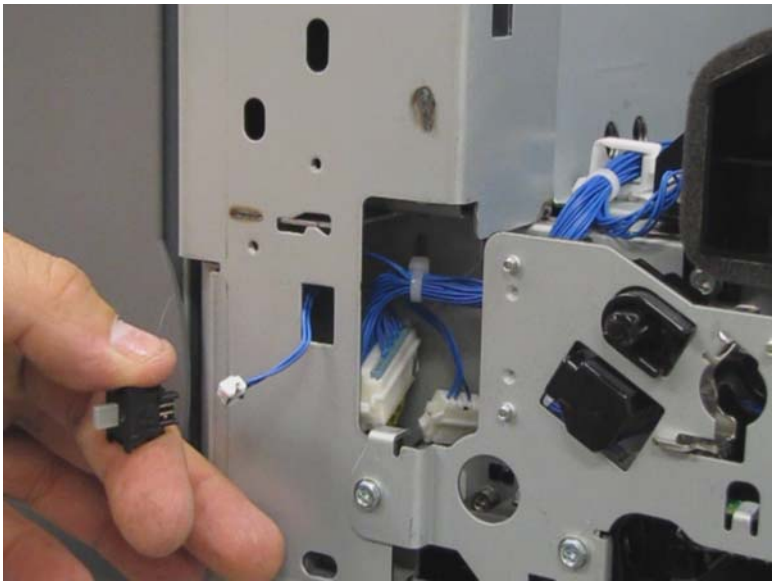
9. Using a flat-blade screwdriver, release the two latches (A) securing the sensor (printer left front door interlock).



10. Pull out the sensor (printer left front door interlock) (B), and disconnect the sensor cable.

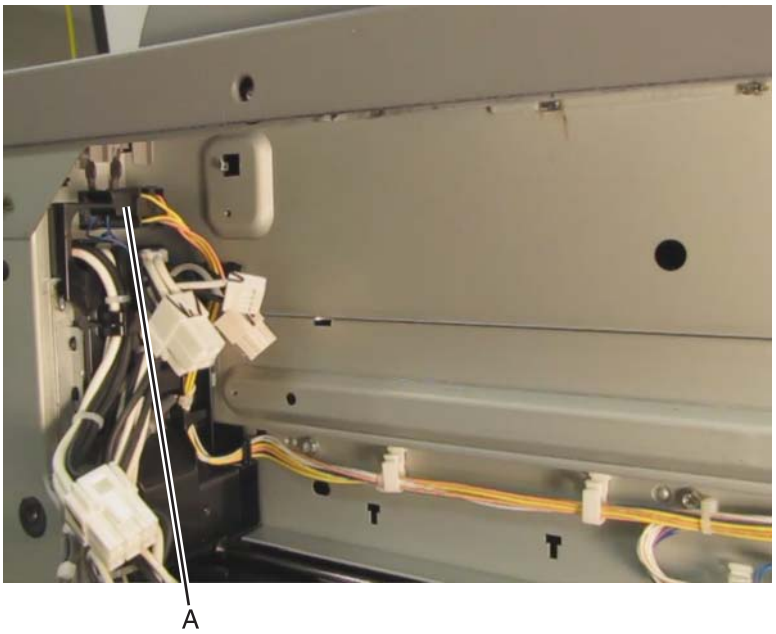


11. Remove the sensor (printer left front door interlock).

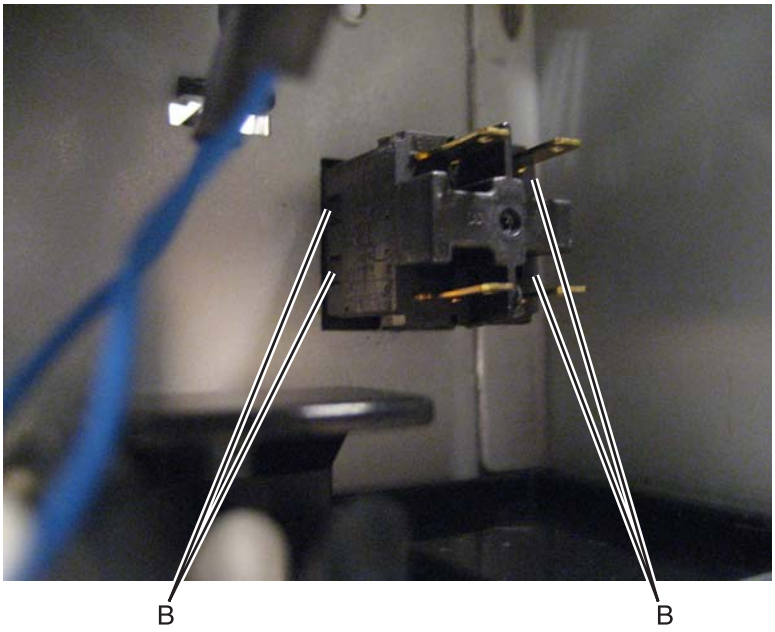


Sensor (printer right front door interlock) removal

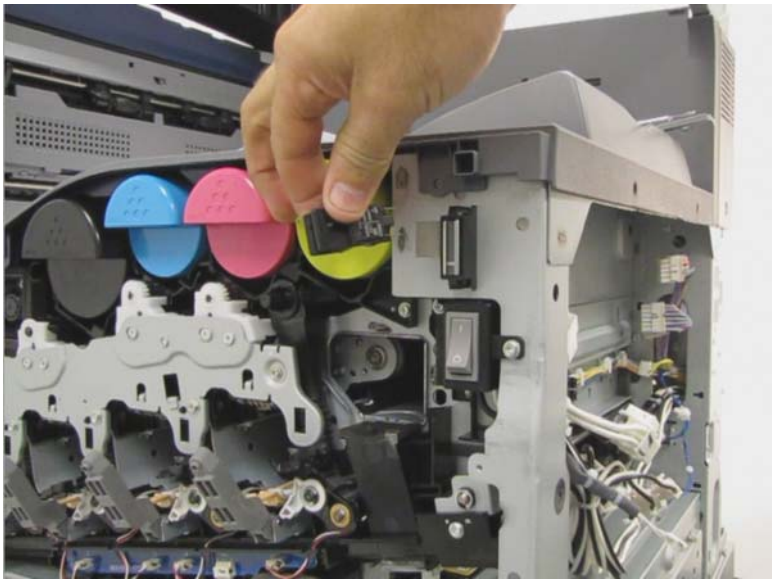
1. Remove the printer right side cover. See **“Printer right cover removal” on page 4-14**.
2. Remove the LVPS subfan guide. See **“LVPS front fan guide removal” on page 4-117**.
3. Remove the LVPS. See **“LVPS PCBA removal” on page 4-118**.
4. Disconnect the cable (A) from the sensor (printer right front door interlock).



5. Release the four tabs (B) securing the sensor (printer right front door interlock) to the machine.



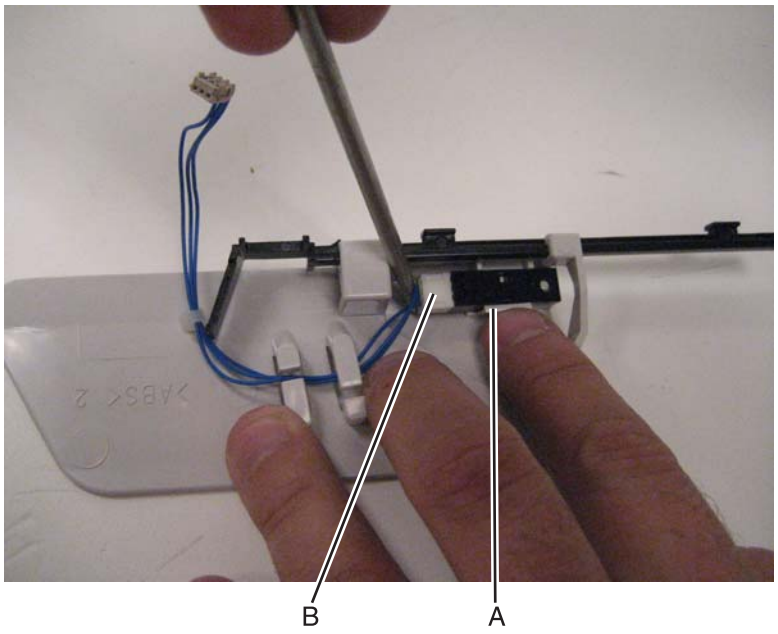
6. Remove the sensor (printer right front door interlock).



Sensor (tray 1 pre-feed) removal

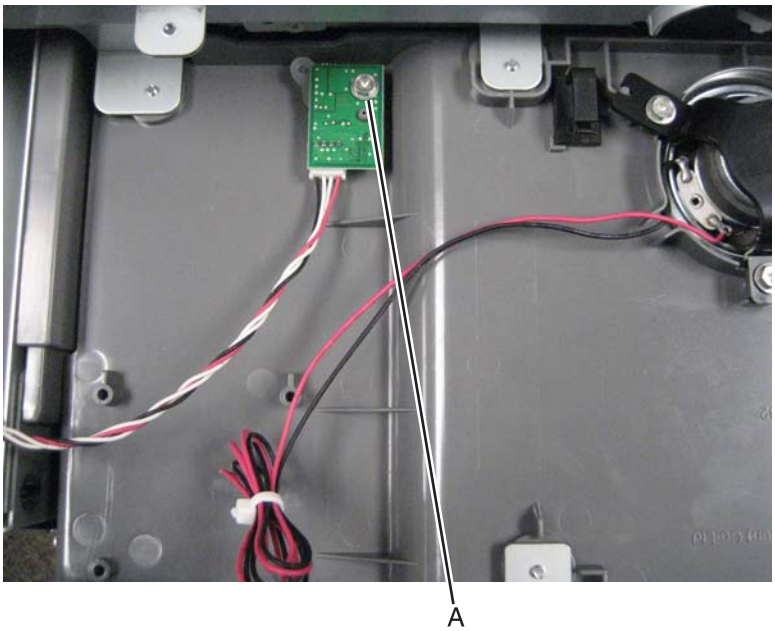
1. Remove the feeder slide guide. See **"Feeder slide guide removal" on page 4-83**.
2. Release the hook (A) securing the sensor (printer tray 1 prefeed) to the assembly.

3. Remove the sensor (printer tray 1 prefeed).
4. Disconnect the cable (B).



Standard bin LED (MFP) removal

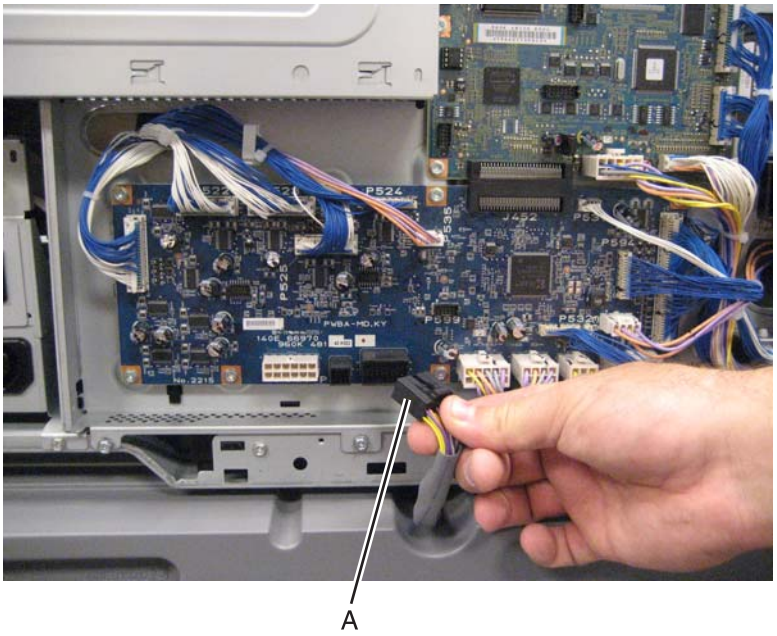
1. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
2. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
3. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
4. Remove the operator panel. See **“Operator panel top cover (MFP) removal” on page 4-11**.
5. Remove the screw (A) securing the part to the machine.



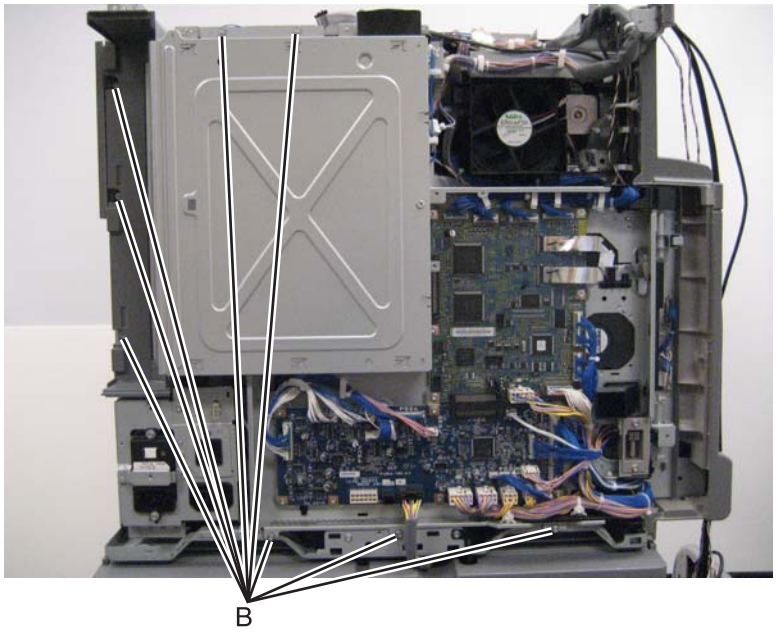
6. Remove the standard bin LED.
7. Disconnect the cable.

Sub LVPS PCBA removal

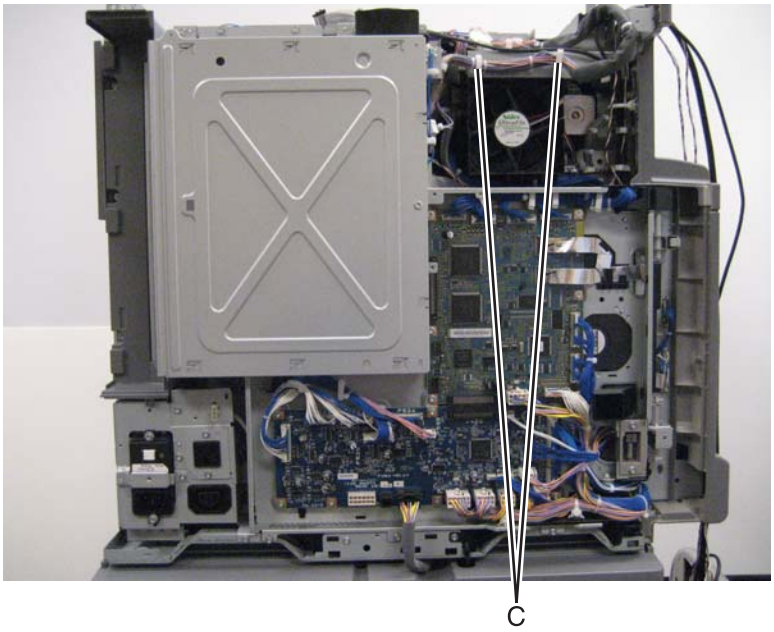
1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-19**.
2. Remove the rear lower cover. See **"Rear lower cover removal" on page 4-17**.
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.

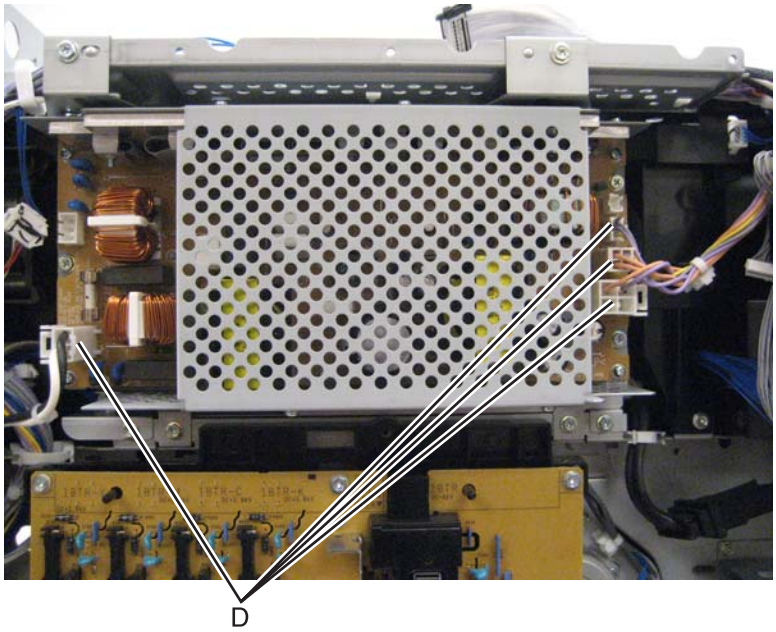


5. Release the two clamps (C) to release the harness.

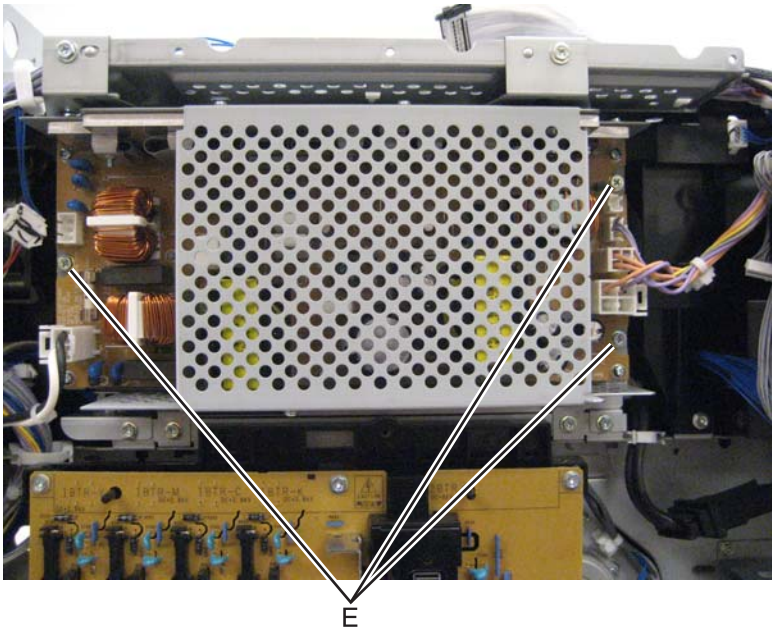


6. Swing the PCBA door open.

7. Disconnect the four cables (D).



8. Remove the three screws (E) securing the sub LVPS PCBA to the machine.

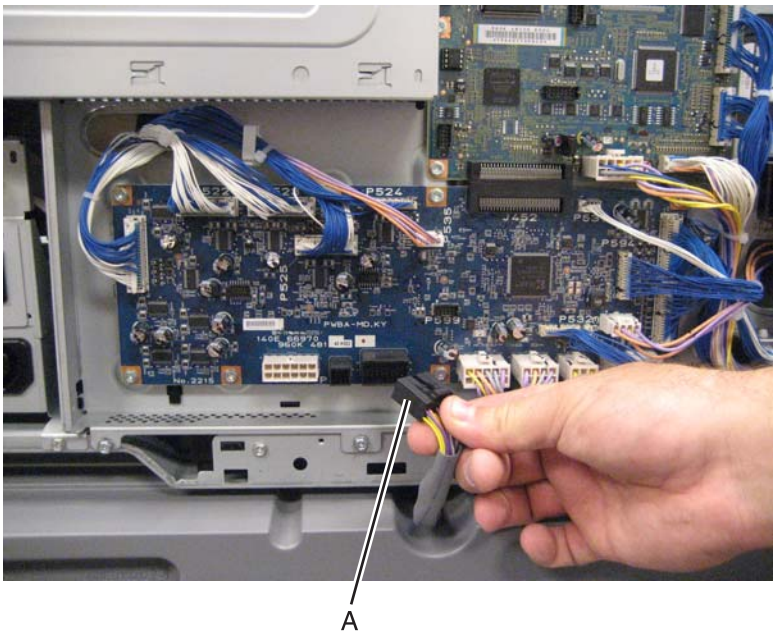


9. Remove the sub LVPS PCBA.

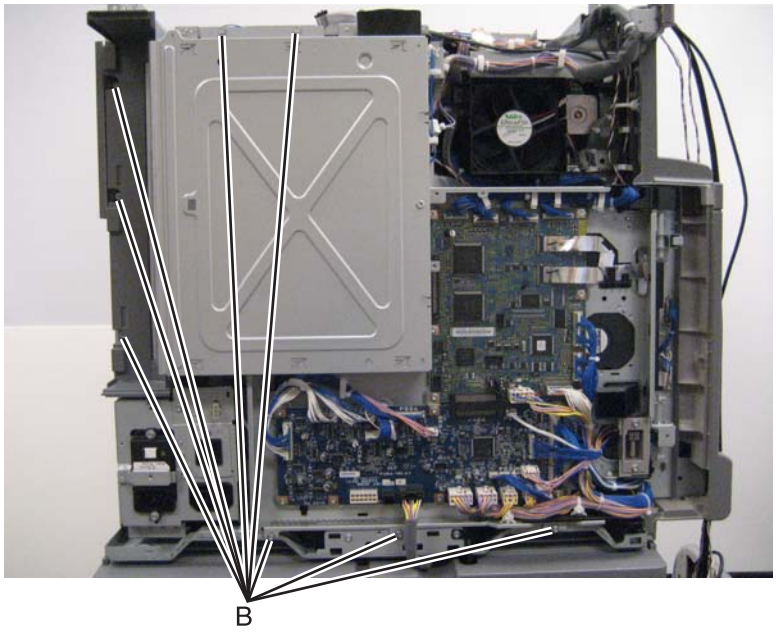
Suction fan removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

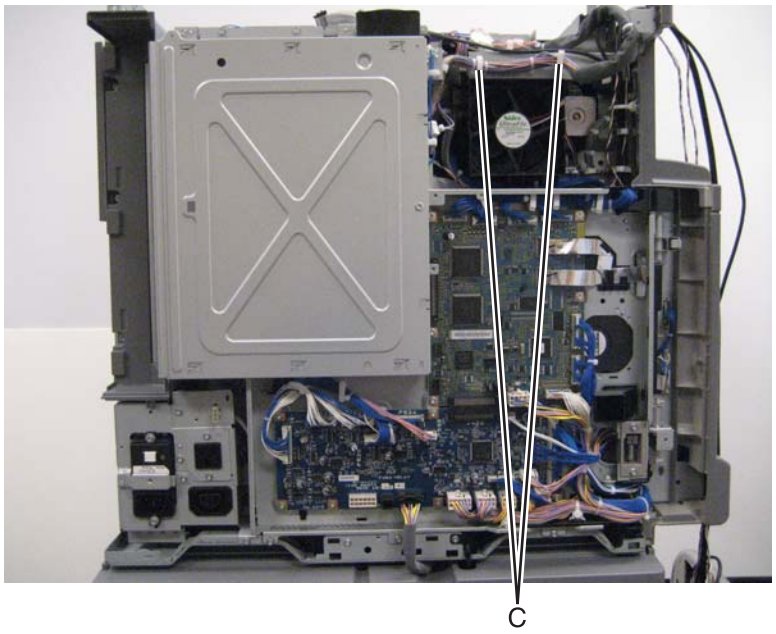
3. Disconnect the input option cable (A).



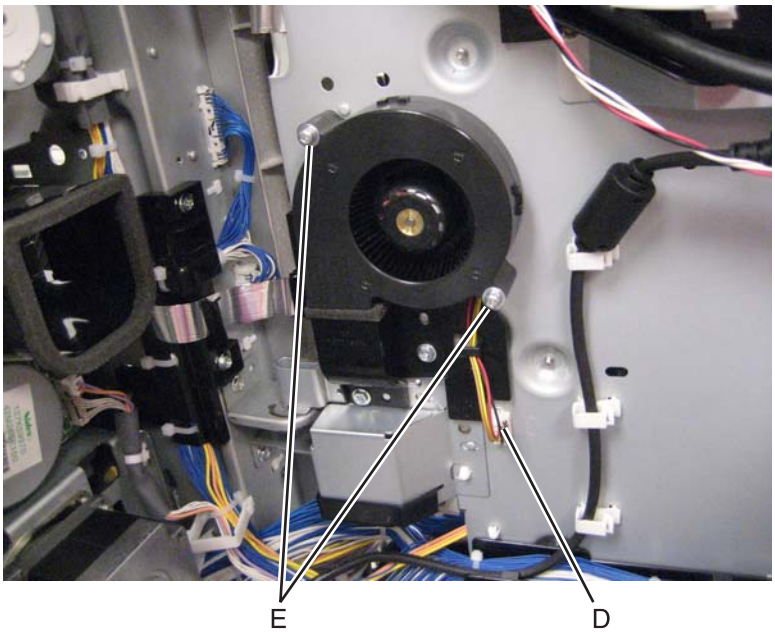
4. Remove the eight screws (B) securing the PCBA door to the machine.



5. Release the two clamps (C) to release the harness.



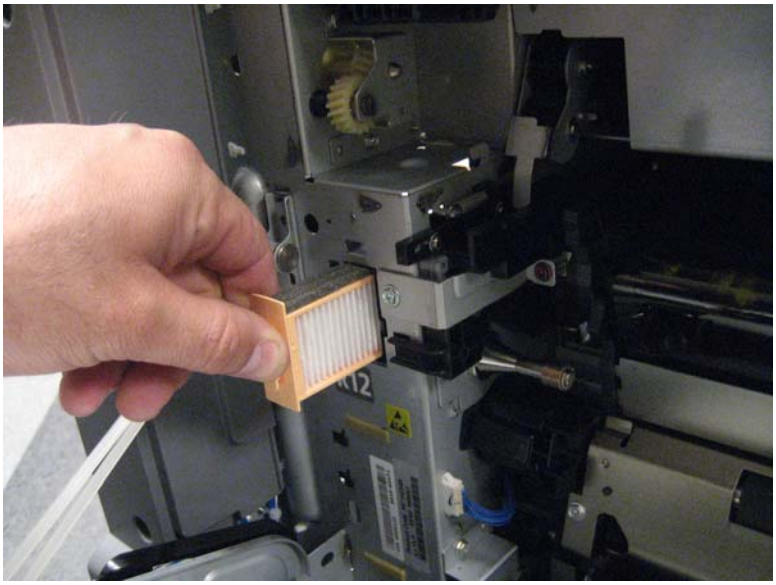
6. Swing the PCBA door open.
7. Disconnect the cable (D) from the suction fan.
8. Remove the two screws (E) securing the suction fan to the machine.



9. Remove the suction fan.

Suction filter

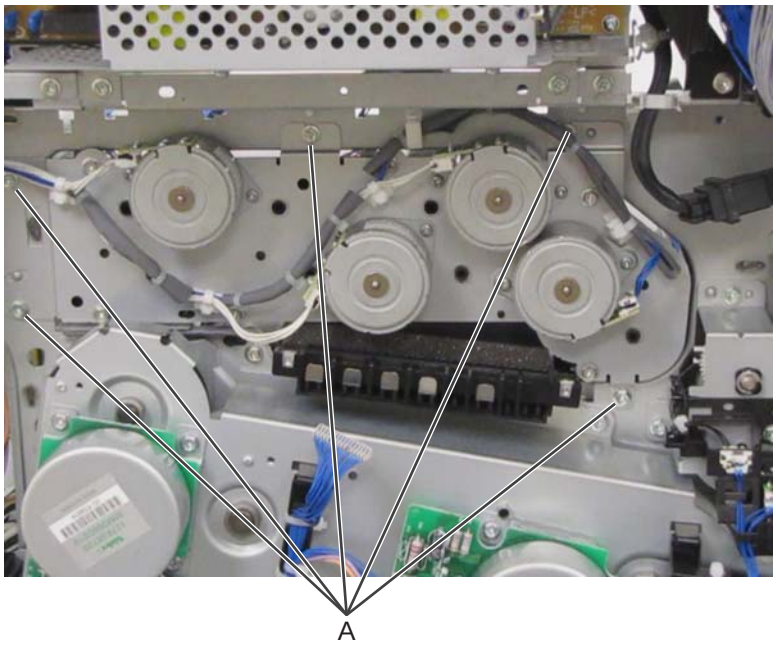
1. Open the printer left duplex door.
2. Remove the suction filter.



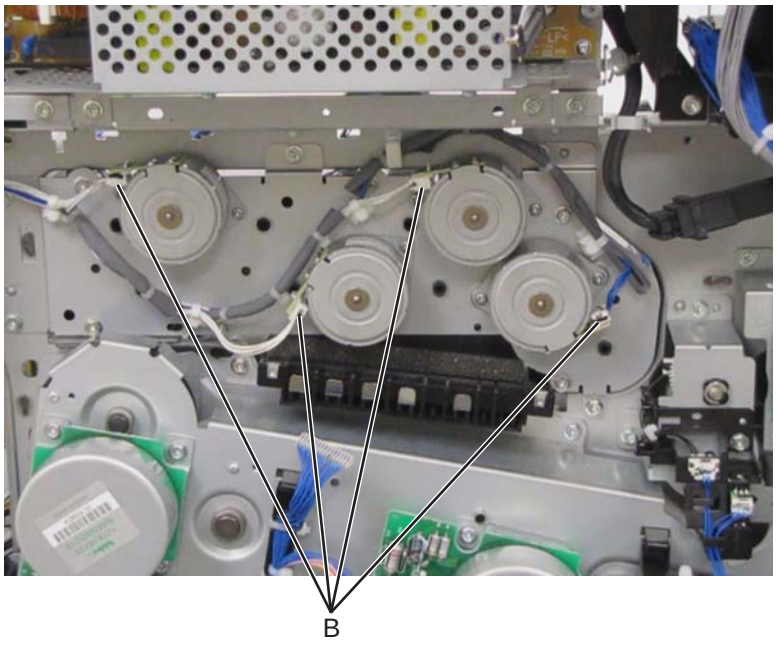
Toner dispense motor removal

1. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
2. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
3. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
4. Remove the top cover. See **“Printer top cover removal” on page 4-15**.
5. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
6. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
7. Remove the waste toner box.
8. Remove the four photoconductor units.
9. Remove the four toner supplies.
10. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
11. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
12. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
13. Remove the CMYK toner dispense auger assembly. See **“CMYK toner dispense auger assembly removal” on page 4-45**.

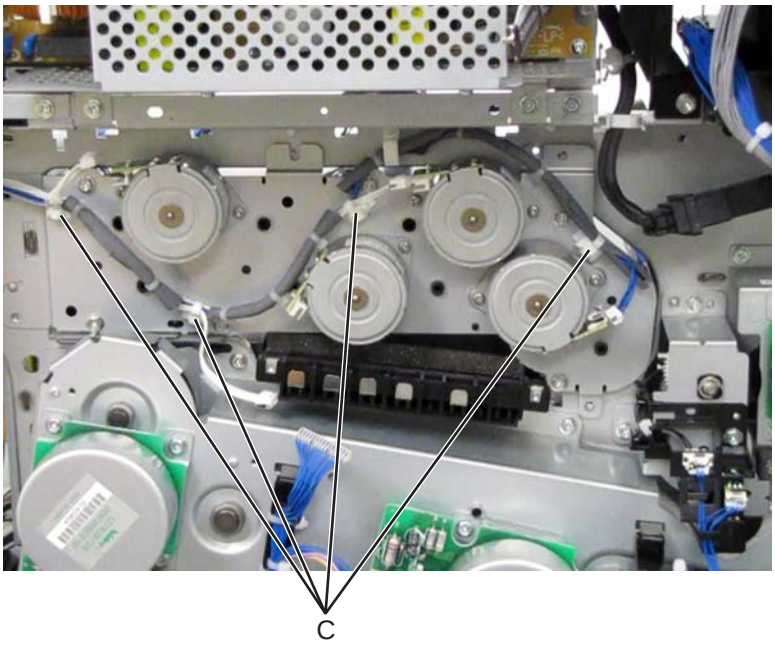
14. Remove the five screws (A) from the toner dispense motor.



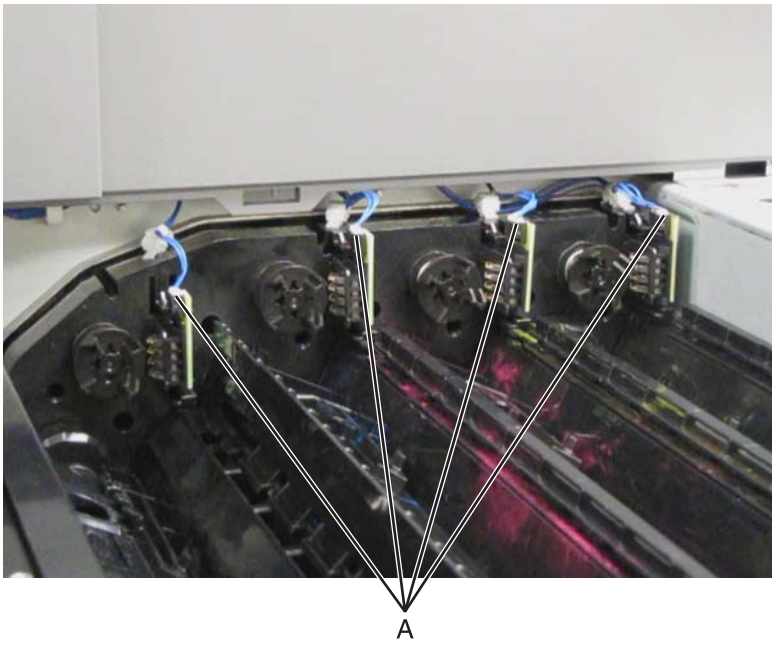
15. Disconnect the four toner dispense motor cables (B).



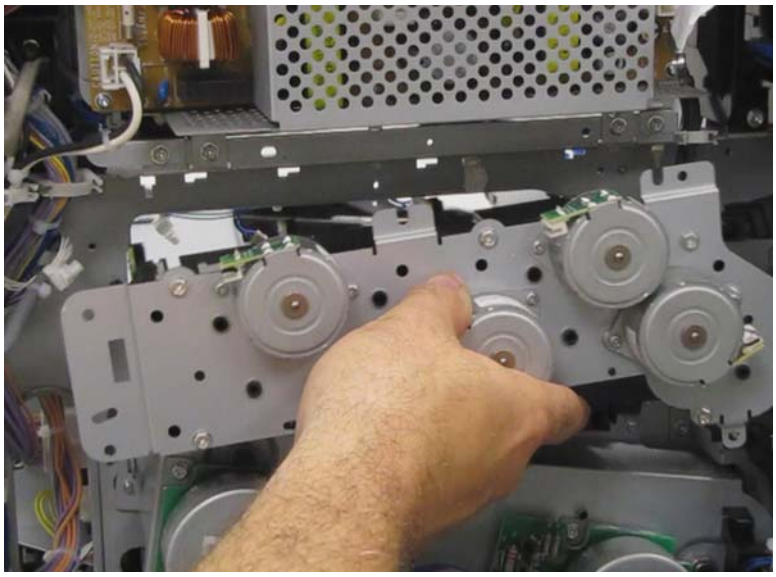
16. Disconnect the four cable clamps (C) from the motor and remove the cable harness.



17. Disconnect the four cables (D) from the front side of the printer.

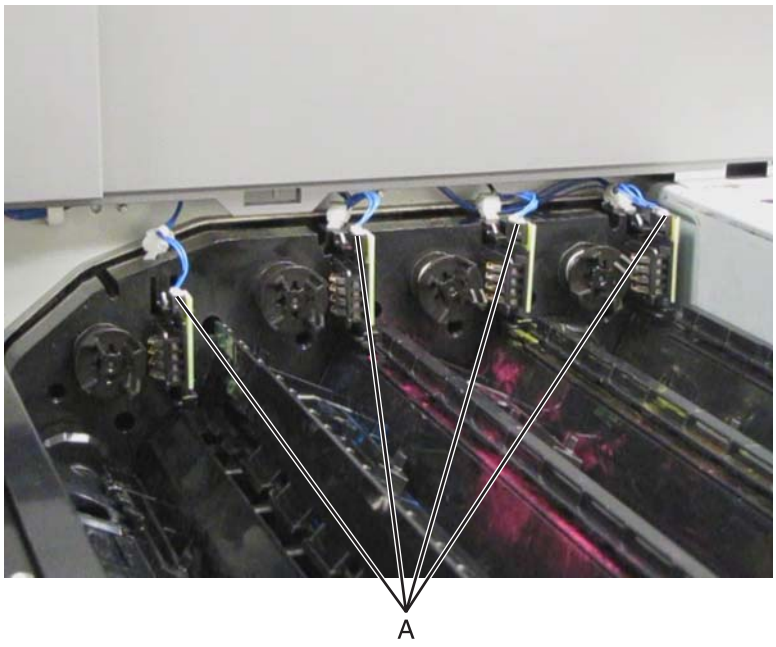


18. From the rear side of the printer, disengage the toner dispense motor and remove.



Toner smart chip PCB removal

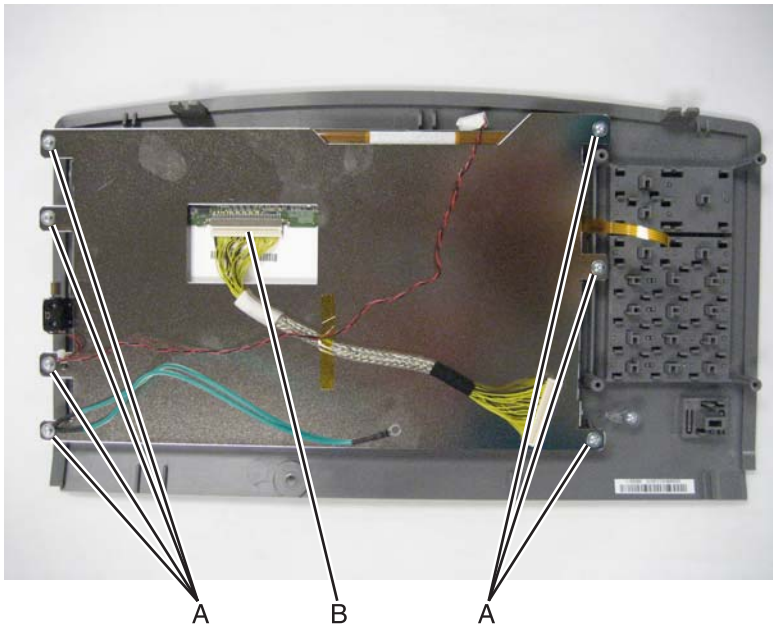
1. Remove the top cover. See **“Printer top cover removal” on page 4-15**.
2. Remove the cable (A) from the toner smart chip PCB that will be removed.



3. Detach the toner smart chip PCB and remove.

Touch screen (MFP) removal

1. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
2. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
3. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
4. Remove the operator panel. See **“Printer front door removal” on page 4-13**.
5. Remove the operator panel PCBA. See **“Operator panel PCBA (MFP) removal” on page 4-137**
6. Remove the seven screws (A) securing the shield to the assembly.
7. Disconnect the cable (B).



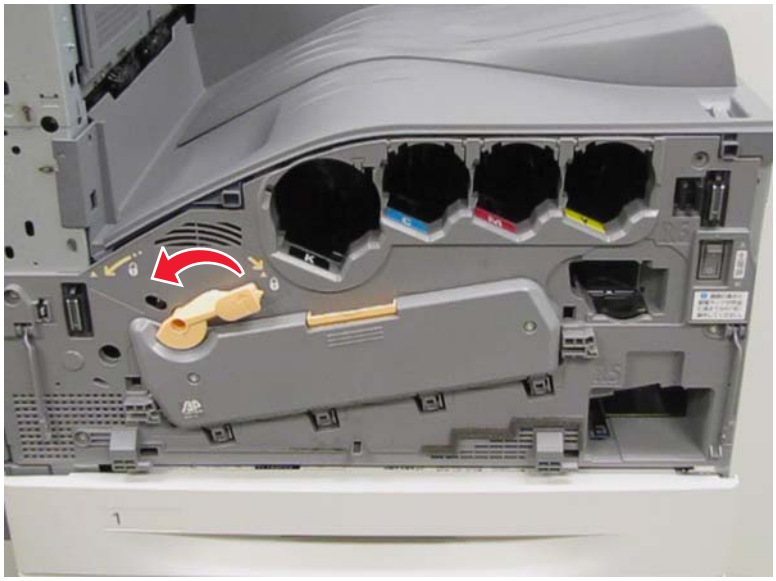
8. Remove the touch screen.

Installation note: When connecting the operator panel cable to the operator panel PCBA and to the display, do either of the following:

- If the cable is yellow, then connect the end of the cable marked with black tape to the display.
- If the cable is black, then connect the end of the cable marked P1 to the display.

Transfer belt assembly removal

1. Open the printer front door.
2. Remove the transfer belt cleaner. See **"Transfer belt cleaner removal" on page 4-185**.
3. Rotate the transfer belt lever counterclockwise to the unlock position.



4. Open the printhead retract door.

Warning: After the photoconductor units are removed, ensure that they are properly covered so that they are not exposed to light.

5. Remove the four photoconductor units.

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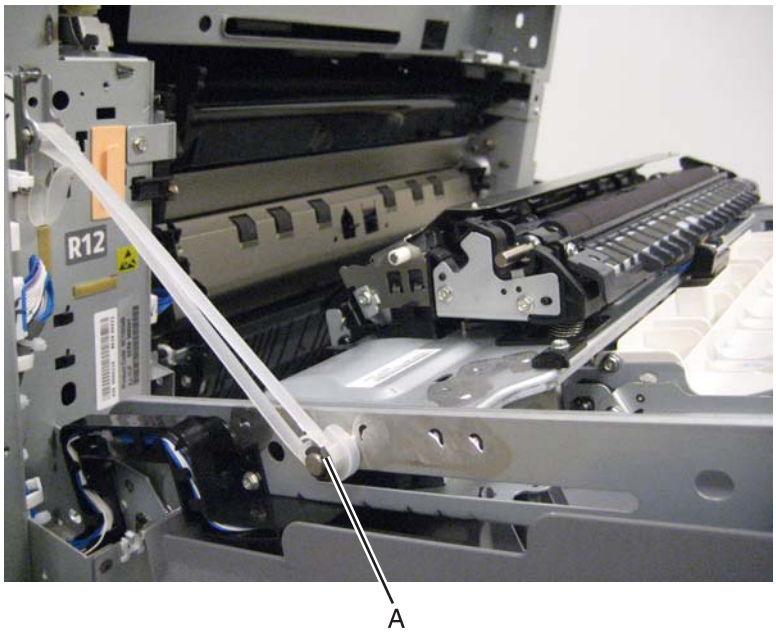
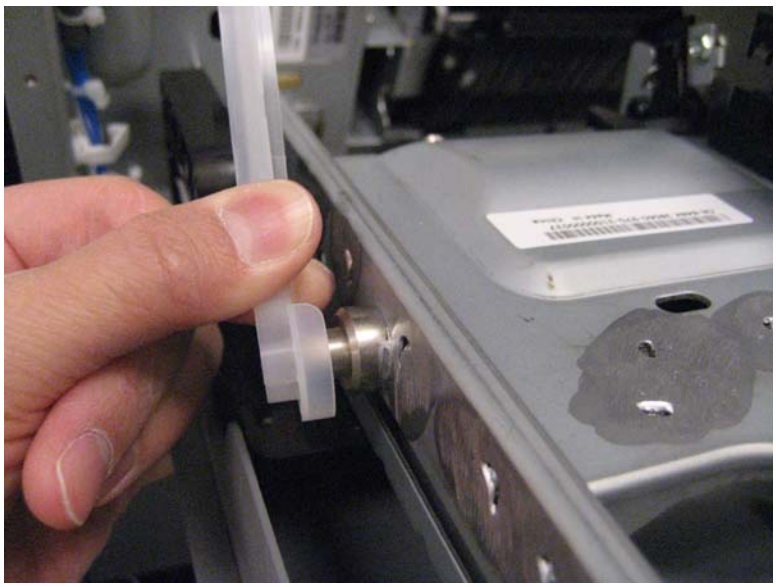
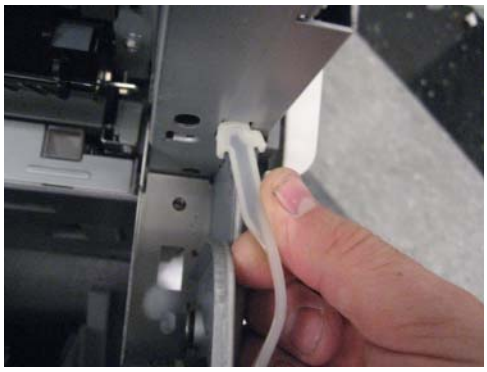
6. Remove the transfer belt lever. See **“Transfer belt lever removal” on page 4-186**.
7. Open the printer left duplex door assembly.
8. Remove the fuser. See **“Fuser assembly removal” on page 4-90**.
9. Remove the e-clip (A) securing the rear plastic support strap to the printer left duplex door assembly.

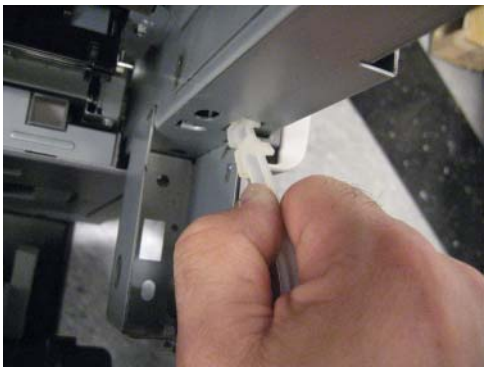


10. Remove the rear plastic support strap.

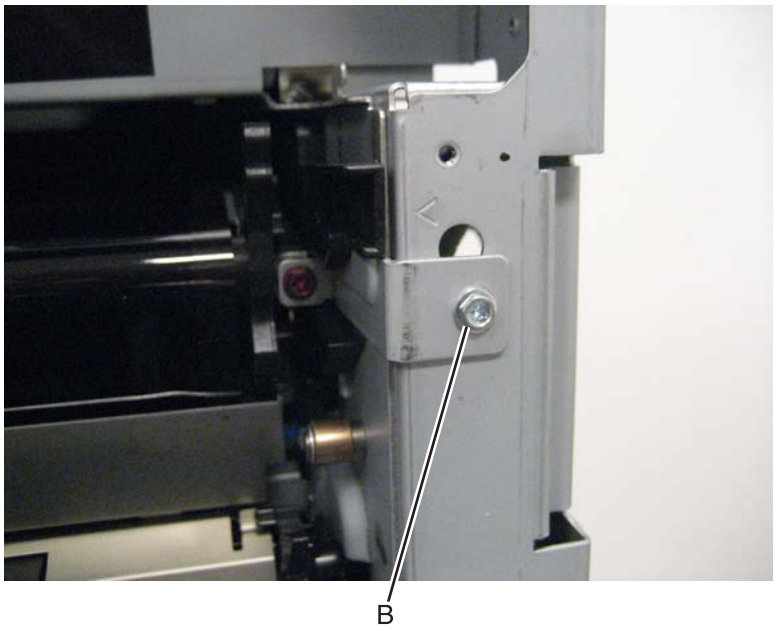


11. Rotate the front plastic support strap 90 degrees and release it from the machine.

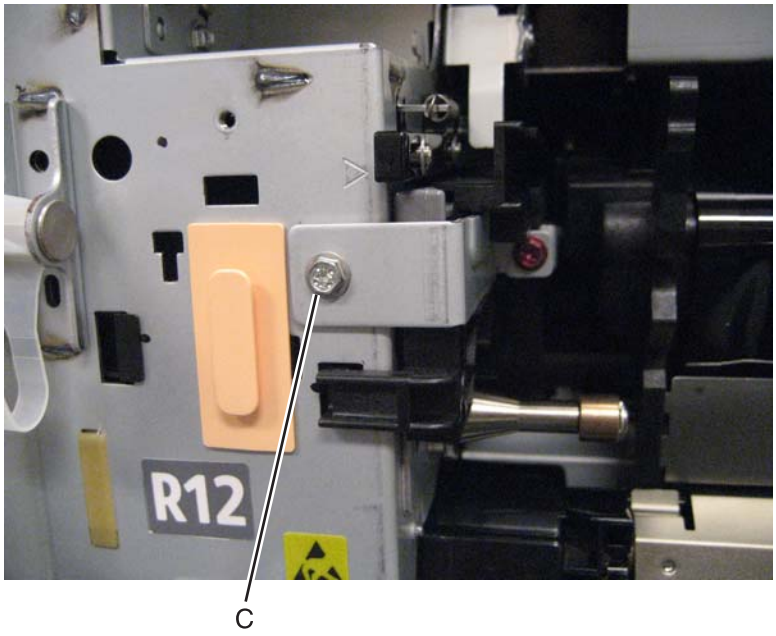




12. Remove the screw (B) securing the rear belt retaining bracket.
13. Remove the rear belt retaining bracket.

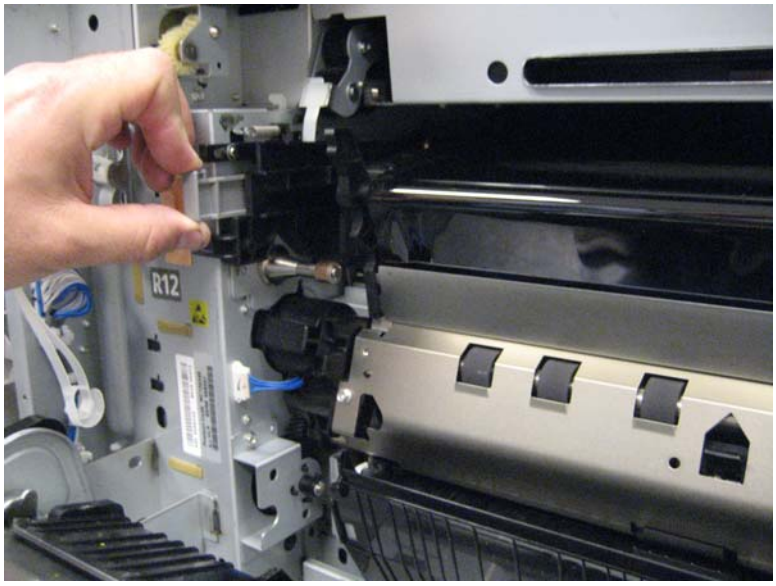


14. Remove the screw (C) securing the front belt retaining bracket.



15. Remove the front belt retaining bracket.

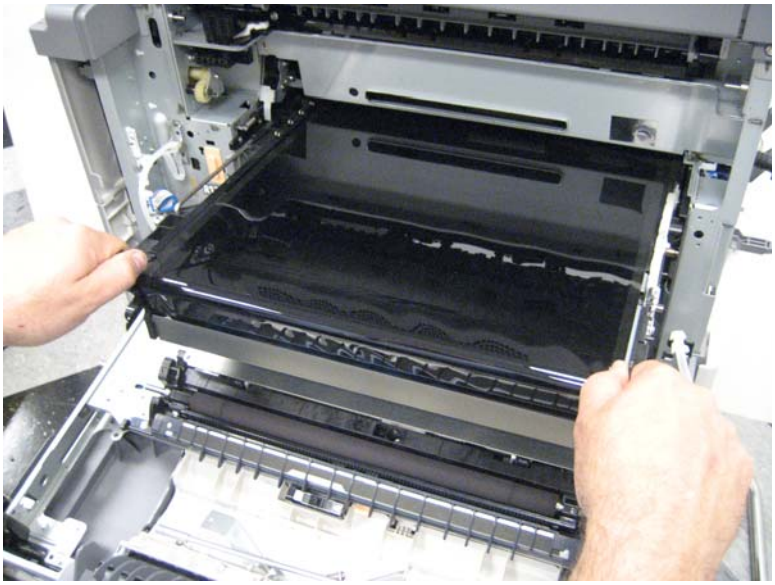
16. Pull the belt release latch to disengage the transfer belt assembly.



Warning: When removing the transfer belt assembly from the machine, do not touch the belt surface or damage will occur.

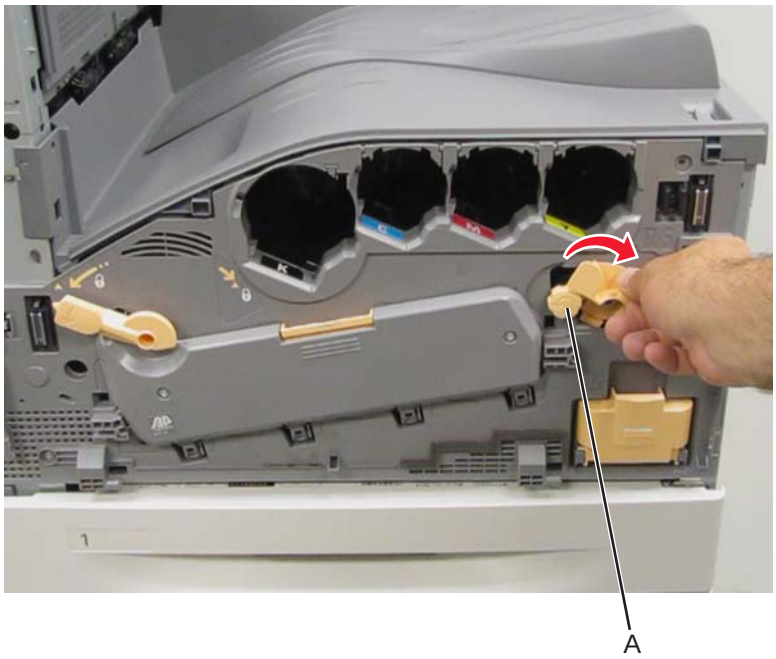
Warning: When removing the transfer belt assembly, make sure the belt's surface does not come into contact with the printer left duplex door assembly.

17. Carefully remove the transfer belt assembly from the machine.

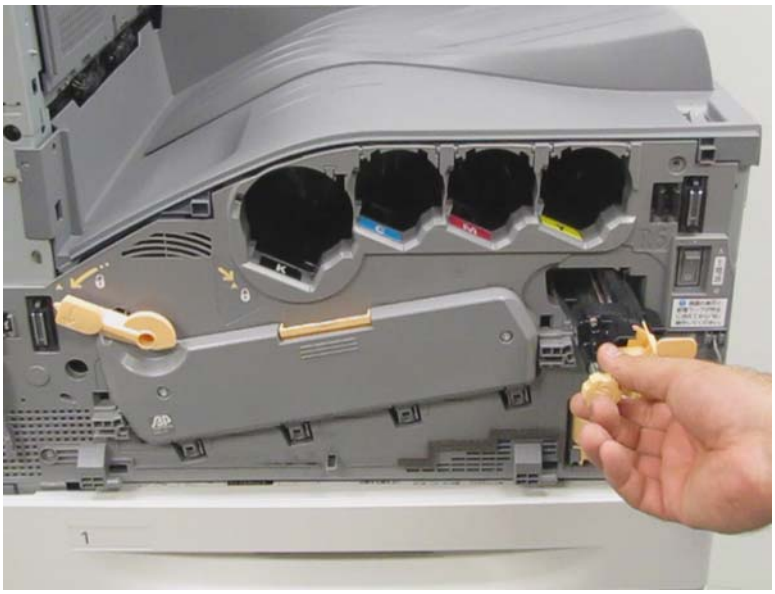


Transfer belt cleaner removal

1. Open the front door.
2. Rotate the handle clockwise to access the knob (A).
3. Unscrew the knob (A).

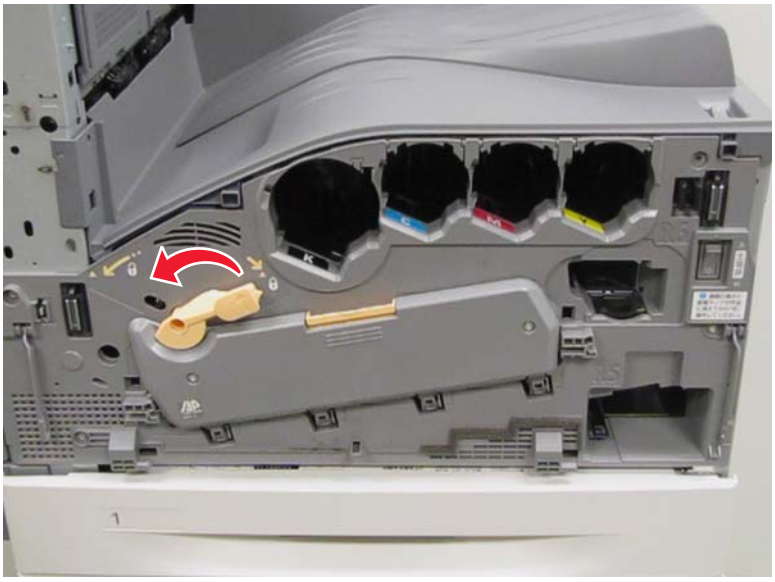


4. Pull out the transfer belt cleaner and remove.

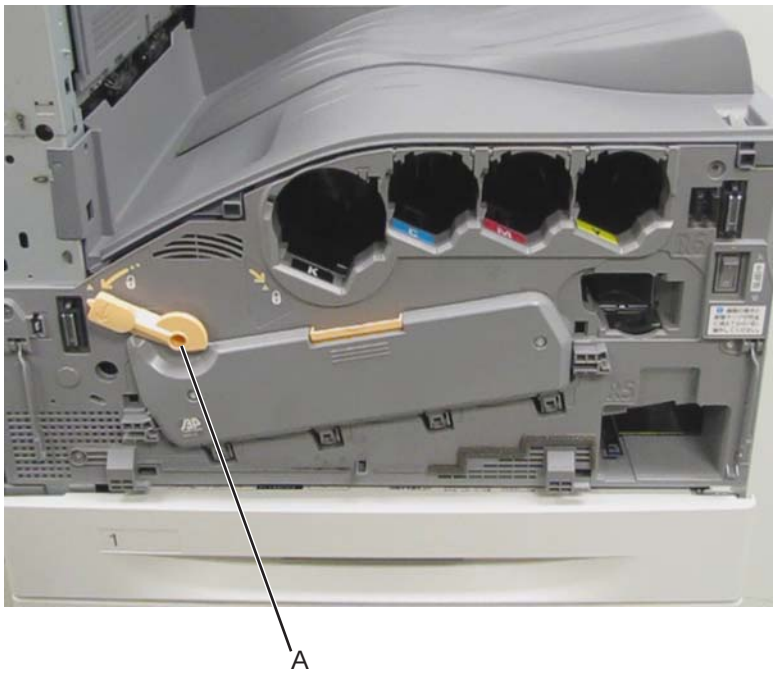


Transfer belt lever removal

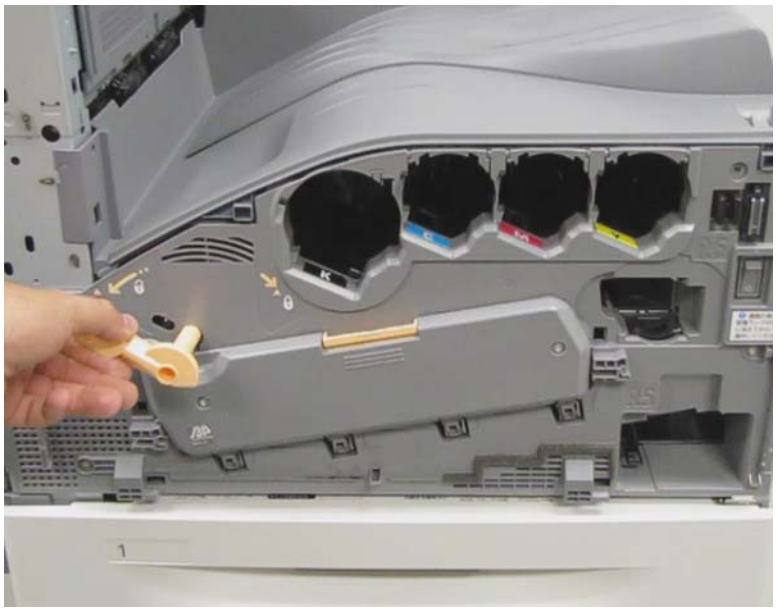
1. Open the front door.
2. Rotate the transfer belt lever counterclockwise to the unlock position.



3. Remove the screw (A) from the transfer belt lever.



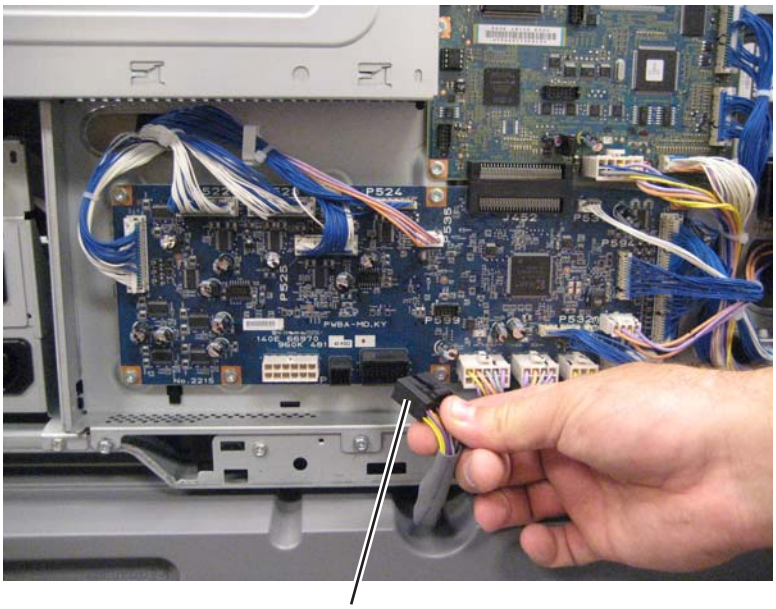
4. Remove the transfer belt lever.



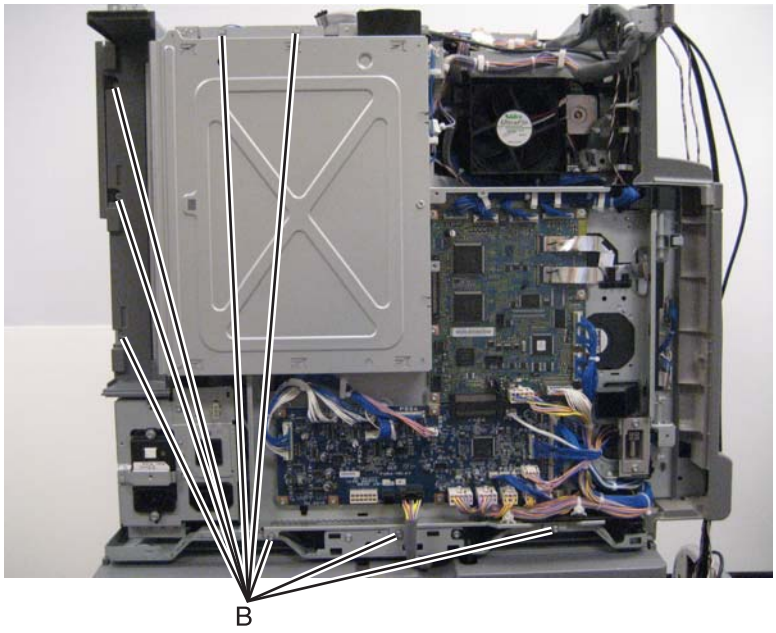
Transfer roll HVPS PCBA removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

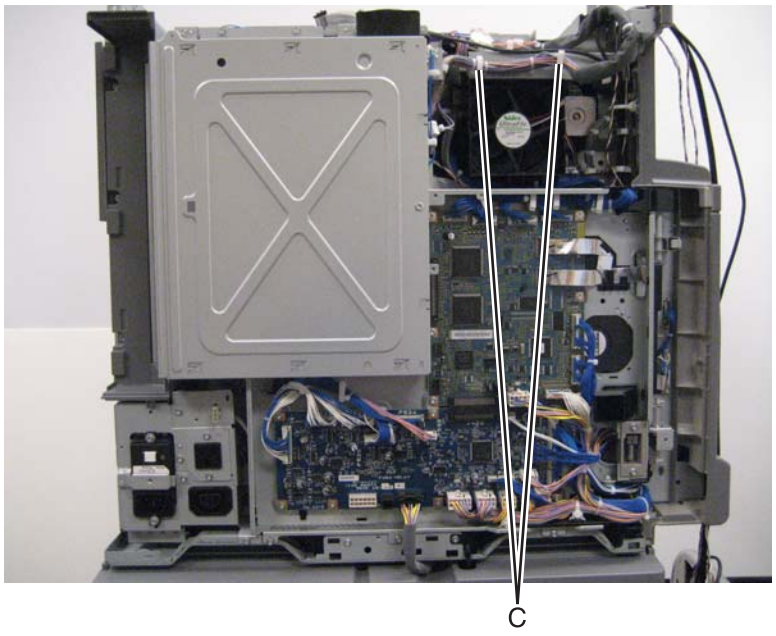
3. Disconnect the input option cable (A).



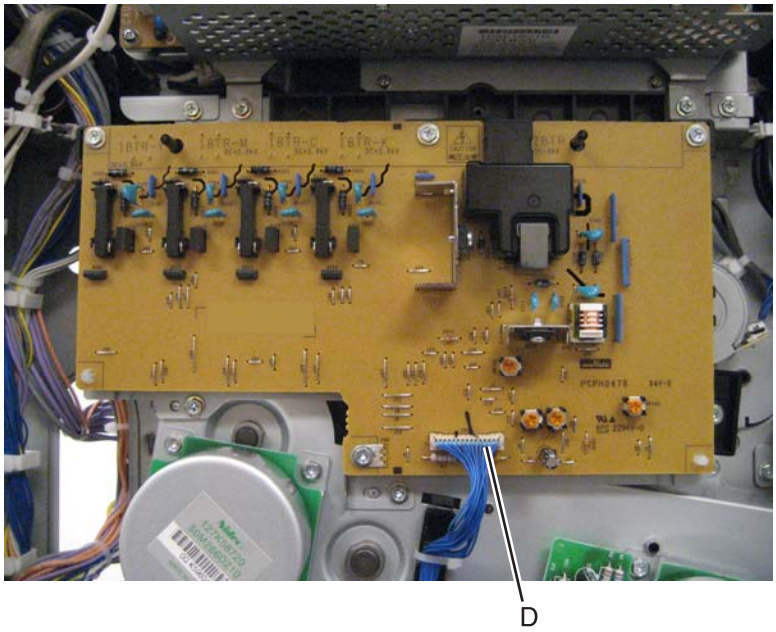
4. Remove the eight screws (B) securing the PCBA door to the machine.



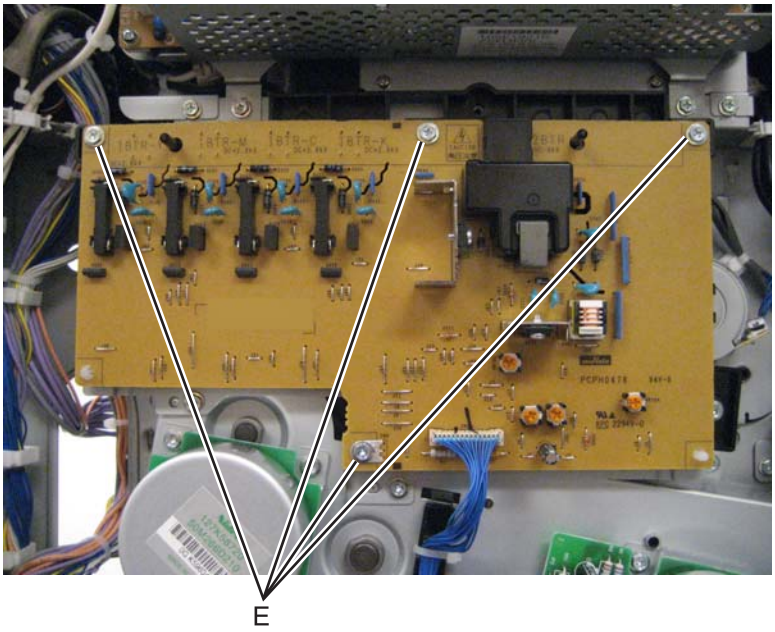
5. Release the two clamps (C) to release the harness.



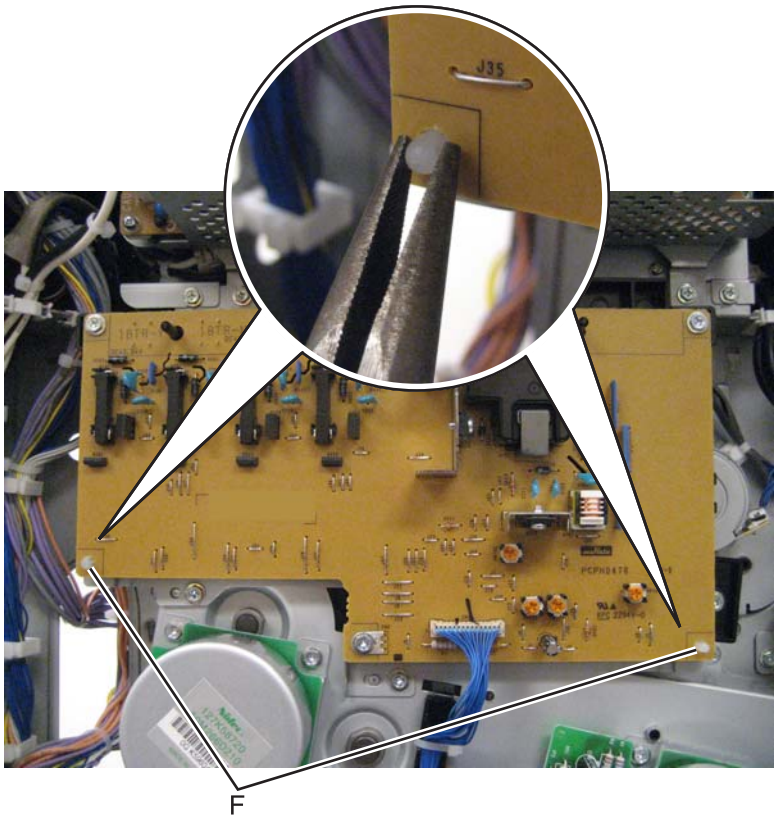
6. Swing the PCBA door open.
7. Disconnect the cable (D).



8. Remove the four screws (E) securing the transfer roll HVPS PCBA to the machine.



9. Release the tabs on the two plastic standoffs (F) securing the transfer roll HVPS PCBA to the machine.

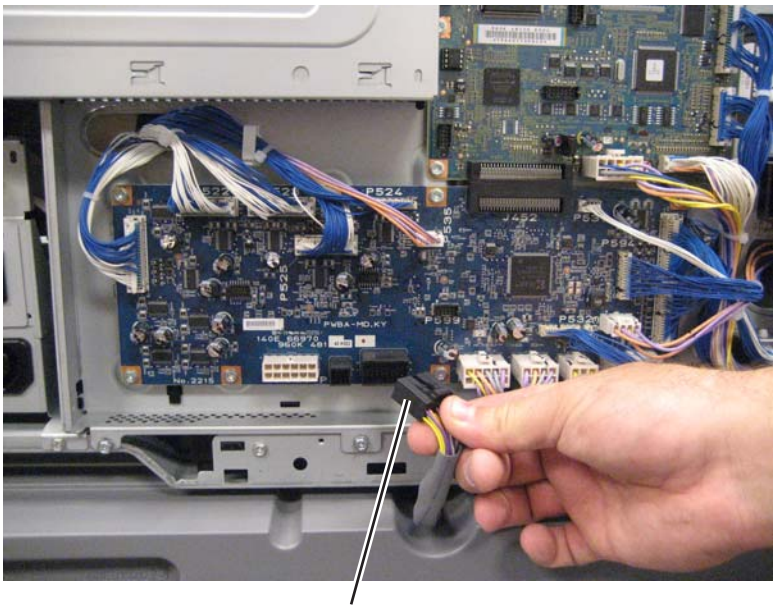


10. Remove the transfer roll HVPS PCBA from the machine.

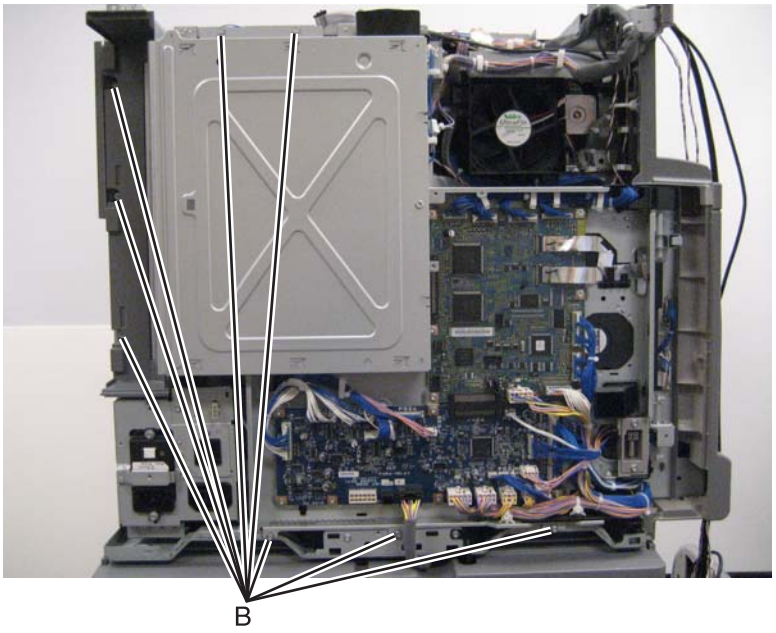
Upper exhaust cooling fan removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

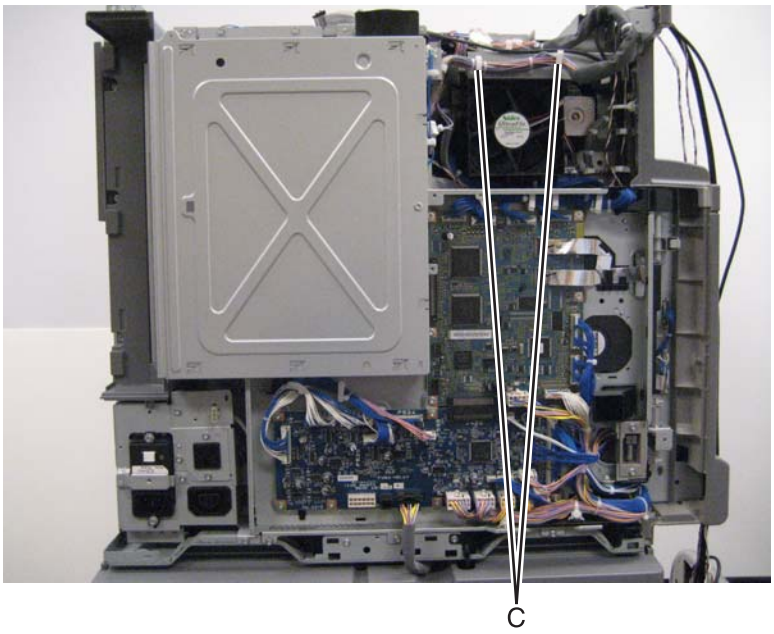
3. Disconnect the input option cable (A).



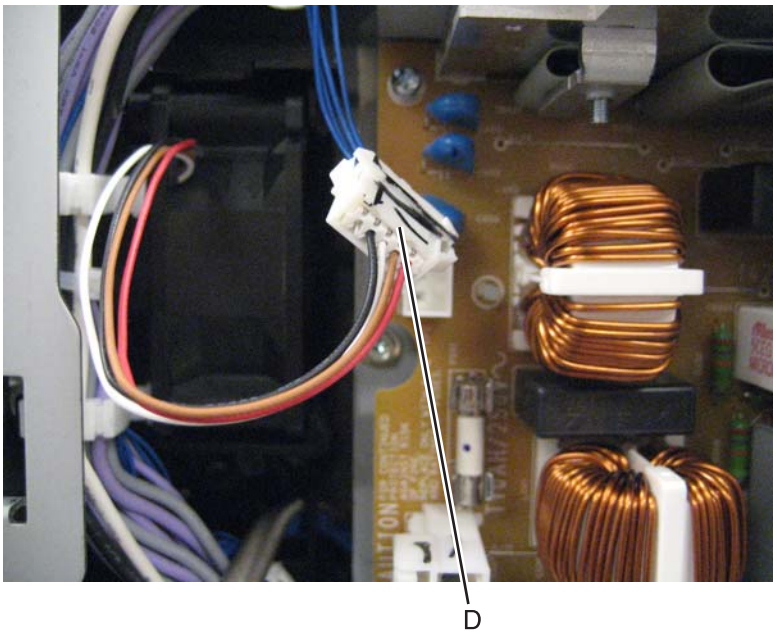
4. Remove the eight screws (B) securing the PCBA door to the machine.



5. Release the two clamps (C) to release the harness.



6. Swing the PCBA door open.
7. Disconnect the cable (D).



8. Remove the upper exhaust cooling fan.

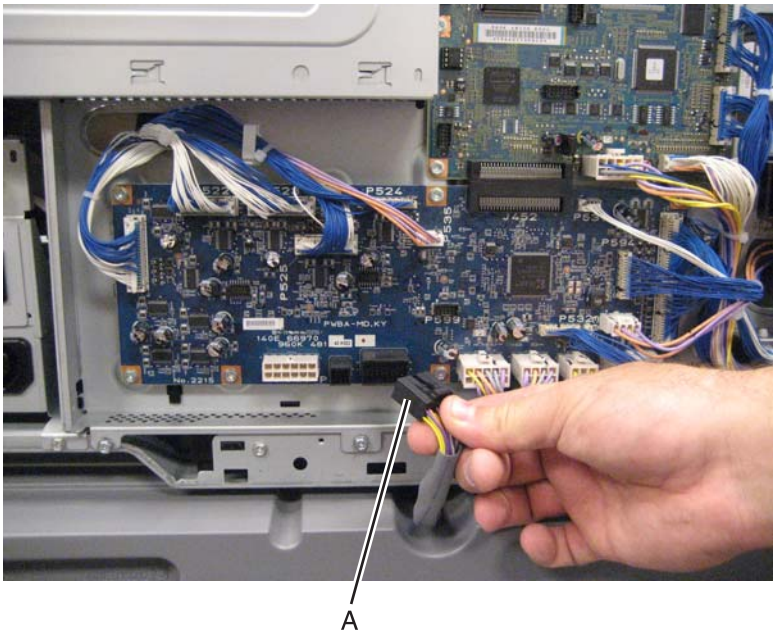
Re-installation note: When replacing the upper exhaust cooling fan, make sure the fan is positioned so that the air flow is directed away from the machine.

Upper printer engine PCBA removal

WARNING

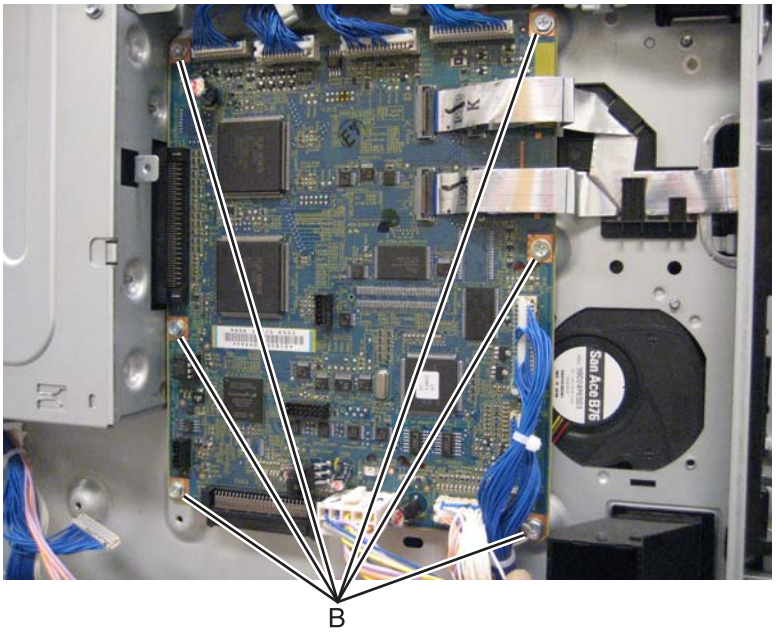
Ensure that the NVM EPROM is removed from the defective PCBA and installed to the new PCBA or damage to the machine may occur. For more details, go to **"Upper engine PCBA reinstallation" on page 4-194**.

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-19**.
2. Remove the rear lower cover. See **"Rear lower cover removal" on page 4-17**.
3. Disconnect the input option cable (A).



4. Remove the lower engine PCBA. See **"Lower engine PCBA removal" on page 4-109**.
5. Disconnect all the cables from the upper printer engine PCBA.
6. Remove the six screws (B).

7. Detach the upper printer engine PCBA by moving it to the right.



8. Remove the upper printer engine PCBA.

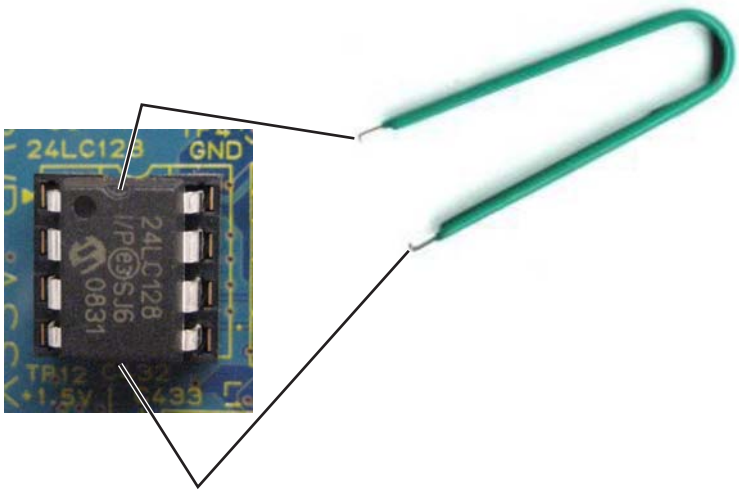
Upper engine PCBA reinstallation

	WARNING Failure to perform this procedure correctly may cause: • damage to the replacement PCBA • loss of memory settings

1. Install the NVM EPROM from the defective PCBA to the replacement PCBA.

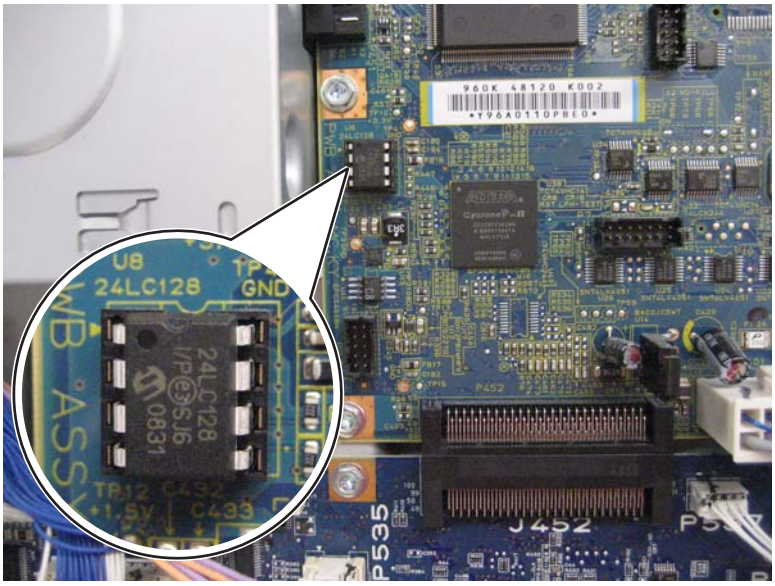
1.1 Remove the NVM EPROM from the defective PCBA using a chip puller. Hold the chip on the touch positions shown, then gently pull the chip away from the board.

Warning: The chip must be pulled away in the direction perpendicular to the PCBA. The pins may get deformed if the chip is not pulled straight and evenly.

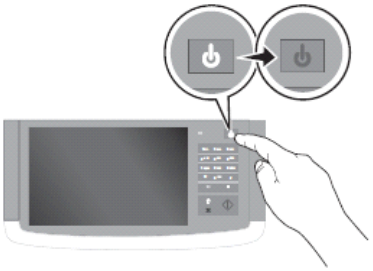


1.2 Mount the NVM EPROM to the replacement PCBA.

Warning: Failure to correctly mount the NVM EPROM chip may cause damage to the system. The correct orientation of the chip when mounted to the board is shown below. Pin 1 of the NVM EPROM chip (marked with a circle) must be inserted to the correct slot (marked with a triangle) on the replacement PCBA.



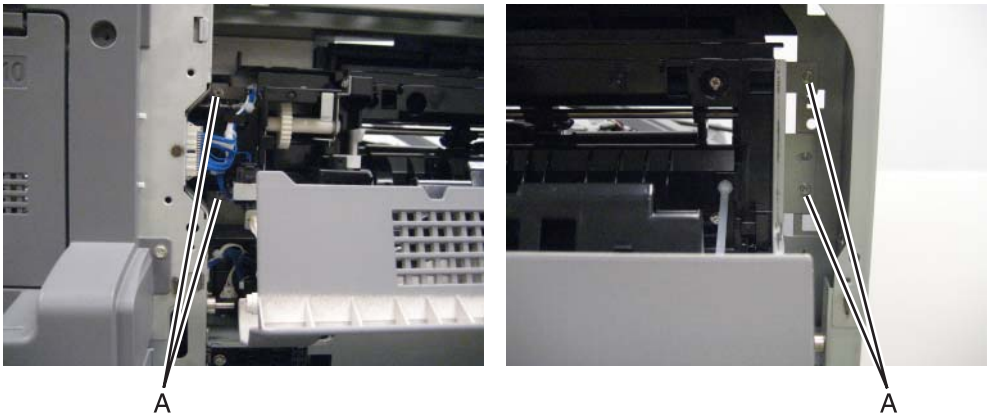
2. Install the replacement PCBA to the machine.
   Warning: Ensure that the cables are properly reconnected, or damage will occur.
3. Turn on the machine.
4. An error will occur on the system. To clear the error, press the power button on the operator panel to put the machine in hibernate mode.
   Warning: Shutting down using the operator panel button is required to update the memory settings from the old NVM EPROM and save it to the current system. Failure to to shut down correctly may cause loss of memory settings.



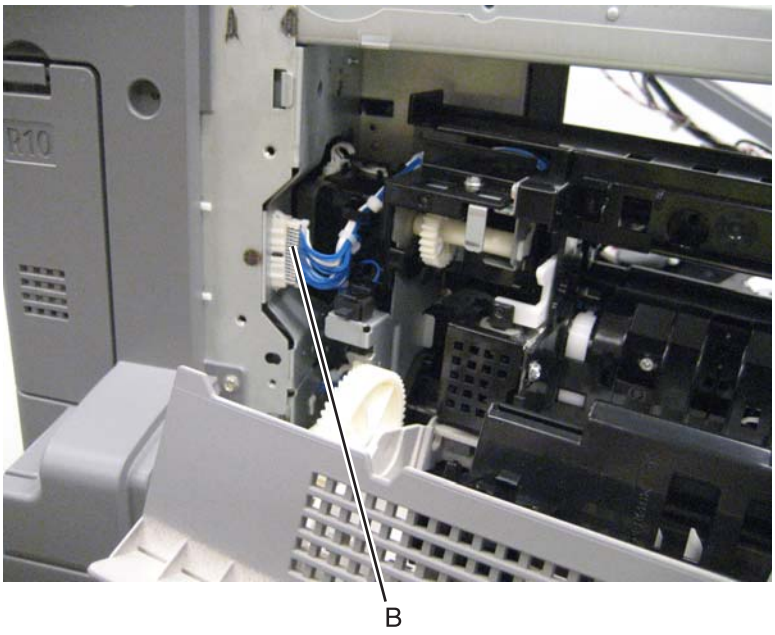
Upper redrive assembly removal

1. Open the printer left duplex door assembly.
2. Remove the left upper cover. See **"Left upper cover removal" on page 4-7**.

3. Remove the four screws (A).



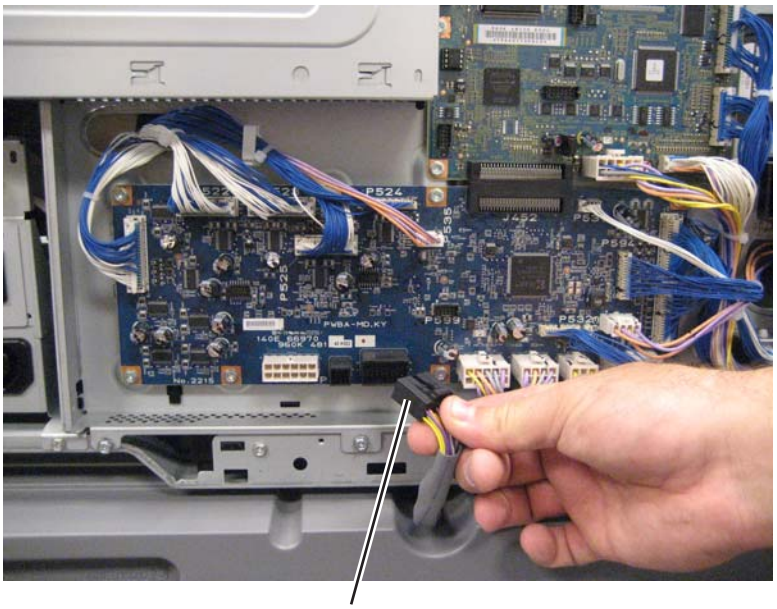
4. Remove the upper redrive assembly.
5. Disconnect the cables (B).



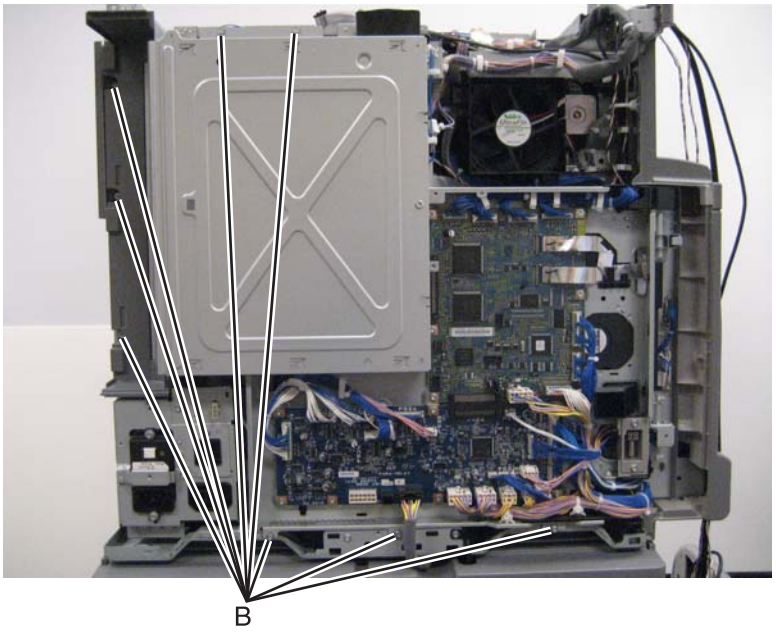
Waste toner agitator motor removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-17**.

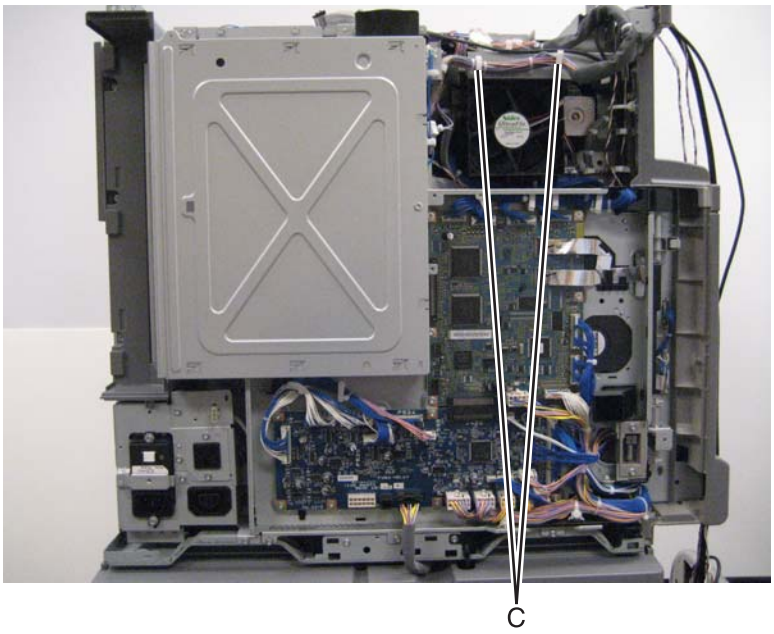
3. Disconnect the input option cable (A).



4. Remove the eight screws (B) securing the PCBA door to the machine.



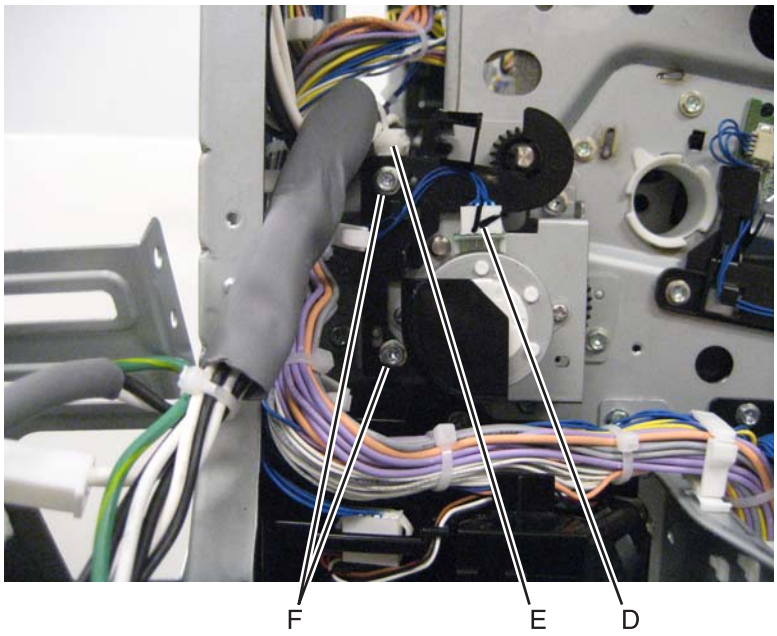
5. Release the two clamps (C) to release the harness.



6. Swing the PCBA door open.
7. Pull the main power GFI interface out of the machine, and swing it out of the way. See the **"Main power GFI interface removal" on page 4-124**.

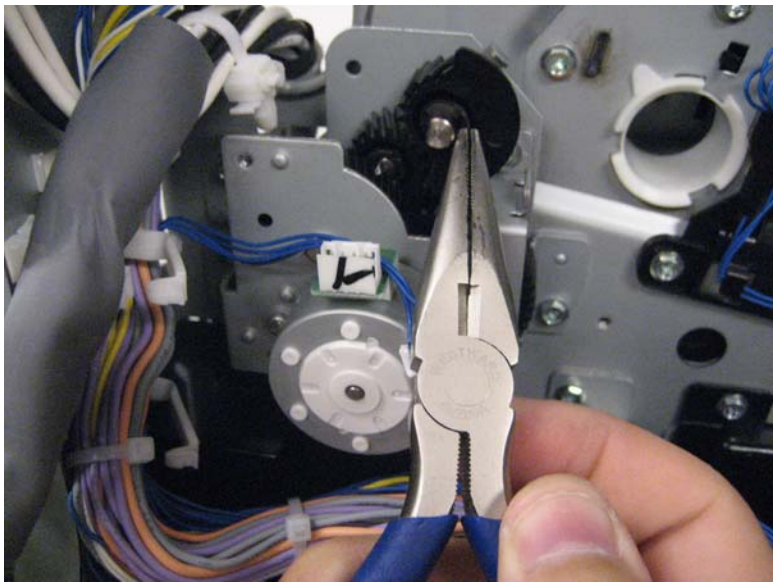
Note: The cables do not have to be removed from the main power GFI interface to remove this part.

8. Remove the PC/developer drive motor. See the **"PC/developer drive motor removal" on page 4-143**.
9. Disconnect the cable (D) from the waste toner agitator motor.
10. Release the harness from the clamp (E).
11. Remove the two screws (F) securing the motor cover to the machine.

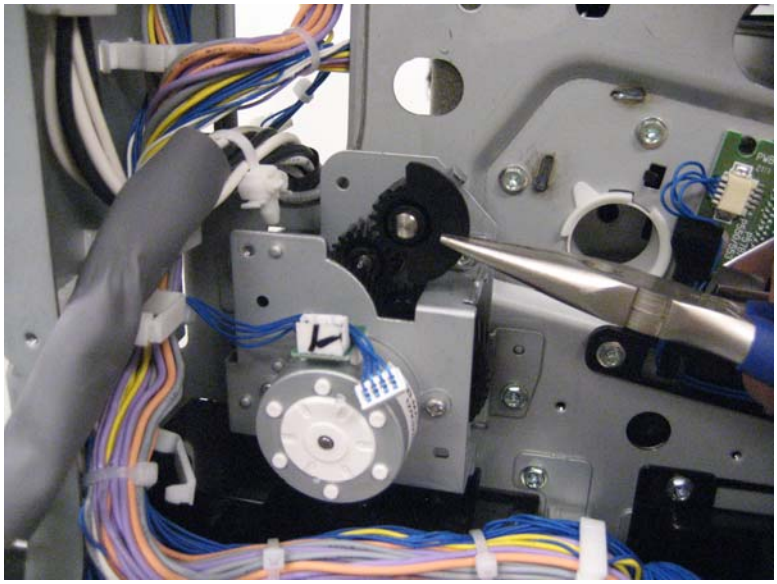


12. Remove the motor cover.

13. Remove the e-clip.

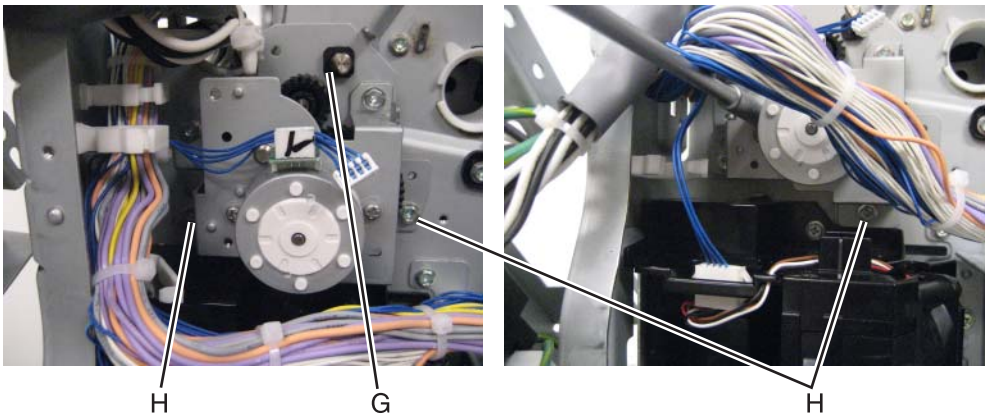


14. Remove the actuator gear.



15. Remove the plastic bushing (G).

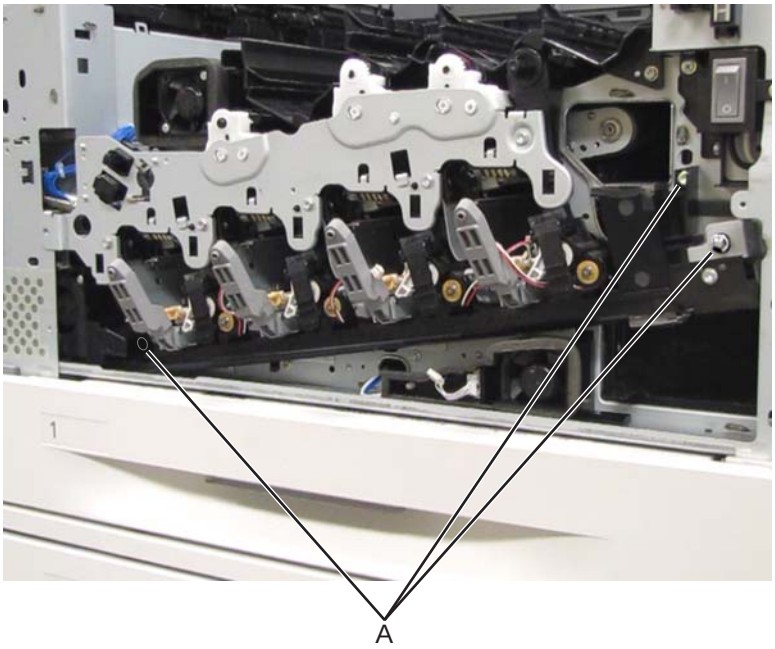
16. Remove the three screws (H) securing the waste toner agitator motor to the machine.



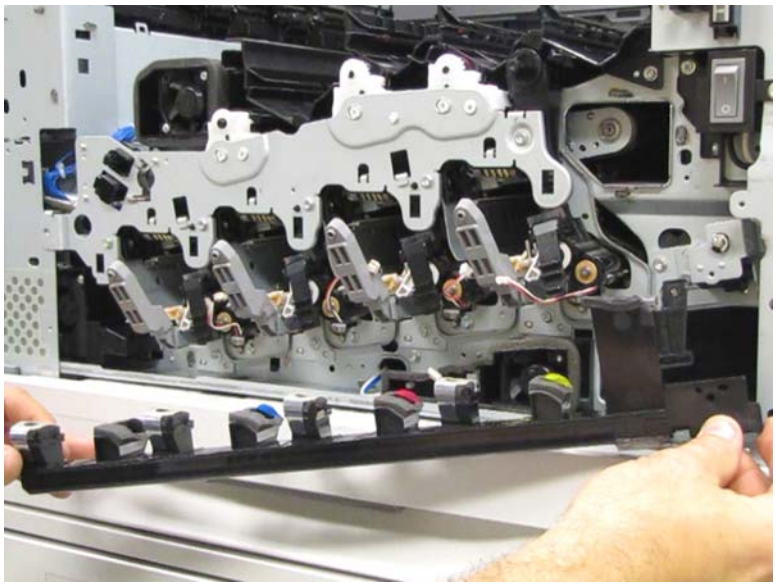
17. Remove the waste toner agitator motor.

Waste toner auger chute removal

1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
7. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
8. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
9. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
10. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
11. Remove the ATC sensor PCB bracket. See **“ATC sensor PCB bracket removal” on page 4-29**.
12. Remove the three screws (A) from the waste toner auger chute.



13. Remove the waste toner auger chute.



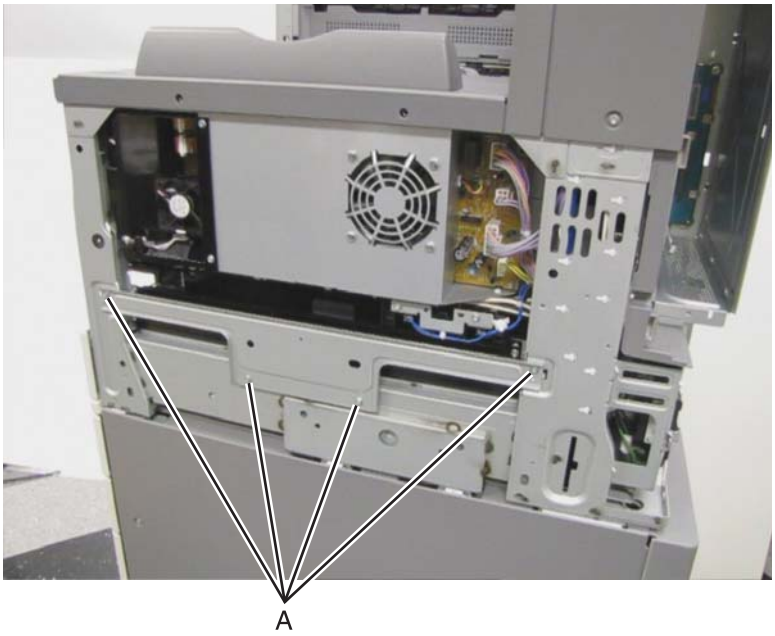
Re-installation warning: When replacing the waste toner auger chute, ensure that the four plastic gates on the four toner add chutes are in the closed position or damage will occur to the foam gaskets on the waste toner auger chute.

Re-installation warning: When replacing the waste toner auger chute, ensure that the four developer housing harnesses are properly routed and do not become pinched.

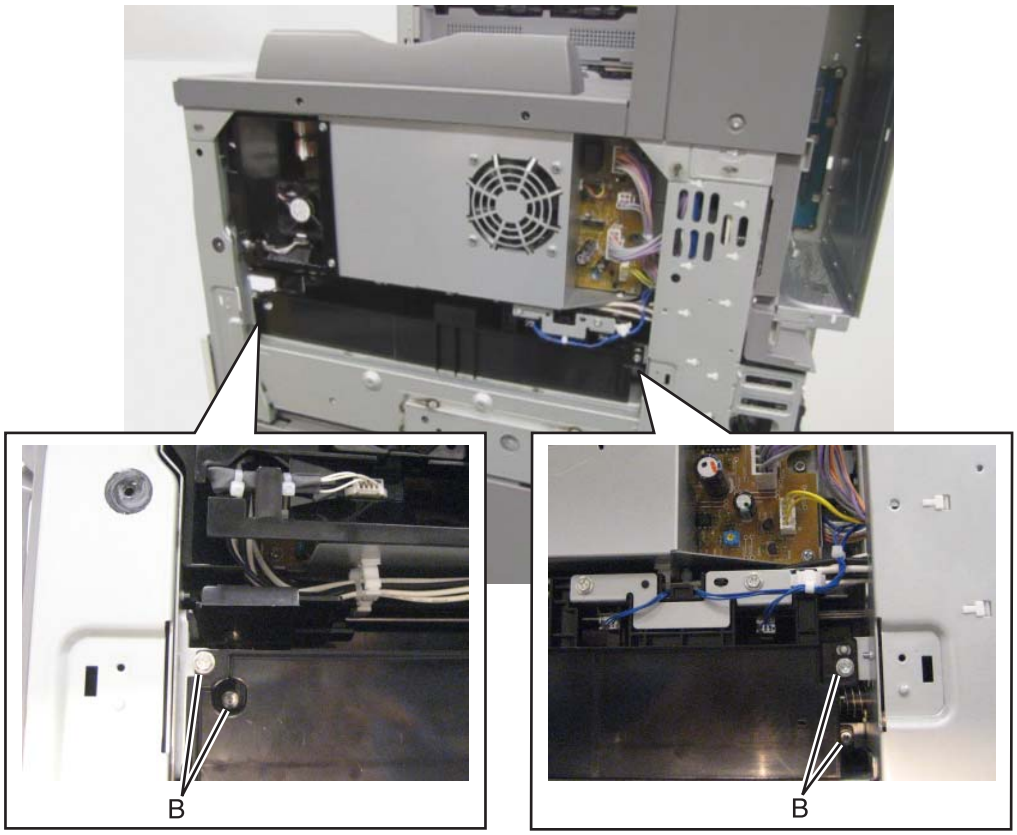
Re-installation warning: After the waste toner auger chute has bee re-installed, ensure that the four plastic gates are moved to the open position or the inner cover will not properly re-install.

Waste toner sensor guide removal

1. Remove the printer right side cover. See **“Printer right cover removal” on page 4-14**.
2. Remove the four screws (A) securing the bracket to the machine.

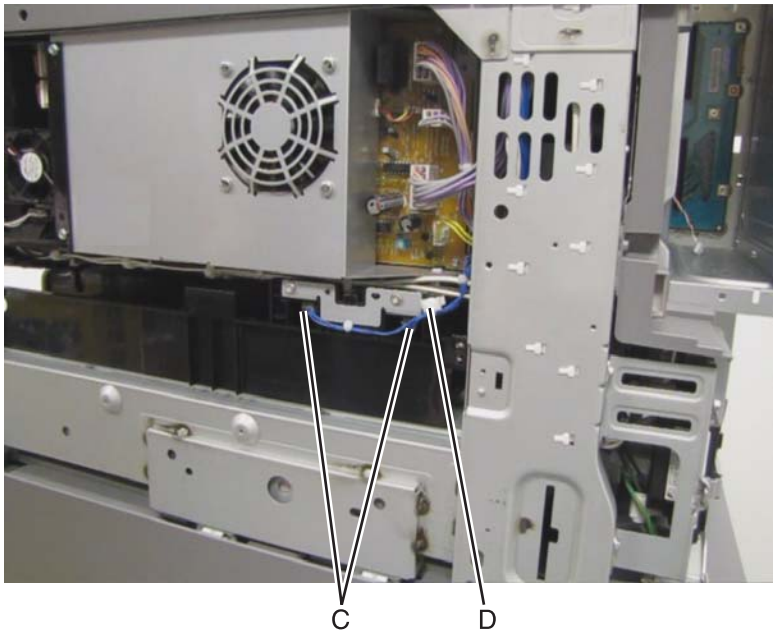


3. Remove the bracket.
4. Remove the four screws (B) securing the waste toner sensor guide to the machine.



5. Disconnect the two cables (C) from the waste toner sensor guide.

6. Remove the harness clamp (D) from the waste toner sensor guide.

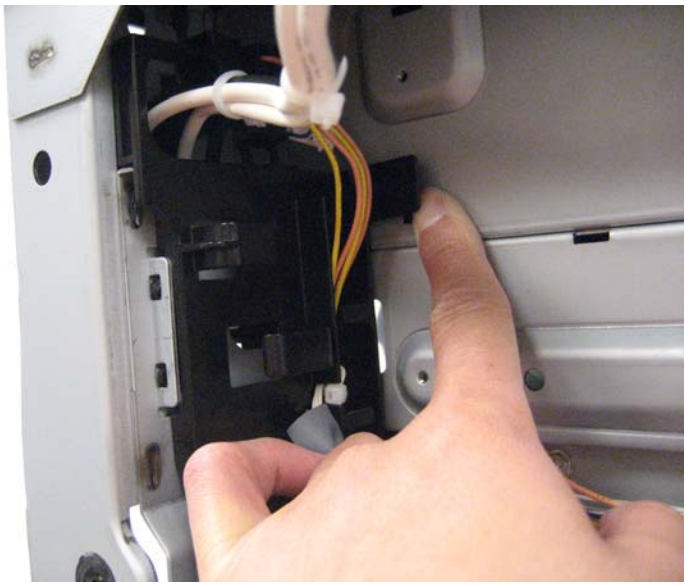


7. Remove the waste toner sensor guide.

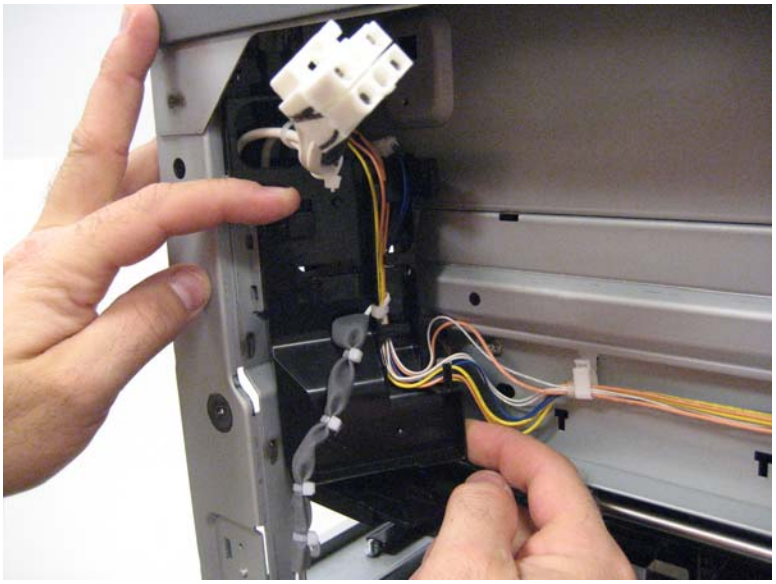
Waste toner shaft gate removal

1. Remove the printer front door. See **“Printer front door removal” on page 4-13**.
2. Remove the transfer belt cleaner. See **“Transfer belt cleaner removal” on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **“Operator panel front cover (MFP) removal” on page 4-8**.
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the ATC sensor PCB bracket. See **“ATC sensor PCB bracket removal” on page 4-29**.
10. Remove the waste toner add chute. See the **“Waste toner auger chute removal” on page 4-200**.
11. Remove the printer right side cover. See **“Printer right cover removal” on page 4-14**.
12. Remove the LVPS subfan guide. See **“LVPS front fan guide removal” on page 4-117**.
13. Remove the waste toner sensor guide. See **“Waste toner sensor guide removal” on page 4-202**.
14. Remove the LVPS PCBA. See the **“LVPS PCBA removal” on page 4-118**
15. Remove the main power GFI interface. See the **“Main power GFI interface removal” on page 4-124**.
16. Remove the PC/developer drive motor. See the **“PC/developer drive motor removal” on page 4-143**.
17. Remove the waste toner agitator motor. See the **“Waste toner agitator motor removal” on page 4-196**.

18. Lift the tab securing the plastic cover to the machine.

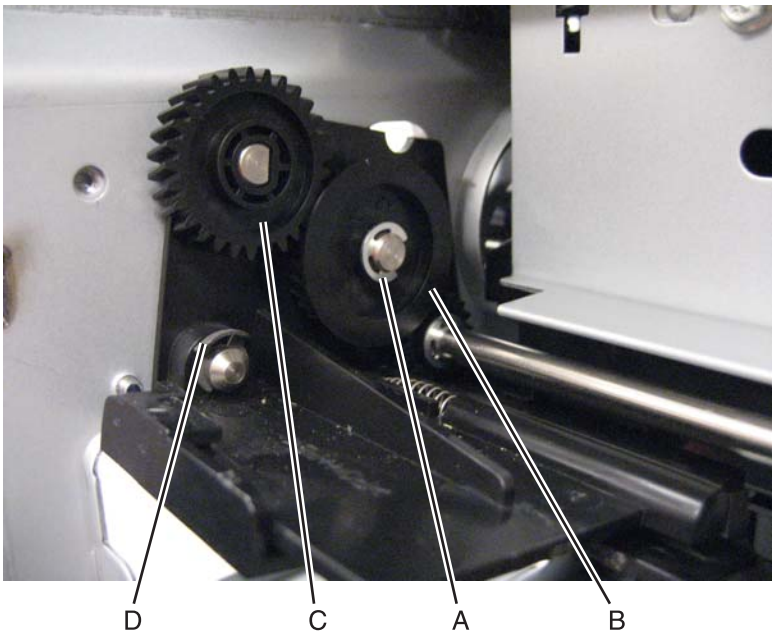


19. Swing the plastic cover out of the machine and allow it to hang by the harness.

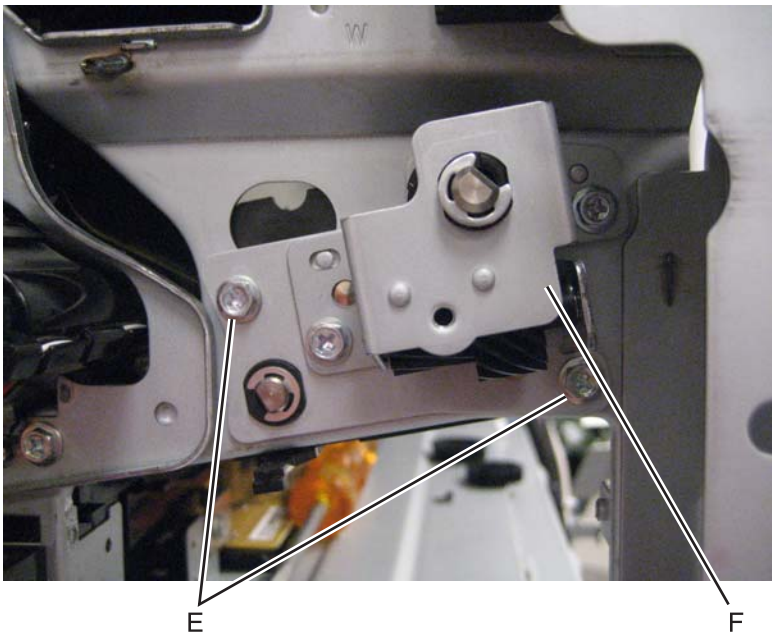


20. Remove the e-clip (A) securing the 31T gear (B).
21. Remove the 31T gear.
22. Remove the 29T gear (C).

23. Remove the e-clip (D) securing the waste toner shaft gate to the machine.



24. Remove the two screws (E) securing the waste toner gear bracket (F) to the machine.



25. Remove the waste toner gear bracket.
26. Remove the waste toner shaft gate.

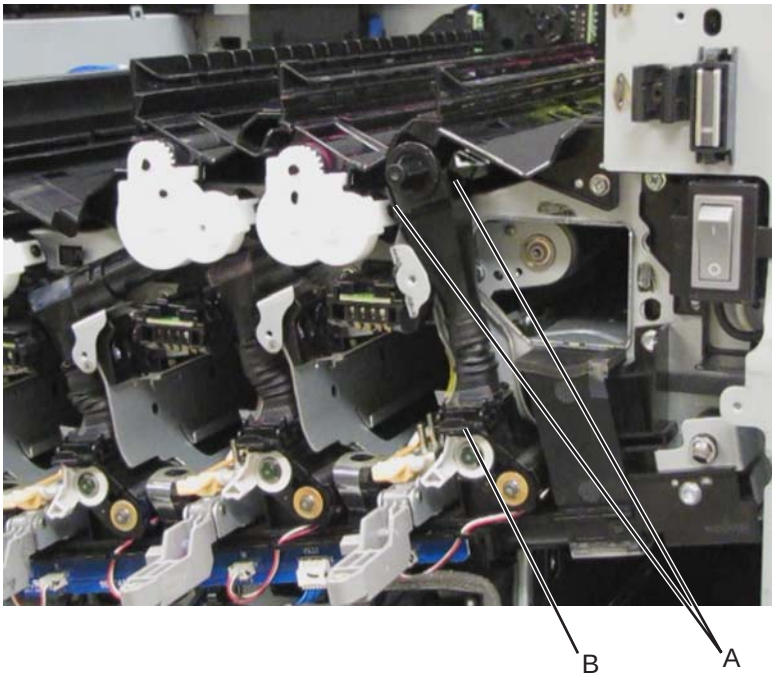
Y toner auger removal

1. Remove the printer front door. See **"Printer front door removal" on page 4-13**.
2. Remove the transfer belt cleaner. See **"Transfer belt cleaner removal" on page 4-185**.
3. Remove the waste toner box.
4. Remove the four photoconductor units.
5. Remove the four toner supplies.
6. Remove the operator panel front cover. See **"Operator panel front cover (MFP) removal" on page 4-8**.

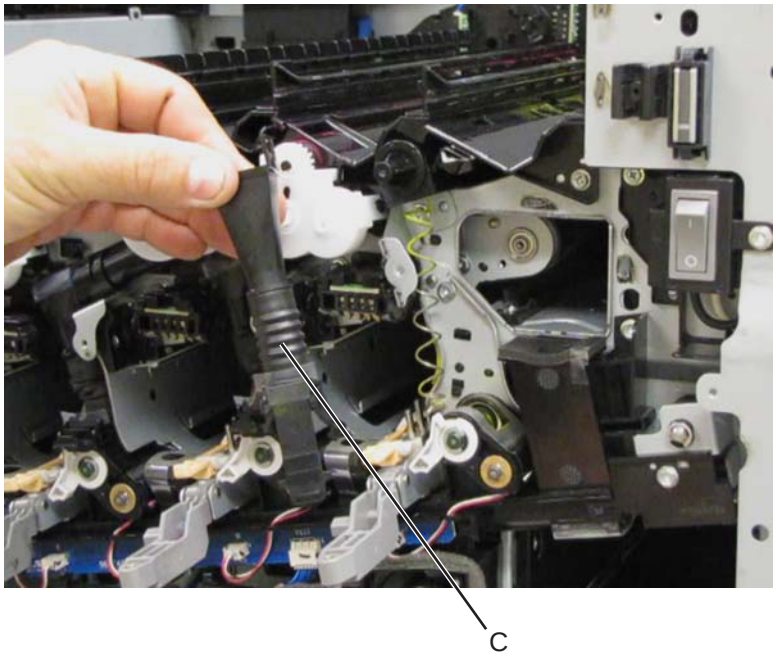
7. Remove the printhead retract door. See **“Printhead retract door removal” on page 4-151**.
8. Remove the inner cover. See **“Inner cover removal” on page 4-4**.
9. Remove the inner plate. See **“Inner plate removal” on page 4-104**.
10. Lift the plastic gate, and push it in to prevent the toner from spilling.

11. Release the two latches (A) connecting the upper portion of the auger.
12. Detach the lower portion (B) of the auger from the developer unit.

Warning: The lower portion of the auger is prone to damage. Extra care is required in handling this part.



13. Remove the Y toner auger.

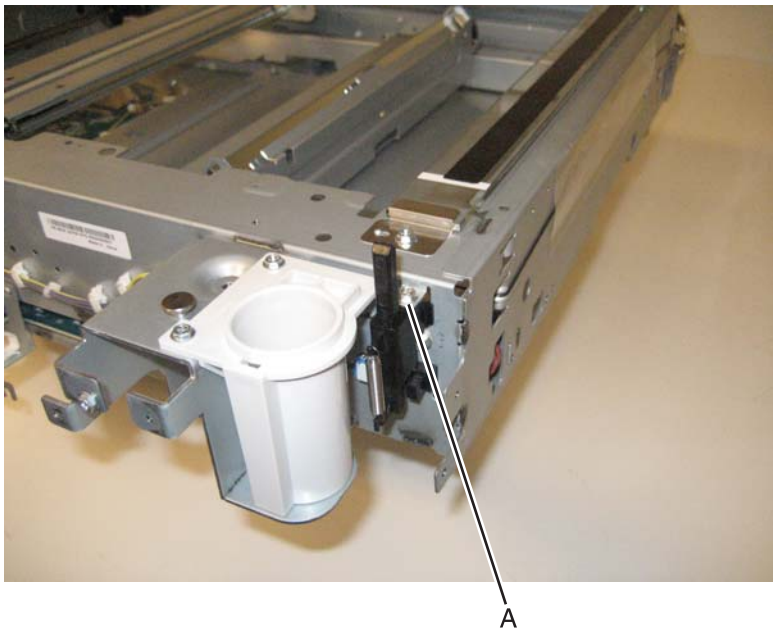


Re-installation note: Ensure that the rubber sleeve (C) is attached properly to prevent toner spillage.

Scanner component removal procedures

ADF angle actuator removal

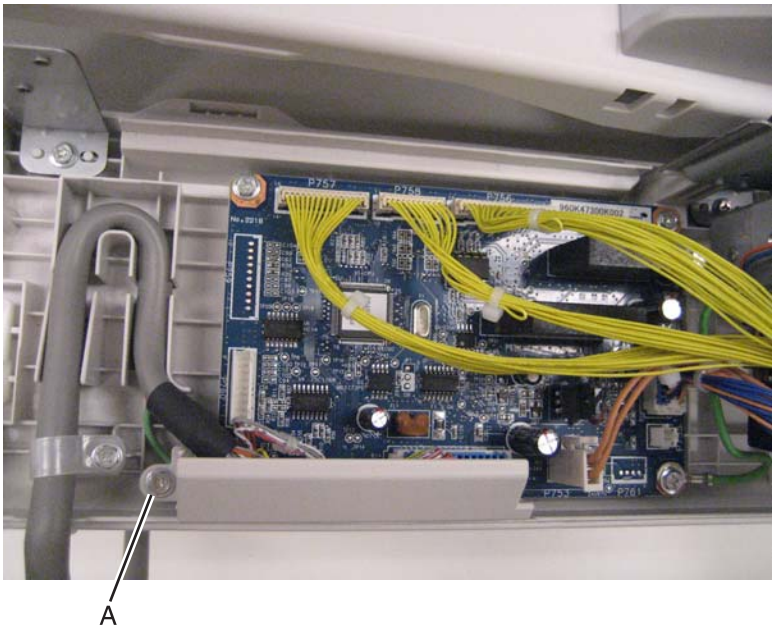
1. Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-20**.
2. Remove the scanner left cover. See **“Scanner left cover removal” on page 4-19**.
3. Remove the screw (A) securing the ADF angle actuator.



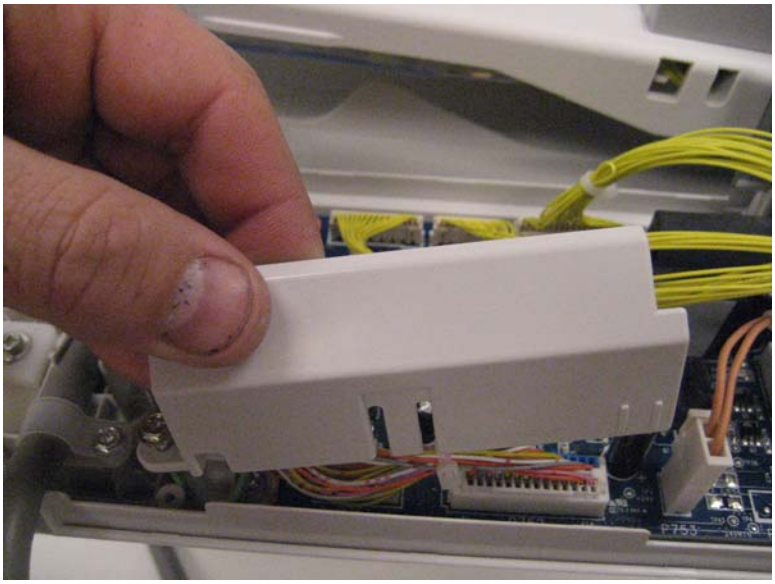
4. Remove the ADF angle actuator.

ADF controller PCBA removal

1. Remove the ADF rear cover. See **“ADF rear cover removal” on page 4-224**.
2. Remove the screw (A) securing the plastic shield to the machine.

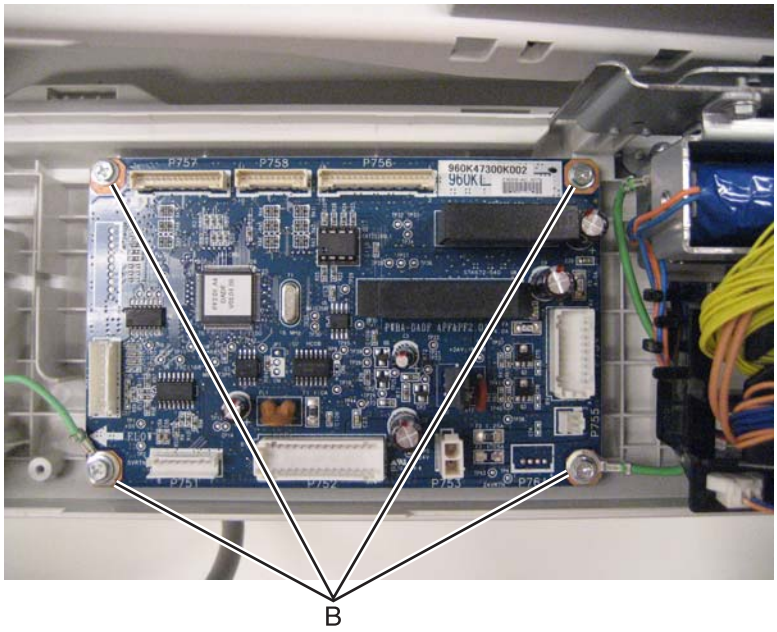


3. Remove the plastic shield.



4. Disconnect all the cables from the ADF controller PCBA.

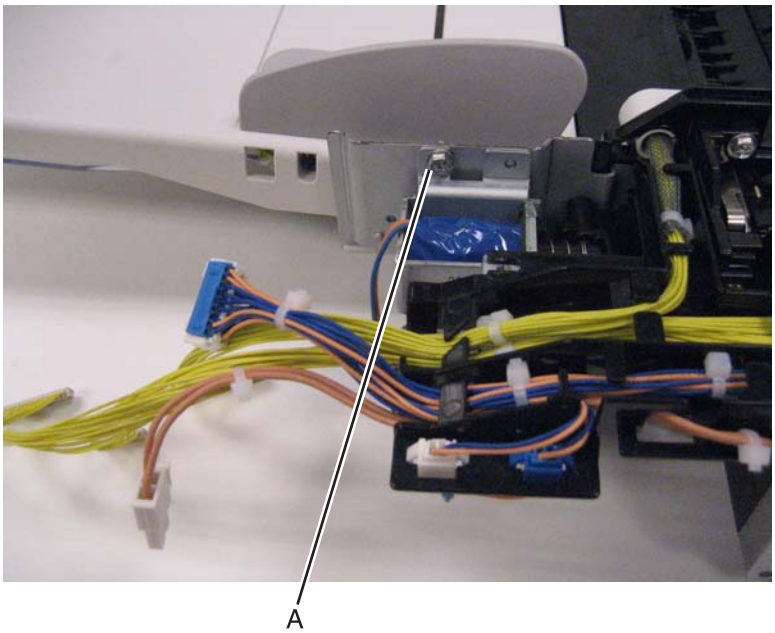
5. Remove the four screws (B).



6. Remove the ADF controller PCBA from the base.

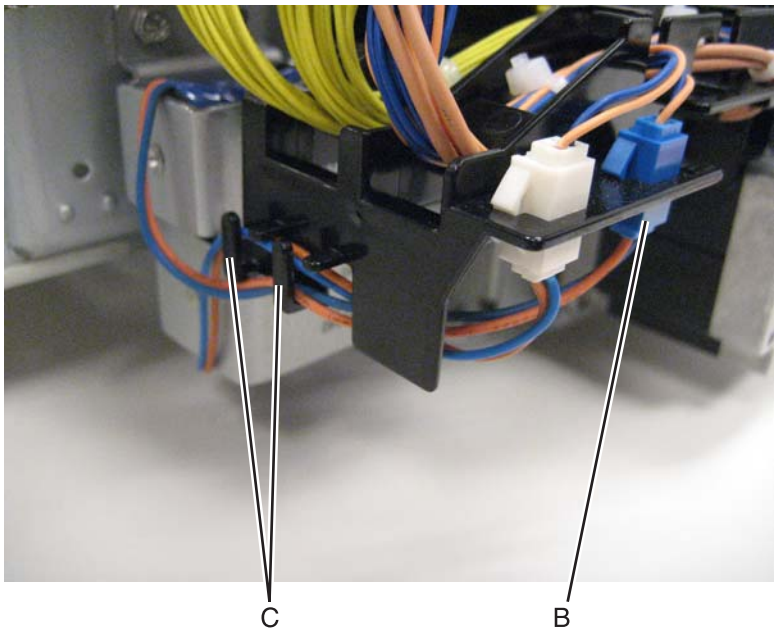
ADF diverter gate solenoid removal

1. Remove the ADF main drive sub-assembly. See **“ADF main drive sub assembly removal” on page 4-221**.
2. Remove the screw (A).



3. Disconnect the cable (B).

4. Release the harness from the clamps (C).



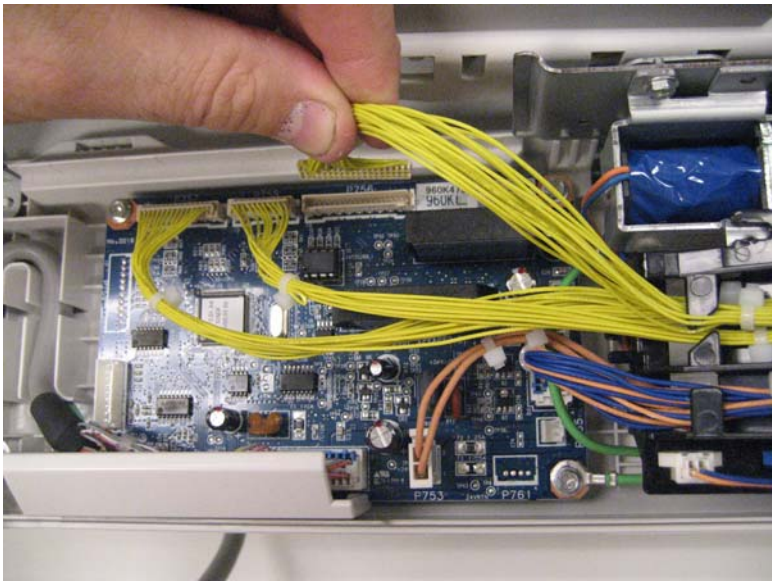
Note: When removing the ADF diverter gate solenoid, the spring and plunger will become detached.

5. Remove the ADF diverter gate solenoid.

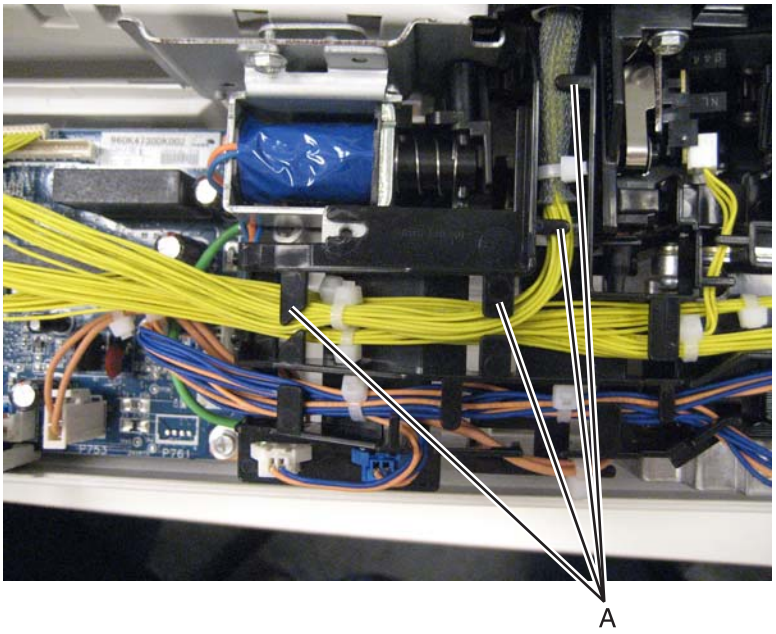
Reinstallation note: When replacing the ADF diverter gate solenoid, ensure that the pin on the plunger is properly reattached.

ADF document tray removal

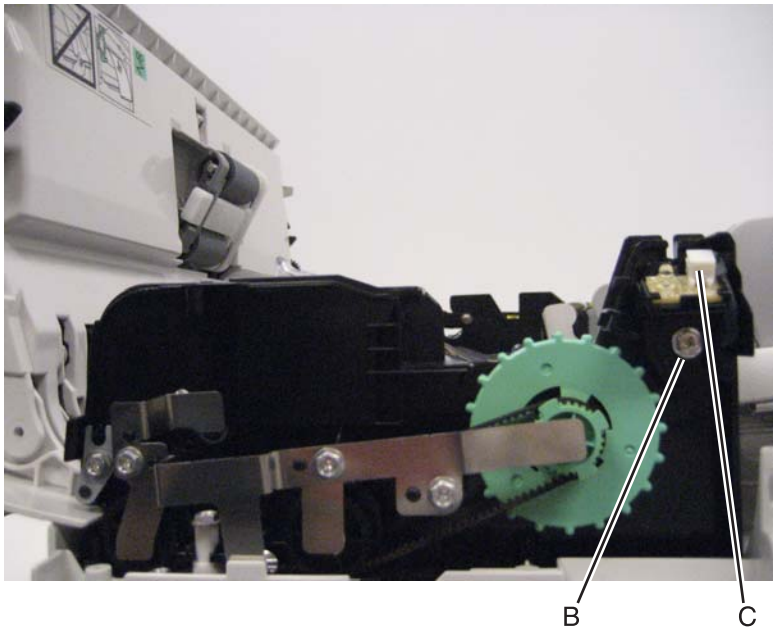
1. Open the ADF top door.
2. Remove the ADF rear cover. See **"ADF rear cover removal" on page 4-224**.
3. Disconnect the cable from the ADF controller PCBA.



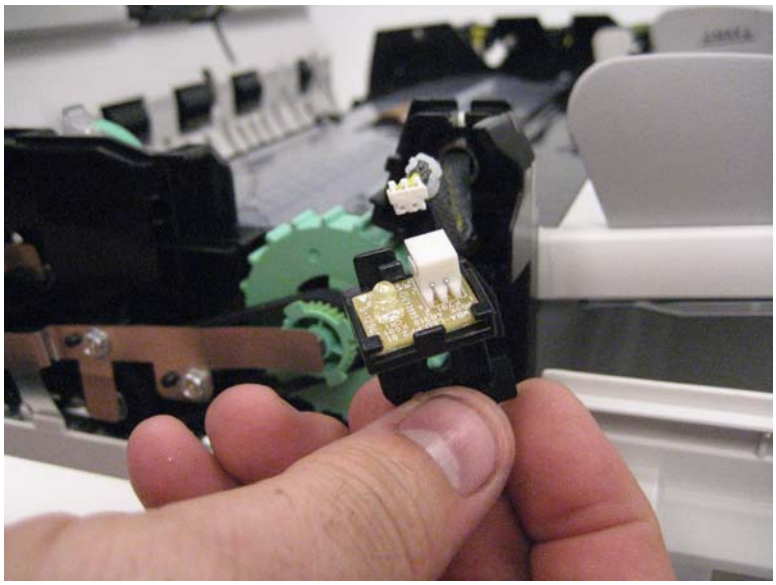
4. Remove the harness from the four clamps (A).



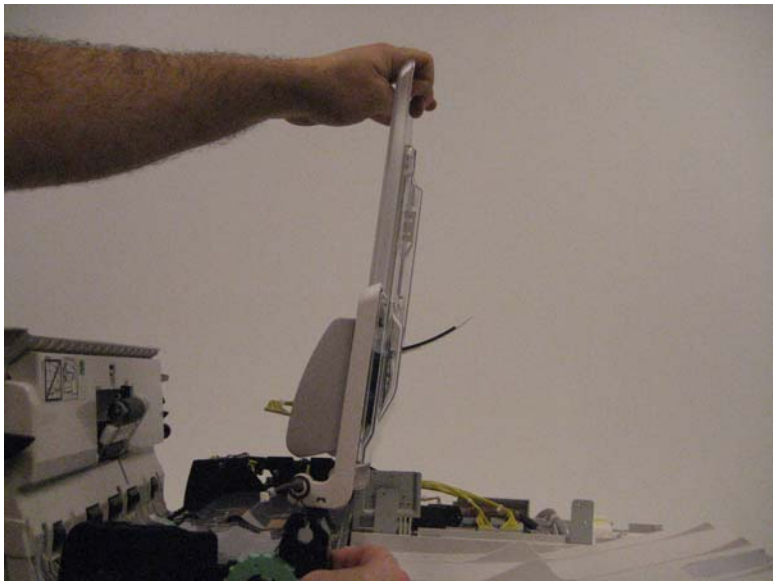
5. Remove the ADF front cover. See **“ADF front cover removal” on page 4-219**.
6. Remove the screw (B) securing the LED to the machine.
7. Disconnect the cable (C) from the LED.



8. Remove the LED.

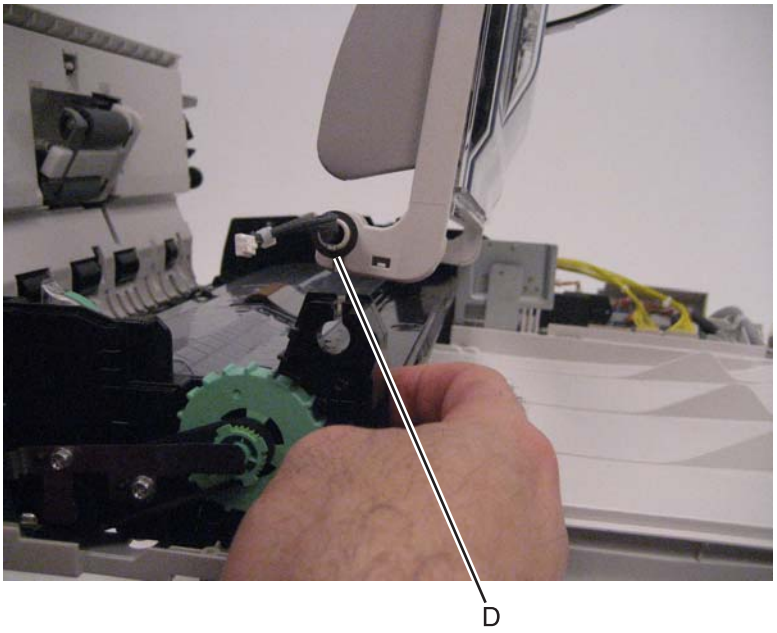


9. Gently flex the frame and detach the front of the ADF document tray from the base.



Note: When removing the ADF document tray, ensure that the tray is in its full upright position, as shown in the previous image.

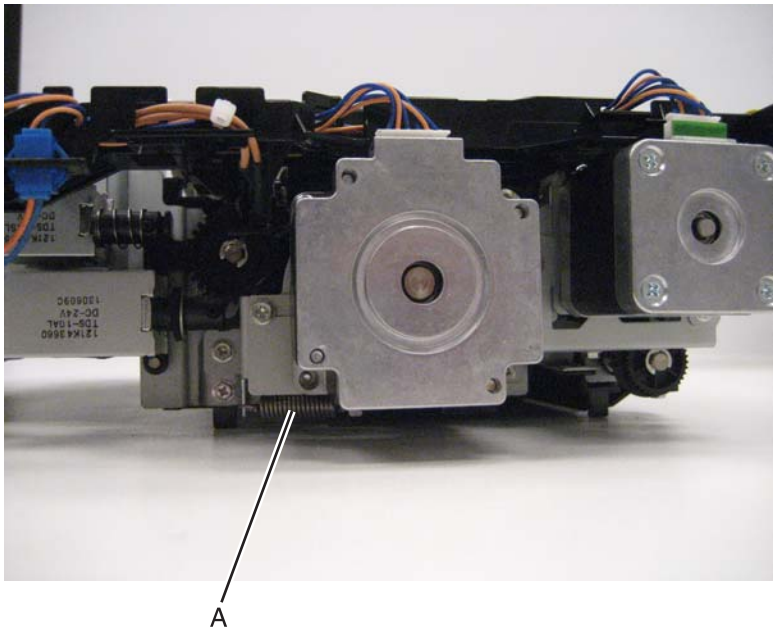
Note: When removing the ADF document tray, make sure the plastic washer (D) does not fall off. >> Wording



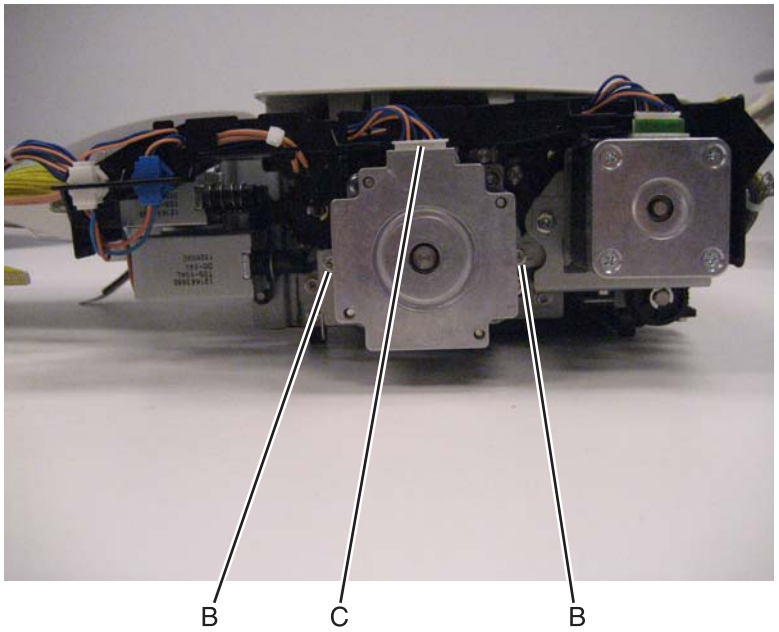
10. Remove the ADF document tray.

ADF feed motor removal

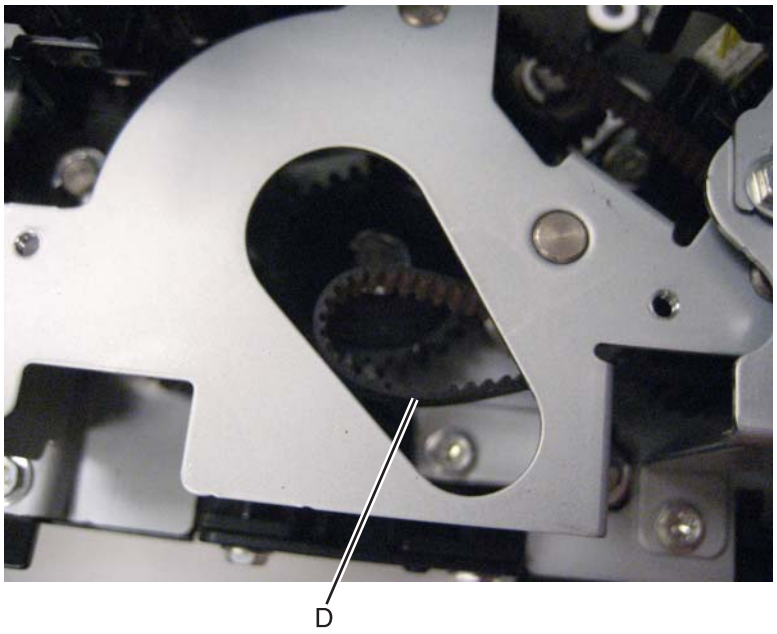
1. Remove the ADF main drive sub-assembly. See **“ADF main drive sub assembly removal” on page 4-221**.
2. Remove the tension spring (A).



3. Remove the two screws (B) securing the ADF feed motor to the assembly.
4. Disconnect the cable (C).



Note: When removing the ADF feed motor, the drive belt (D) will become detached.

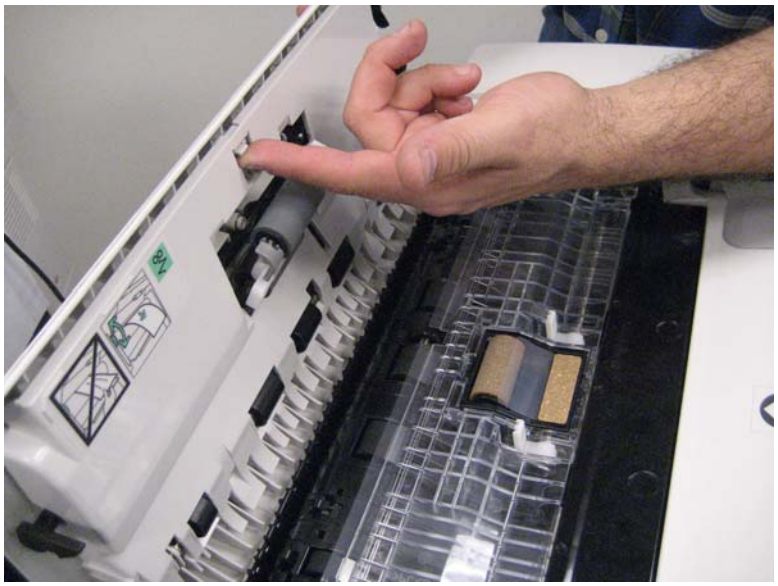


5. Remove the ADF feed motor.

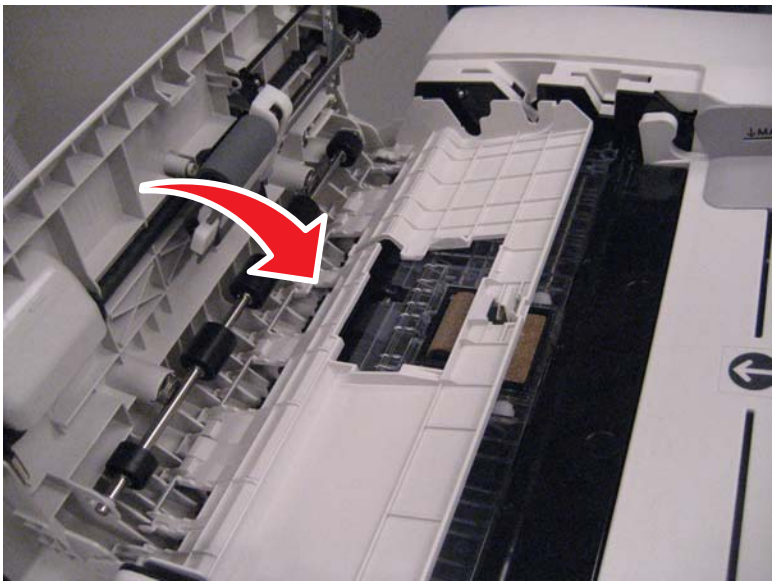
Reinstallation note: To correctly set the ADF feed motor belt drive tension, install the ADF feed motor and the ADF feed motor tension spring before completely tightening the two screws.

ADF feed/pick roller assembly removal

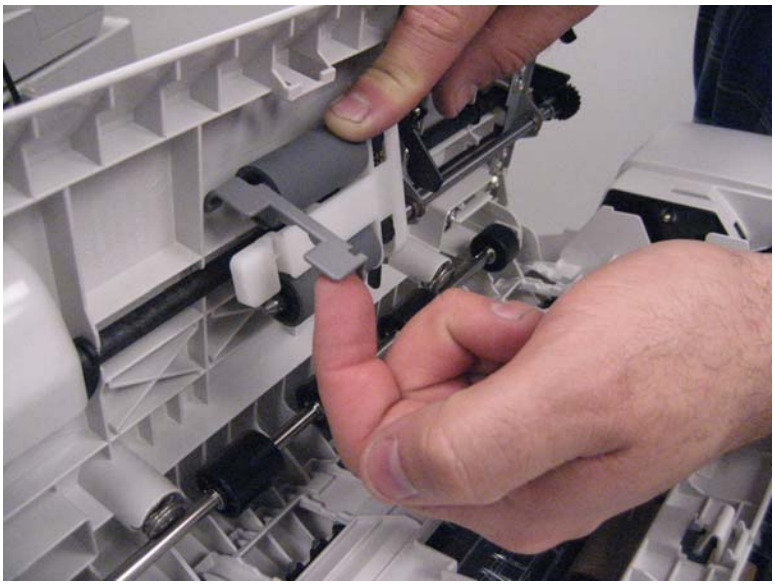
1. Open the ADF top door assembly.
2. Release the tab securing the inner cover.



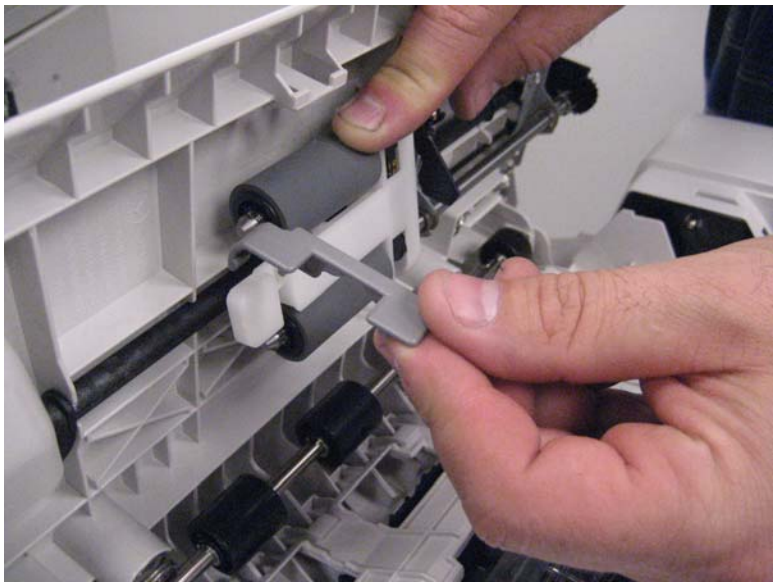
3. Lower the inner cover.



4. Detach the bottom portion of the retaining clip.



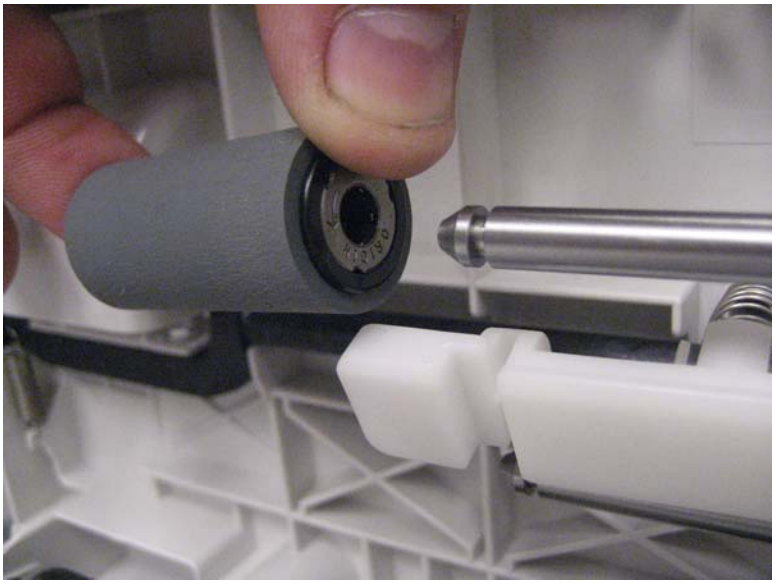
5. Remove the retaining clip from the machine.



6. Remove the two rollers from the machine.

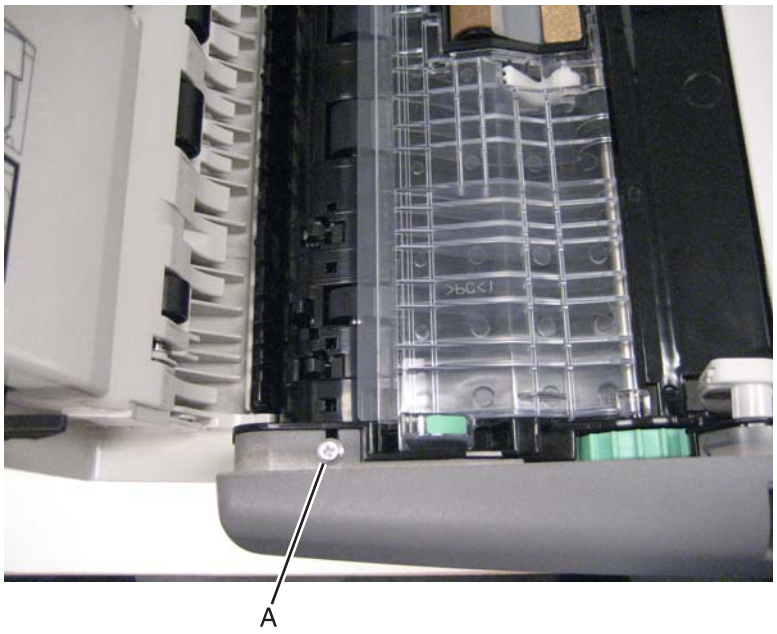
Reinstallation warning: Before reinstalling, make sure you do not touch the rubber surface of the pick roller.

Reinstallation warning: When reinstalling the ADF feed/pick roller assemblies, ensure that they are installed as shown in the following image.

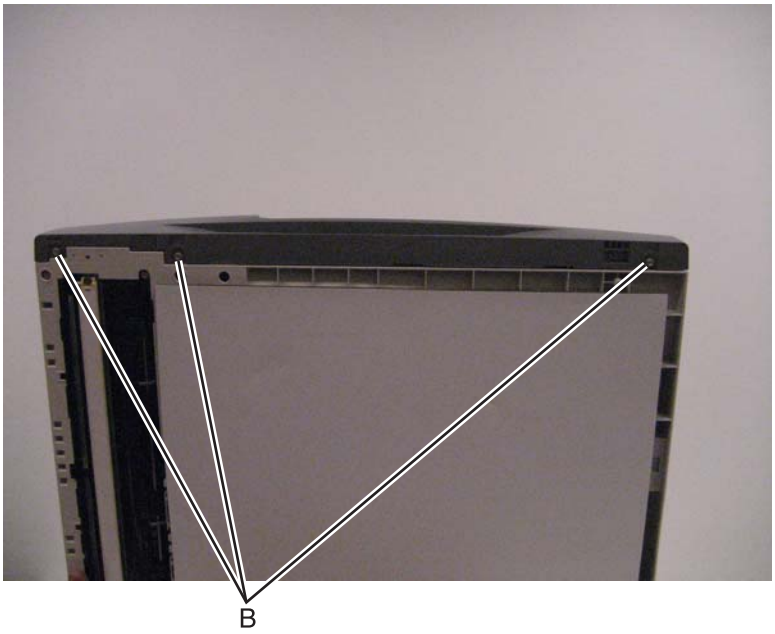


ADF front cover removal

1. Open the ADF top door.
2. Loosen the screw (A) securing the ADF front cover to the machine.



3. Lift the ADF to its uppermost position.
4. Loosen the three screws (B).

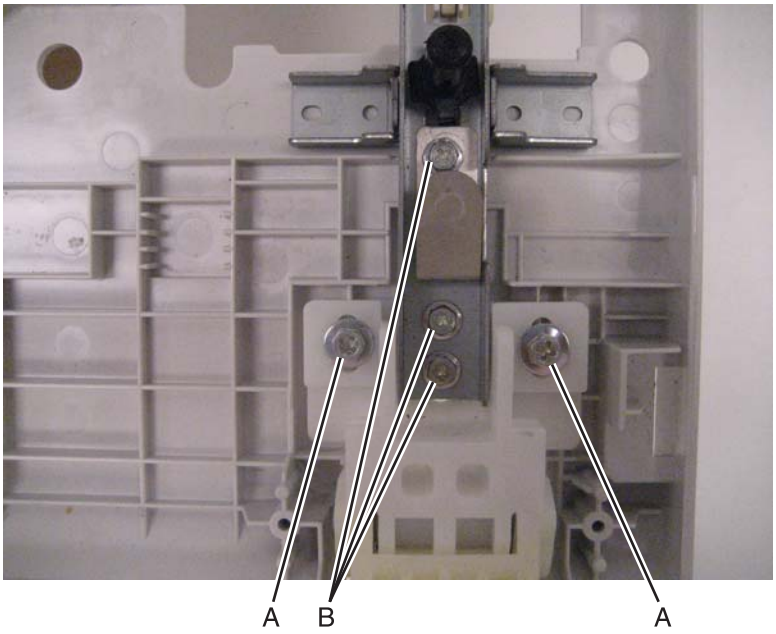


5. Remove the ADF front cover.

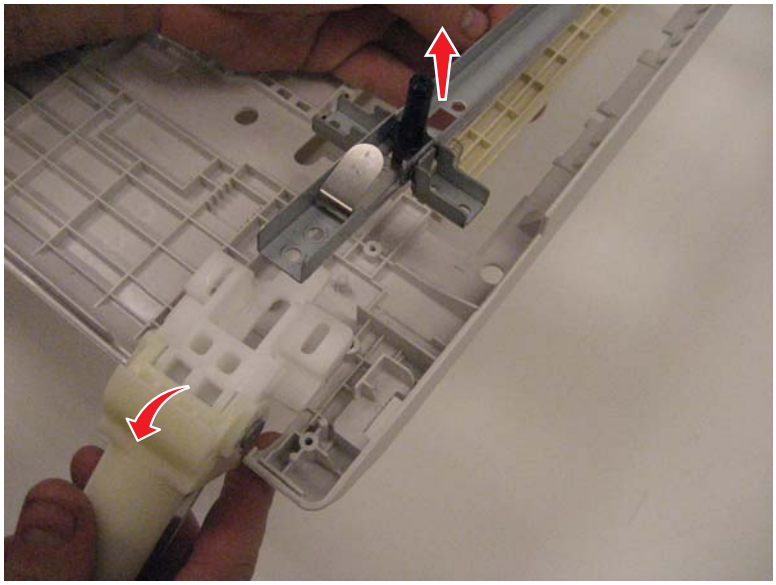
ADF left hinge removal

1. Remove the ADF main drive sub-assembly. See **“ADF main drive sub assembly removal” on page 4-221**.
2. Remove the two screws (A) securing the ADF left hinge to the base.

3. Remove the three screws (B) securing the metal bracket to the base.



4. Gently lift the bracket from the metal base and remove the ADF left hinge from the base.



ADF main drive sub assembly removal

Previous
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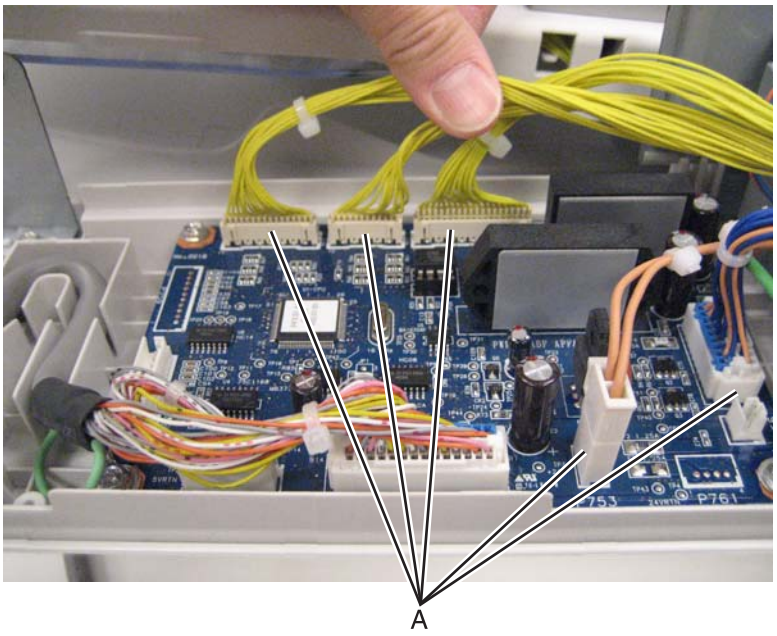
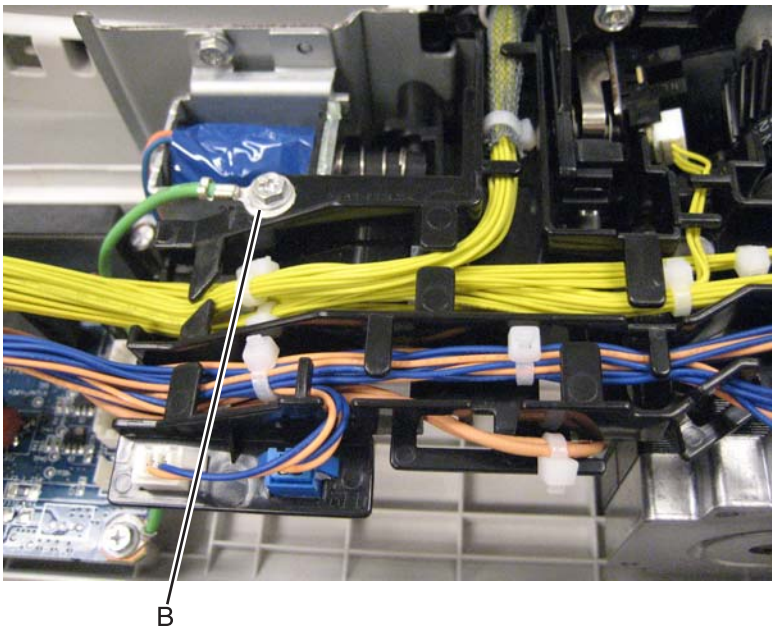
1. Remove the ADF rear cover. See **“ADF rear cover removal” on page 4-224**.
2. Disconnect the five cables (A) from the ADF controller PCBA.

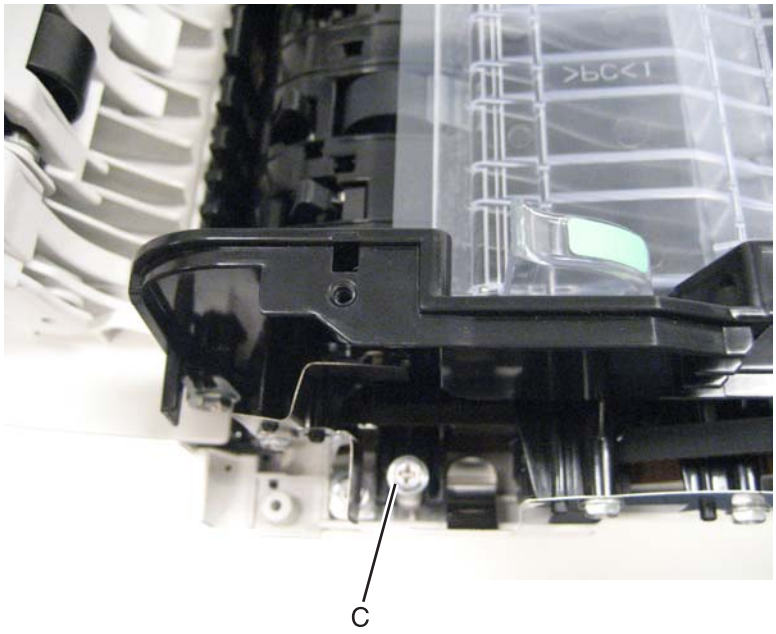


3. Remove the screw (B) securing the grounding wire to the ADF main drive sub assembly.

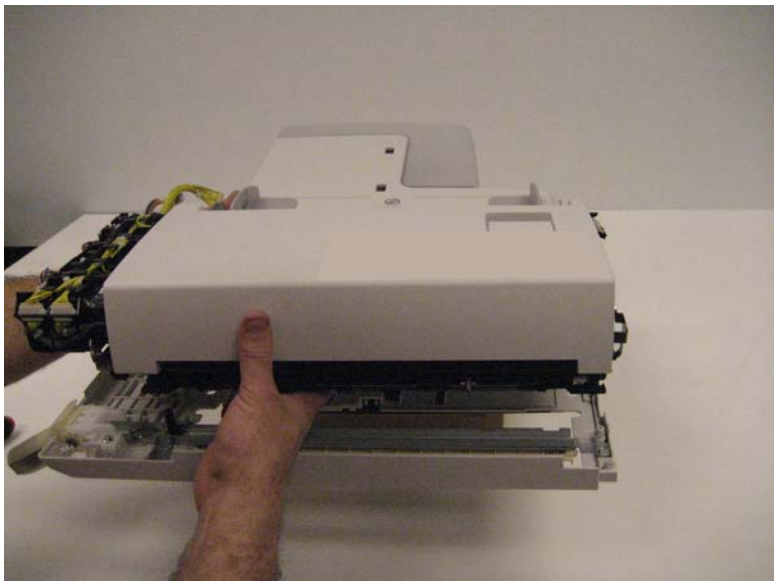


4. Remove the ADF front cover. See **“ADF front cover removal” on page 4-219**.

5. Remove the screw (C) securing the ADF main drive sub assembly to the base.



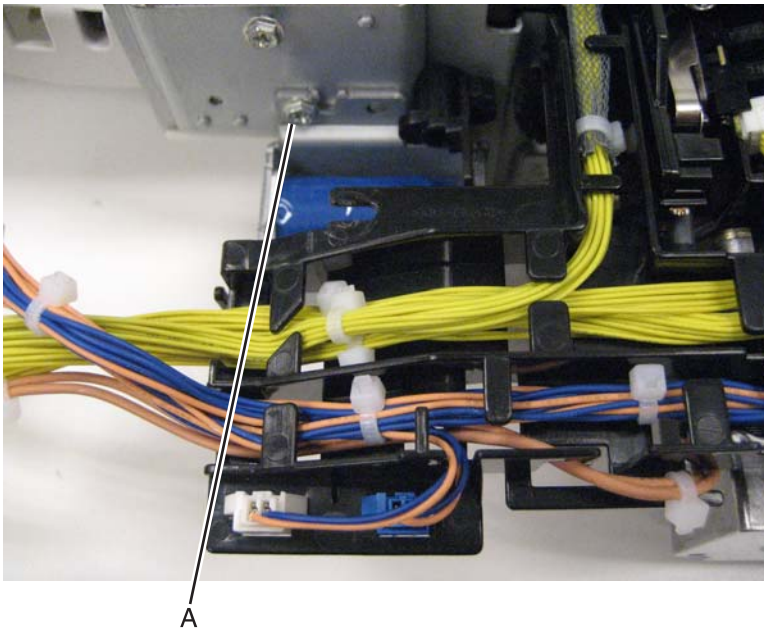
6. Remove the ADF main drive sub assembly from the base.



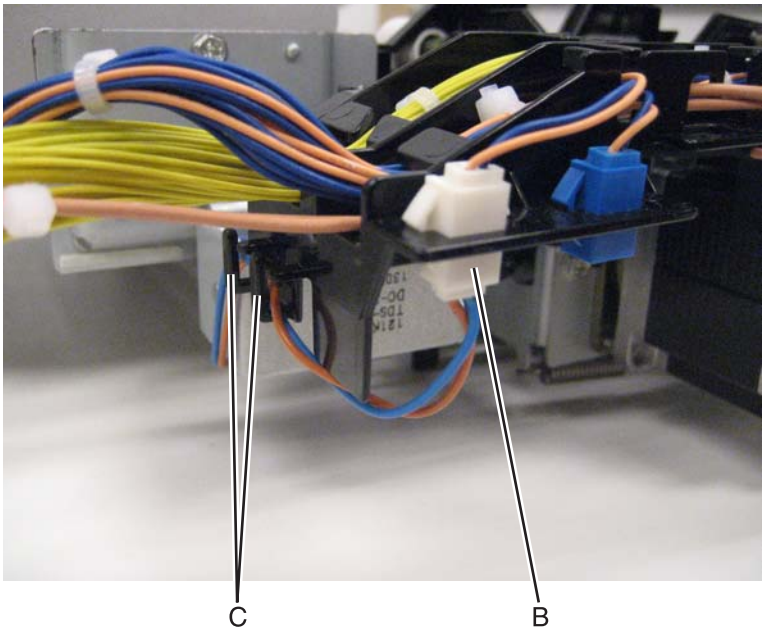
ADF nip release solenoid removal

1. Remove the ADF main drive sub-assembly. See **“ADF main drive sub assembly removal” on page 4-221**.
2. Remove the ADF diverter gate solenoid. See **“ADF diverter gate solenoid removal” on page 4-210**.

3. Remove the screw (A).



4. Disconnect the cable (B).
5. Release the harness (C) from the clamps.



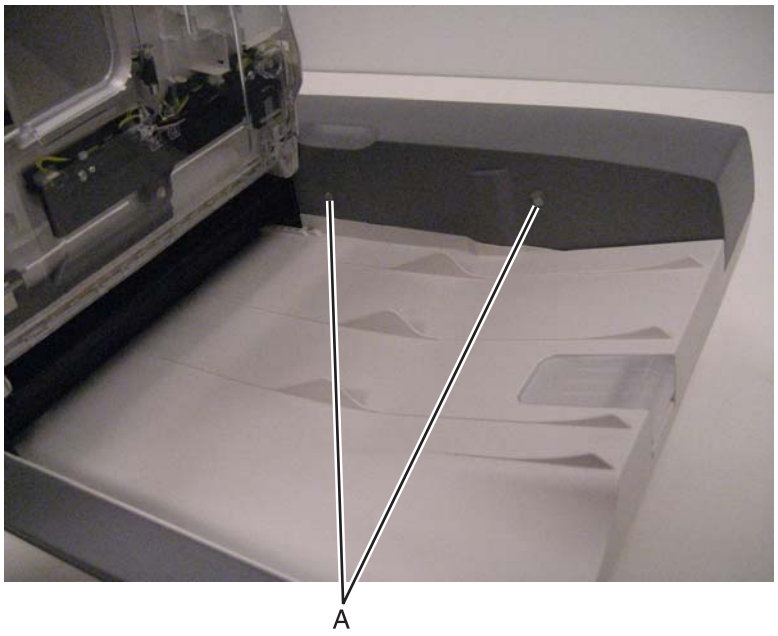
Note: When removing the ADF nip release solenoid, the spring and plunger will become detached.

6. Remove the ADF nip release solenoid.

Reinstallation note: When replacing the ADF nip release solenoid, ensure that the pin on the plunger is properly reattached.

ADF rear cover removal

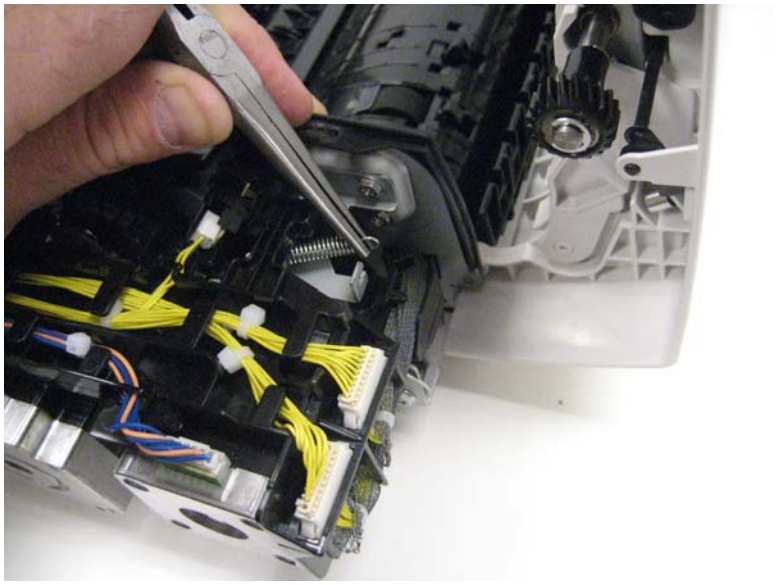
1. Lift the ADF document tray to its uppermost position.
2. Remove the two screws (A) securing the ADF rear cover to the machine.



3. Remove the ADF rear cover.

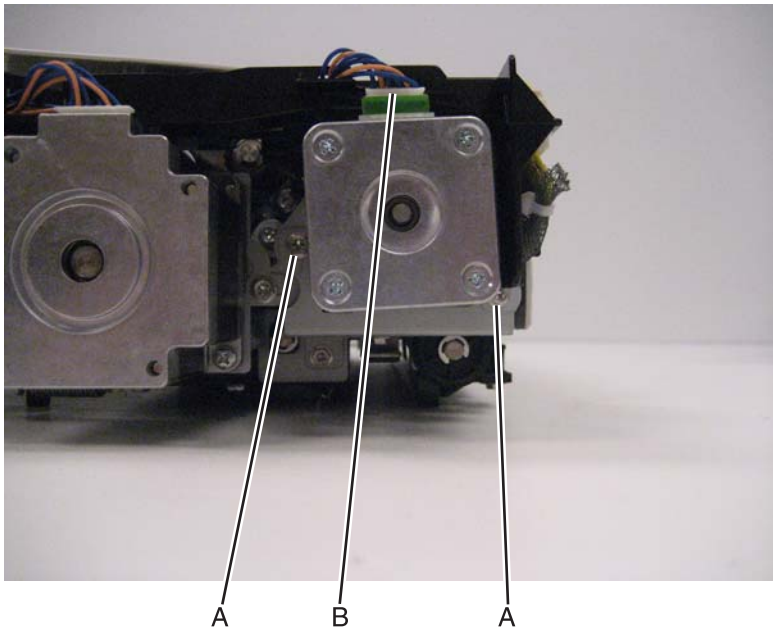
ADF registration motor removal

1. Remove the ADF main drive sub-assembly. See **“ADF main drive sub assembly removal” on page 4-221**.
2. Remove the tension spring.

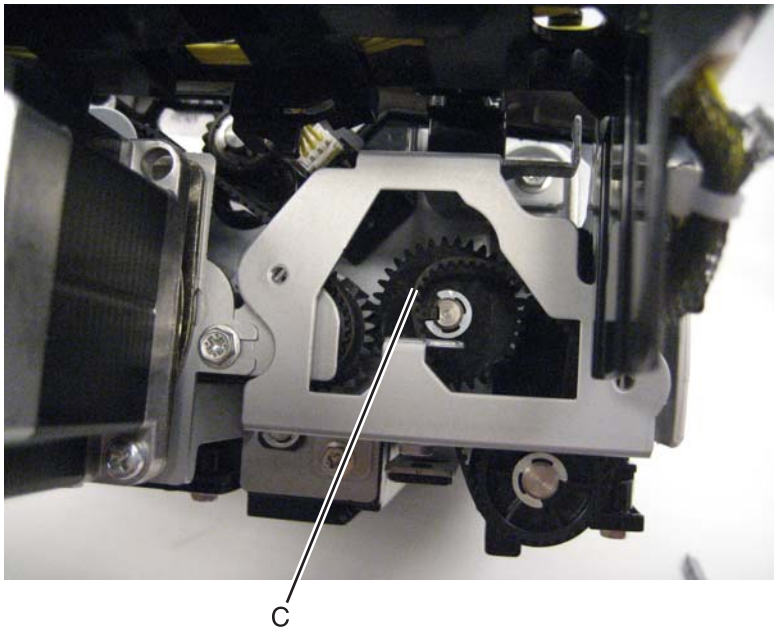


3. Remove the two screws (A) securing the ADF registration motor to the assembly.

4. Disconnect the cable (B).



Note: When removing the ADF registration motor, the drive belt (C) will become detached.



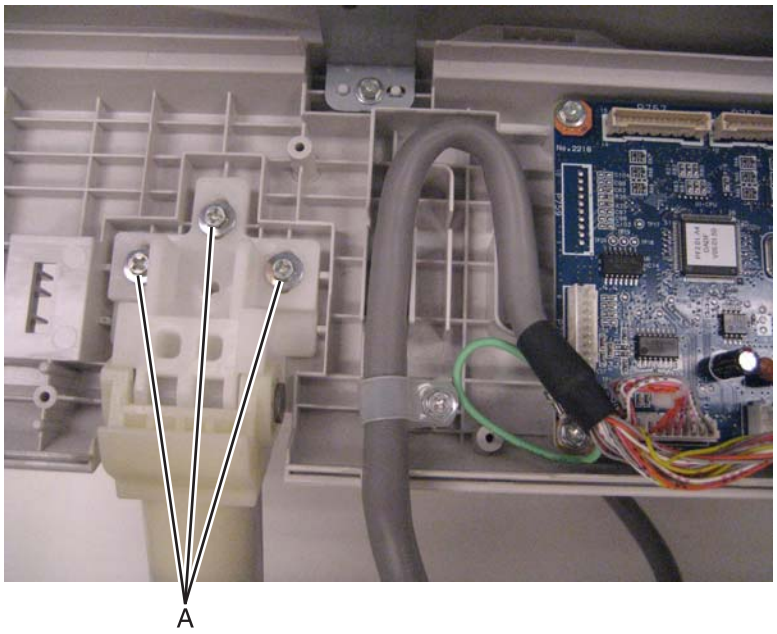
5. Remove the ADF registration motor.

Reinstallation note: To correctly set the ADF registration motor belt drive tension, install the ADF registration motor and the ADF registration motor tension spring before completely tightening the two screws.

ADF right hinge removal

1. Remove the ADF from the machine. See **"Automatic document feeder (ADF) assembly removal" on page 4-233**.
2. Remove the ADF rear cover. See **"ADF rear cover removal" on page 4-224**.

3. Remove the three screws (A).

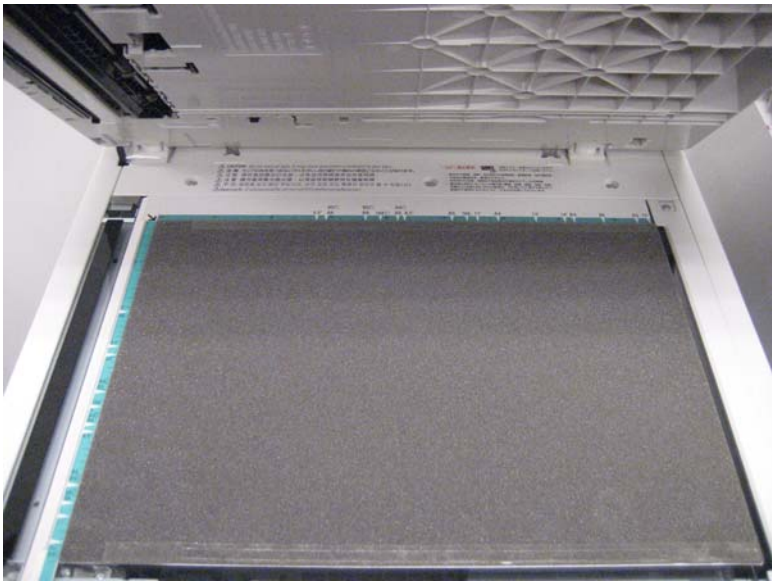


4. Remove the ADF right hinge from the base.

ADF scan pad removal

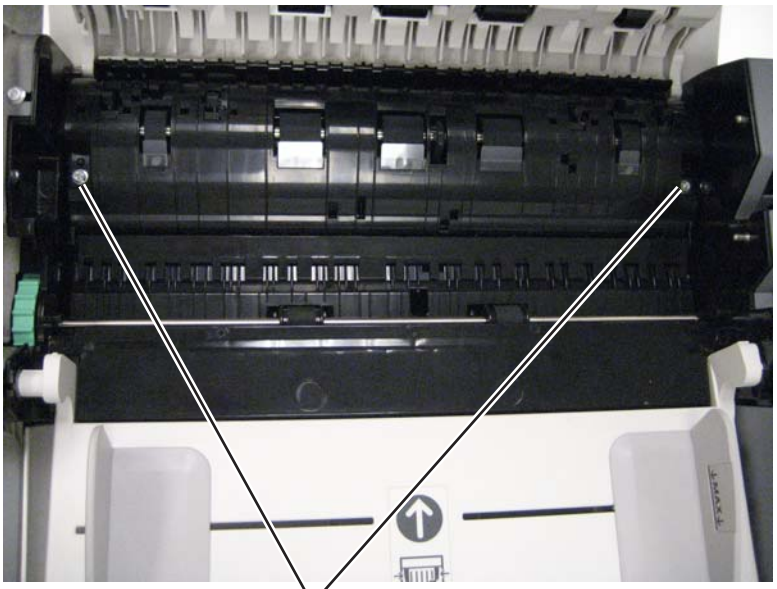
1. Raise the ADF to its uppermost position.
2. Gently pull the ADF scan pad as shown in the following picture.

Reinstallation note: When replacing the ADF scan pad, place it on the platen glass, as shown in the following picture. Then lower the ADF assembly to attach the ADF scan pad. (work on wording)



ADF sensor actuator guide removal

1. Open the ADF top door.
2. Remove the two screws (A).

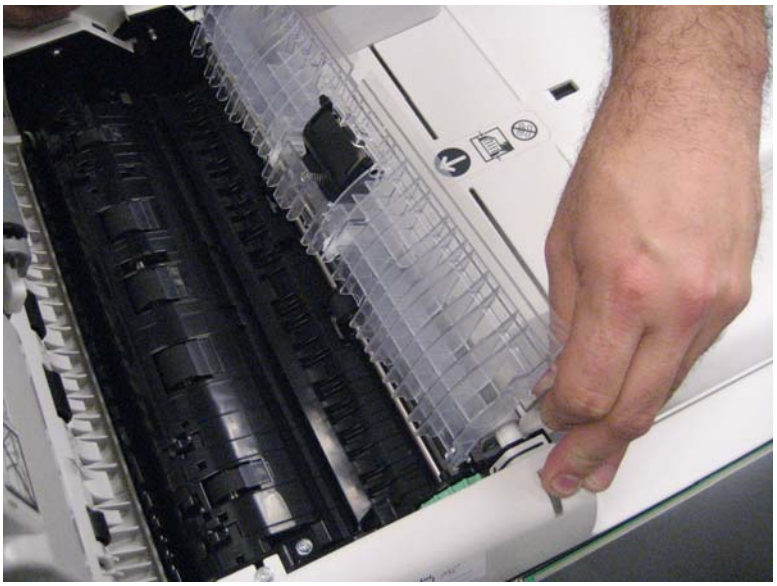


3. Remove the ADF sensor actuator guide.

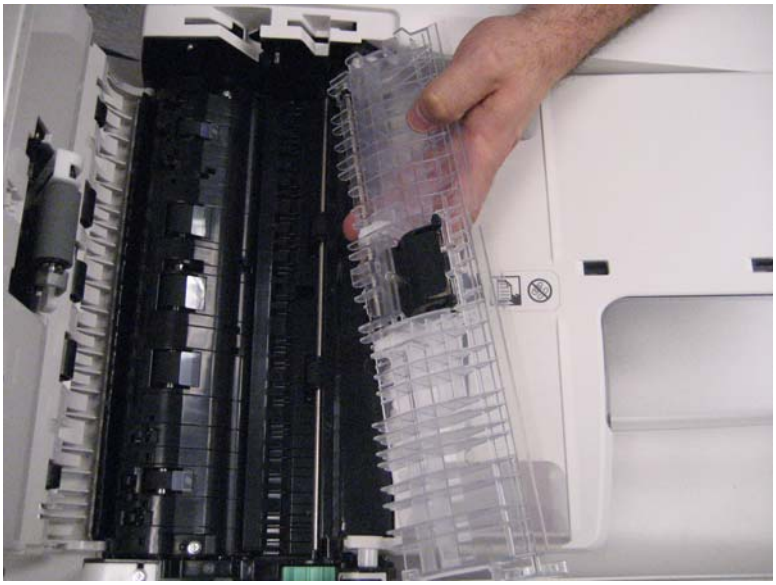
ADF separation roller guide removal

1. Open the ADF top door assembly.

2. Raise the ADF separation roller guide as shown in the following image.

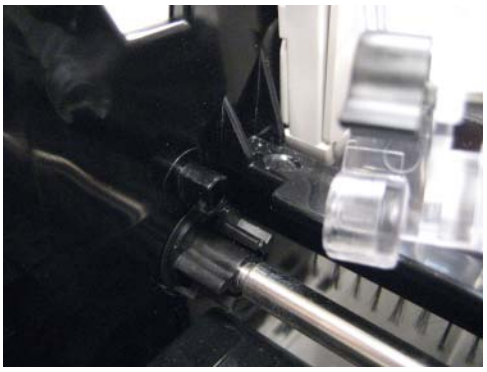


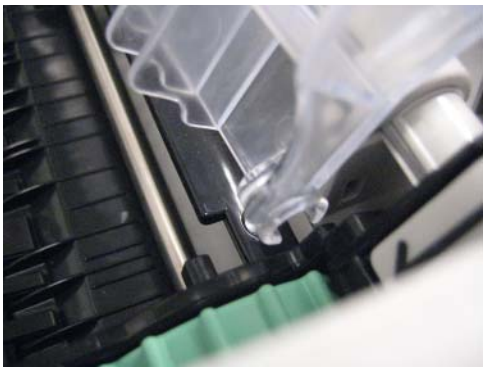
3. Gently detach the front of the ADF separation roller guide.



4. Remove the ADF separation roller guide from the machine.

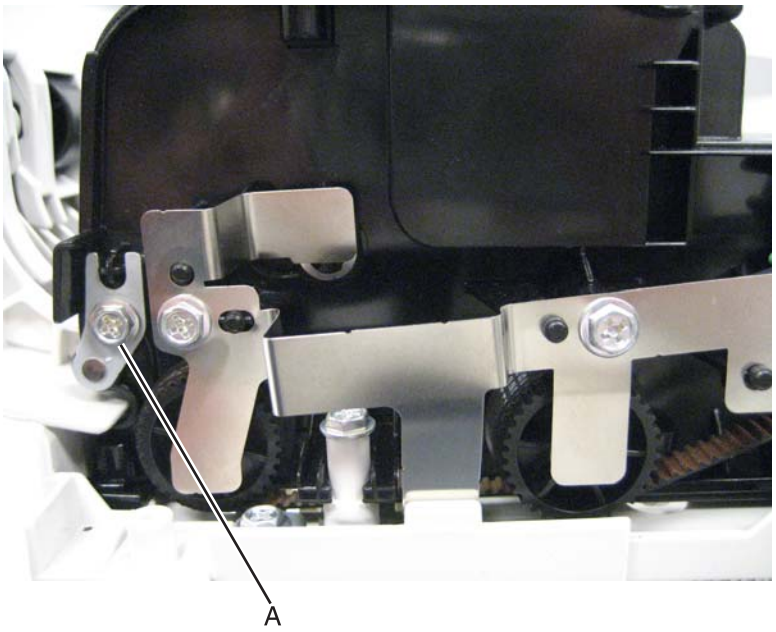
Reinstallation note: When reinstalling the ADF separation roller guide, place the rear hinge point of the ADF separation roller guide over the rear boss, and then gently press the front hinge point into the front boss until it snaps in place.



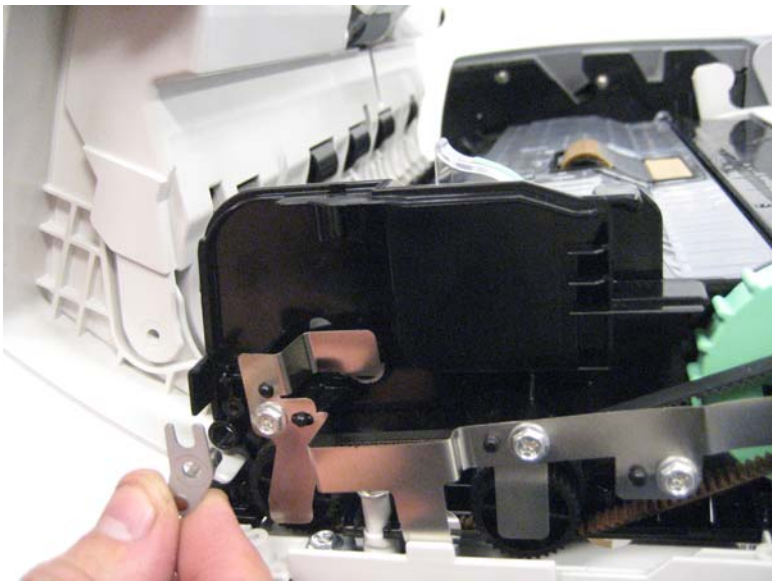


ADF top door removal

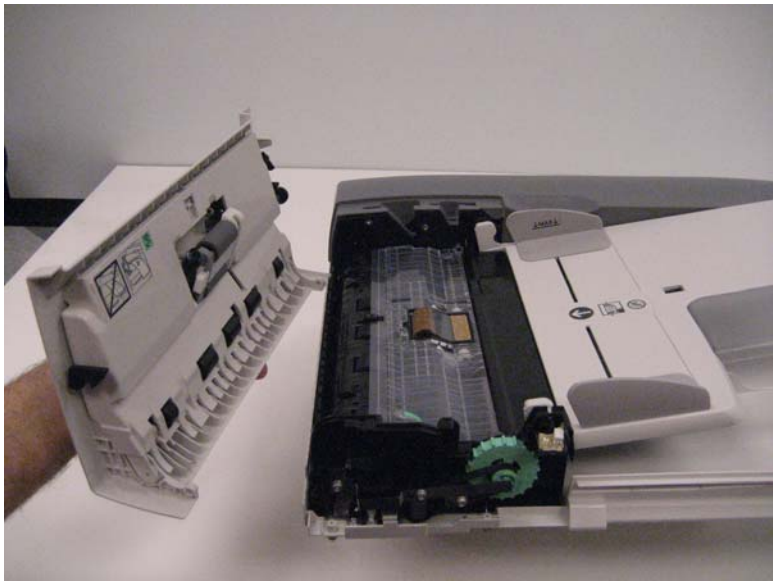
1. Remove the ADF front cover. See **“ADF front cover removal” on page 4-219**.
2. Remove the screw (A) securing the retainer to the machine.



3. Remove the retainer.

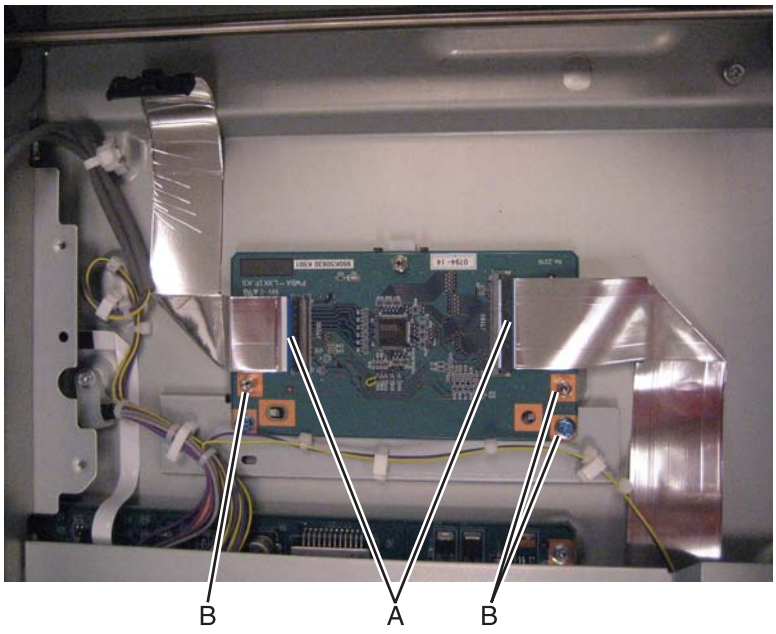


4. Remove the ADF top door.



Authentication PCBA removal

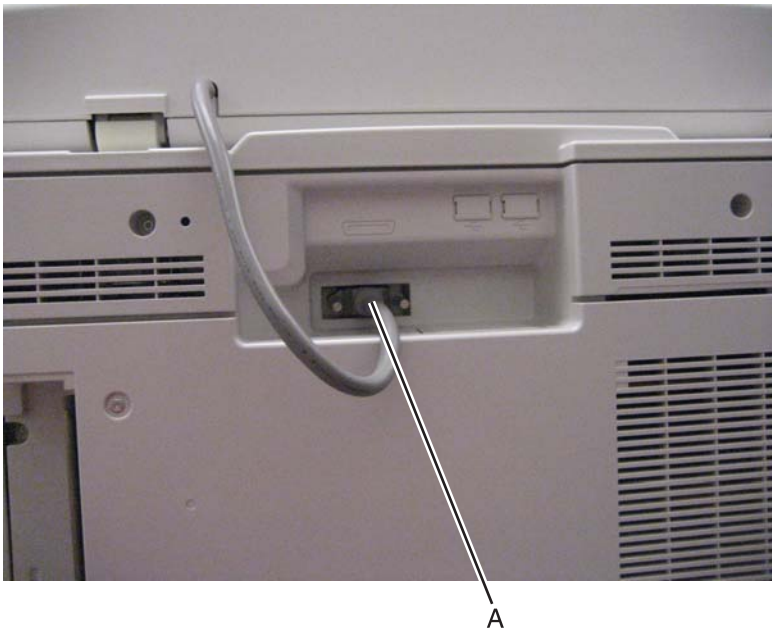
1. Remove the large platen glass. See **“Large platen glass removal” on page 4-239**.
2. Remove the sensor (FB platen length). See **“Sensor (FB platen length) removal” on page 4-268**.
3. Remove the FB CCD sensor assembly. See **“FB CCD sensor assembly removal” on page 4-233**.
4. Disconnect the two ribbon cables (A) from the authentication PCBA.
5. Remove the four screws (B).



6. Remove the authentication PCBA.

Automatic document feeder (ADF) assembly removal

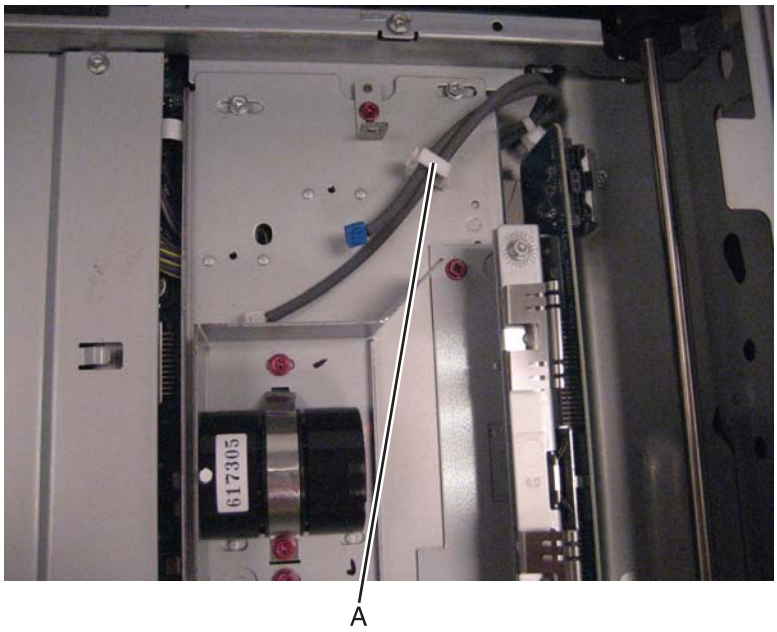
1. Disconnect the cable (A) from the flatbed scanner assembly.



2. Lift the ADF assembly up and away from the flatbed scanner assembly.
3. Gently tip the ADF towards the rear to release it.
4. Lift the ADF assembly and remove it from the machine.

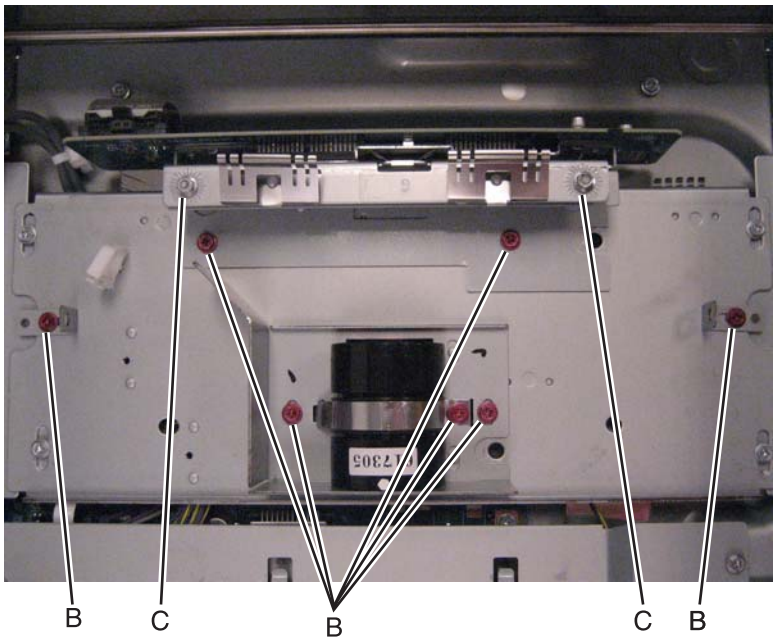
FB CCD sensor assembly removal

1. Remove the large platen glass. See **"Large platen glass removal" on page 4-239**.
2. Remove the sensor (FB platen length). See **"Sensor (FB platen length) removal" on page 4-268**.
3. Release the two harnesses from the clamp (A).

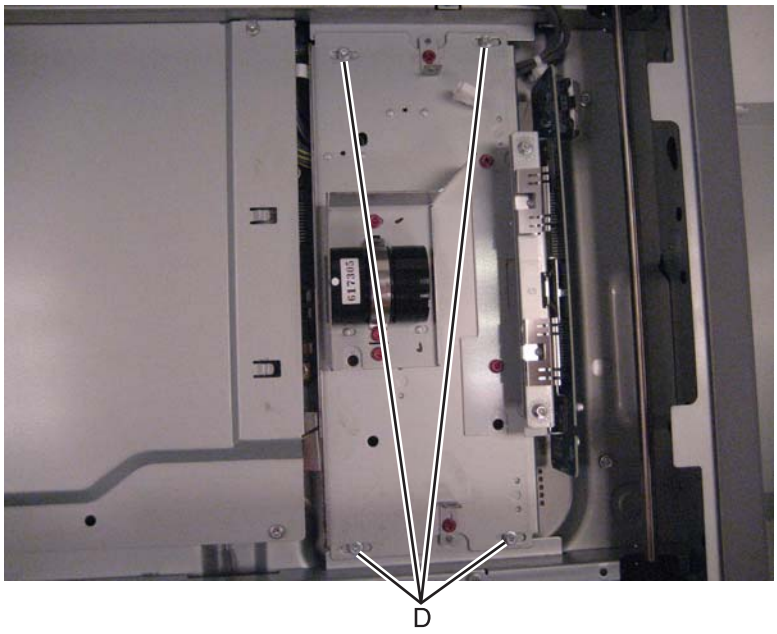


Warning: Do not loosen or remove the red adjusting screws (B) on the FB CCD sensor assembly.

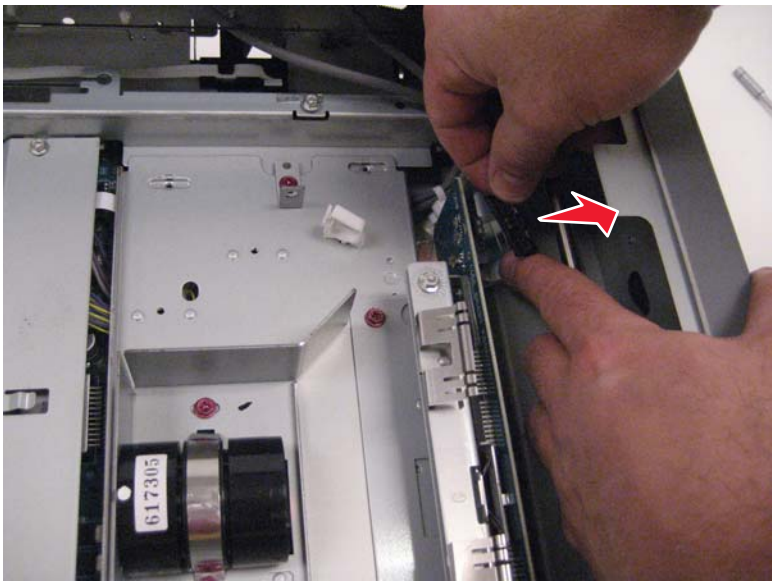
Warning: Do not adjust the two clocking screws (C) on the FB CCD sensor assembly.



4. Remove the four screws (D) securing the FB CCD sensor assembly to the machine.

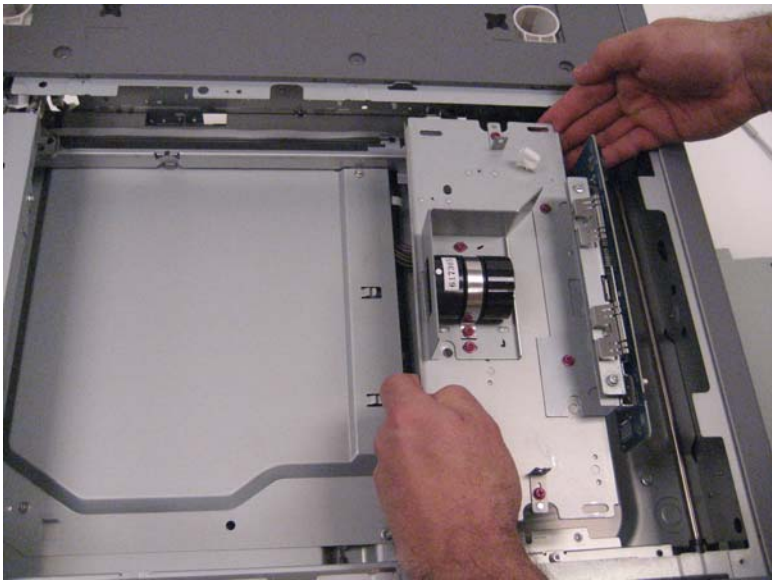


5. Disconnect the CCD ribbon cable from the FB CCD sensor assembly.



Warning: When disconnecting the CCD ribbon cable from the FB CCD sensor assembly, make sure that the release hook is pressed or the connection will be damaged.

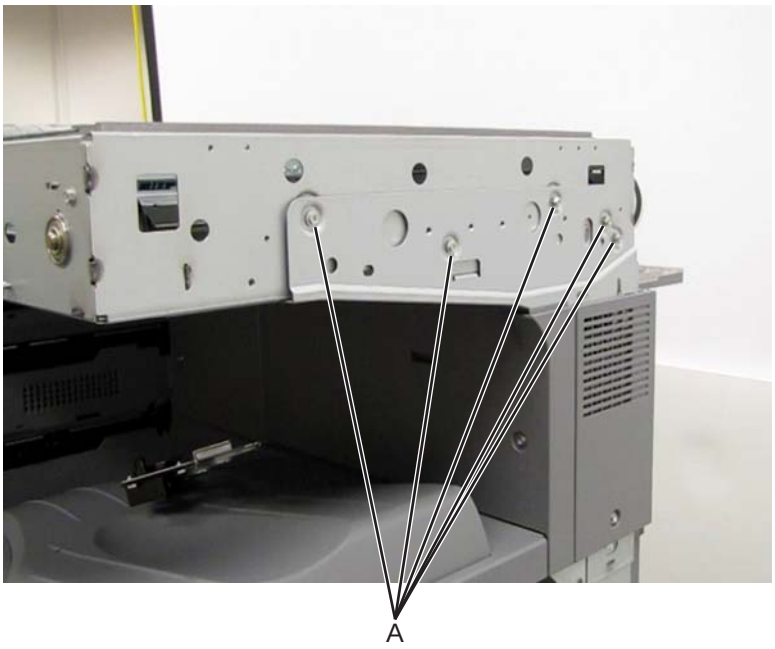
6. Remove the FB CCD sensor assembly.



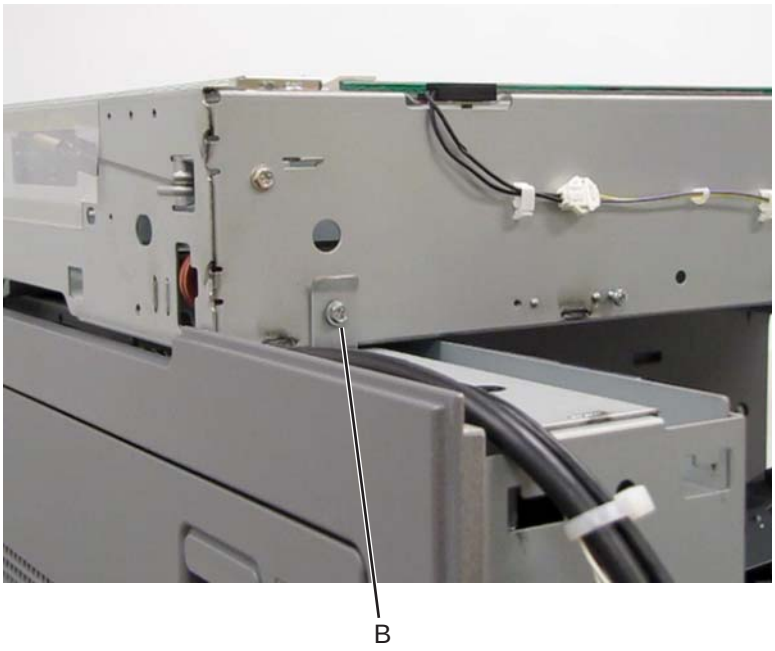
Flatbed scanner assembly removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the ADF assembly. See **“Automatic document feeder (ADF) assembly removal” on page 4-233**.
3. Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-20**.
4. Remove the operator panel left cover. See **“Operator panel left cover removal” on page 4-10**.
5. Remove the operator panel right cover. See **“Operator panel right cover removal” on page 4-11**.
6. Remove the scanner right cover. See **“Scanner right cover removal” on page 4-21**.
7. Remove the scanner left cover. See **“Scanner left cover removal” on page 4-19**.
8. Remove the operator panel. See **“Scanner controller PCBA removal” on page 4-243**.

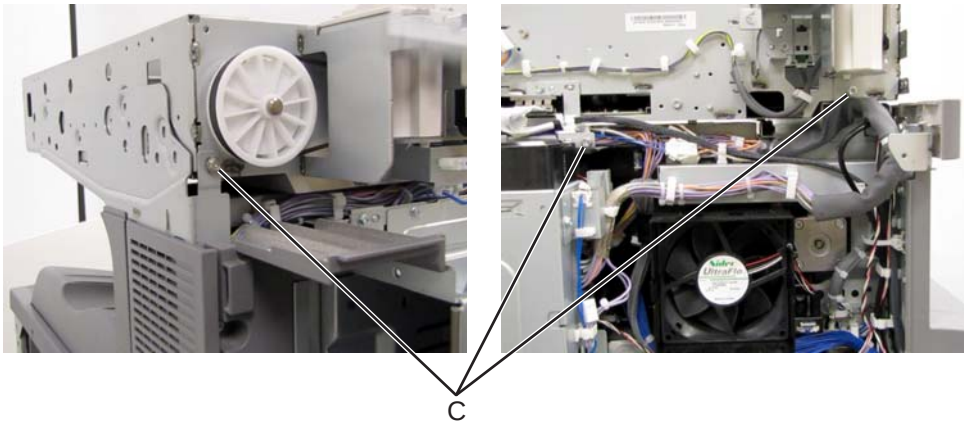
9. Remove the five screws (A) from the right side of the printer.



10. Remove the screw (B) from the front side of the printer.

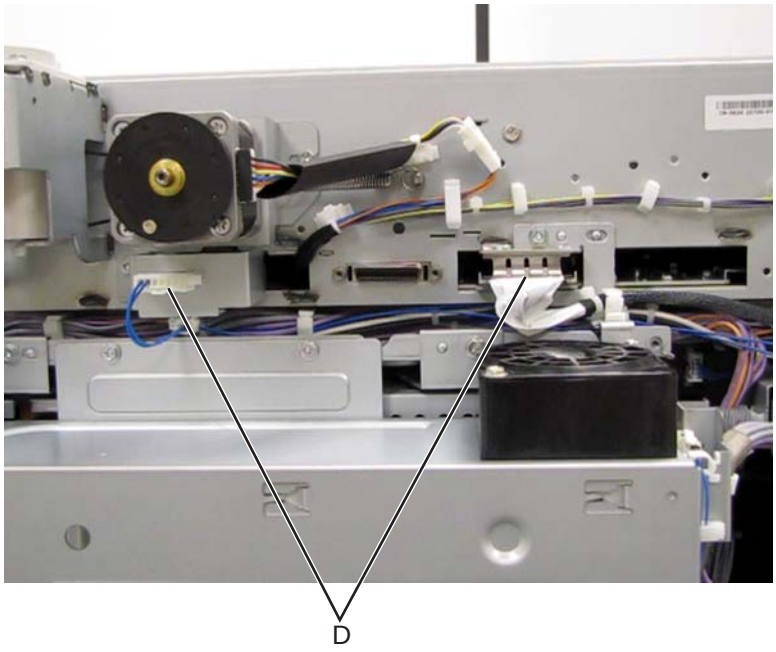


11. Remove the three screws (C) from the rear side of the printer.

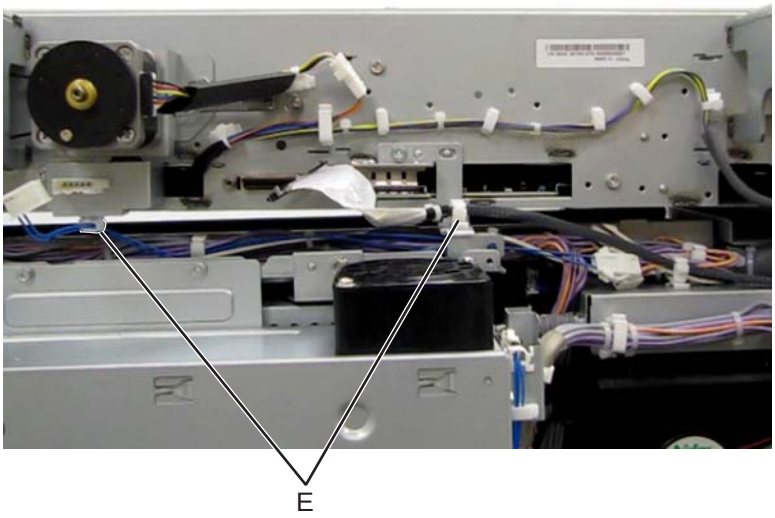


12. Disconnect the two cables (D) from the rear side of the printer.

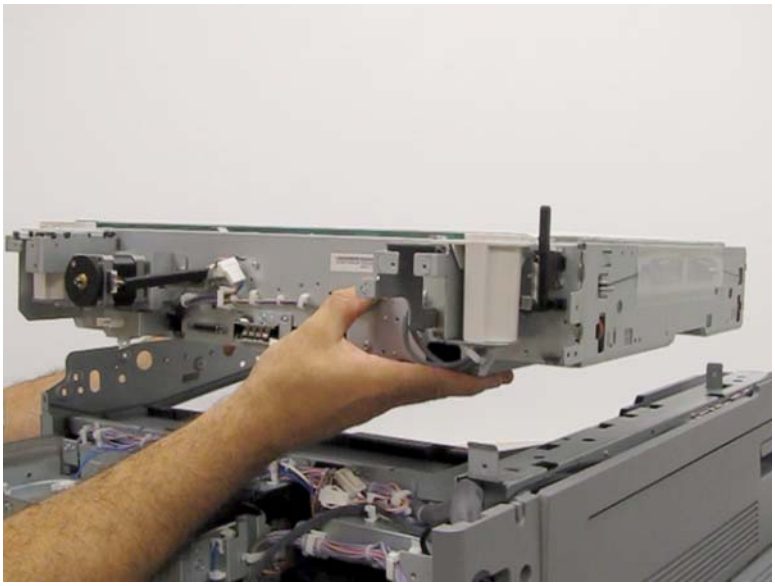
Warning: The data connection cable is prone to damage. Extra care is required in handling this part.



13. Release the cables from the cable holders (E).

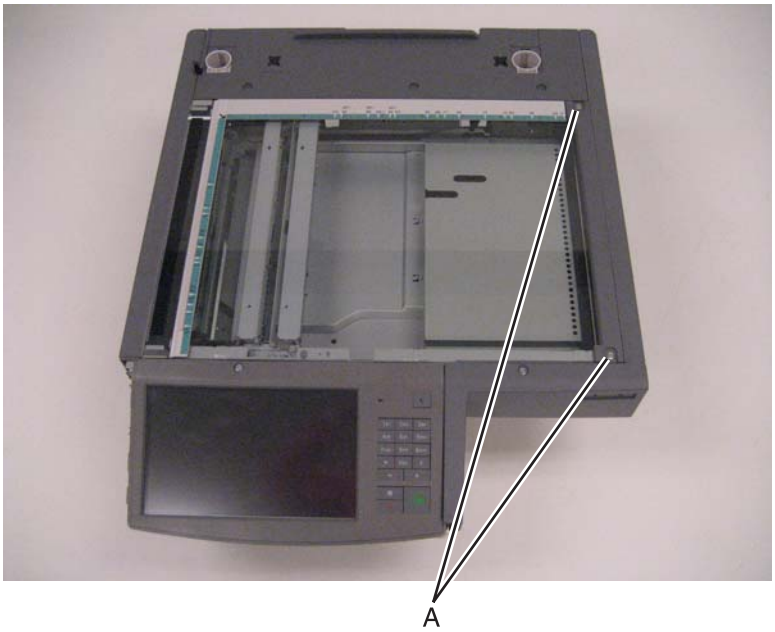


14. Remove the flatbed scanner assembly.

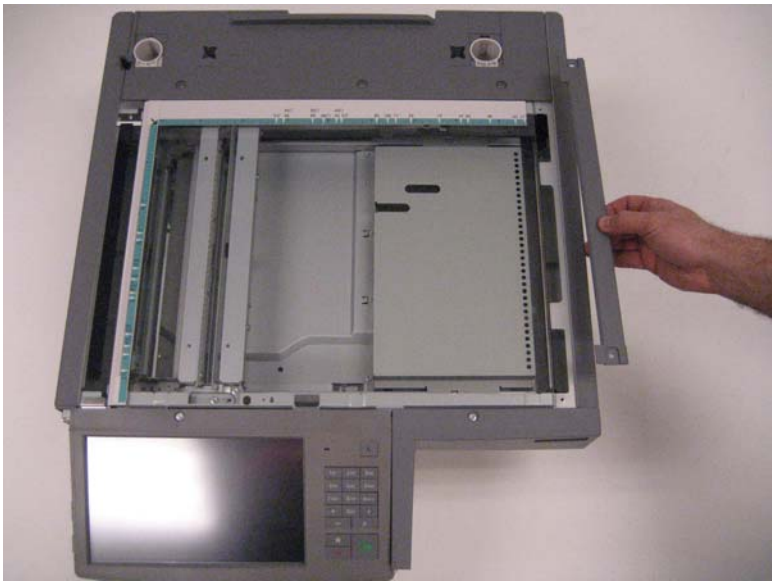


Large platen glass removal

1. Remove the two screws (A) securing the large platen retainer to the machine.



2. Remove the large platen retainer.

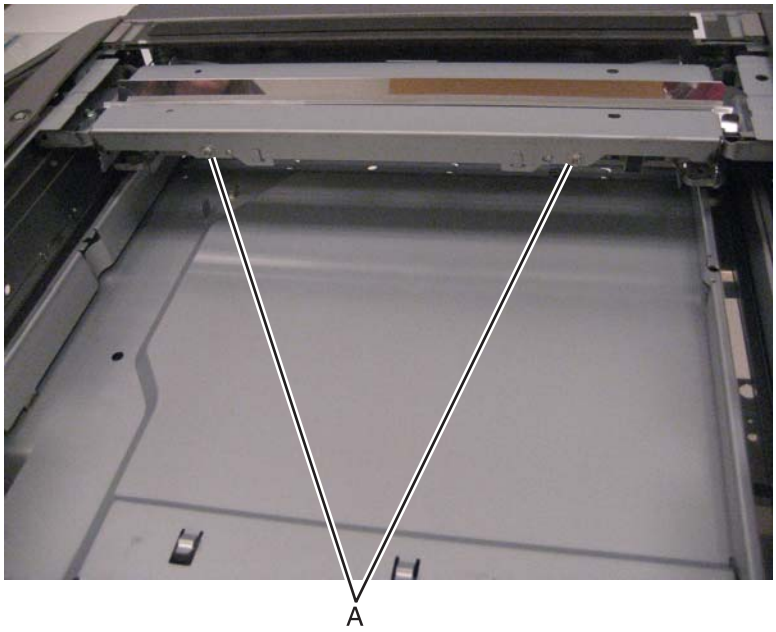


3. Remove the large platen glass.

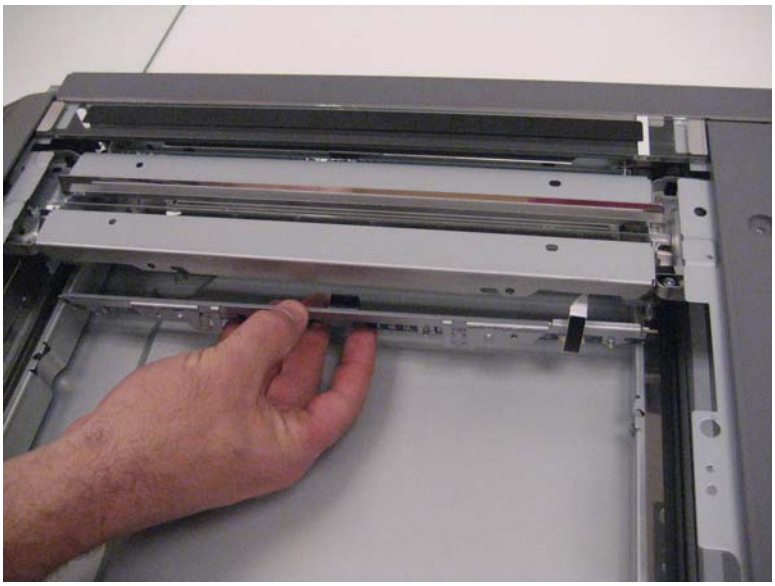
Reinstallation note: Ensure that both sides of the glass are properly cleaned.

LED exposure bar removal

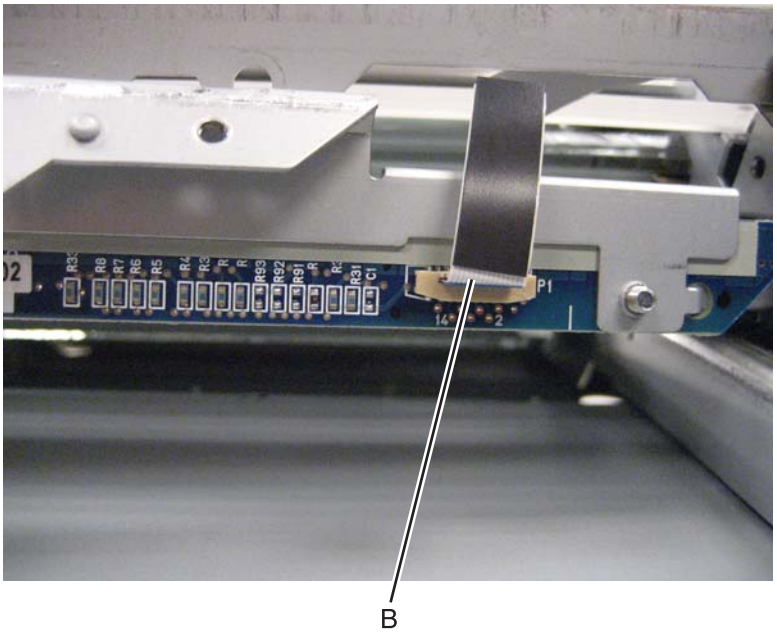
1. Remove the large platen glass. See **"Large platen glass removal" on page 4-239**.
2. Remove the two screws (A).



3. Remove the LED exposure bar from the underside of the carriage.



4. Disconnect the cable (B).

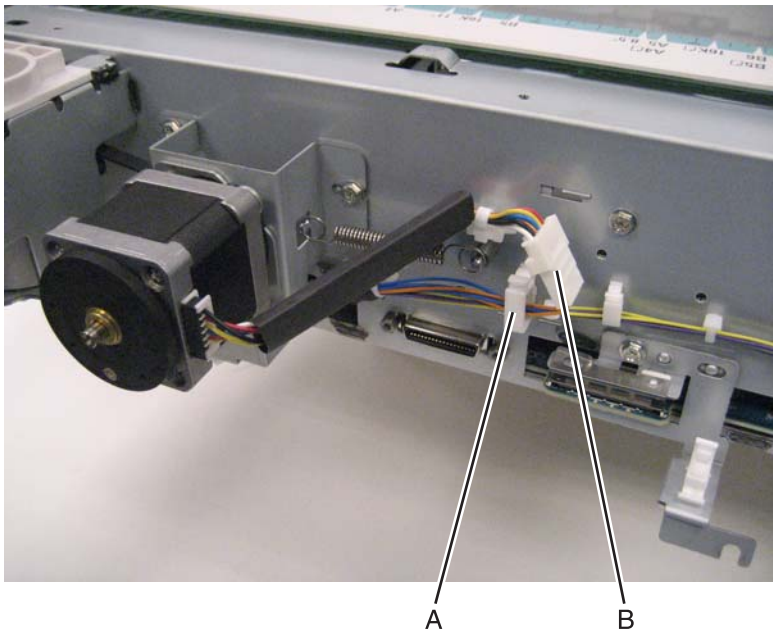


Scanner carriage motor removal

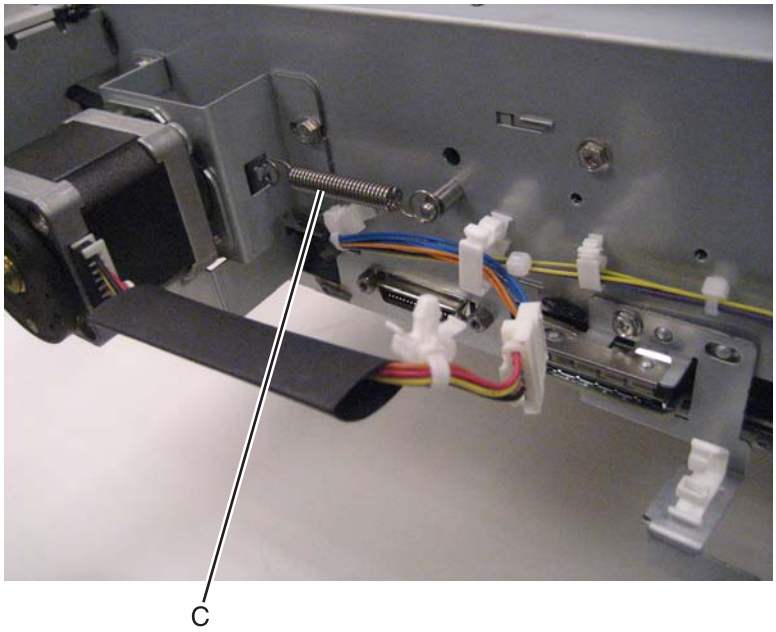
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-20**.
3. Remove the scanner top cover. See **“Scanner top cover removal” on page 4-22**.
4. Release the clamp (A) from the machine.

Note: Make sure the release hook is pressed or the connection will be damaged.

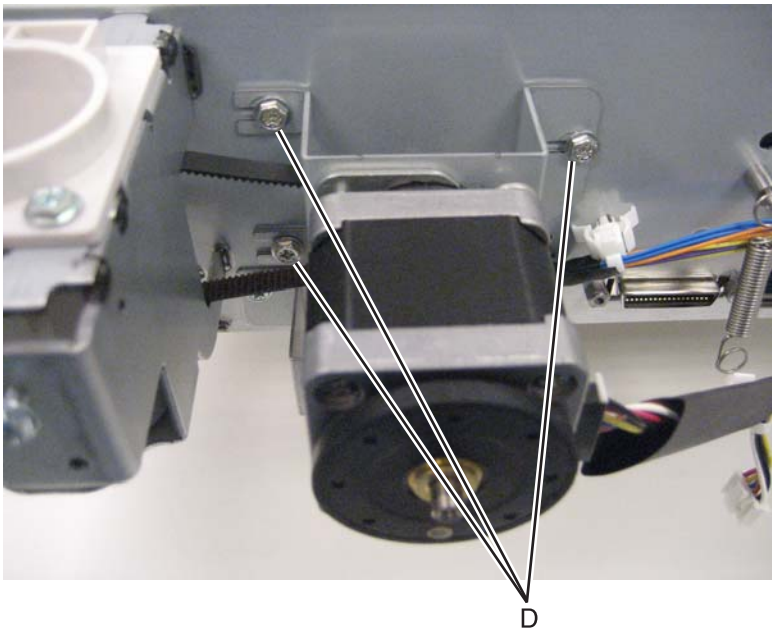
5. Disconnect the cable (B).



6. Remove the tension spring (C).



7. Remove the three screws (D).

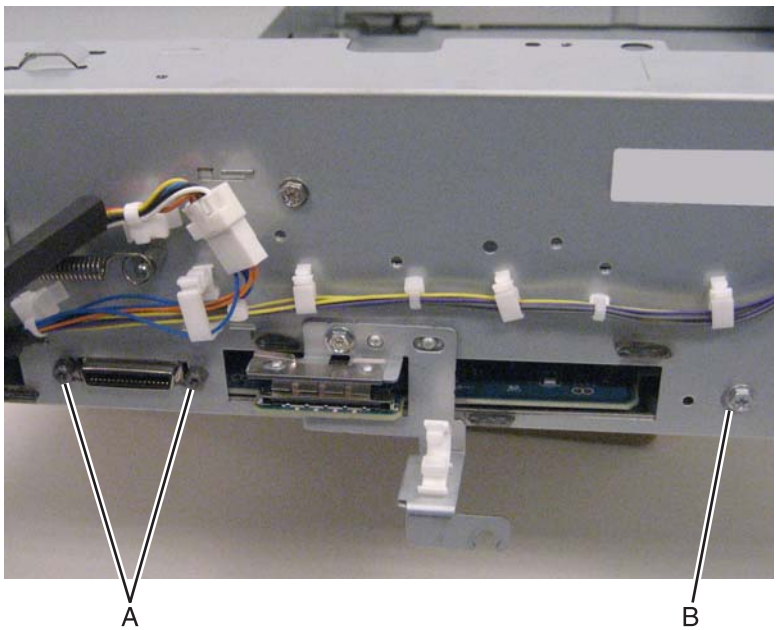


8. Remove the scanner carriage motor from the machine.

Reinstallation warning: To correctly set the scanner drive belt tension, install the scanner carriage motor assembly and the scanner carriage motor tension spring before completely tightening the three screws.

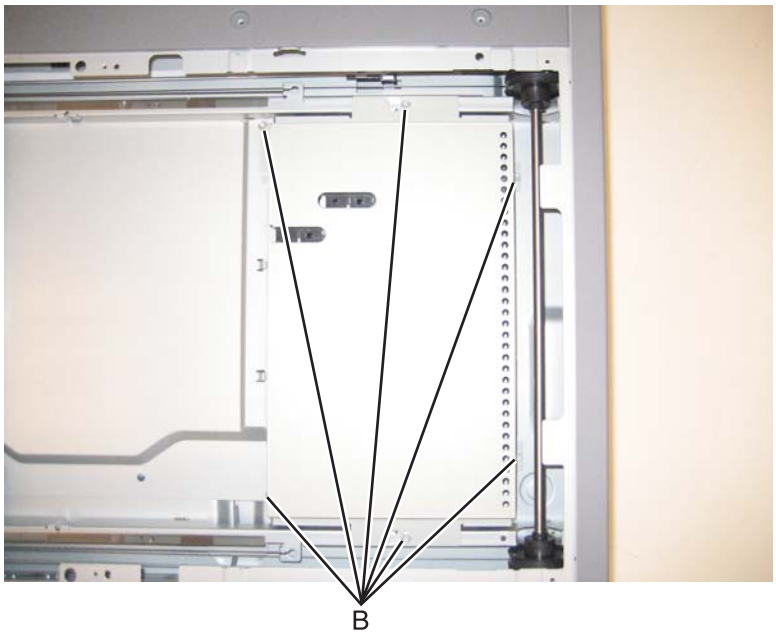
Scanner controller PCBA removal

1. Remove the scanner rear cover. See **"Scanner rear cover removal" on page 4-20**.
2. Remove the two connector screws (A).
3. Remove the screw (B) securing the scanner controller PCBA to the machine.

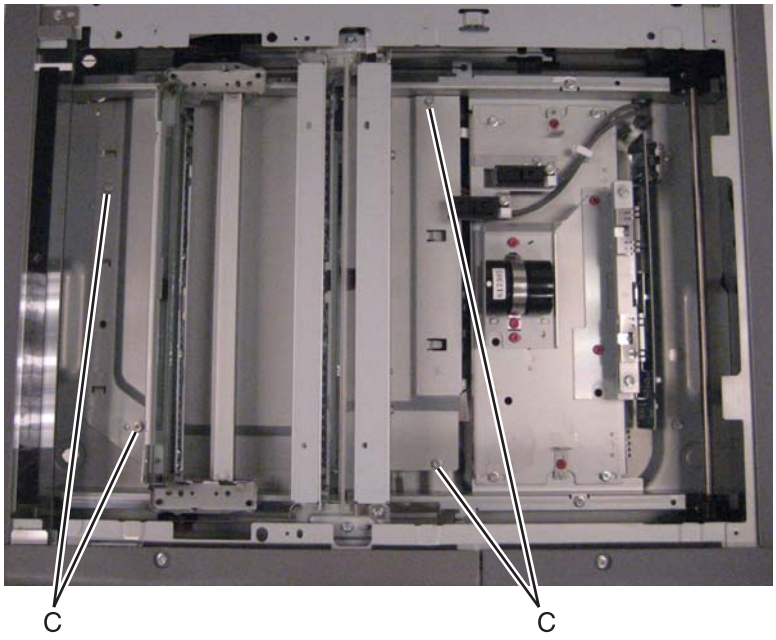


4. Remove the large platen glass. See **"Large platen glass removal" on page 4-239**.

5. Loosen the six screws (B) securing the optics shield to the machine.

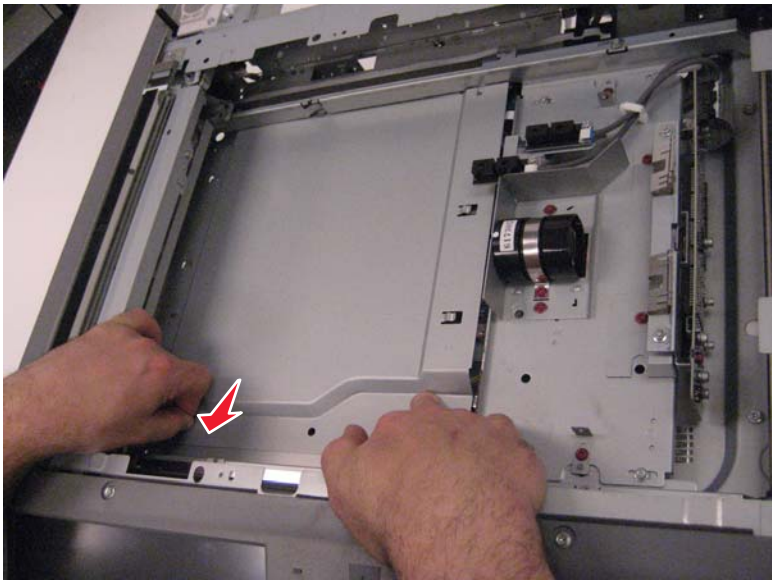


6. Move the optics shield to the right and lift it to remove.
7. Move the scanner carriage to the position as shown in the following image to provide access to the screws.
8. Remove the four screws (C) securing the controller shield to the machine.

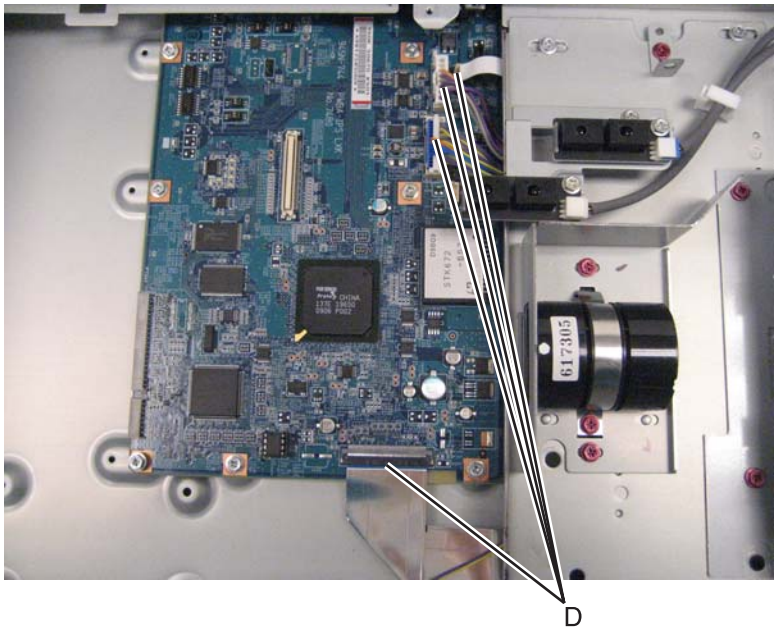


9. Move the scanner carriage as far left as possible.

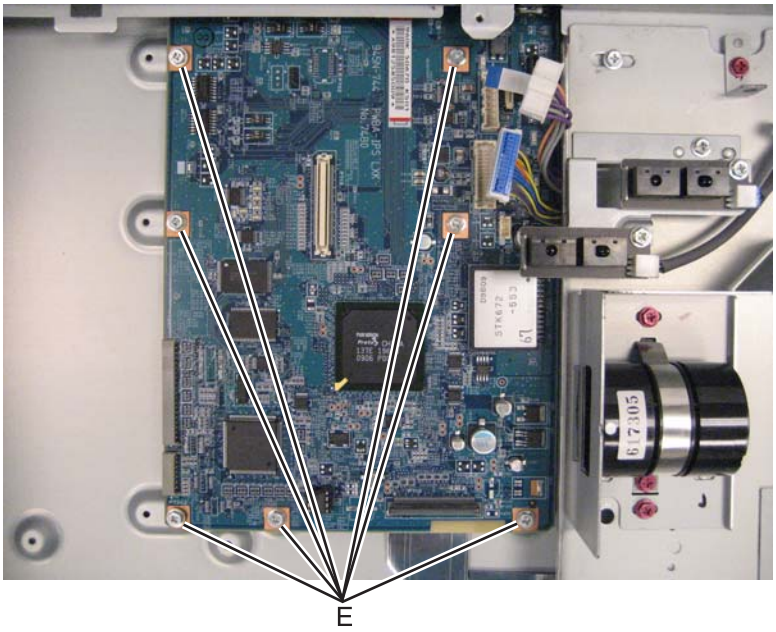
10. Move the controller shield toward the front of the machine and remove it from the machine.



11. Detach the four cables (D) from the scanner controller PCBA.



12. Remove the seven screws (E) securing the scanner controller PCBA to the machine.



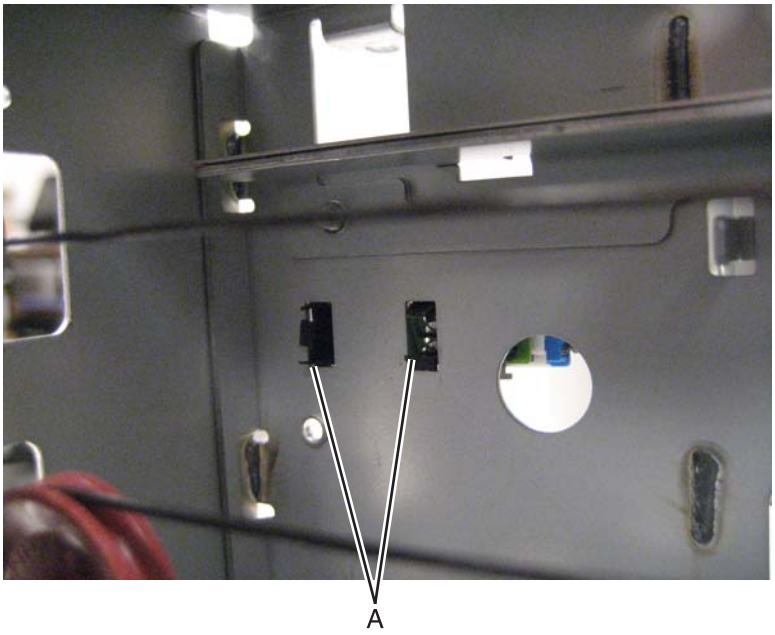
13. Remove the scanner controller PCBA from the machine.

Sensor (ADF angle) removal

1. Remove the scanner rear cover. See **"Scanner rear cover removal" on page 4-20**.
2. Remove the scanner left cover. See **"Scanner left cover removal" on page 4-19**.
3. Remove the ADF angle actuator. See **"ADF angle actuator removal" on page 4-208**.

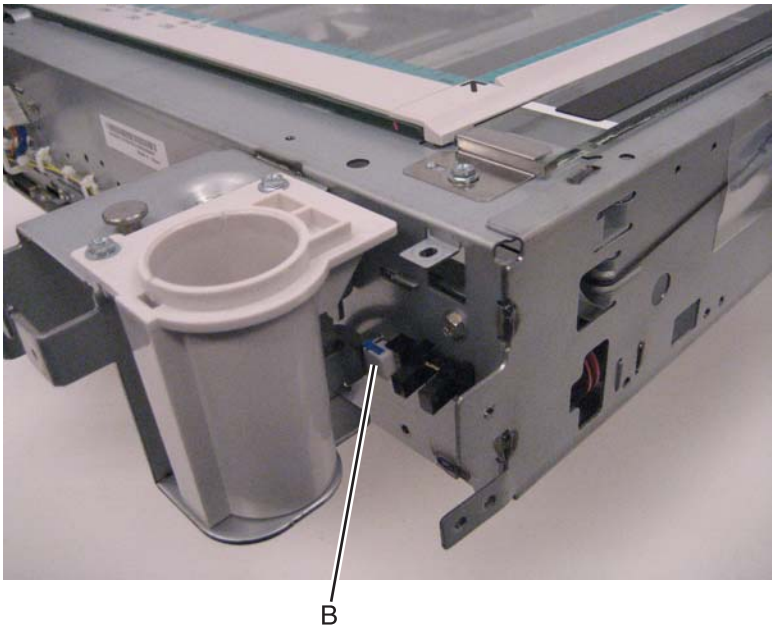
Note: The hooks for the sensor can be accessed more easily by removing the large platen glass.

4. Release the hooks (A) securing the sensor (ADF angle) to the machine.



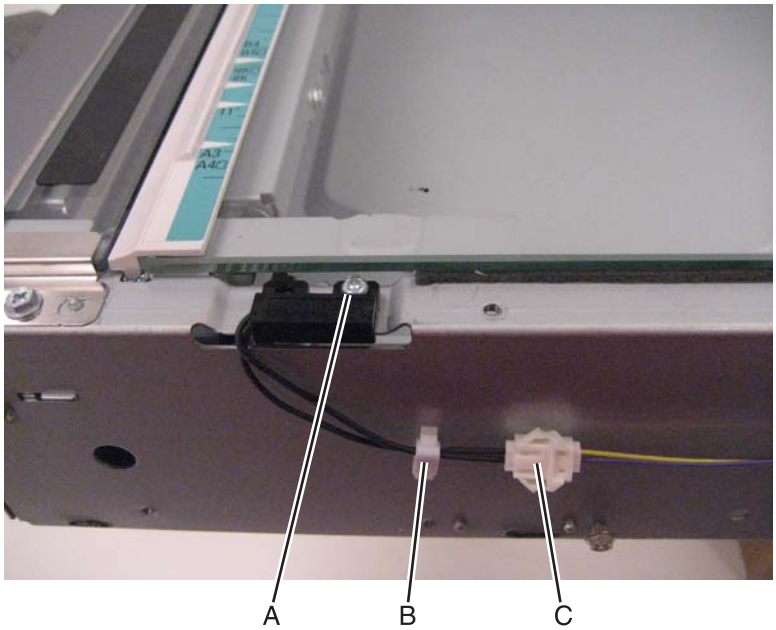
5. Remove the sensor (ADF angle).

6. Disconnect the cable (B).



Sensor (ADF closed interlock) removal

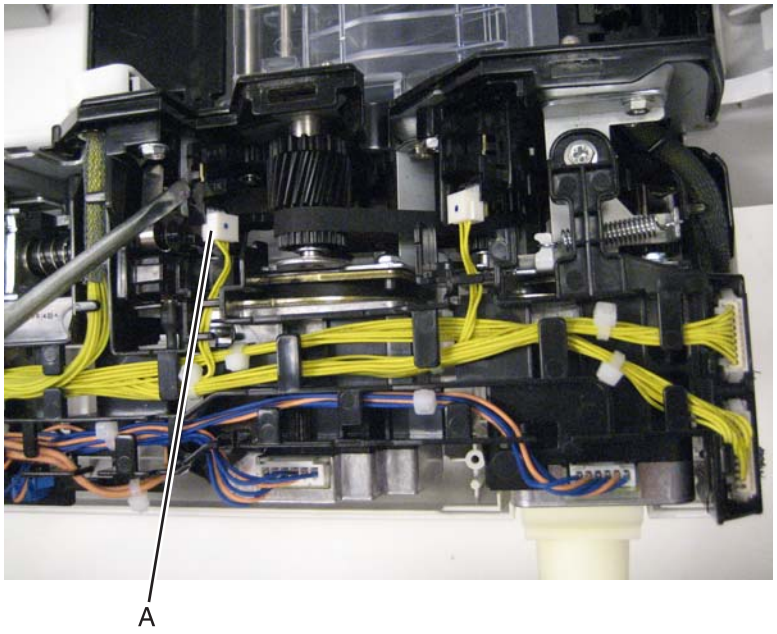
1. Remove the operator panel assembly. See **“Scanner controller PCBA removal” on page 4-243**.
2. Remove the screw (A).
3. Release the harness (B) from the clamp.
4. Disconnect cable (C) to remove the sensor (ADF closed interlock).



Sensor (ADF document set) removal

1. Remove the ADF rear cover. **“ADF main drive sub assembly removal” on page 4-221**
2. Disconnect the cable (A).

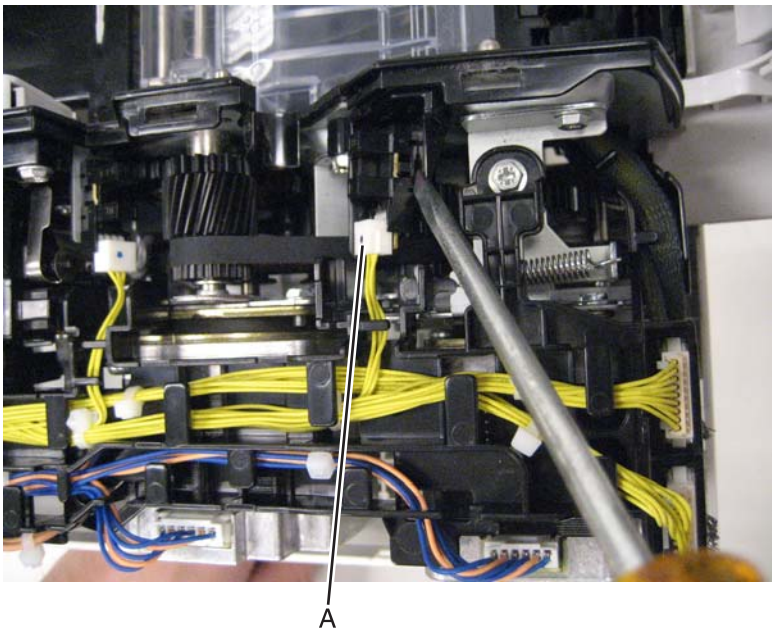
3. Release the hooks securing the sensor (ADF document set) to the machine.



4. Remove the sensor (ADF document set).

Sensor (ADF feedout) removal

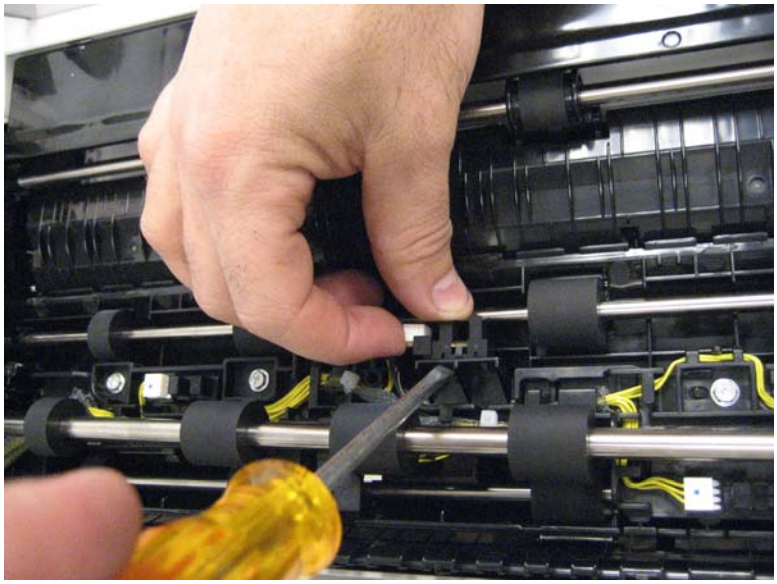
1. Remove the ADF rear cover. **“ADF rear cover removal” on page 4-224**
2. Disconnect the cable (A).
3. Release the hooks securing the sensor (ADF feedout) to the machine.



4. Remove the sensor (ADF feedout).

Sensor (ADF inverter) removal

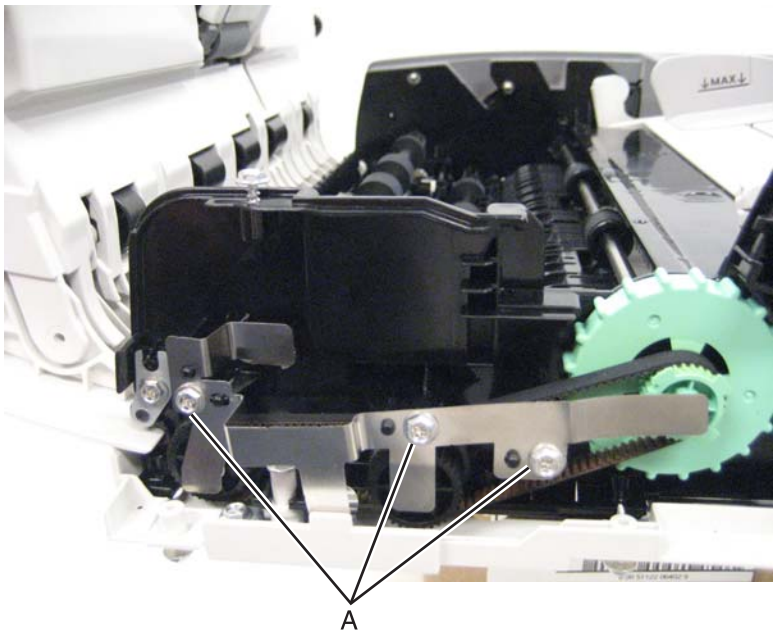
1. Open the ADF top door.
2. Release the hook securing the sensor (ADF inverter).



3. Remove the sensor (ADF inverter).

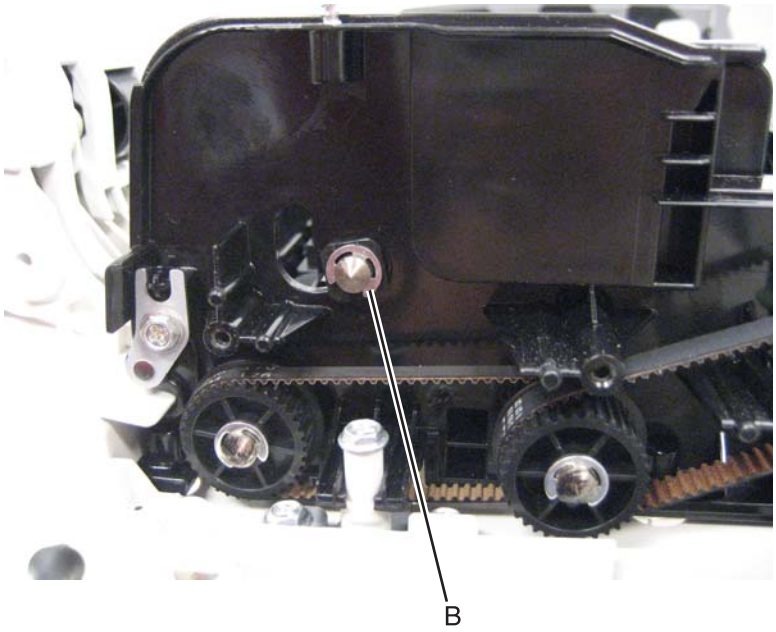
Sensor (ADF pre-registration) removal

1. Open the ADF top door.
2. Remove the ADF front cover. See **"ADF front cover removal" on page 4-219**.
3. Remove the three screws (A) securing the grounding plate to the machine.

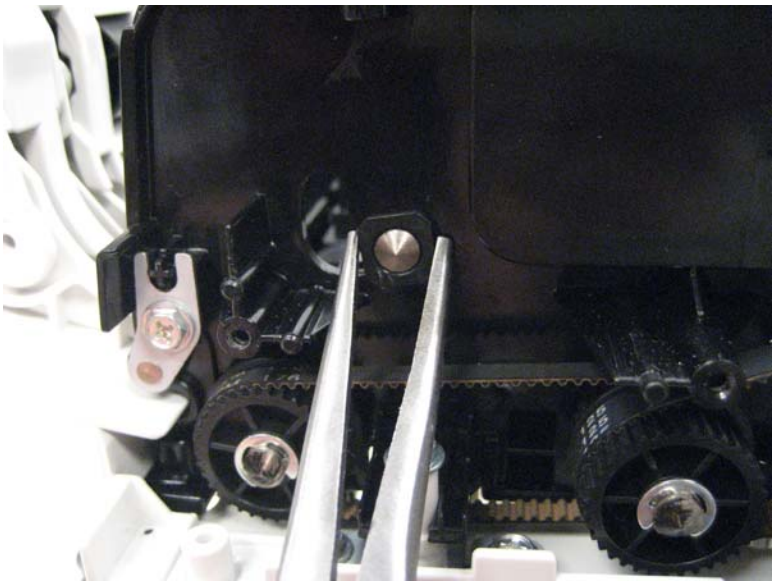


4. Remove the grounding plate.

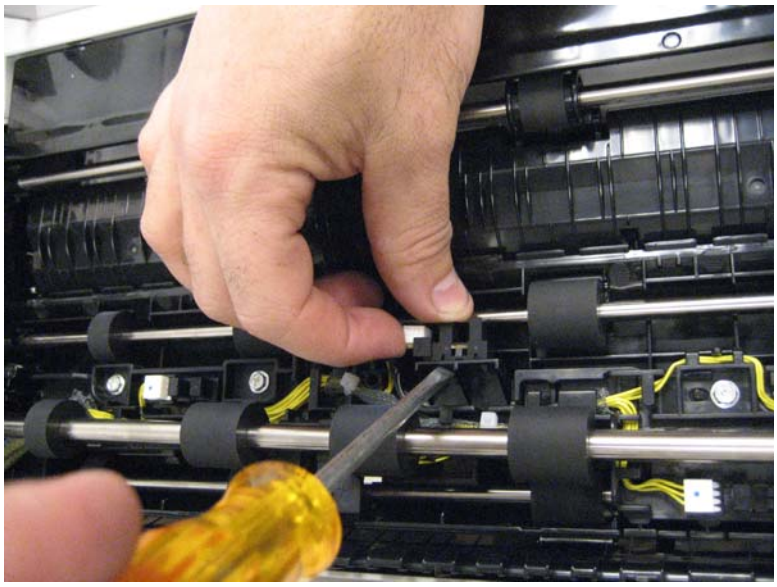
5. Remove the e-clip (B) securing the roller to the machine.



6. Remove the plastic bushing.

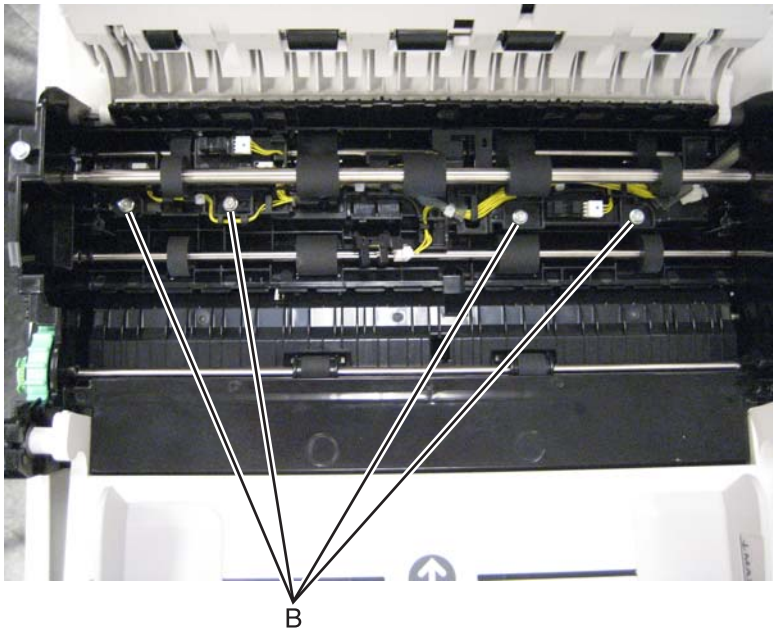


7. Release the hook securing the sensor (ADF inverter) to the machine.

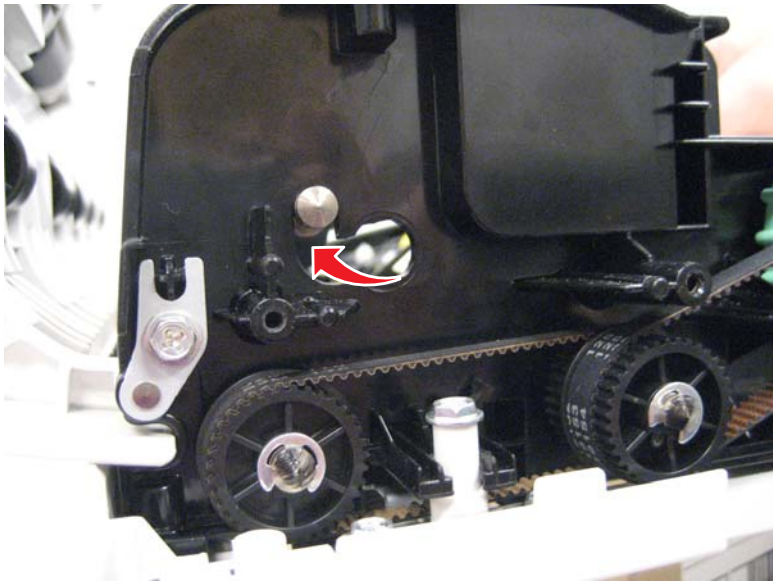


Note: You do not have to disconnect the cable from the sensor (ADF inverter).

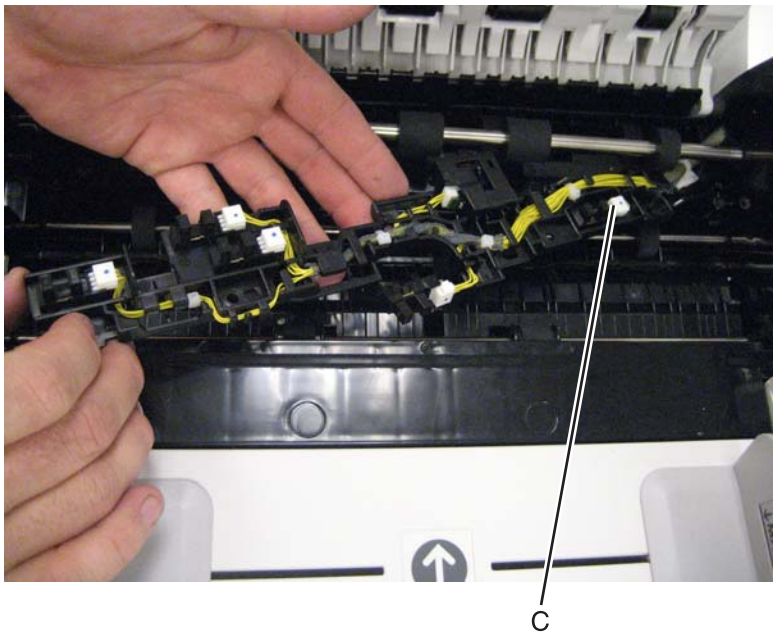
8. Remove the four screws (B) securing the two sensor brackets to the machine.



9. Position the ADF feed roller in its uppermost position to allow access to the ADF sensors, as shown in the following image.



10. Move the brackets out from under the ADF feed roller.
11. Release the hooks securing the sensor (ADF pre-registration) (C).

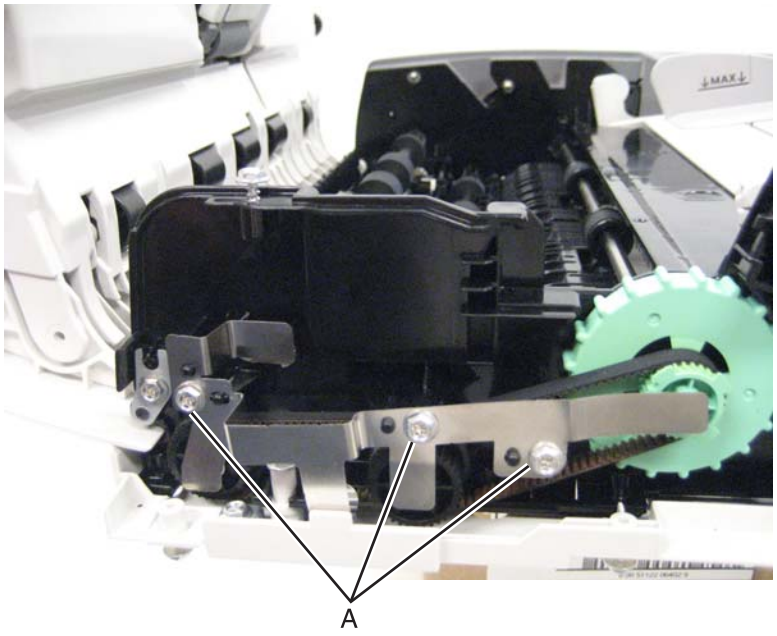


12. Remove sensor (ADF pre-registration).

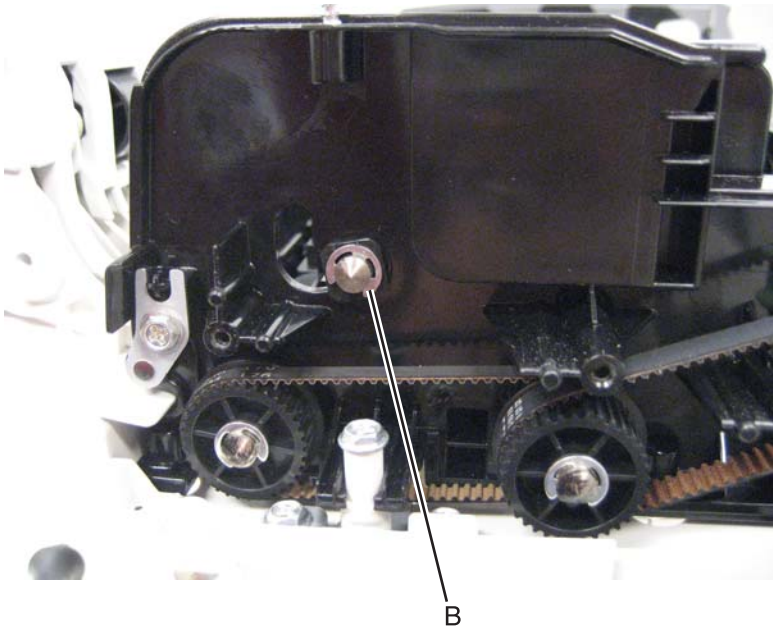
Sensor (ADF registration) removal

1. Open the ADF top door.
2. Remove the ADF front cover. See **“ADF front cover removal” on page 4-219**.

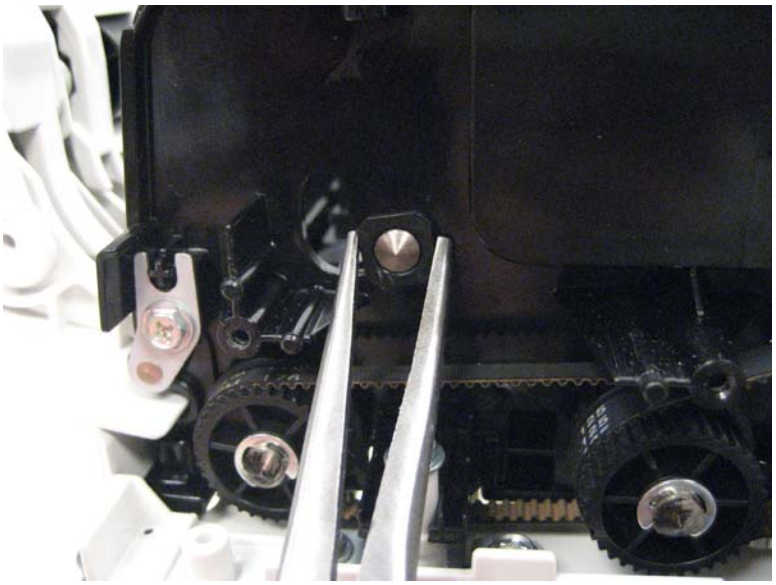
3. Remove the three screws (A) securing the grounding plate to the machine.



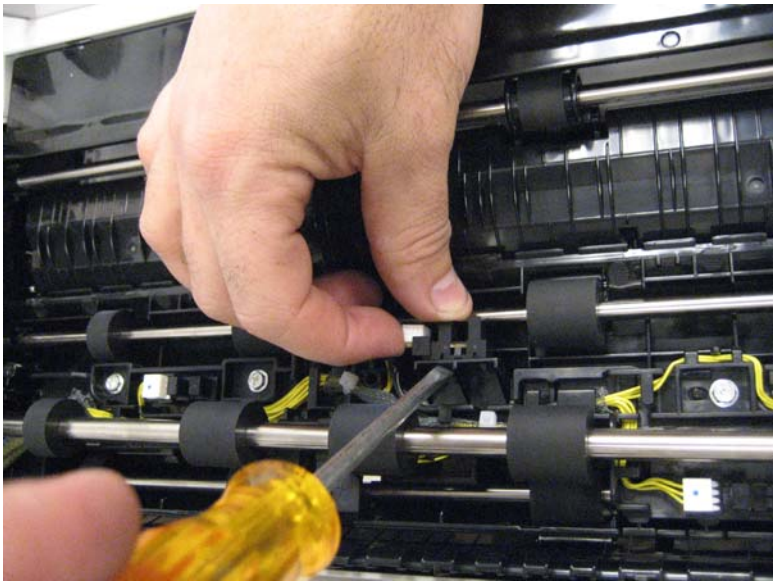
4. Remove the grounding plate.
5. Remove the e-clip (B) securing the roller to the machine.



6. Remove the plastic bushing.

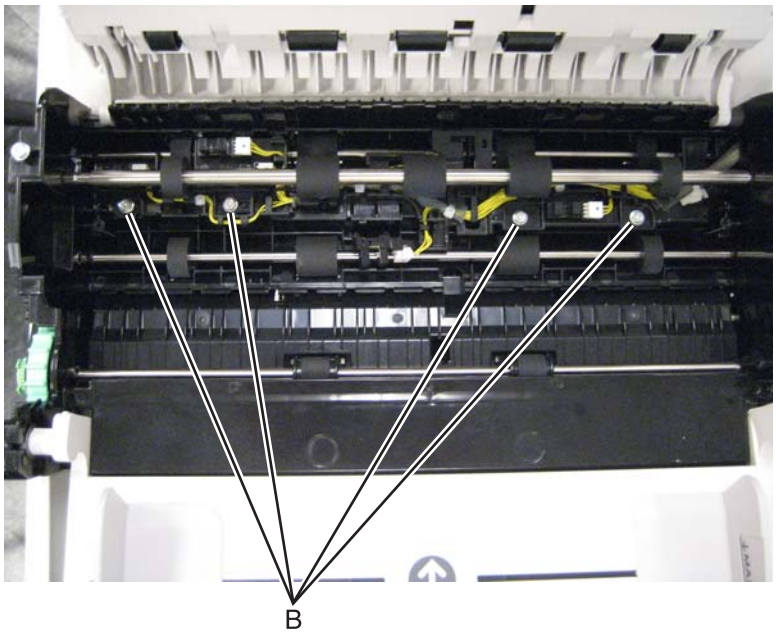


7. Release the hook securing the sensor (ADF inverter) to the machine.

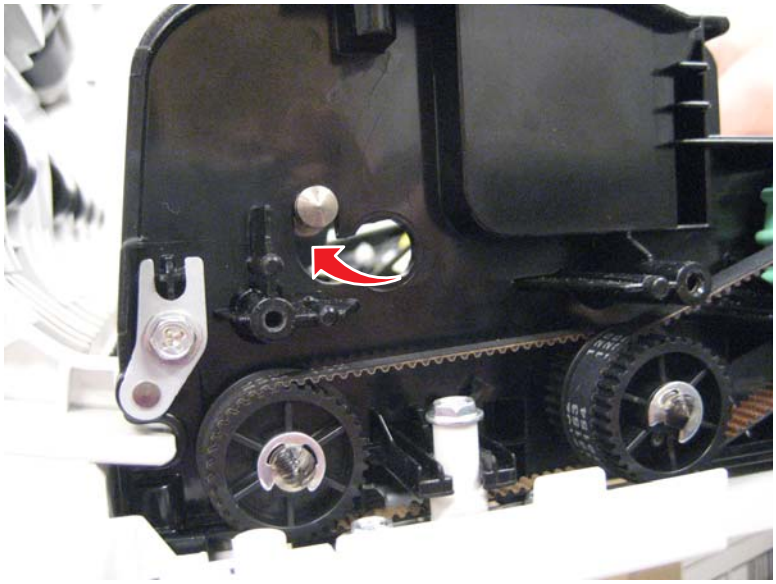


Note: You do not have to disconnect the cable from the sensor (ADF inverter).

8. Remove the four screws (B) securing the two sensor brackets to the machine.

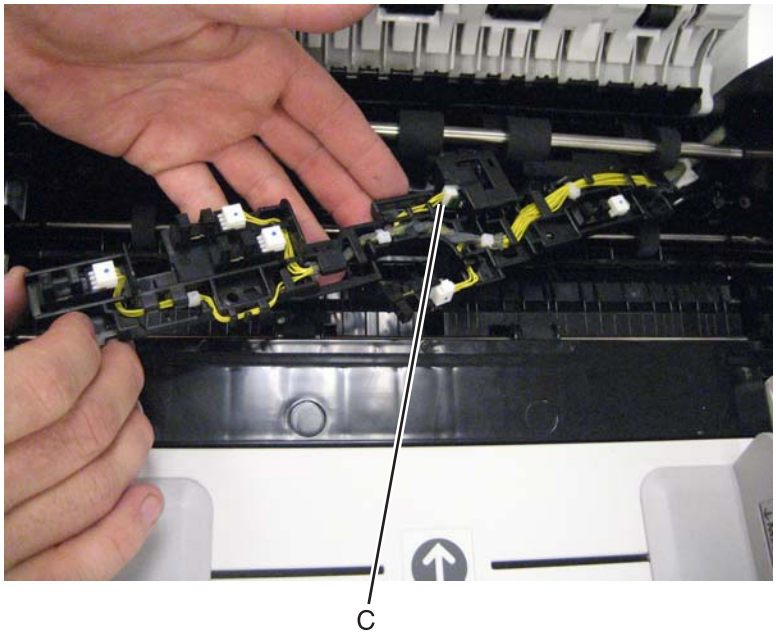


9. Position the ADF feed roller in its uppermost position to allow access to the ADF sensors, as shown in the following image.



10. Move the brackets out from under the ADF feed roller.

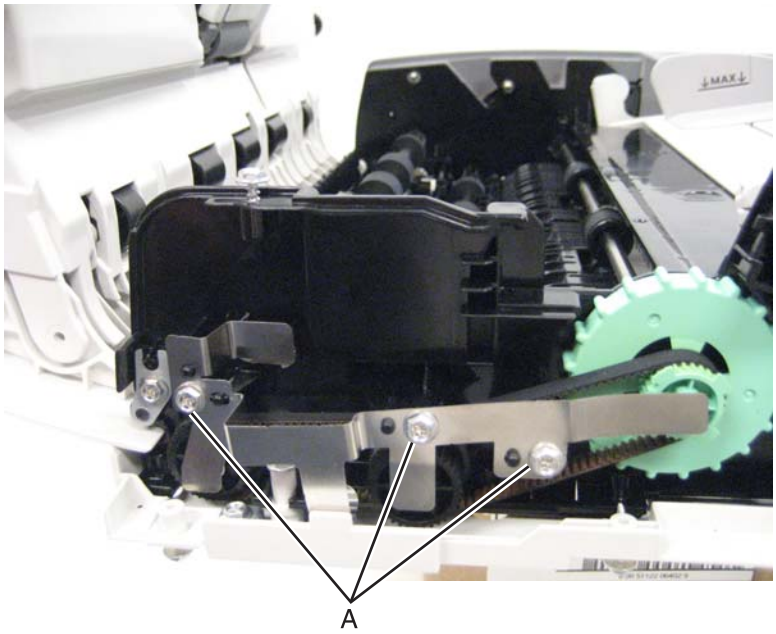
11. Release the hooks securing the sensor (ADF registration) (C).



12. Remove sensor (ADF registration).

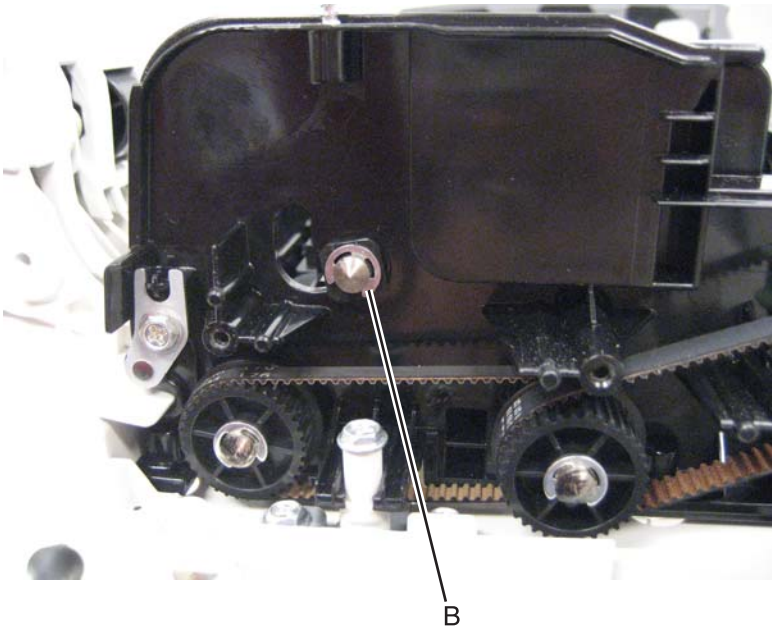
Sensor (ADF scan width 1) removal

1. Open the ADF top door.
2. Remove the ADF front cover. See **“ADF front cover removal” on page 4-219**.
3. Remove the three screws (A) securing the grounding plate to the machine.

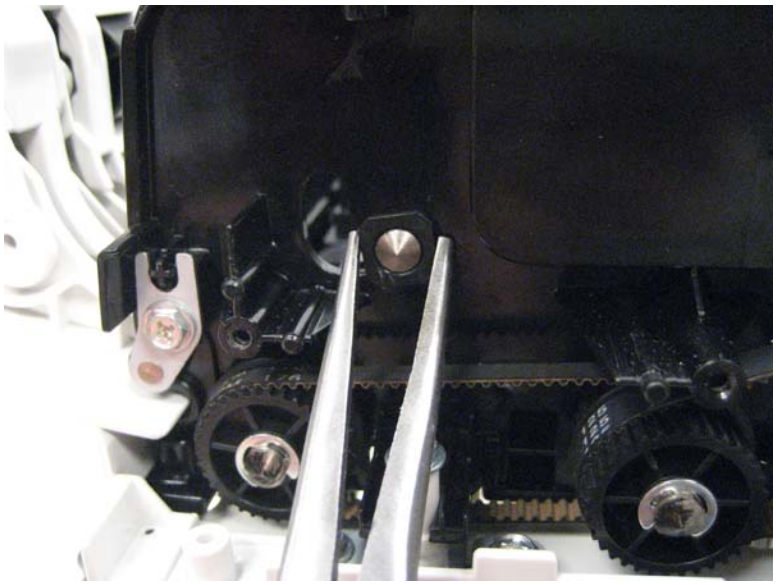


4. Remove the grounding plate.

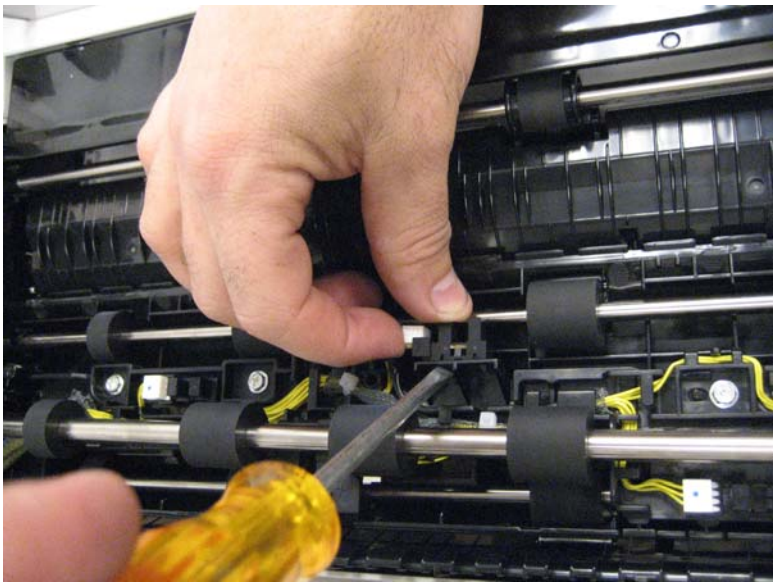
5. Remove the e-clip (B) securing the roller to the machine.



6. Remove the plastic bushing.

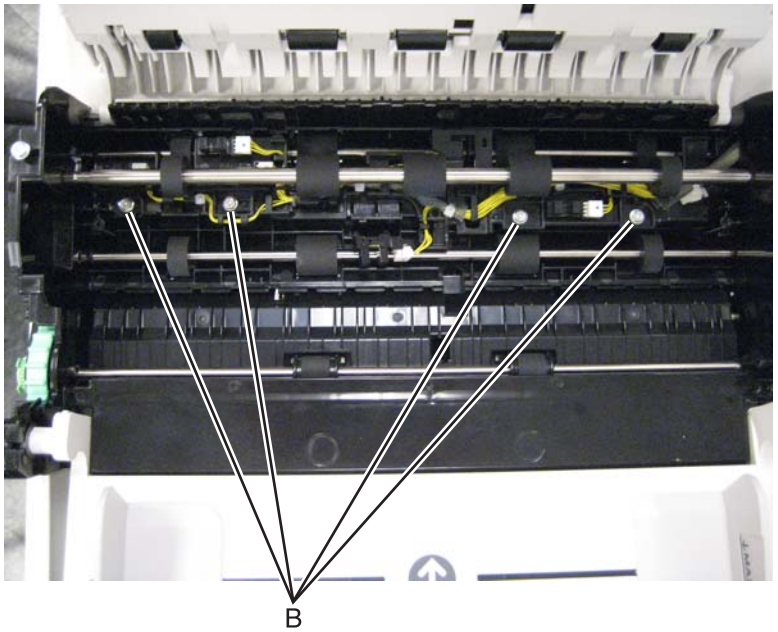


7. Release the hook securing the sensor (ADF inverter) to the machine.

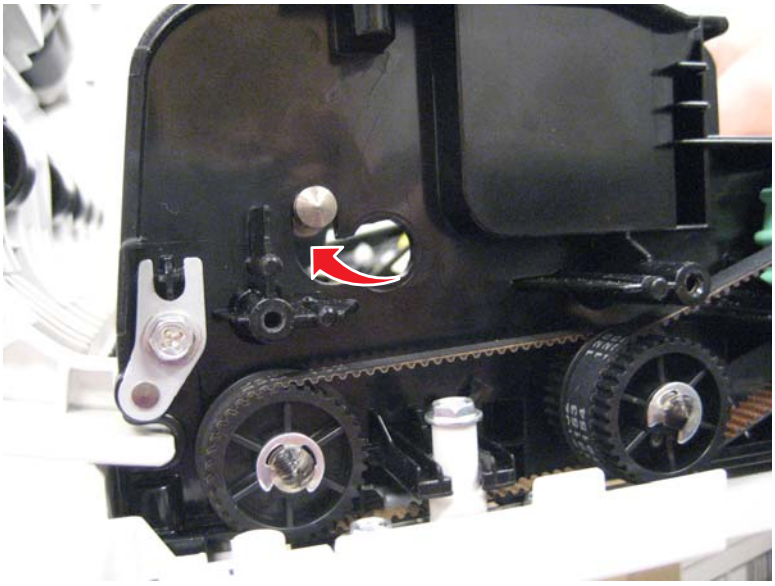


Note: You do not have to disconnect the cable from the sensor (ADF inverter).

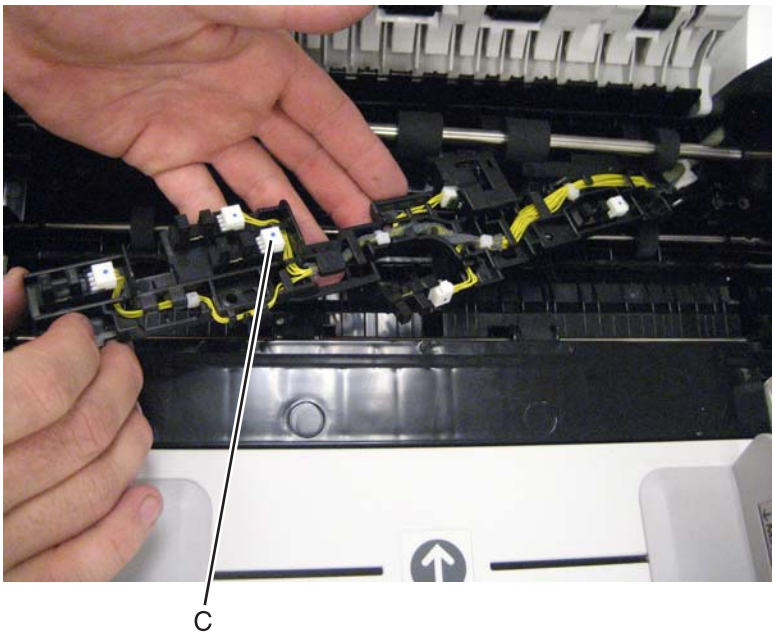
8. Remove the four screws (B) securing the two sensor brackets to the machine.



9. Position the ADF feed roller in its uppermost position to allow access to the ADF sensors, as shown in the following image.



10. Move the brackets out from under the ADF feed roller.
11. Release the hooks securing the sensor (ADF scan width 1) (C).

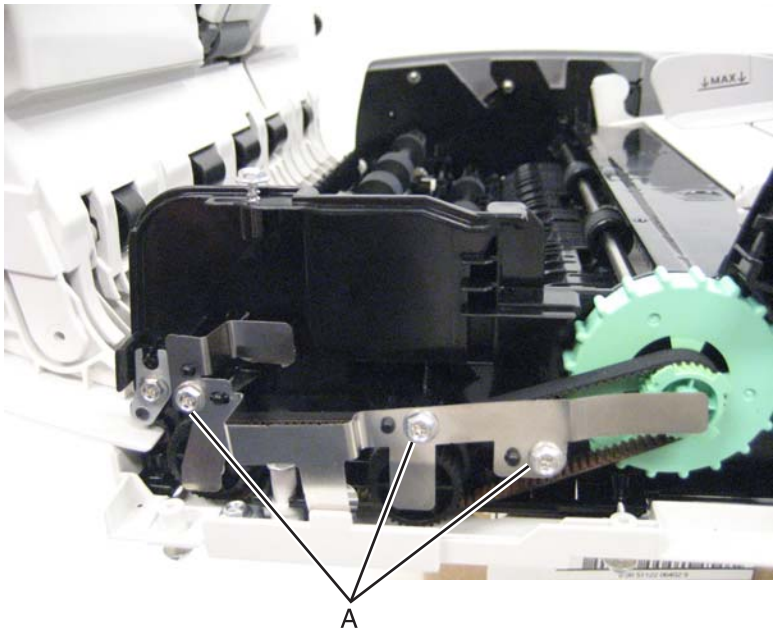


12. Remove sensor (ADF scan width 1).

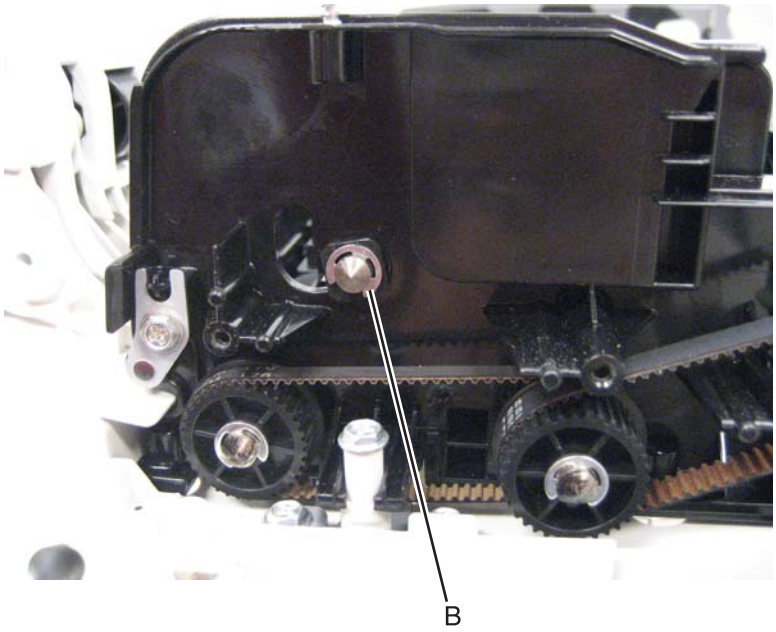
Sensor (ADF scan width 2) removal

1. Open the ADF top door.
2. Remove the ADF front cover. See **"ADF front cover removal" on page 4-219**.

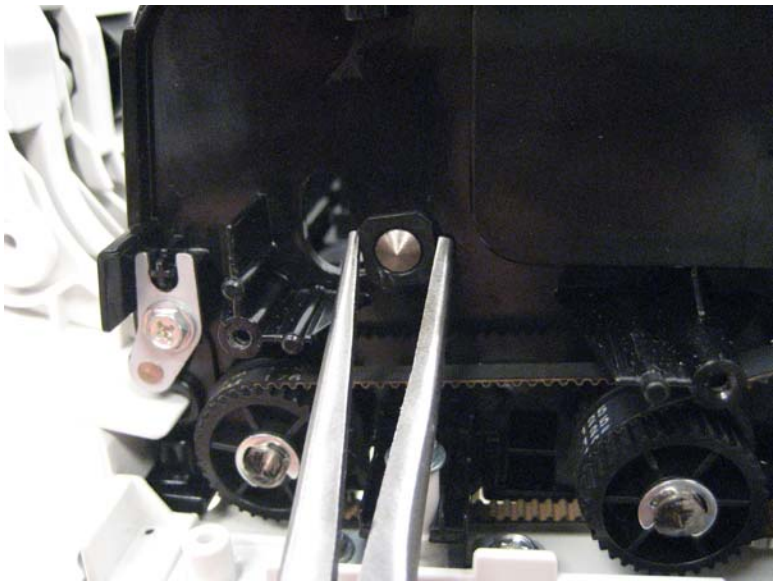
3. Remove the three screws (A) securing the grounding plate to the machine.



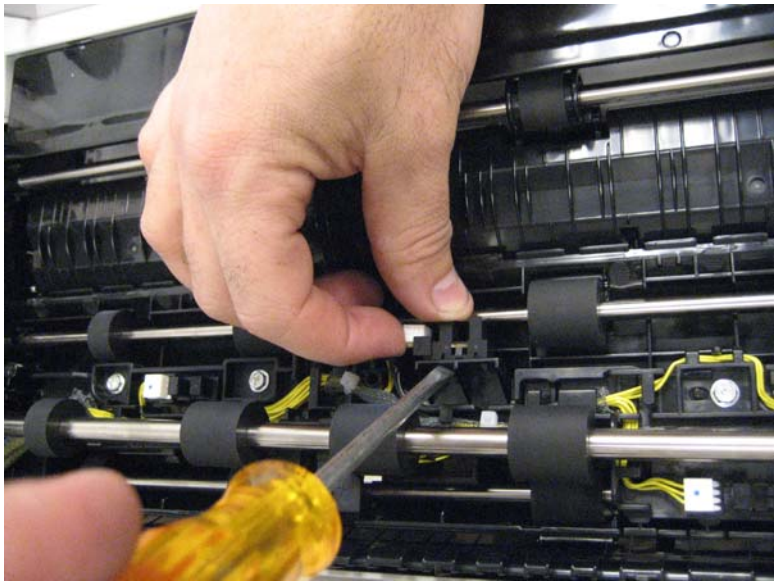
4. Remove the grounding plate.
5. Remove the e-clip (B) securing the roller to the machine.



6. Remove the plastic bushing.

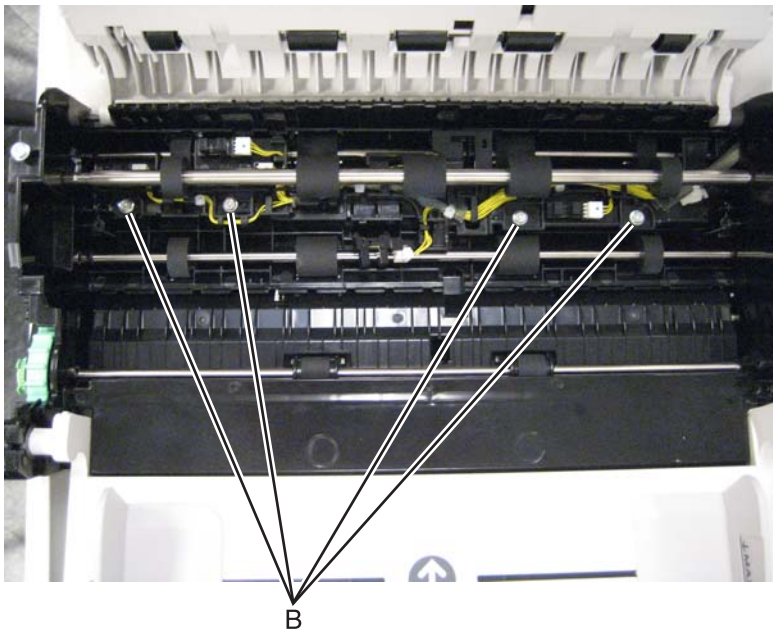


7. Release the hook securing the sensor (ADF inverter) to the machine.

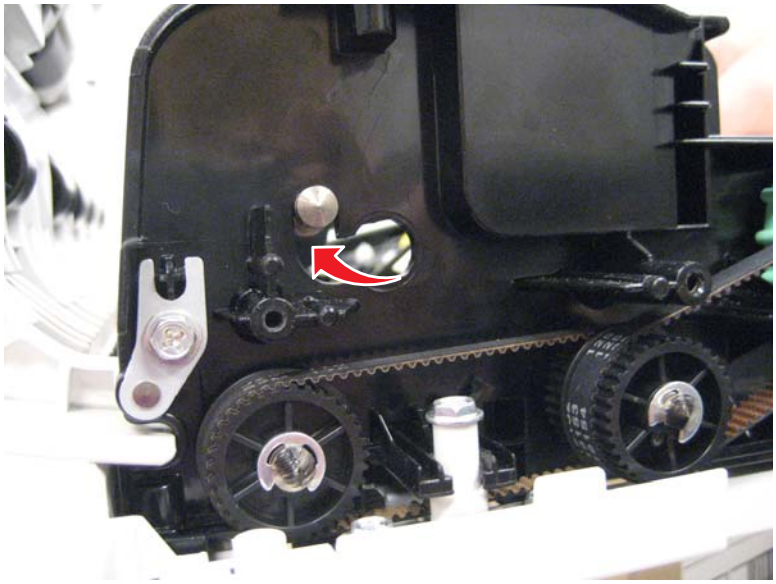


Note: You do not have to disconnect the cable from the sensor (ADF inverter).

8. Remove the four screws (B) securing the two sensor brackets to the machine.

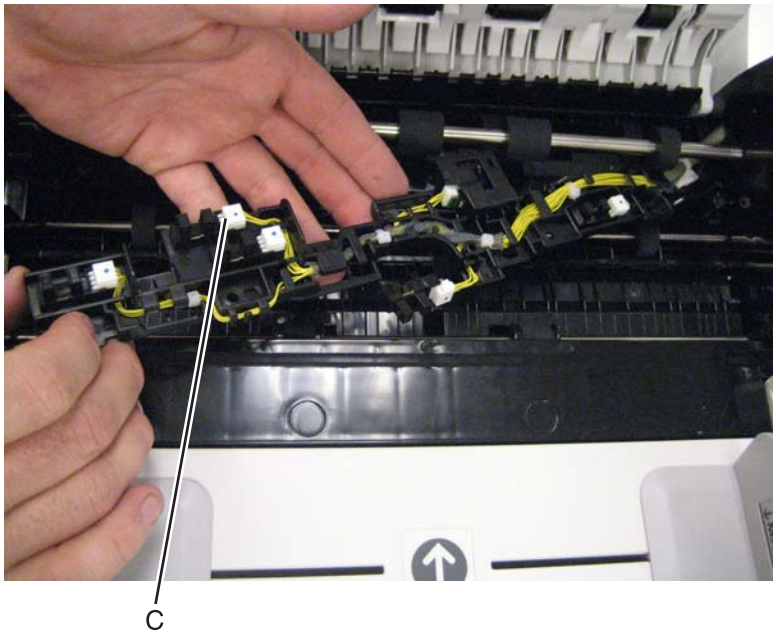


9. Position the ADF feed roller in its uppermost position to allow access to the ADF sensors, as shown in the following image.



10. Move the brackets out from under the ADF feed roller.

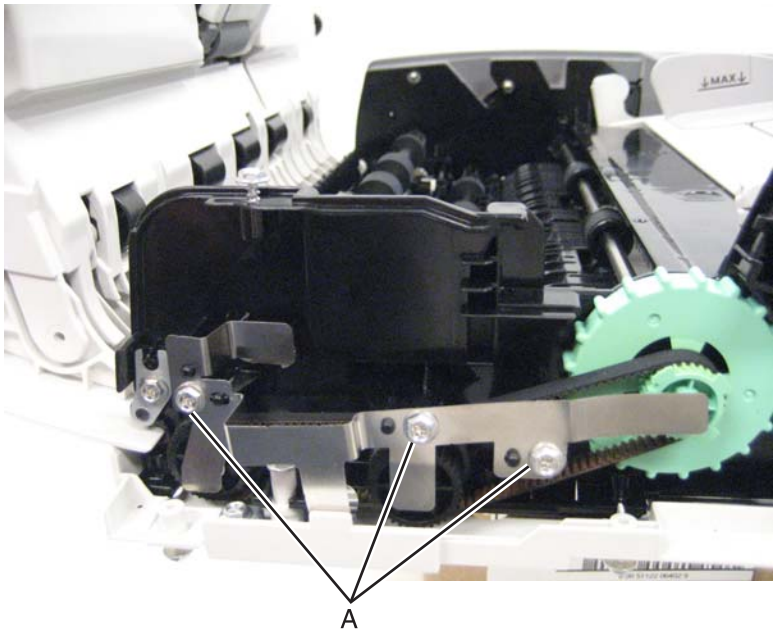
11. Release the hooks securing the sensor (ADF scan width 2) (C).



12. Remove sensor (ADF scan width 2).

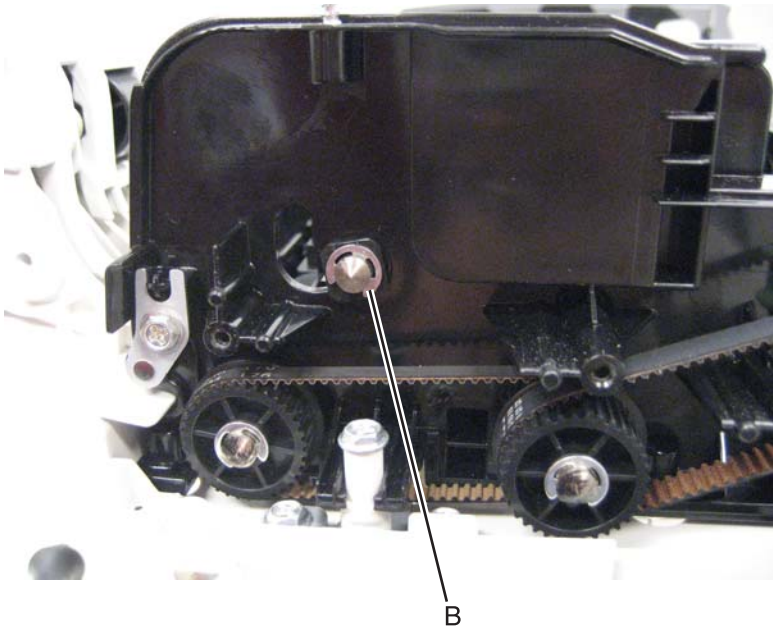
Sensor (ADF scan width 3) removal

1. Open the ADF top door.
2. Remove the ADF front cover. See **"ADF front cover removal" on page 4-219**.
3. Remove the three screws (A) securing the grounding plate to the machine.

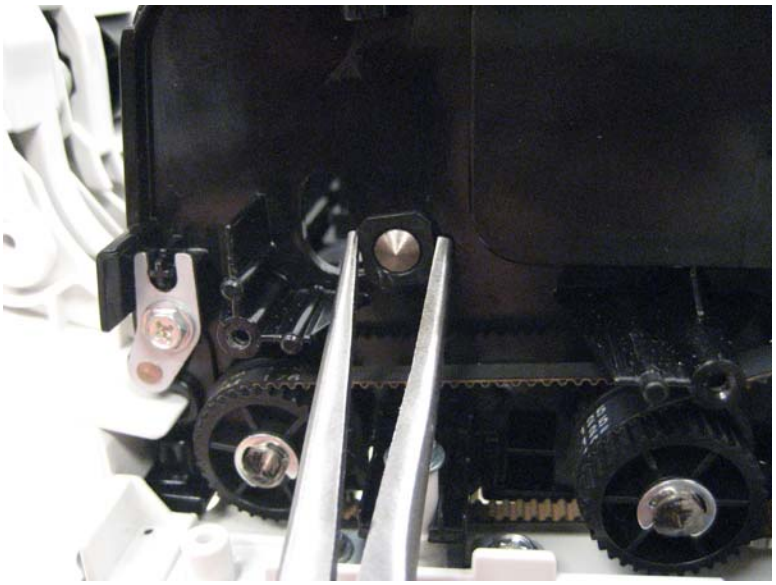


4. Remove the grounding plate.

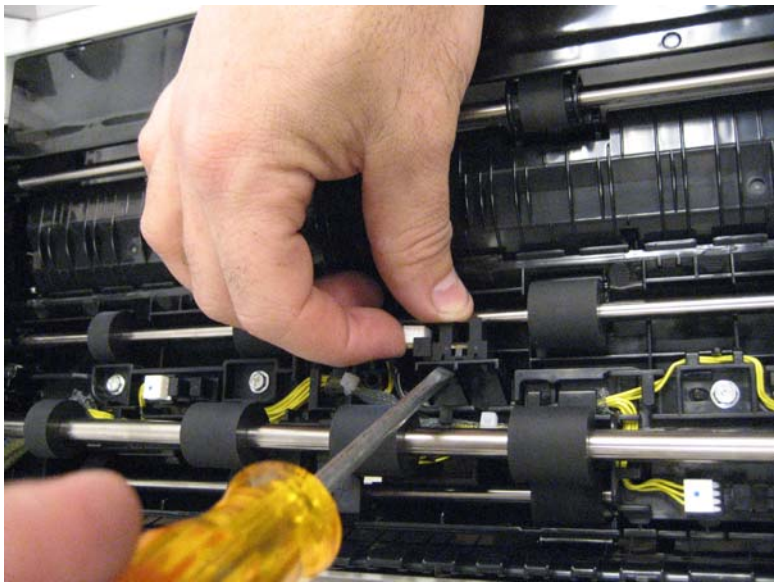
5. Remove the e-clip (B) securing the roller to the machine.



6. Remove the plastic bushing.

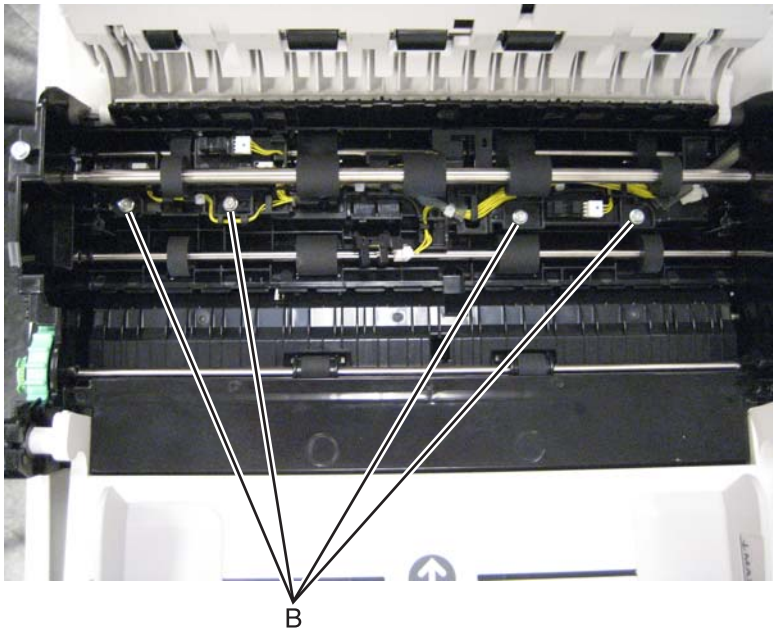


7. Release the hook securing the sensor (ADF inverter) to the machine.

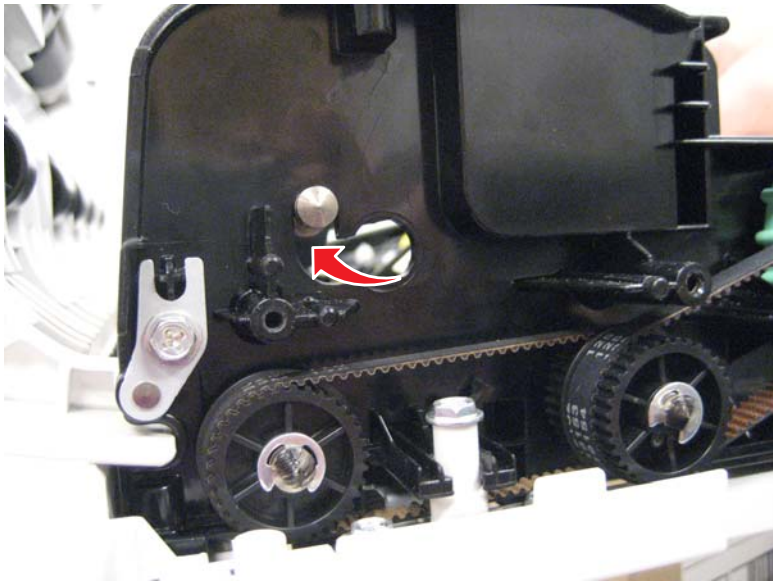


Note: You do not have to disconnect the cable from the sensor (ADF inverter).

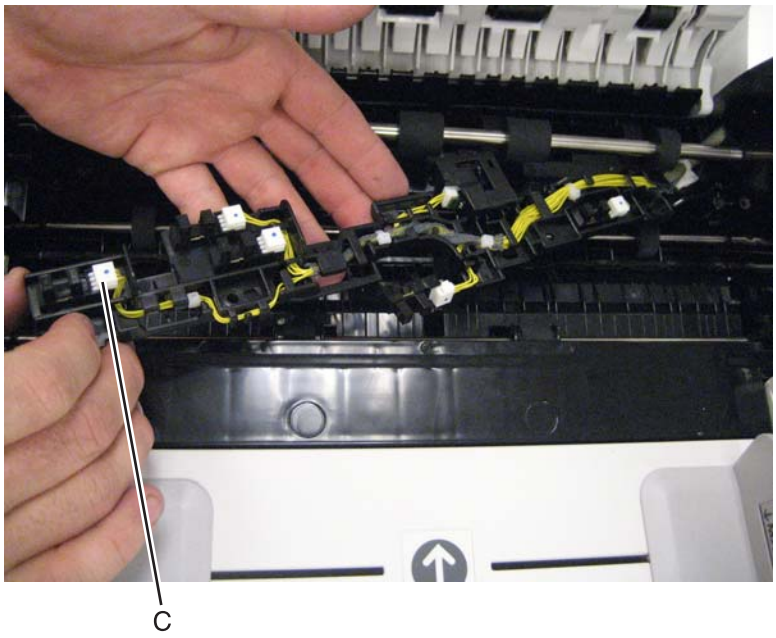
8. Remove the four screws (B) securing the two sensor brackets to the machine.



9. Position the ADF feed roller in its uppermost position to allow access to the ADF sensors, as shown in the following image.

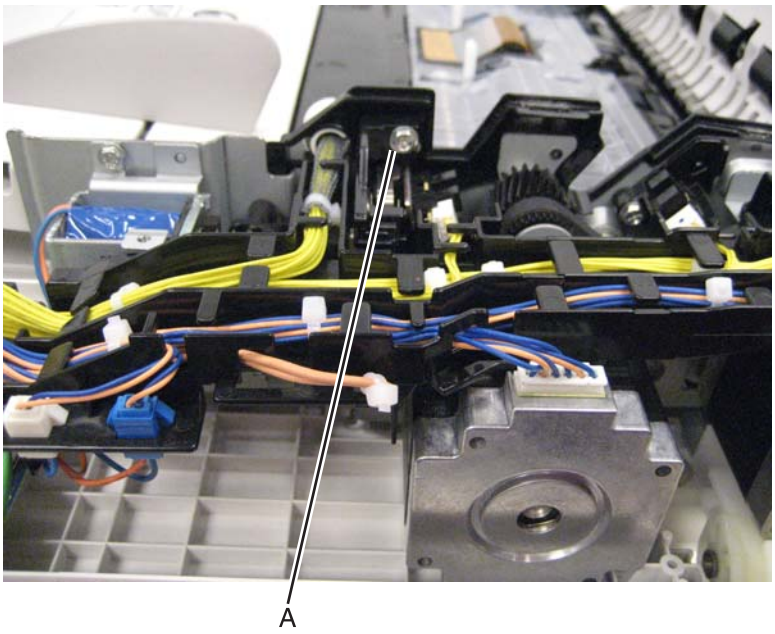


10. Move the brackets out from under the ADF feed roller.
11. Release the hooks securing the sensor (ADF scan width 3) (C).

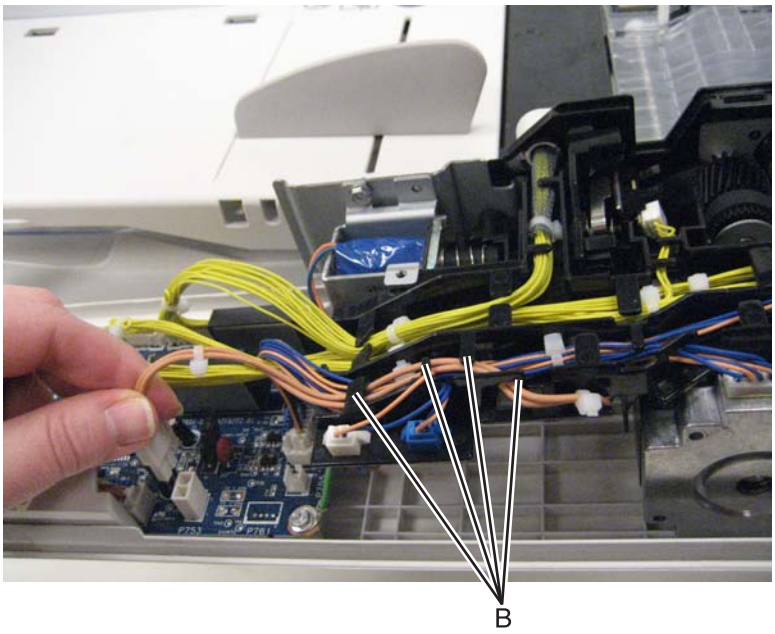


Sensor (ADF top door interlock) removal

1. Remove the ADF rear cover. **“ADF main drive sub assembly removal” on page 4-221**
2. Remove the screw (A).



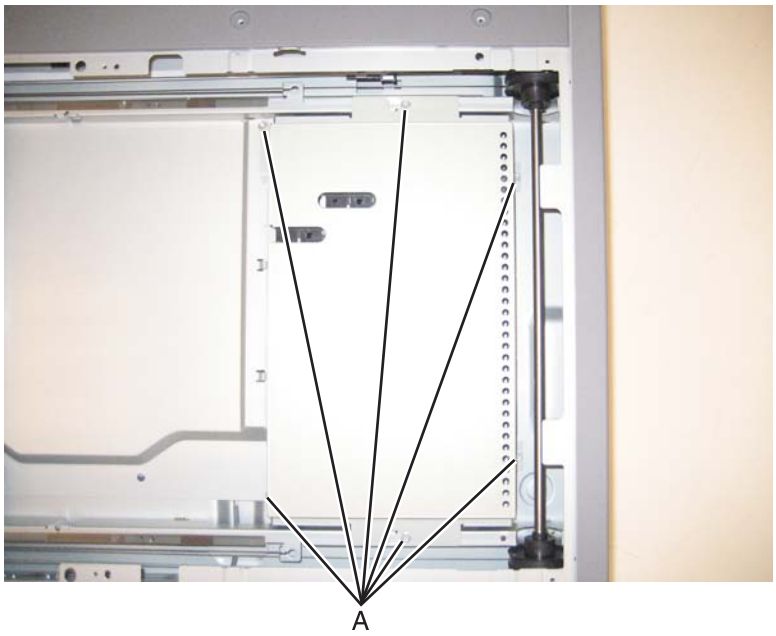
3. Disconnect the cable.
4. Remove the harness from the clamps (B).



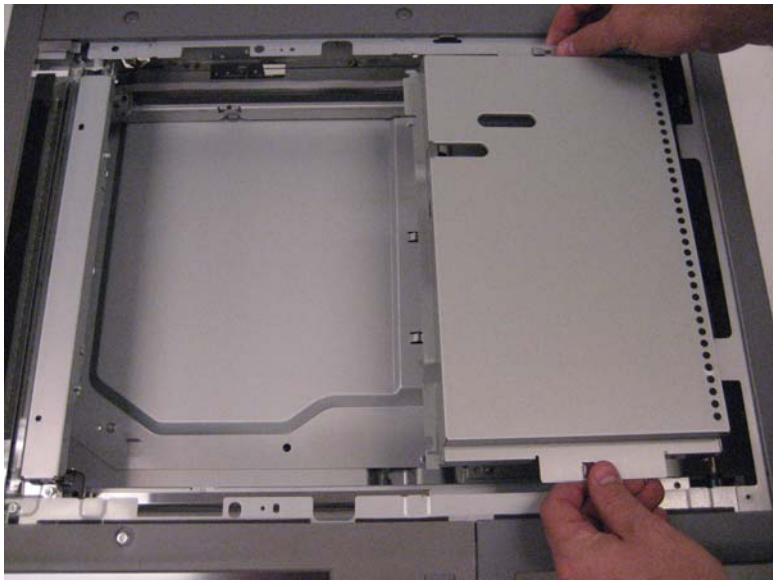
5. Remove the sensor (ADF top door interlock).

Sensor (FB platen length) removal

1. Remove the large platen glass. See **“Large platen glass removal” on page 4-239**.
2. Loosen the six screws (A) securing the optics shield to the machine.

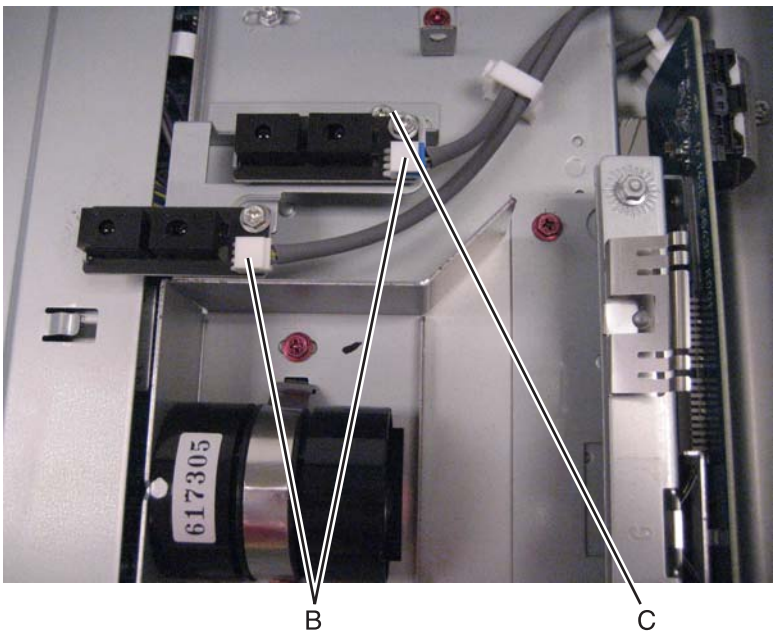


3. Move the optics shield to the right and lift it to remove.

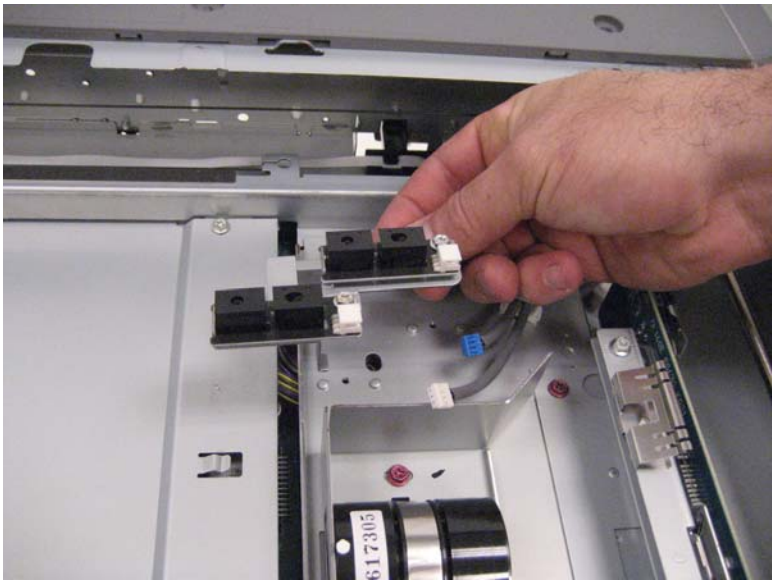


4. Disconnect the two cables (B) from the sensor (FB platen length).

5. Remove the screw (C).



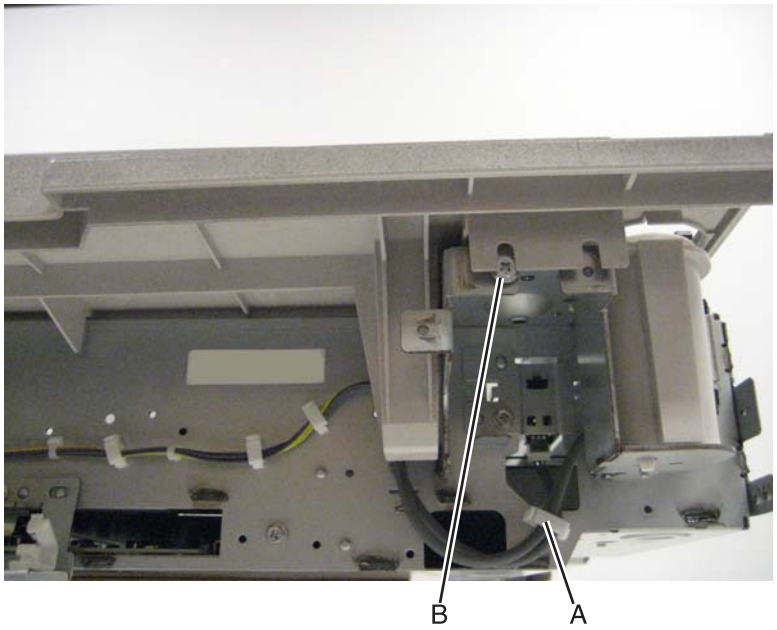
6. Remove the sensor (FB platen length).



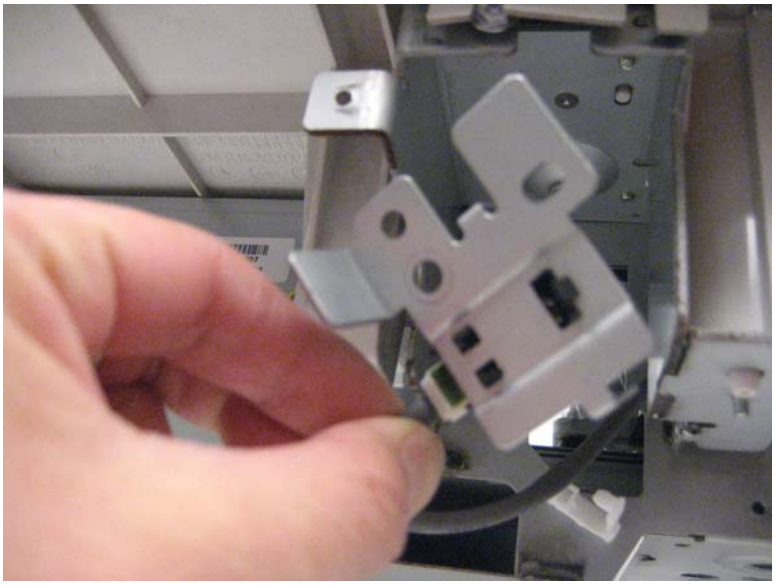
Reinstallation warning: Ensure that the blue cable is connected to the rearmost sensor or the scanner will not operate correctly.

Sensor (FB scanner HP) removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-19**.
2. Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-20**.
3. Release the two harnesses from the clamp (A).
4. Remove the screw (B).



5. Remove the sensor (FB scanner HP) from the machine.
6. Disconnect the cable.

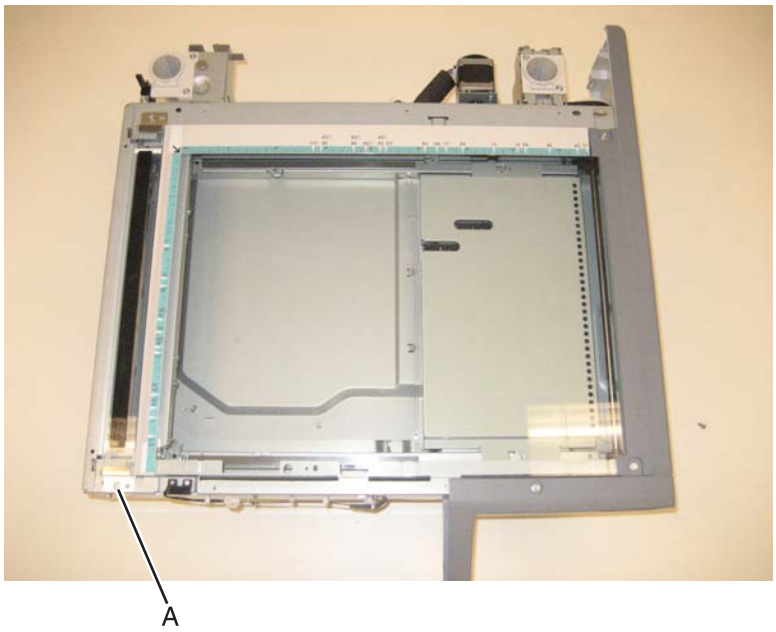


7. Remove sensor (FB scanner HP).

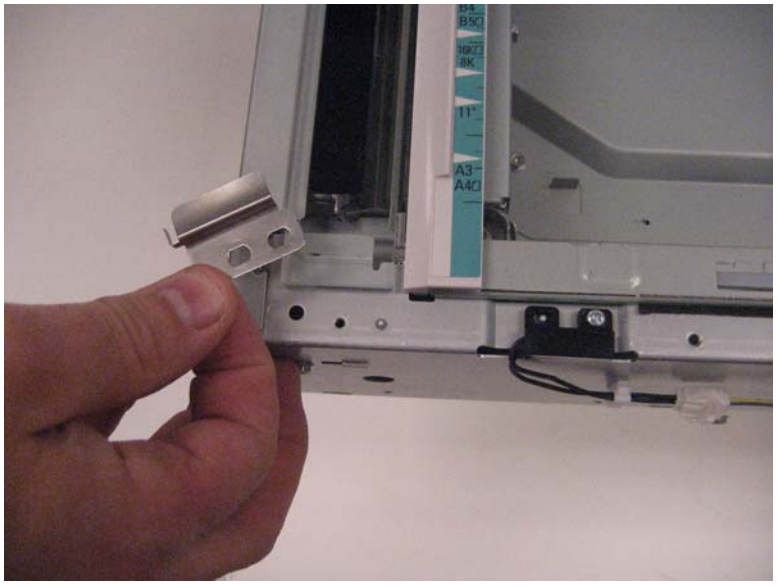
Small platen glass removal

1. Remove the operator panel assembly. See **“Scanner controller PCBA removal” on page 4-243**.
2. Remove the scanner rear cover. See **“Scanner rear cover removal” on page 4-20**.
3. Remove the scanner left cover. See **“Scanner left cover removal” on page 4-19**.

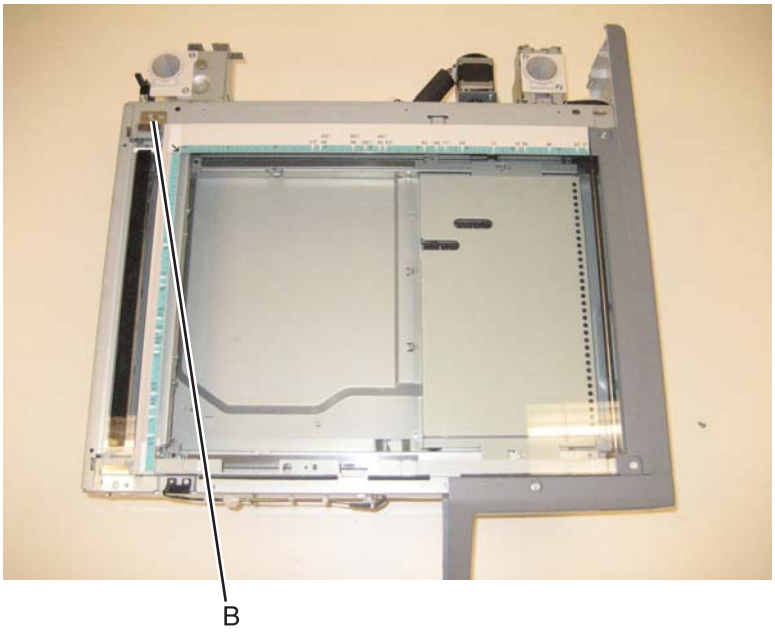
4. Remove the screw (A) securing the small platen front retainer.



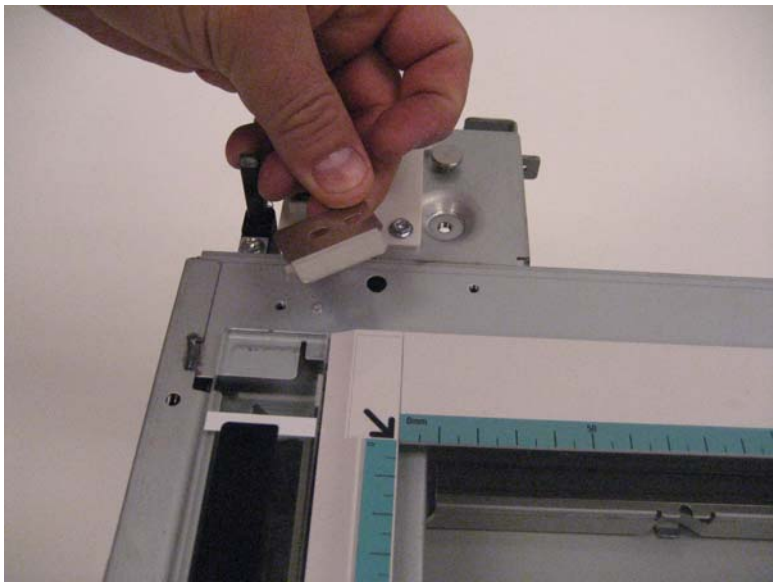
5. Remove the small platen front retainer.



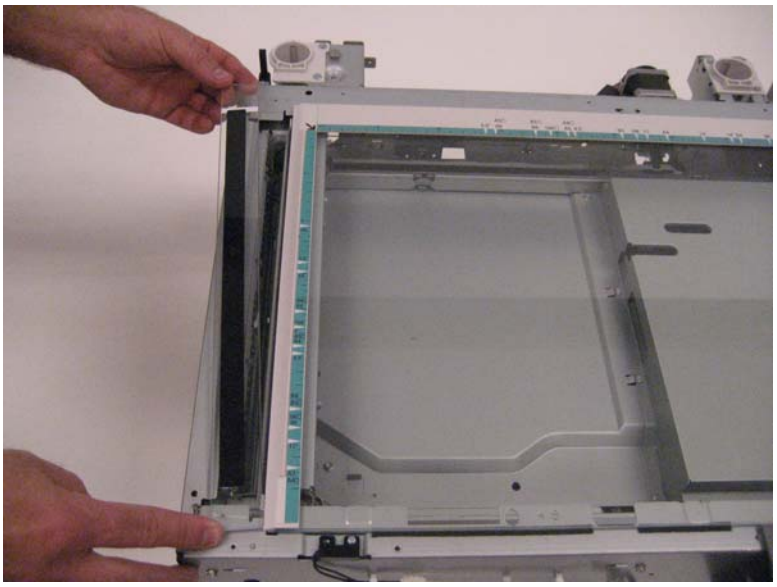
6. Remove the screw (B) securing the small platen rear retainer.



7. Remove the small platen rear retainer.



8. Remove the small platen glass.



Reinstallation note: Make sure both sides of the glass are properly cleaned.

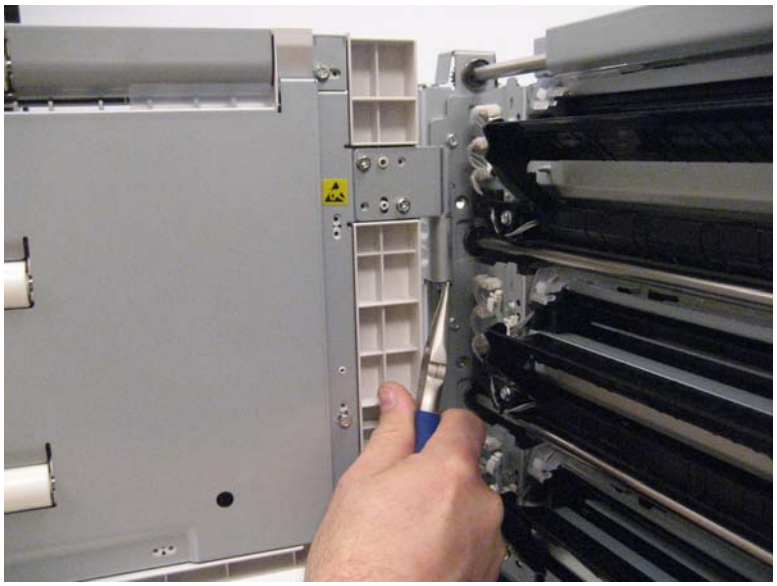
Reinstallation note: Make sure the small platen glass is replaced as seen in the previous photo.

Tray module removal procedures

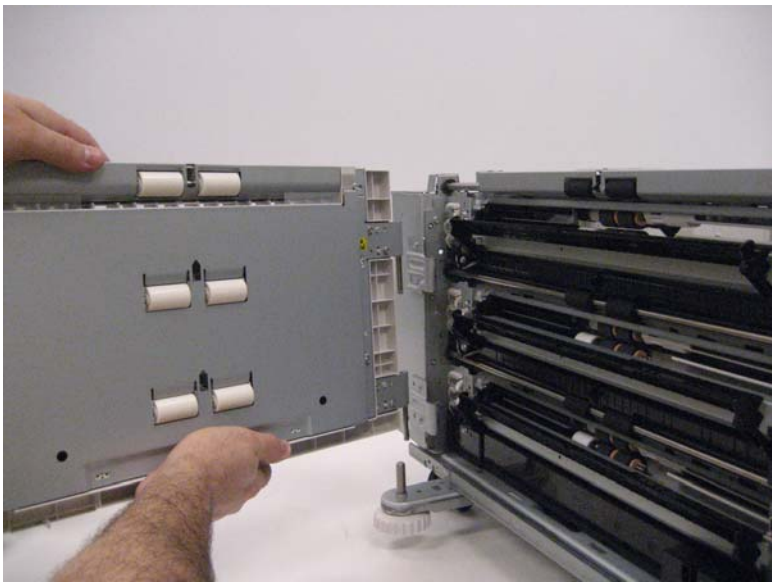
Unless otherwise indicated, each removal procedure applies to TTM, 3TM, and 1TM devices.

3TM left door removal

1. Remove the tray module rear cover. See **“Tray module right cover removal” on page 4-291**.
2. Remove the tray module left cover. See **“Tray module left cover removal” on page 4-286**.
3. Remove the metal clip.



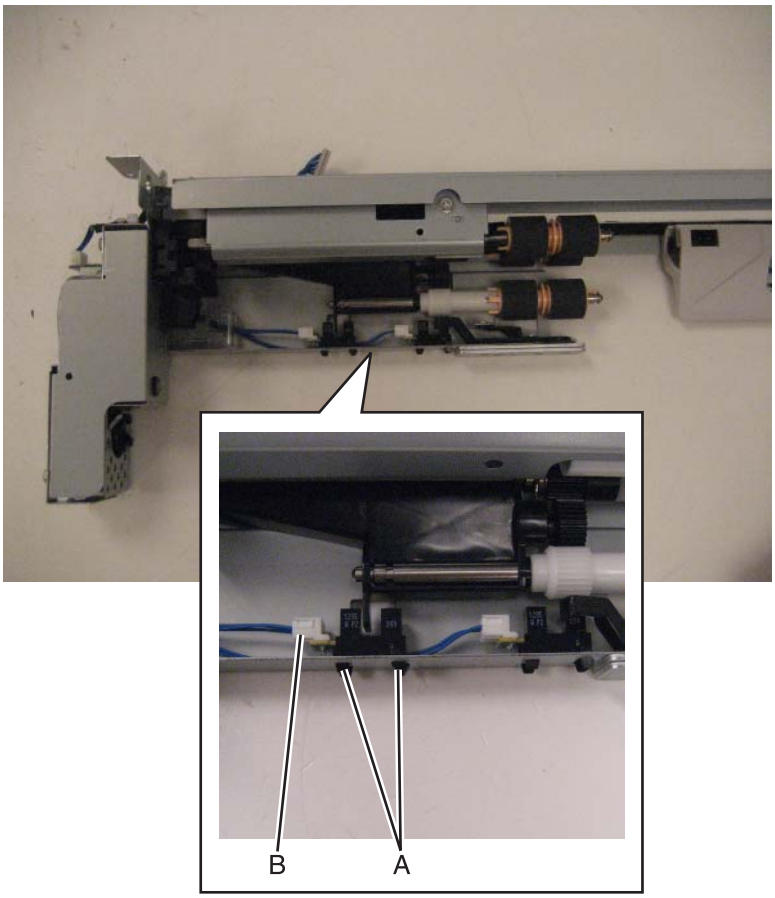
4. Lift the 3TM left door, and remove it from the machine.



Sensor (media level) removal

This removal procedure applies to trays 1–4.

1. Remove the appropriate feeder unit. See **“Printer tray 1 feeder removal” on page 4-150**, **“Tray module media feeder removal” on page 4-288**, **“TTM tray 4 media feeder removal” on page 4-301**, or **“TTM tray 3 feeder removal” on page 4-297**.
2. Release the tabs (A) securing the sensor (media level) to the assembly.
3. Remove the sensor (media level).
4. Disconnect the harness (B).

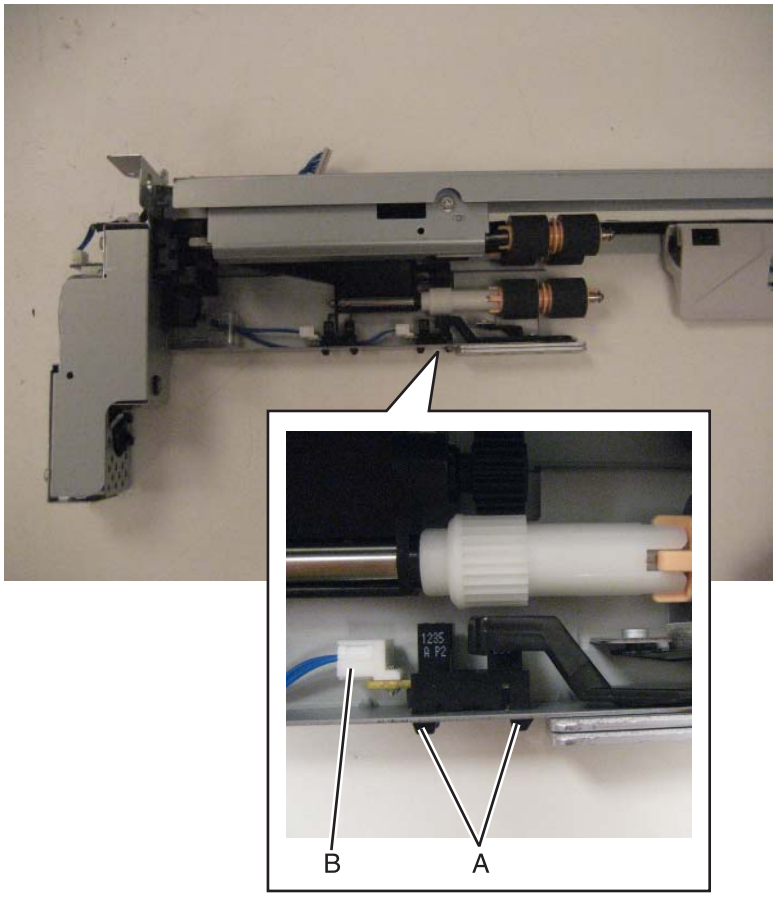


Sensor (media out) removal

This removal procedure applies to trays 1–4.

1. Remove the appropriate feeder unit. See **“Printer tray 1 feeder removal” on page 4-150**, **“Tray module media feeder removal” on page 4-288**, **“TTM tray 4 media feeder removal” on page 4-301**, or **“TTM tray 3 feeder removal” on page 4-297**.
2. Remove the media out actuator. See **“Media out actuator removal” on page 4-129**.
3. Release the tab (A) securing the sensor (media out) to the assembly.
4. Remove the sensor (media out).

5. Disconnect the cable (B).

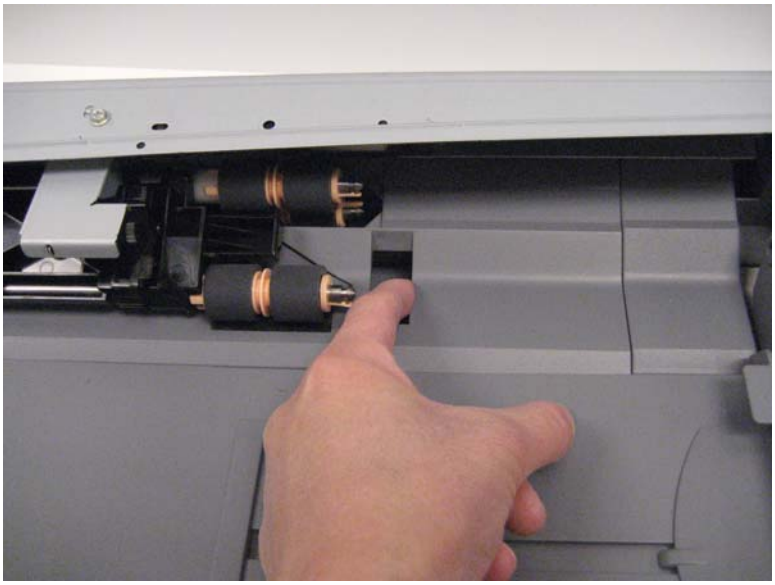


Sensor (media present) removal

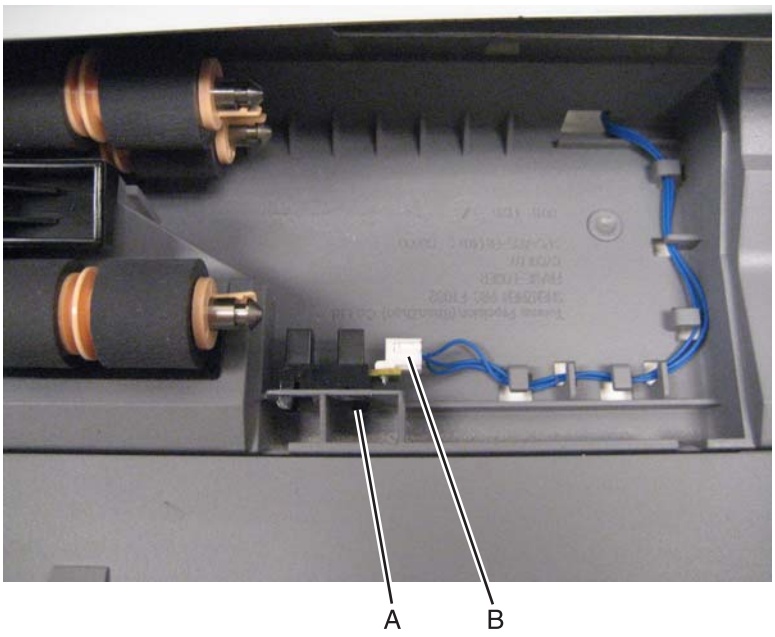
This removal procedure applies to trays 1–4.

1. Remove the left rear lower cover. See **“Left rear lower cover removal” on page 4-7**.
2. Remove the MPF tray feeder. See **“MPF tray feeder removal” on page 4-134**.
3. Remove the MPF top cover. See **“MPF top cover removal” on page 4-8**.

4. Gently detach the access cover.



5. Release the hooks (A) securing the sensor (MPF media present) to the MPF tray feeder.
6. Disconnect the cable (B) from the sensor (MPF media present).



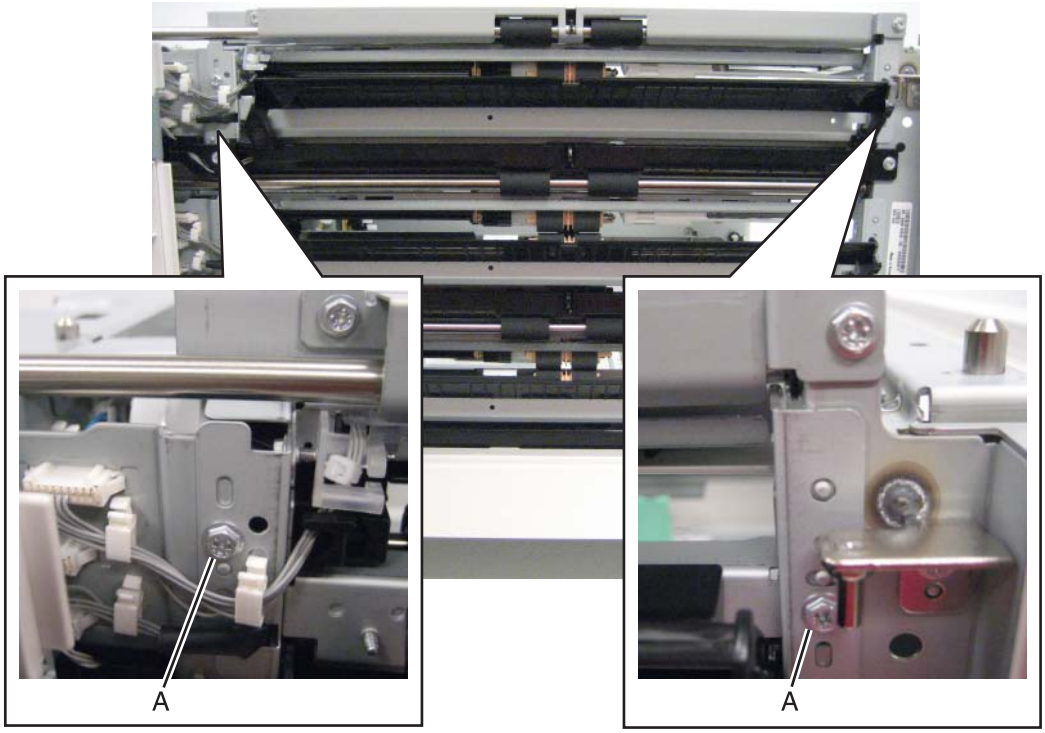
7. Remove the sensor (MPF media present).

Reinstallation note: Ensure that the access cover is properly reinstalled so that it is flush with the machine or media jamming might occur.

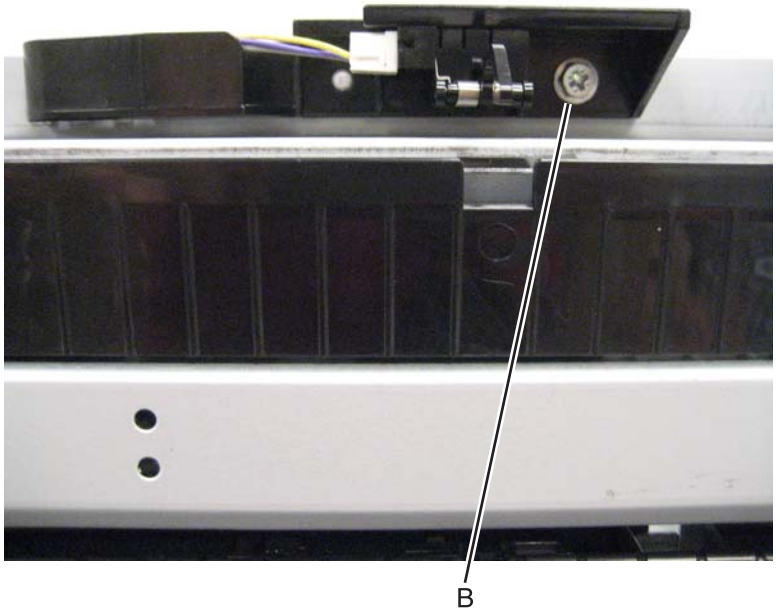
Sensor (tray module feedout) removal

This removal procedure applies to all three tray modules.

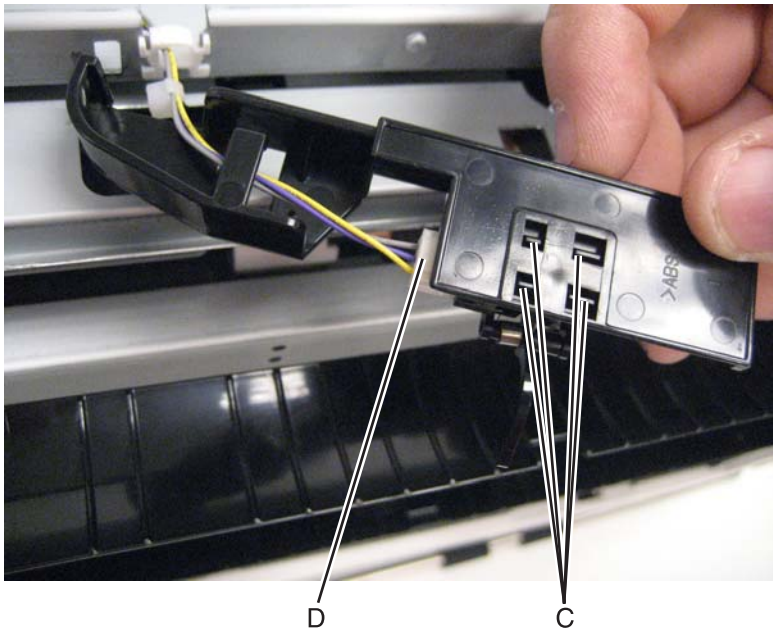
1. Open the left door.
2. Remove the two screws (A) securing the metal guide to the machine.



3. Remove the metal guide.
4. Remove the tray module upper media transport roller. See the **"Tray module transport rollers removal" on page 4-293**.
5. Remove the screw (B) securing the plastic bracket to the machine.



6. Remove the plastic bracket.
7. Release the hooks (C) securing the sensor (tray module feedout) to the machine.
8. Remove the sensor.
9. Disconnect the cable (D).

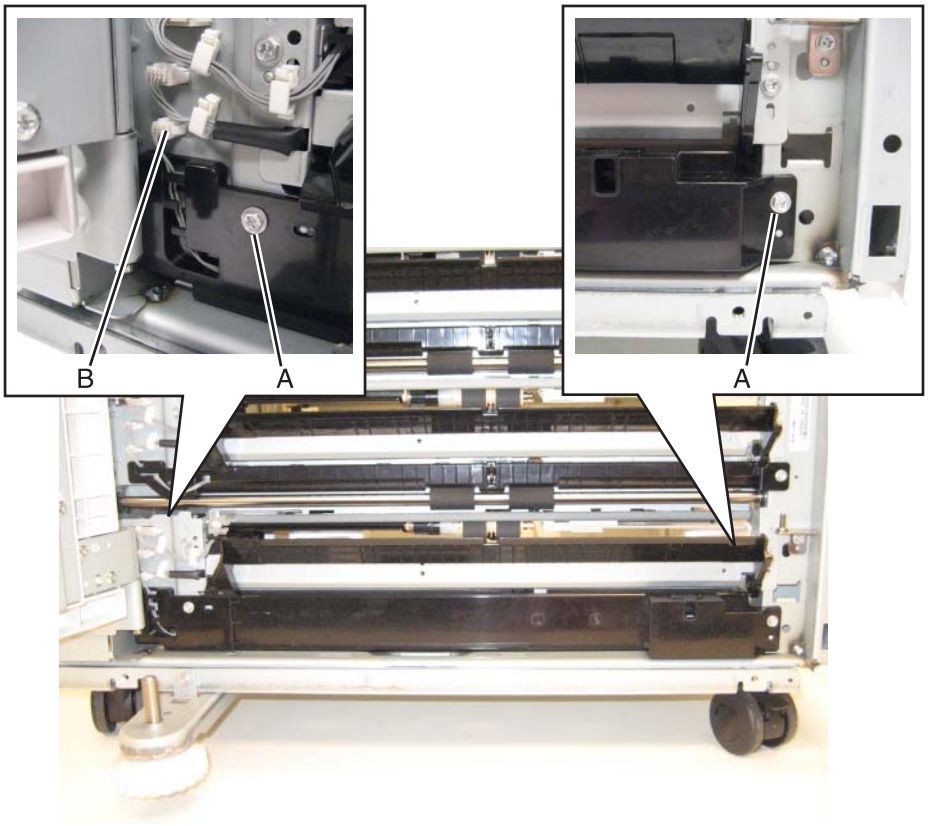


10. Remove the sensor (tray module feedout).

Sensor (tray module left door interlock) removal

1. Remove the left cover.
2. Open the left door.
3. Remove the two screws (A) securing the plastic cover to the machine.

4. Disconnect the cable (B) from the sensor (tray module left door interlock).



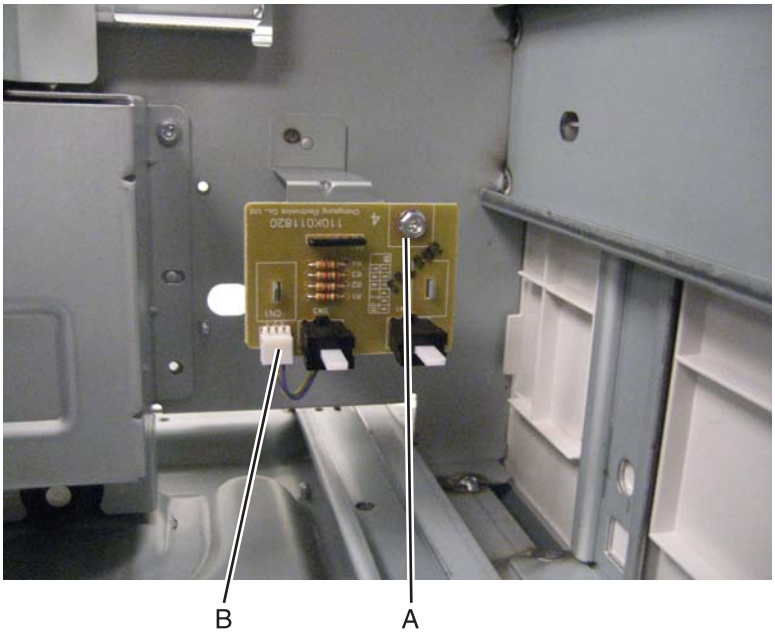
5. Remove the plastic cover.
6. Disconnect the cable (C).

7. Release the hooks securing the sensor (tray module left door interlock) to the plastic cover.
8. Remove the sensor (tray module left door interlock).

Sensor (TTM media size) removal

This removal procedure can be applied to either TTM tray 3 media tray or TTM tray 4 media tray.

1. Pull the appropriate TTM media tray from the machine.
2. Remove the screw (A).
3. Disconnect the cable (B).

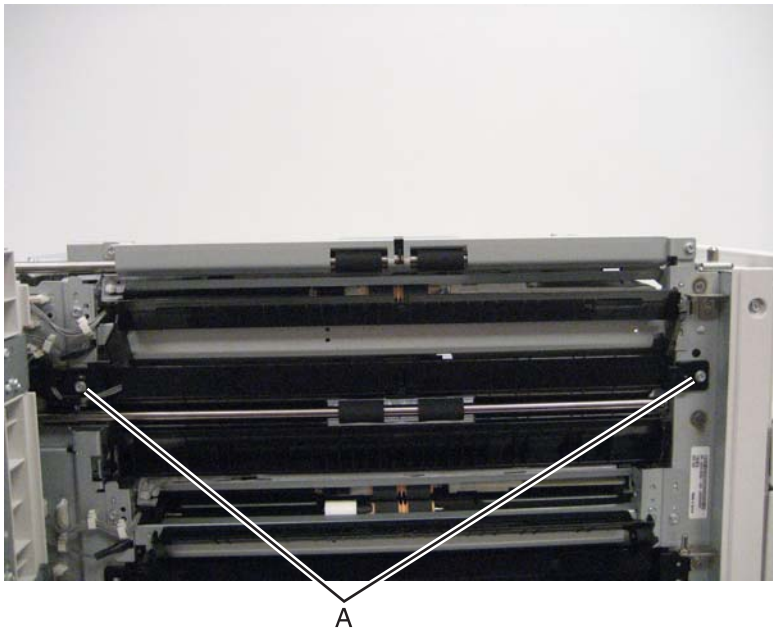


4. Remove the sensor (TTM media size).

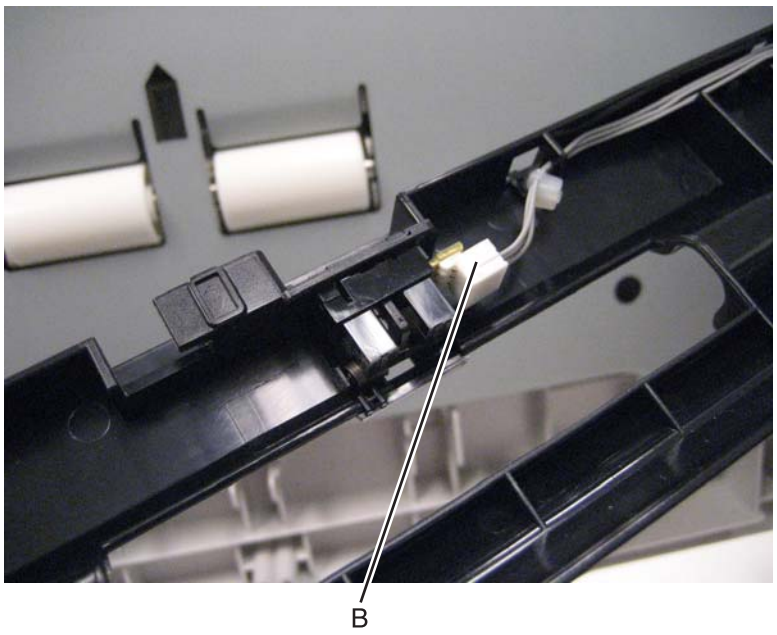
Sensor (TTM tray 3 feedout) removal

1. Open the left door.
2. Remove the lower tray module media transport roller. See **“Tray module transport rollers removal” on page 4-293**.

3. Remove the two screws (A) securing the plastic media guide to the machine.



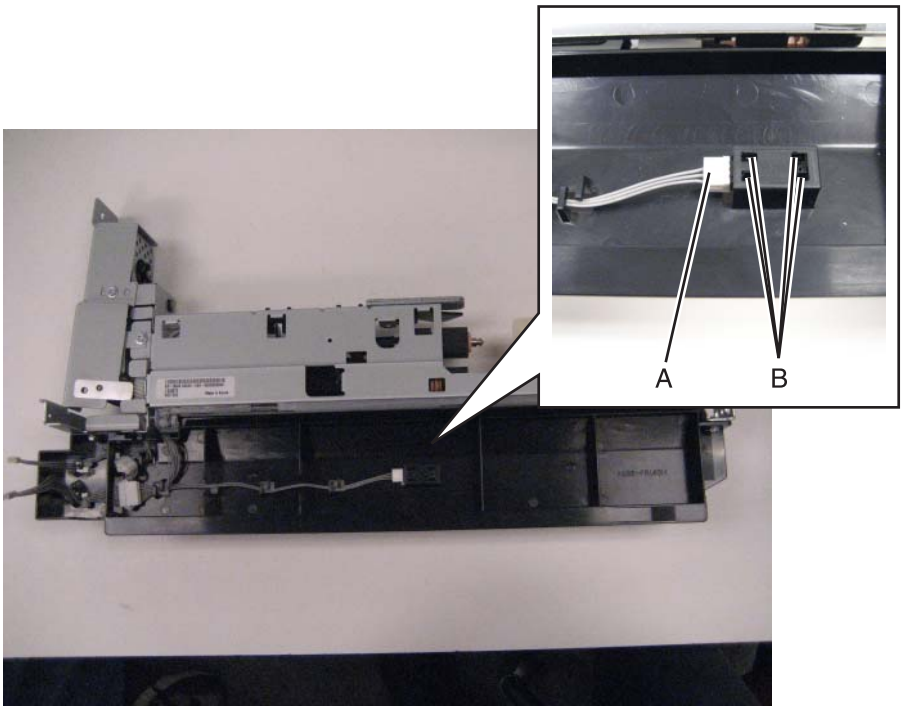
4. Push the plastic media guide slightly toward the rear and pull it out from the machine.
5. Release the hooks securing the sensor (TTM tray 3 feedout) to the machine.
6. Disconnect the cable (B).



Sensor (TTM tray 4 feedout) removal

1. Remove the TTM tray 4 media feeder. See **"TTM tray 4 media feeder removal" on page 4-301**.
2. Disconnect the cable (A).

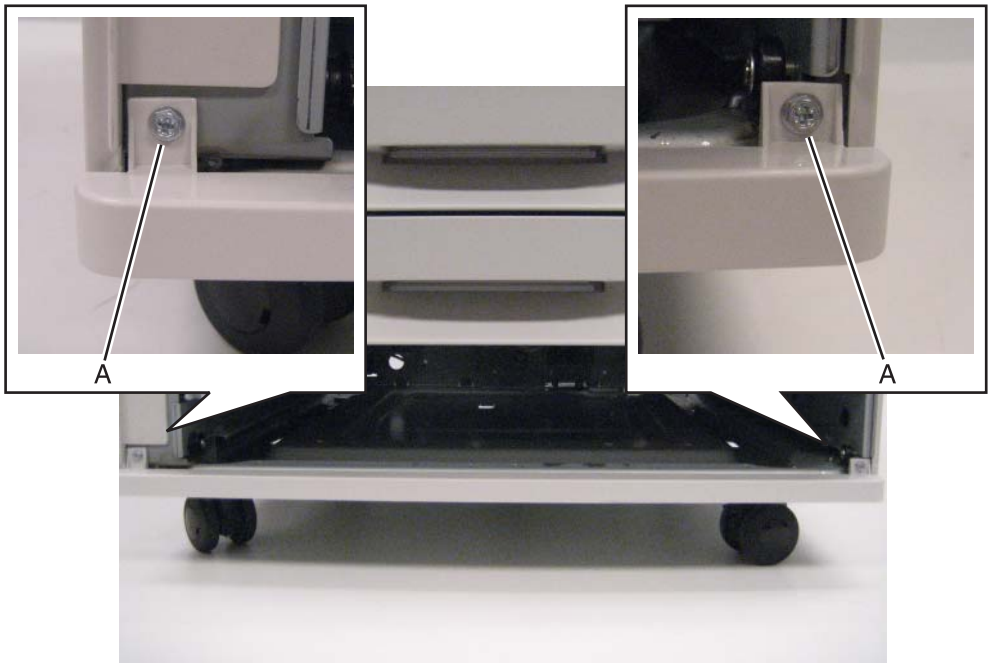
3. Release the hooks (B).



4. Remove the sensor (TTM tray 4 feedout).

Tray module bottom cover removal

1. Remove the media tray 4.
2. Remove the two screws (A) securing the tray module bottom cover to the machine.

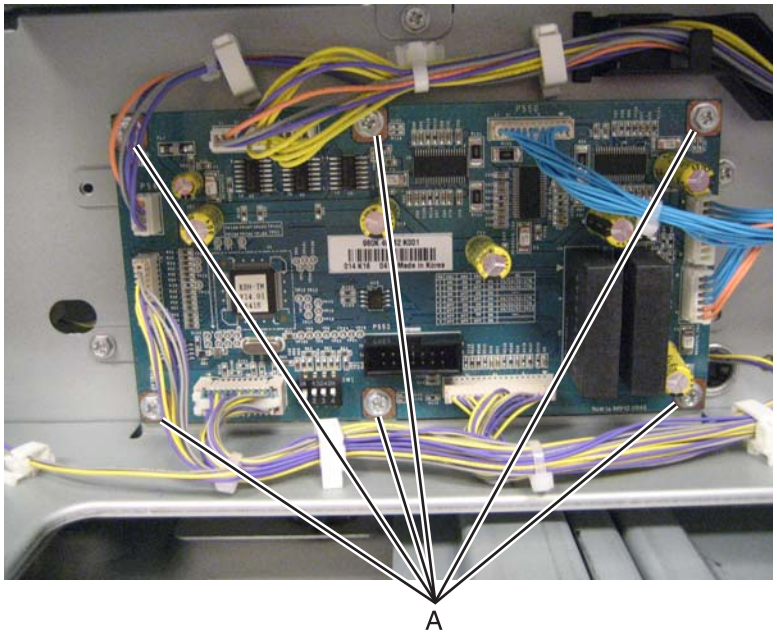


3. Remove the tray module bottom cover.

Tray module controller PCBA removal

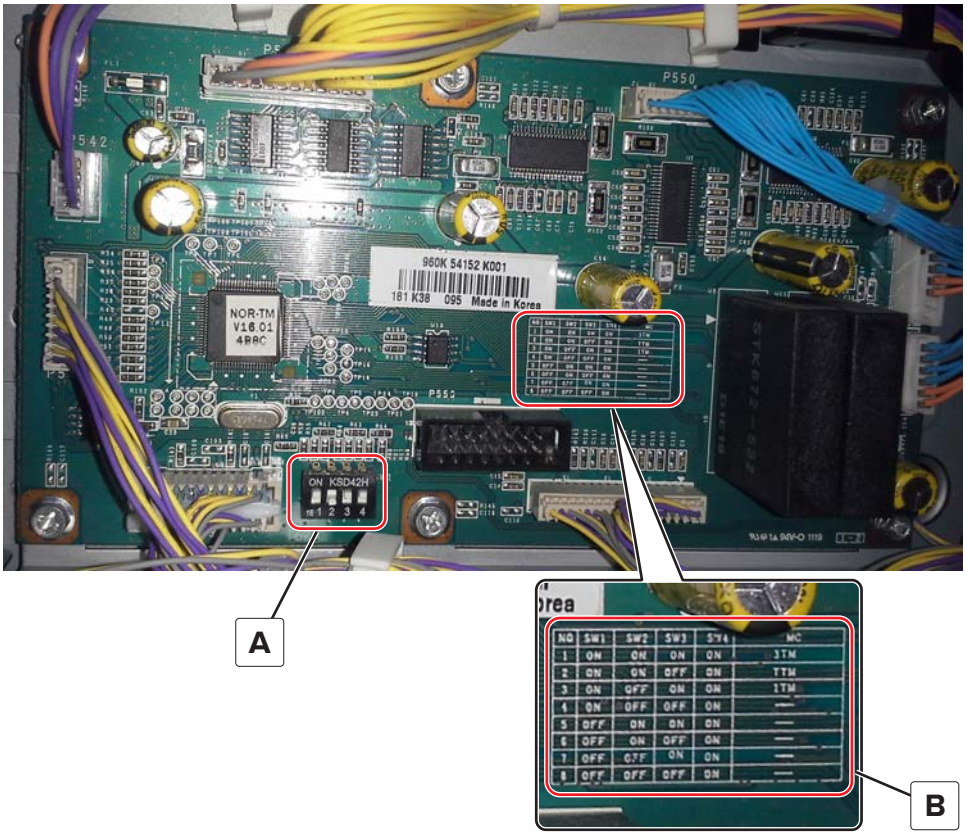
This removal procedure applies to all three tray modules.

1. Remove the tray module rear cover. See **“Tray module rear cover removal” on page 4-290**.
2. Remove the six screws (A).



3. Disconnect all the cables from the tray module controller PCBA.
4. Remove the tray module controller PCBA.

Installation note: After installing the replacement unit, make sure that the switches (A) are configured correctly for the option where the unit is installed into. You can also use the tabularized data (B) on the PCBA board as a guide.



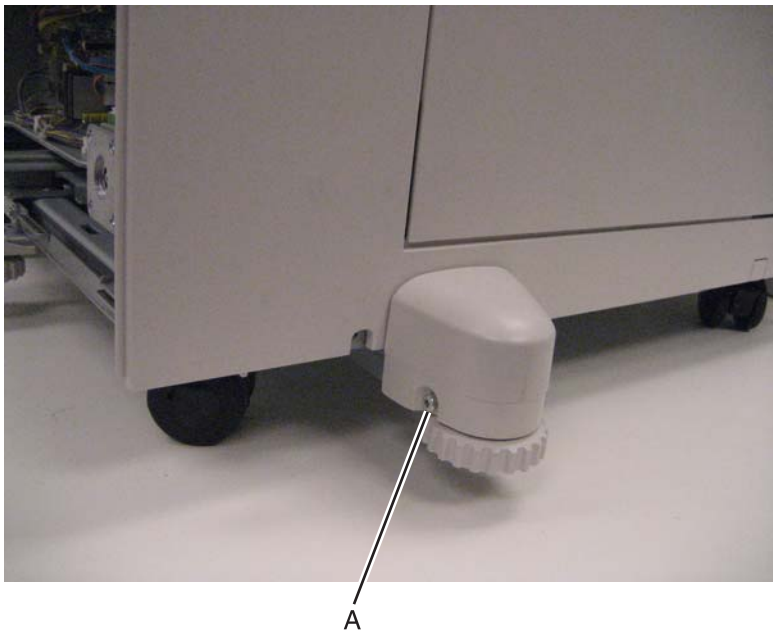
Correct dip-switch settings for the option

Input Option	Switch Settings			
	Switch 1	**Switch 2**	**Switch 3**	**Switch 4**
3-Tray Module (3TM)	ON	ON	ON	ON
Tandem Tray Module (TTM)	ON	ON	OFF	ON
1 Tray Module (1TM)	ON	OFF	ON	ON

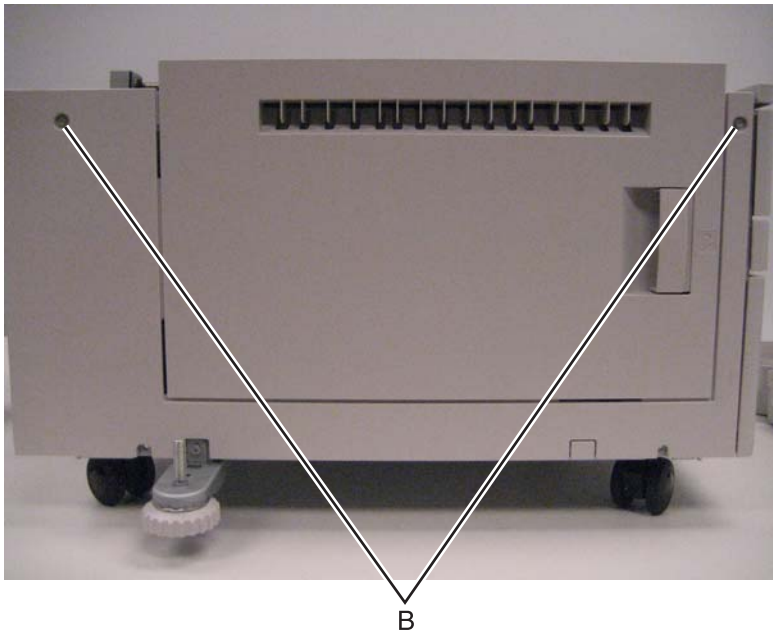
Tray module left cover removal

Previous
Next
Go Back

1. Remove the tray module rear cover. See **"Tray module rear cover removal" on page 4-290**.
2. Remove the screw (A) securing the foot cover to the machine.



3. Remove the foot cover.
4. Remove the two screws (B).



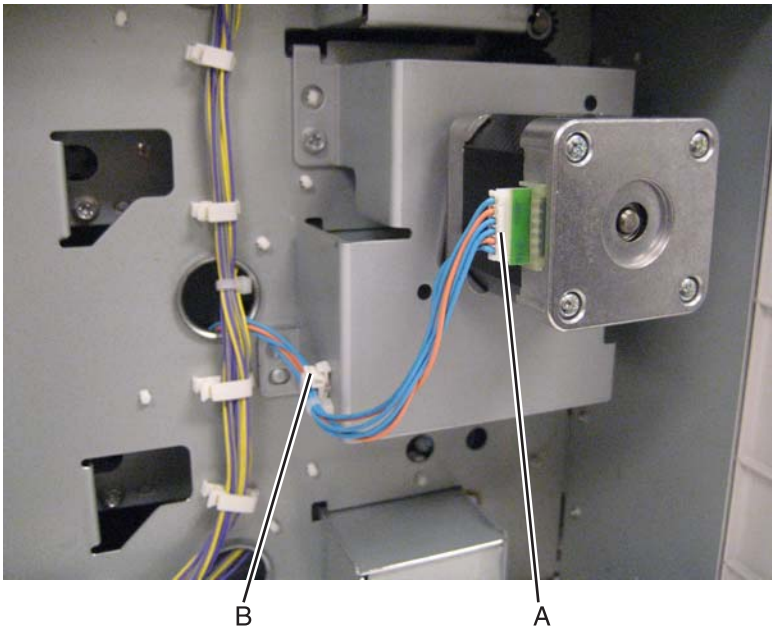
Note: Opening the tray module left door will help you remove the tray module left cover.

5. Remove the tray module left cover.

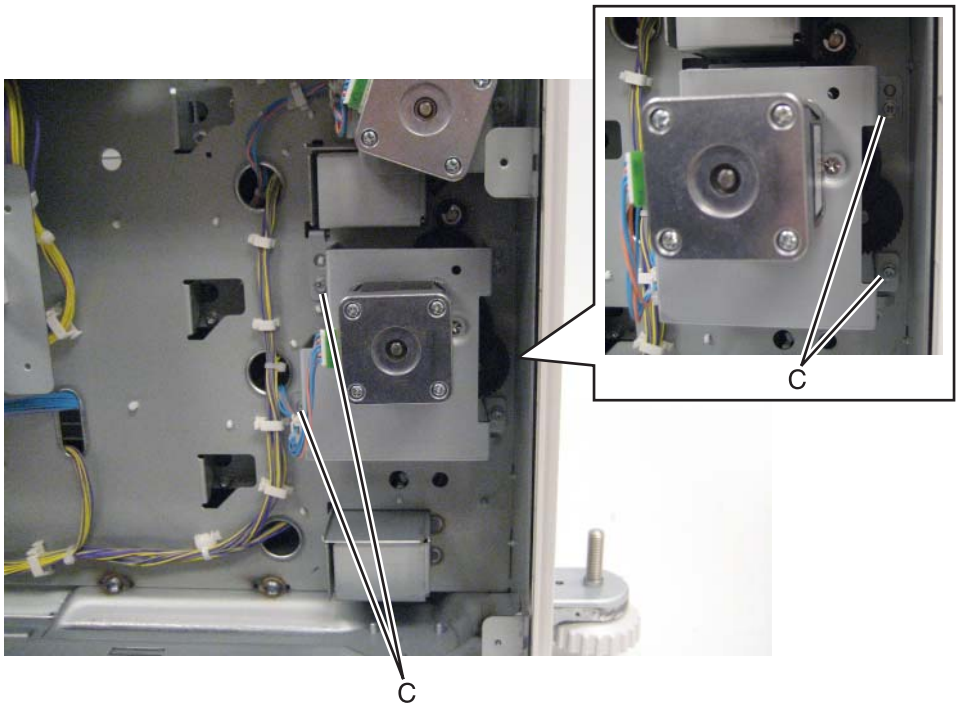
Tray module lower transport motor removal

This removal procedure is not applicable to TTM tray modules.

1. Remove the tray module rear cover. See **"Tray module rear cover removal" on page 4-290**.
2. Disconnect the cable (A).
3. Release the harness from the clamp (B).



4. Remove the four screws (C).



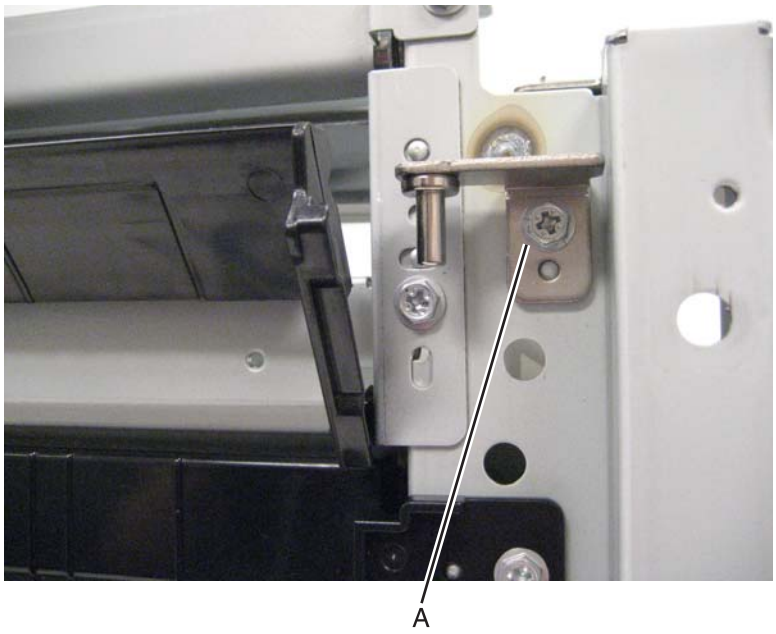
5. Remove the tray module lower transport motor.

Tray module media feeder removal

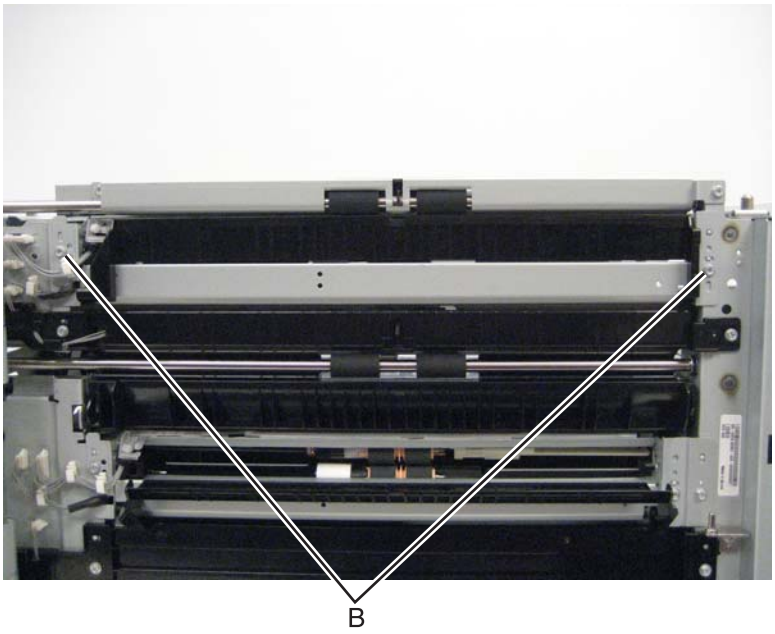
This removal procedure can be used for the following trays:

- 1TM tray module
- 3TM tray module, tray 2
- 3TM tray module, tray 3
- 3TM tray module, tray 4
- TTM tray module, tray 2

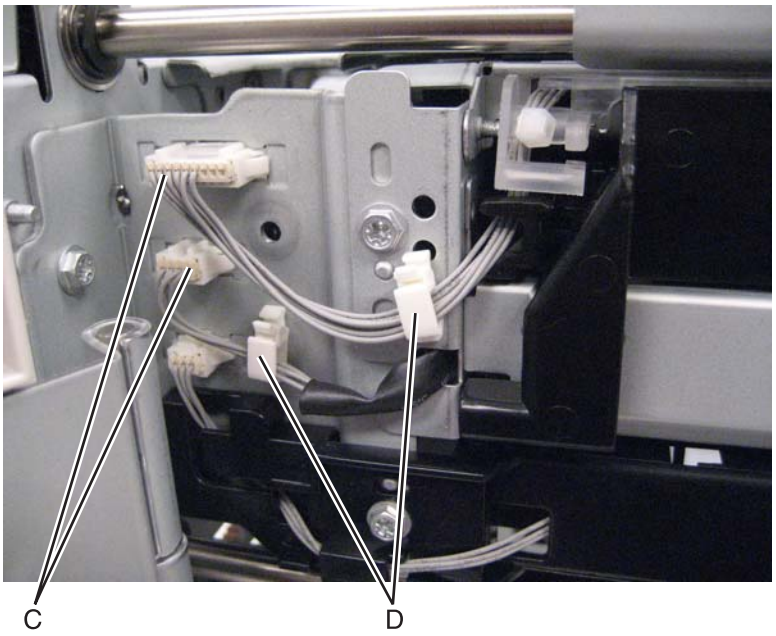
1. Remove the media tray 2.
2. Open the left door.
3. Remove the screw (A) securing the bracket to the machine.



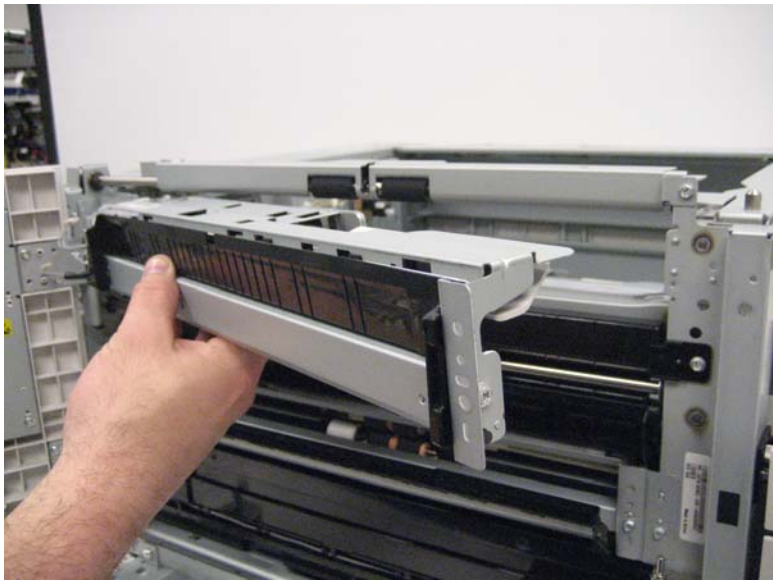
4. Remove the two screws (B) securing the tray module media feeder to the machine.



5. Disconnect the two cables (C) from the machine.
6. Remove the two harnesses from the clamps (D).

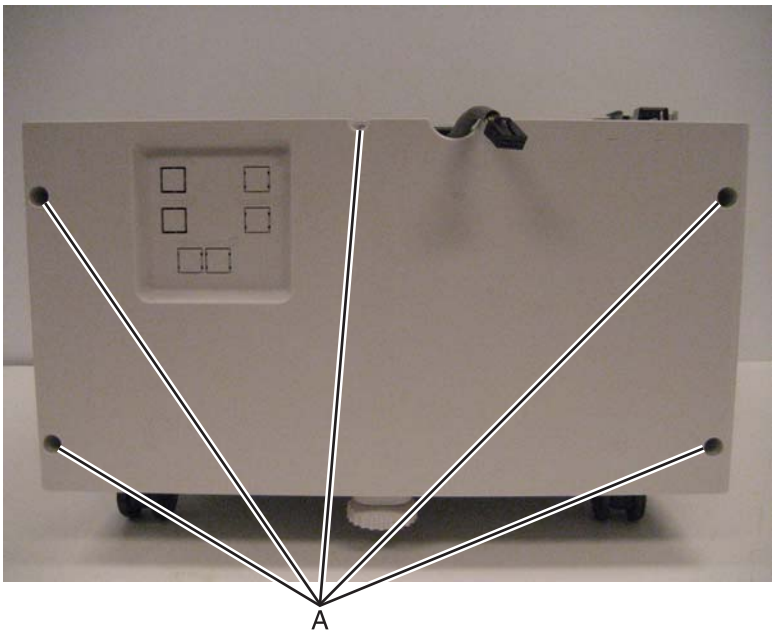


7. Remove the tray module media feeder.



Tray module rear cover removal

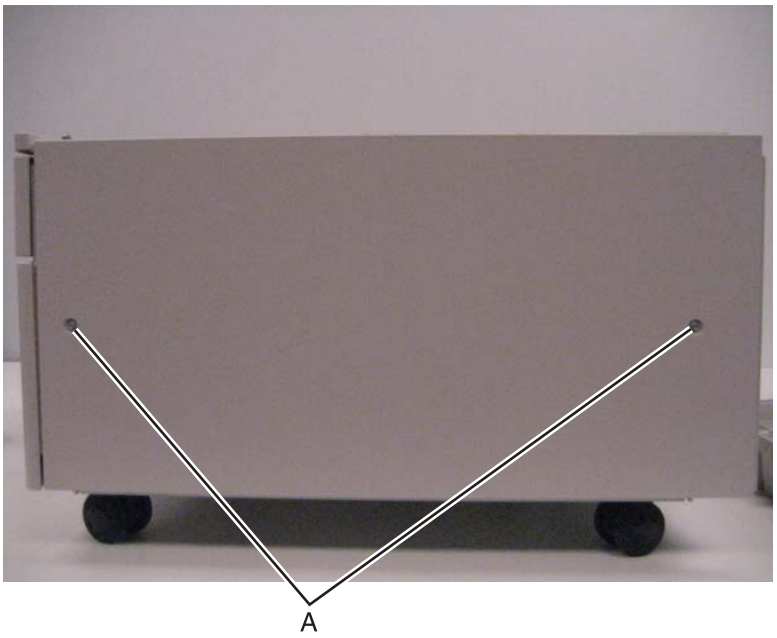
1. Remove the five screws (A) securing the tray module rear cover.



2. Remove the tray module rear cover.

Tray module right cover removal

1. Remove the tray module rear cover. See **“Tray module rear cover removal” on page 4-290**.
2. Remove the two screws (A).

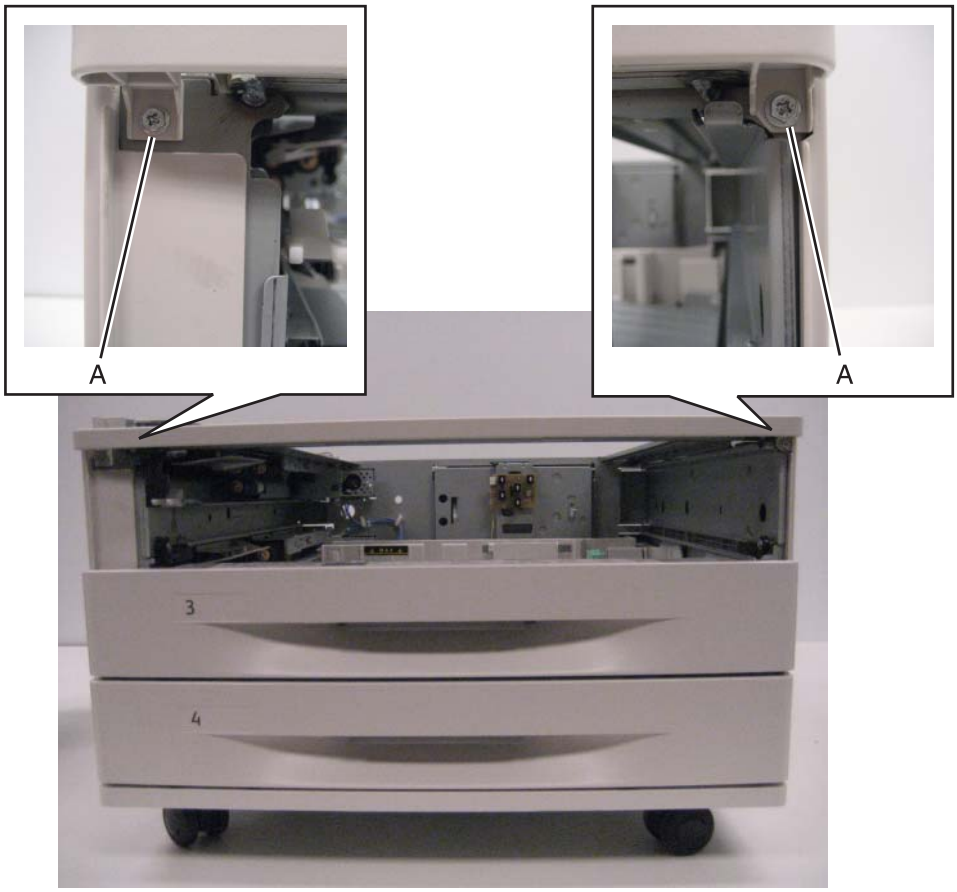


3. Remove the tray module right cover.

Tray module top cover removal

This removal procedure applies to all three tray modules.

1. Remove the media tray 2.
2. Remove the two screws (A) securing the tray module top cover to the machine.

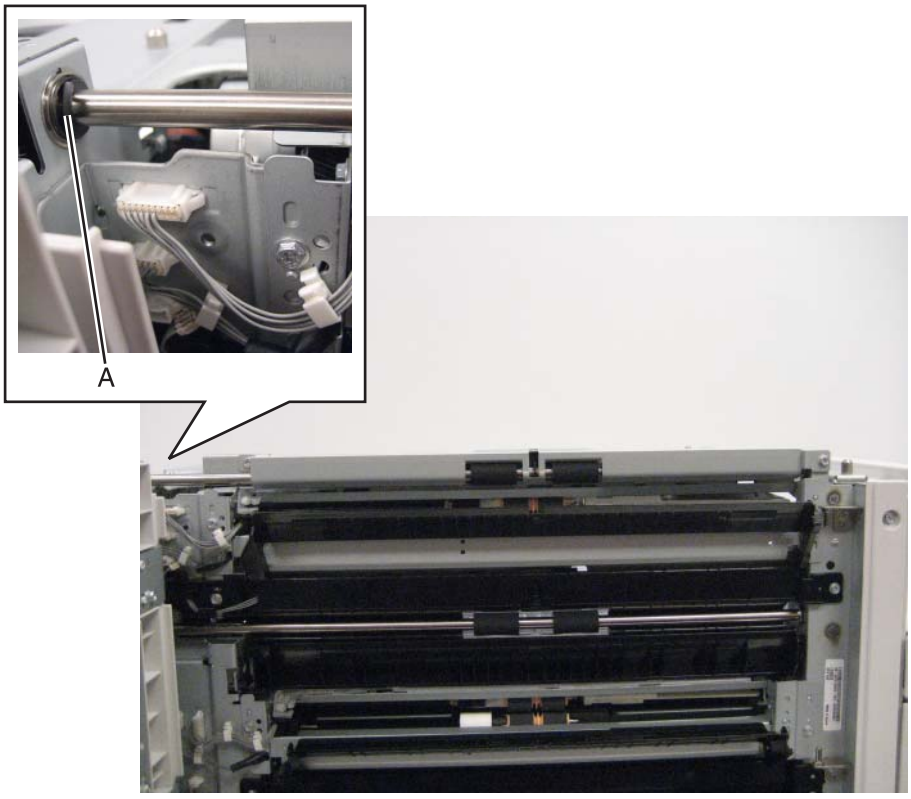


3. Remove the tray module top cover.

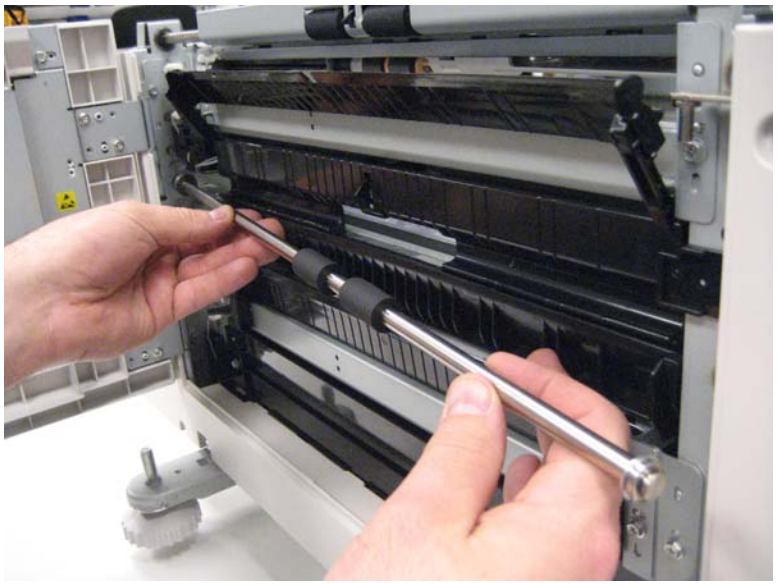
Tray module transport rollers removal

This removal procedure applies to all three tray modules.

1. Open the left door.
2. Remove the e-clip (A).



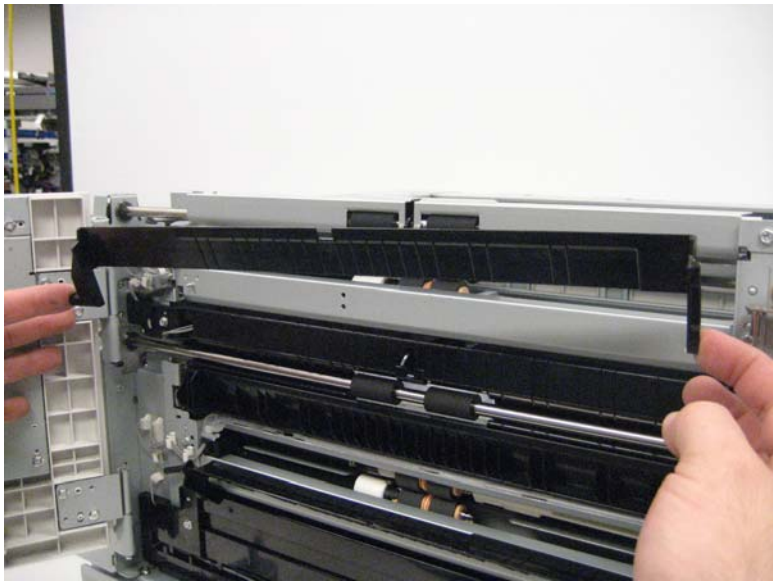
3. Move the tray module transport roller toward the rear of the machine, and detach it from the machine.
4. Remove the tray module transport roller from the machine.



Tray module tray 2 media turn guide removal

1. Open the left door.
2. Gently press the lower edges of the tray module 2 media turn guide.

3. Remove the tray module 2 media turn guide from the machine.

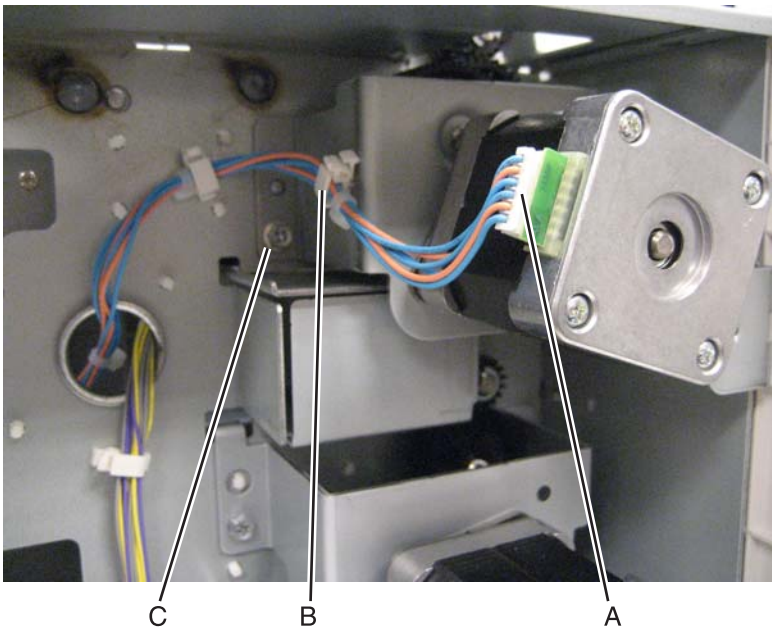


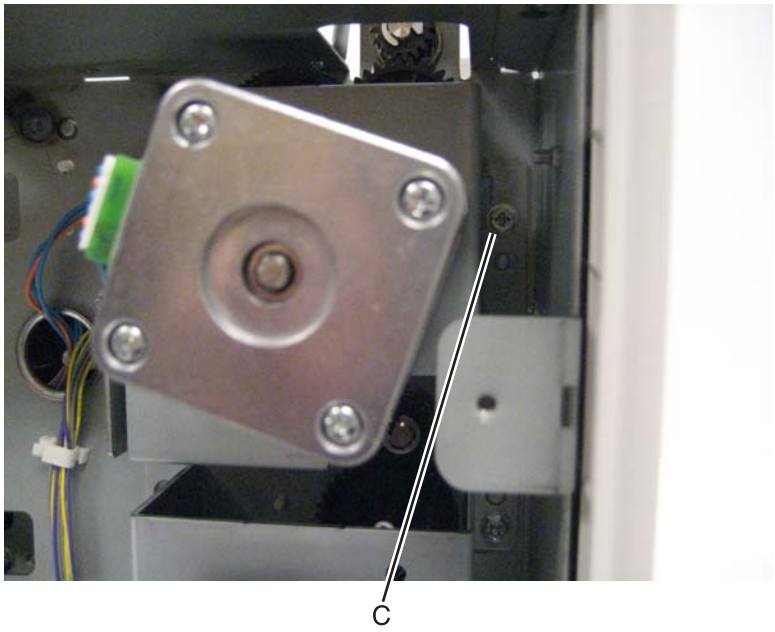
Tray module upper transport motor removal

This removal procedure is not applicable to TTM tray modules.

1. Remove the tray module rear cover. See **“Tray module rear cover removal” on page 4-290**.
2. Disconnect the cable (A).
3. Release the harness from the clamp (B).

4. Remove the two screws (C).





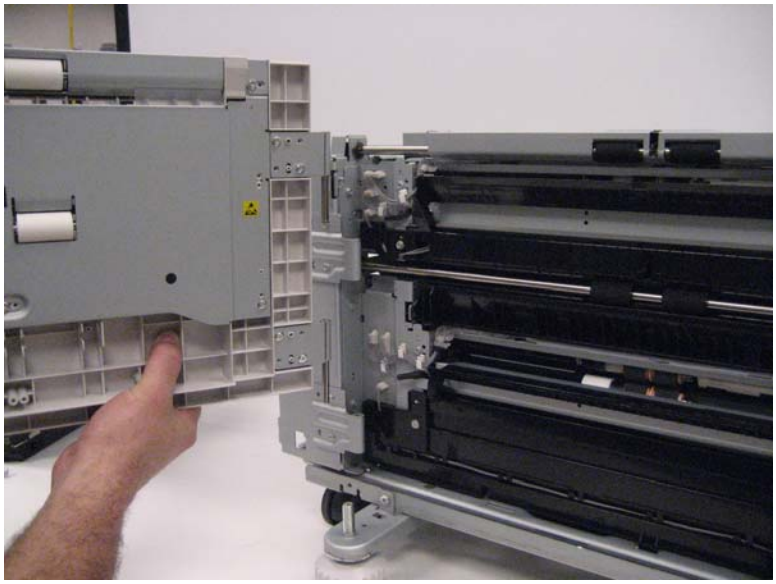
5. Remove the tray module upper transport motor.

TTM left door removal

1. Remove the tray module left cover. See **“Tray module left cover removal” on page 4-286**.
2. Open the TTM left door.

3. Remove the metal clip from the hinge.

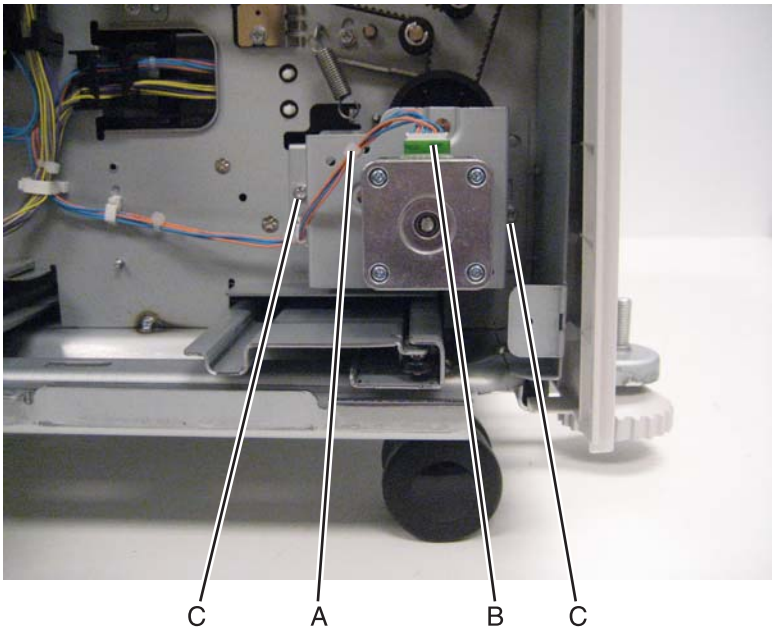
4. Lift the TTM left door and remove it from the machine.



TTM lower transport motor removal

1. Remove the tray module rear cover. See **“Tray module rear cover removal” on page 4-290**.
2. Disconnect the cable (A).
3. Release the harness from the clamp (B).

4. Remove the two screws (C) securing the TTM lower transport motor to the machine.



Note: When removing the TTM lower transport motor, the drive belt will become detached.

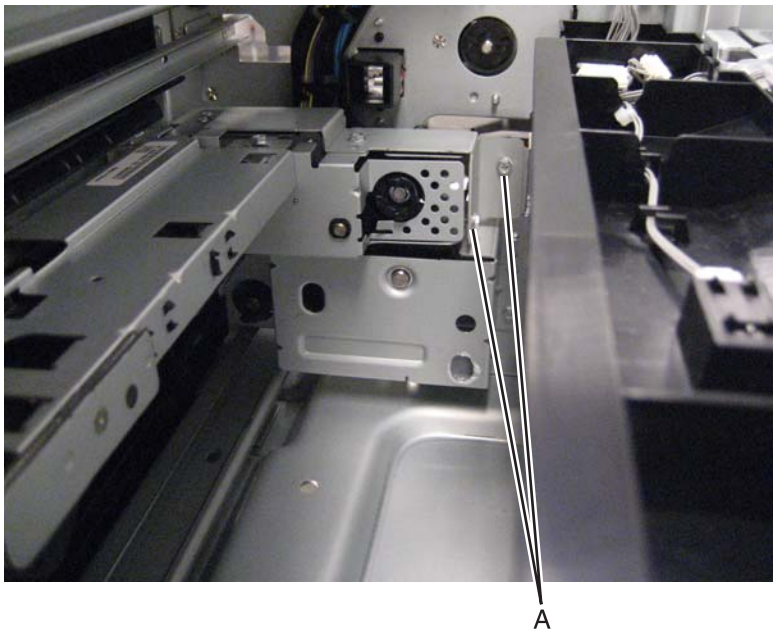
5. Remove the TTM lower transport motor.

Reinstallation note: To correctly set the drive belt tension, install the TTM lower transport motor and the TTM lower transport motor tension spring before completely tightening the three screws.

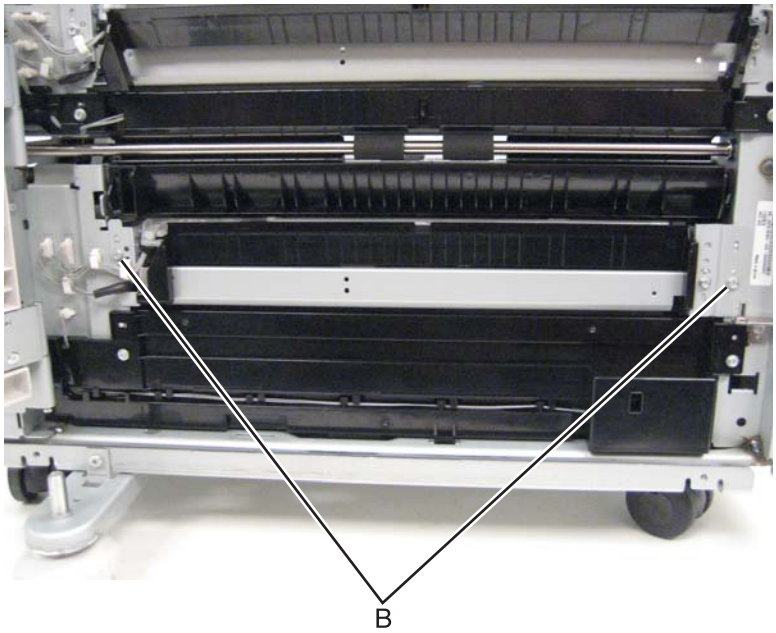
TTM tray 3 feeder removal

1. Remove the TTM tray 3 media tray out from the machine. See **"TTM tray 3 media tray removal" on page 4-300**.
2. Pull open, but do not remove, the TTM tray 4 media tray.
3. Open the left door.

4. Remove the two screws (A) from the inside of the tray module securing the TTM tray 3 feeder to the machine.

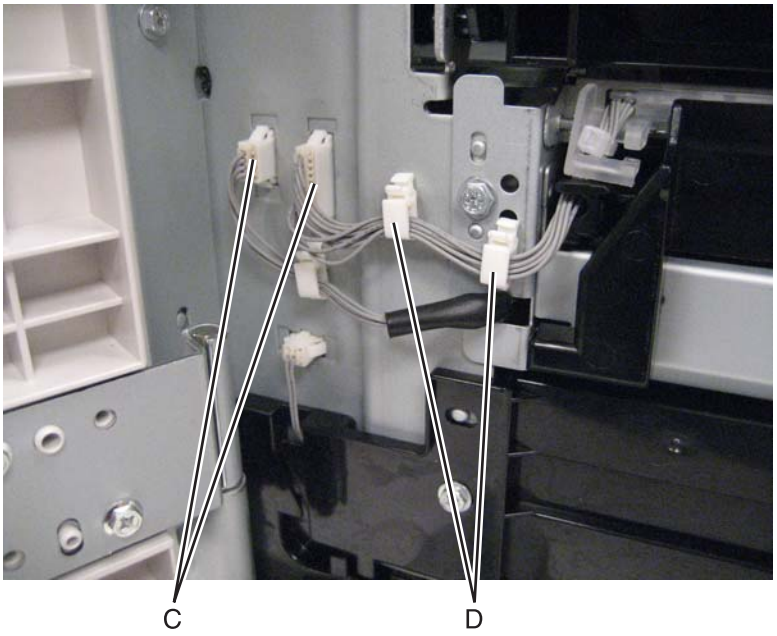


5. Remove the two screws (B) securing the TTM tray 3 feeder to the machine.

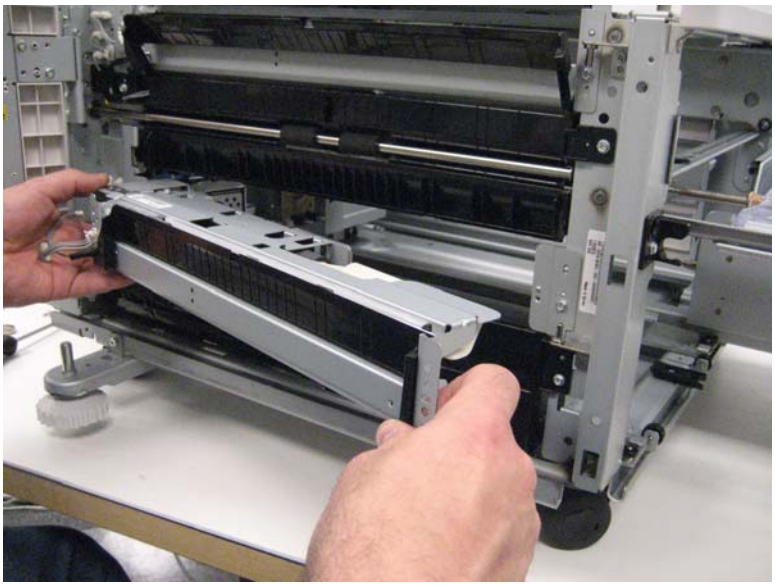


6. Disconnect the two cables (C).

7. Release the two harnesses from the clamps (D).



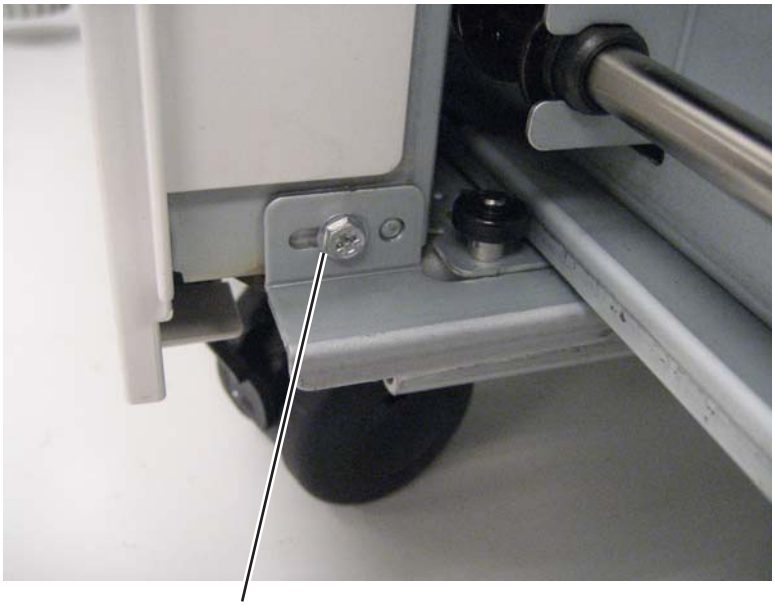
8. Remove the TTM tray 3 feeder.



Reinstallation note: When replacing the TTM tray 3 feeder, ensure that the rear metal bracket is removed and installed on the new TTM tray 3 feeder.

TTM tray 3 media tray removal

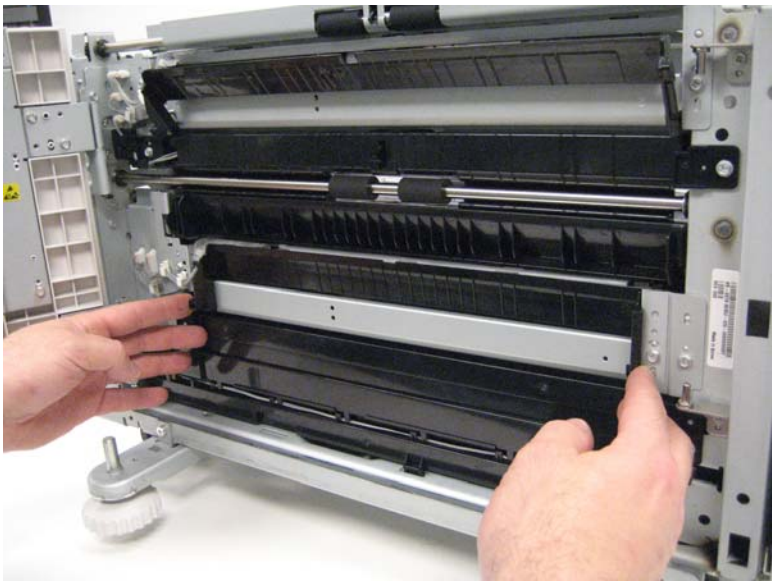
1. Pull the TTM tray 3 media tray from the machine.
2. Remove the screw (A) securing the lock bracket to the machine.



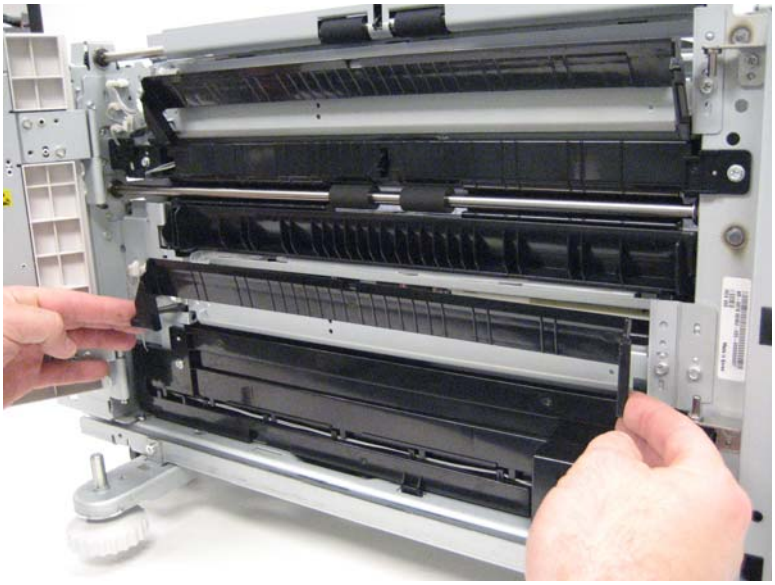
3. Remove the bracket from the machine.
4. Gently lift and remove the TTM tray 3 media tray from the machine.

TTM tray 3 media turn guide removal

1. Open the left door.
2. Gently press the lower edges of the tray module 3 media turn guide.



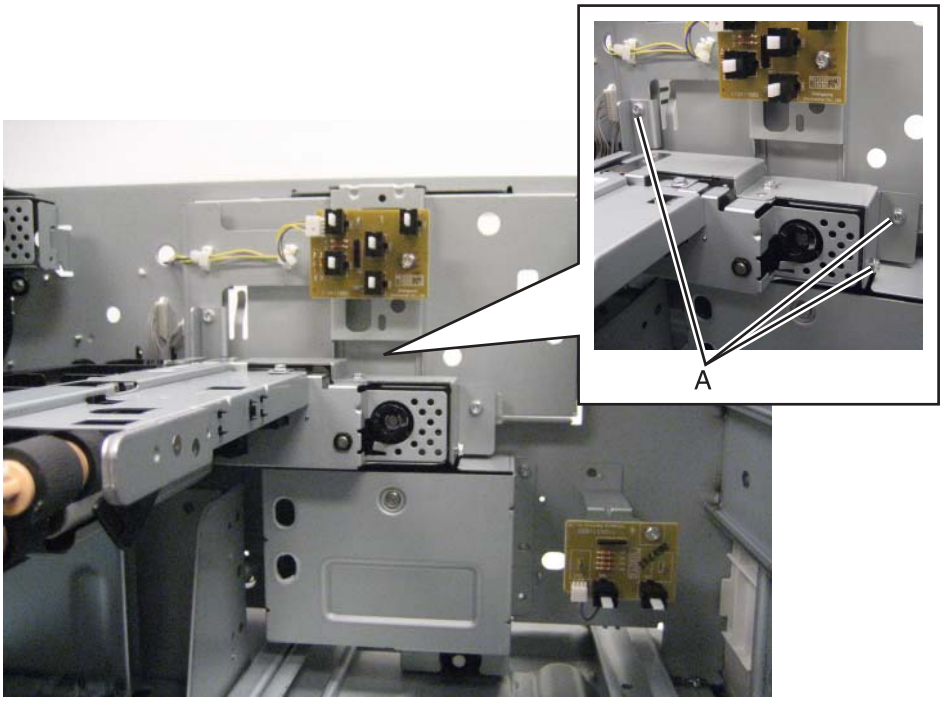
3. Remove tray module 3 media turn guide from the machine.



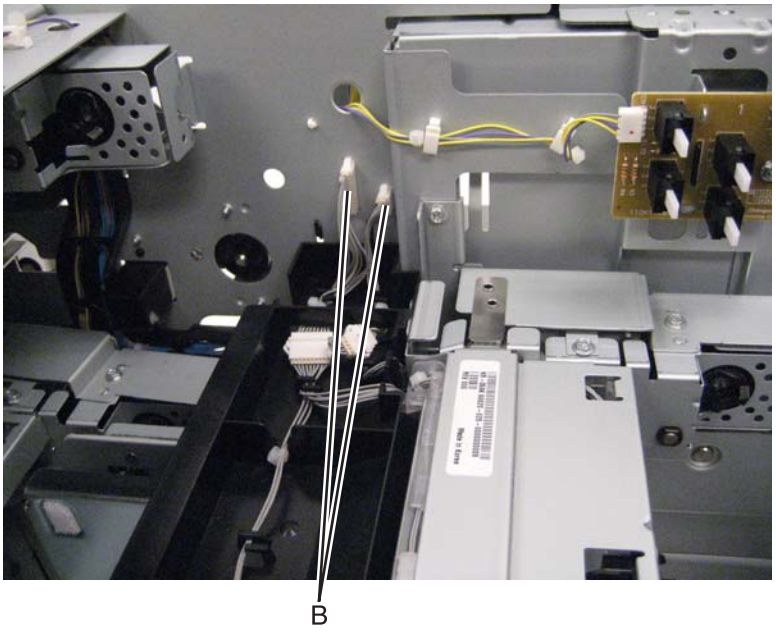
TTM tray 4 media feeder removal

1. Remove the tray 2 from the machine.
2. Pull the TTM tray 4 media tray out from the machine.

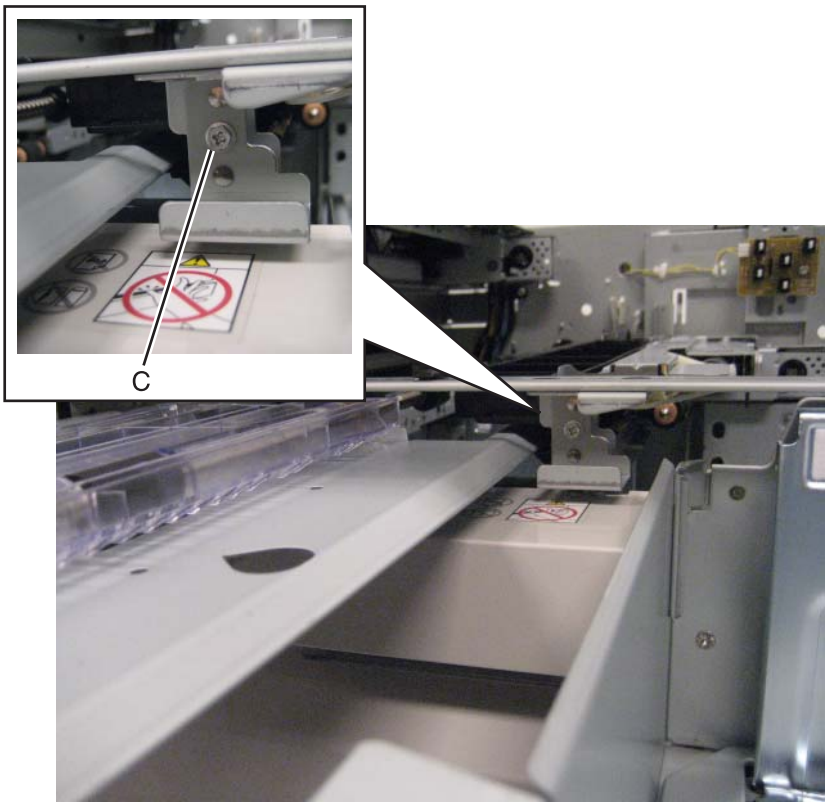
3. Remove the three screws (A) from inside the tray module.



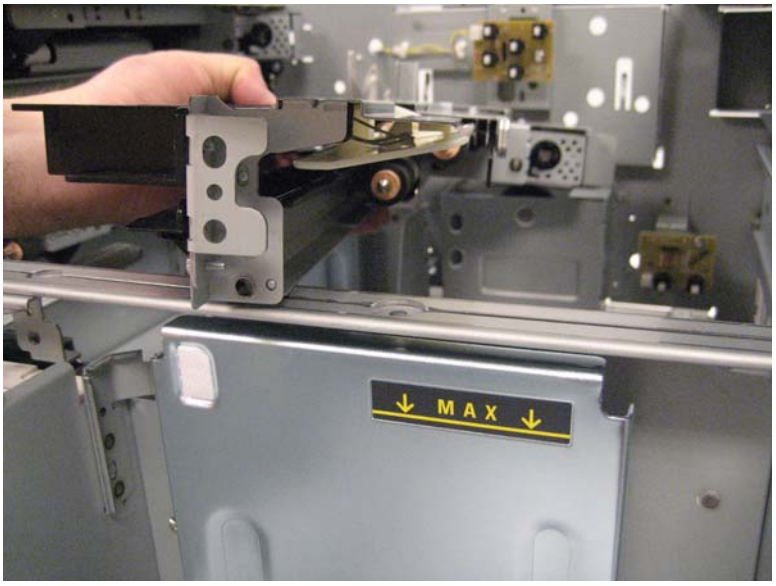
4. Disconnect the two cables (B).



5. Remove the screw (C) securing the bracket to the machine.



6. Remove the bracket.
7. Remove the TTM tray 4 media feeder.

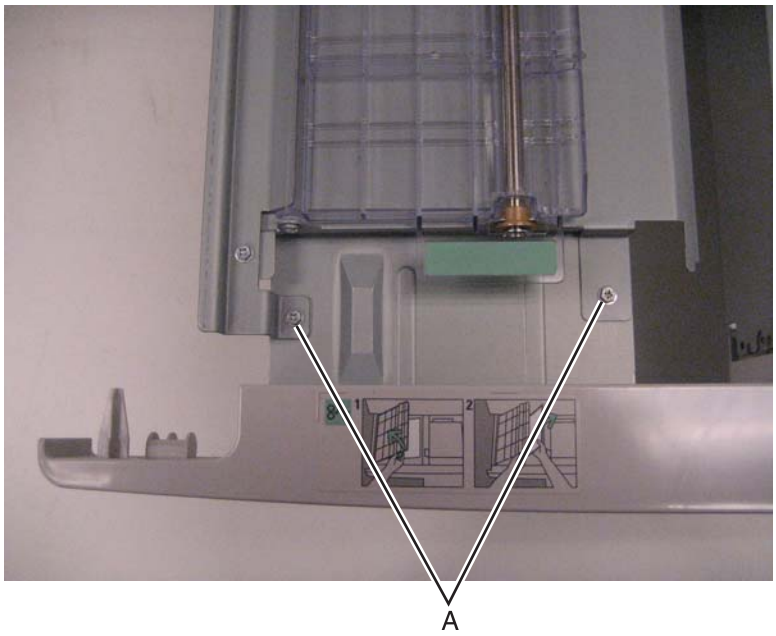


Reinstallation note: When replacing the TTM tray 4 media feeder, ensure that the following parts are removed and installed on the new TTM tray 4 media feeder:

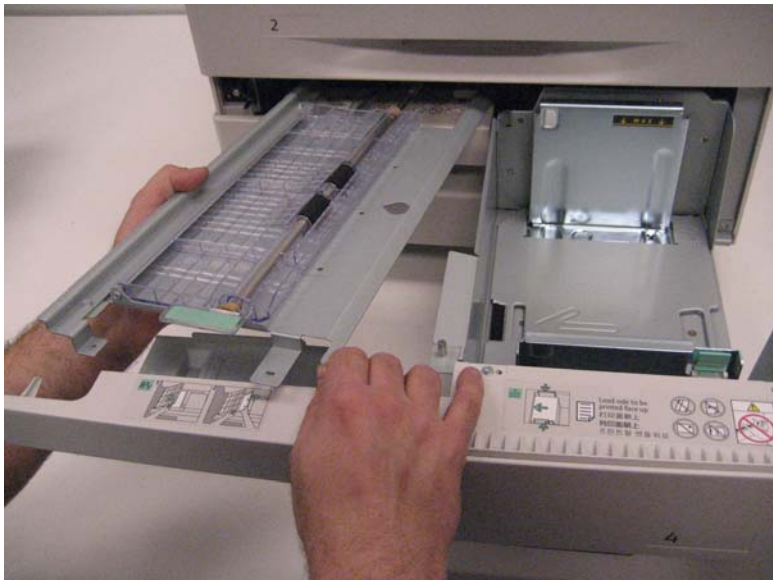
- Rear metal bracket
- TTM tray 4 lower guide
- TTM tray 4 feeder upper guide

TTM tray 4 media transport removal

1. Pull the TTM tray 4 media tray from the machine.
2. Remove the two screws (A) securing the TTM tray 4 media transport to the machine.

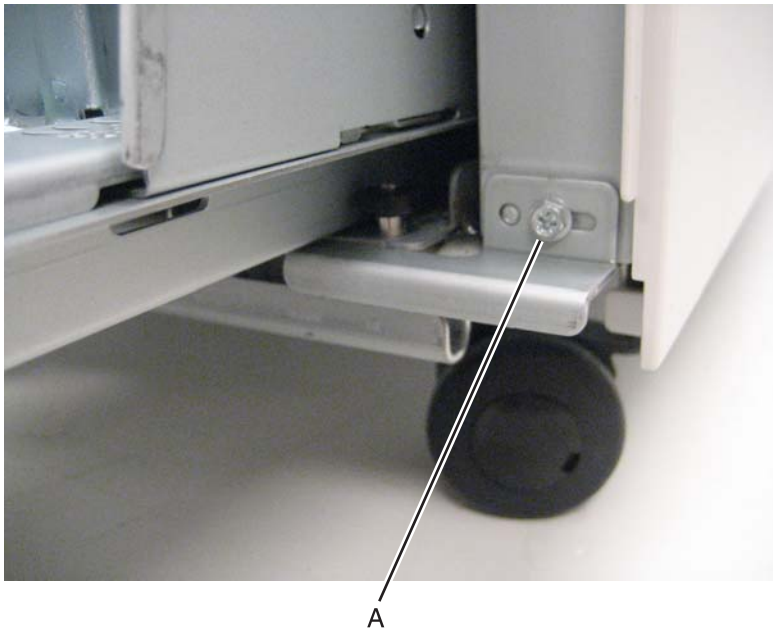


3. Slide the TTM tray 4 media transport out of the machine and remove it.



TTM tray 4 media tray removal

1. Remove the TTM tray 4 media transport. See **“TTM tray 4 media transport removal” on page 4-304**.
2. Remove the screw (A) securing the lock bracket to the machine.

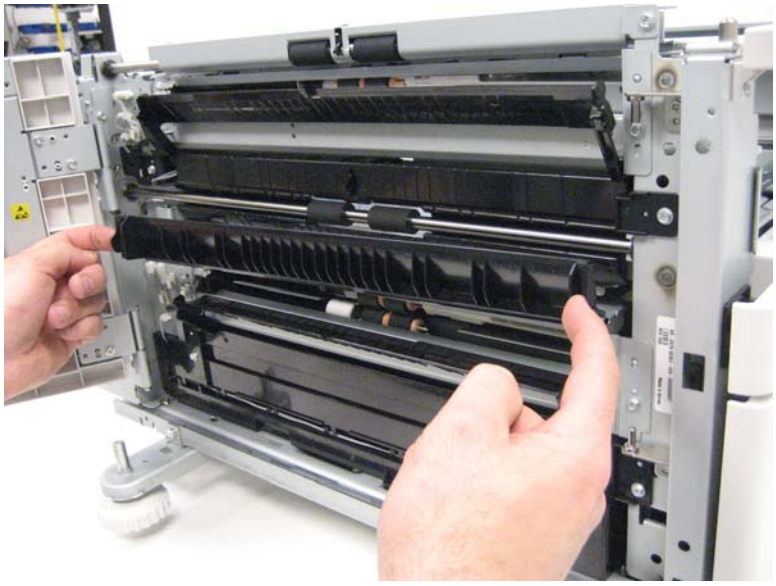


3. Remove the lock bracket.
4. Gently lift and remove the TTM tray 4 media tray from the machine.

TTM tray 4 media turn guide removal

1. Open the left door.
2. Gently press the lower edges of the tray module 4 media turn guide.

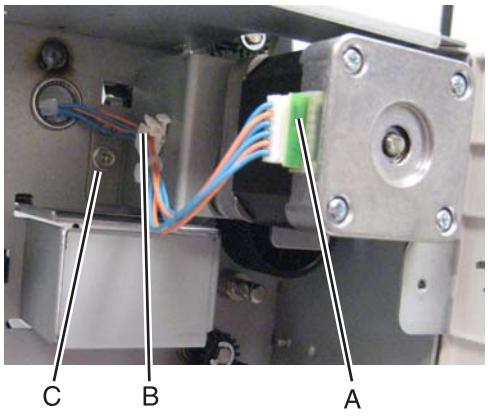
3. Remove the tray module 4 media turn guide from the machine.

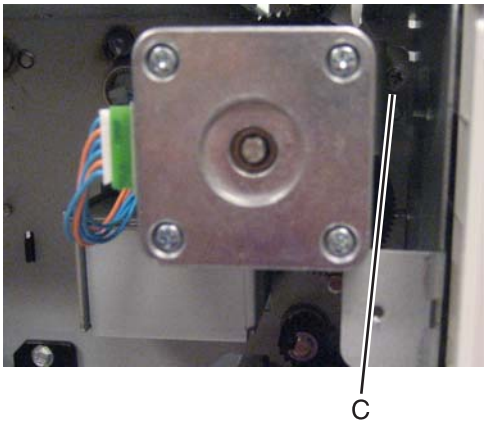


TTM upper transport motor removal

1. Remove the tray module rear cover. See **“Tray module rear cover removal” on page 4-290**.
2. Disconnect the cable (A).
3. Release the harness from the clamp (B).

4. Remove the two screws (C) securing the TTM upper transport motor to the machine.



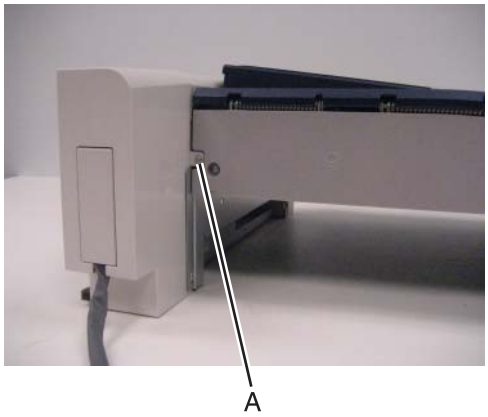


5. Remove the TTM upper transport motor.

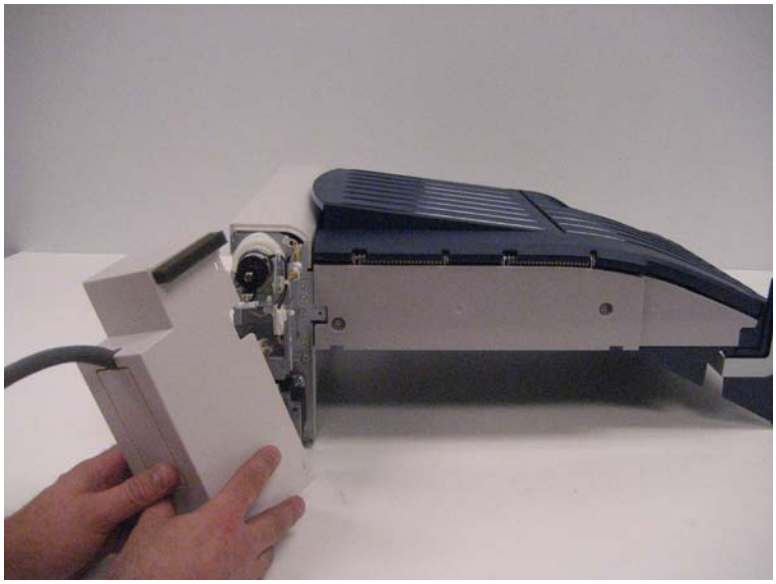
Bridge unit removal procedures

Bridge decurler rear cover removal

1. Remove the bridge unit assembly. See **“Bridge unit assembly removal” on page 4-312**.
2. Remove the three screws (A) securing the bridge decurler rear cover to the machine.



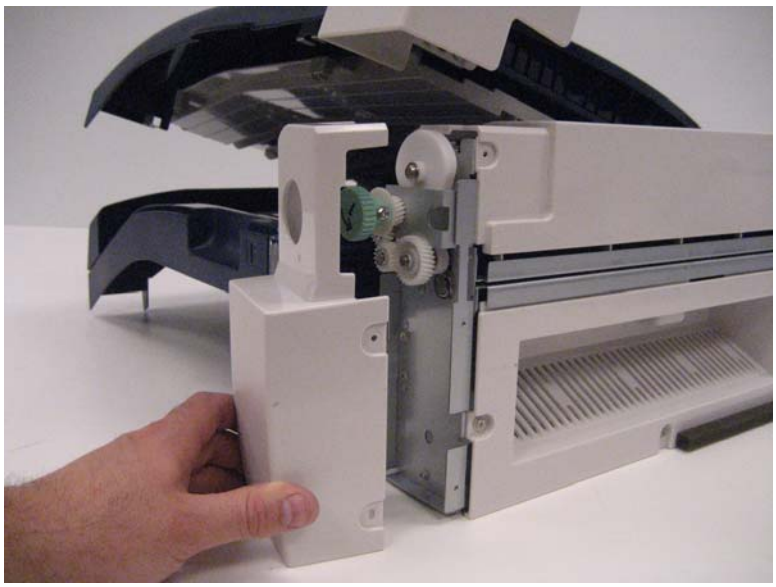
3. Remove the bridge decurler rear cover.



Bridge decurler right cover removal

1. Remove the bridge unit assembly. See **"Bridge unit assembly removal" on page 4-312**.
2. Remove the two screws (A) securing the bridge decurler right cover to the machine.

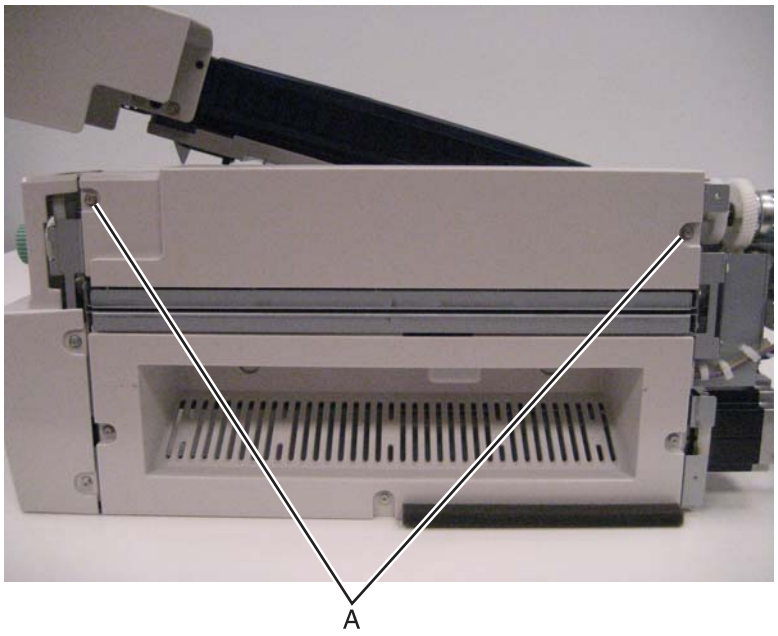
3. Remove the bridge decurler right cover.



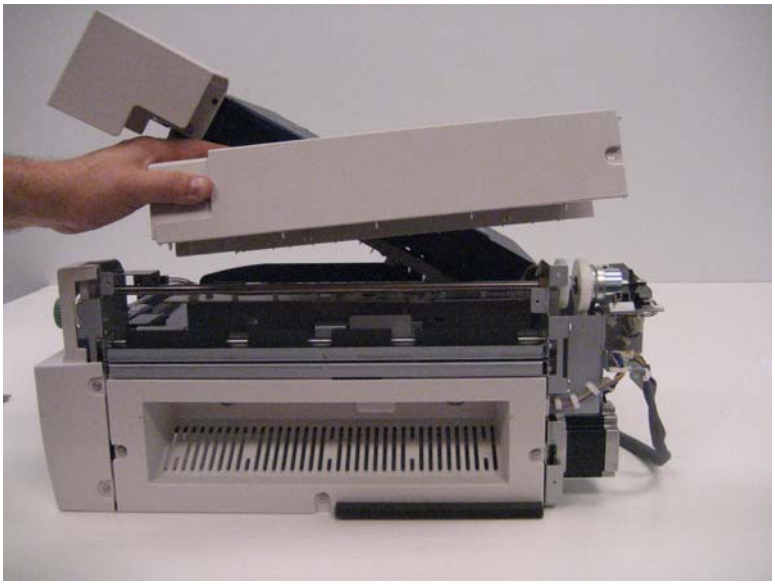
Bridge decurler top cover removal

1. Remove the bridge unit assembly. See **"Bridge unit assembly removal" on page 4-312**.
2. Remove the bridge decurler rear cover. See **"Bridge decurler rear cover removal" on page 4-308**.
3. Raise the bridge top door to its uppermost position.

4. Remove the two screws (A) securing the bridge decurler top cover to the machine.



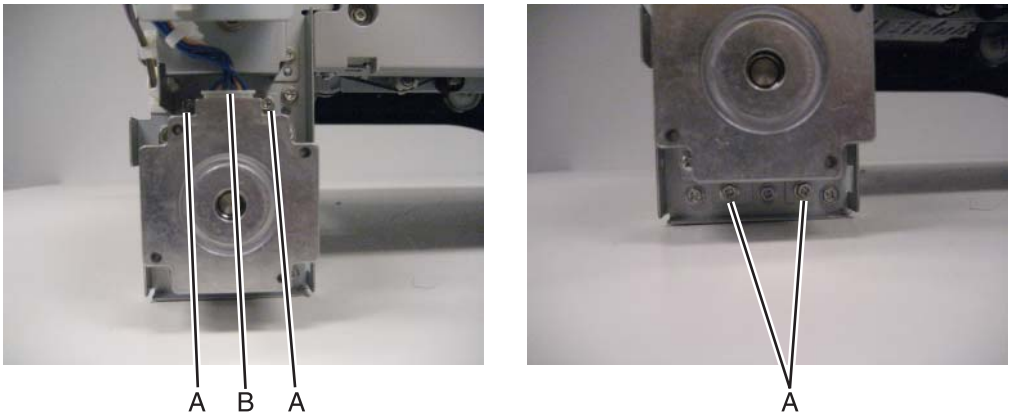
5. Remove the bridge decurler top cover.



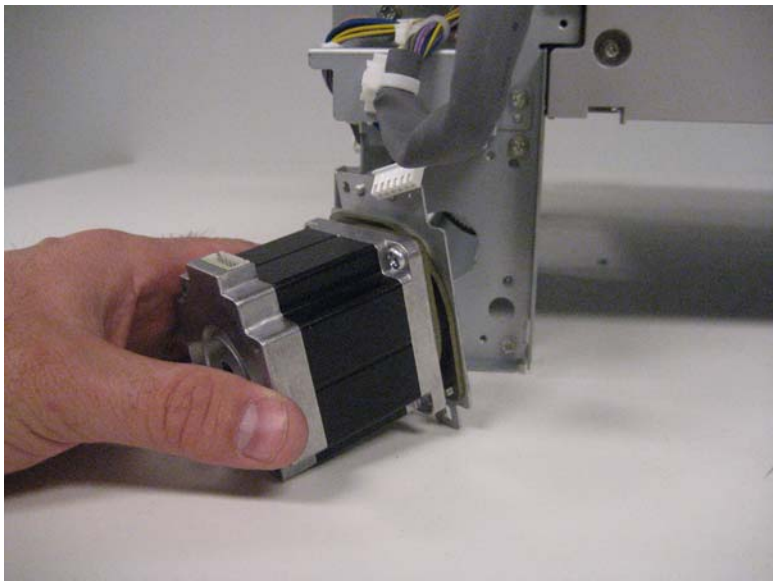
Bridge drive motor removal

1. Remove the bridge unit assembly. See **“Bridge unit assembly removal” on page 4-312**.
2. Remove the bridge decurler rear cover. See **“Bridge decurler rear cover removal” on page 4-308**.
3. Remove the bridge unit right cover. See **“Bridge decurler right cover removal” on page 4-309**.
4. Remove the four screws (A) securing the bridge drive motor to the machine.

5. Disconnect the cable (B).

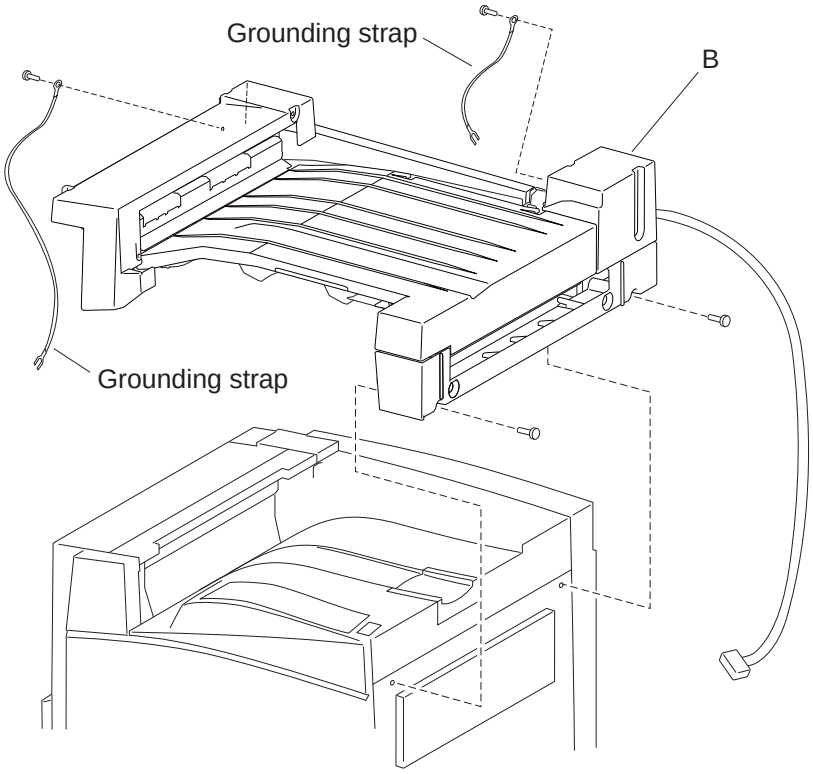


6. Remove the bridge drive motor.

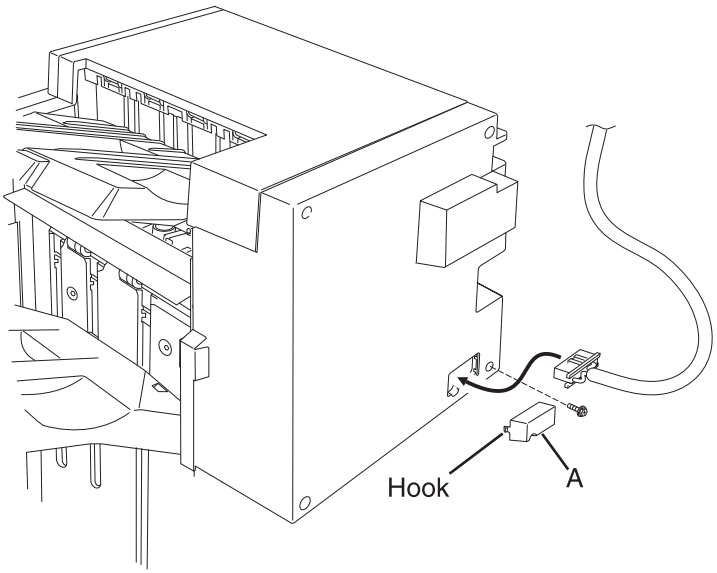


Bridge unit assembly removal

1. Release the hook securing the bridge unit hookup cover (A) to the finisher.
2. Remove the bridge unit hookup cover (A).

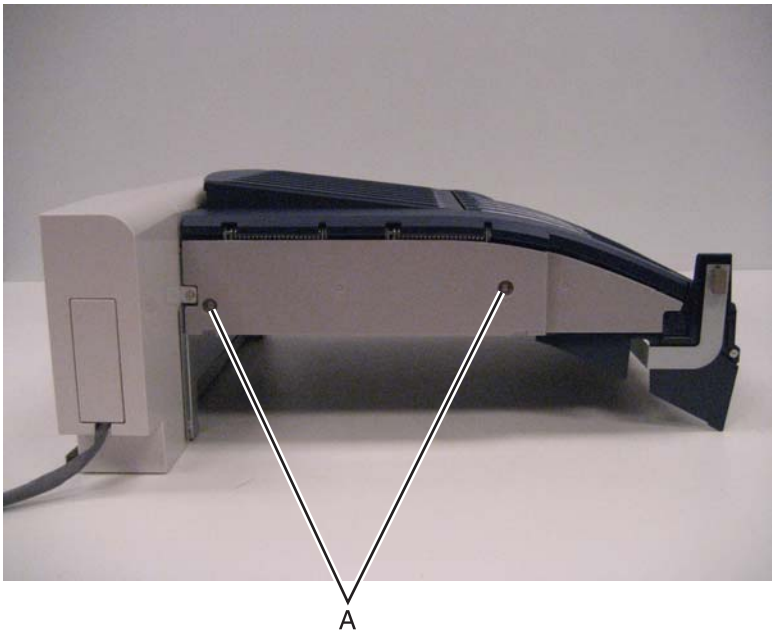


3. Remove the finisher from the printer.
4. Remove the two screws securing the bridge unit assembly (B) to the printer.
5. Remove the bridge unit assembly (B) from the printer.

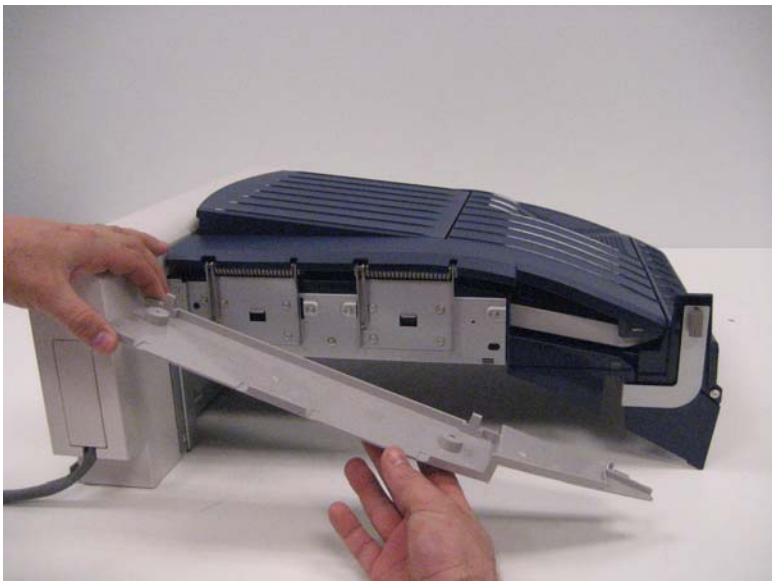


Bridge unit rear cover removal

1. Remove the bridge unit assembly. See **“Bridge unit assembly removal” on page 4-312**.
2. Remove the two screws (A) securing the bridge unit rear cover to the machine.



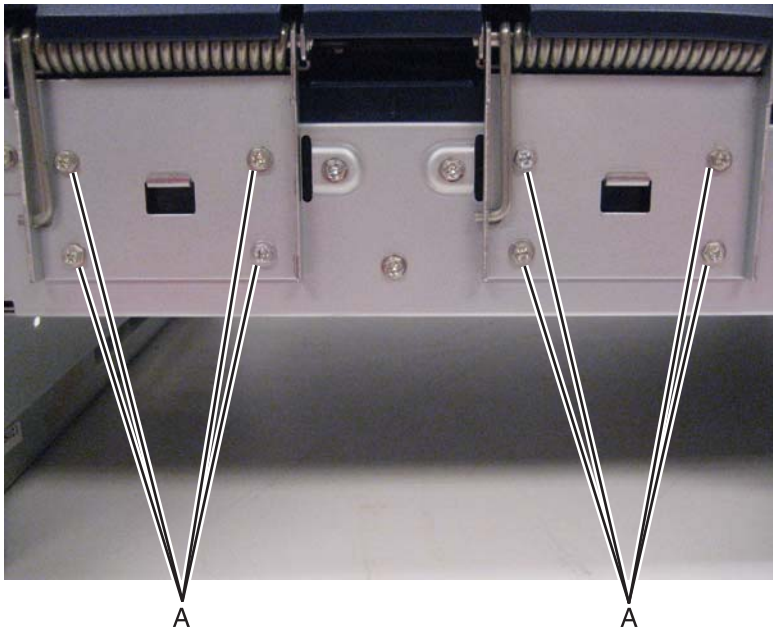
3. Remove the bridge unit rear cover.



Bridge unit top door removal

1. Remove the bridge unit assembly. See **“Bridge unit assembly removal” on page 4-312**.
2. Remove the bridge unit rear cover. See **“Bridge unit rear cover removal” on page 4-313**.

3. Remove the eight screws (A) securing the bridge unit top door to the machine.

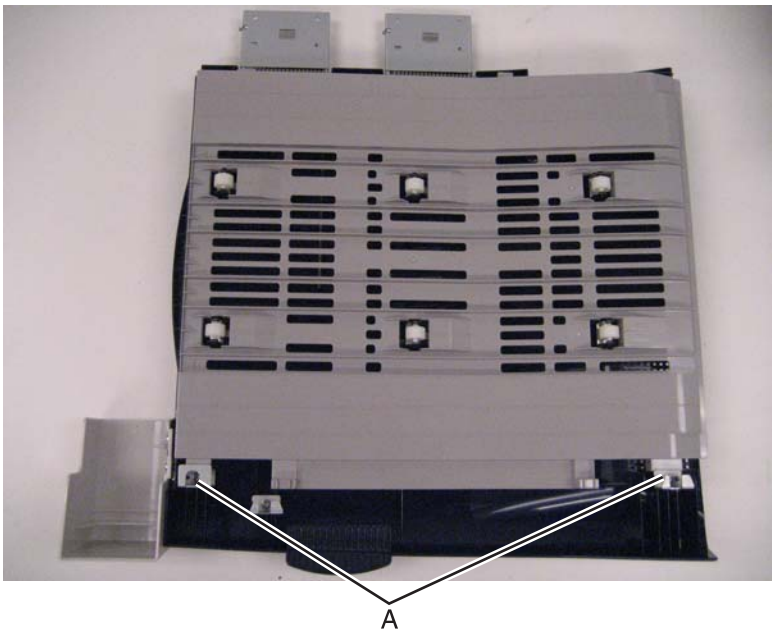


4. Raise the bridge unit top door to an upright position.
5. Remove the bridge unit top door.

Bridge unit top door spring removal

1. Remove the bridge unit top door. See **“Bridge unit top door removal” on page 4-313**.
2. Place the bridge unit top door upside down on the work surface.

3. Remove the two screws (A) securing the two hold-down brackets to the machine.

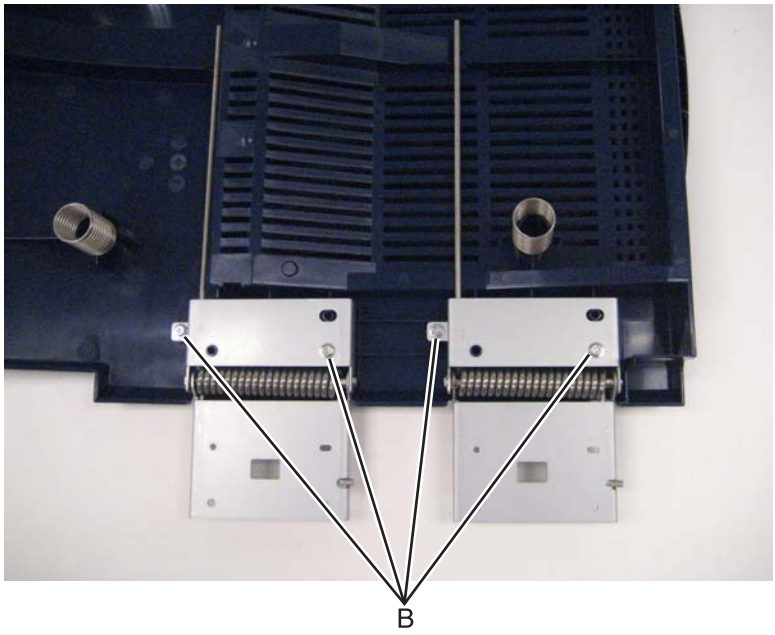


4. Remove the two hold-down brackets.

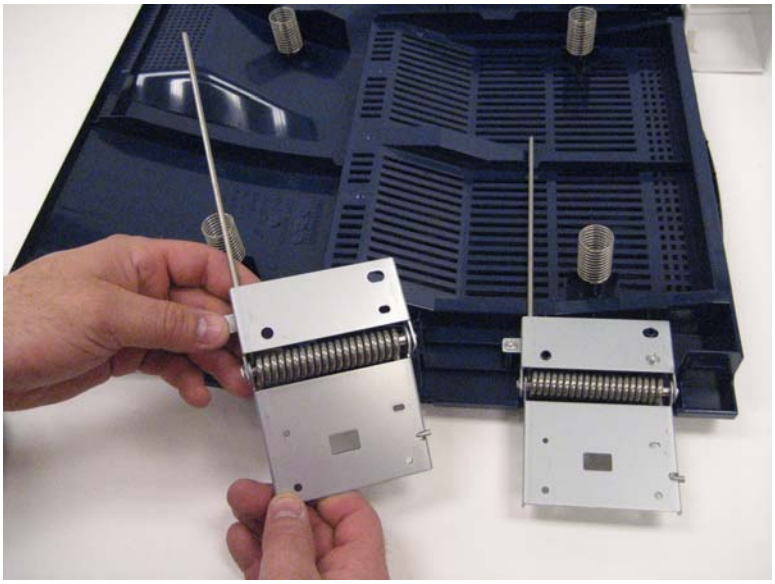
Note: When removing the inner guide, the inner guide springs might become detached.

5. Detach the inner guide from the machine.

6. Remove the two screws (B) securing the bridge unit top door spring you want to remove.



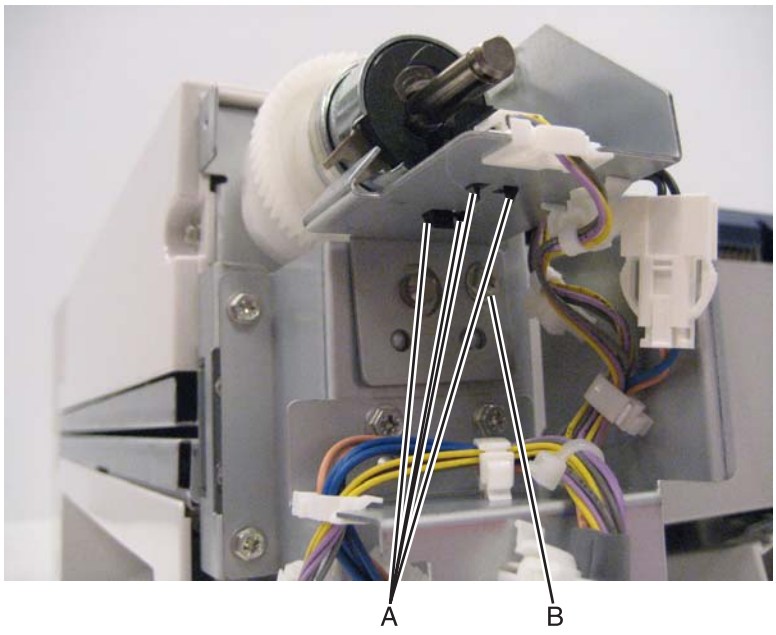
7. Remove the bridge unit top door spring.



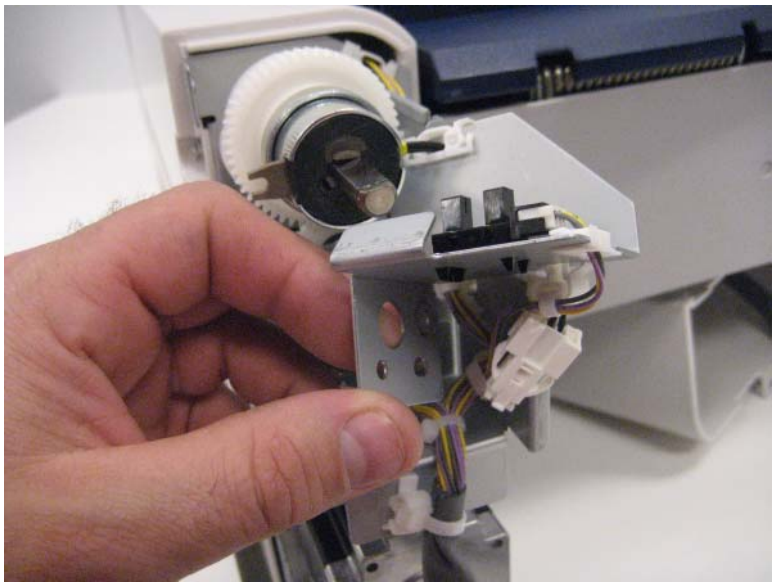
Reinstallation note: Ensure that the inner guide springs are properly reinstalled.

Decurler clutch removal

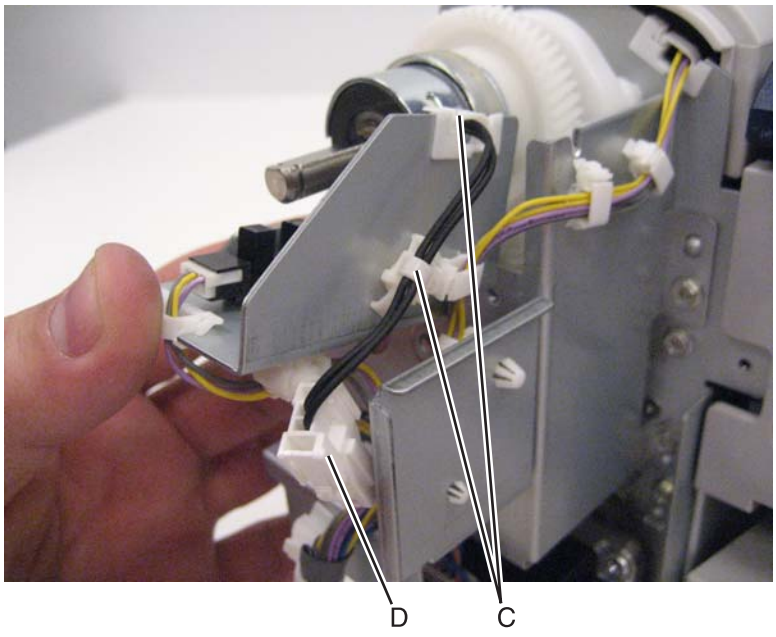
1. Remove the bridge unit assembly. See **"Bridge unit assembly removal" on page 4-312**.
2. Remove the bridge decurler rear cover. See **"Sensor (decurler cover interlock) removal" on page 4-326**.
3. Release the hooks (A) securing the sensor flag to the machine.
4. Remove the sensor flag.
5. Remove the screw (B) securing the bracket to the machine.



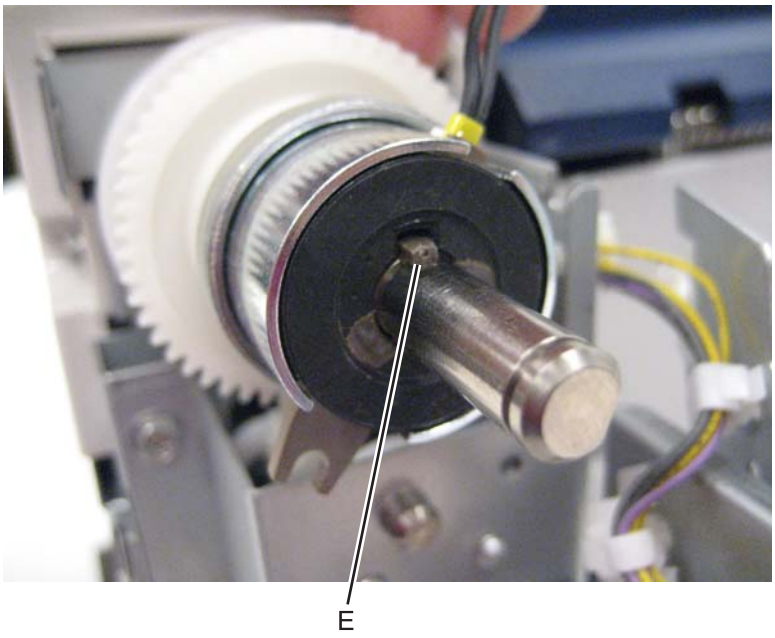
6. Remove the bracket from the machine.



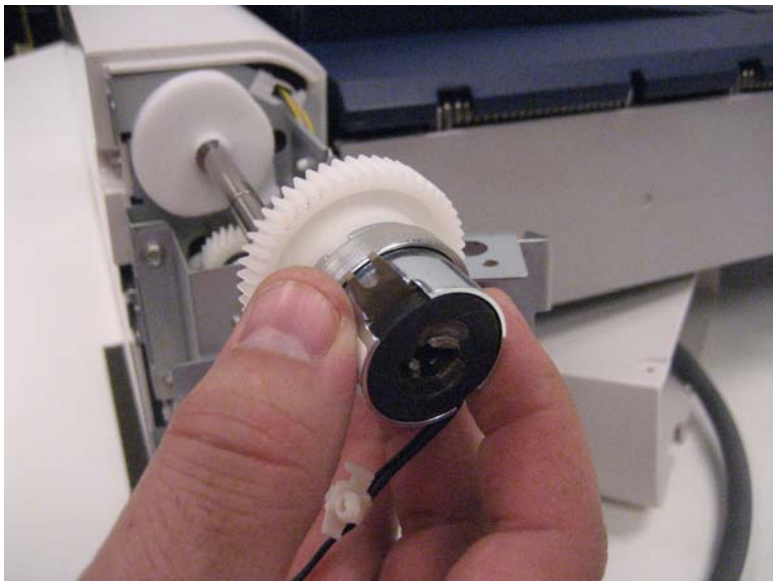
7. Release the harness from the clamps (C).
8. Disconnect the cable (D).



9. Release the hook (E) securing the decurler clutch to the machine.



10. Slide the decurler clutch away from the machine, and remove it.

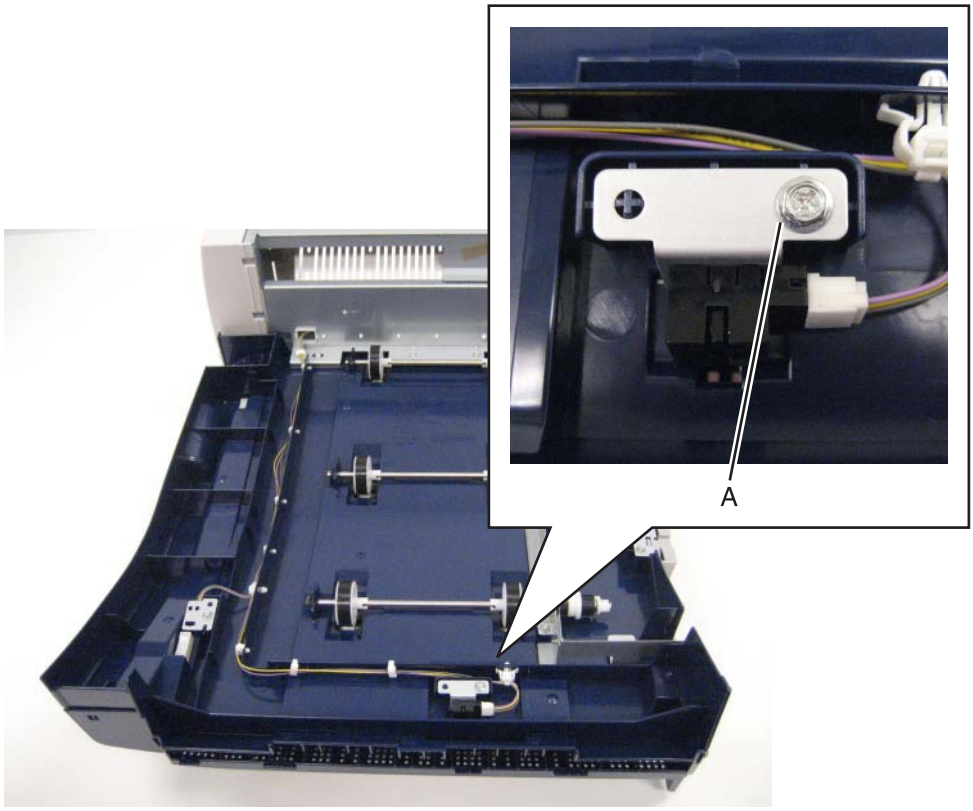


Reinstallation note: When replacing the decurler clutch, ensure that the hook on the decurler clutch is captured by the boss on the bracket.

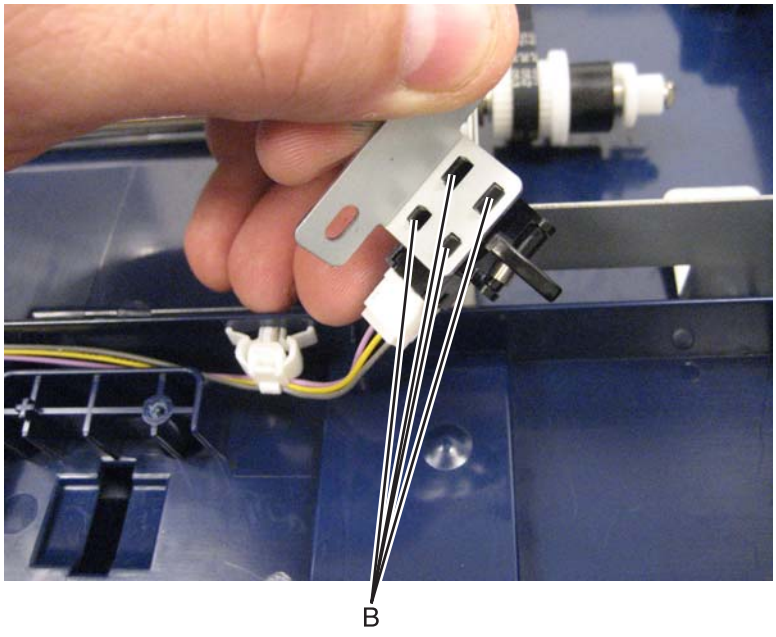
Sensor (bridge media entrance) removal

1. Remove the bridge unit assembly. See **"Bridge unit assembly removal" on page 4-312**.
2. Place the bridge unit assembly upside down.

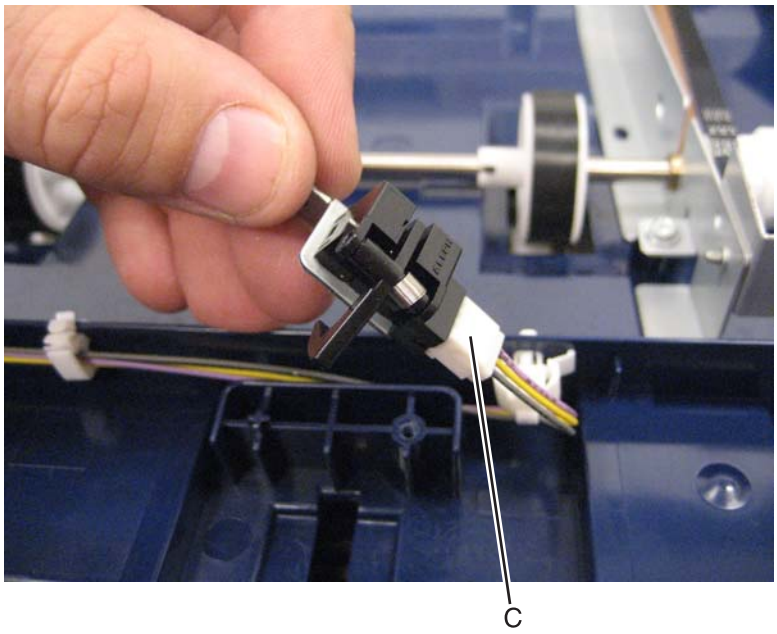
3. Remove the screw (A) securing the bracket to the bridge unit assembly.



4. Remove the bracket from the machine.
5. Release the hooks (B).



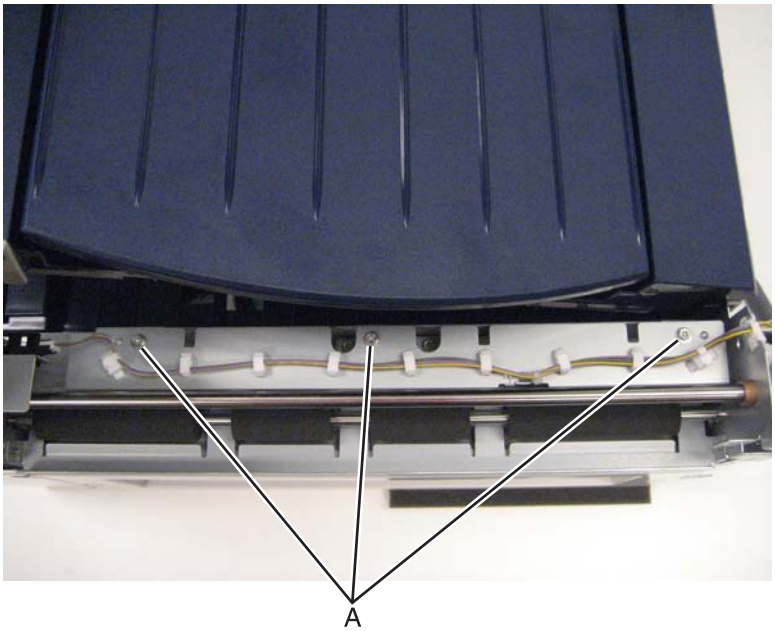
6. Disconnect the cable (C) from the sensor (bridge media entrance).



7. Remove the sensor (bridge media entrance).

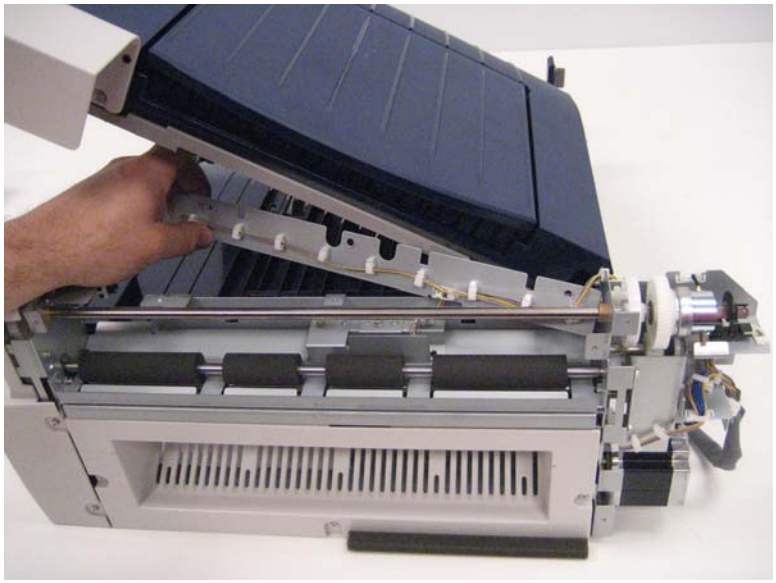
Sensor (bridge media exit) removal

1. Remove the bridge unit assembly. See **"Bridge unit assembly removal" on page 4-312**.
2. Remove the bridge de-curler top cover. See **"Bridge decurler top cover removal" on page 4-309**.
3. Remove the three screws (A) securing the long metal bracket to the machine.

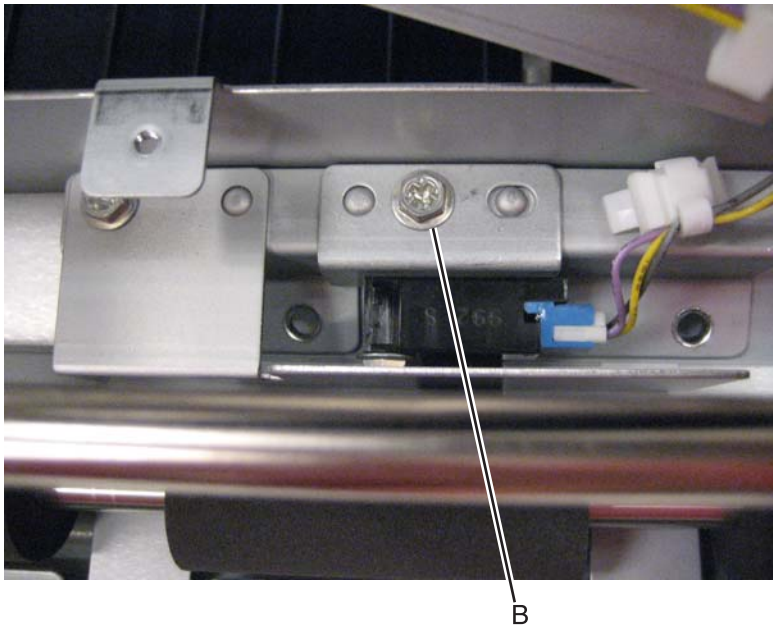


Note: When detaching the long metal bracket, you do not have to remove the harness from the clamps.

4. Detach the long metal bracket from the machine.

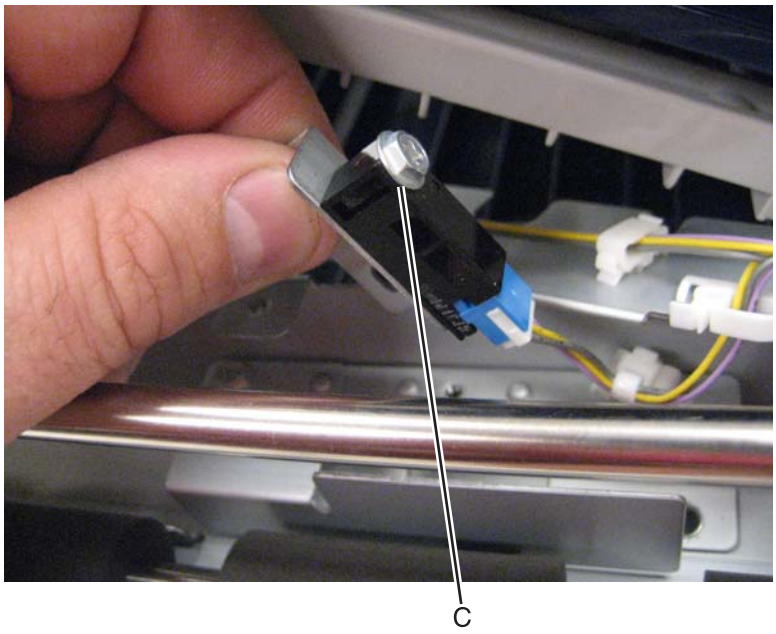


5. Remove the screw (B) securing the bracket to the machine.

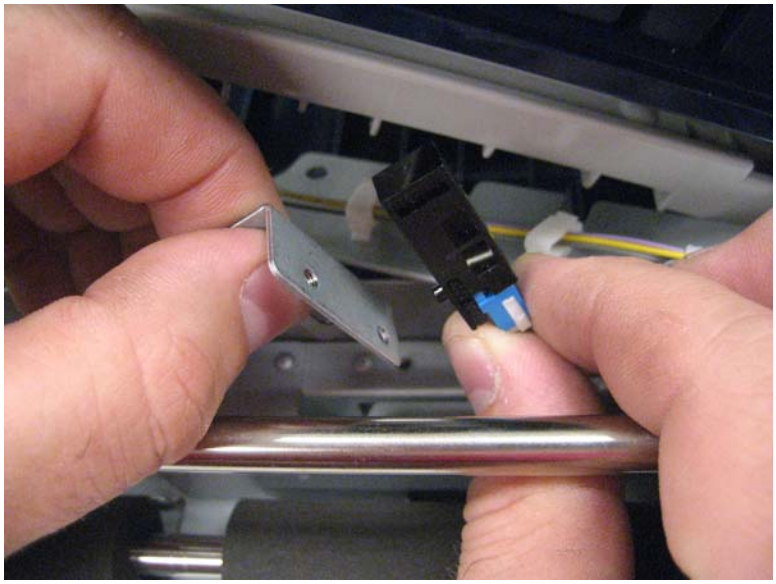


6. Remove the bracket from the machine.

7. Remove the screw (C) securing the sensor to the bracket.



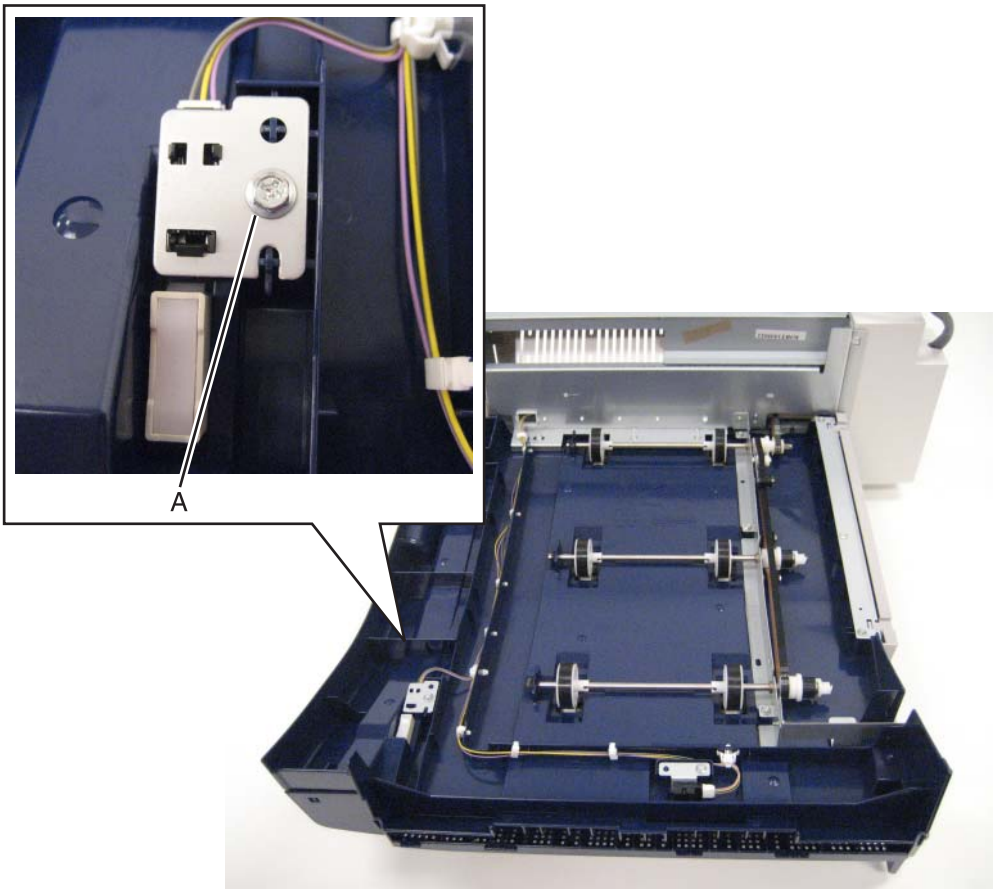
8. Remove the sensor (bridge media exit).



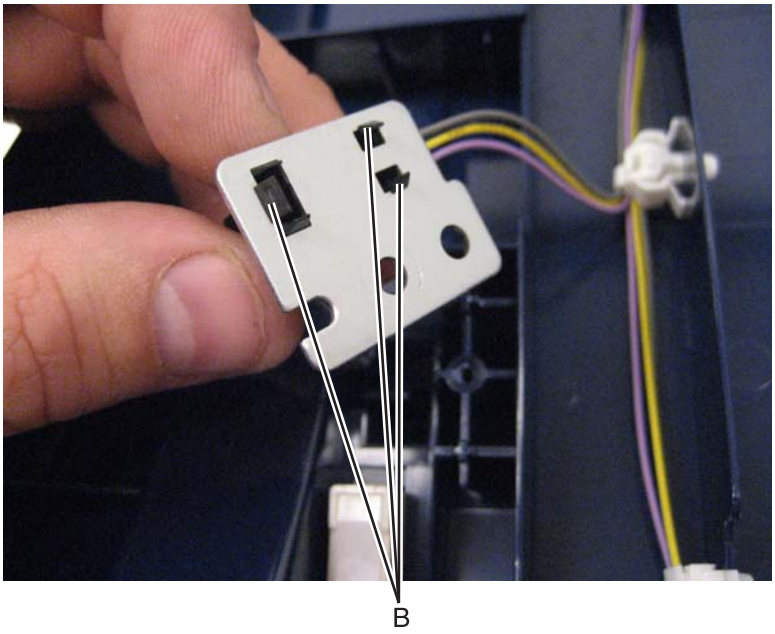
Sensor (bridge top door interlock) removal

1. Remove the bridge unit assembly. See **“Bridge unit assembly removal” on page 4-312**.
2. Place the bridge unit upside down on the work surface.

3. Remove the screws (A) securing the bracket to the machine.



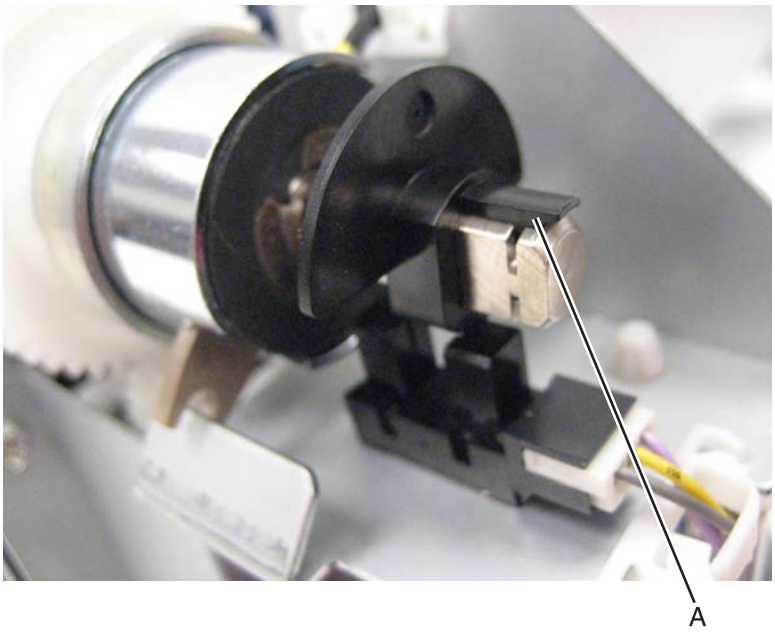
4. Remove the bracket from the machine.
5. Release the hooks (B) securing the sensor (bridge top door interlock) to the bracket.



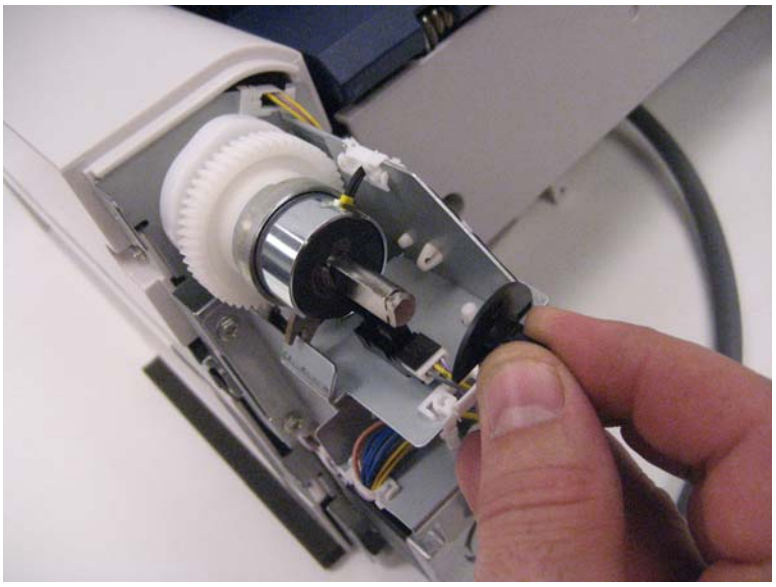
6. Remove the sensor (bridge top door interlock).

Sensor (decurler cam HP) removal

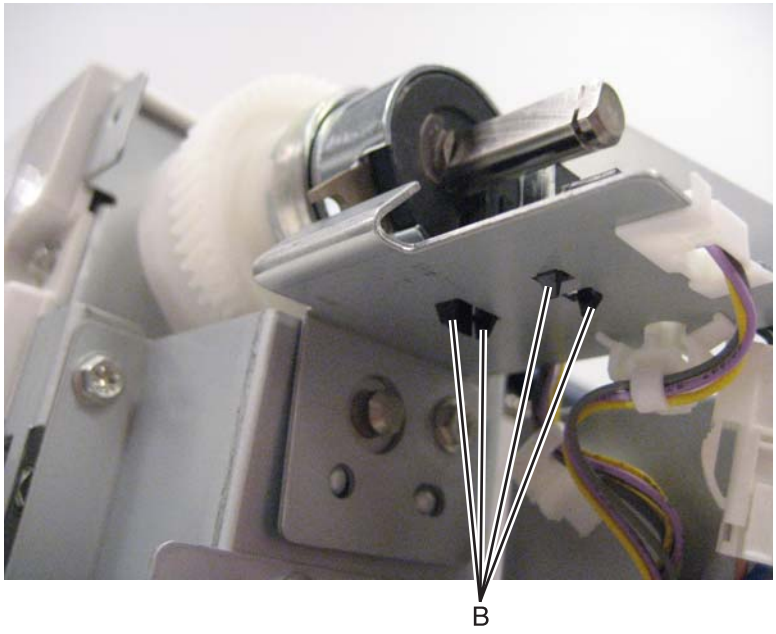
1. Remove the bridge unit assembly. See **“Bridge unit assembly removal” on page 4-312**.
2. Remove the bridge decurler rear cover. See **“Sensor (decurler cover interlock) removal” on page 4-326**.
3. Release the hook (A) securing the sensor flag to the machine.



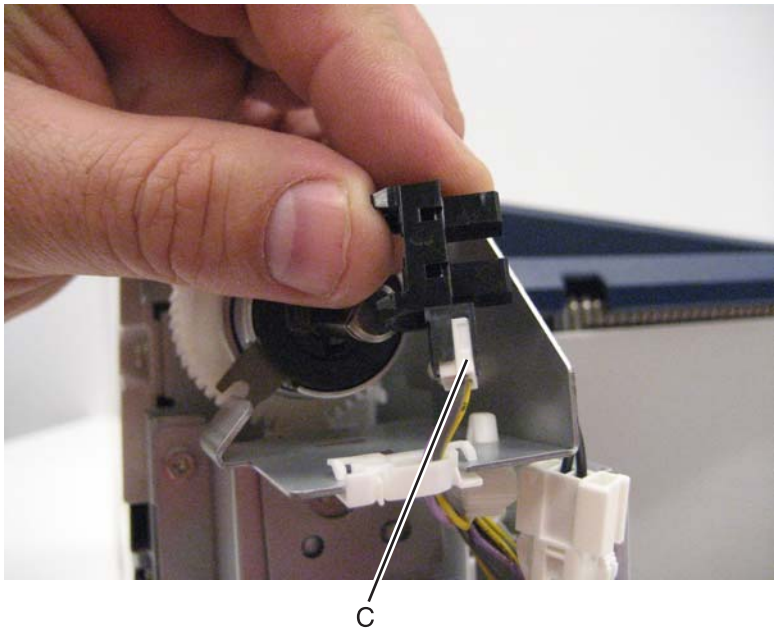
4. Remove the sensor flag.



5. Release the hooks (B) securing the sensor (decurler cam HP) to the machine.



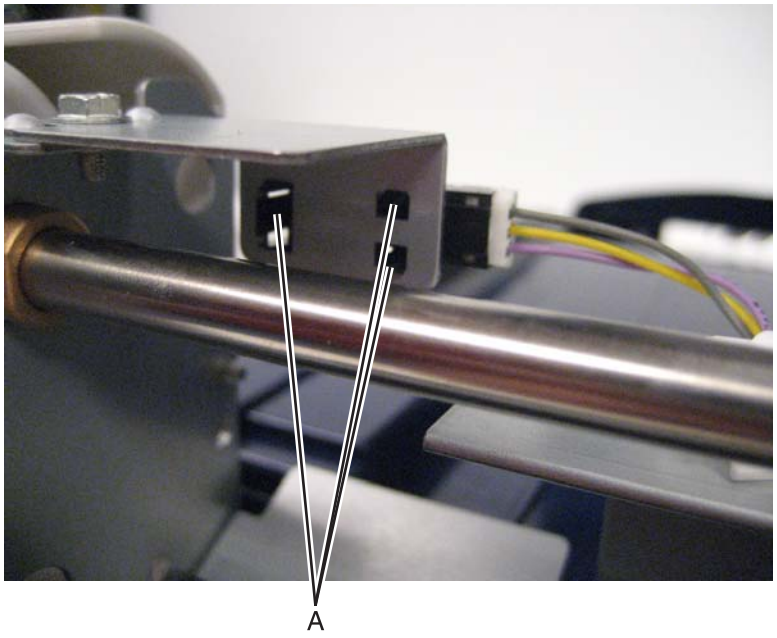
6. Remove the sensor (decurler cam HP).
7. Disconnect the cable (C).



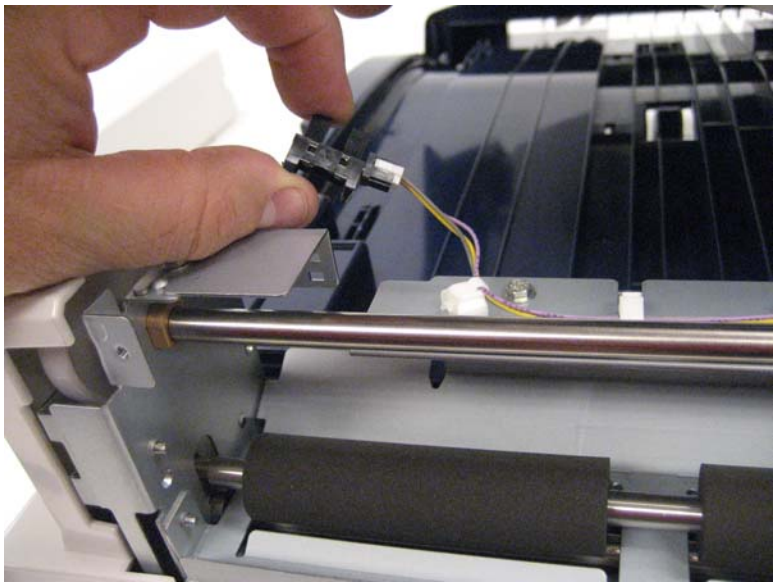
Sensor (decurler cover interlock) removal

1. Remove the bridge unit assembly. See **“Bridge unit assembly removal” on page 4-312**.
2. Remove the bridge decurler top cover. See **“Bridge decurler top cover removal” on page 4-309**.

3. Release the hooks (A) securing the sensor (decurler cover interlock) to the bracket.



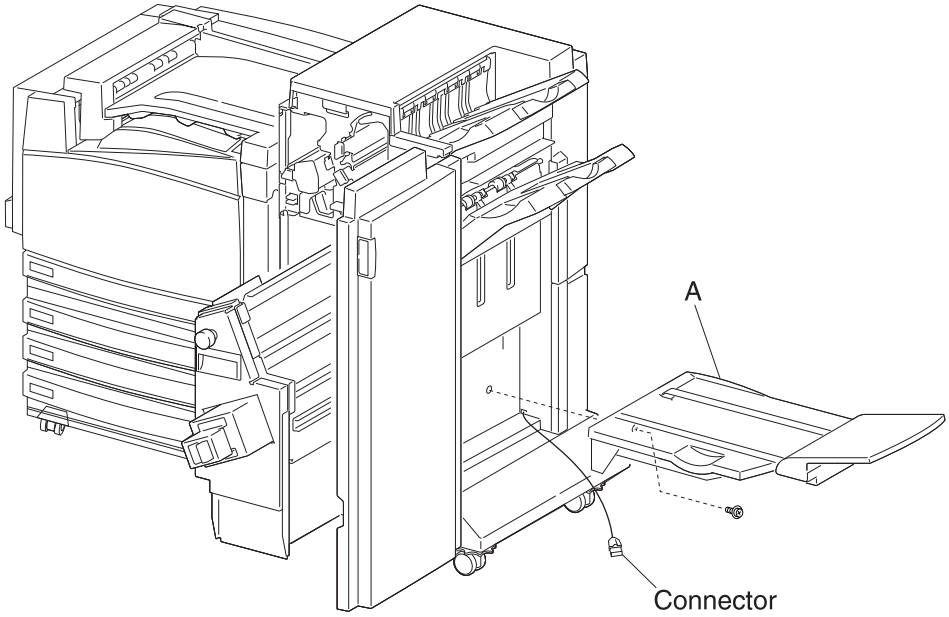
4. Remove the sensor (decurler cover interlock).



Finisher removal procedures

Booklet bin assembly removal

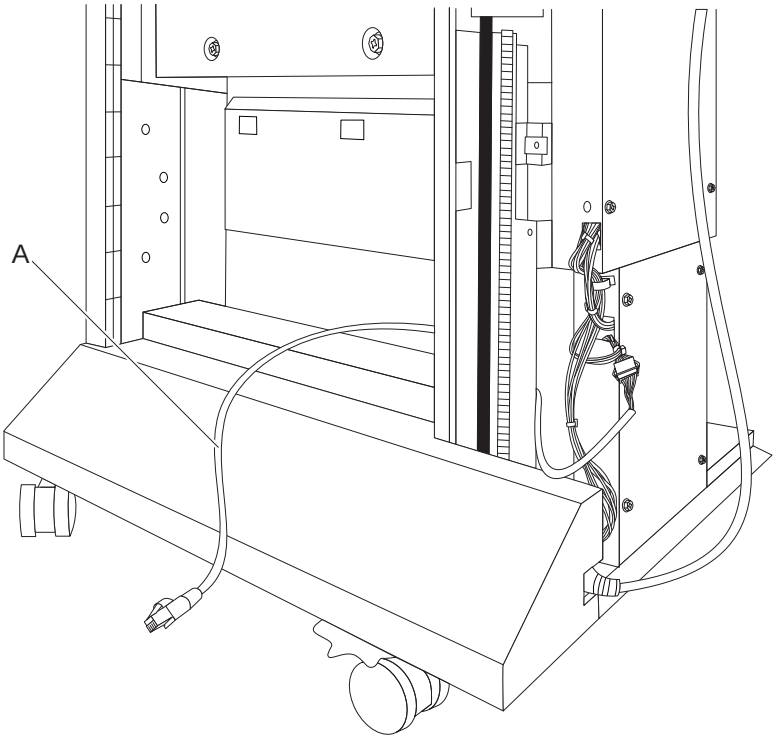
1. Disconnect booklet hookup cable assembly from the booklet bin assembly.
2. Remove the screw securing the booklet bin assembly (A) to the finisher.
3. Remove booklet bin assembly (A).



Booklet bin hookup cable assembly removal

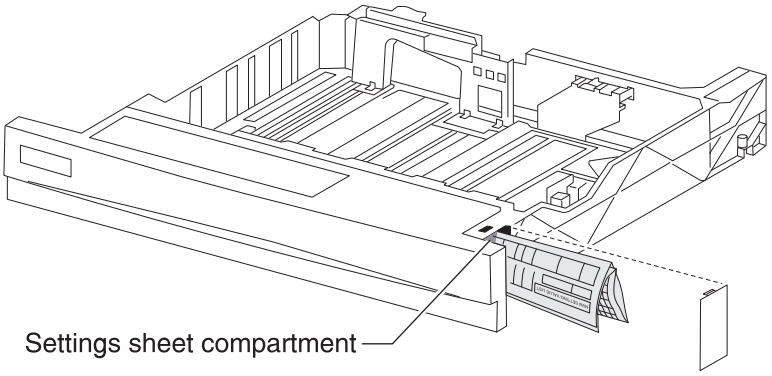
1. Disconnect booklet hookup cable assembly from the booklet bin assembly.
2. Remove rear lower cover. See **“Upper media bin front cover removal” on page 4-430**.
3. Disconnect the booklet bin hookup cable assembly from the rear of the finisher.
4. Release the clamps securing the booklet bin hookup cable assembly from the finisher.

5. Remove booklet bin hookup cable assembly (A).



Booklet controller card assembly removal

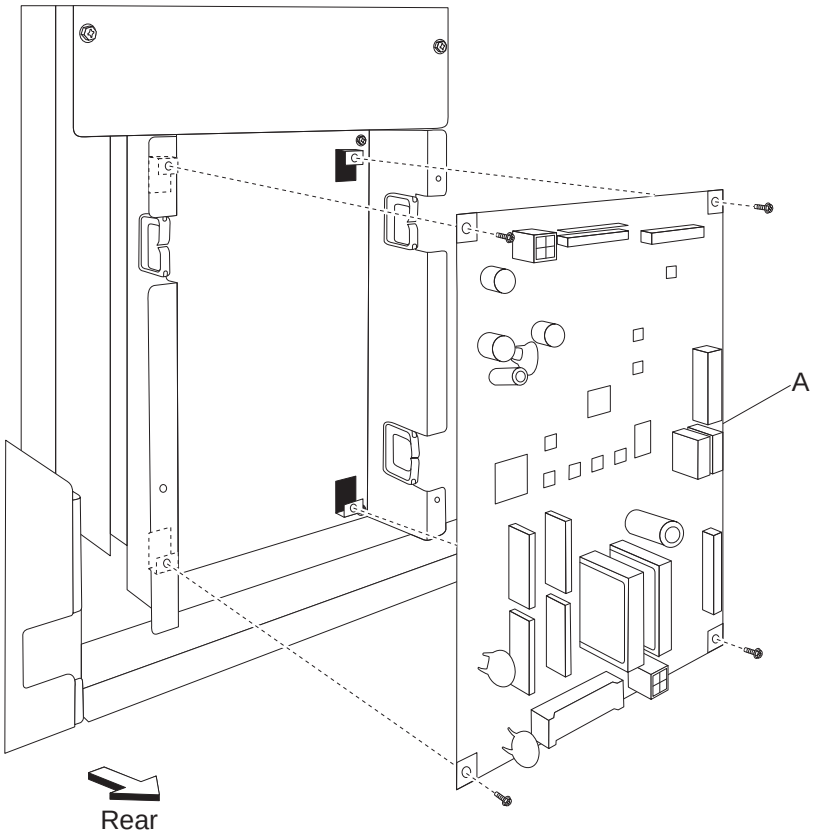
Warning: When replacing the booklet controller card assembly, the existing booklet maker adjustments must be restored to the original settings, or booklet folding and stapling will be out of alignment. The existing booklet maker adjustments can be found on the settings sheet located in the tray 1 settings sheet compartment.



To enter replacement settings or if the setting sheet is not available, refer to booklet maker setup and adjustment located in chapter 4. See **"High capacity feeder (HCF) removal procedures" on page 4-436**.

1. Remove the rear lower cover. **"Upper media bin front cover removal" on page 4-430**.
2. Loosen the four screws securing the plate to the finisher.
3. Move the plate to the right and outward.
4. Remove the plate.
5. Disconnect the connectors from the booklet controller card assembly (A).
6. Remove the four screws securing the booklet controller card assembly (A).

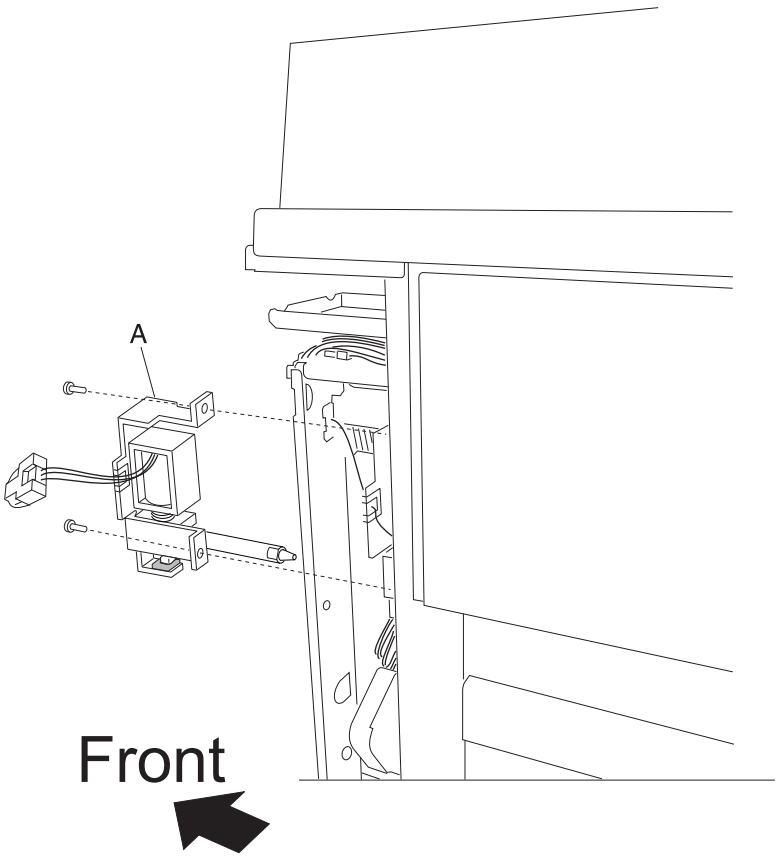
7. Remove the booklet controller card assembly (A).



Booklet diverter gate removal

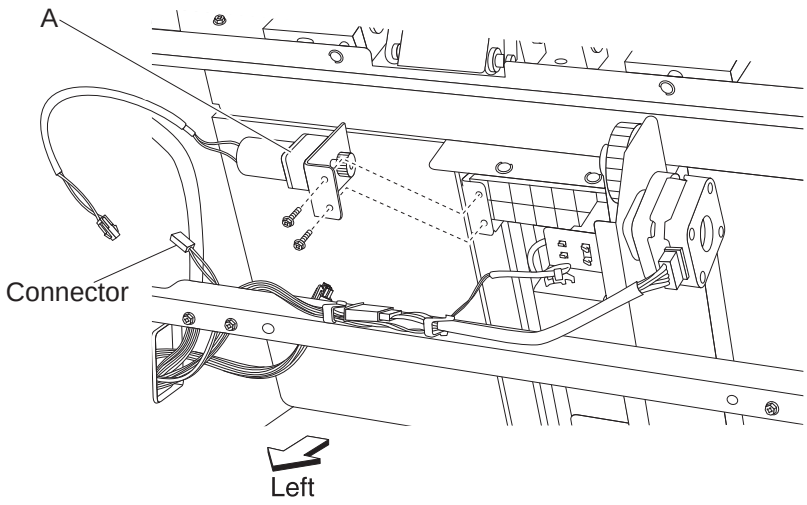
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
2. Remove the two screws securing the booklet diverter gate (A) to the machine.
3. Remove the booklet diverter gate (A).
4. Release the harness from the clamp.

5. Disconnect the connector from the booklet diverter gate (A).



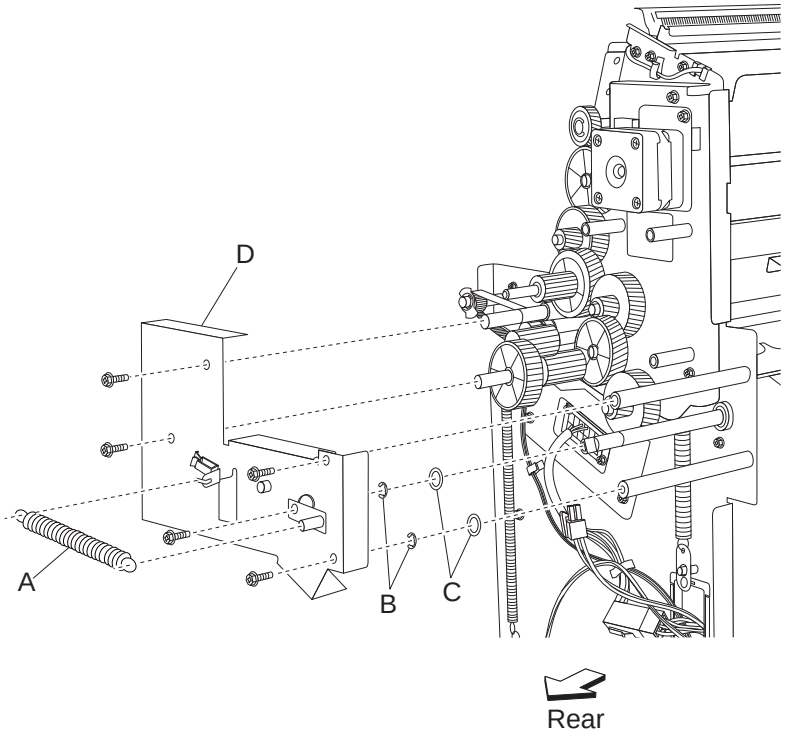
Booklet end guide drive motor removal

1. Remove the booklet unit assembly. See **"Booklet unit chassis removal" on page 4-342**.
2. Remove the booklet unit assembly left cover. See **"Booklet unit assembly left cover removal" on page 4-341**.
3. Disconnect the connectors from the sensor (booklet end guide drive motor).
4. Remove the two screws securing the booklet end guide drive motor (A) from the compiler frame.
5. Remove the booklet end guide drive motor (A).



Booklet fold solenoid frame removal

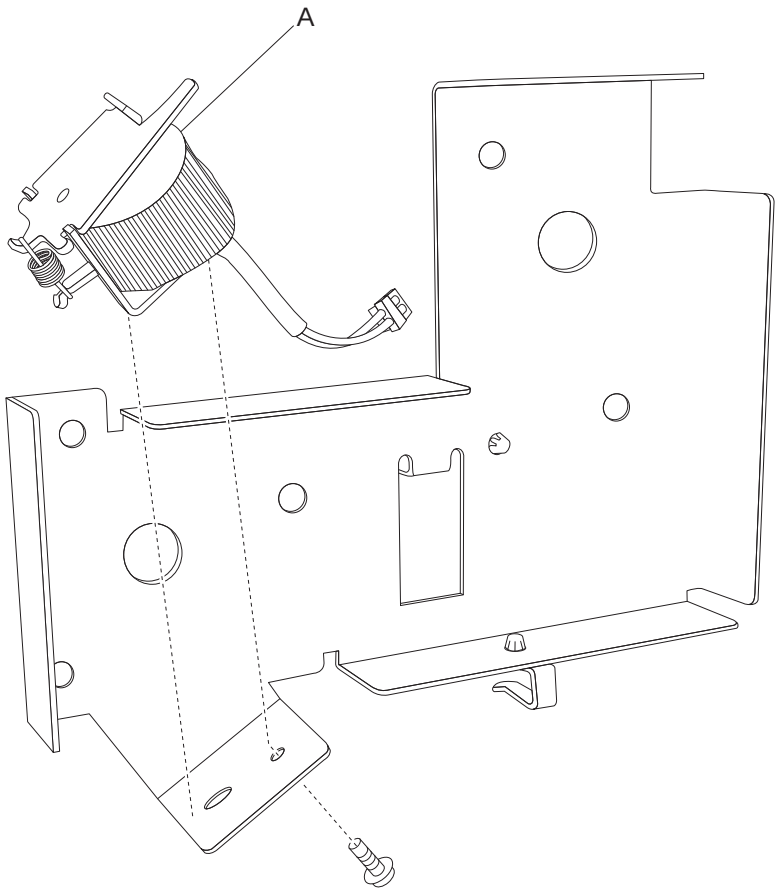
1. Remove the booklet unit chassis. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit motor assembly. See **“Booklet folding/exit drive motor assembly removal” on page 4-333**.
3. Disconnect the connectors from the booklet fold solenoid (A).
4. Remove the spring from the booklet fold solenoid frame (A).
5. Remove the five screws securing the booklet gear train frame from the booklet unit chassis.
6. Remove the two e-clips from shaft X & Y.
7. Remove the two bushings from shaft X & Y.
8. Remove the folding solenoid frame (A).



Booklet fold solenoid removal

1. Remove the booklet unit chassis. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit motor assembly. See **“Booklet folding/exit drive motor assembly removal” on page 4-333**.
3. Remove the knife solenoid frame. See **“Booklet fold solenoid frame removal” on page 4-332**.
4. Remove the screw securing the booklet fold solenoid from the booklet fold solenoid frame (A).

5. Remove the booklet fold solenoid (A).



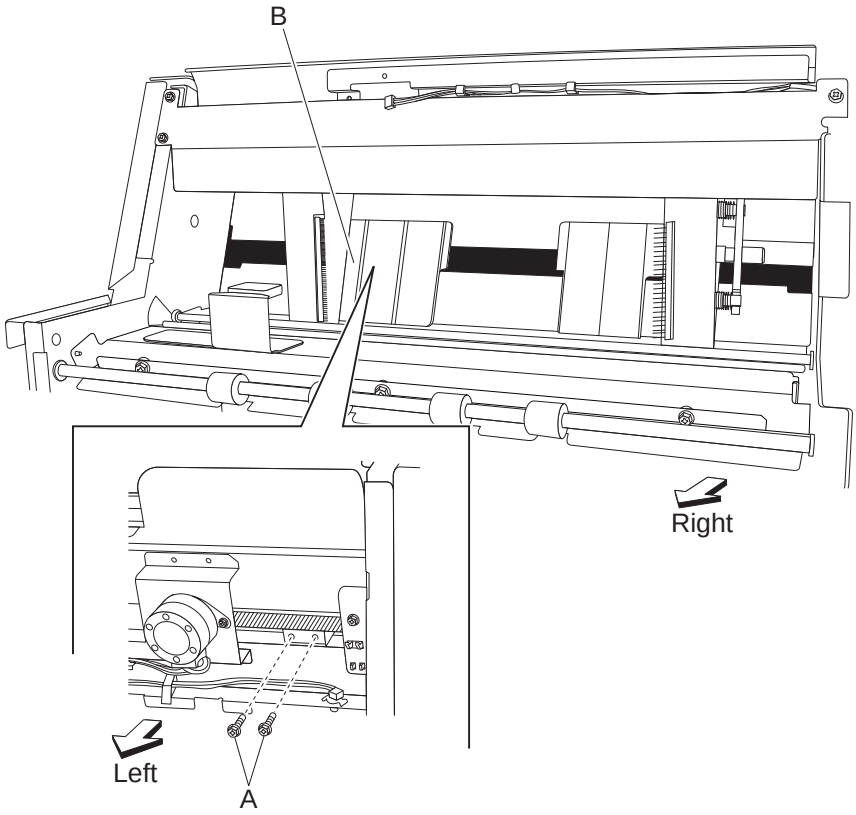
Booklet folding/exit drive motor assembly removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Disconnect the connectors from the booklet unit motor assembly (A).
3. Remove the five screws securing the booklet folding/exit drive motor assembly (A) from the booklet gear train frame.
4. Remove the booklet folding/exit drive motor assembly (A).

Booklet front tamper guide removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
3. Remove the two screws securing the booklet front tamper guide from the rack.

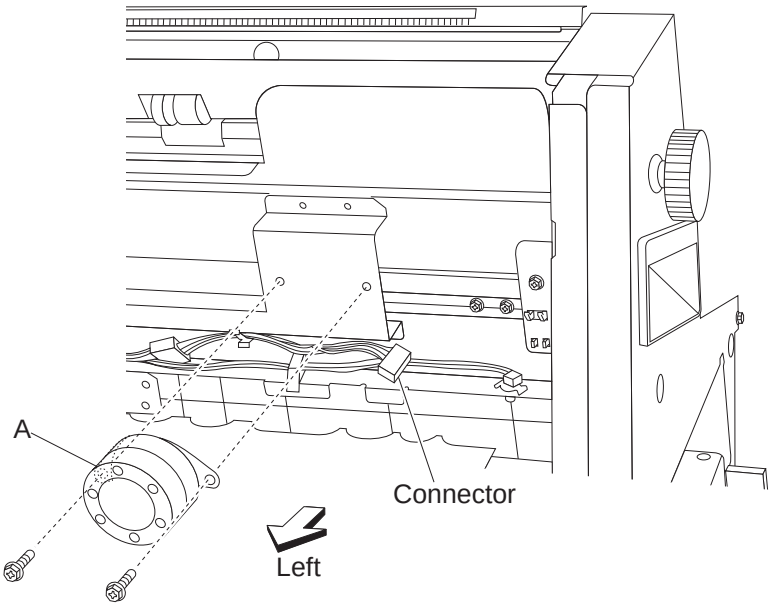
4. Remove the front tamper guide (A).



Booklet front tamper motor removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
3. Disconnect the connector from the booklet front tamper motor.
4. Remove the two screws securing the booklet front tamper motor from the tamper frame assembly.

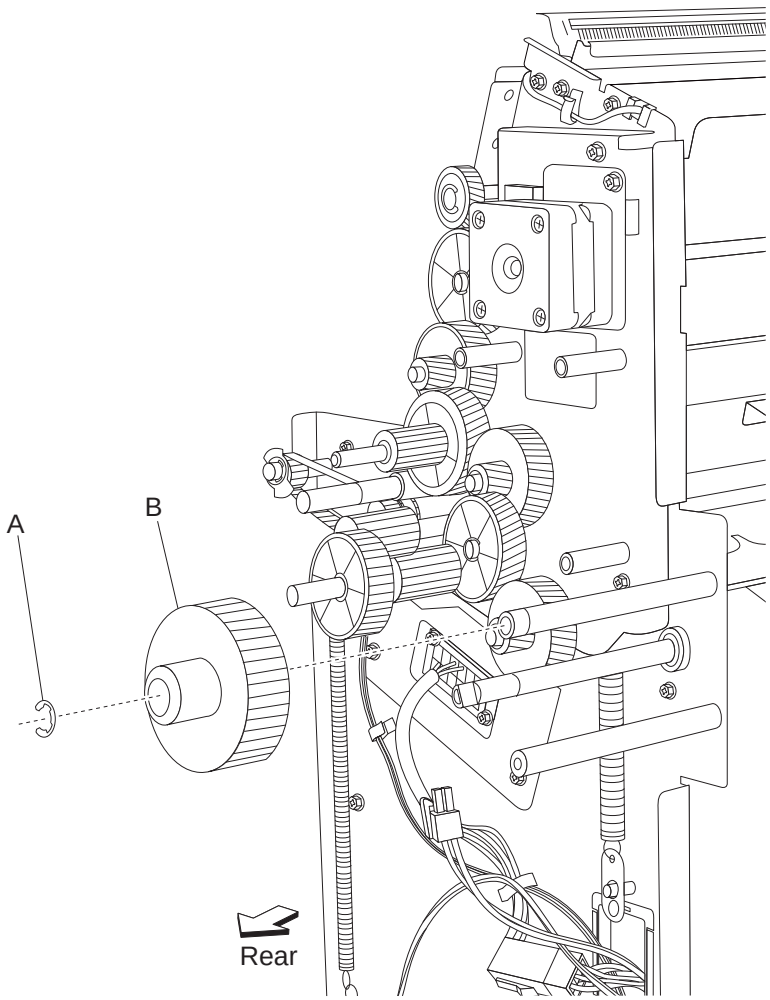
5. Remove the booklet front tamper motor (A).



Booklet knife sector drive gear 42T removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit motor assembly. See **“Booklet folding/exit drive motor assembly removal” on page 4-333**.
3. Remove the knife solenoid frame. See **“Booklet fold solenoid frame removal” on page 4-332**.
4. Remove the e-clip.

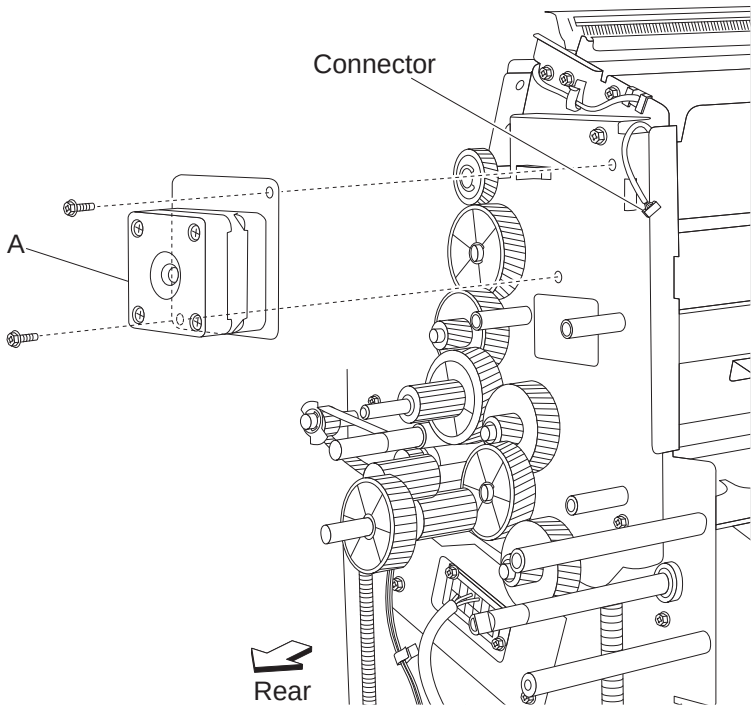
5. Remove the booklet knife sector drive gear 42T (A).



Booklet media entrance drive motor removal

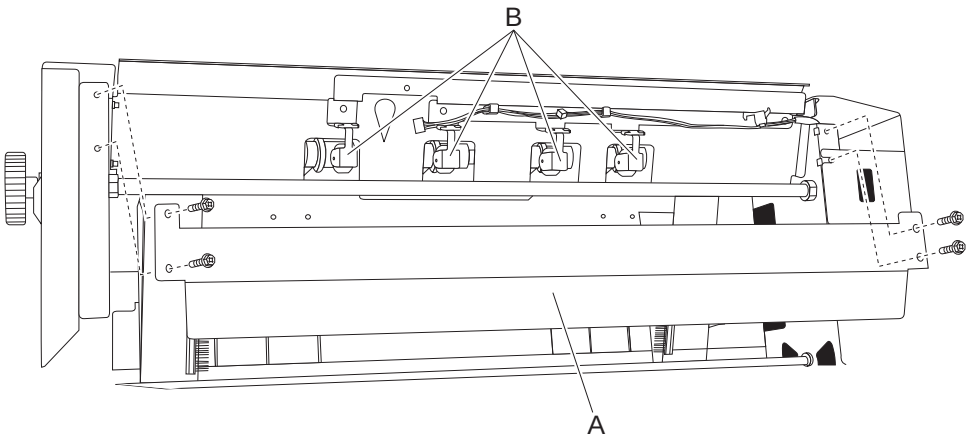
1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the screws securing the booklet media entrance drive motor cover from the booklet unit.
3. Remove the booklet media entrance drive motor cover.
4. Disconnect the connectors from the booklet media entrance drive motor (A).
5. Remove the two screws securing the booklet media transport from the knife solenoid frame.

6. Remove the booklet media entrance drive motor (A).



Booklet media pinch roll assembly removal

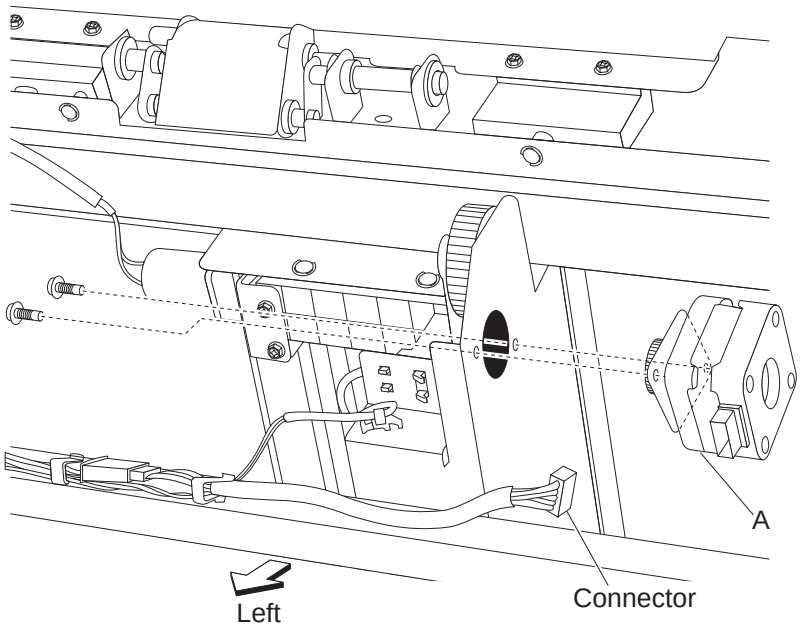
1. Remove the booklet unit chassis. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the sensor (booklet media entrace). See **“High capacity feeder (HCF) removal procedures” on page 4-436**.
3. Remove the four screws securing the frame X from the booklet unit chassis.
4. Release the cable harness from the frame X.
5. Remove the four screws securing the booklet media pinch roll assembly (A) from the booklet unit chassis.
6. Remove the booklet media pinch roll assembly (A).



Booklet paddle drive motor assembly removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.

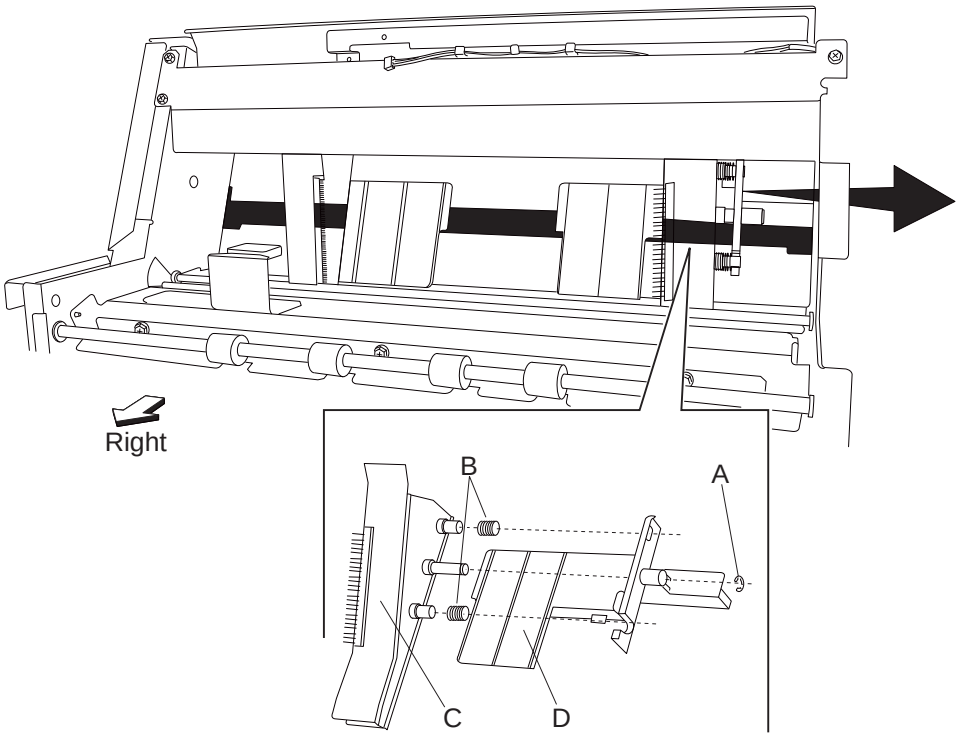
3. Disconnect the connectors from the booklet paddle motor (A).
4. Remove the two screws securing the booklet paddle motor (A) from the compiler frame.
5. Remove booklet paddle motor (A).



Booklet rear tamper guide removal

1. Remove the booklet unit chassis. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit motor assembly. See **“Booklet folding/exit drive motor assembly removal” on page 4-333**.
3. Remove the knife solenoid frame. See **“Booklet fold solenoid frame removal” on page 4-332**.
4. Remove the booklet media entrance drive motor. See **“Booklet media entrance drive motor removal” on page 4-336**.
5. Remove the booklet knife sector drive gear 42T. See **“Booklet knife sector drive gear 42T removal” on page 4-335**.
6. Remove booklet unit gear train frame. See **“Booklet unit gear train frame removal” on page 4-343**.
7. Remove the booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
8. Remove the screw (A) securing the sensor (booklet rear tamper HP).
9. Slide the booklet rear tamper guide out.
10. Remove the e-clip.
11. Remove the two springs (B) from the booklet rear tamper guide.
12. Remove booklet rear tamper guide.

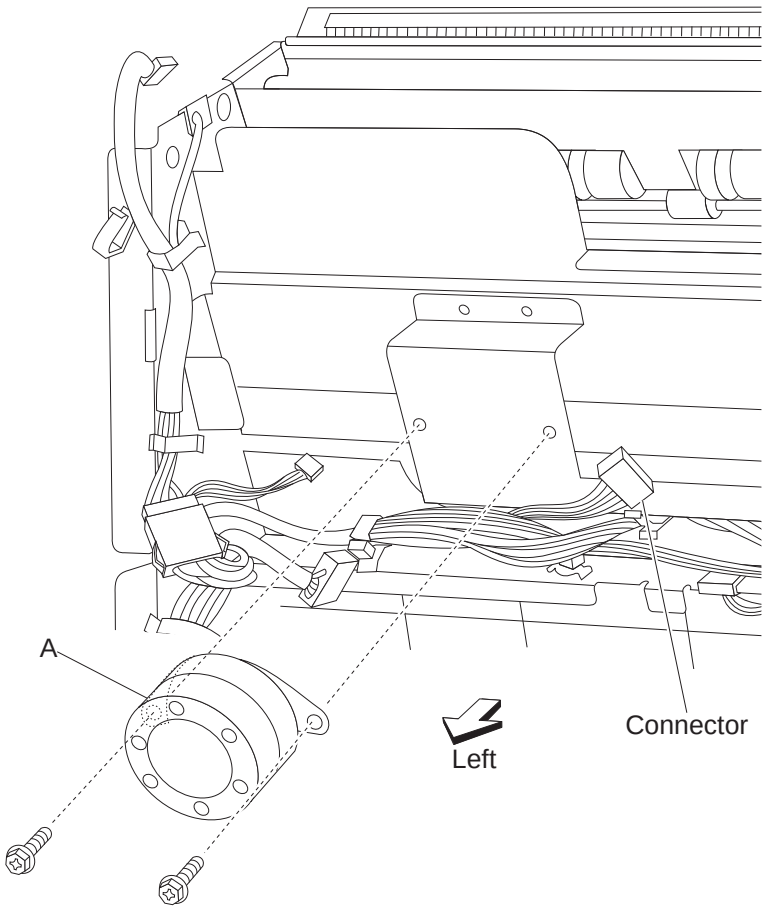
13. Remove the bookelt rear tamper guide (D).



Booklet rear tamper motor removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
3. Disconnect the connector from the booklet rear tamper motor (A).
4. Remove the two screws securing the booklet rear tamper motor (A) from the tamper frame assembly.

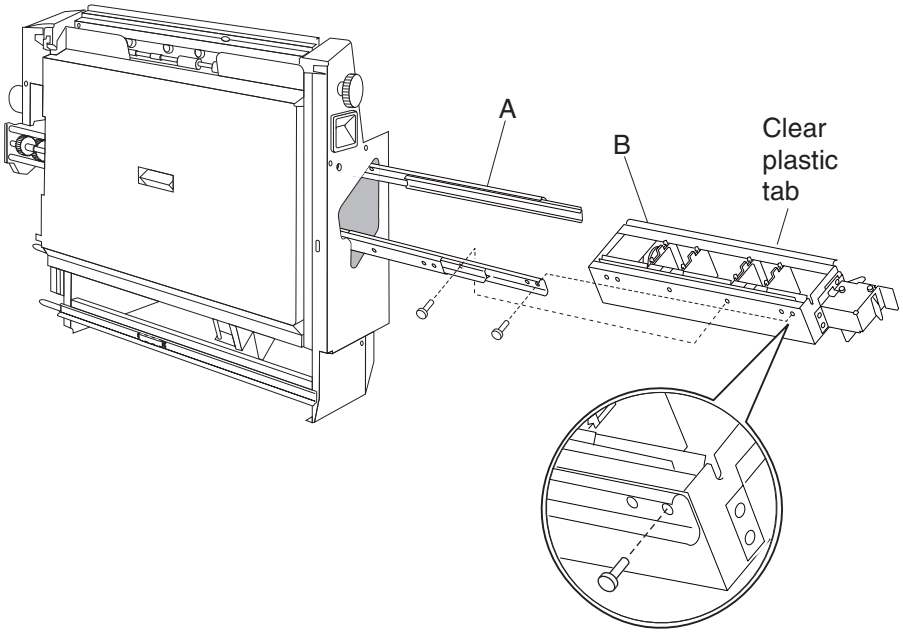
5. Remove the booklet rear tamper motor (A).



Booklet stapler unit assembly removal

1. Open the finisher front door assembly.
2. Pull the booklet stapler unit out of the machine.
3. Release the hook securing the right ball bearing slide (A).
4. Pull the booklet stapler unit assembly (B) from the machine.
5. Remove the two screws securing the booklet stapler unit assembly (B) to the left ball bearing slide (C).

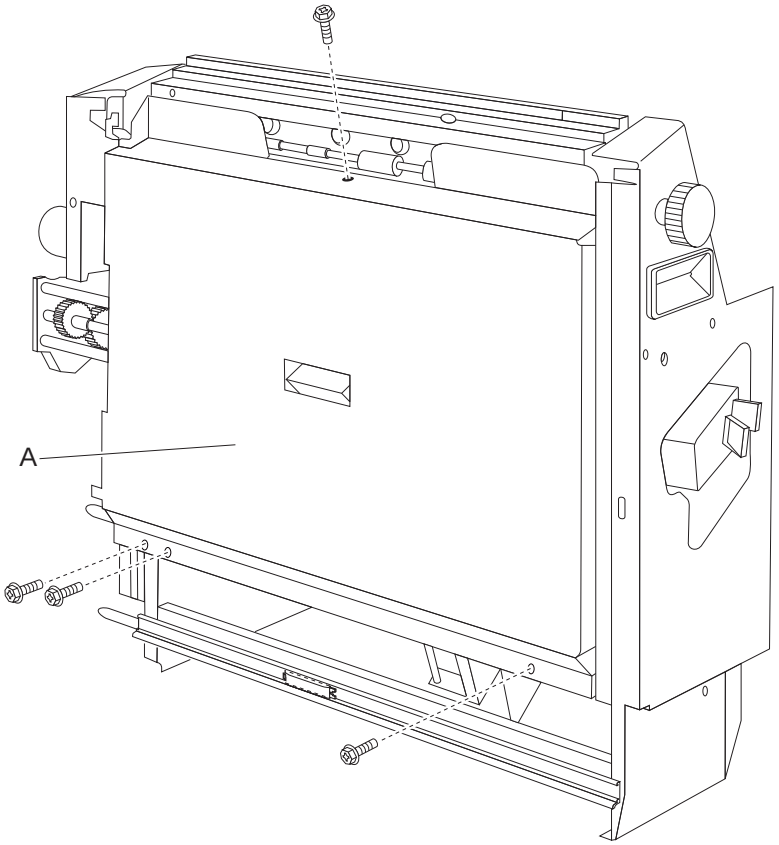
6. Remove the booklet stapler unit assembly (B).



Booklet unit assembly left cover removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the top screws securing the left cover to the booklet unit assembly.
3. Loosen the two screws securing the left cover to the booklet unit assembly.

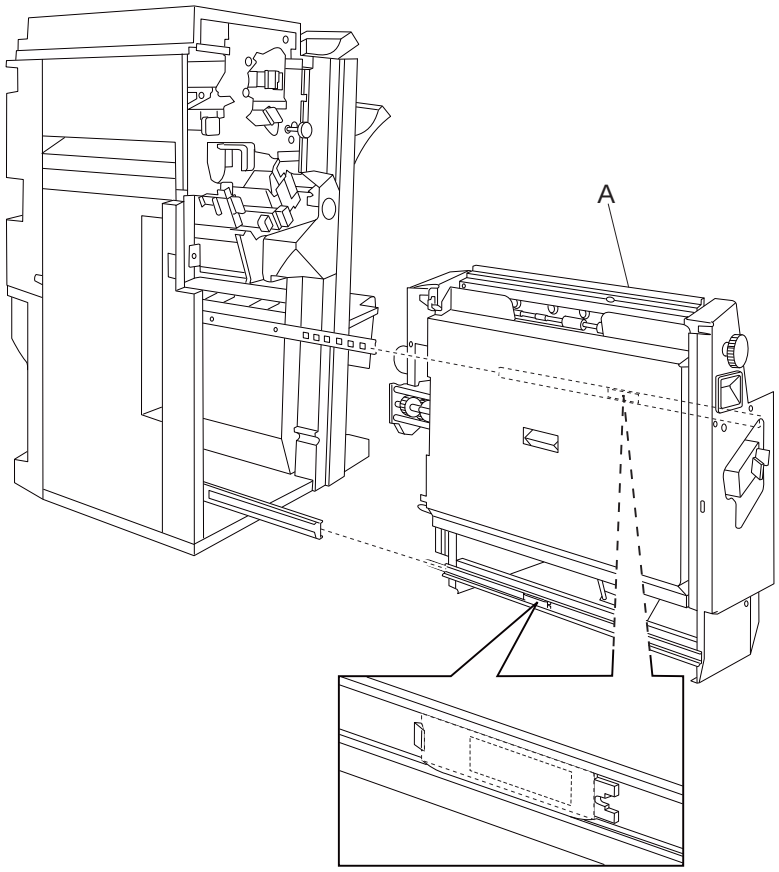
4. Remove the booklet unit assembly left cover (A).



Booklet unit chassis removal

1. Open the finisher front door assembly.
2. Slide the booklet unit out.
3. Remove the two screws that are securing the retainer to the machine.
4. Remove the retainer.
5. Release the two latches securing the booklet unit (A) from the guides.

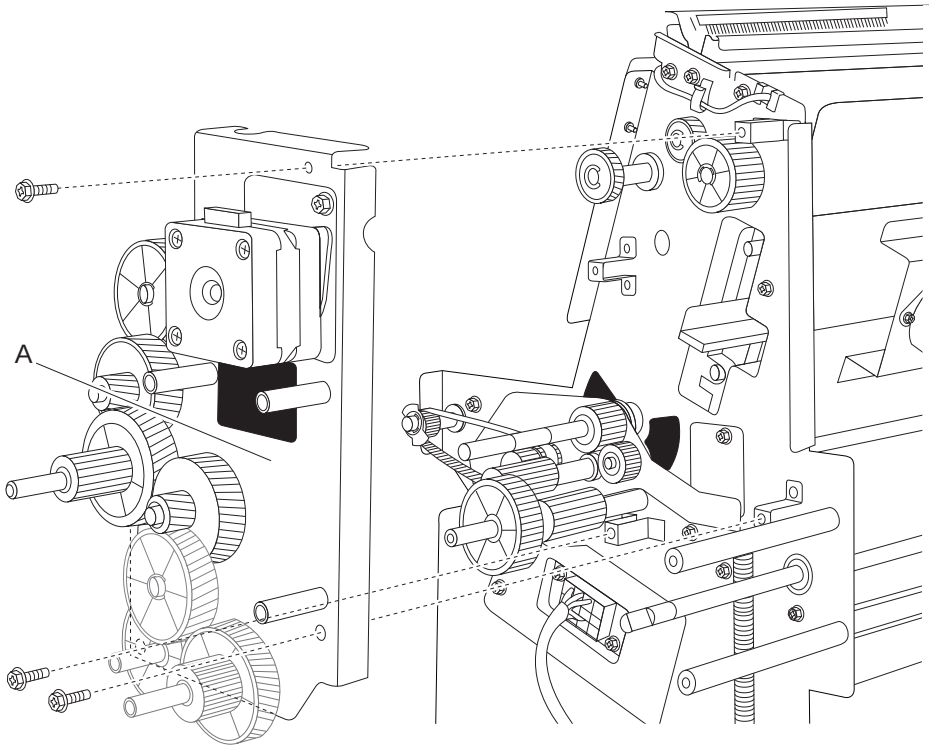
6. Remove booklet unit (A).



Booklet unit gear train frame removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit motor assembly. See **“Booklet folding/exit drive motor assembly removal” on page 4-333**.
3. Remove the knife solenoid frame. See **“Booklet fold solenoid frame removal” on page 4-332**.
4. Remove the booklet media entrance drive motor. See **“Booklet media entrance drive motor removal” on page 4-336**.
5. Remove the booklet knife sector drive gear 42T. See **“Booklet knife sector drive gear 42T removal” on page 4-335**.
6. Remove the gear 18T.
7. Remove the three screws securing the booklet unit gear train frame (A) from the booklet unit.

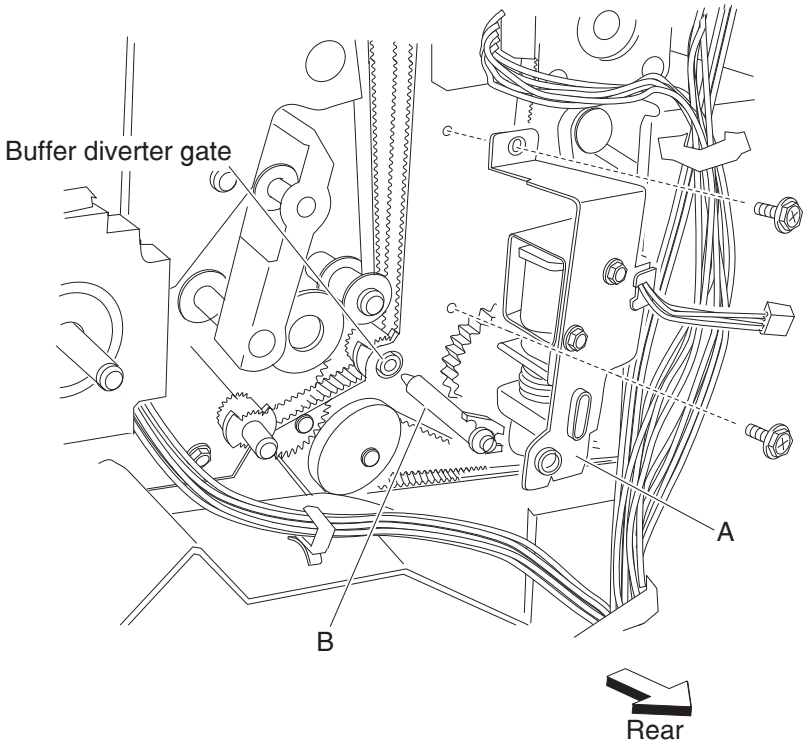
8. Remove the booklet unit gear train frame (A).



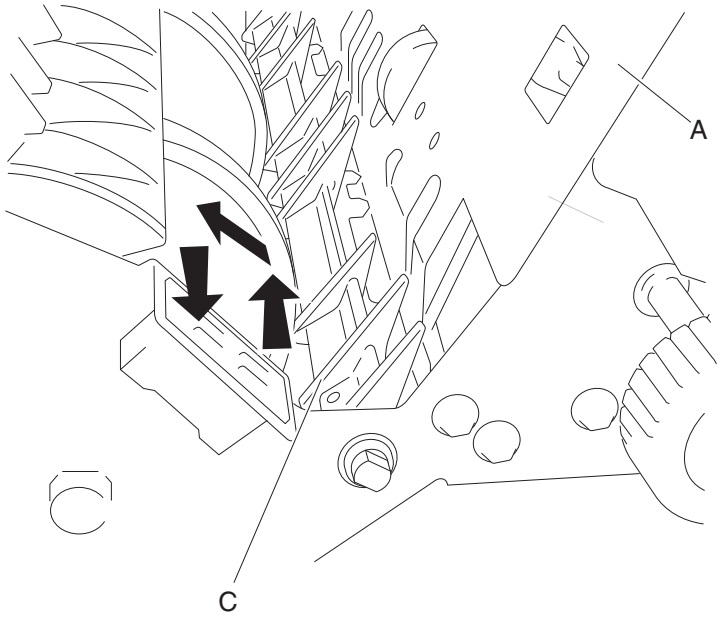
Buffer diverter gate removal

1. Open the finisher front door assembly.
2. Move the lower pinch guide assembly (A) to the right.
3. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
4. Remove the buffer diverter gate solenoid. See **“Buffer diverter gate solenoid removal” on page 4-345**.

5. Remove the link (B).



6. Move the buffer diverter gate (C) toward the rear, the left, and then forward, as shown.

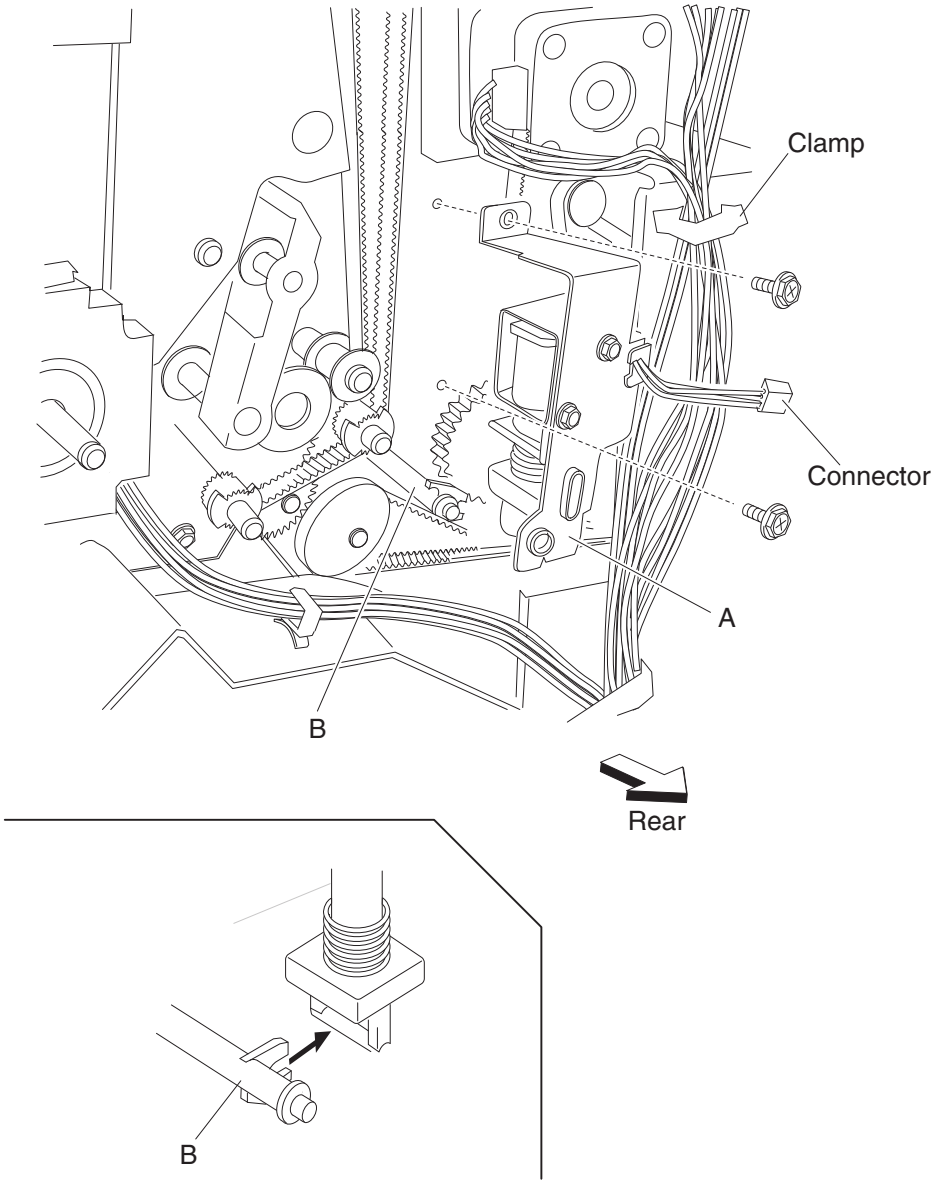


7. Remove the buffer diverter gate (C).

Buffer diverter gate solenoid removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Disconnect the connector from the buffer diverter gate solenoid (A).
4. Release the harness from the clamp.

5. Remove the two screws securing the buffer diverter gate solenoid to the finisher.
6. Remove the buffer diverter gate solenoid.
   Note: The link (B) may remain inserted into the finisher.

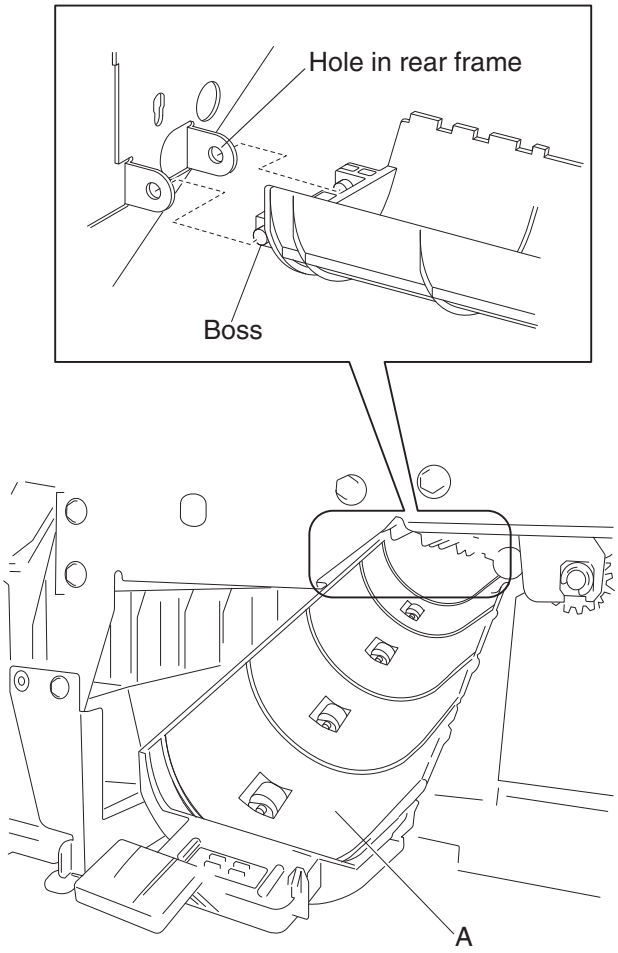


7. Remove the link.
   Note: When the link is removed, the buffer diverter gate may become detached. See **"Buffer diverter gate removal" on page 4-344**.

Buffer pinch guide assembly removal

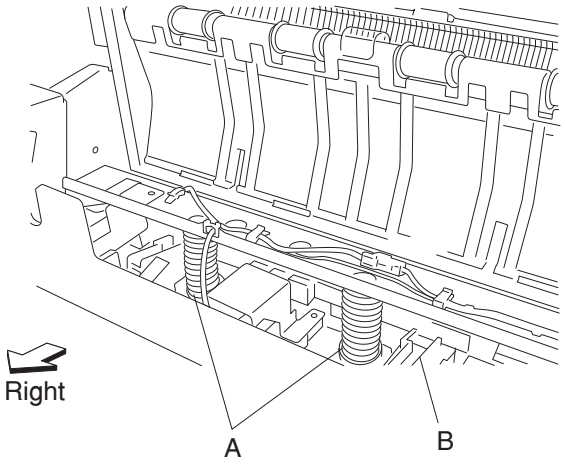
1. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the rear lower cover. See **"Upper media bin front cover removal" on page 4-430**.
4. Remove the stapler unit frame. See **"Stapler unit frame removal" on page 4-419**.
5. Lower the buffer pinch guide assembly (A) as far as it will go.

6. Move the buffer pinch guide assembly (A) to the right to remove the two bosses from the holes in the finisher.



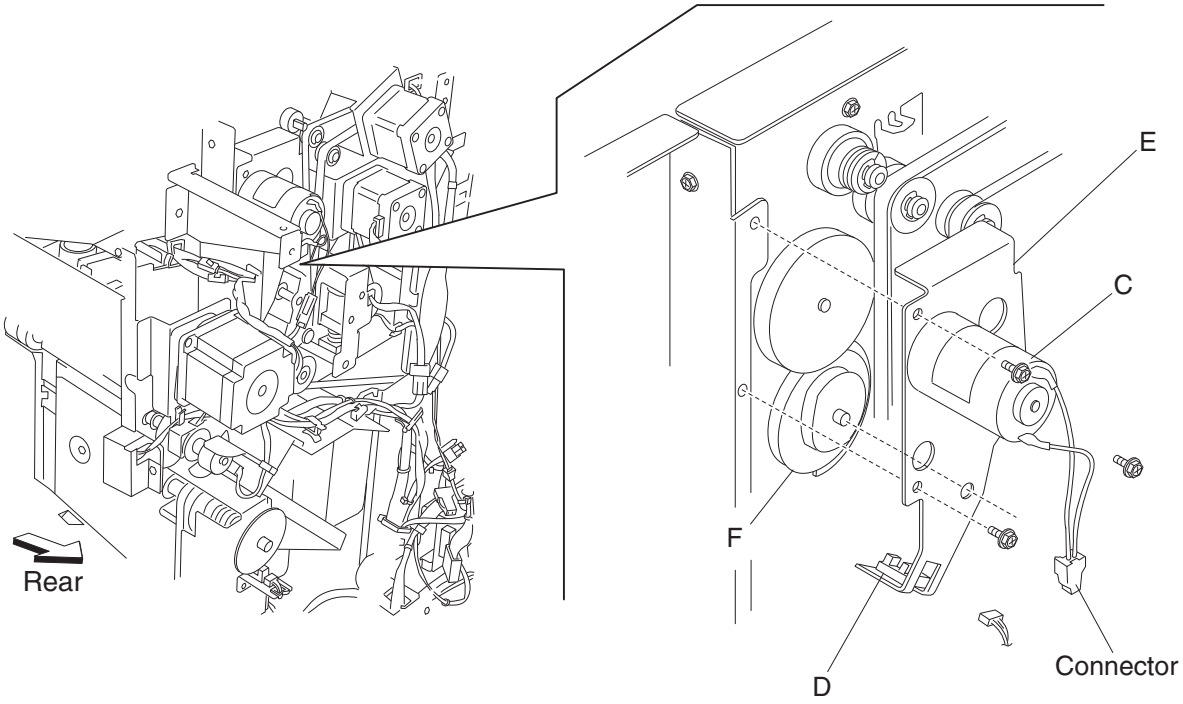
Clamp drive motor removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
3. Remove the two media eject unit springs (A) attached to the media eject unit assembly (B) by pushing them downward.



4. Disconnect the connector from the media eject clamp motor (C).
5. Disconnect the connector from the sensor (media eject clamp HP) (D).
6. Remove the three screws securing the bracket (E) to the finisher.
7. Remove the bracket (E).

   Note: When removing the bracket, turn the media eject clamp gear 70T (F) so that it does not interact with the sensor (media eject clamp HP) (D).



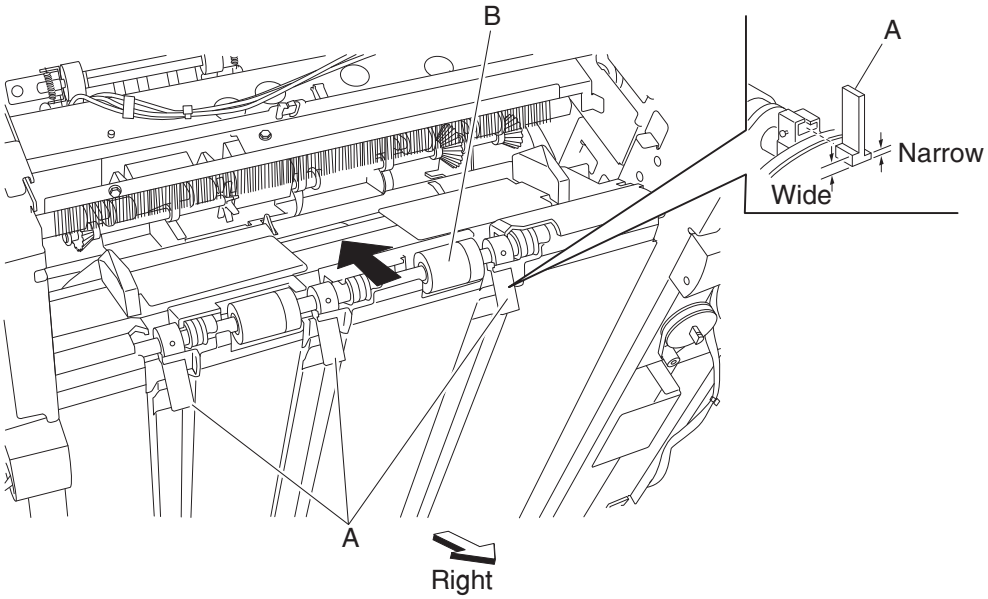
8. Remove the two screws securing the media eject clamp motor to the bracket (E).
9. Remove the media eject clamp motor (C).

Reinstallation note: When replacing the bracket, turn the media eject clamp gear 70T (F) so that it interacts with the sensor (media eject clamp HP).

Clamp paddle removal

1. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the media eject shaft assembly. See **"Eject roll shaft removal" on page 4-349**.

4. Remove the three clamp paddles (A) by sliding them out of the media eject shaft assembly (B).

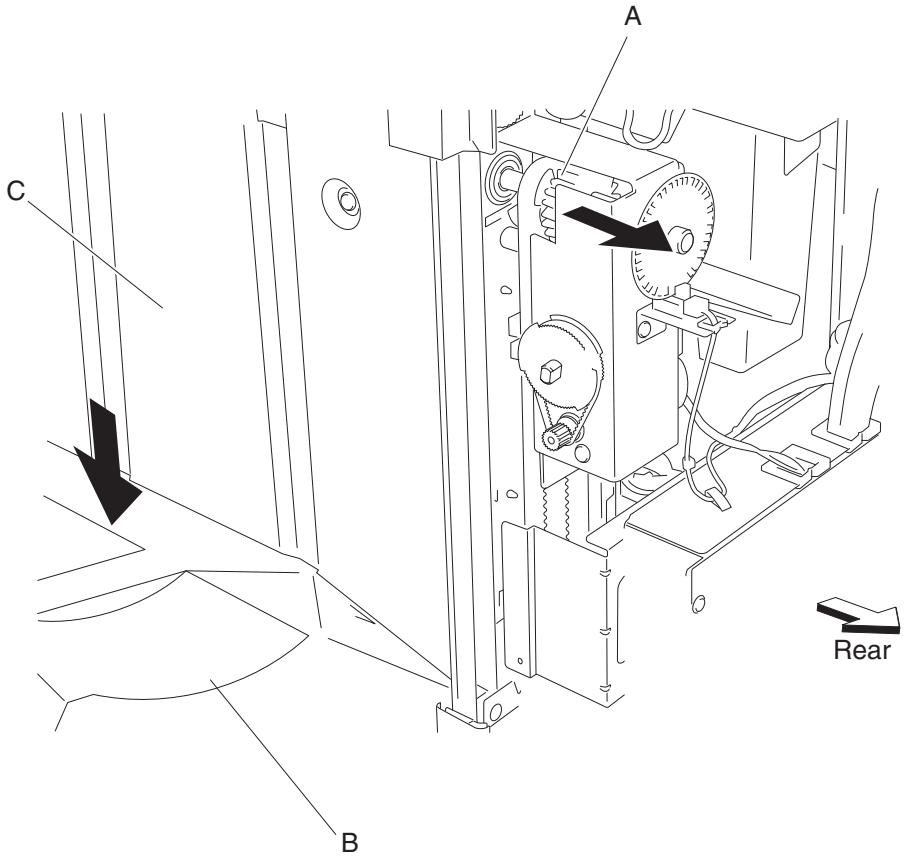


Reinstallation note: Replacement is easier if you lightly moisten the rubber surface of the paddles with water.

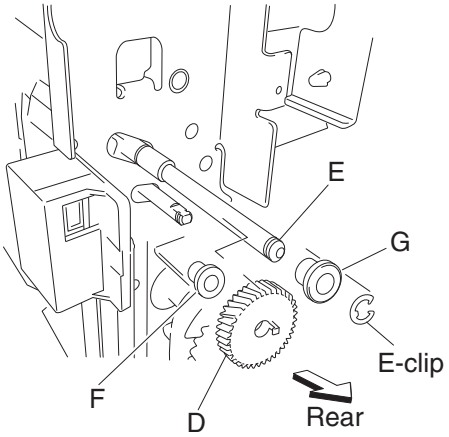
Eject roll shaft removal

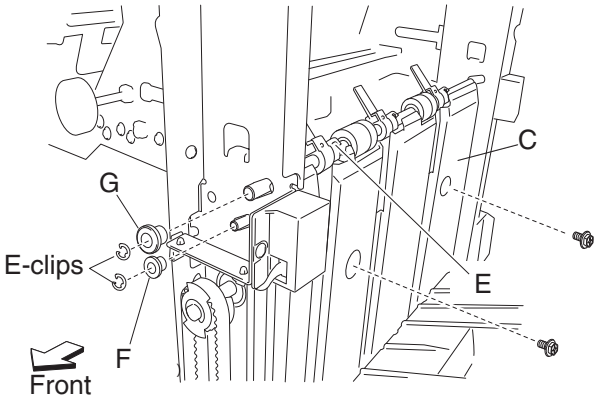
1. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Move the slip clutch gear 24T (A) toward the rear as shown to disengage the stacker bin (B).
4. Move the stacker bin down as shown to its lowest position after it is disengaged.
   Note: Make sure the stacker bin is at its lowest position before continuing.
5. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.

6. Remove the four screws securing the right panel (C) to the finisher.

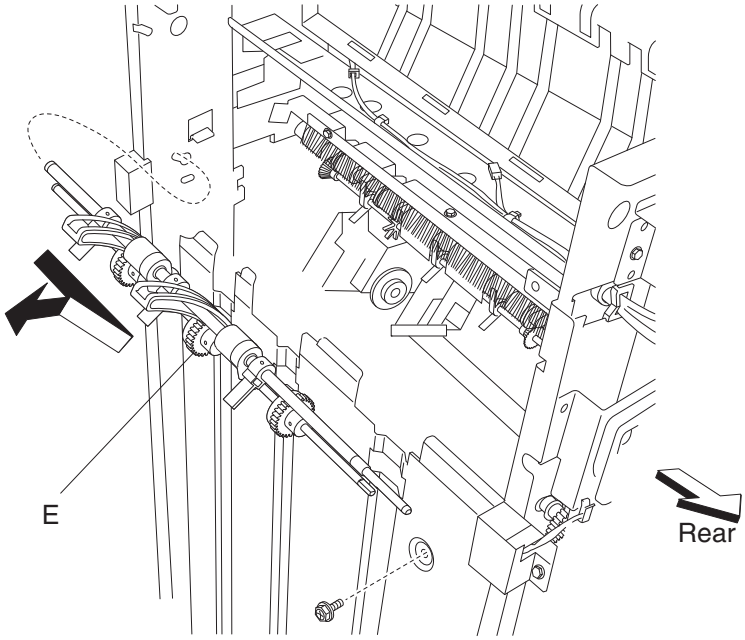


7. Remove the media eject motor assembly. See **“Media eject motor assembly removal” on page 4-376**.
8. Release the hook of the media eject shaft gear 39T (D) from the eject roll shaft (E).
9. Remove the media eject shaft gear 39T (D).
10. Remove the 6 mm bushing (F).
11. Use a prying tool to remove the e-clip securing the eject roll shaft (E) to the rear of the finisher.
12. Remove the 8 mm bushing (G).
13. Remove the two e-clips securing the eject roll shaft (E) to the front of the finisher.
14. Remove the 6 mm bushing (F) and the 8 mm bushing (G).
15. Move the eject roll shaft toward the rear and outward as shown.





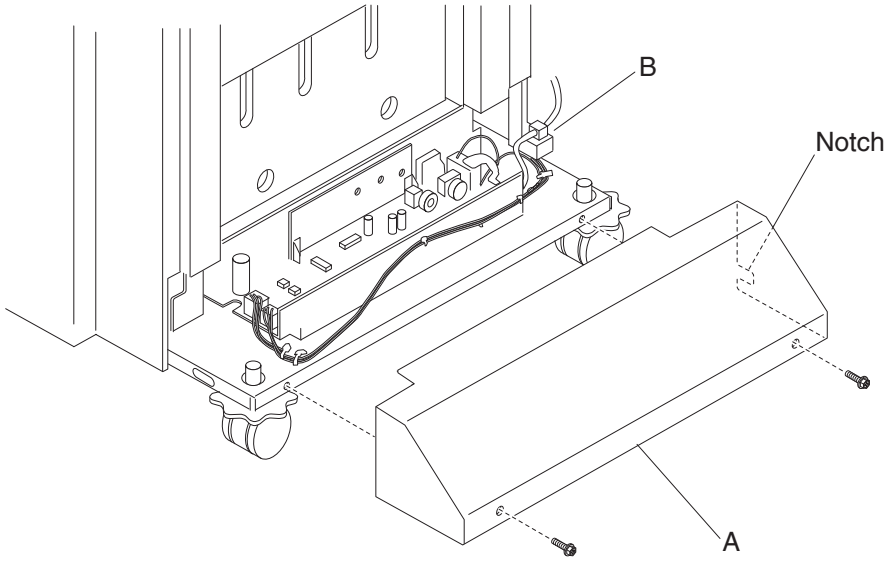
16. Remove the eject roll shaft (E).



Finisher bottom cover removal

1. Remove the two screws securing the finisher bottom cover (A) to the finisher.
2. Remove the finisher bottom cover (A).

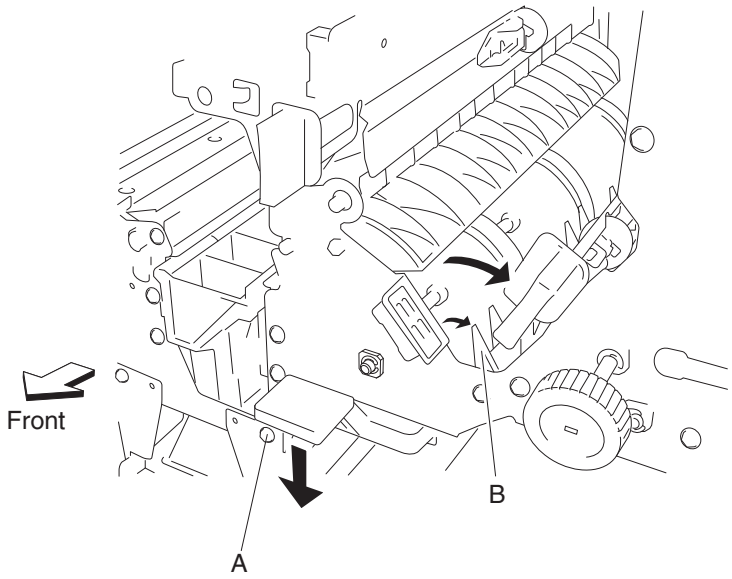
Reinstallation note: Make sure to put the power cord (B) into the notch on the finisher bottom cover (A).



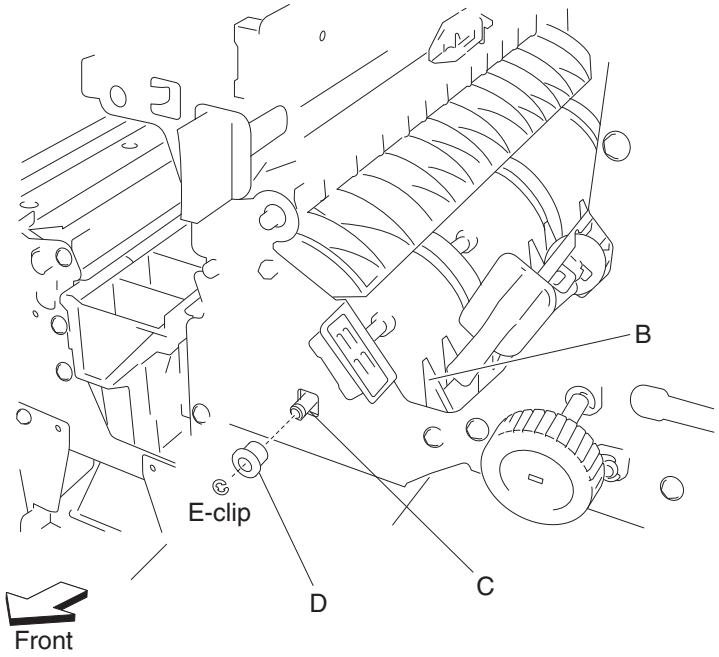
Finisher buffer roll assembly removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
2. Open the finisher front door assembly.
3. Remove the stapler unit cartridge.
4. Move the stapler unit assembly by hand as far to the rear as it will go.
5. Lower the buffer pinch guide assembly (A).

6. Move the lower pinch guide assembly to the right.
7. Position the buffer diverter gate (B) using your finger to its upper-most position.

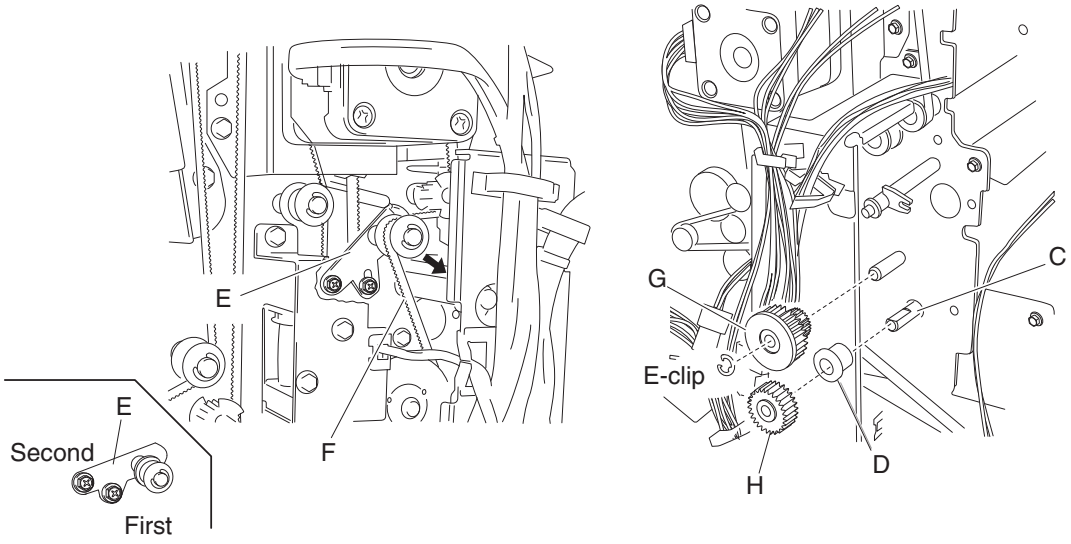


8. Use a prying tool to remove the e-clip securing the buffer roll assembly (C) to the front of the finisher.
9. Remove the 6 mm bushing (D).



10. Remove the finisher diverter gate solenoid. See **“Finisher diverter gate solenoid removal” on page 4-354**.
11. Loosen the two screws securing the belt tensioner bracket (E) to the finisher and move it downward, as shown.

12. Remove the belt (buffer/transport) (F) from the buffer roll drive gear 46T (G).

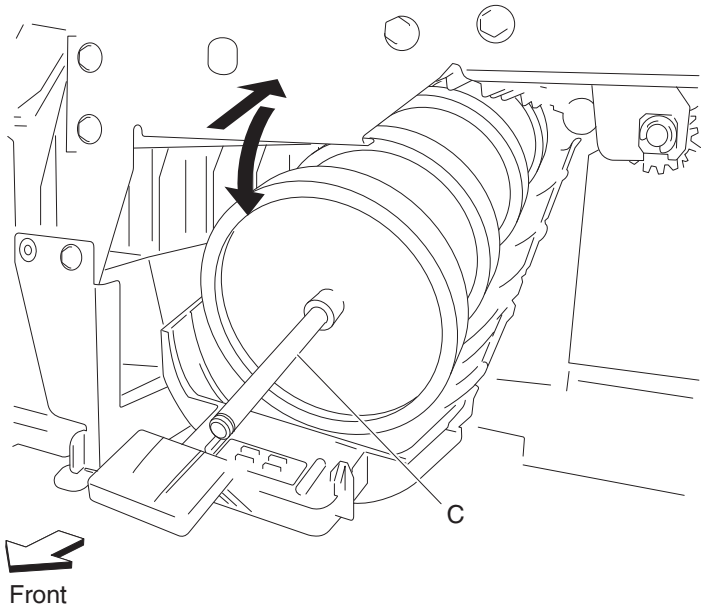


13. Use a prying tool to remove the e-clip securing the buffer roll drive gear 23/53T (G).
14. Remove the buffer roll drive gear 53/23T (G).
15. Release the hook of the buffer roll drive gear 46T (H) from the buffer roll assembly (C).
16. Remove the buffer roll drive gear 46T (H).
17. Remove the 6 mm bushing (D).
18. Remove the buffer roll assembly (C) from inside the finisher.

Note: When removing the buffer roll assembly (C), do not touch the rubber surface.

Replacement notes:

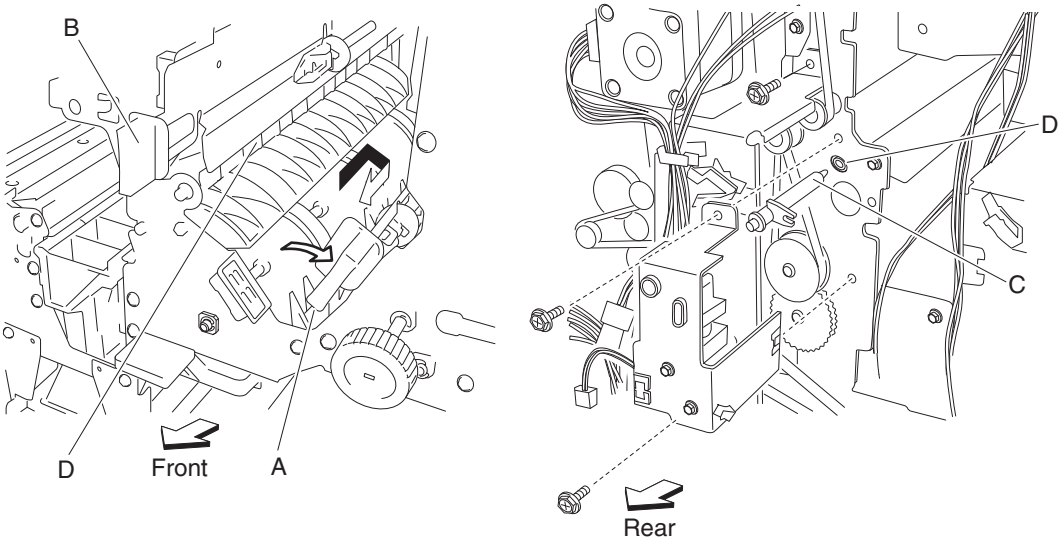
- Make sure the flat spot on the end of the buffer roll assembly (C) is installed to the rear.



- When replacing the buffer roll assembly, do not touch the rubber surface.
- The tension of the belt (buffer/transport) (F) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (E).
- Tighten the two screws in the order shown.

Finisher diverter gate removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Open the lower pinch guide assembly (A) to the right.
4. Open the upper pinch guide assembly (B) to the right.
5. Remove the finisher diverter gate solenoid. See **"Finisher diverter gate solenoid removal" on page 4-354**.
6. Remove the link (C).
7. Move the finisher diverter gate (D) toward the rear, to the right, and forward, as shown.

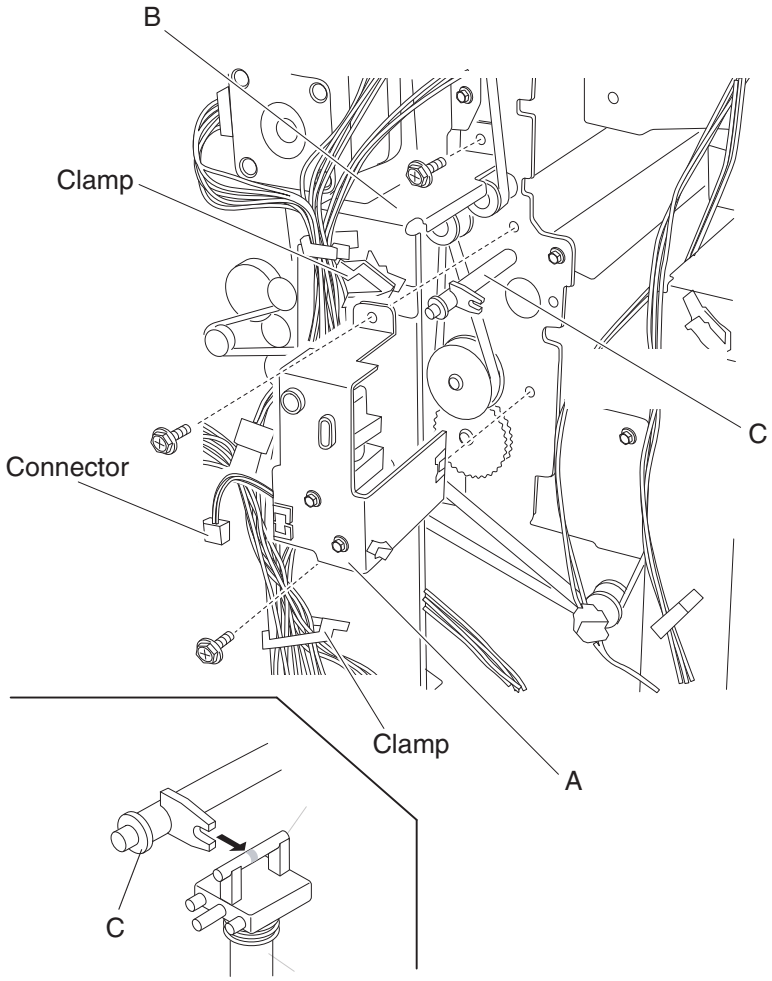


8. Remove the finisher diverter gate (D).

Finisher diverter gate solenoid removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Disconnect the connector from the finisher diverter gate solenoid (A).
4. Release the harness from the clamp.
5. Remove the two screws securing the bracket (B) to the finisher.
   Note: The bracket should not be removed from the finisher, it should be gently moved to provide better access to the finisher diverter gate solenoid mounting screws.
6. Remove the two screws securing the finisher diverter gate solenoid (A) to the finisher.

7. Remove the finisher diverter gate solenoid (A).
   Note: The link (C) may remain inserted into the finisher.



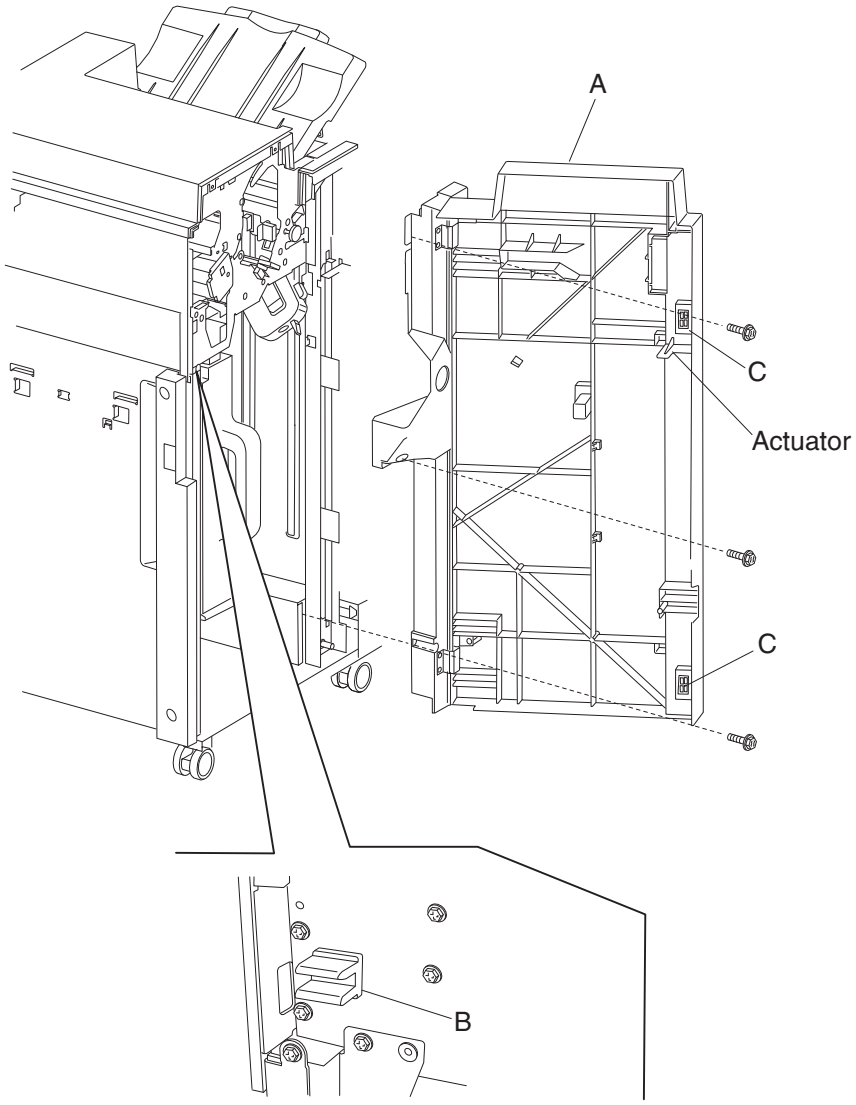
8. Remove the link.
   Note: When the link is removed, the finisher diverter gate may become detached. See **"Finisher diverter gate removal" on page 4-354**.

Finisher front door assembly removal

1. Open the finisher front door assembly (A).
2. Remove the three screws securing the finisher front door assembly.

3. Remove the finisher front door assembly.

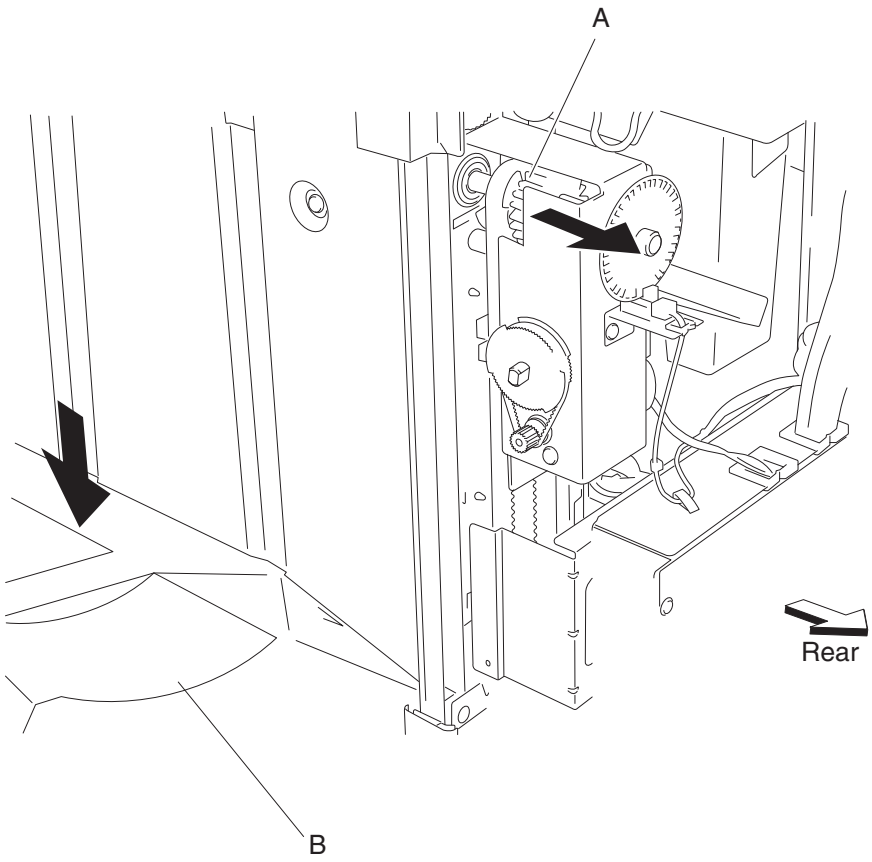
Reinstallation note: Make sure the actuator molded in the finisher front door assembly properly engages the switch (finisher front door interlock) (B). The two magnetic catches (C) should properly engage the finisher.



Finisher left carrage belt assembly removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
3. Move the slip clutch gear 24T (A) toward the rear to disengage the stacker bin (B).

4. Move the stacker bin (B) down to its lowest position after being disengaged.
   Note: Make sure the stacker bin is at its lowest position before continuing.

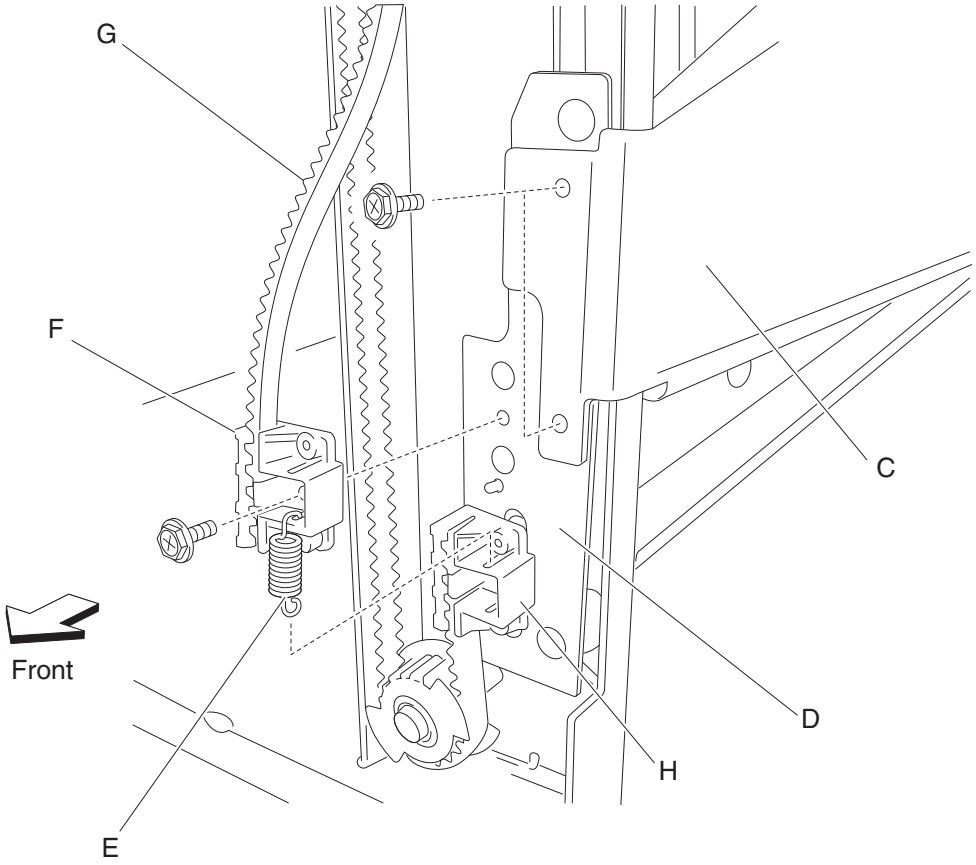


5. Remove the two screws securing the bin bracket (C) to the left carriage bracket (D).
6. Remove the spring (E) from the left carriage lift assembly.
7. Remove the screw securing the upper belt clamp (F) to the left carriage bracket (D).
8. Remove the upper belt clamp (F).
9. Remove the left carriage bracket with the finisher left carriage belt assembly (G) from the finisher.
10. Release the hook securing the finisher left carriage belt assembly (G) to the lower belt clamp (H).
11. Remove the finisher left carriage belt assembly (G).

Reinstallation notes:

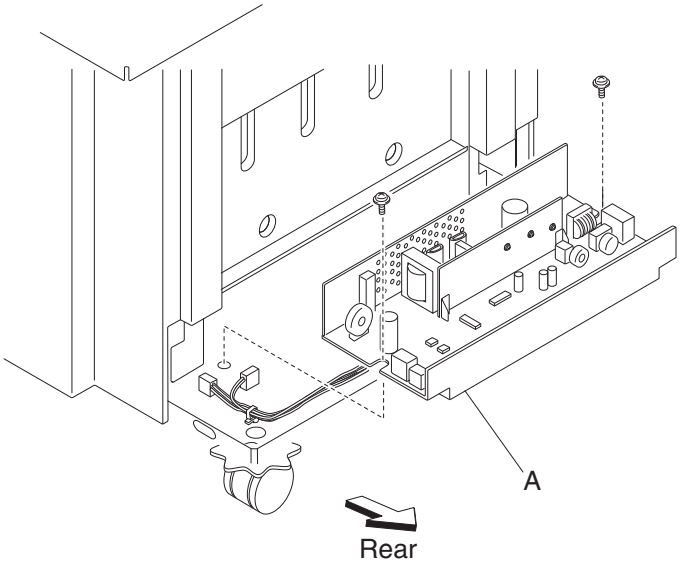
- Make sure the finisher left carriage belt assembly (G) is inserted into the upper belt clamp (F) as shown.

- Make sure the bin bracket (C) is level to prevent binding.



Finisher LVPS PCBA removal

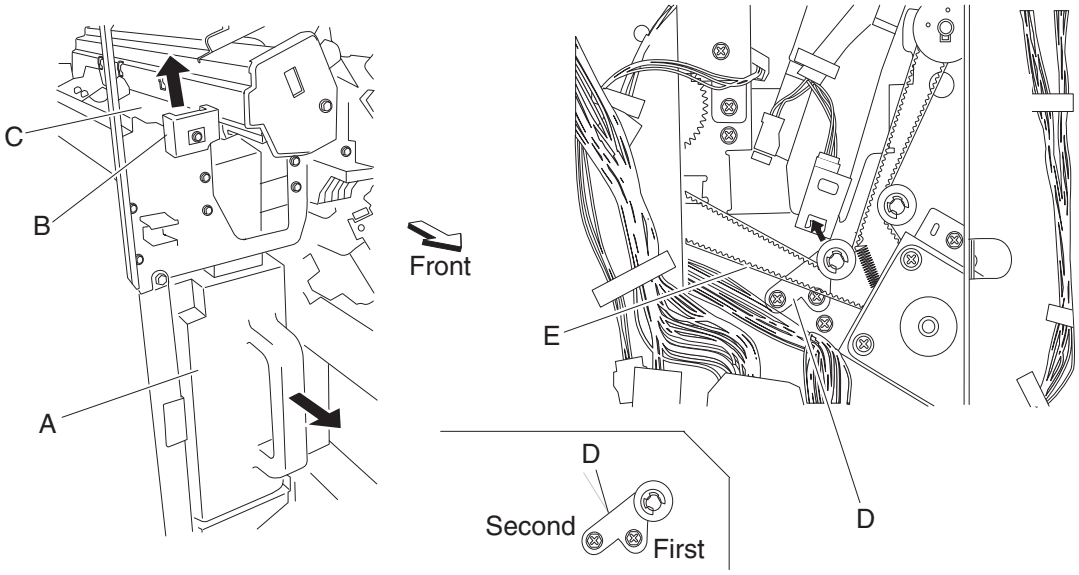
1. Remove the right lower cover. See **"Upper media bin front cover removal" on page 4-430**.
2. Disconnect all the connectors from the finisher LVPS PCBA (A).
3. Remove the two screws securing the finisher LVPS PCBA (A) to the finisher.



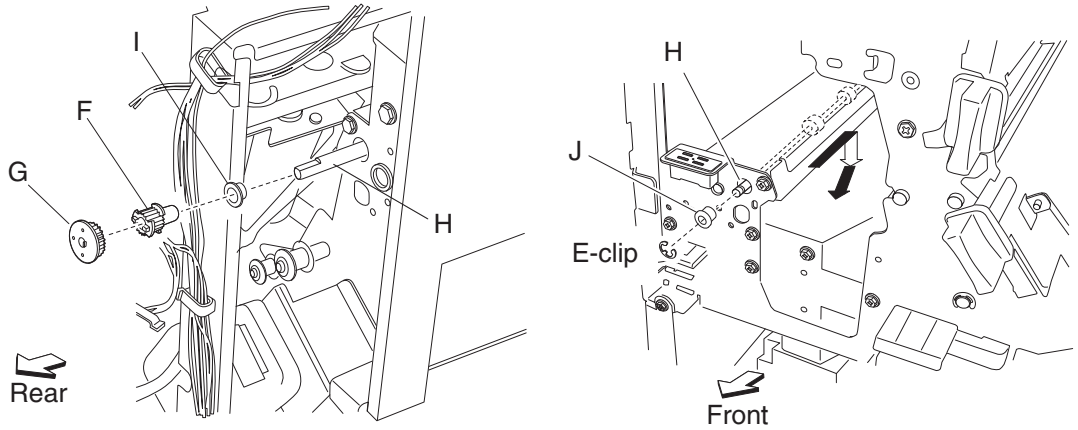
4. Remove the finisher LVPS PCBA (A).

Finisher media entrance roll assembly removal

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-355**.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the left upper cover. See **“Left upper cover removal” on page 4-367**.
4. Remove the punch waste box (A) from the finisher.
5. Remove the screw securing the cover (B) to the media entrance pinch guide assembly.
6. Remove the cover (B).
7. Lift the media entrance pinch guide assembly (C).
8. Loosen the two screws securing the belt tensioner bracket (D) to the finisher and move it upward in the direction of the arrow.
9. Remove the belt (entrance/paddle) (E) from the entrance drive pulley 20T (F).



10. Release the hook securing the entrance drive gear 23T (G) to the media entrance roll assembly (H).
11. Remove the entrance drive gear 23T (G).
12. Remove the entrance drive pulley 20T (F).
13. Remove the bushing (I).
14. Remove the e-clip securing the media entrance roll assembly (H) to the front of the finisher.
15. Remove the bushing (J).



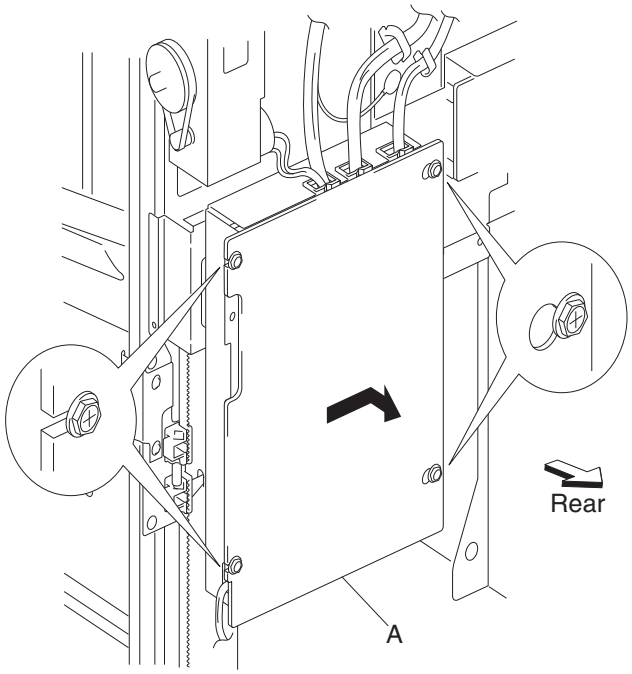
16. Move the media entrance roll assembly (H) toward the rear, downward, and then forward.
17. Remove the media entrance roll assembly (H) through the inside of the finisher.
    Note: When removing the media entrance roll assembly (H), do not touch the rubber surface.

Reinstallation notes:

- Make sure the flat spot on the media entrance roll assembly (H) is installed to the rear.
- When replacing the media entrance roll assembly (H), do not touch the rubber surface.
- The tension of the belt (entrance/paddle) (E) is automatically adjusted to the force of the spring attached to the belt tensioner bracket (D).
- Tighten the two screws in the order shown.

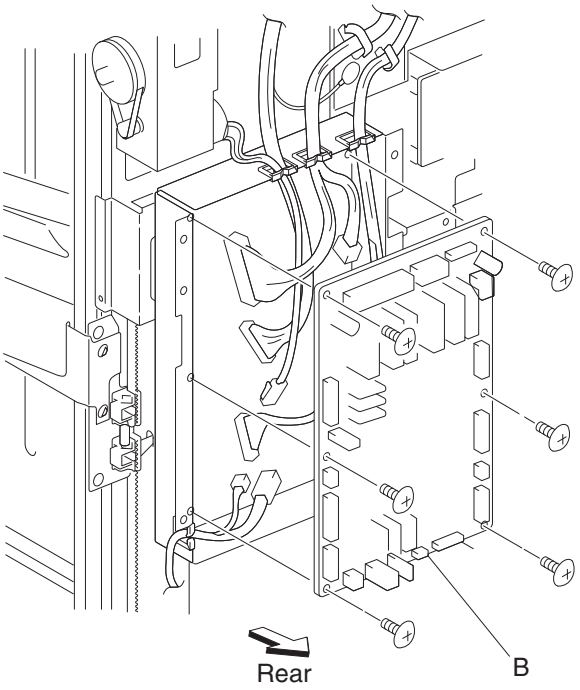
Finisher PCBA removal

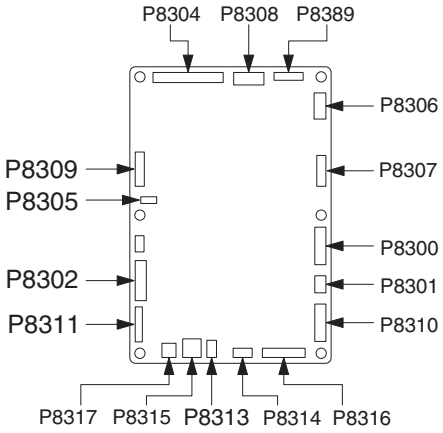
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
2. Remove the rear lower cover. See **“Upper media bin front cover removal” on page 4-430**.
3. Loosen the four screws securing the plate (A) to the finisher.
4. Move the plate (A) to the right and outward.



5. Remove the plate (A).

6. Disconnect the connectors from the finisher PCBA.



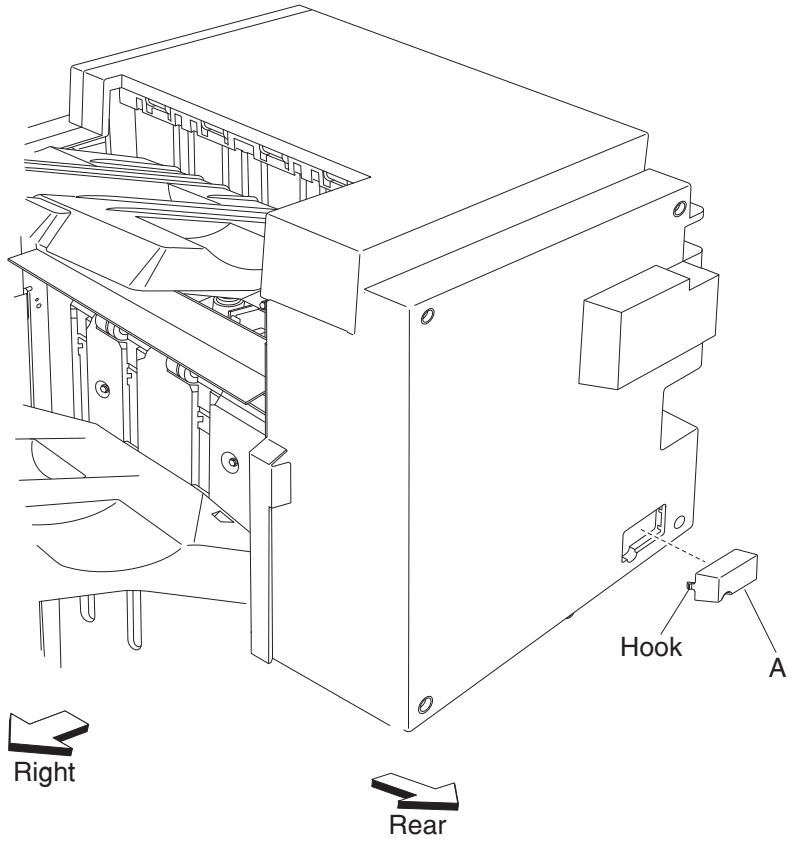


7. Remove the six screws securing the finisher PCBA (B).

8. Remove the finisher PCBA (B).

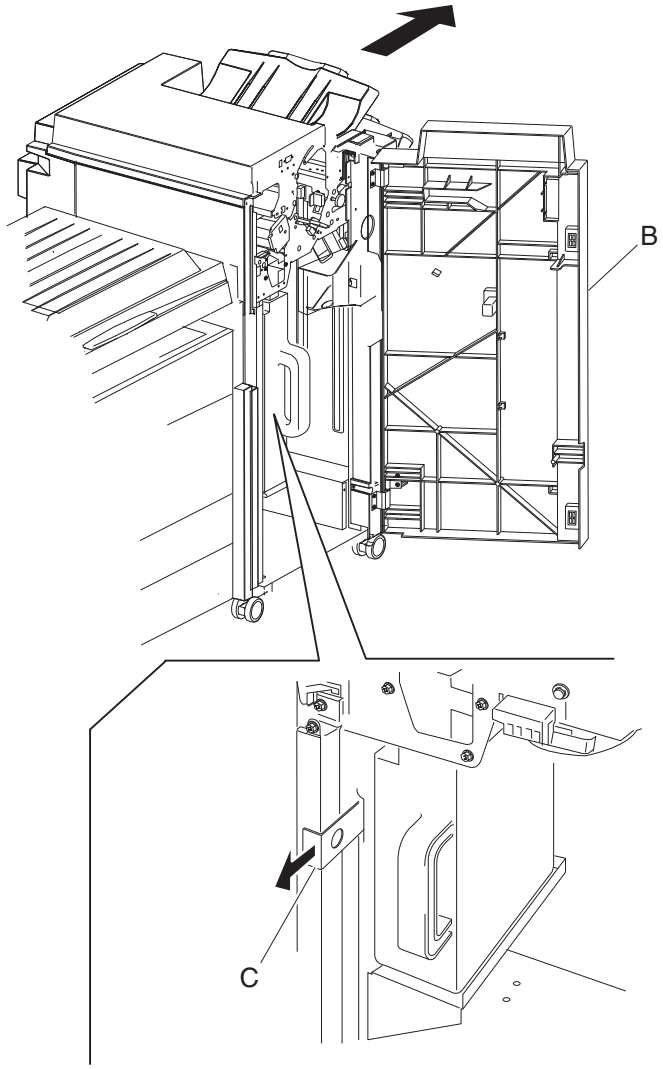
Finisher removal

1. Disconnect the finisher power cord and the finisher connection cable from the rear of the printer.
2. Release the hook securing the bridge unit hookup cover (A) to the finisher.



3. Remove the bridge unit hookup cover (A).
4. Disconnect the bridge unit connection from the finisher.
5. Open the finisher front door assembly (B) on the front of the finisher.

6. Pull the finisher docking latch assembly (C) outward in the direction of the arrow, and pull the finisher away from the printer.

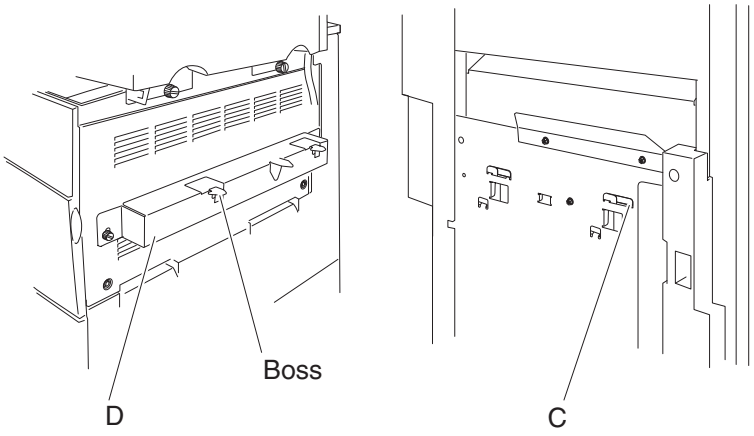


7. Close the finisher front door assembly.

8. Remove the two screws securing the finisher docking bracket (D) to the printer.

9. Remove the finisher docking bracket (D).

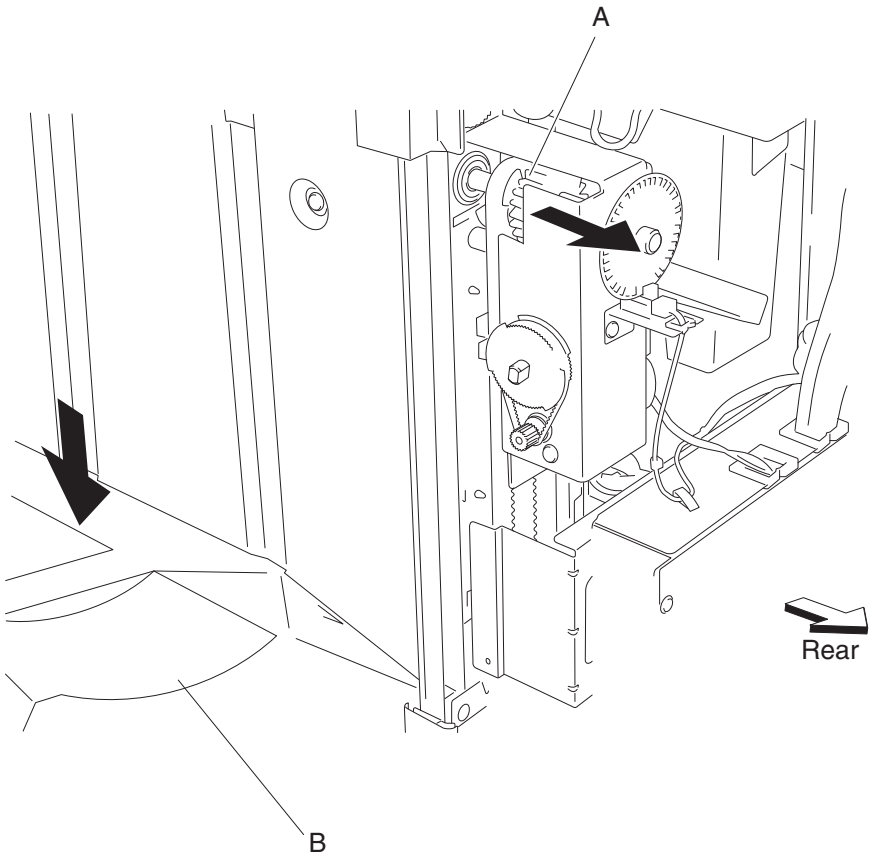
Reinstallation note: When docking the finisher to the printer, make sure the boss on the finisher docking bracket (D) is inserted into the hole on the finisher docking latch assembly (C). The finisher should be firmly locked into position.



Finisher right carriage belt removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
3. Move the slip clutch gear 24T (A) toward the rear to disengage the stacker bin (B).
4. Move the stacker bin (B) to its lowest position.

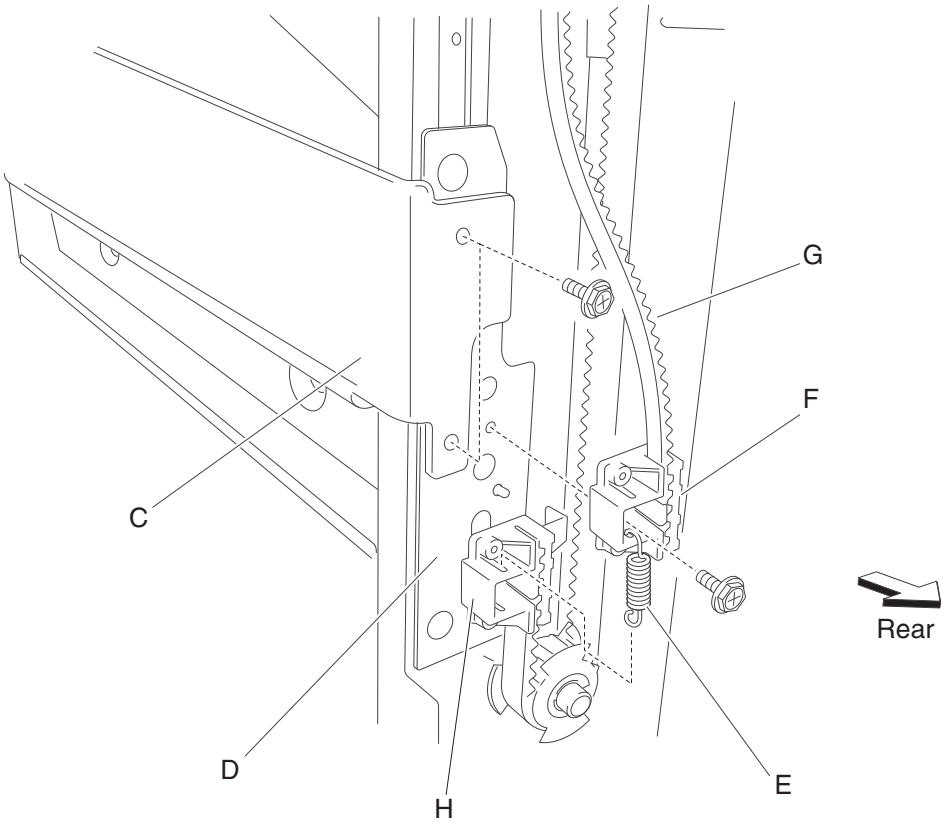
Note: Make sure the stacker bin is at the lowest position before continuing.



5. Remove the two screws securing the bin bracket (C) to the right carriage bracket (D).
6. Remove the spring (E) from the right carriage bracket (D).
7. Remove the screw securing the upper belt clamp (F) to the right carriage bracket (D).
8. Remove the upper belt clamp (F).
9. Remove the right carriage bracket (D) with the finisher right carriage belt assembly (G) from the finisher.
10. Release the hook securing the finisher right carriage belt assembly (G) to the lower belt clamp (H).
11. Remove the finisher right carriage belt assembly (G).

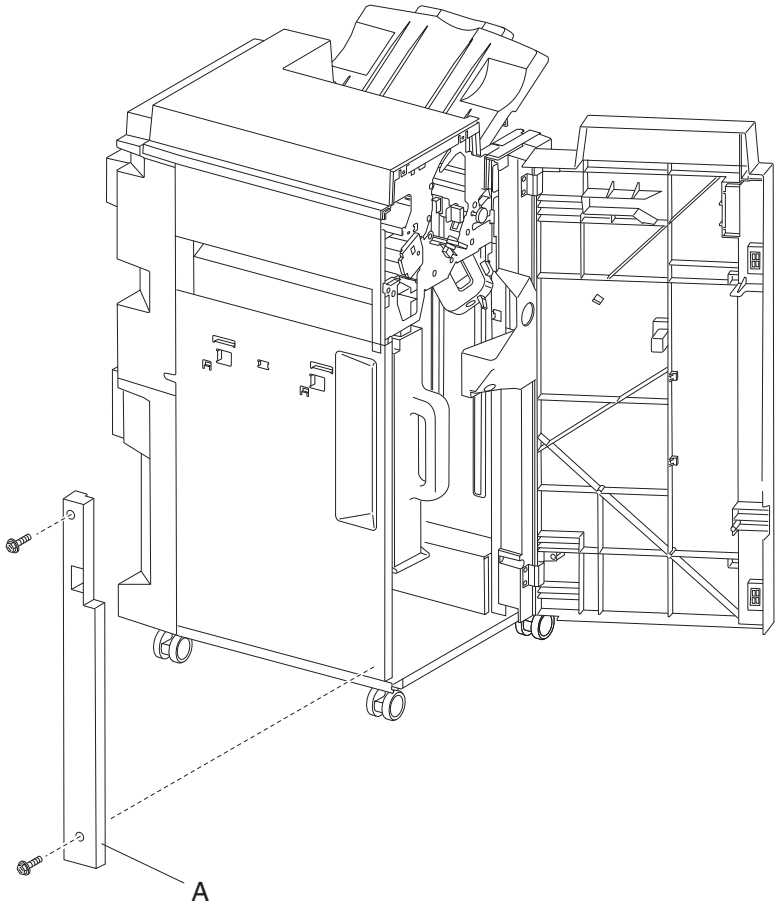
Reinstallation notes:

- Make sure the finisher right carriage belt assembly (G) is inserted into the upper belt clamp (F) as shown.
- Make sure the bin bracket (C) is level to prevent binding.



Left lower cover removal

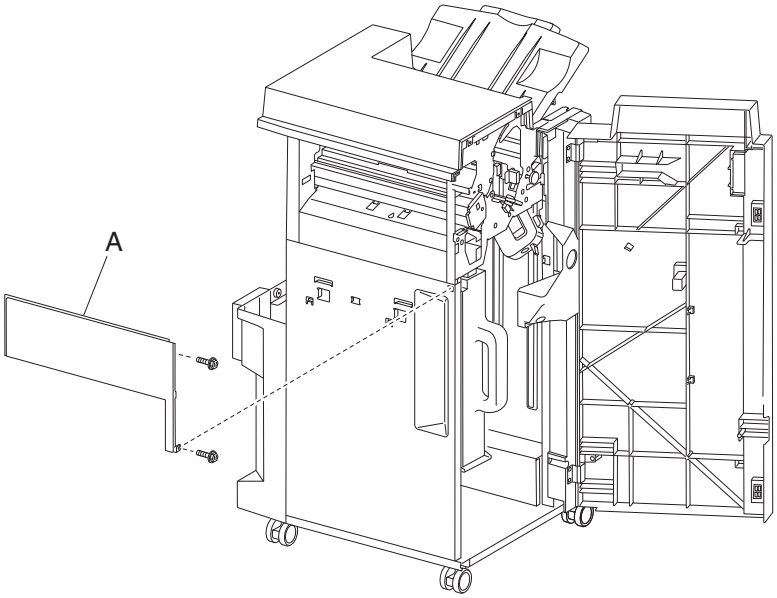
1. Open the finisher front door assembly.
2. Remove the two screws securing the left lower cover (A).



3. Remove the left lower cover (A).

Left upper cover removal

1. Open the finisher front door assembly.
2. Remove the two screws securing the left upper cover (A).

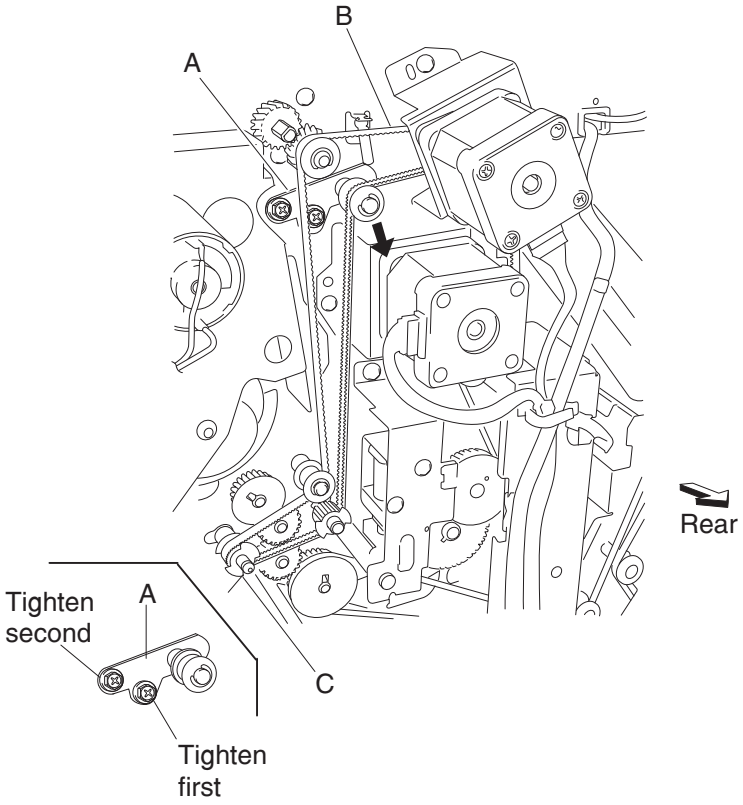


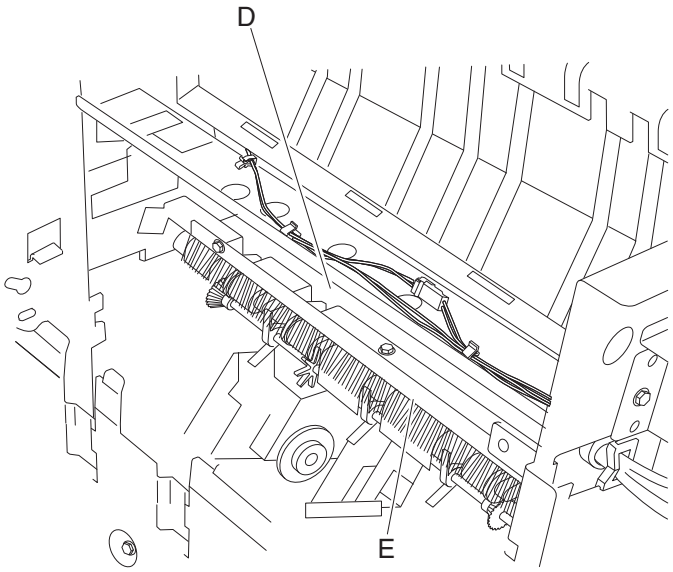
3. Remove the left upper cover (A).

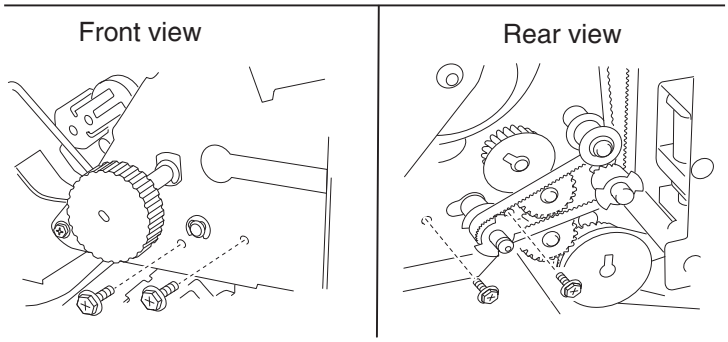
Lower media exit roll assembly removal

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-355**.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
4. Remove upper media bin vertical cover. See **“Right eject cover removal” on page 4-388**.
5. Remove the rear lower cover. See **“Upper media bin front cover removal” on page 4-430**.
6. Remove the stapler unit frame. See **“Stapler unit frame removal” on page 4-419**.
7. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
8. Remove the upper media bin vertical cover. See **“Right eject cover removal” on page 4-388**.
9. Remove the stapler unit frame. See **“Stapler unit frame removal” on page 4-419**.
10. Remove the media eject clamp motor assembly. See **“Clamp drive motor removal” on page 4-347**.
11. Remove the media eject unit assembly. See **“Media eject unit assembly removal” on page 4-377**.
12. Remove the media compiler unit assembly. See **“Media compiler unit assembly removal” on page 4-372**.
13. Remove the media eject clutch. See **“Media eject clamp clutch removal” on page 4-375**.
14. Remove the media eject motor assembly. See **“Media eject motor assembly removal” on page 4-376**.
15. Remove the media eject shaft assembly. See **“Eject roll shaft removal” on page 4-349**.
16. Remove the main paddle shaft assembly. See **“Paddle shaft removal” on page 4-381**.
17. Loosen the two screws securing the belt tensioner bracket (A) to the finisher, and move the bracket down in the direction of the arrow.

18. Remove the belt (exit) (B) from the lower exit roll drive pulley 20T (C).

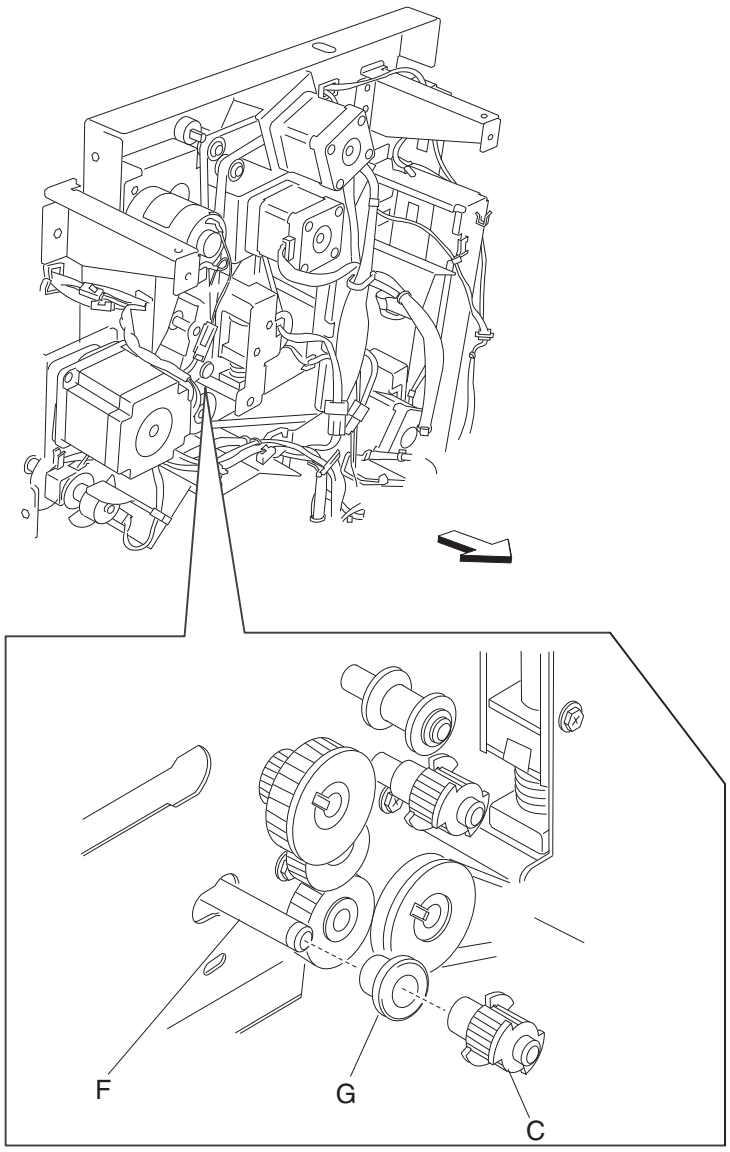






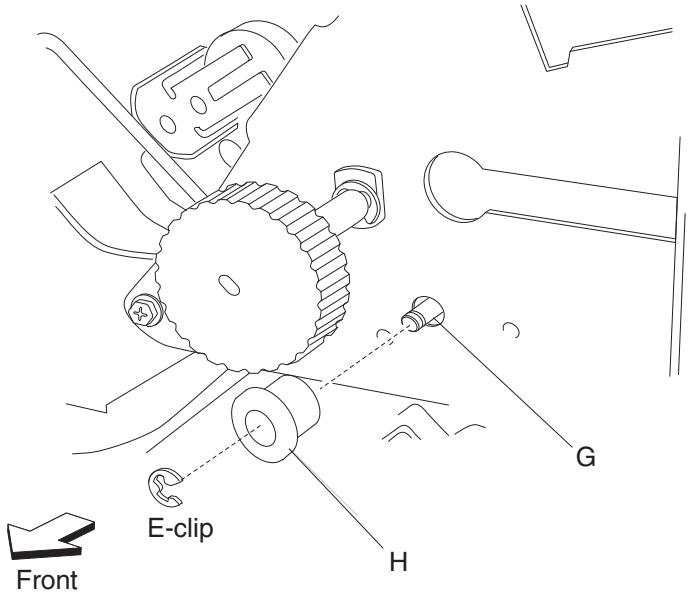
19. Release the hook of the lower exit roll drive pulley 20T (C) from the lower media exit roll assembly (F).
20. Remove the lower exit roll drive pulley 20T (C).

21. Remove the 6 mm ball bearing (G).

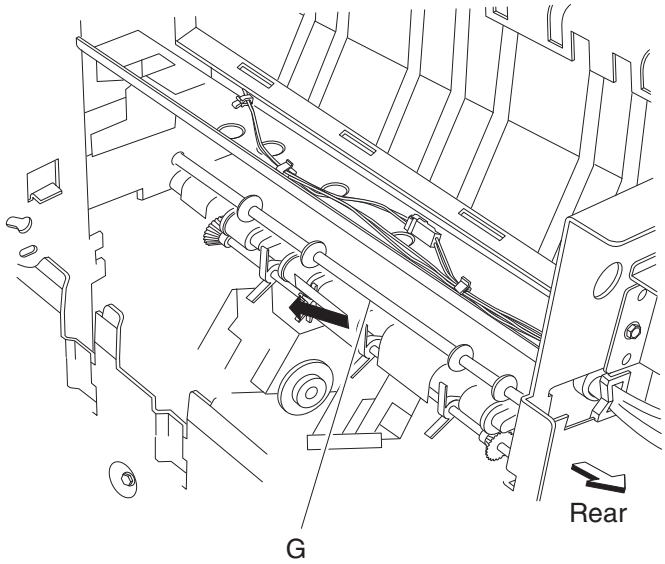


22. Use a prying tool to remove the e-clip on the front of the finisher securing the lower media exit roll assembly (F) to the finisher.

23. Remove the 6 mm bushing (H).



24. Move the lower media exit roll assembly (F) towards the rear and outward, as shown.

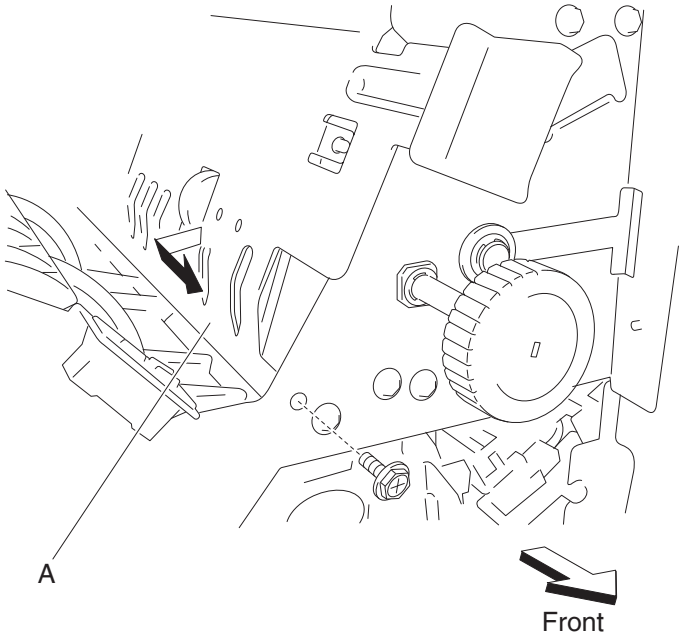


25. Remove the lower media exit roll assembly (F).

Lower pinch guide assembly removal

1. Open the finisher front door assembly.
2. Open the lower pinch guide assembly (A) by lifting it upward.
3. Remove the screw securing the lower pinch guide assembly (A) to the finisher.

4. Move the lower pinch guide assembly (A) upward and outward.

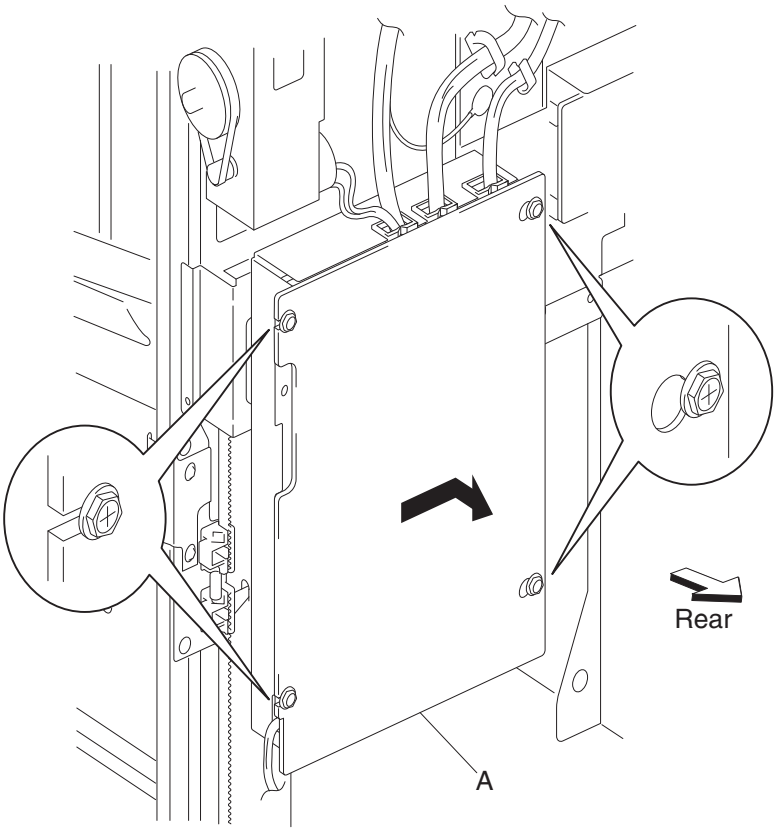


5. Remove the lower pinch guide assembly (A).

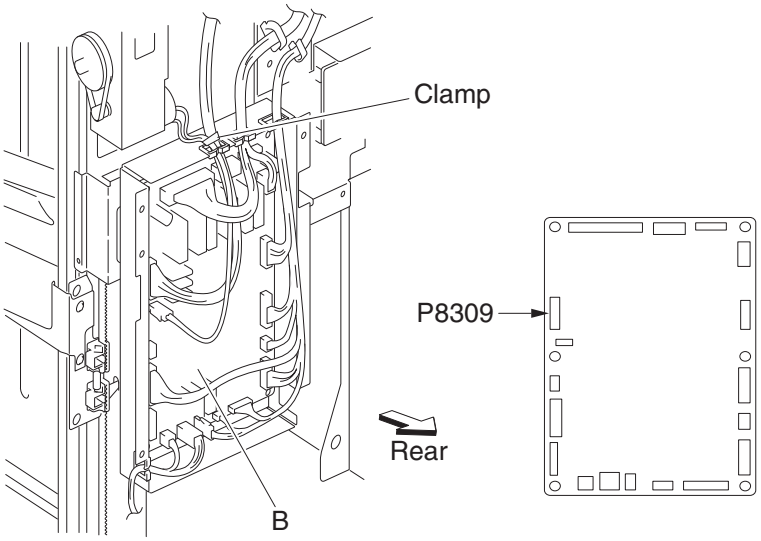
Media compiler unit assembly removal

1. Remove the finisher front door assembly. See**“Finisher front door assembly removal” on page 4-355**.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the rear lower cover. See **“Upper media bin front cover removal” on page 4-430**.
4. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
5. Remove the upper media bin vertical cover. See **“Right eject cover removal” on page 4-388**.
6. Remove the stapler unit frame. See **“Stapler unit frame removal” on page 4-419**.
7. Remove the media eject clamp motor assembly. See **“Clamp drive motor removal” on page 4-347**.
8. Remove the media eject unit assembly. See **“Media eject unit assembly removal” on page 4-377**.
9. Remove the media eject motor assembly. See **“Media eject motor assembly removal” on page 4-376**.
10. Loosen the four screws securing the plate (A) to the finisher.

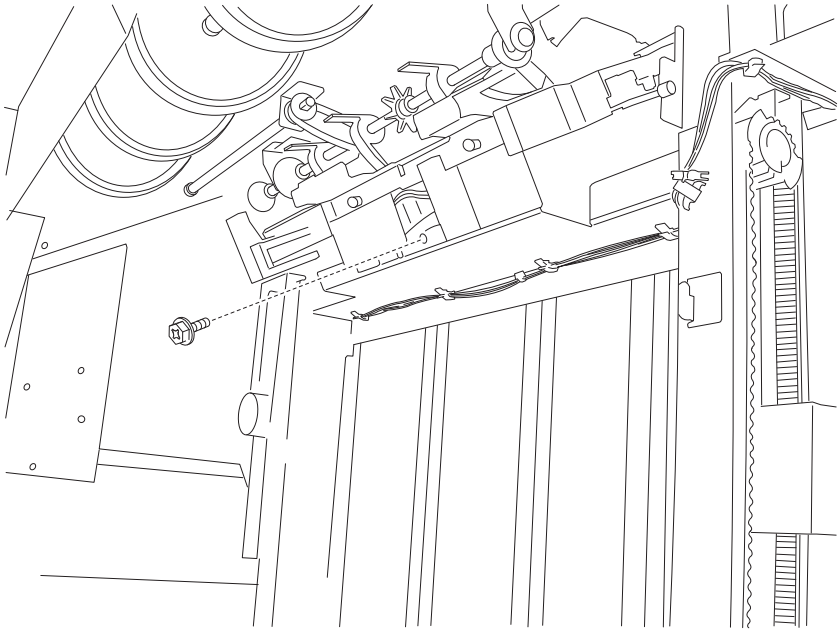
11. Move the plate to the right and outward.



12. Remove the plate.
13. Disconnect the connector P8309 from the finisher controller card assembly (B).
14. Release the harness from the clamps.

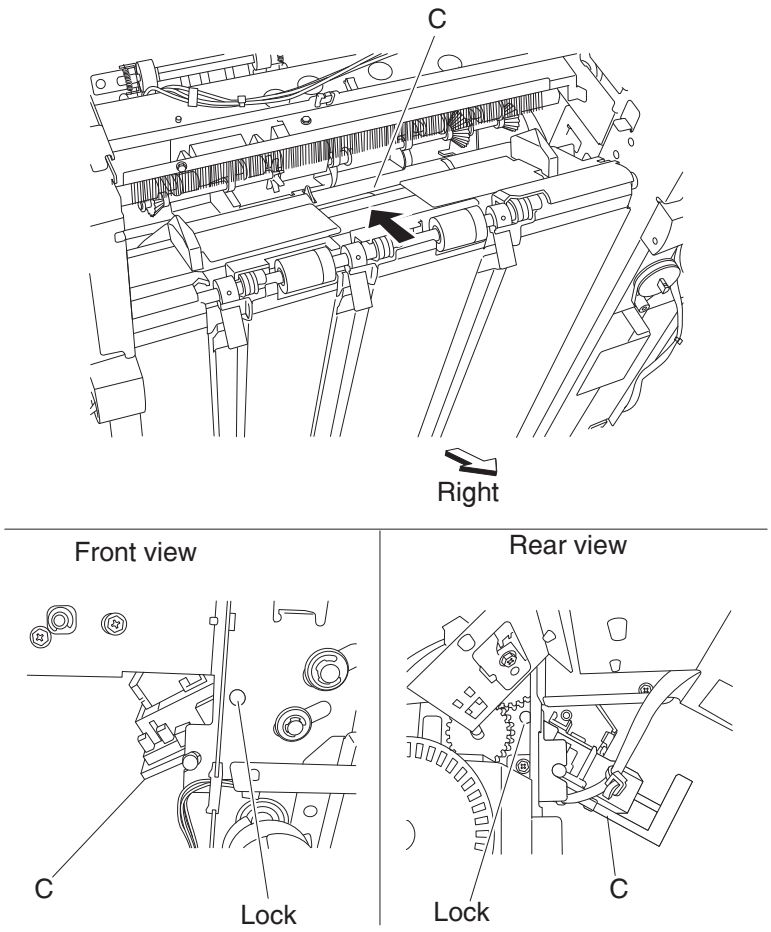


15. Remove the screw securing the media compiler unit assembly (C) to the finisher. This screw is found inside the finisher.



Inside view

16. Release the media compiler assembly (C) by pushing the front lock and the rear lock inward to release the front boss and the rear boss from the finisher.

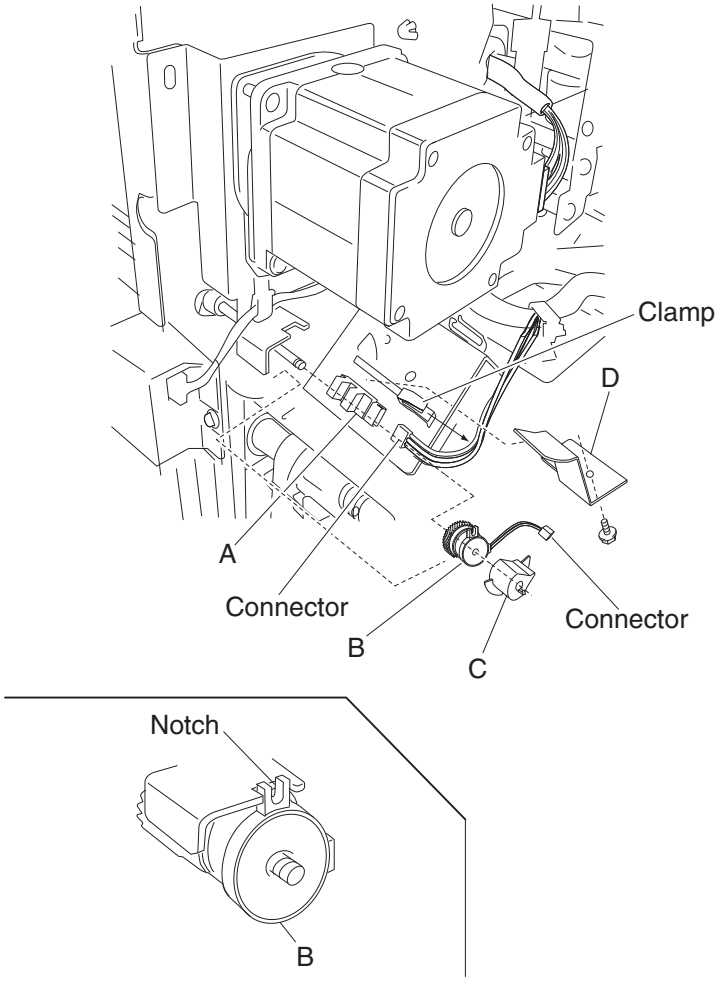


17. Remove the harness from any additional parts.
18. Remove the media compiler unit assembly through the inside of the finisher and out the front.

Media eject clamp clutch removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
2. Disconnect the connector from the sensor (media eject shaft HP) (A).
3. Release the harness from the clamp.
4. Disconnect the connector from the media eject clutch (B).
5. Release the harness from the clamp.
6. Release the hook securing the media eject clutch actuator (C) to the media eject clutch (B).

7. Remove the screw securing the spring clamp (D) to the finisher.



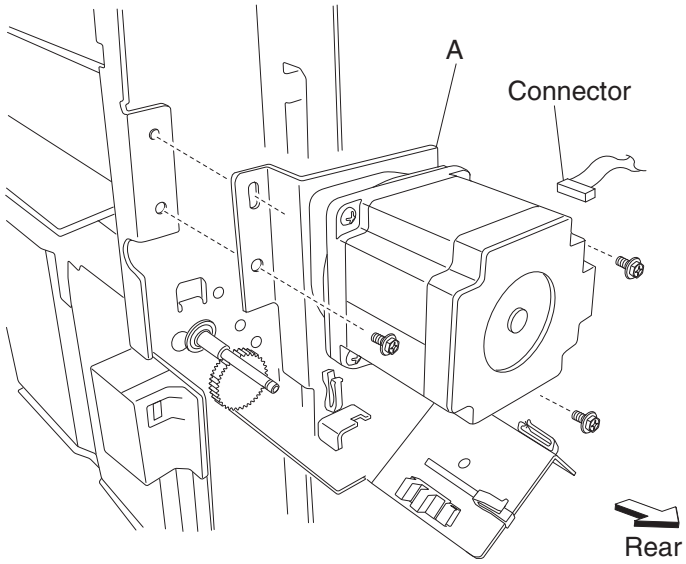
8. Remove the spring clamp (D).
9. Remove the media eject clutch actuator (C).
10. Remove the media eject clamp clutch (B).

Installation note: Make sure the hook on the media eject clamp clutch is placed in the notch of the bracket.

Media eject motor assembly removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Remove the media eject clutch. See **"Media eject clamp clutch removal" on page 4-375**.
3. Disconnect the connector from the media eject motor assembly (A).
4. Disconnect the connector from the sensor (media bin level 2) (B).

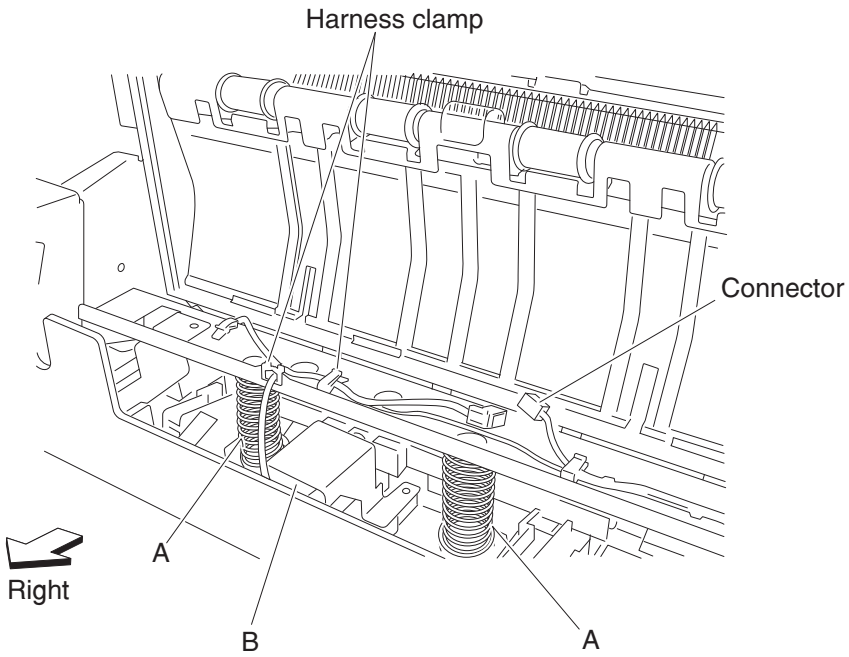
5. Remove the three screws securing the media eject motor assembly (A).



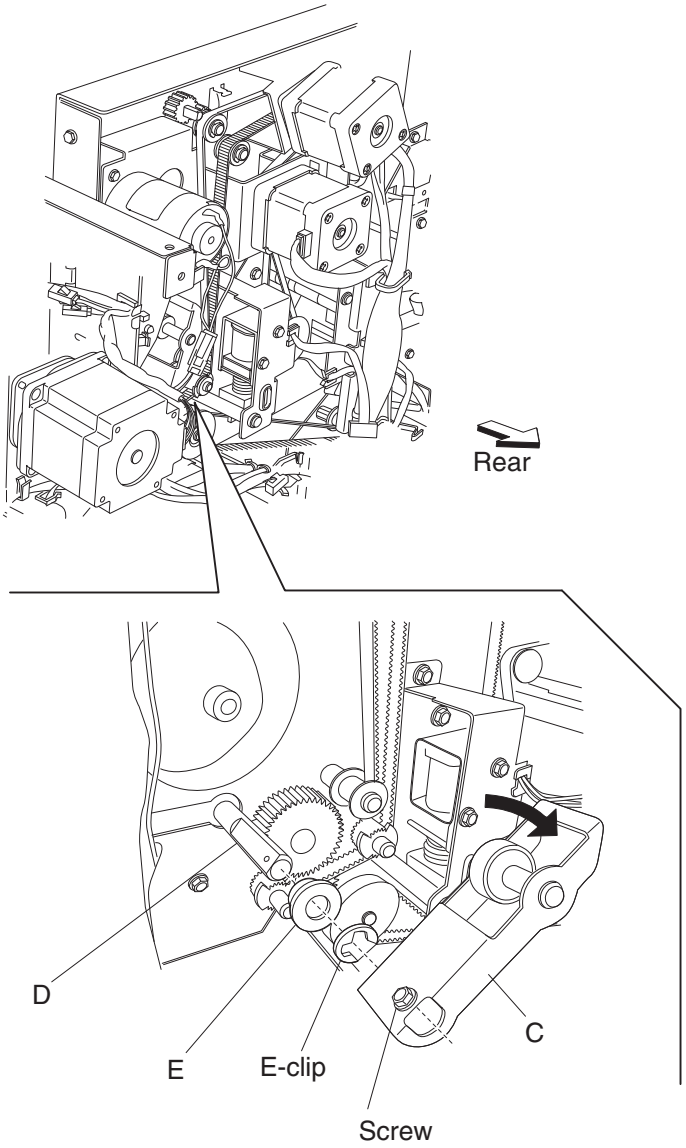
6. Remove the media eject motor assembly (A).
7. Remove any remaining harnesses from the clamps.

Media eject unit assembly removal

1. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
4. Remove the upper media bin vertical cover. See **"Right eject cover removal" on page 4-388**.
5. Remove the two media eject unit springs (A) by pushing them downward.
6. Disconnect the connector from the eject unit solenoid (B).
7. Release the harness from the two clamps.

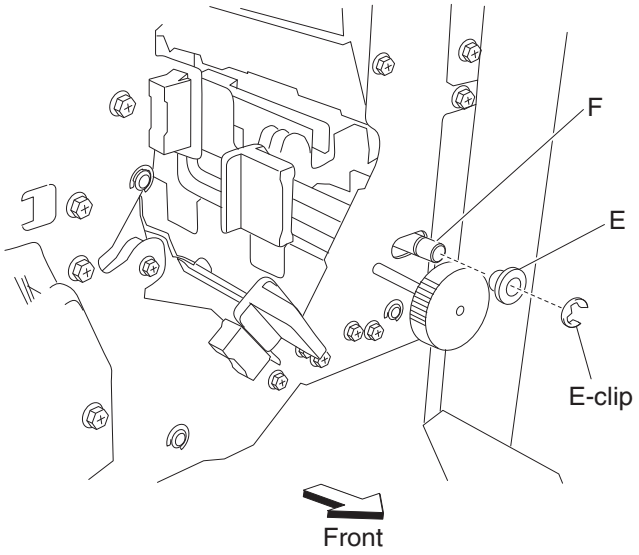


8. Remove the screw securing the eject clamp lever assembly (C) from the shaft (D) on the rear of the finisher.
9. Remove the eject clamp lever assembly (C).
10. Remove the e-clip securing the shaft (D) to the rear of the finisher.
11. Remove the 8 mm bushing (E) on the rear side.



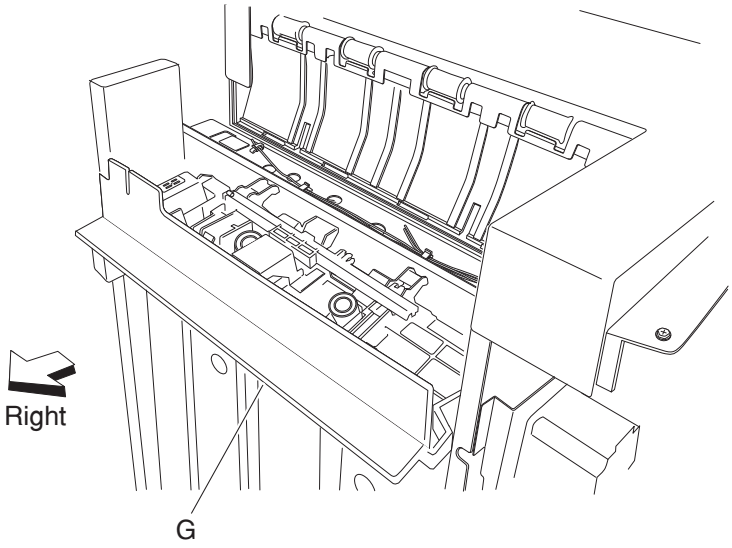
12. Remove the e-clip securing the shaft (F) to the front of the finisher.

13. Remove the 8 mm bushing (E) on the front side.



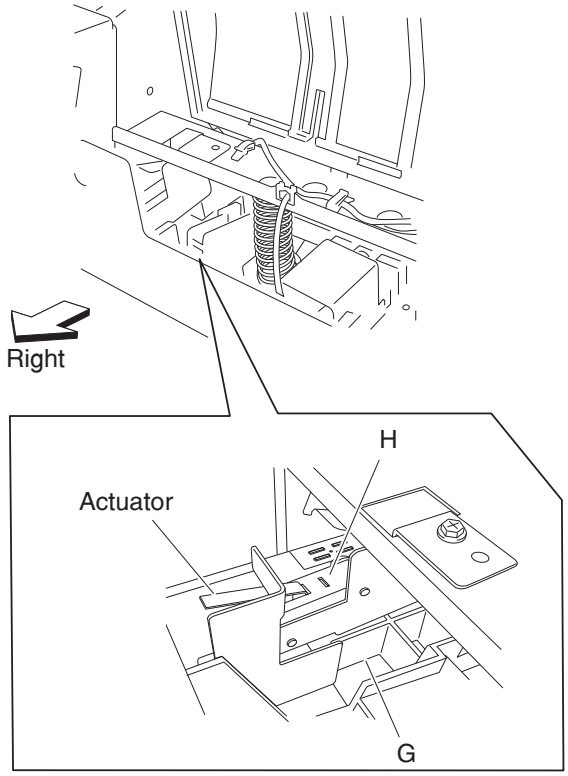
14. Gently move the left side of the media eject unit assembly (G) out of the finisher followed by the right side.
Note: Do not force the media eject unit assembly out of the finisher. Remove the left side before the right side.

Note: Tilting the media eject unit assembly slightly may make the removal easier.



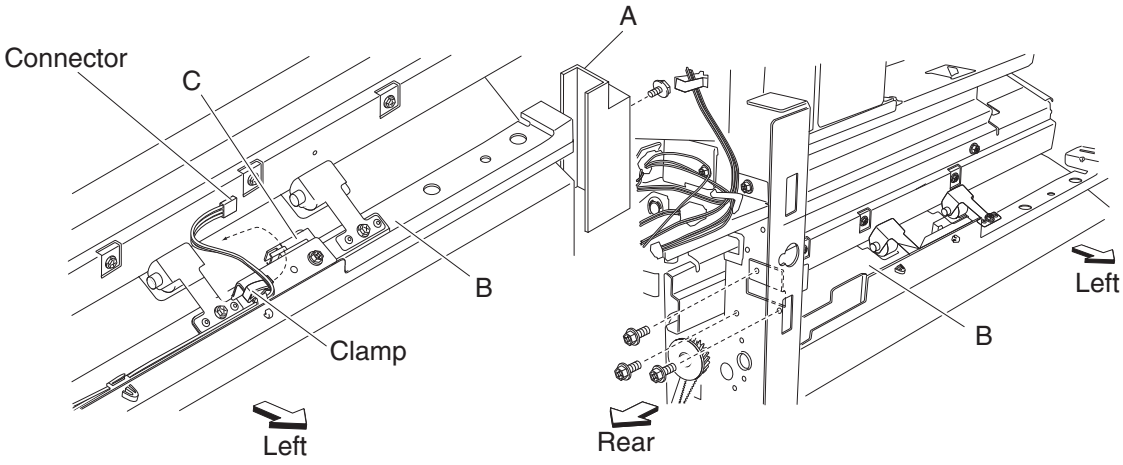
15. Remove the media eject unit assembly.
- Do not force the media eject unit assembly into the finisher. Insert the right side before the left side.

- Make sure the media eject unit assembly properly actuates the switch (eject cover interlock) (H) without binding.



Media entrance pinch guide assembly removal

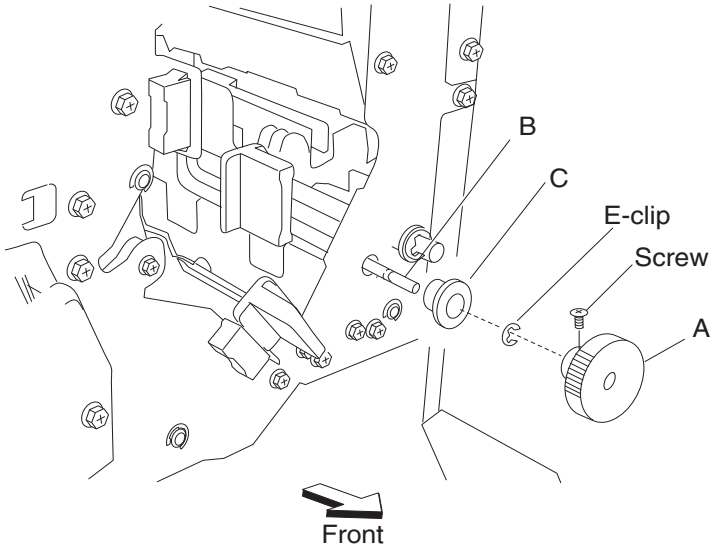
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the left lower cover. See **"Left lower cover removal" on page 4-366**.
4. Remove the left upper cover. See **"Left upper cover removal" on page 4-367**.
5. Remove the screw securing the cover (A) to the media entrance pinch guide assembly (B).
6. Remove the cover (A).
7. Disconnect the connector from the sensor (finisher media entrance) (C).
8. Release the harness from the clamps.
9. Remove the three screws securing the media entrance pinch guide assembly (B).



10. Remove the entrance pinch guide assembly (B) from the finisher.

Paddle shaft removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the media eject unit assembly. See **“Media eject unit assembly removal” on page 4-377**.
4. Loosen the screw securing the knob (A) to the paddle shaft (B) on the front of the finisher.
5. Remove the knob (A).
6. Remove the one e-clip securing the paddle shaft (B).
7. Remove the bushing (C).

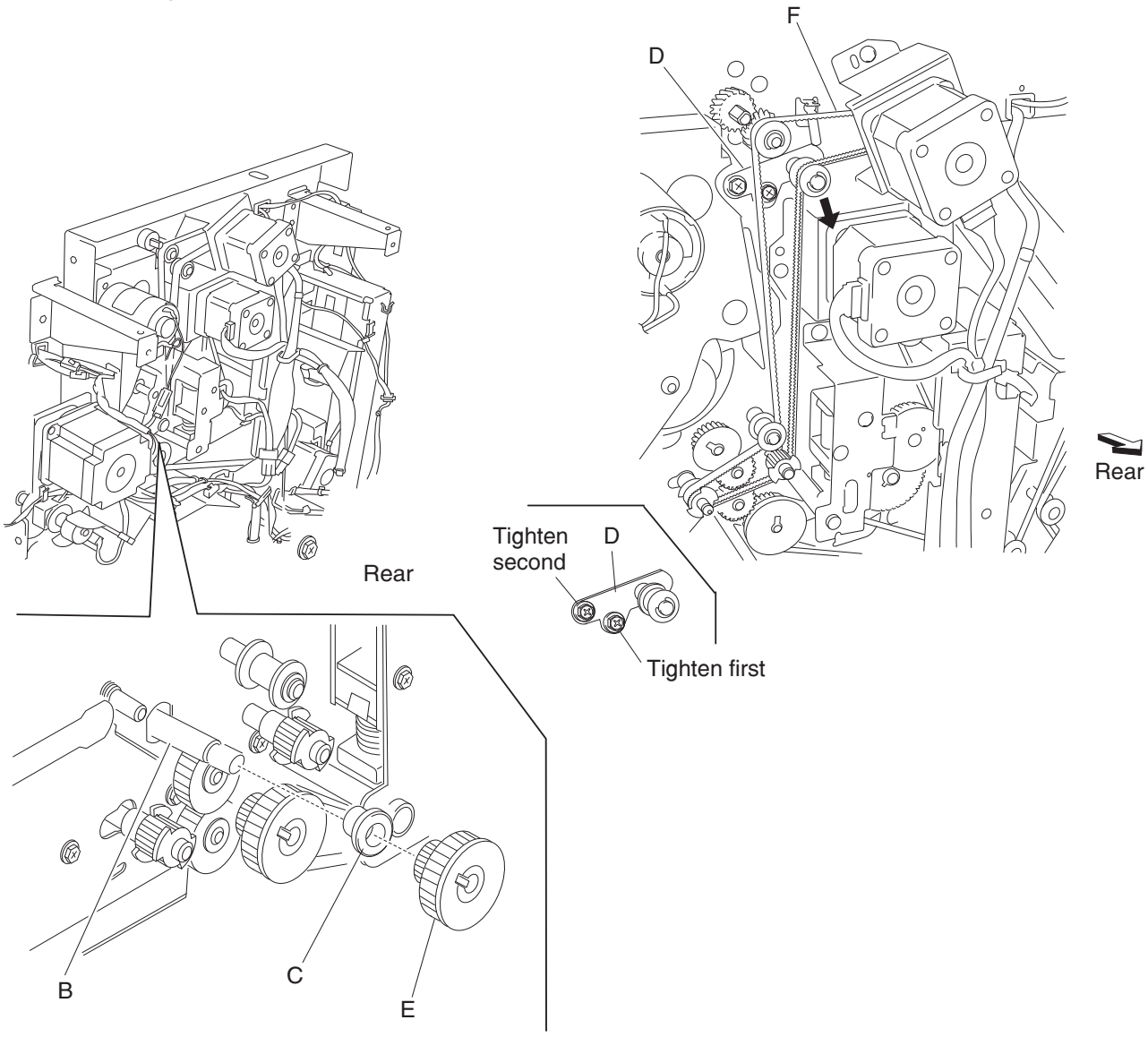


8. Loosen the two screws securing the belt tensioner bracket (D) to the rear of the finisher.
9. Release the hook of the sub paddle drive gear 23T (E) from the paddle shaft (B).
10. Remove the sub paddle drive gear 23T (E).
11. Remove the e-clip and the 6 mm bushing (C).
12. Move the paddle shaft (B) toward the rear of the finisher and outward.
13. Remove the paddle shaft (B).

Reinstallation notes:

- The tension of the belt (exit) (F) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (D).

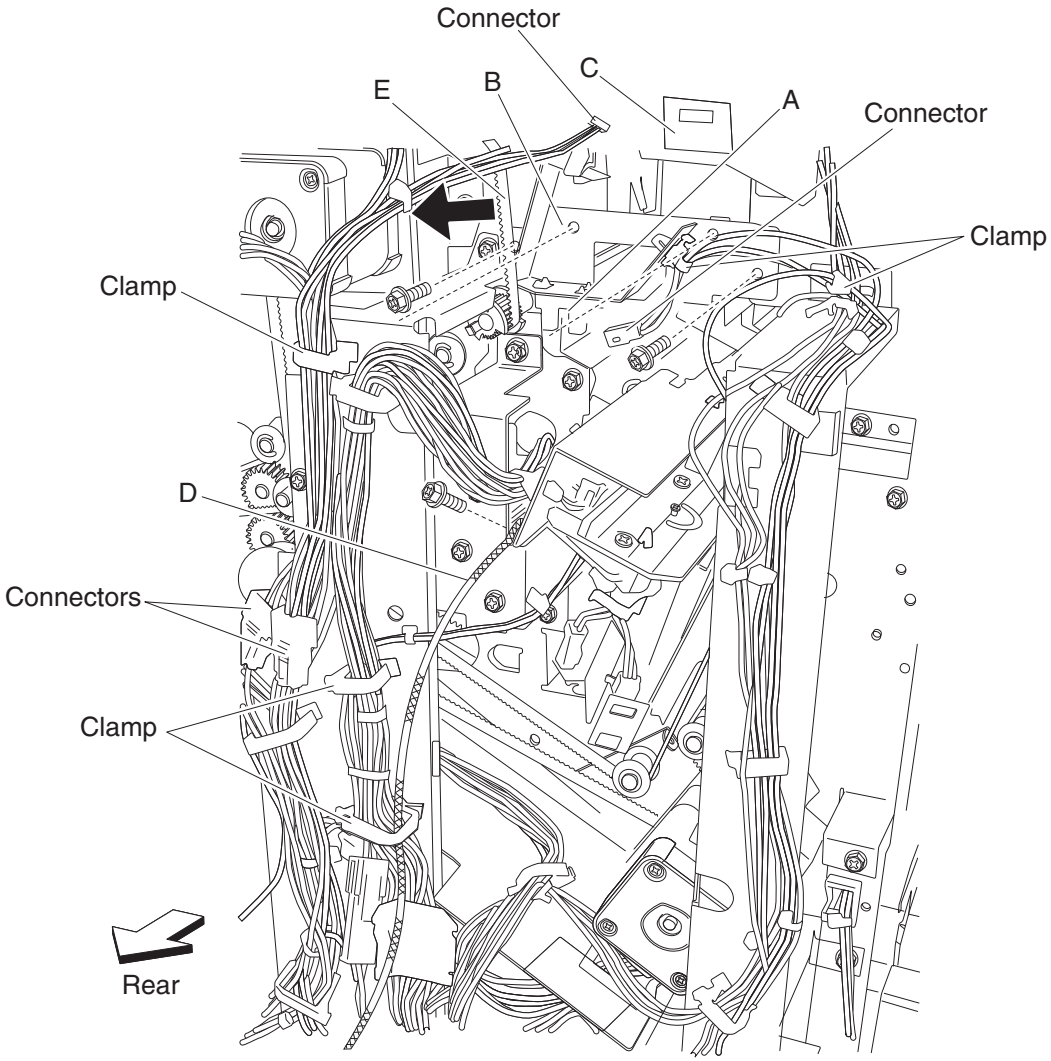
- Tighten the two screws in the order shown.



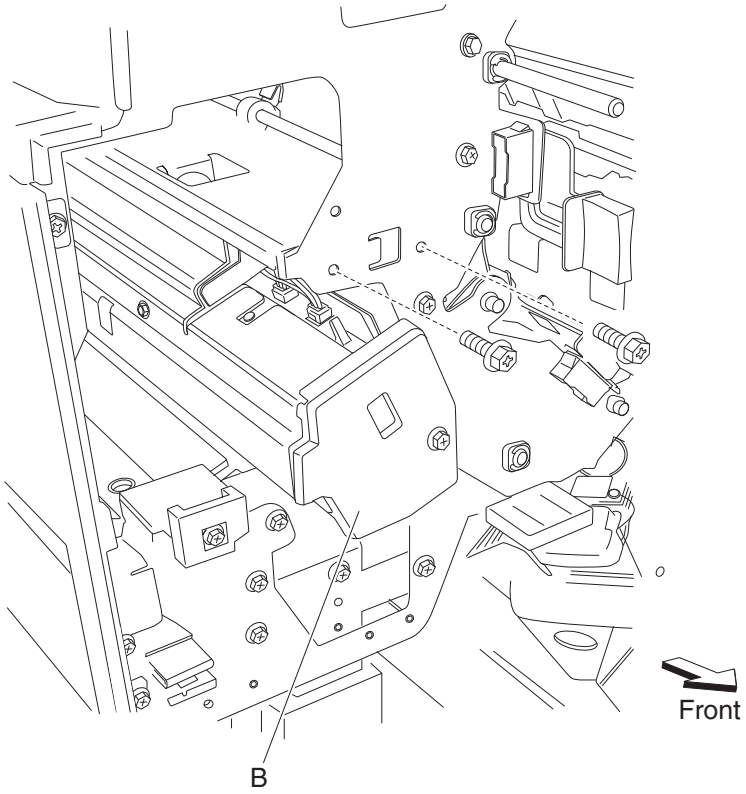
Punch carriage assembly removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
4. Remove the connector from the sensor (punch carriage shift HP) (A).
5. Remove the top cover. See **"Top cover removal" on page 4-428**.
6. Release the harness from the punch carriage assembly (B).
7. Remove the connector from the punch carriage shift motor assembly (C).
8. Release the two punch unit assembly harnesses from the three clamps on the rear of the finisher.
9. Disconnect the two punch unit assembly harnesses from the main harness.
10. Remove the screw securing the grounding wire (D) to the punch unit carriage assembly (B).

11. Remove the two screws on the rear securing the punch carriage assembly (B) to the finisher.



12. Remove the two screws on the front securing the punch carriage assembly (B) to the finisher.



13. While moving the belt (buffer/transport) (E) to the left as shown, pull the punch carriage assembly (B) gently out of the rear of the finisher.

Warning: Do not force the punch carriage assembly (B) out of the finisher. Be sure to hold the unit firmly to avoid dropping it.

Reinstallation notes:

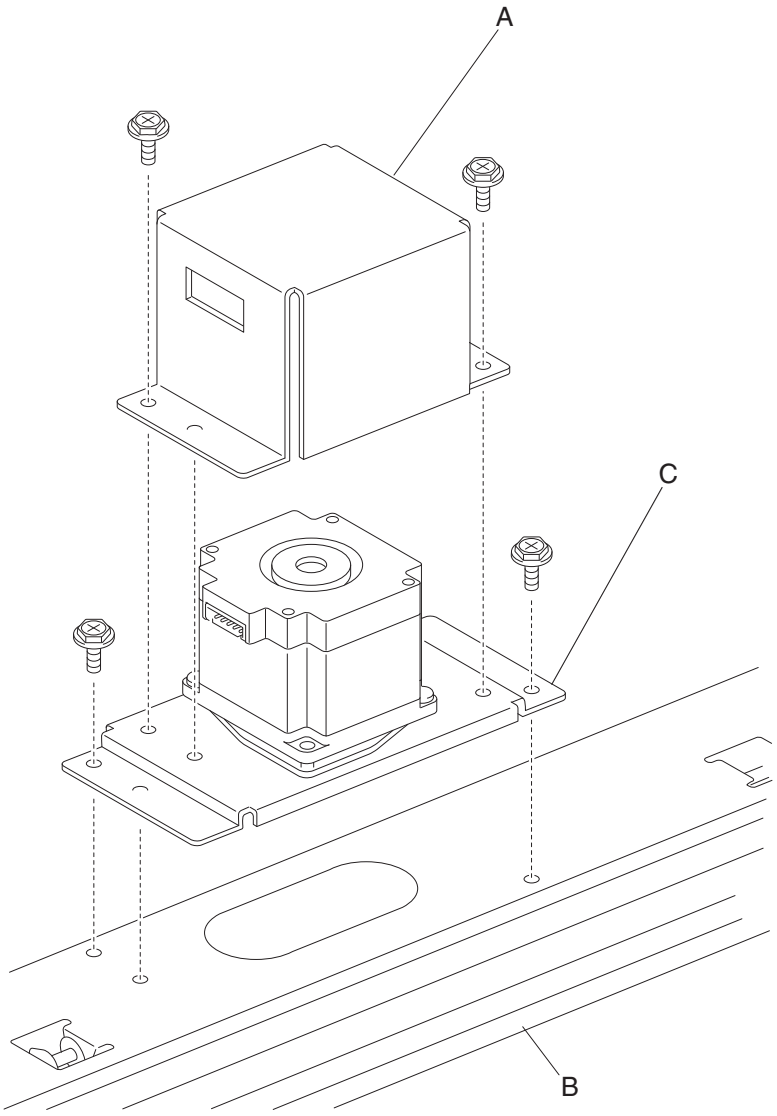
Warning: Make sure the punch carriage assembly is able to shift back and forth completely without binding the harnesses, or damage will occur.

- Do not force the punch unit into the finisher.
- Be sure to hold the punch carriage assembly firmly to avoid dropping it.
- Make sure all harnesses are properly clamped.
- Make sure the harnesses do not come into contact with any rotating mechanisms.

Punch carriage shift motor assembly removal

1. Open the finisher front door assembly.
2. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
3. Remove the top cover. See **“Top cover removal” on page 4-428**.
4. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
5. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-382**.
6. Remove the two screws securing the cover (A) to the punch carriage assembly (B).
7. Remove the cover (A).

8. Remove the two screws securing the punch carriage shift motor assembly (C) to the punch unit assembly (B).

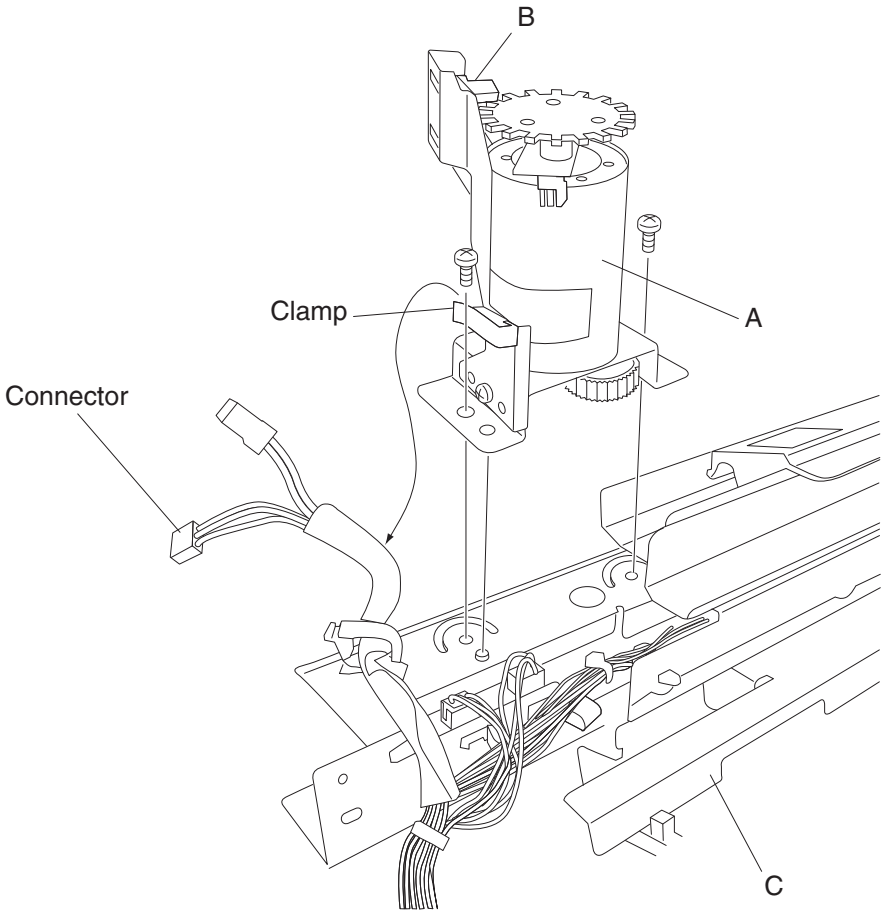


9. Remove the punch carriage shift motor assembly (C).

Punch unit motor assembly removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
4. Remove the connector from the sensor (punch carriage shift HP) (A).
5. Remove the top cover. See **“Top cover removal” on page 4-428**.
6. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-382**.
7. Disconnect the connector from the punch unit motor assembly (A).
8. Disconnect the connector from the sensor (punch unit motor encoder) (B).
9. Remove the harness from the clamp.

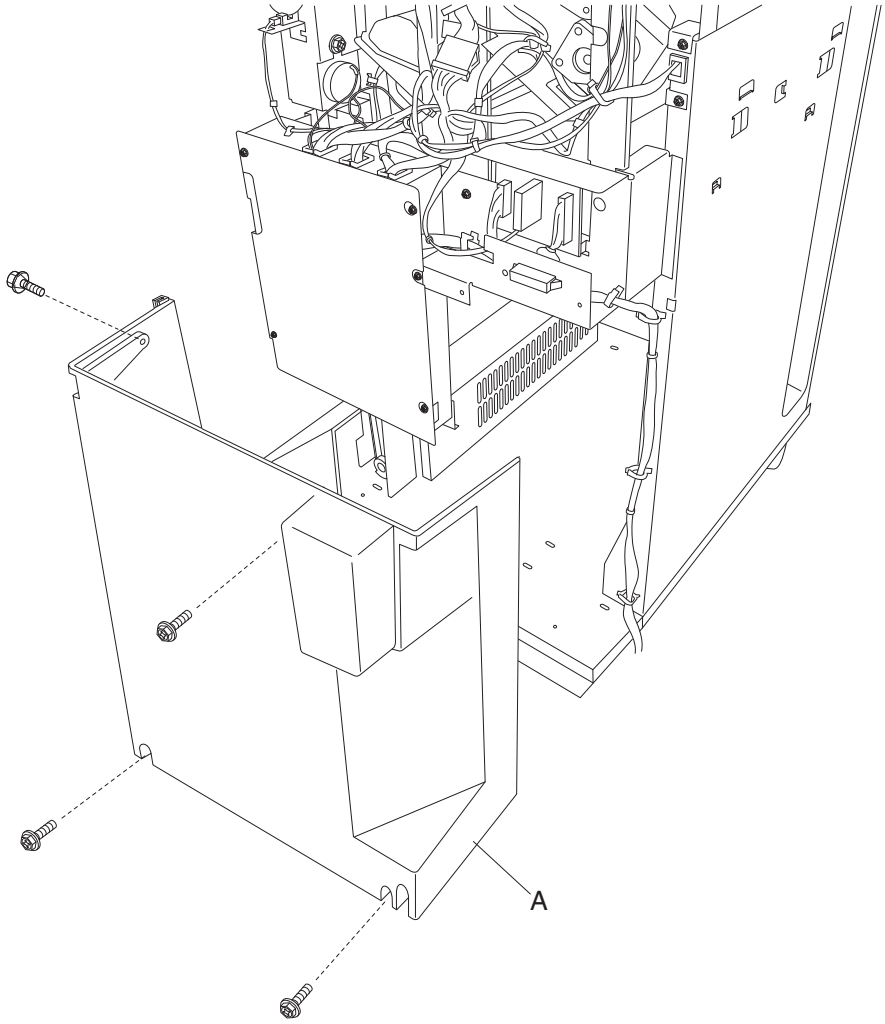
10. Remove the two screws securing the punch unit motor assembly (A) to the punch unit assembly (C).



11. Remove the punch unit motor assembly.

Rear lower cover removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
2. Remove the four screws securing the rear lower cover (A) to the finisher.

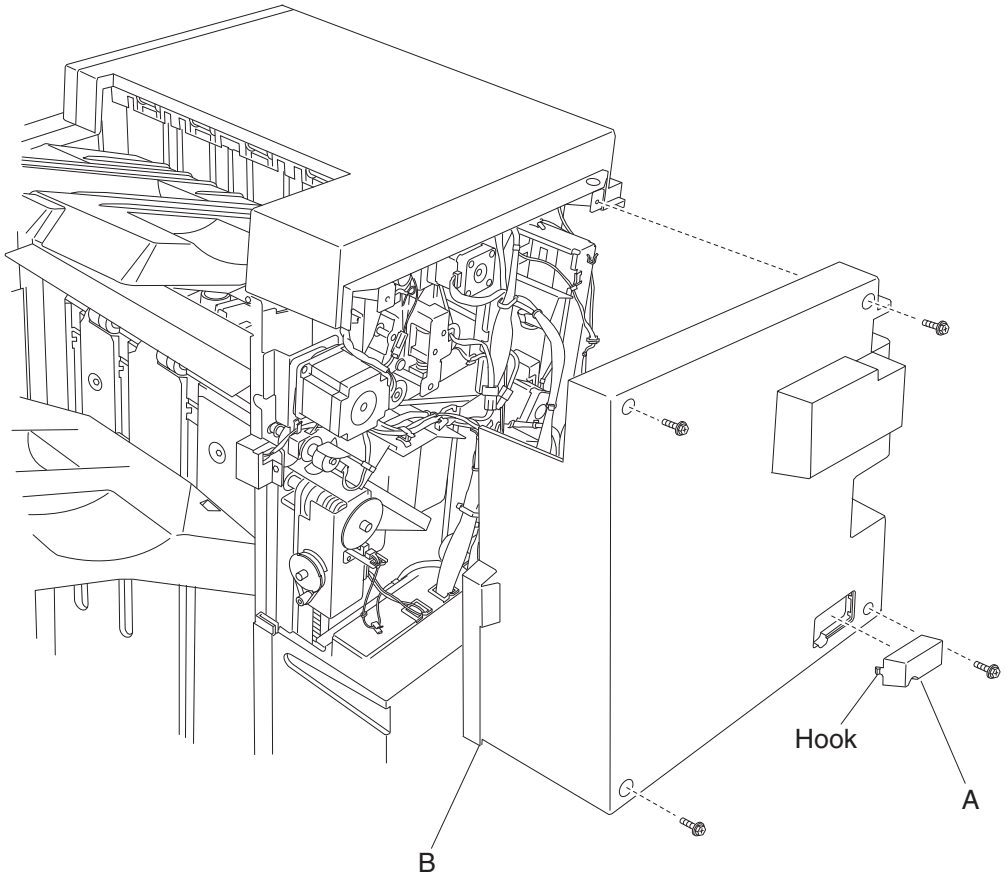


3. Remove the rear lower cover (A).

Rear upper cover removal

1. Release the hook of the bridge unit hookup cover (A) to the finisher.
2. Disconnect the bridge unit harness from the finisher.

3. Remove the four screws securing the rear upper cover (B) to the finisher.

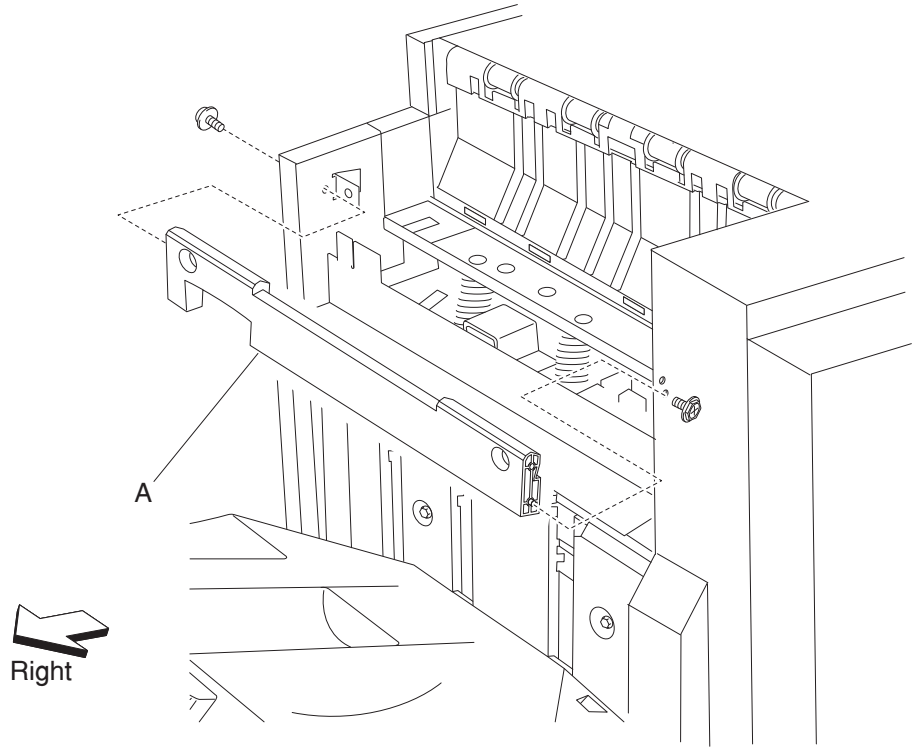


4. Remove the rear upper cover (B).

Right eject cover removal

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-355**.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.

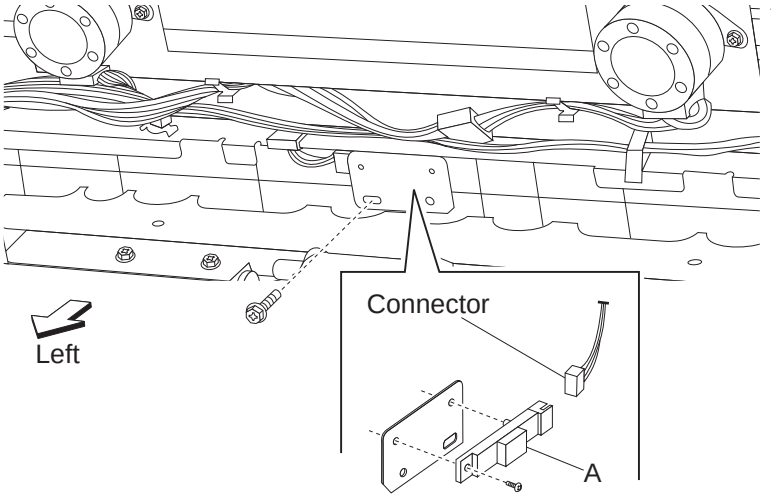
3. Remove the two screws securing the right eject cover (A) to the finisher.



4. Remove the right eject cover (A).

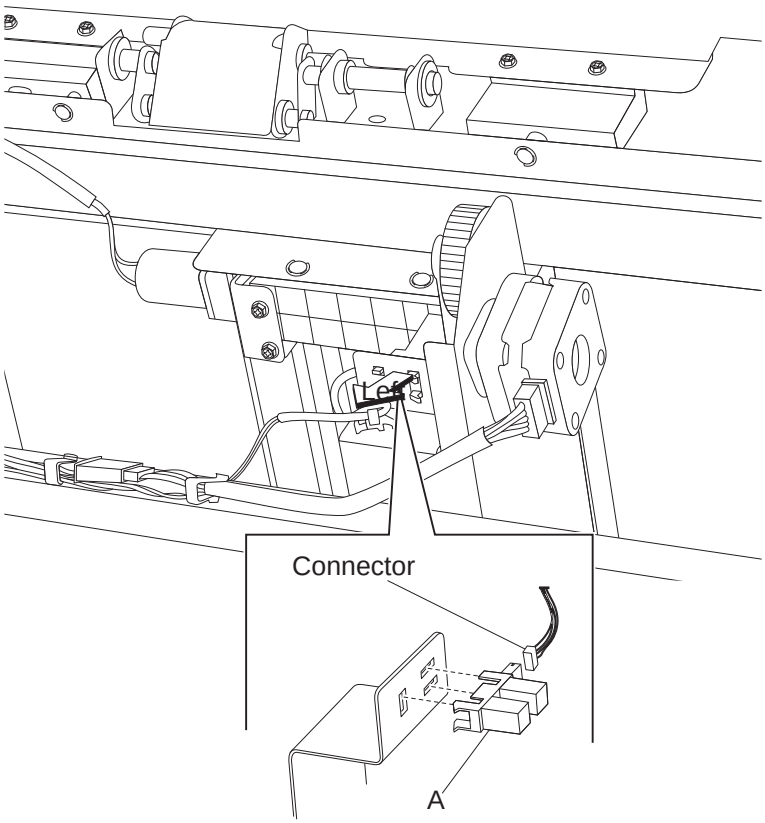
Sensor (booklet compiler media entrance) removal

1. Remove the booklet unit chassis. See **"Booklet unit chassis removal" on page 4-342**.
2. Remove the booklet unit assembly left cover. See **"Booklet unit assembly left cover removal" on page 4-341**.
3. Disconnect the connector from the sensor (booklet compiler media entrance) (A).
4. Remove the screw securing the sensor (booklet compiler media entrance) bracket from the booklet unit chassis.
5. Remove the screw securing the sensor (booklet compiler media entrance) (A) from the bracket.
6. Remove Sensor (booklet compiler media entrance) (A).



Sensor (booklet end guide HP) removal

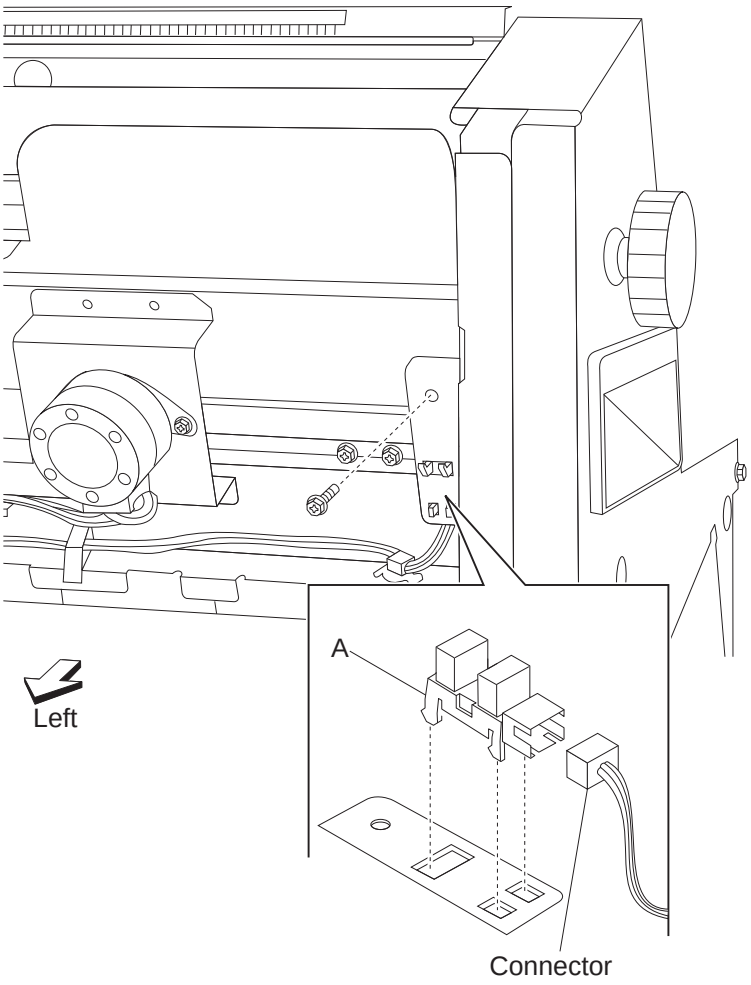
1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
3. Disconnect the connector from the sensor (booklet end guide HP) (A).
4. Release the hooks securing the sensor (booklet end guide HP) (A) from the booklet unit.
5. Remove sensor (booklet end guide HP) (A).



Sensor (booklet front tamper HP) removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
3. Disconnect the connector from the booklet front tamper sensor.
4. Remove the screw securing the sensor (booklet front tamper HP) bracket from the booklet unit assembly.

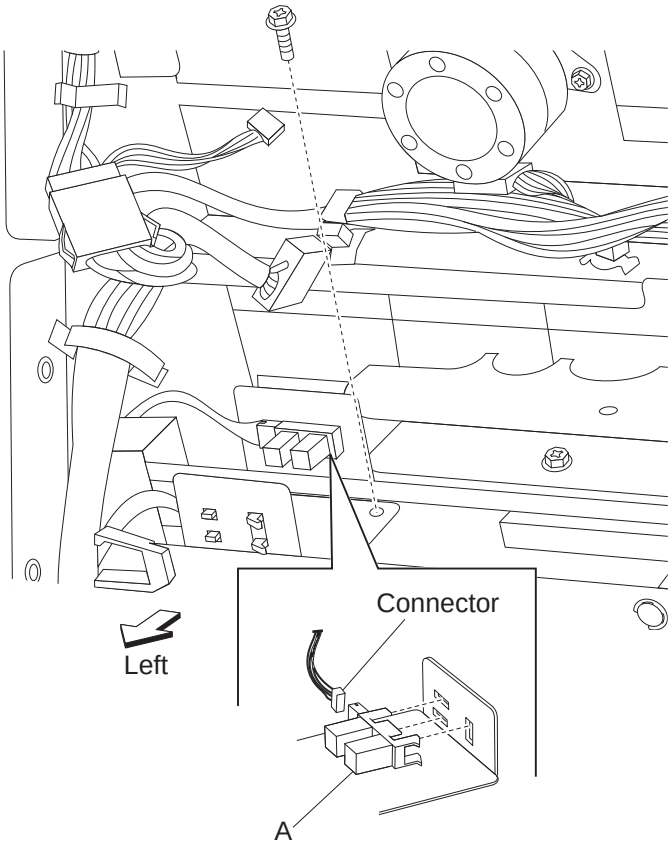
5. Remove sensor (booklet front tamper HP) (A).



Sensor (booklet knife folding) removal

1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
1. Remove the Complete booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
2. Rotate knife sector gear clockwise until the flag is in the folding sensor position.
3. Remove one screw securing the sensor (knife HP sensor & knife folding sensor) from the knife frame assembly.
4. Disconnect the connector from the sensor (booklet knife folding) (A).

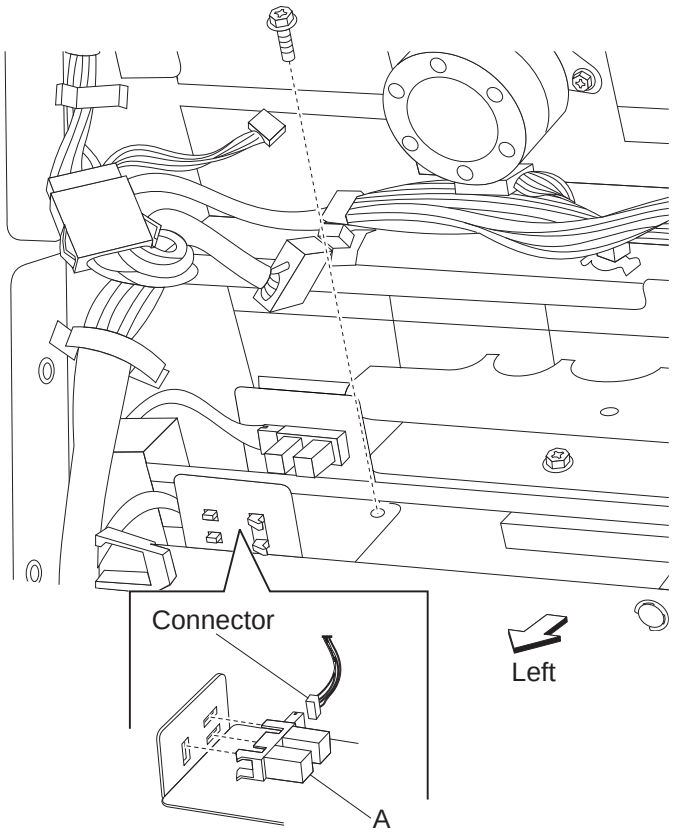
5. Remove sensor (booklet knife folding) (A).



Sensor (booklet knife HP) removal

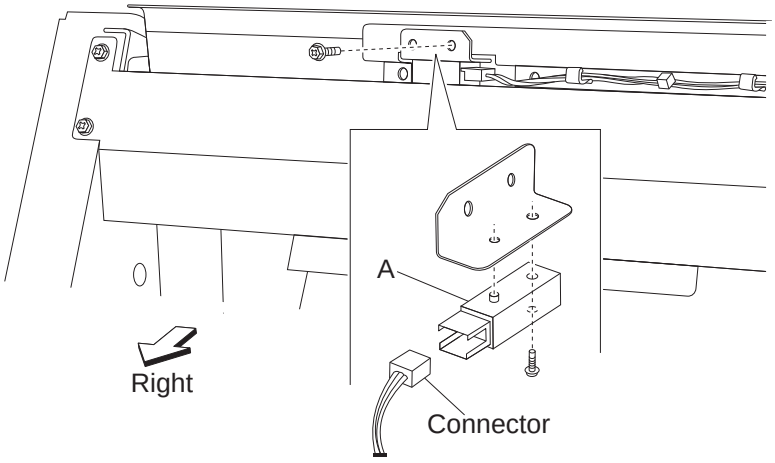
1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
3. Rotate knife sector gear clockwise until the flag is in the folding sensor position.
4. Remove one screw securing the sensor (knife HP sensor & Knife folding sensor) from the knife frame assembly.
5. Disconnect the connector from the sensor (booklet knife HP and booklet knife folding).

6. Remove sensor (booklet knife HP) (A).



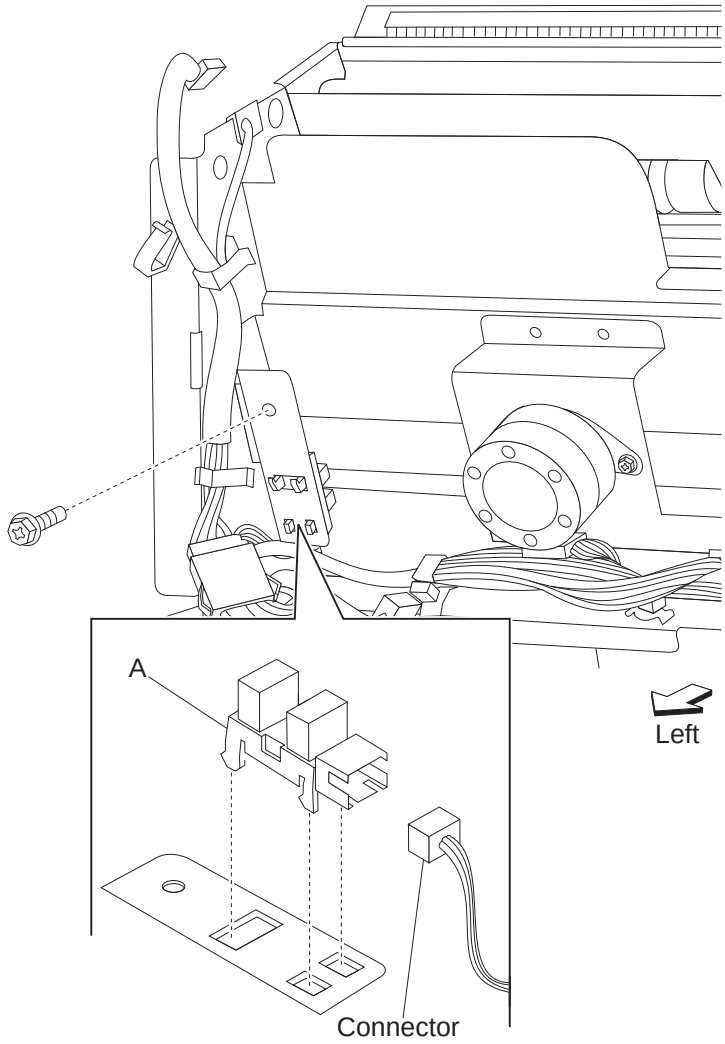
Sensor (booklet media entrance) removal

1. Remove the booklet unit chassis. See **“Booklet unit chassis removal” on page 4-342**.
2. Disconnect the connectors from the sensor (booklet media entrace) (A).
3. Remove the screw securing the sensor (booklet media entrace) bracket from the pinch roll frame.
4. Remove the screw securing the sensor (booklet media entrace) (A) from the bracket.
5. Remove sensor (booklet media entrace) (A).



Sensor (booklet rear tamper HP) removal

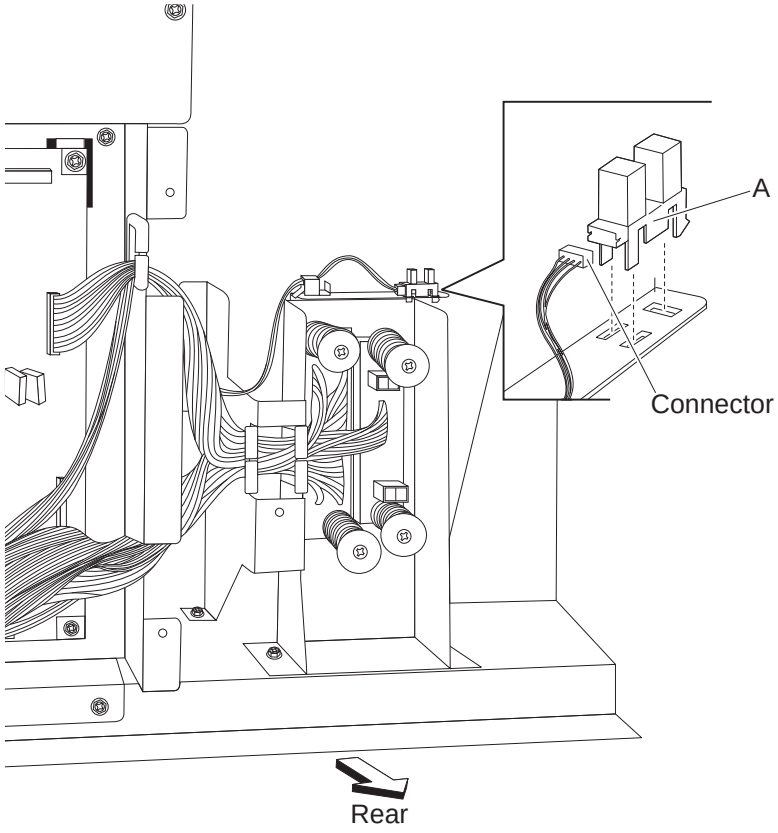
1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
3. Disconnect the connector from the booklet left tamper sensor.
4. Remove the screw securing the sensor (booklet rear tamper HP) bracket from the booklet unit assembly.
5. Remove sensor (booklet rear tamper HP) (A).



Sensor (booklet unit interlock) removal

1. Open the finisher front door assembly.
2. Pull the booklet unit assembly out of the finisher.
3. Remove rear lower cover. See **“Upper media bin front cover removal” on page 4-430**.
4. Disconnect the connector from the sensor (booklet unit interlock).

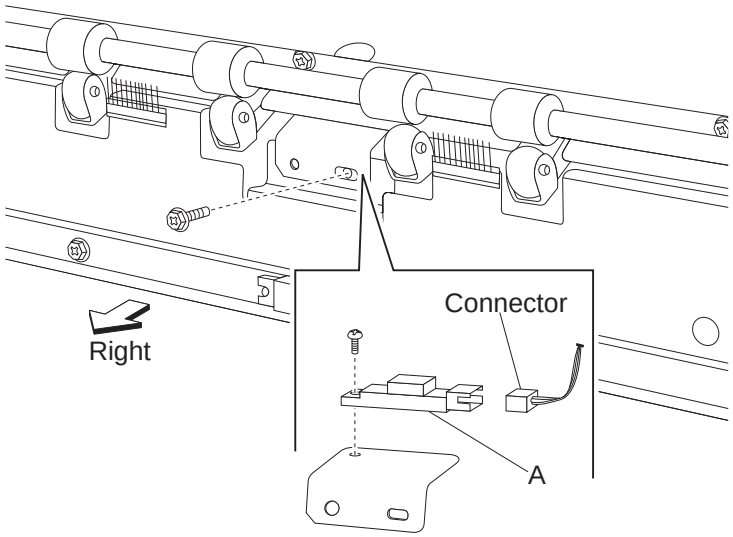
5. Remove sensor (booklet unit interlock) (A).



Sensor (booklet unit media exit) removal

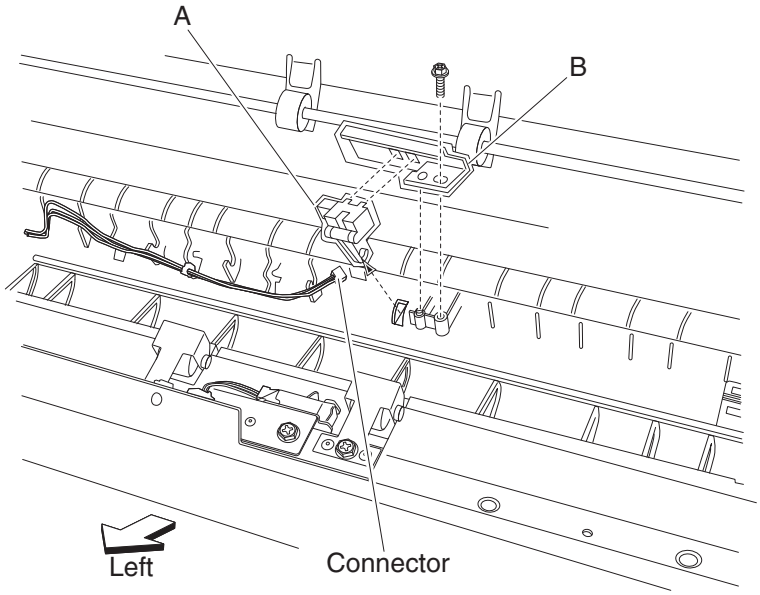
1. Remove the booklet unit assembly. See **“Booklet unit chassis removal” on page 4-342**.
2. Remove the booklet unit assembly left cover. See **“Booklet unit assembly left cover removal” on page 4-341**.
3. Remove the screw securing the Sensor (booklet unit media exit) bracket from the booklet unit assembly.
4. Disconnect the connector from the Sensor (booklet unit media exit) (A).
5. Remove the screw securing the Sensor (booklet unit media exit) (A) from the bracket.

6. Remove Sensor (booklet unit media exit) (A).



Sensor (buffer path) removal

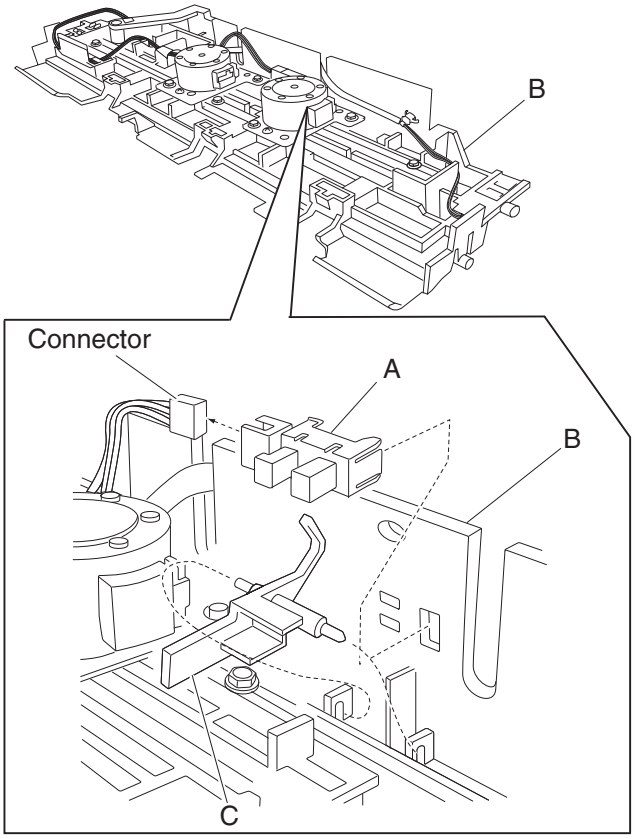
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
4. Remove the top cover. See **“Top cover removal” on page 4-428**.
5. Remove the left lower cover. See **“Left lower cover removal” on page 4-366**.
6. Remove the left upper cover. See **“Left upper cover removal” on page 4-367**.
7. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-382**.
8. Disconnect the connector from the sensor (buffer path) (A).
9. Remove the screw securing the bracket (B) to the finisher.



10. Remove the bracket (B).
11. Release the hooks securing the sensor (buffer path) (A) to the bracket (B).
12. Remove the sensor (buffer path) (A).

Sensor (compiler media present) removal

1. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the rear lower cover. See **"Upper media bin front cover removal" on page 4-430**.
4. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
5. Remove the upper media bin vertical cover. See **"Right eject cover removal" on page 4-388**.
6. Remove the stapler unit frame. See **"Stapler unit frame removal" on page 4-419**.
7. Remove the clamp drive motor. See**"Clamp drive motor removal" on page 4-347**.
8. Remove the media eject unit assembly. See **"Media eject unit assembly removal" on page 4-377**.
9. Remove the media eject motor assembly. See **"Media eject motor assembly removal" on page 4-376**.
10. Remove the media compiler unit assembly. See **"Media compiler unit assembly removal" on page 4-372**.
11. Disconnect the connector from the sensor (compiler media present) (A).
12. Release the hooks securing the sensor (compiler media present) (A) to the compiler unit assembly (B).
13. Move the compiler media present actuator (C) downward as shown.

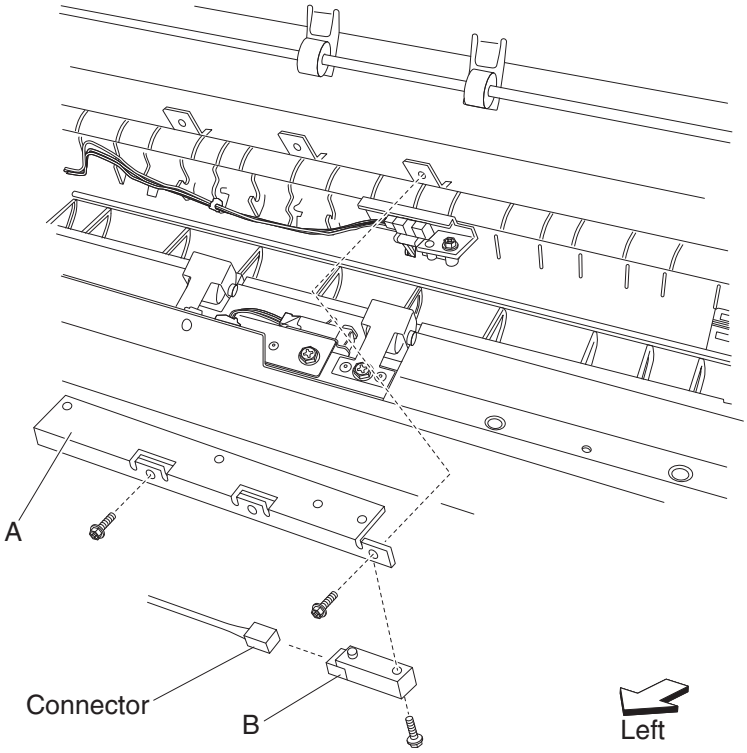


14. Remove the sensor (compiler media present) (A).

Sensor (diverter gate) removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
4. Remove the top cover. See **"Top cover removal" on page 4-428**.
5. Remove the left lower cover. See **"Left lower cover removal" on page 4-366**.
6. Remove the left upper cover. See **"Left upper cover removal" on page 4-367**.
7. Remove the punch carriage assembly. See **"Punch carriage assembly removal" on page 4-382**.

8. Remove the two screws securing the bracket (A) to the finisher.
9. Remove the bracket (A).
10. Disconnect the connector from the sensor (diverter gate) (B).
11. Remove the screw securing the sensor (diverter gate) (B) to the bracket (A).

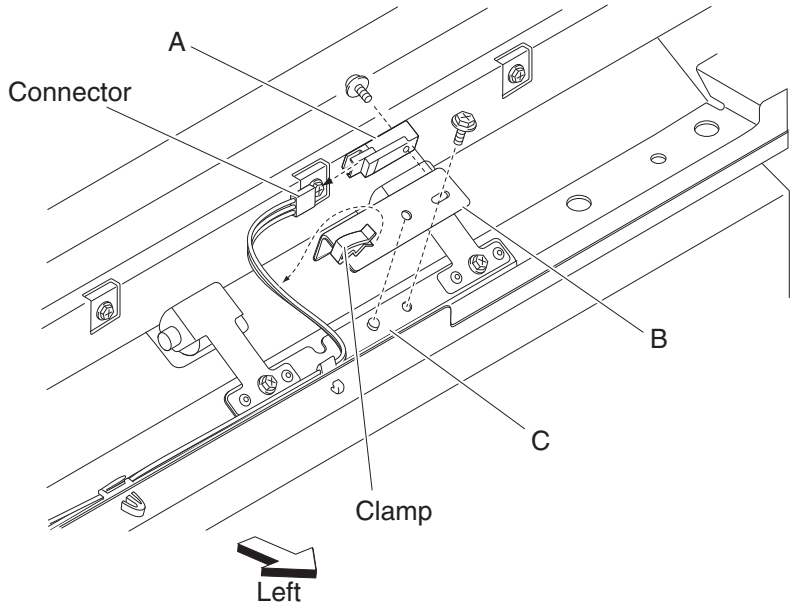


12. Remove the sensor (diverter gate) (B).

Sensor (finisher media entrance) removal

1. Open the front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
4. Remove the top cover. See **“Top cover removal” on page 4-428**.
5. Remove the left lower cover. See **“Left lower cover removal” on page 4-366**.
6. Remove the left upper cover. See **“Left upper cover removal” on page 4-367**.
7. Disconnect the connector from the sensor (finisher media entrance) (A).
8. Release the harness from the clamp.

9. Remove the screw securing the bracket (B) to the media entrance pinch guide assembly (C).

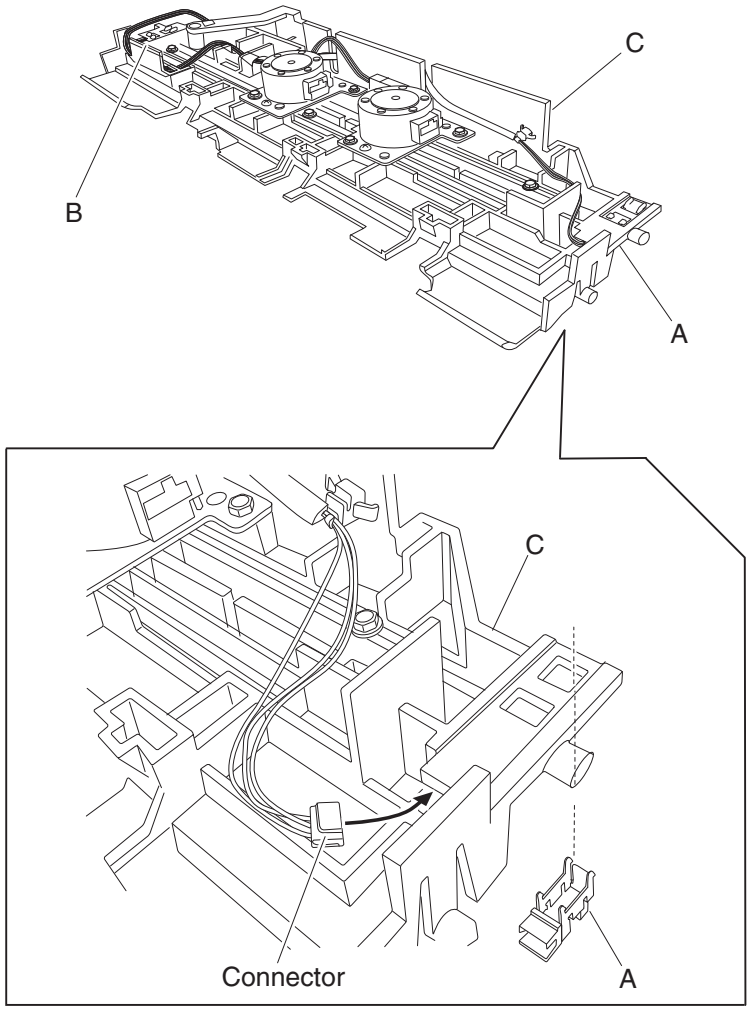


10. Release the hooks securing the sensor (finisher media entrance) (A) to the bracket (B).
11. Remove the sensor (finisher media entrance) (A).

Sensor (front tamper HP) and sensor (rear tamper HP) removals

1. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the rear lower cover. See **"Upper media bin front cover removal" on page 4-430**.
4. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
5. Remove the upper media bin vertical cover. See **"Right eject cover removal" on page 4-388**.
6. Remove the stapler unit frame. See **"Stapler unit frame removal" on page 4-419**.
7. Remove the media eject clamp motor assembly. See **"Clamp drive motor removal" on page 4-347**.
8. Remove the media eject unit assembly. See **"Media eject unit assembly removal" on page 4-377**.
9. Remove the media eject motor assembly. See **"Media eject motor assembly removal" on page 4-376**.
10. Remove the media compiler unit assembly. See **"Media compiler unit assembly removal" on page 4-372**.
11. Disconnect the connector from the sensor (front tamper HP) (A) or the sensor (rear tamper HP) (B).
12. Release the hooks securing the sensor (front tamper HP) (A) or the sensor (rear tamper HP) (B) from the media compiler unit assembly (C).

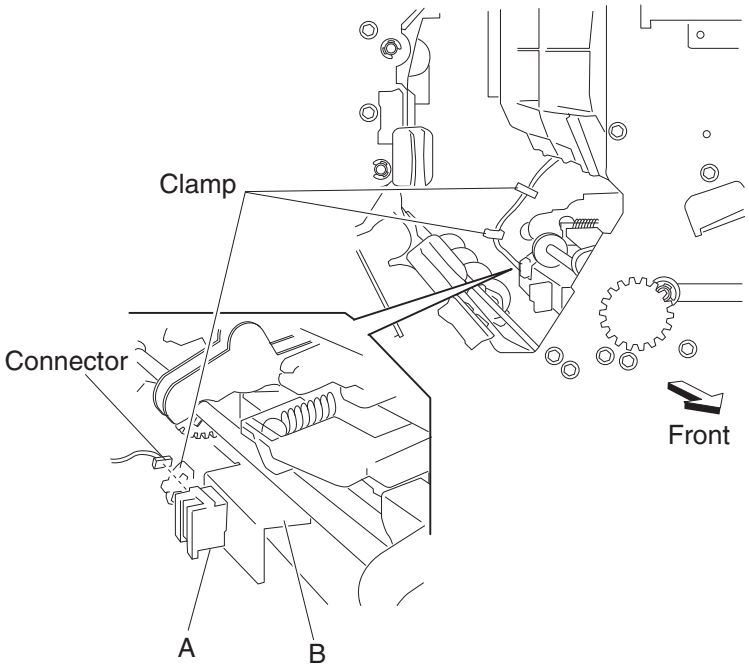
13. Remove the sensor(s).
Note: The sensors are identical.



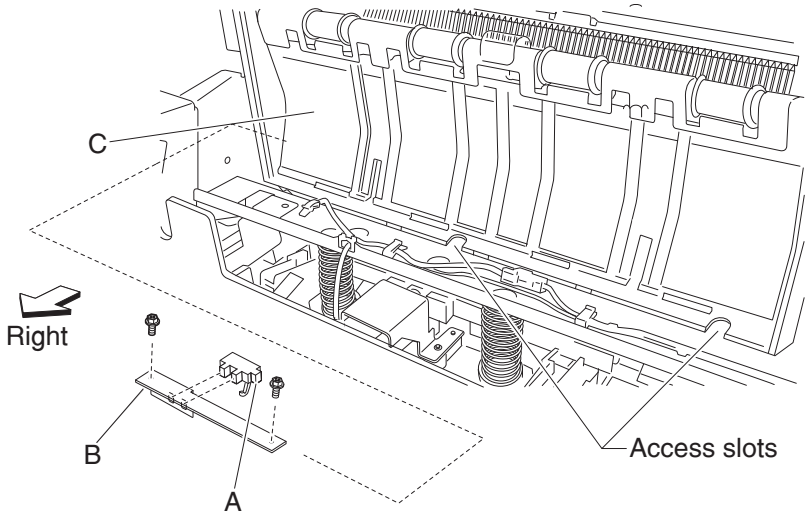
Sensor (lower media exit) removal

1. Open the finisher front door assembly.
2. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
3. Disconnect the connector from the sensor (lower media exit) (A).
4. Remove the harness from the clamps.

5. Remove the two screws securing the bracket (B) to the finisher.



Note: The upper media bin vertical cover (C) has slots that make access to the screws easier, as shown.

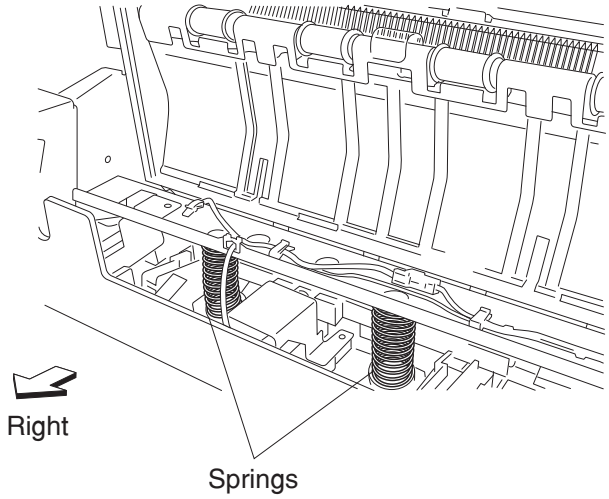


6. Remove the bracket (B).
7. Release the hooks securing the sensor (lower media exit) (A) to the bracket.
8. Remove the sensor (lower media exit) (A).

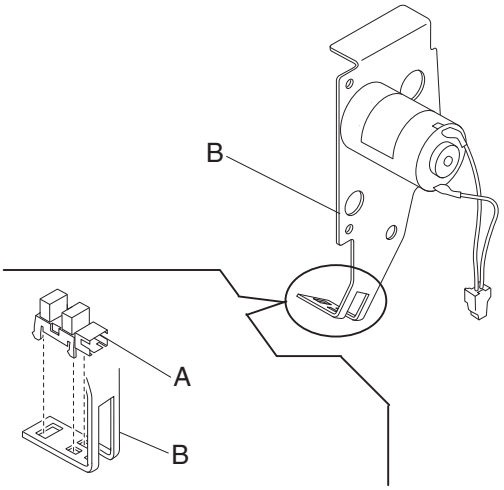
Sensor (media eject clamp HP) removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.

3. Remove the two media eject unit springs attached to the media eject unit assembly by pushing them downward.



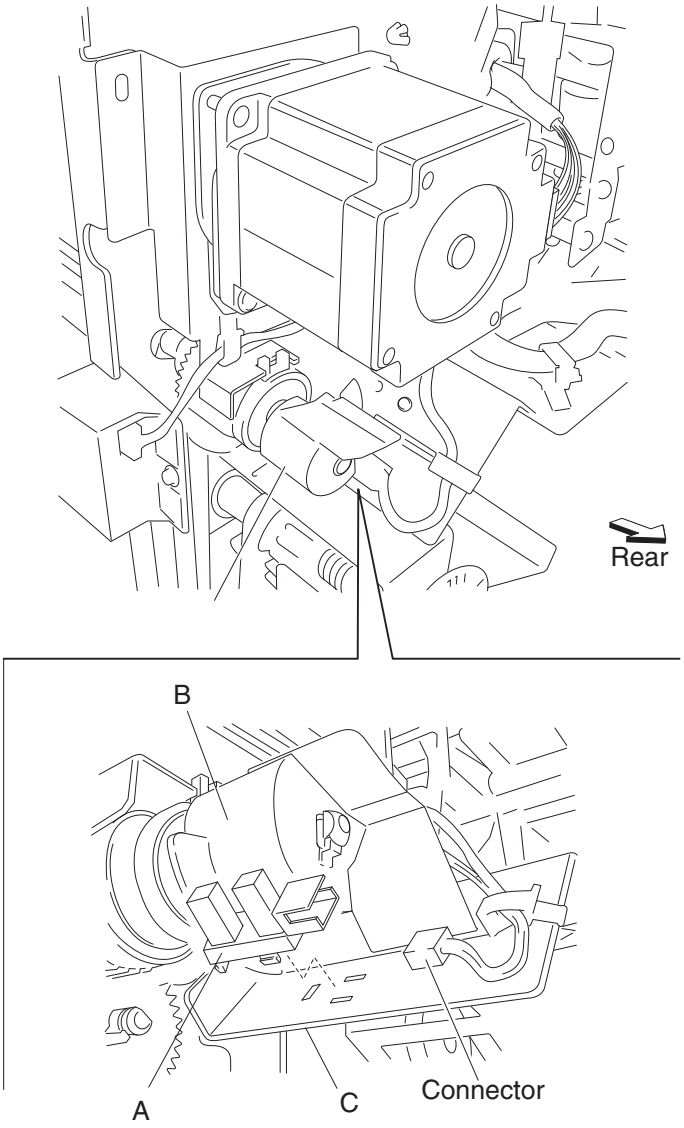
4. Remove the media eject clamp motor assembly. See **"Clamp drive motor removal" on page 4-347**.
5. Release the hooks of the sensor (media eject clamp HP) (A) from the bracket (B).
6. Remove the sensor (media eject clamp HP) (A).



Sensor (media eject shaft HP) removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Disconnect the connector from the sensor (media eject shaft HP) (A).
3. Rotate the media eject clutch actuator (B) by hand so it clears the sensor (media eject shaft HP) (A).

4. Release the hooks securing the sensor (media eject shaft HP) (A) to the bracket (C).

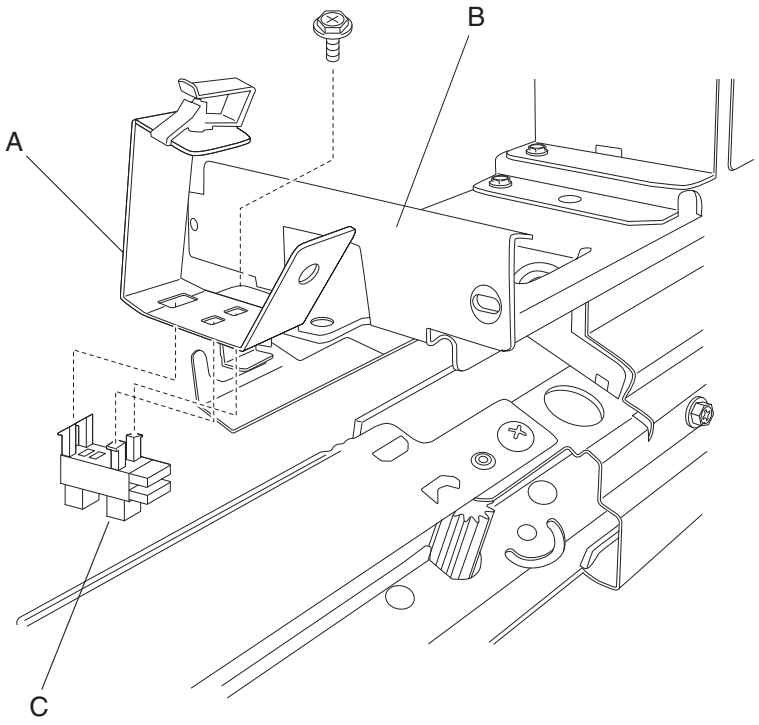


5. Remove the sensor (media eject shaft HP) (A).

Sensor (punch carriage shift HP) removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the punch carriage assembly. See **"Punch carriage assembly removal" on page 4-382**.
4. Remove the one screw securing the bracket (A) to the punch carriage unit (B).

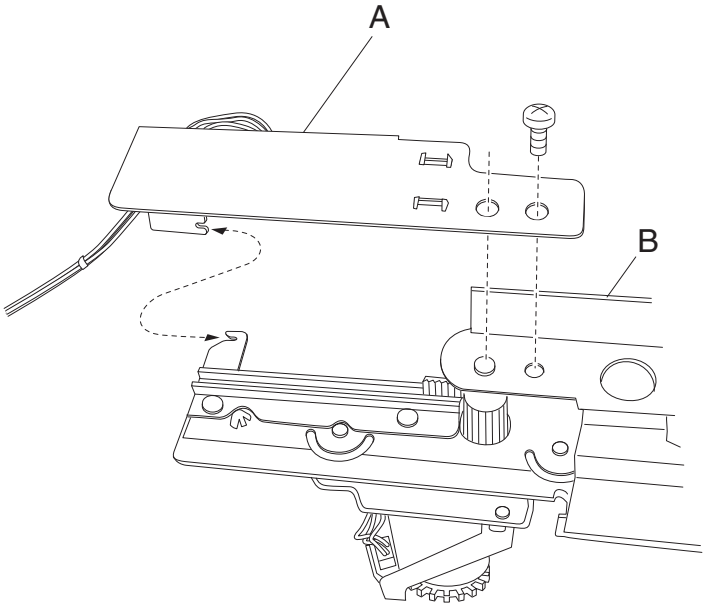
5. Release the hooks securing the sensor (punch carriage shift HP) (C) to the bracket (A).



6. Remove the sensor (punch carriage shift HP) (C).

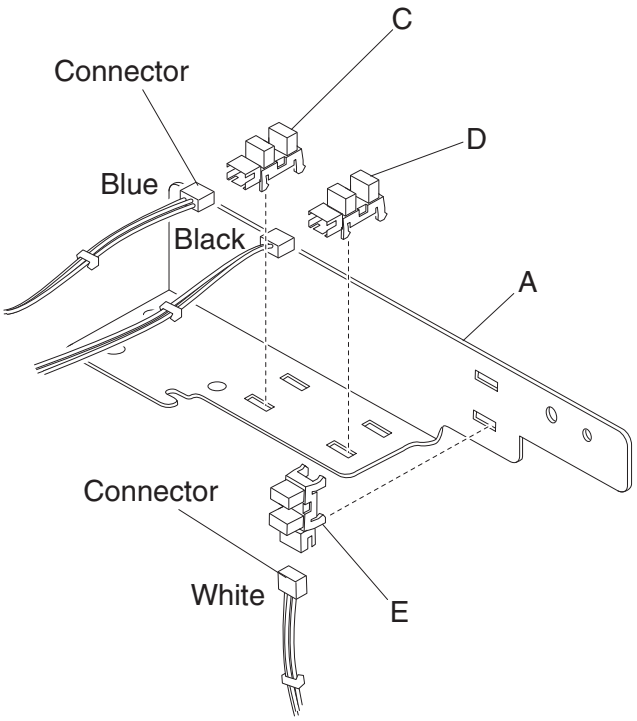
Sensor (punch hole select), sensor (punch cam front), and sensor (punch unit HP) removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the punch carriage assembly. See **"Punch carriage assembly removal" on page 4-382**.
4. Remove the screw securing the bracket (A) to the punch unit assembly (B).



5. Disconnect the connector from the sensor (punch hole select) (C), the sensor (punch cam front) (D), or the sensor (punch unit HP) (E).
6. Release the hooks securing the sensor(s) to the bracket.
7. Remove the sensor(s).

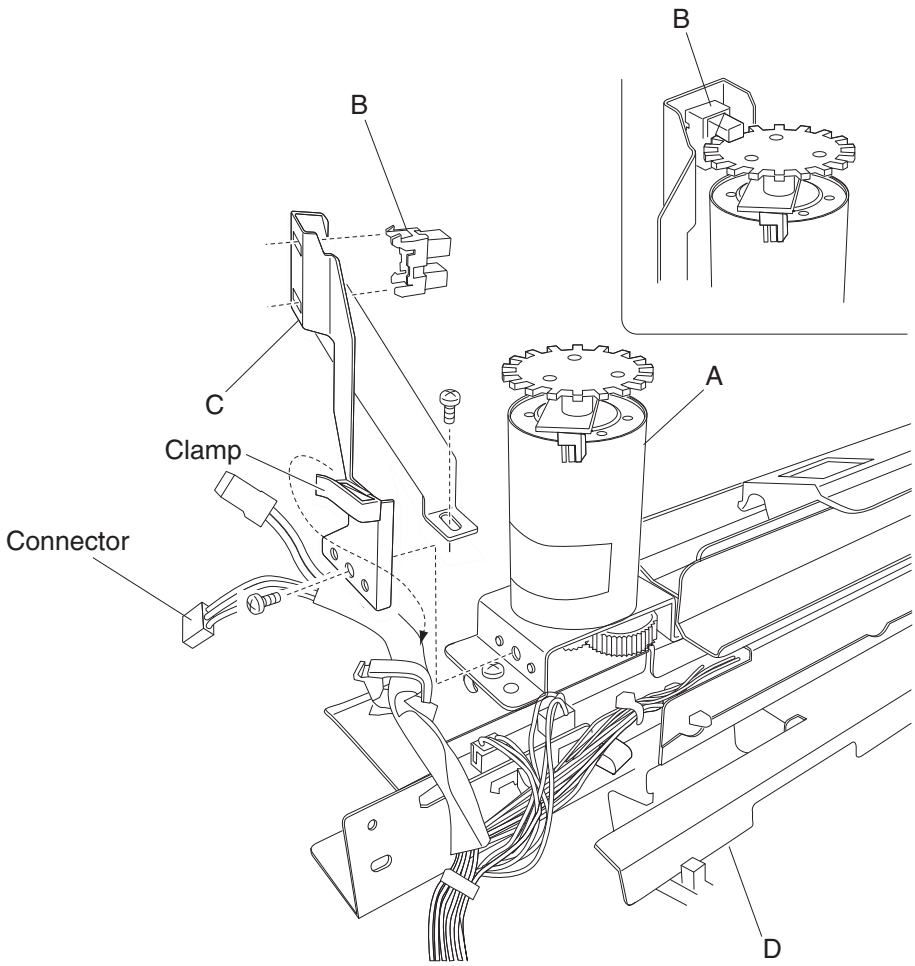
Reinstallation note: Make sure the color coded-connectors are connected to the proper sensors, as shown.



Sensor (punch unit motor encoder) removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
4. Remove the top cover. See **“Top cover removal” on page 4-428**.
5. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-382**.
6. Disconnect the connector from the punch unit motor assembly (A).
7. Disconnect the connector from the sensor (punch unit motor encoder) (B).
8. Remove the harness from the clamp.

9. Remove the two screws securing the bracket (C) to the punch unit assembly (D).



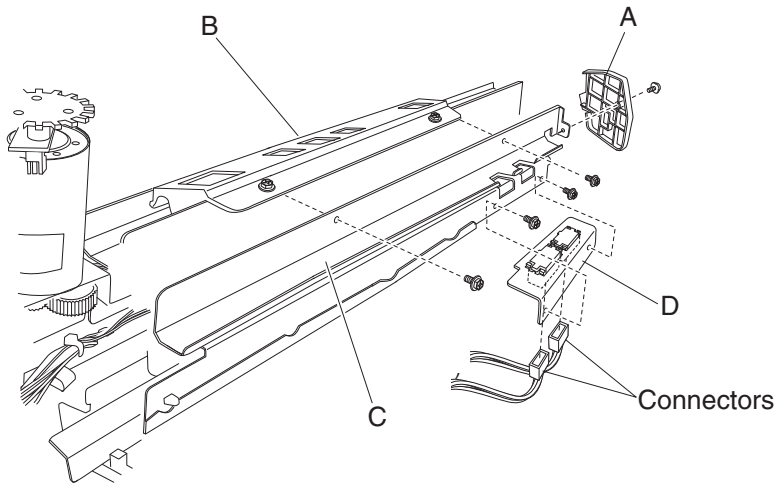
10. Release the hooks securing the sensor (punch unit motor encoder) (B) to the bracket (C).
11. Remove the sensor (punch unit motor encoder) (B).

Sensor (punch unit side registration pair) with bracket removal

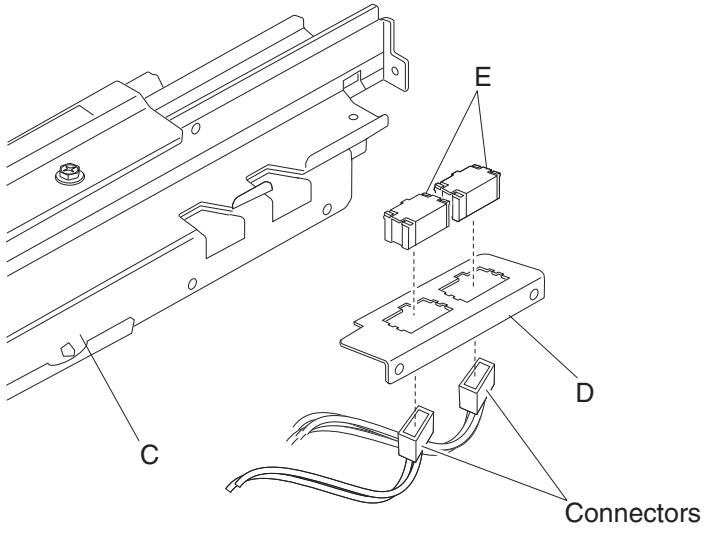
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
4. Remove the top cover. See **“Top cover removal” on page 4-428**.
5. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-382**.
6. Remove the screw securing the cover (A) to the punch unit assembly (B).
7. Remove the cover.

8. Remove the two screws securing the paper guide (C) to the punch unit assembly (B).

Note: Do not remove the harness attached to the paper guide (C).



9. Turn the paper guide (C) upside down.
10. Remove the two screws securing the bracket (D) to the paper guide (C).
11. Remove the bracket (D).
12. Remove the two connectors from the sensor (punch unit side registration pair) (E).
13. Release the hooks securing the sensors (punch unit side registration pair) (E) to the bracket (D).



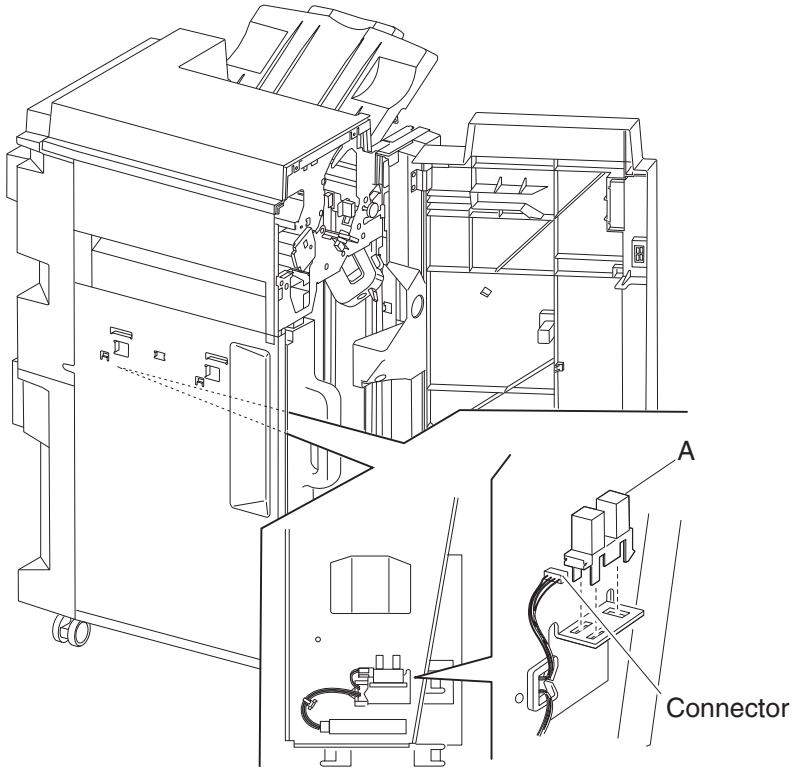
14. Remove the sensor (punch unit side registration pair) (E).

Note: The two sensors are identical.

Sensor (punch waste box set) removal

1. Open the finisher front door assembly.
2. Pull the punch waste box.
3. Disconnect the connector from the sensor (punch waste box set) (A).

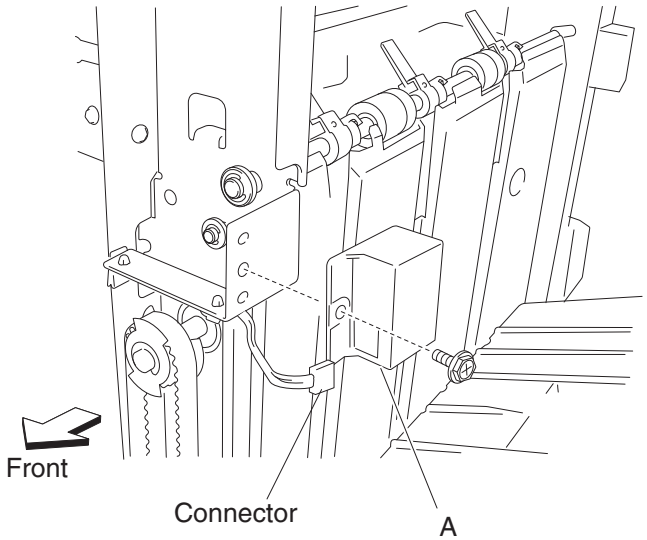
4. Release the hooks securing the sensor (punch waste box set) (A) to the finisher.



5. Remove the sensor (punch waste box set) (A).

Sensor (stacker bin level F) removal

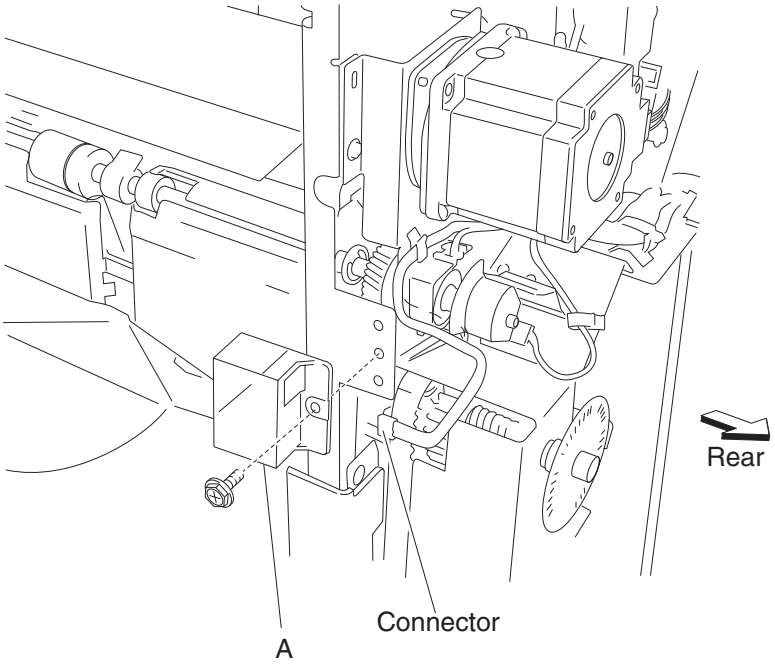
1. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Disconnect the connector from the sensor (stacker bin level F) (A).



4. Remove the screw securing the sensor (stacker bin level F) (A) to the finisher.
5. Remove the sensor (stacker bin level F) (A).

Sensor (stacker bin level R) removal

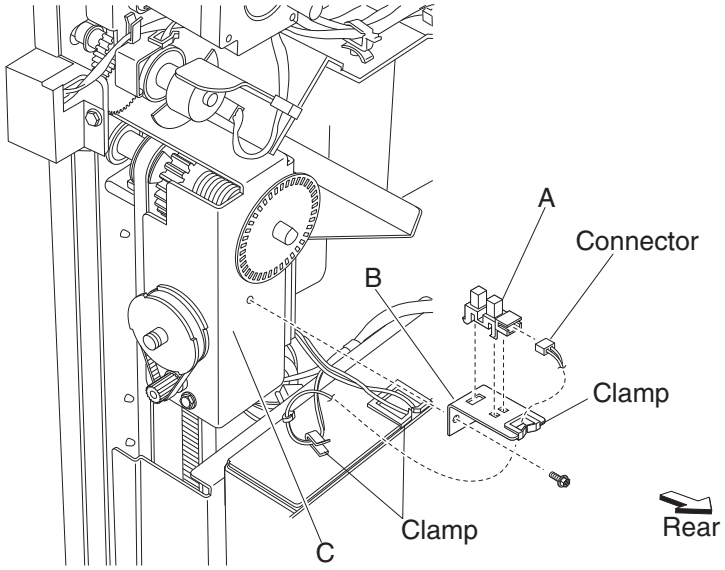
1. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-355**.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Disconnect the connector from the lift tray height sensor (stacker bin level R) (A).



4. Remove the screw securing the sensor (stacker bin level R) (A).
5. Remove the sensor (stacker bin level R) (A).

Sensor (stacker bin level encoder) removal

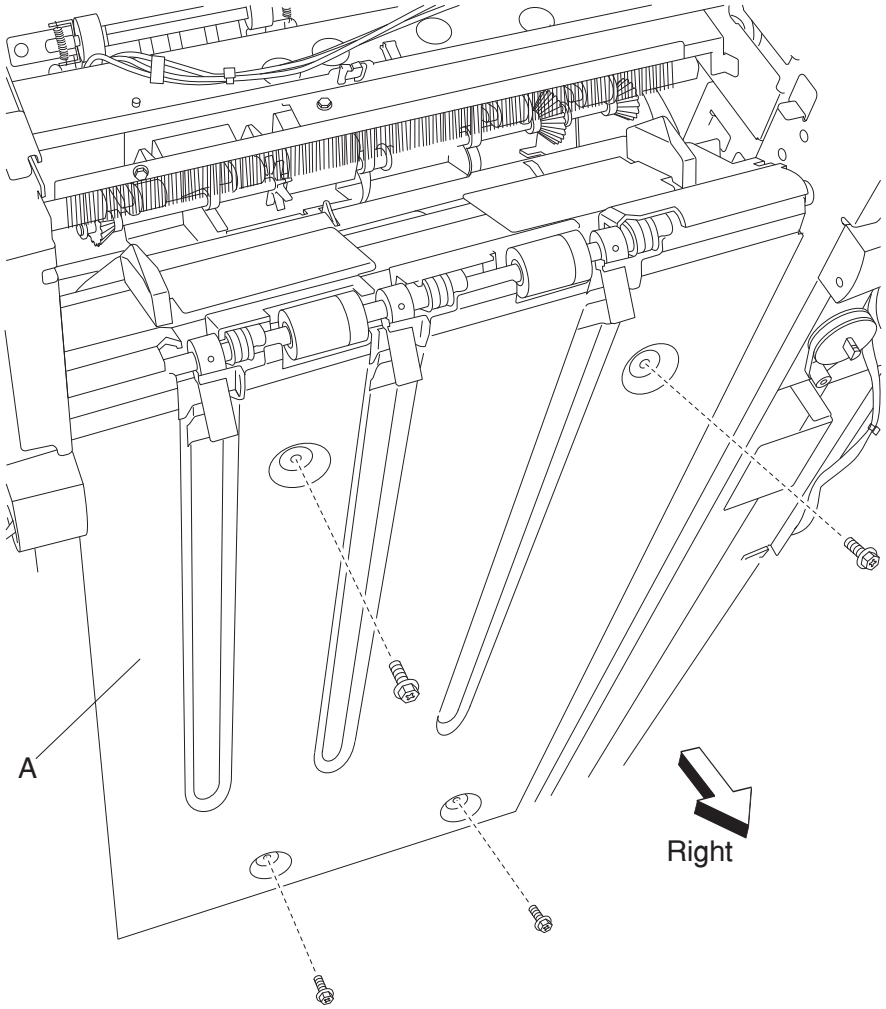
1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Disconnect the connector from the sensor (stacker bin level encoder) (A).
3. Release the harness from the clamp.
4. Remove the screw securing the bracket (B) from the stacker bin lift motor assembly (C).



5. Release the hooks securing the sensor to the bracket (B).
6. Remove the sensor (stacker bin level encoder) (A).

Sensor (stacker bin upper limit) or sensor (stacker bin no media) removal

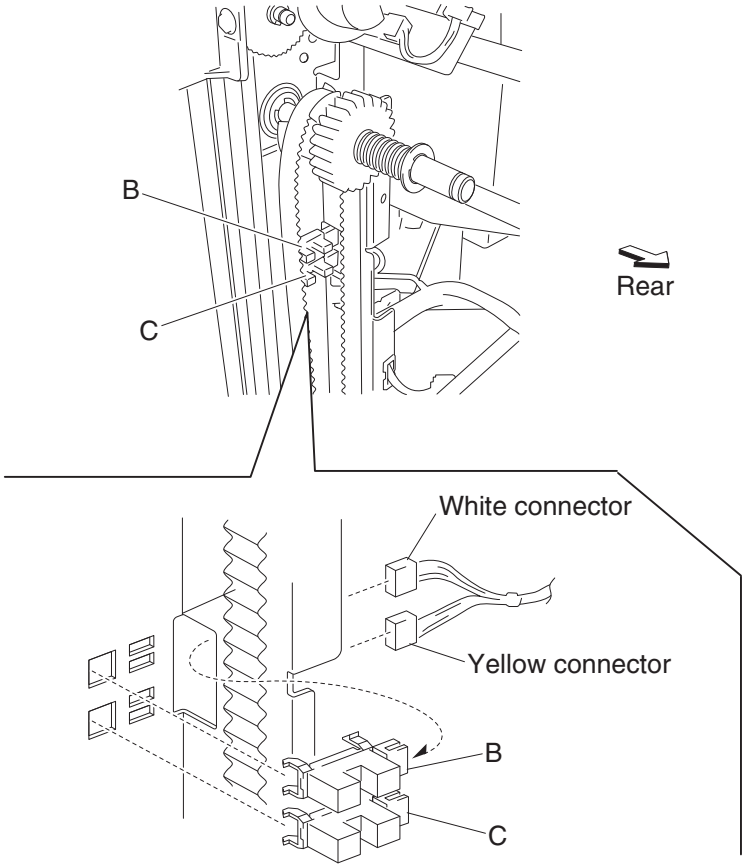
1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Remove the rear lower cover. See **"Upper media bin front cover removal" on page 4-430**.
3. Remove the stacker media bin assembly. See **"High capacity feeder (HCF) removal procedures" on page 4-436**.
4. Remove the stacker bin lift motor assembly. See **"Stacker bin lift motor assembly removal" on page 4-414**.
5. Remove the four screws securing the metal cover (A) to the finisher.
6. Remove the metal cover (A).



7. Disconnect the connector from the sensor (stacker bin upper limit) (B) or the sensor (stacker bin no media) (C).
8. Release the hooks of the selected sensor.

9. Remove the sensor.

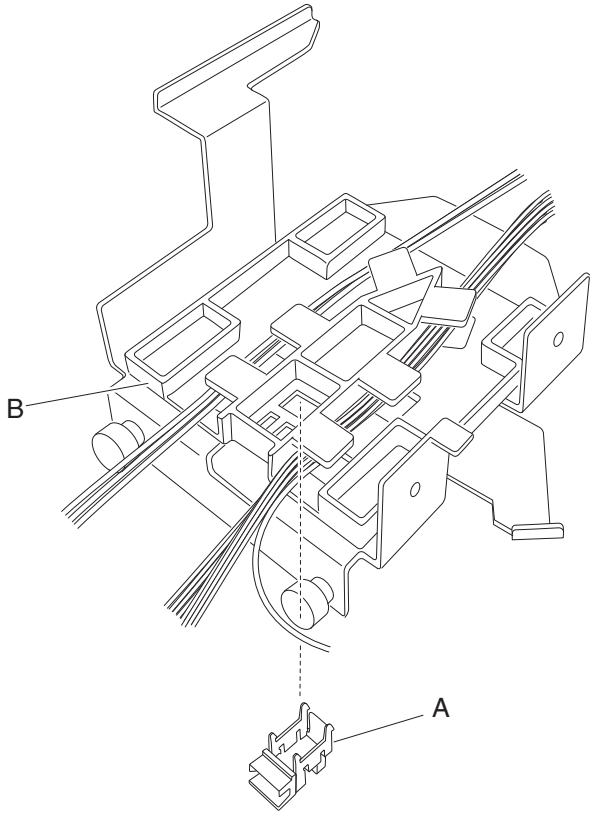
Reinstallation note: Make sure that the yellow connector is plugged into the sensor (stacker bin no media) (C).



Sensor (stapler carriage HP) removal

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-355**.
2. Remove the staple cartridge.
3. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
4. Remove the rear lower cover. See **“Upper media bin front cover removal” on page 4-430**.
5. Remove the stapler unit frame. See **“Stapler unit frame removal” on page 4-419**.
6. Remove the stapler unit assembly. See **“Stapler unit assembly removal” on page 4-417**.

7. Release the hooks securing the sensor (stapler carriage HP) (A) to the stapler carriage assembly (B).

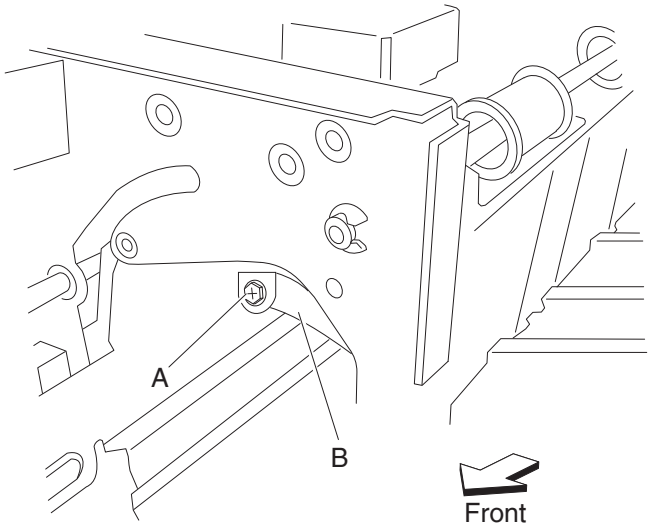


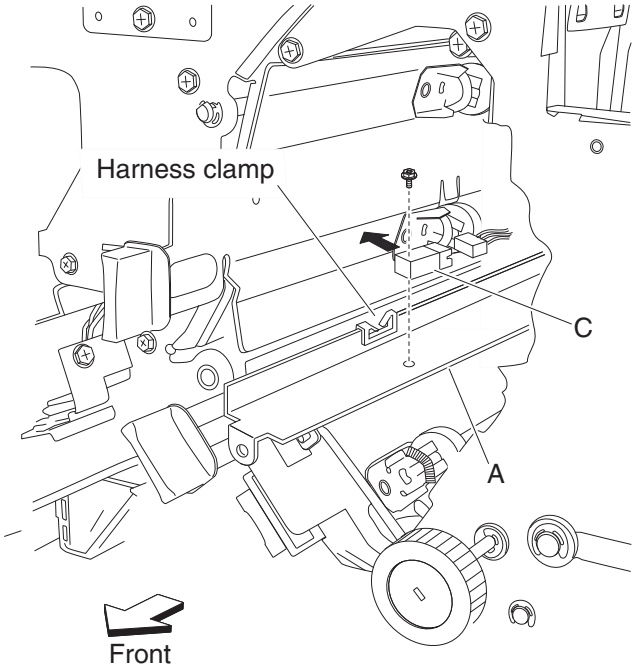
8. Remove the sensor (stapler carriage HP) (A).

Sensor (upper media bin full) removal

1. Open the finisher front door assembly.
2. Remove the screw securing the bracket (A) to the upper media bin vertical cover (B).
3. Move the bracket frontward and downward to gain access to the harness and connector.
4. Release the harness from the clamp.

5. Move the bracket (B) frontward again, and remove the screw securing the sensor (upper media bin full) (C) to the bracket.



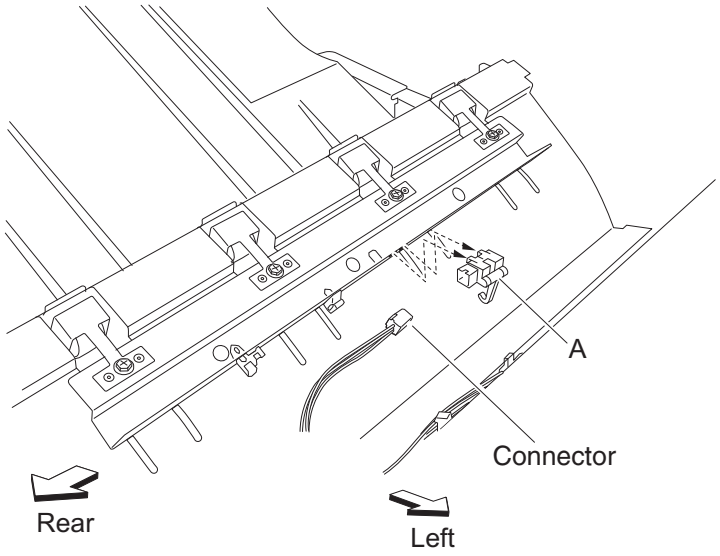


6. Remove the sensor (upper media bin full) (C).
7. Disconnect the connector from the sensor (upper media bin full) (C).

Sensor (upper media exit) removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
4. Remove the top cover. See **"Top cover removal" on page 4-428**.

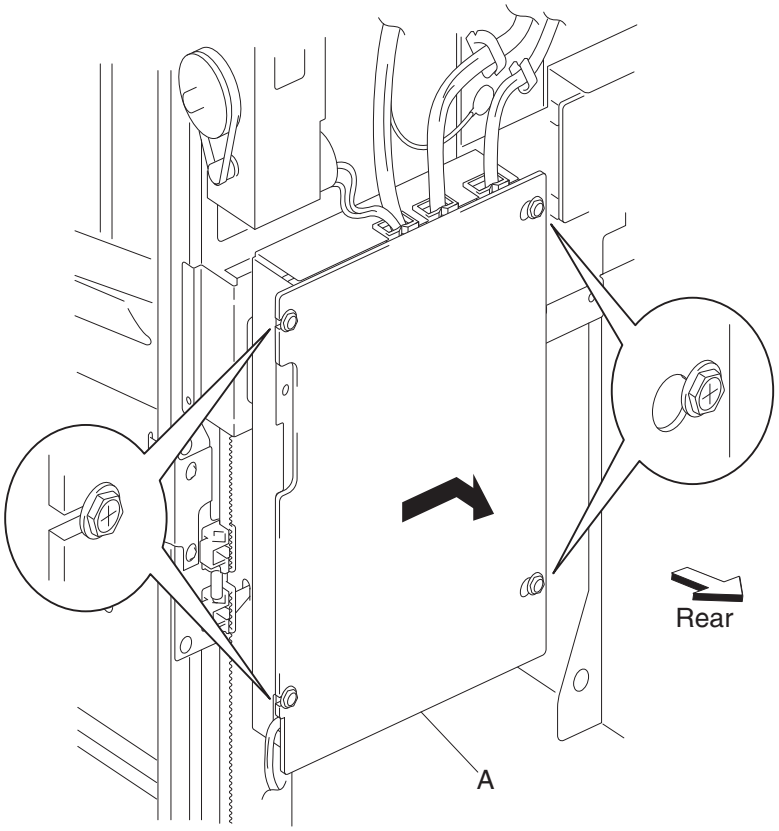
5. Disconnect the connector from the sensor (upper media exit) (A).



6. Release the hooks securing the sensor (upper media exit) (A) to the finisher.
7. Remove the sensor (upper media exit) (A).

Stacker bin lift motor assembly removal

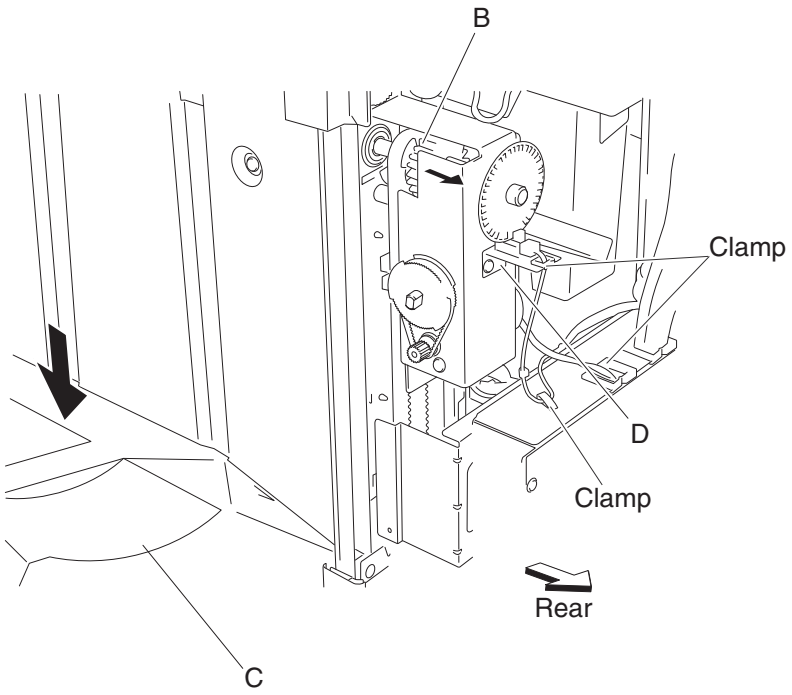
1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Remove the rear lower cover. See **"Upper media bin front cover removal" on page 4-430**.
3. Loosen the four screws securing the plate (A).
4. Move the plate (A) toward the right as shown.



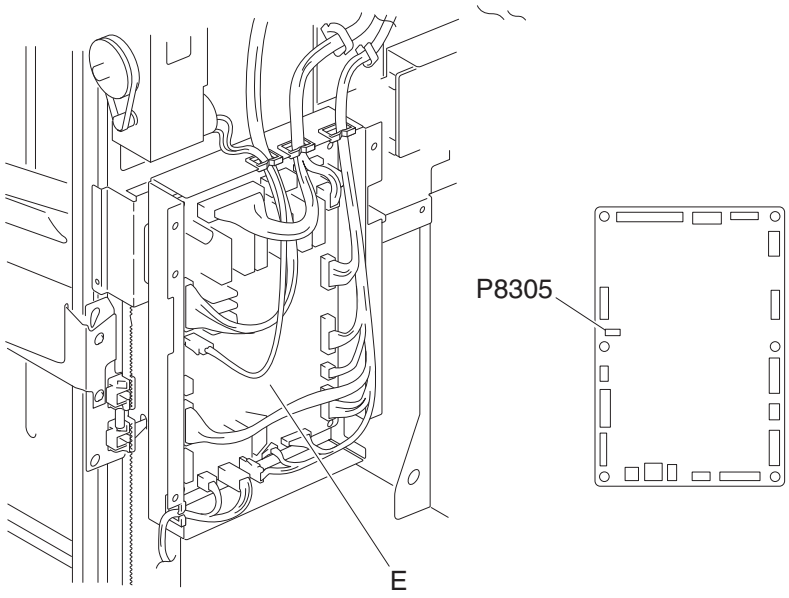
5. Remove the plate (A).
6. Move the slip clutch gear 24T (B) toward the rear to disengage the stacker bin (C).
7. Move the stacker bin (C) to the lowest position.

Note: Make sure the stacker bin (C) is at the lowest position before continuing.

8. Disconnect the connector from the sensor (stacker bin level encoder) (D).
9. Release the harness from the clamps.

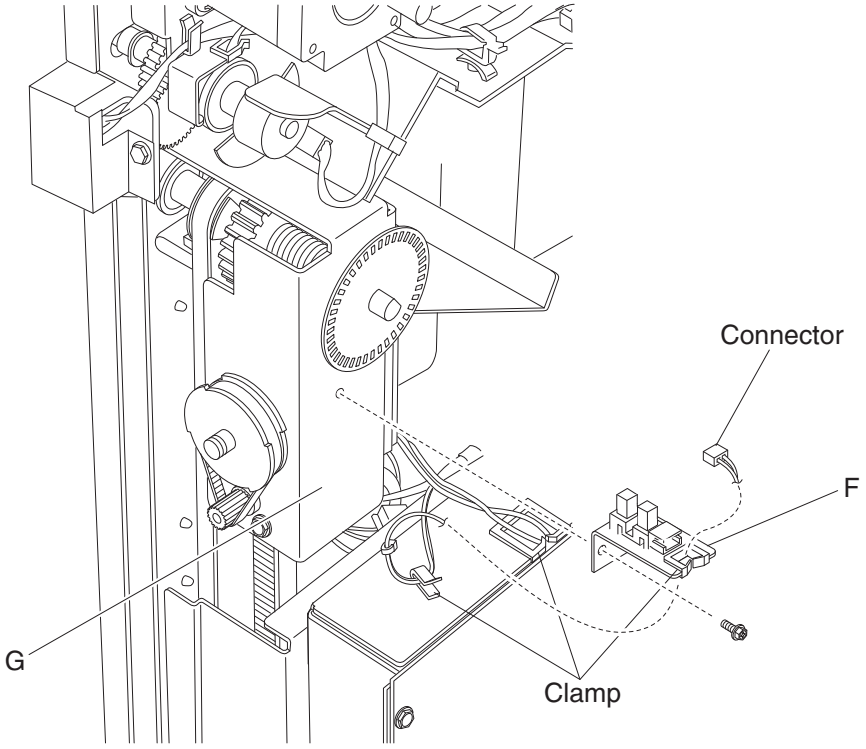


10. Disconnect the connector (P8305) from the finisher controller card assembly (E).

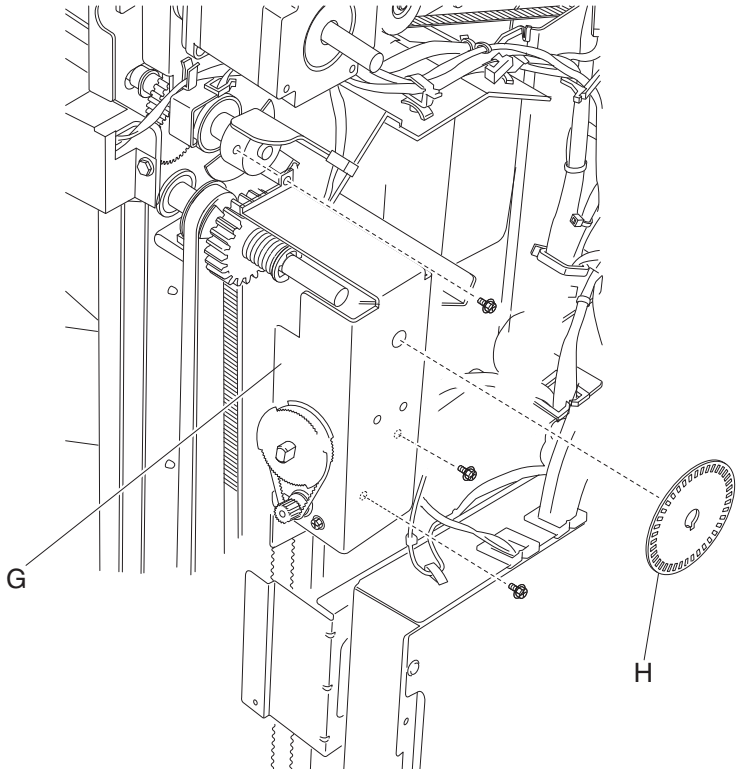


11. Remove the screw securing the bracket (F) to the stacker bin lift motor assembly (G).

12. Remove the bracket (F).



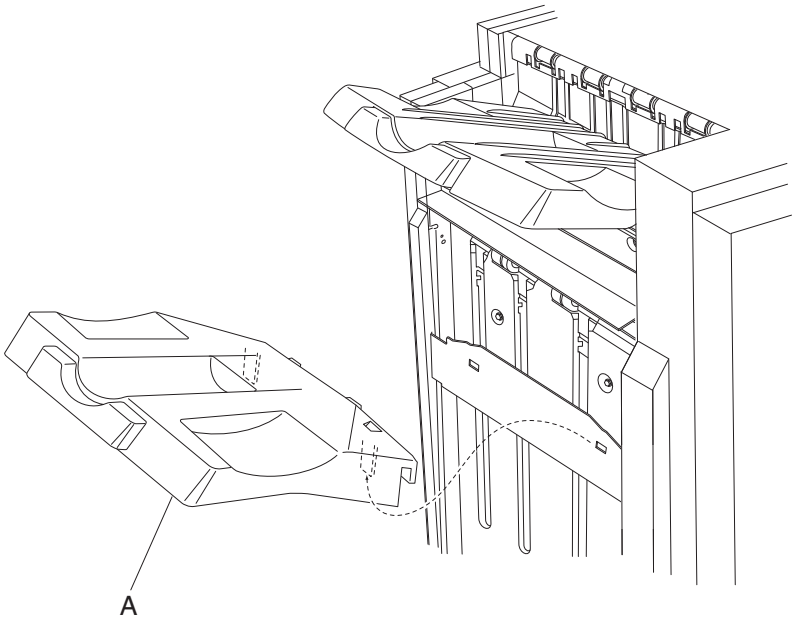
13. Release the hook securing the encoder (H) to the stacker bin lift motor assembly (G).
14. Remove the encoder.
15. Remove the three screws securing the stacker bin lift motor assembly (G) to the finisher.



16. Remove the stacker bin lift motor assembly (G).

Stacker media bin assembly removal

1. Release the two hooks securing the stacker media bin assembly (A) to the finisher.

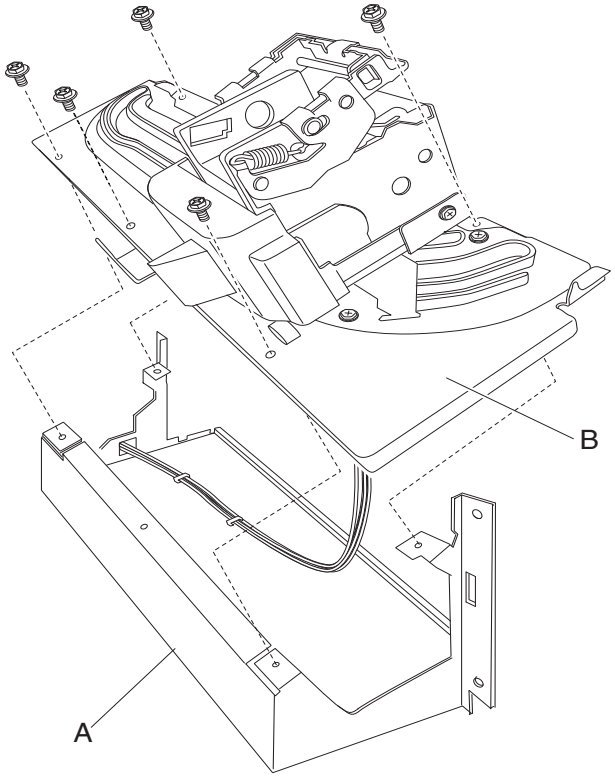


2. Lift the stacker media bin assembly (A) upward.
3. Remove the stacker media bin assembly. (A).

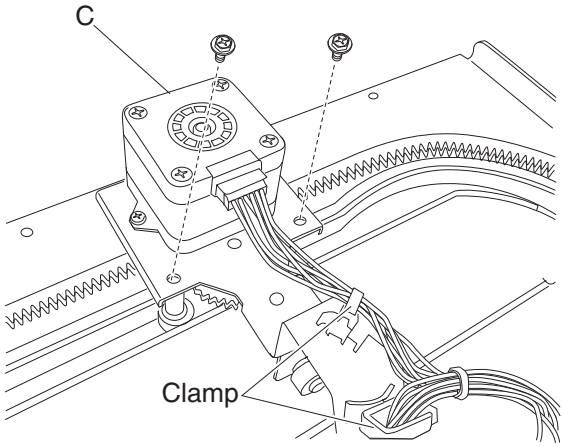
Stapler unit assembly removal

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-355**.
2. Remove the staple cartridge.
3. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
4. Remove the rear lower cover. See **“Upper media bin front cover removal” on page 4-430**.
5. Remove the stapler unit frame. See **“Stapler unit frame removal” on page 4-419**.

6. Remove the five screws securing the stapler unit frame (A) to the plate (B).

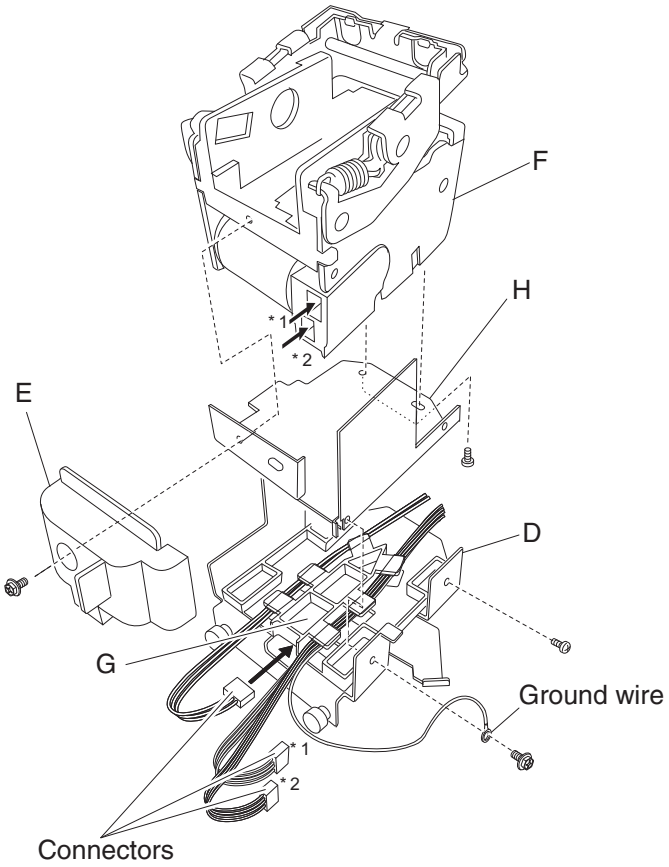


7. Remove the stapler unit frame (A).
8. Release the harness from the three clamps on the stapler unit frame (A).
9. Remove the two screws securing the stapler carriage motor assembly (C) to the stapler carriage assembly (D).
10. Remove the stapler carriage motor assembly (C).



11. Remove the screw securing the stapler cover (E) to the stapler unit assembly (F).
12. Remove the stapler cover (E).
13. Disconnect the two connectors from the stapler unit assembly (F).
14. Disconnect the connector from the sensor (stapler carriage HP) (G).
15. Remove the two screws securing the bracket (H) to the stapler carriage assembly (D).
16. Remove the bracket (H).

17. Remove the two screws securing the bracket (H) to the stapler unit assembly (F).



18. Remove the stapler unit assembly (F).

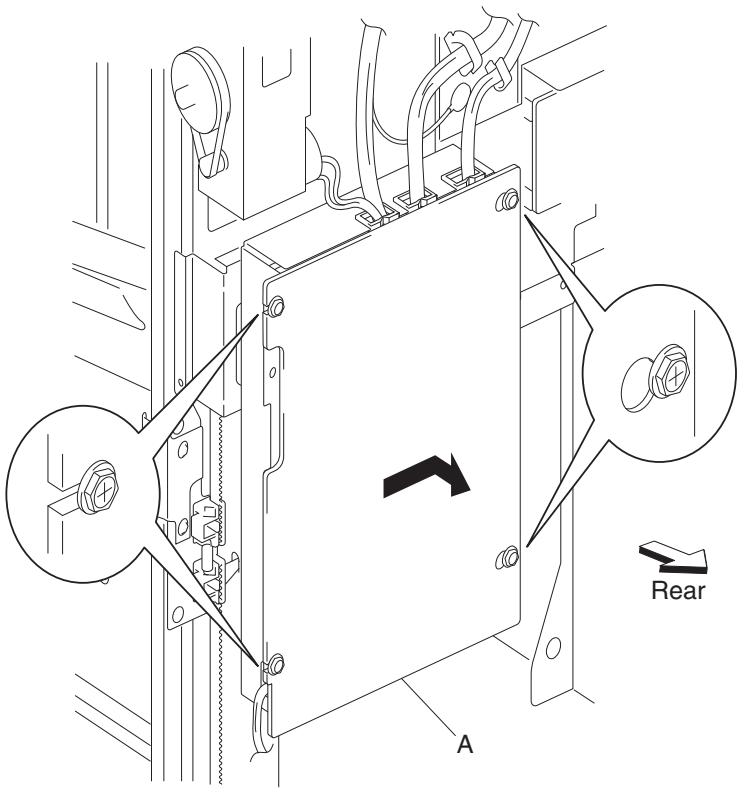
Reinstallation notes:

- When replacing the stapler unit assembly (F), make sure the ground wire is reconnected.
- Make sure the stapler carriage assembly (D) and the stapler carriage motor assembly (C) move freely without binding.

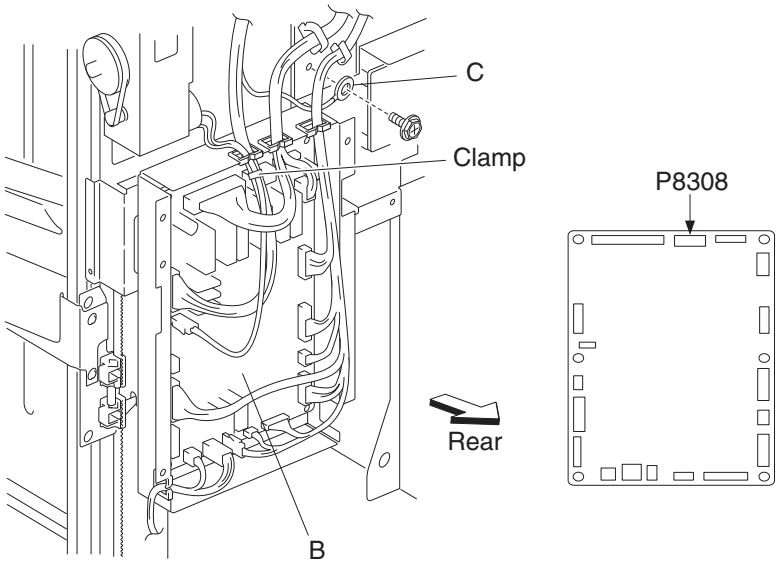
Stapler unit frame removal

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-355**.
2. Remove the staple cartridge.
3. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
4. Remove the rear lower cover. See **“Upper media bin front cover removal” on page 4-430**.
5. Loosen the four screws securing the plate (A) to the finisher.

6. Move the plate (A) toward the right and out in the direction shown.

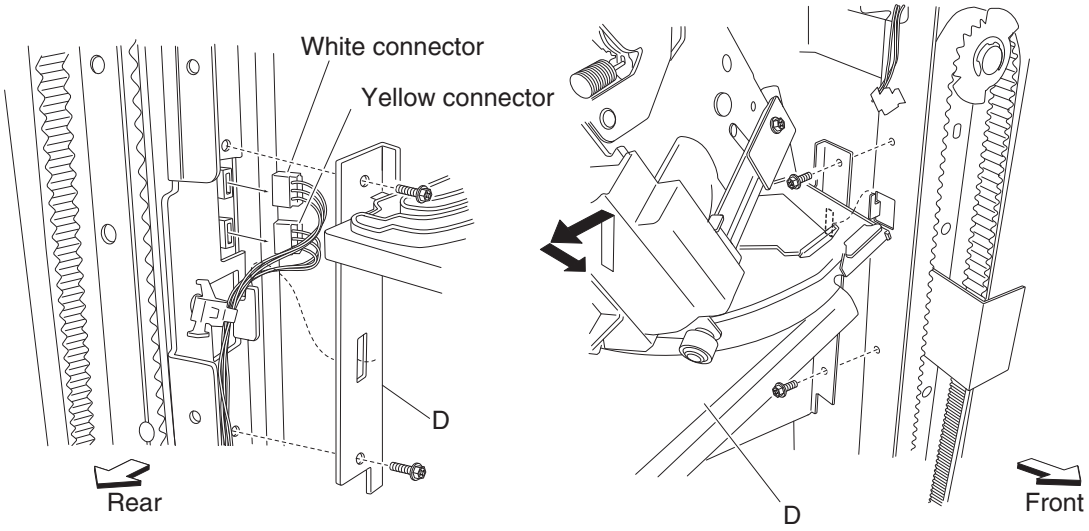


7. Remove the plate.
8. Disconnect the connector P8308 from the finisher controller card assembly (B).
9. Remove the screw securing the ground wire (C) to the finisher.
10. Release the harness from the clamp.



11. Remove the media stacker bin lift motor assembly. See **"High capacity feeder (HCF) removal procedures" on page 4-436**.
12. Disconnect the white connector and the yellow connector from the sensor (stacker bin upper limit) and the sensor (stacker bin no media).
13. Remove the four screws securing the stapler unit frame (D) to the finisher.

14. Move the stapler unit frame upward and outward in the direction of the arrow, as shown.



15. Remove the stapler unit frame.

Warning: Do not force the stapler unit frame out of the finisher.

Warning: Be sure to hold the stapler unit frame firmly to avoid dropping it.

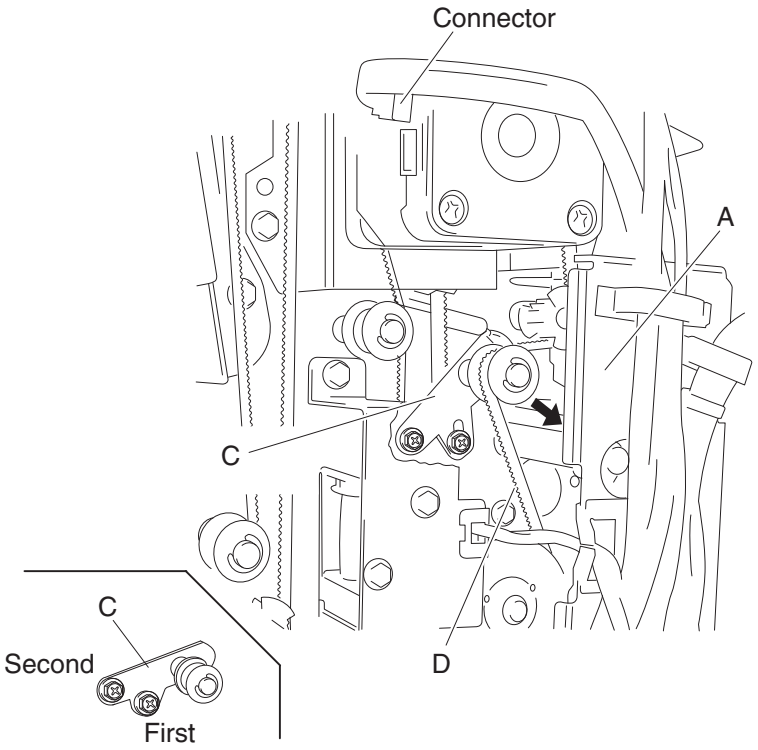
Reinstallation notes:

- Do not force the stapler unit frame into the finisher.
- Be sure to hold the stapler unit frame firmly to avoid dropping it.
- Maker sure no harnesses are pinched when replacing the stapler unit frame.
- Be sure to replace the grounding wire.
- Ensure that the white connector and the yellow connector are properly replaced.

Stepper motor (buffer/transport) and belt (buffer/transport) removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Remove the two screws securing the bracket (A) on the rear of the finisher.
3. Move the bracket slightly.
   Note: It is not necessary to remove the bracket from the finisher. It should only be slightly moved to provide better access to the stepper motor (buffer/transport) (B) for removal.
4. Loosen the two screws securing the belt tensioner bracket (C) to the finisher, and move it down as shown.

5. Remove the belt (buffer/transport) (D) from the stepper motor (buffer/transport).

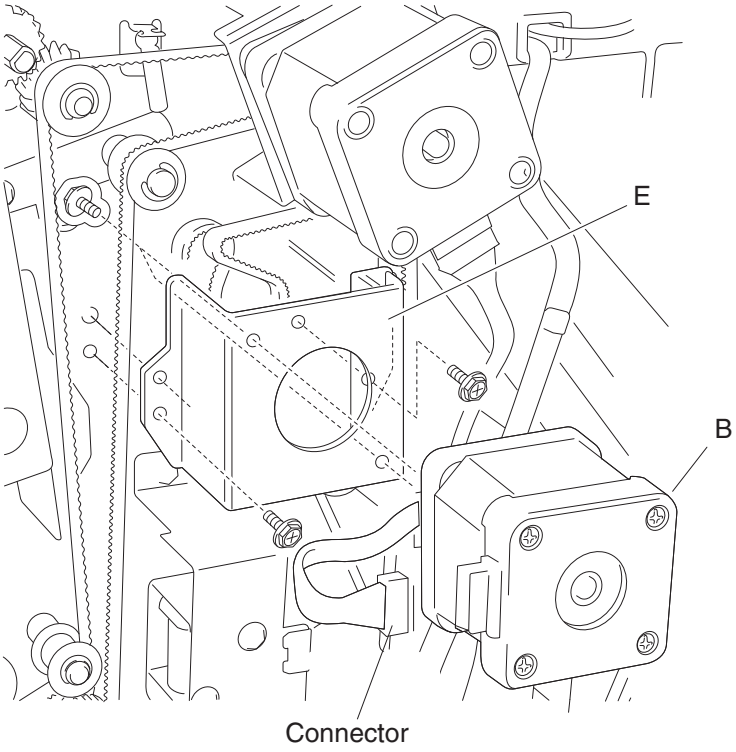


6. Disconnect the connector from the stepper motor (buffer/transport).
7. Remove the two screws securing the bracket (E) to the finisher.
8. Remove the bracket.
9. Remove the two screws securing the stepper motor (buffer/transport) to the bracket.
10. Remove the stepper motor (buffer/transport).
11. Remove the belt (buffer/transport) (D).

Reinstallation notes:

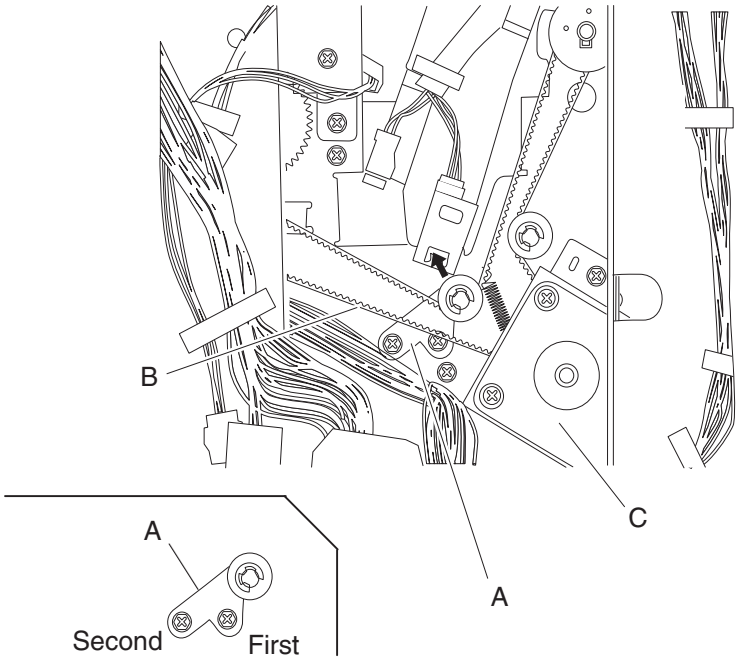
- The tension of the belt (buffer/transport) (D) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (C).

- Tighten the two screws in the order shown.

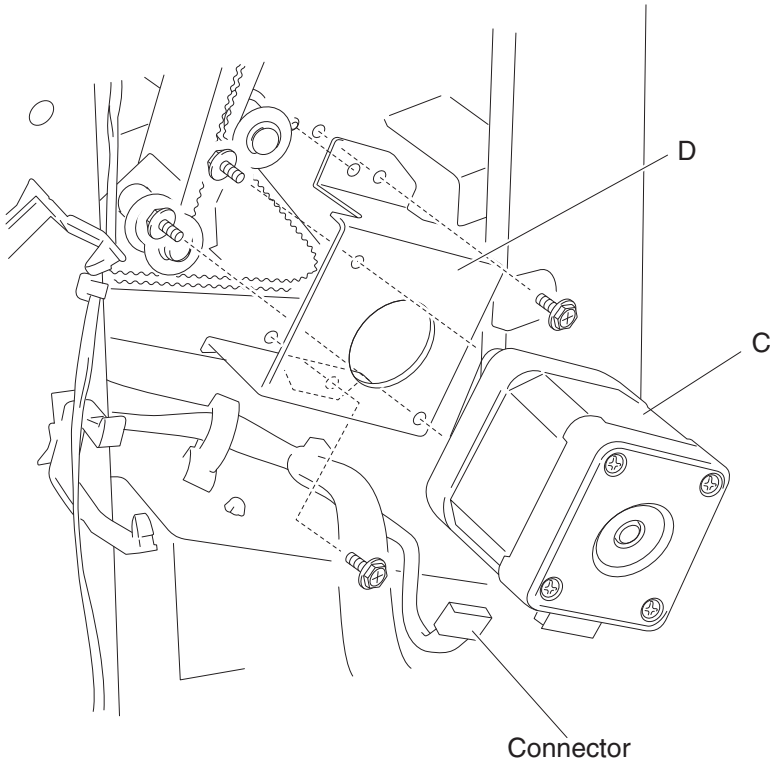


Stepper motor (entrance/paddle) and belt (entrance/paddle) removal

1. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
2. Loosen the two screws securing the belt tensioner bracket (A) to the finisher and move upward, as shown.
3. Remove the belt (entrance/paddle) (B) from the stepper motor (entrance/paddle) (C).
4. Disconnect the connector from the stepper motor (entrance/paddle) (C).



5. Remove the two screws securing the bracket (D) to the finisher.



6. Remove the bracket (D).
7. Remove the two screws securing the bracket (D) to the stepper motor (entrance/paddle) (C).
8. Remove the stepper motor (entrance/paddle) (C).
9. Remove the belt (entrance/paddle) (B).

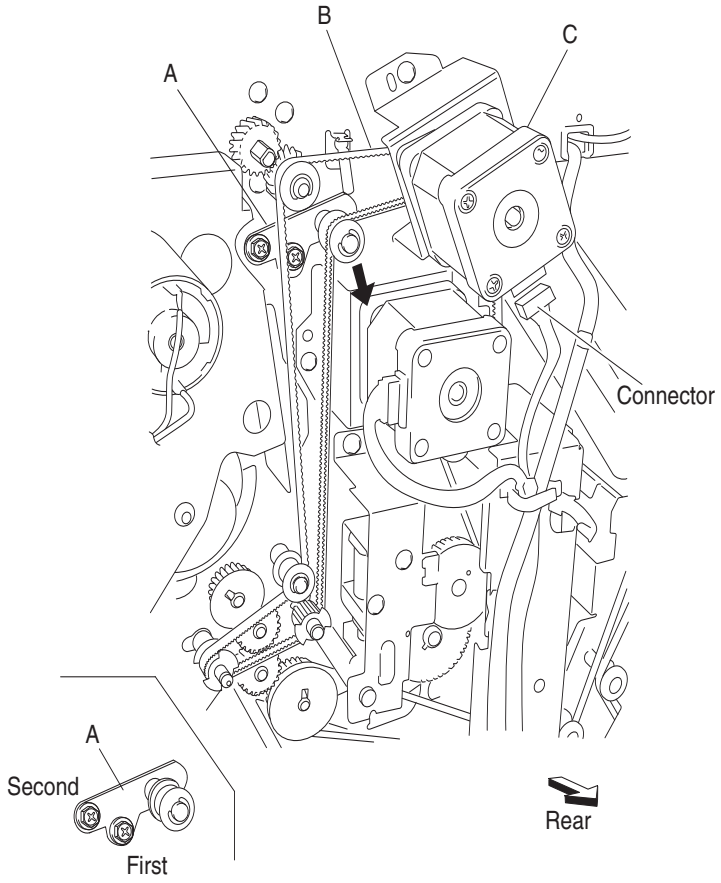
Reinstallation notes:

- The tension of the belt (entrance/paddle) (B) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (A).
- Tighten the two screws in the order shown.

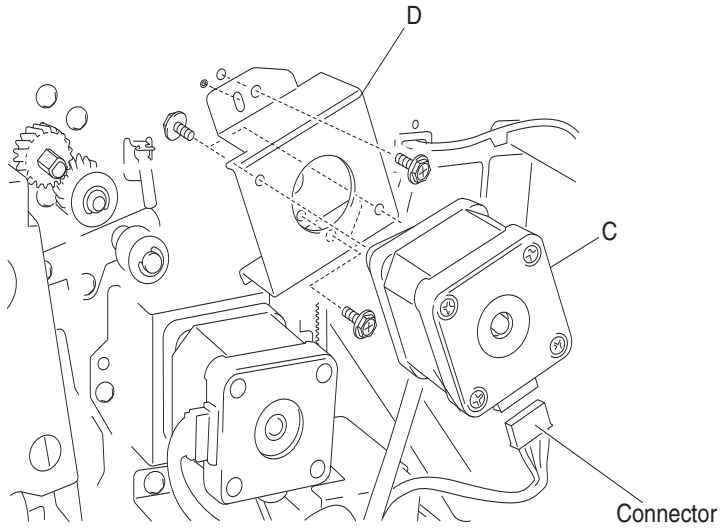
Stepper motor (exit) assembly and belt (exit) removal

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
2. Loosen the two screws securing the belt tensioner bracket (A) to the finisher, and move it down as shown.
3. Remove the belt (exit) (B) from the stepper motor (exit) (C).

4. Disconnect the connector from the stepper motor (exit).



5. Remove the two screws securing the bracket (D) to the finisher.
6. Remove the bracket (D).
7. Remove the two screws securing the stepper motor (exit) to the bracket (D).



8. Remove the stepper motor (exit) (C).

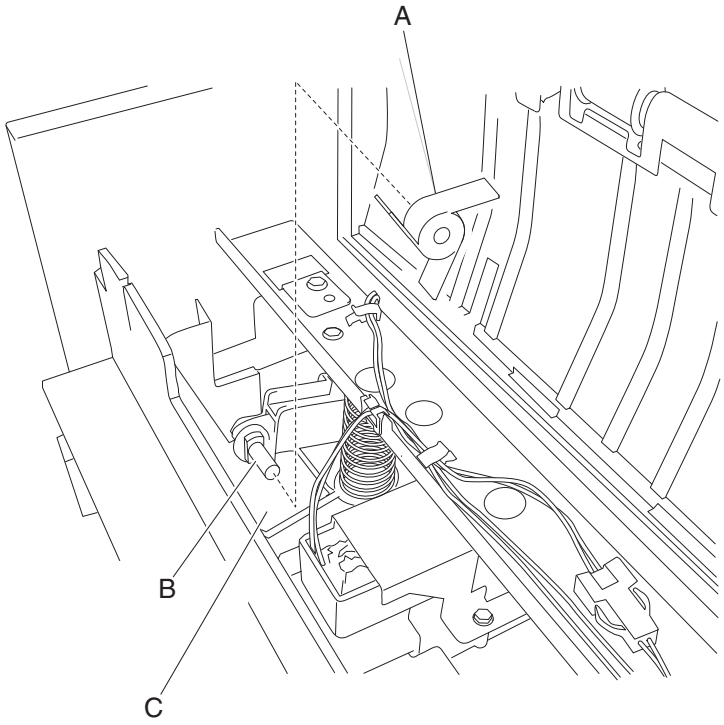
Replacement notes:

- The tension of the belt (exit) (B) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (A).
- Tighten the two screws in the order shown.

Sub paddle removal

1. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
2. Gently remove the two sub paddles (A) from the two shafts (B).

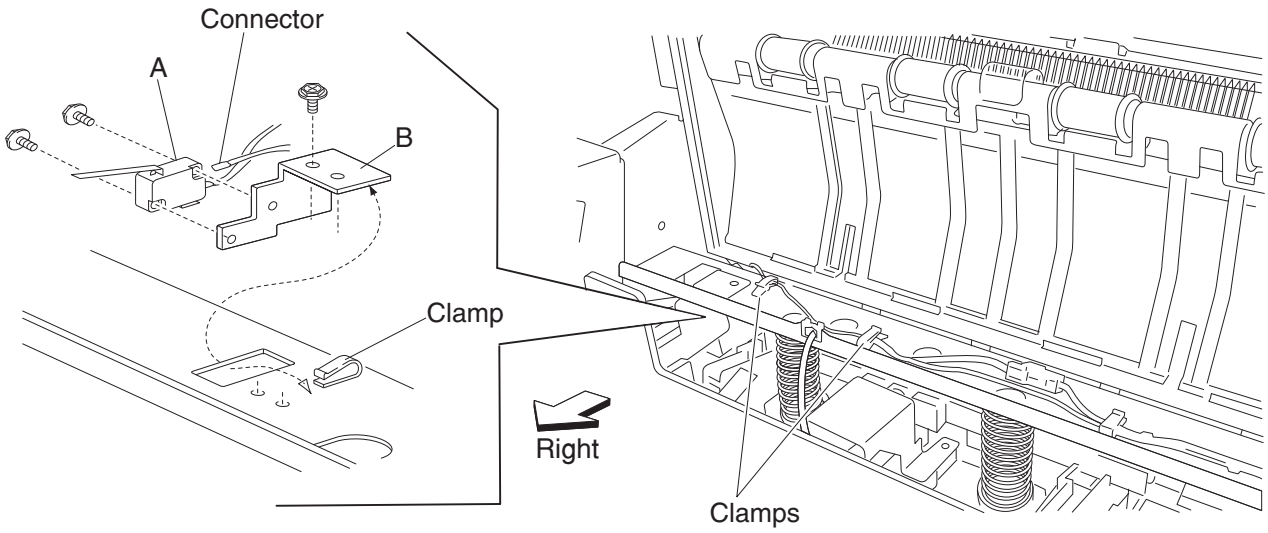
Reinstallation note: Make sure the sub paddles are properly installed as shown in the figure. The paddles must not come in contact with the media eject unit assembly (C).



Switch (eject cover interlock) removal

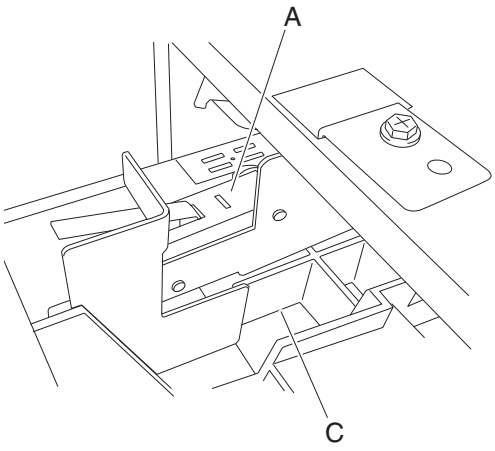
1. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
2. Disconnect the connector from the switch (eject cover interlock) (A).
3. Release the harness from the two clamps.
4. Remove the screw securing the bracket (B) to the finisher.
5. Remove the bracket (B) from the square hole in the finisher.

6. Remove the two screws securing the switch (eject cover interlock) (A) from the bracket (B).



7. Remove the switch (eject cover interlock) (A).

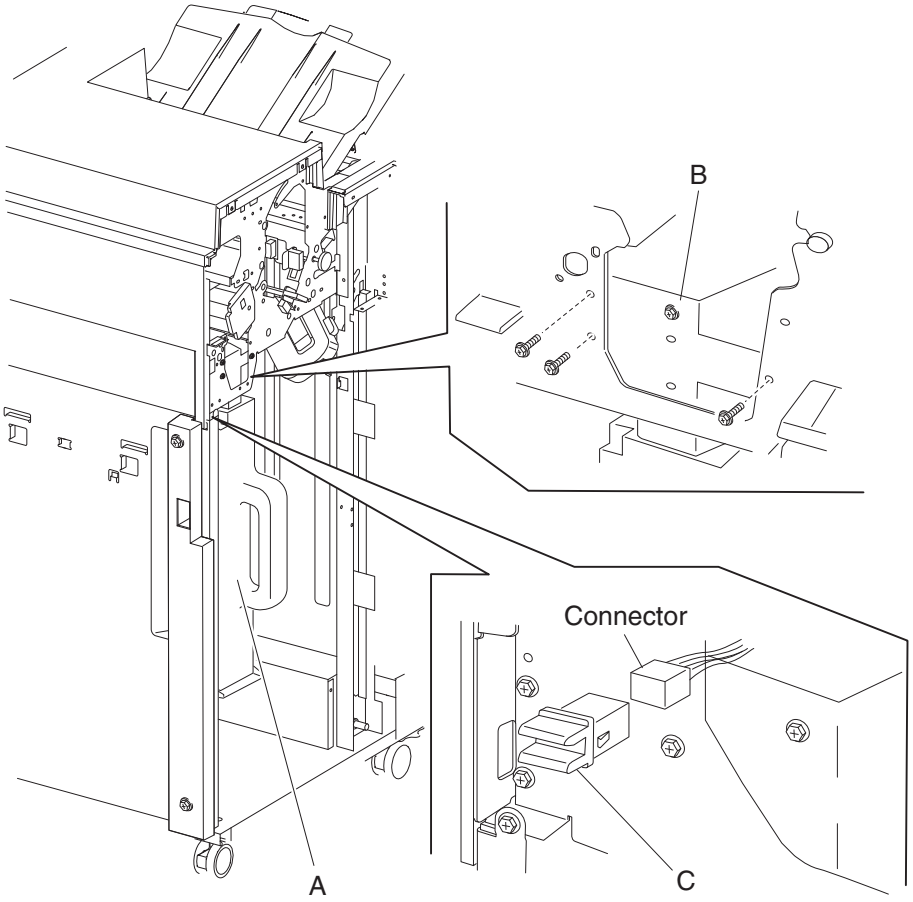
Reinstallation note: Make sure the media eject unit assembly (C) properly actuates the switch (media eject interlock) (A) without binding.



Switch (finisher front door interlock) removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the punch waste box (A).
4. Remove the three screws in the front securing the punch waste chute (B).
5. Gently pull down the punch waste chute (B) to gain better access to the switch (finisher front door interlock) (C).

6. Disconnect the connector from the switch (finisher front door interlock) (C).

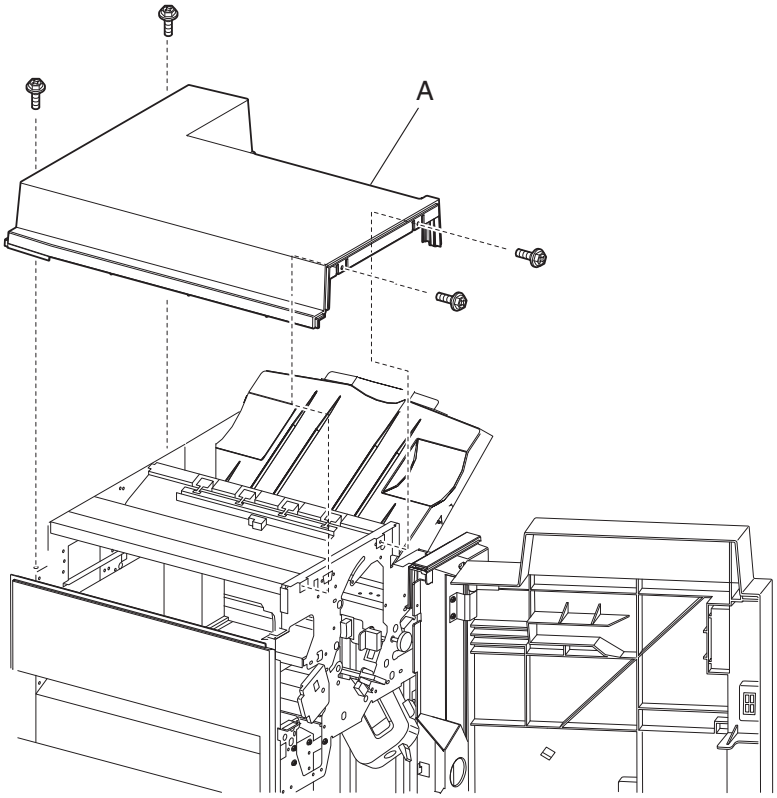


7. Release the hooks securing the switch (finisher front door interlock) (C) to the finisher.
8. Remove the switch (finisher front door interlock) (C).

Top cover removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.

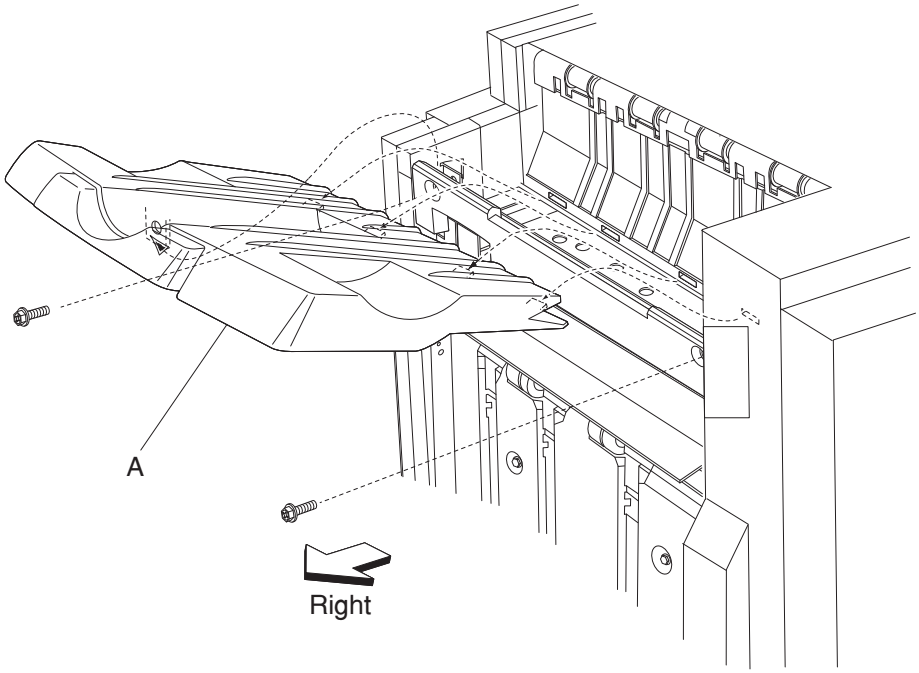
4. Remove the four screws securing the top cover (A) to the finisher.



5. Remove the top cover (A).

Upper media bin assembly removal

1. Loosen the two screws securing the upper media bin assembly (A) to the finisher.

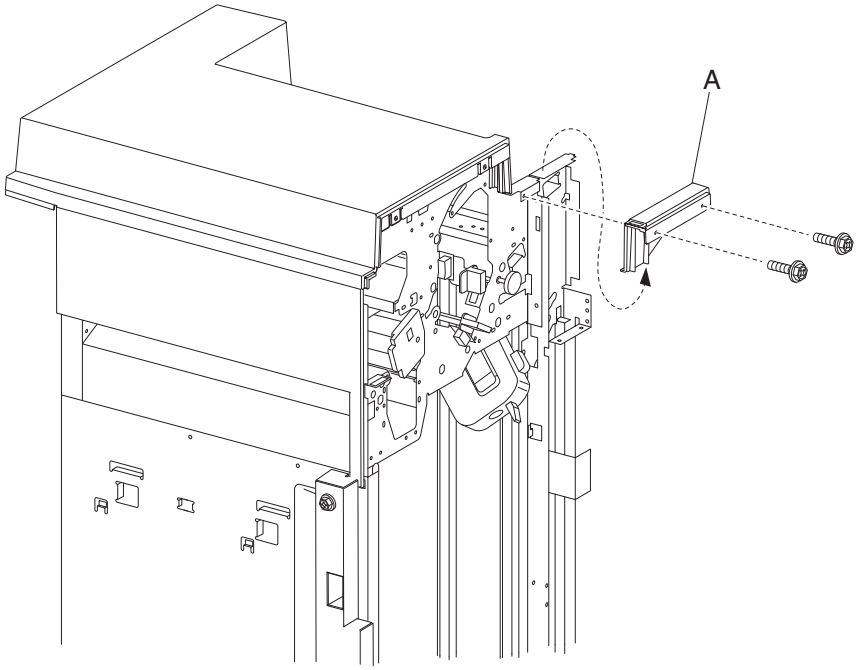


2. Lift the upper media bin assembly (A) upward in the direction of the arrow.

3. Remove the upper media bin assembly (A).

Upper media bin front cover removal

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-355**.
2. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
3. Remove the two screws securing the upper media bin front cover (A).

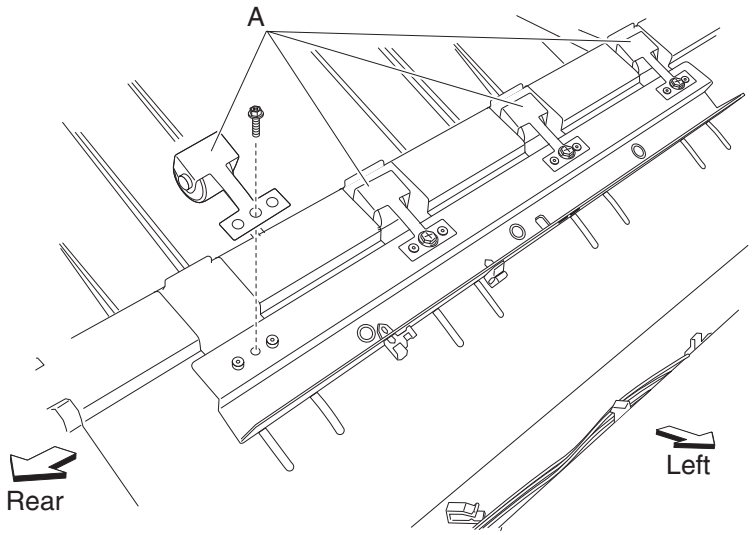


4. Remove the upper media bin front cover (A).

Upper media exit pinch roll assembly removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-387**.
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-429**.
4. Remove the top cover. See **“Top cover removal” on page 4-428**.

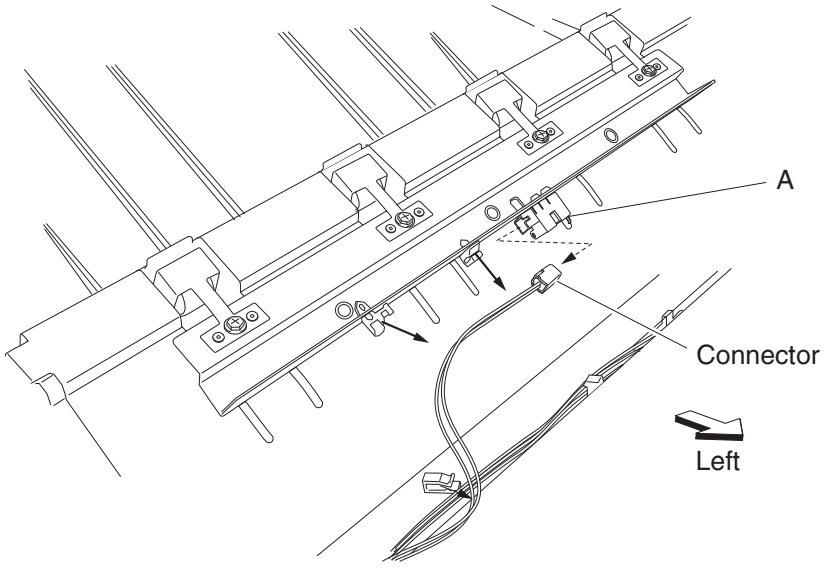
5. Remove the four screws securing the four upper media exit pinch roll assemblies (A) to the finisher.



6. Remove the four upper media exit pinch roll assembly (A).

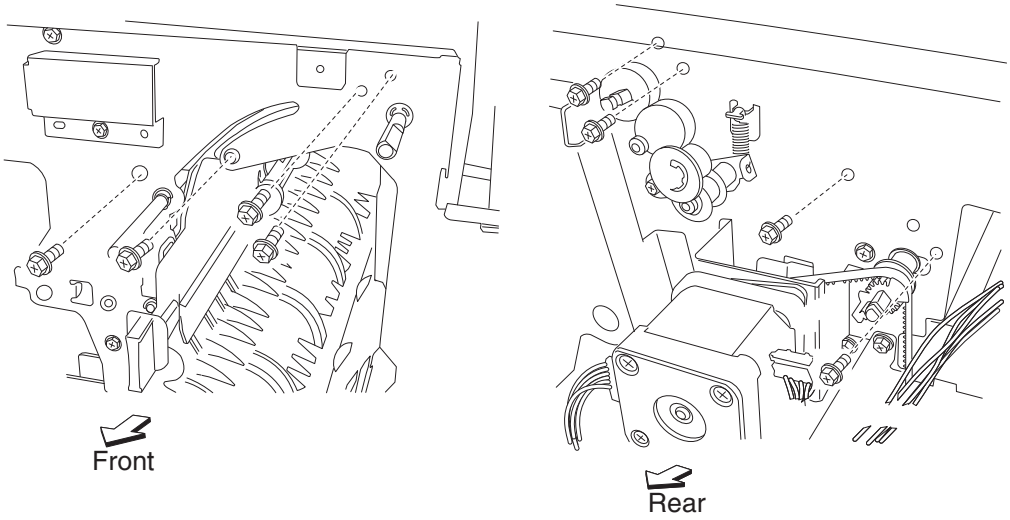
Upper media exit roll assembly removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-429**.
4. Remove the top cover. See **"Top cover removal" on page 4-428**.
5. Remove the drive motor (exit). See **"Stepper motor (exit) assembly and belt (exit) removal" on page 4-424**.
6. Disconnect the connector from the sensor (upper media exit) (A).

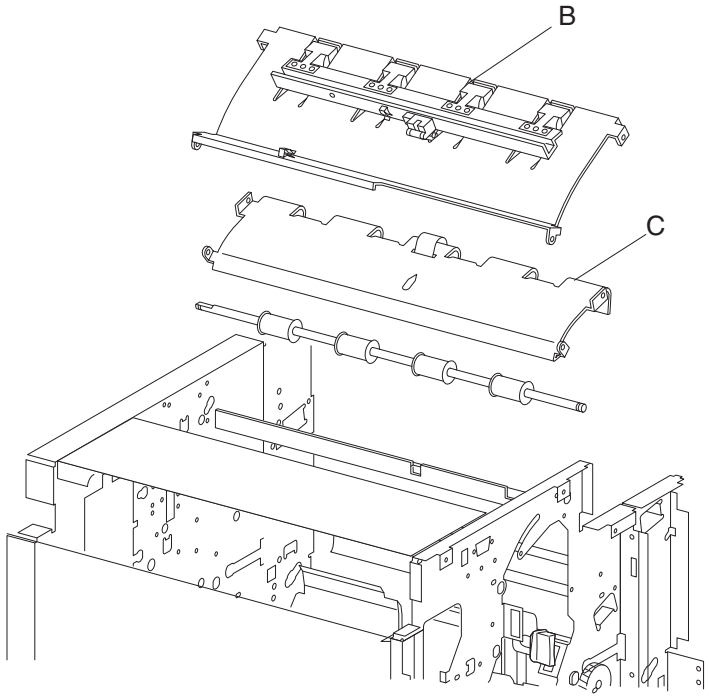


7. Release the harness from the clamps.
8. Remove the two front and two rear screws securing the upper exit guide assembly (B).
9. Remove the upper exit guide assembly.

10. Remove the two front screws and the two rear screws securing the bracket (C) to the finisher.

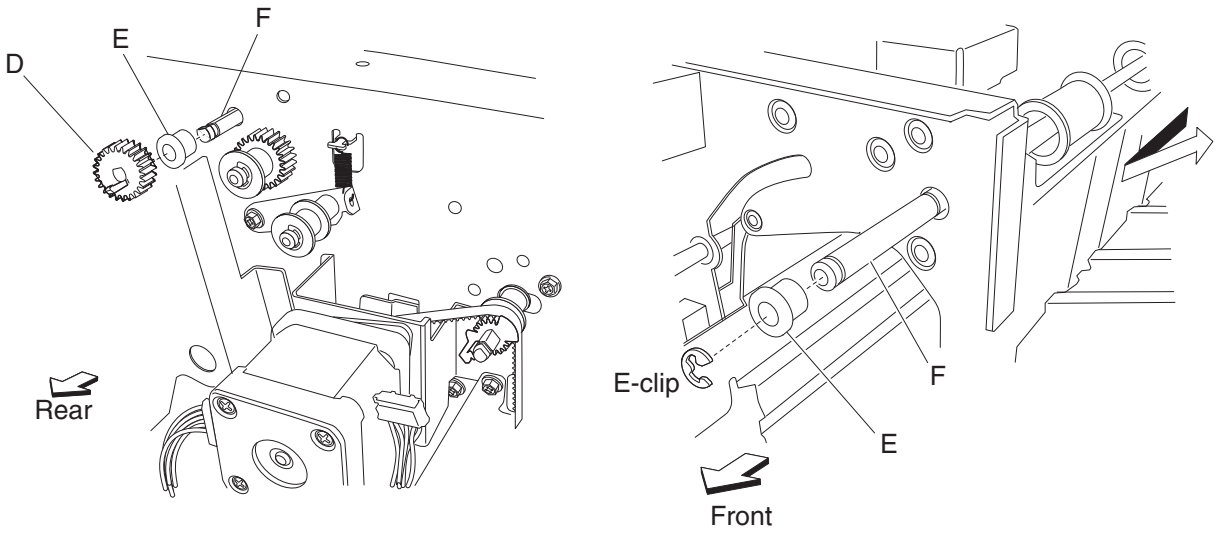


11. Remove the bracket (C).



12. Release the hook from the upper media exit roll drive gear 20T(D).
13. Remove the upper media exit roll drive gear 20T.
14. Remove the 6 mm bushing.
15. Use a prying tool to remove the e-clip securing the upper media exit roll assembly (F) to the front of the finisher.
16. Remove the 6 mm bushing (E).

17. Move the upper media exit roll assembly frontward and outward in the direction of the arrow.



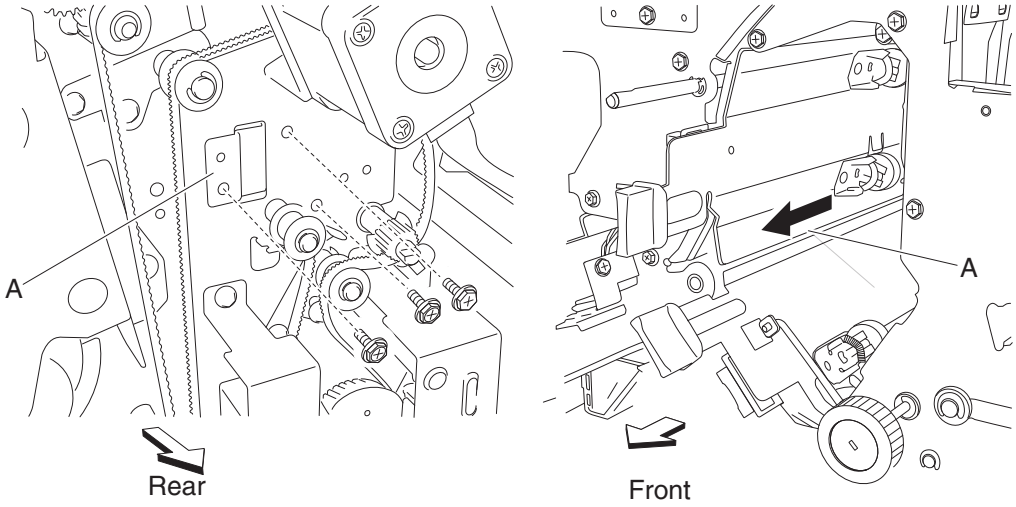
18. Remove the upper media exit roll assembly (F).
    Note: When removing the upper media exit roll assembly (F), do not touch the rubber surface.

Reinstallation notes:

- Maker sure the flat spot of the upper media exit roll assembly (F) is installed to the rear.
- When replacing the upper media exit roll assembly (F), do not touch the rubber surface.

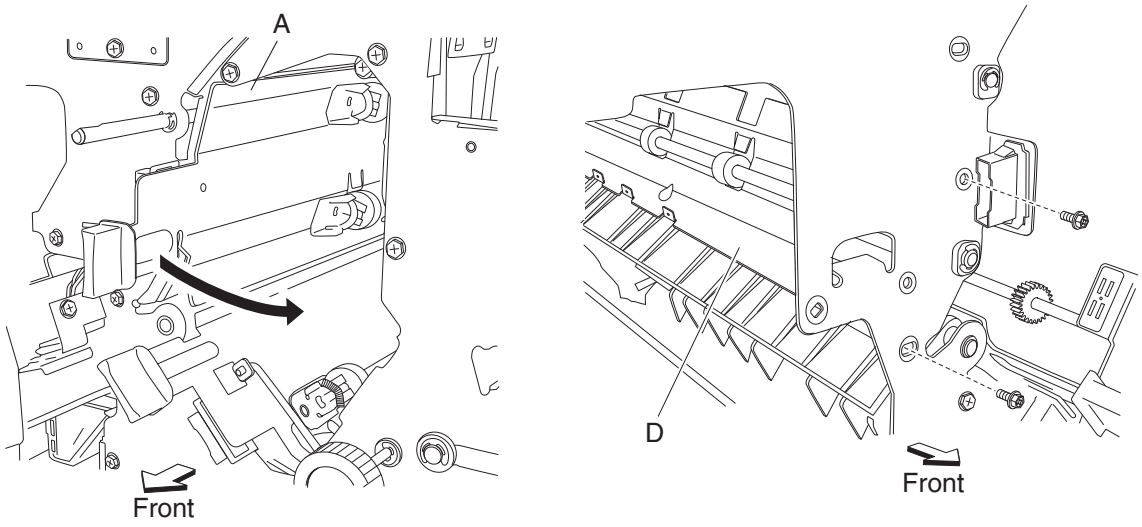
Upper pinch guide assembly removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the drive motor (buffer/transport). See **"Stepper motor (buffer/transport) and belt (buffer/transport) removal" on page 4-421**.
4. Remove the three screws securing the hinge of the upper pinch guide assembly (A) on the rear of the finisher.
5. Move the upper pinch guide assembly hinge from the rear of the finisher.
6. Remove the upper pinch guide assembly (A) from the inside of the finisher in the direction of the arrow.

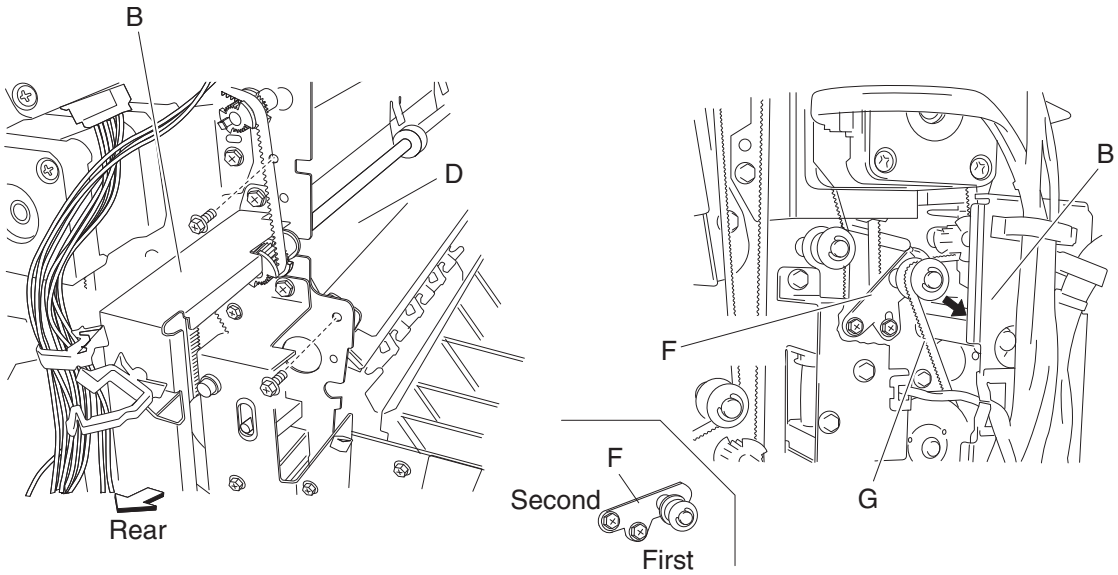


Upper transport roll removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-387**.
3. Remove the top cover. See **"Top cover removal" on page 4-428**.
4. Remove the left lower cover. See **"Left lower cover removal" on page 4-366**.
5. Remove the left upper cover. See **"Left upper cover removal" on page 4-367**.
6. Remove the punch carriage assembly. See **"Punch carriage assembly removal" on page 4-382**.
7. Open the upper pinch guide assembly (A) toward the right.
8. Remove the two screws securing the bracket (B) on the rear of the finisher.

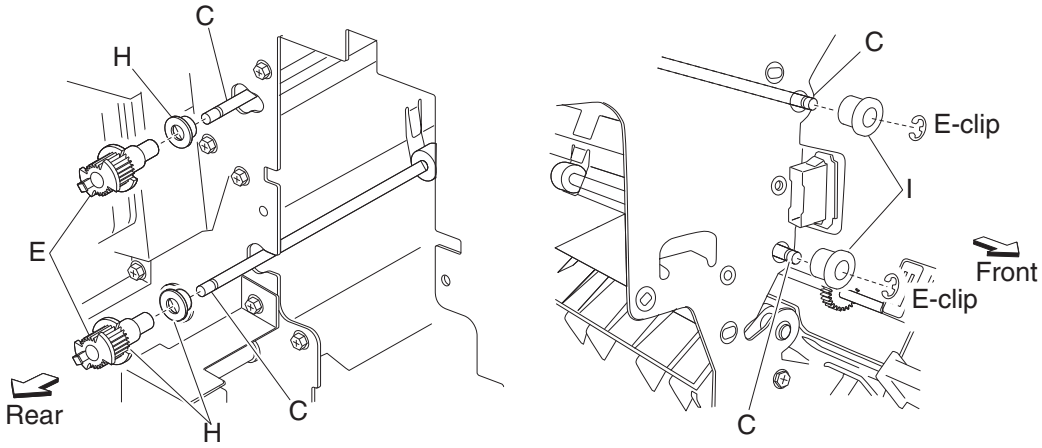


9. Move the bracket (B) slightly toward the exit side of the finisher.
   Note: It is not necessary to remove the bracket from the finisher; it should only be slightly moved to provide better access to the two upper media transport roll assemblies (C) for removal.



10. Remove the two screws securing the bracket (D).
    Note: It is not necessary to remove the bracket from the finisher; it should only be slightly moved to provide better access to the two upper media transport roll drive pulleys 20T(E).

11. Loosen the two screws securing the belt tensioner bracket (F) to the finisher, and move the bracket downward as shown.
12. Remove the belt (buffer/transport) (G) from the two upper media transport roll drive pulleys 20T (E).
13. Release the hook securing the appropriate upper media transport roll drive pulley 20T (E) to the appropriate upper transport roll (C).
14. Remove the appropriate upper media transport roll drive pulley 20T (E).
15. Remove the appropriate bushing (H).
16. With a prying tool, remove the e-clip securing the appropriate upper transport roll (C) to the front of the finisher.



17. Remove the appropriate 6 mm bushing (I).
18. Move the appropriate upper transport roll (C) toward the front and outward.
19. Remove the appropriate upper transport roll (C).
Note: When removing the upper transport roll (C), do not touch the rubber surface.

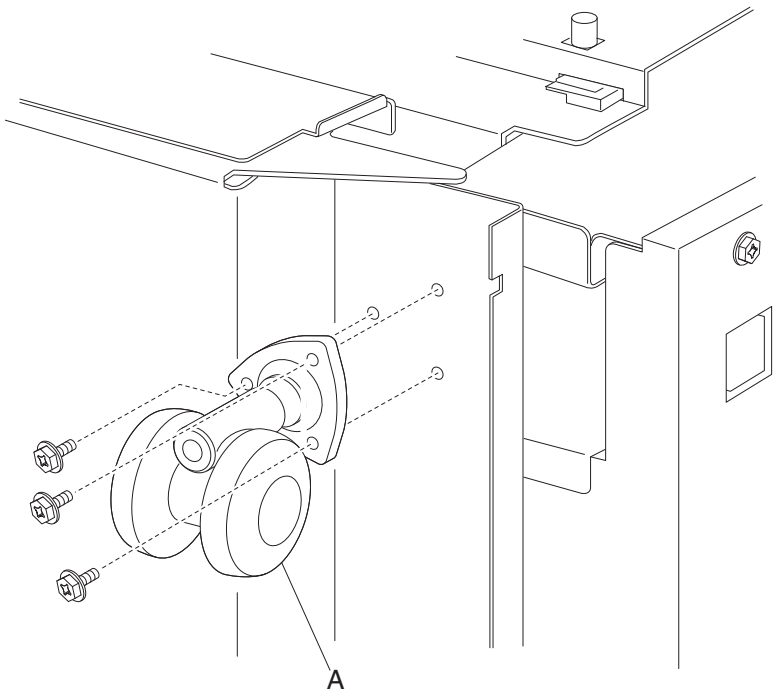
Replacement notes

- Make sure the flat spot on the upper transport roll (C) is installed to the rear.
- When replacing the upper transport roll (C), do not touch the rubber surface.
- The tension of the belt (buffer/transport) (G) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (F).
- Tighten the two screws in the order shown.

High capacity feeder (HCF) removal procedures

HCF caster removal

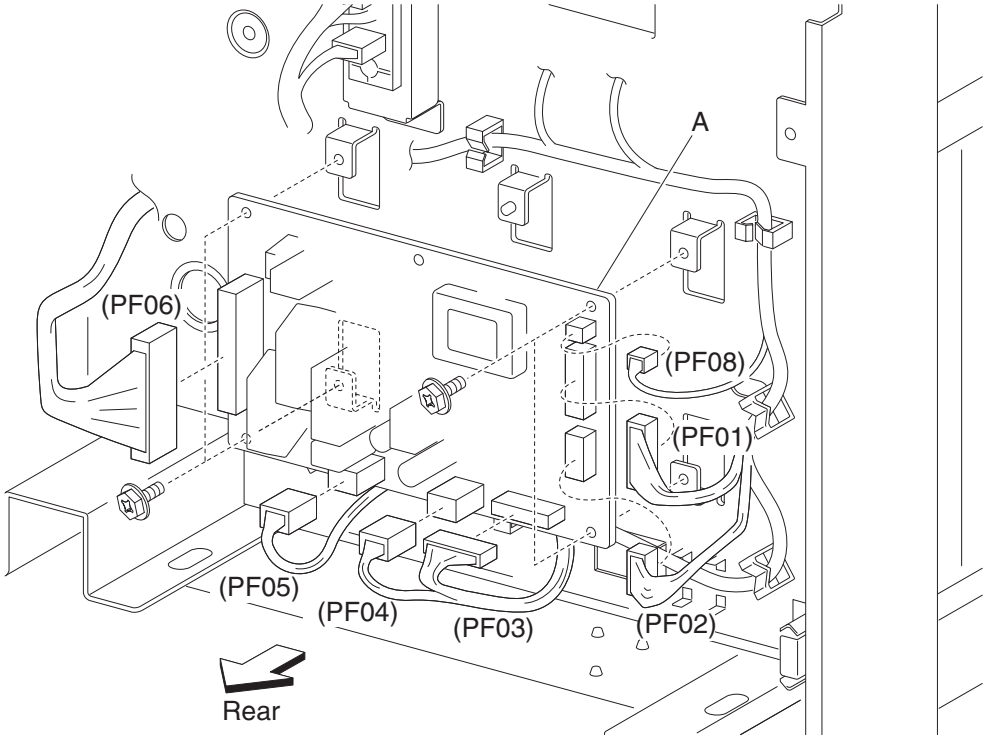
1. Remove the HCF unit from the printer.
2. Place the machine so the HCF left cover faces down.
3. Remove the three screws securing the HCF caster (A) to the unit.
4. Remove the HCF caster (A).



HCF controller card PCBA removal

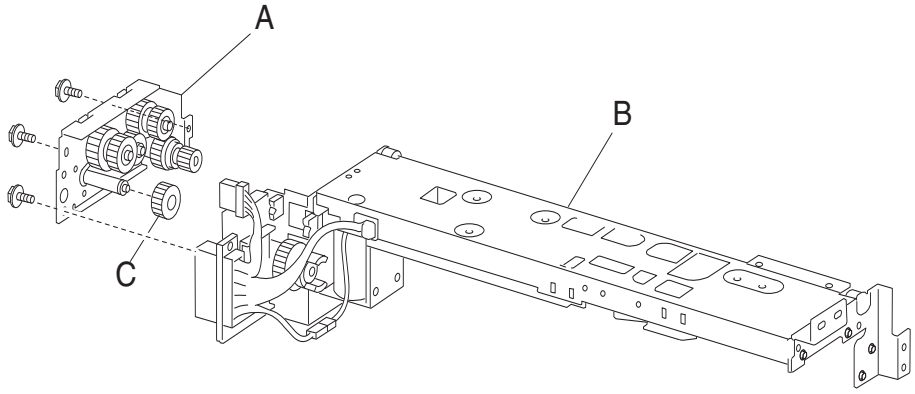
1. Remove the HCF rear cover. See **“HCF rear cover removal” on page 4-448**.
2. Disconnect all connectors from the HCF controller card PCBA (A).
3. Remove the four screws securing the HCF controller card PCBA (A) to the unit.

4. Remove the HCF controller card PCBA (A).



HCF feed lift gear bracket removal

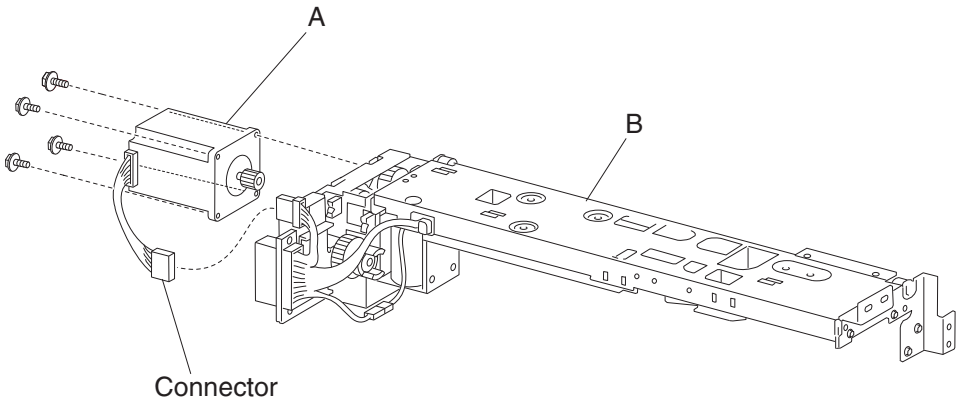
1. Remove the HCF media tray assembly from the printer. See **"HCF media tray assembly removal" on page 4-443**.
2. Remove the HCF media feed unit assembly. See **"HCF feed unit removal" on page 4-439**.
3. Remove the HCF feed lift motor. See **"HCF feed lift motor removal" on page 4-437**.
4. Remove the three screws securing the HCF feed lift gear bracket (A) to the media feed unit assembly (B).
5. Remove the HCF feed lift gear bracket (A).
6. Remove the gear lift gear 24T (C) from the HCF media feed unit assembly.



HCF feed lift motor removal

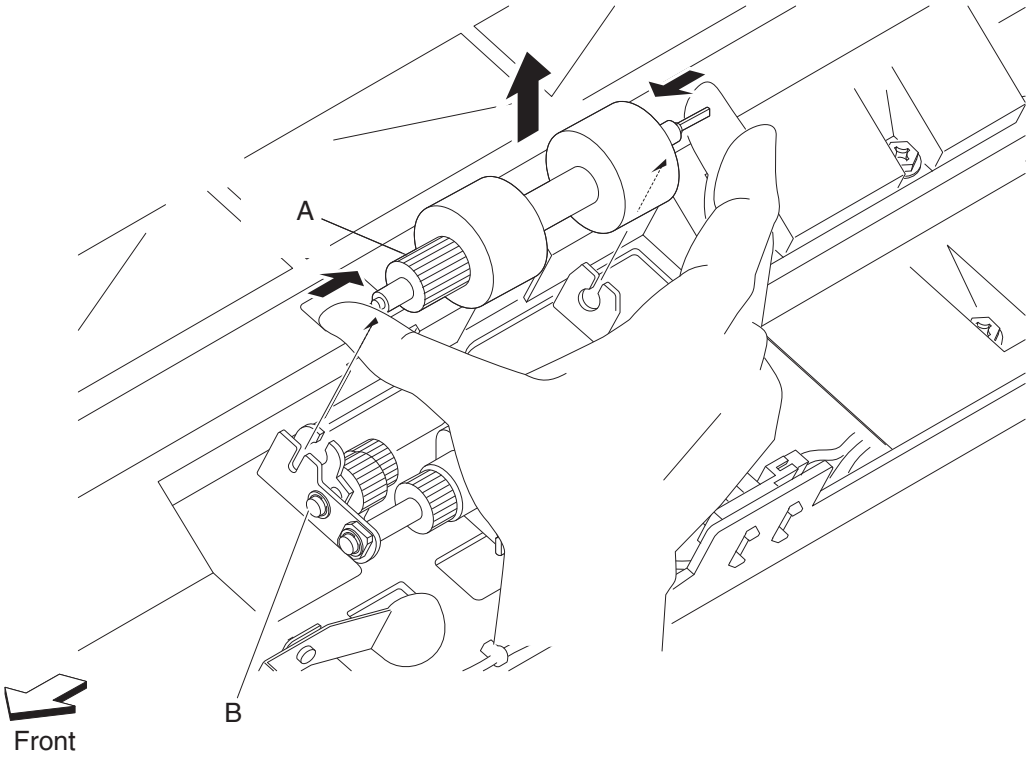
1. Remove the HCF media tray assembly. See **"HCF media tray assembly removal" on page 4-443**.
2. Remove the HCF media feed unit assembly. See **"HCF feed unit removal" on page 4-439**.

3. Disconnect the connector from the HCF feed lift motor assembly (A).
4. Remove the four screws securing the HCF feed lift motor (A) to the HCF media feed unit assembly (B).
5. Remove the HCF media feed lift motor (A).



HCF feed roll assembly removal

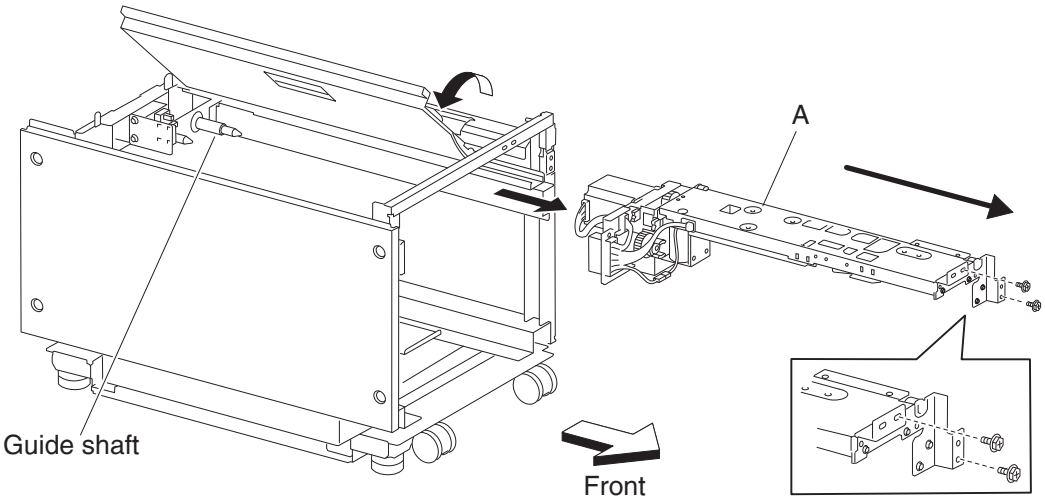
1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Push the two ends of the HCF feed roll assembly (A) inward, and move it upward in the direction of the arrow to release it from the HCF media feed unit assembly (B).
4. Remove the HCF feed roll assembly (A).
   Note: When removing the HCF feed roll assembly (A), do not touch the rubber surface.



Note: Before re-installing the HCF feed roll assembly (A), do not touch the rubber surface.

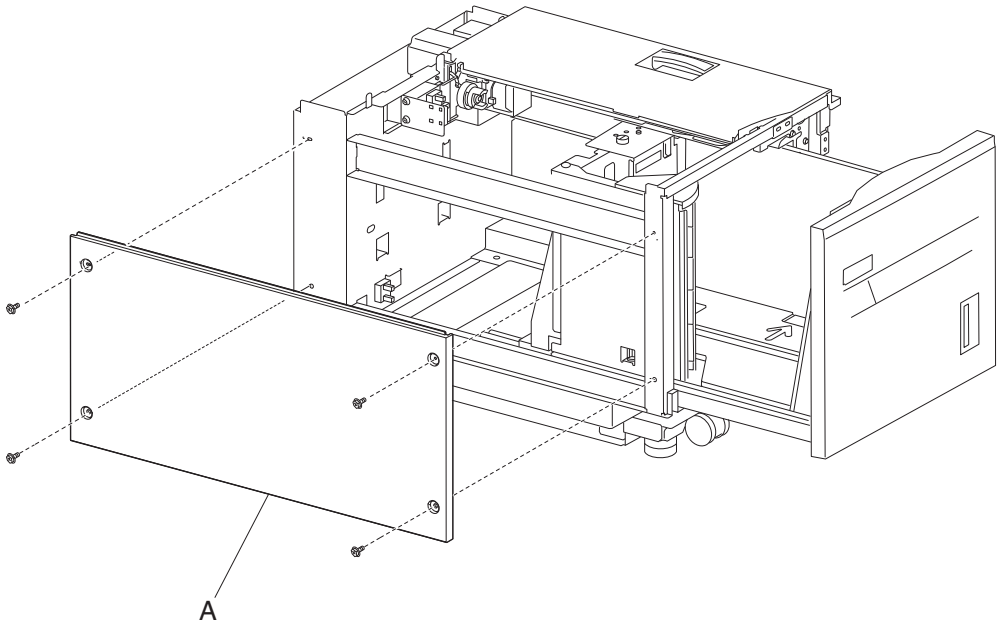
HCF feed unit removal

1. Remove the HCF media tray assembly from the printer. See **"HCF media tray assembly removal" on page 4-443**.
2. Remove the two screws securing the media feed unit assembly (A) on the front side.
3. Pull the media feed unit assembly (A) out of the machine in the direction of the arrow.
   Note: More force to remove the media feed unit (A) may be required due to the electrical connector inside the machine.



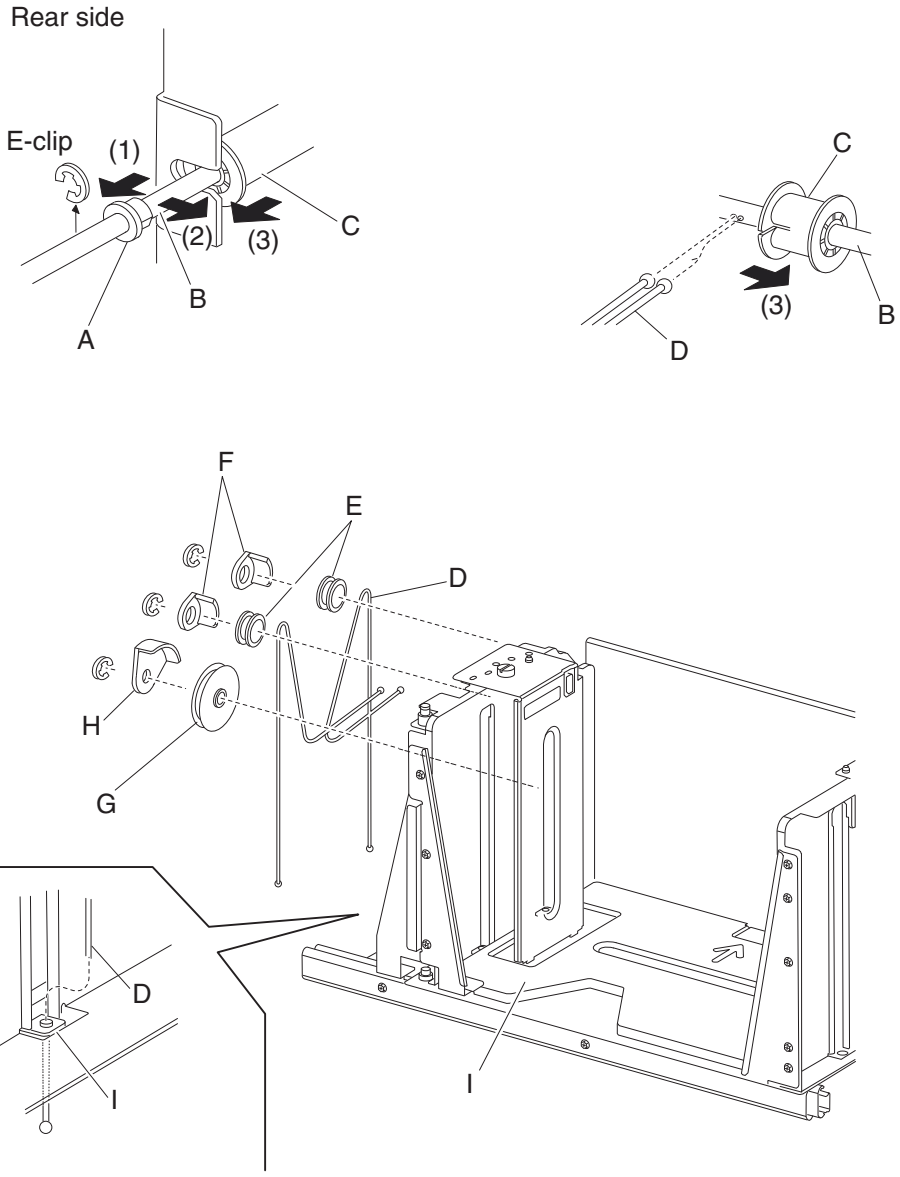
HCF left cover removal

1. Remove the five screws securing the HCF left cover (A) to the unit.
2. Remove the HCF left cover (A).



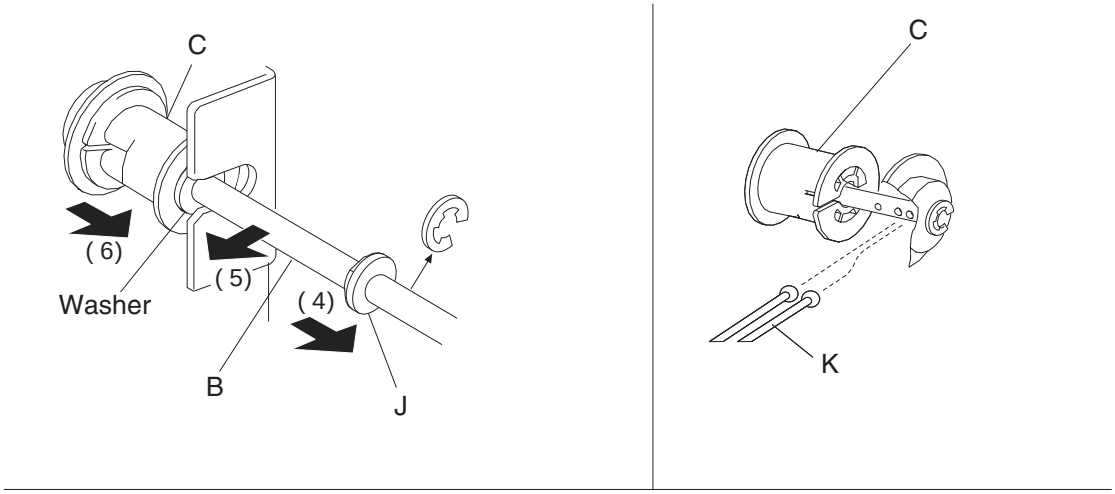
HCF lift cables removal

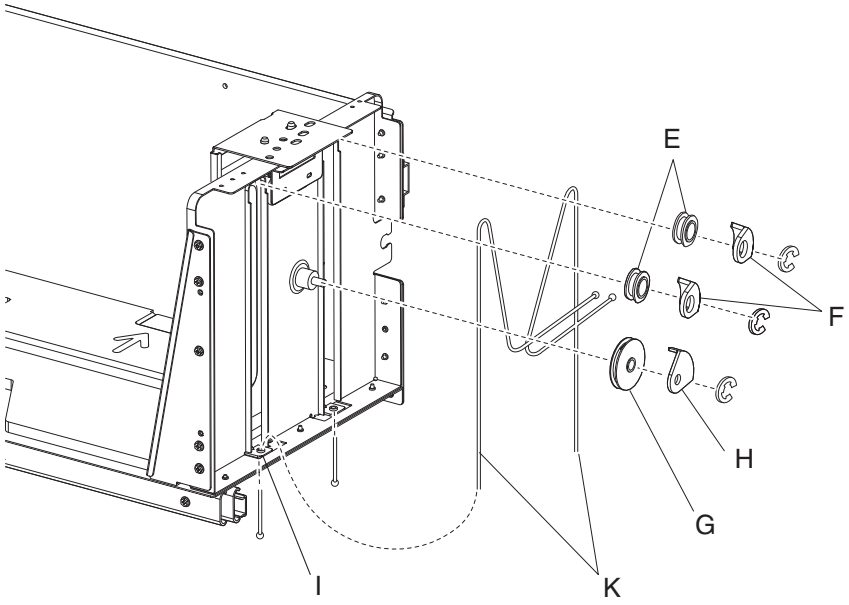
1. Remove the HCF media tray assembly. See **"HCF media tray assembly removal" on page 4-443**.
2. Remove the tray lift gear bracket. See **"HCF tray lift gear bracket removal" on page 4-457**.
3. Remove the HCF media tray front cover. See **"HCF media tray front cover removal" on page 4-444**.
4. Remove the e-clip securing the bushing (A) to the tray lift shaft assembly (B) at the rear on the right side of the HCF media tray.
5. Move the bushing (A) inward in the direction of the arrow (1) to remove it from the tray.
6. Move the tray lift shaft assembly (B) outward in the direction of the arrow (2) to remove it from the tray.
7. Move the tray lift shaft pulley (C) inward in the direction of the arrow (3) to detach the rear cables (D).
8. Detach the rear cables (D) from the tray lift shaft assembly (B).
9. Remove the two e-clips securing the small cable pulleys (E) on the top rear of the HCF media tray.
10. Remove the two small guides (F) and the two small pulleys (E).
11. Remove the e-clip securing the large pulley (G) to the tray.
12. Remove the large guide (H) and the large pulley (G).
13. Remove the two rear cables (D) from the bottom plate (I).



14. Remove the e-clip securing the bushing (J) to the tray lift shaft assembly (B).

15. Move the bushing (J) inward in the direction of the arrow (4) to remove it from the tray.
16. Move the tray lift shaft assembly (B) outward in the direction of the arrow (5) to remove it from the tray.
17. Move the tray lift shaft pulley (C) inward in the direction of arrow (6) to detach the front cables (K).
18. Remove the two e-clips securing the small cable pulleys (E) on the top front of the HCF media tray.
19. Remove the two small guides (F) and the two small pulleys (E).





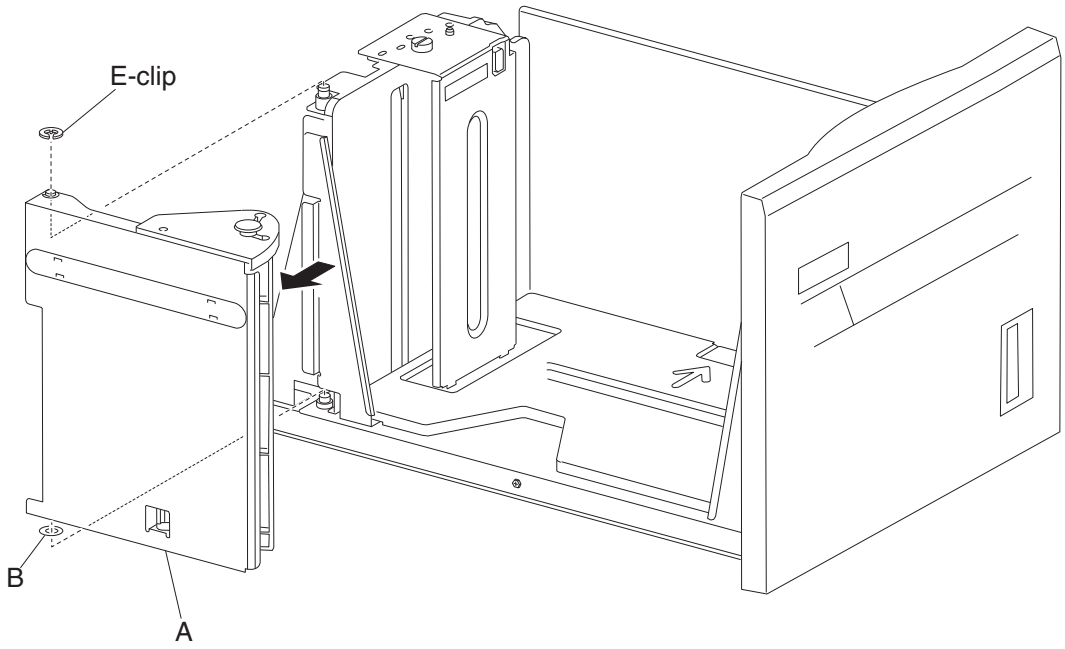
20. Remove the e-clip securing the large pulley (G) to the frame assembly.
21. Remove the large guide (H) and the large pulley (G).
22. Remove the two front cables (K) from the bottom plate (I).
    Note: Before re-installing:

    - It is recommended that all four cables be replaced together.
    - When fitting the cables (D) and (K), ensure they are not twisted or kinked.
    - Route the cables properly, as shown.
    - Be sure to replace the washer on the front of the tray lift shaft assembly.

HCF media long edge guide assembly removal

1. Pull out the HCF media tray.
2. Remove the e-clip securing the media long edge guide assembly (A) to the HCF media tray.

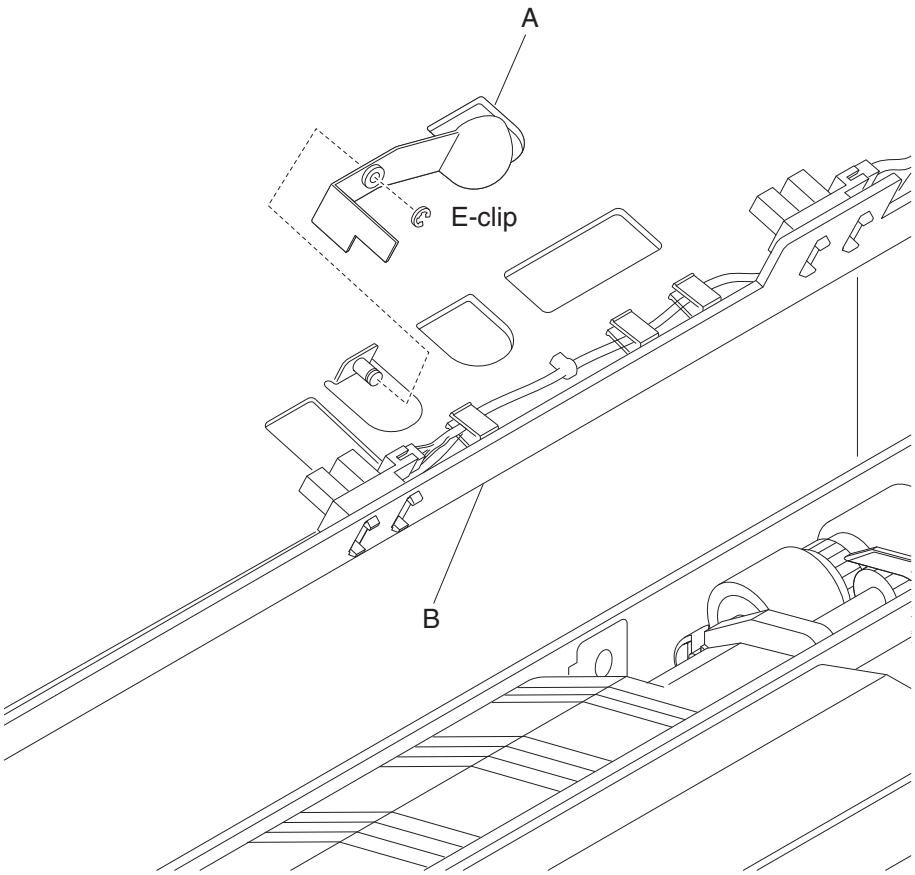
3. Lift the media long edge guide assembly (A) upward to release it from the hinges on the HCF media tray.
4. Remove the media long edge guide assembly (A).
   Note: With the media long edge guide assembly (A) removed, the wave washer (B) becomes detached.



HCF media out actuator removal

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Remove the e-clip securing the media out actuator (A) to the HCF media feed unit assembly (B).

4. Remove the media out actuator (A).



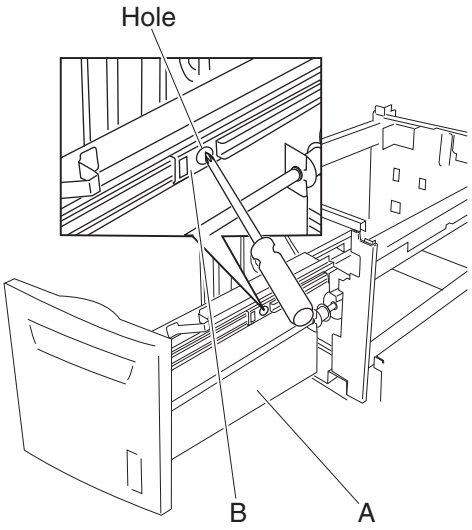
HCF media tray assembly removal

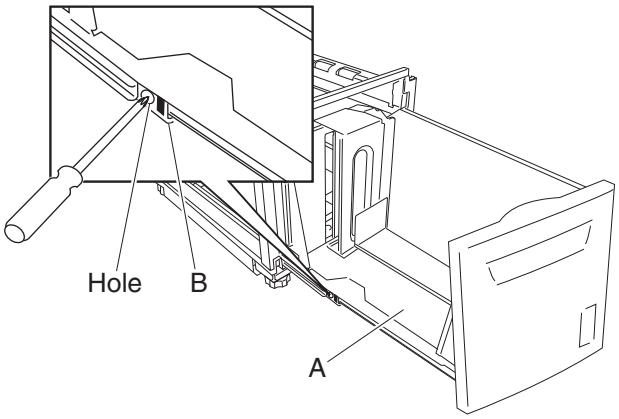
1. Pull out the HCF media tray assembly (A) from the unit.
2. Release the two bearing slides (B) by inserting a prying tool into the two holes while pulling the HCF media tray (A) from the frame assembly (B).

3. Remove the HCF media tray (A) from the frame assembly.
   Note: A little force is required to remove the HCF media tray (A) from the unit.

Note: Before re-installing the HCF media tray (A), ensure the two bearing slides (B) are properly installed into the frame assembly.

Note: Extra force is required to re-install the HCF media tray (A) to the unit.

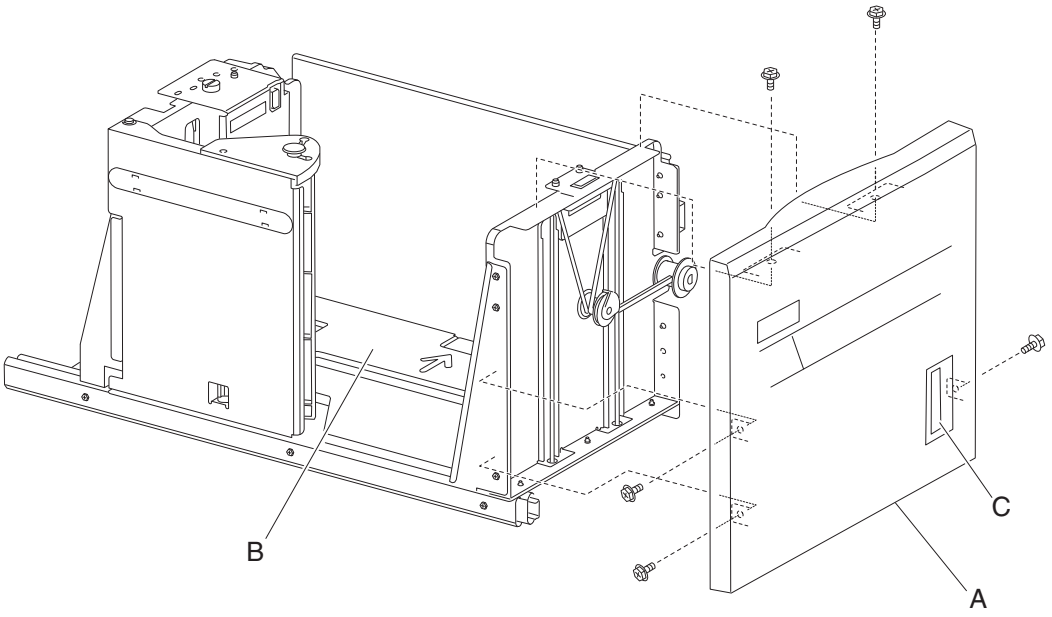




HCF media tray front cover removal

1. Pull out the HCF media tray.
2. Remove the five screws securing the HCF media tray front cover (A) to the HCF media tray.

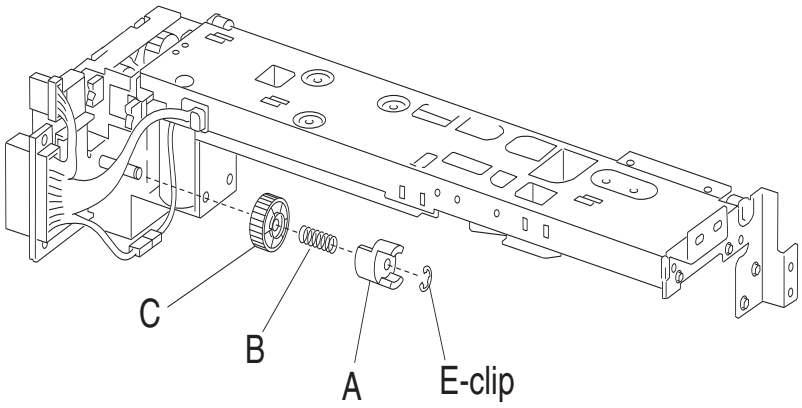
3. Remove the HCF media tray front cover (A).



Note: Ensure that the HCF media tray assembly contains no media when the bottom plate (B) is raised after replacing the HCF media tray front cover (A). A series of clicking sounds will be produced during the calibrating process of the media level indicator (C).

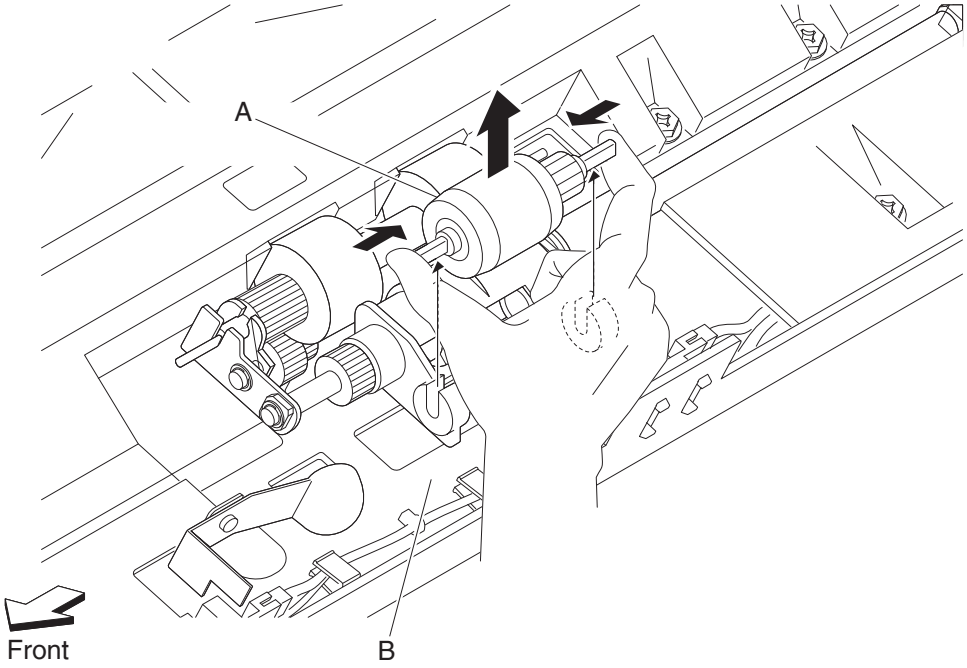
HCF media tray lift coupling assembly removal

1. Remove the HCF media tray assembly from the printer. See **"HCF media tray assembly removal" on page 4-443**.
2. Remove the HCF media feed unit assembly. See **"HCF feed unit removal" on page 4-439**.
3. Remove the HCF feed lift motor. See **"HCF feed lift motor removal" on page 4-437**.
4. Use a prying tool to remove the e-clip securing the HCF tray lift coupling (D) to the HCF media feed unit assembly.
5. Remove the HCF tray lift coupling (A).
6. Remove the spring (B).
7. Remove the HCF tray lift gear - 40 tooth (C).



HCF pick roll assembly removal

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Push the two ends of the HCF pick roll assembly (A) inward, and move it upward in the direction of the arrow to release it from the HCF media feed unit assembly (B).
4. Remove the HCF pick roll assembly (A).
   Note: When removing the HCF pick roll assembly (A), do not touch the rubber surface.

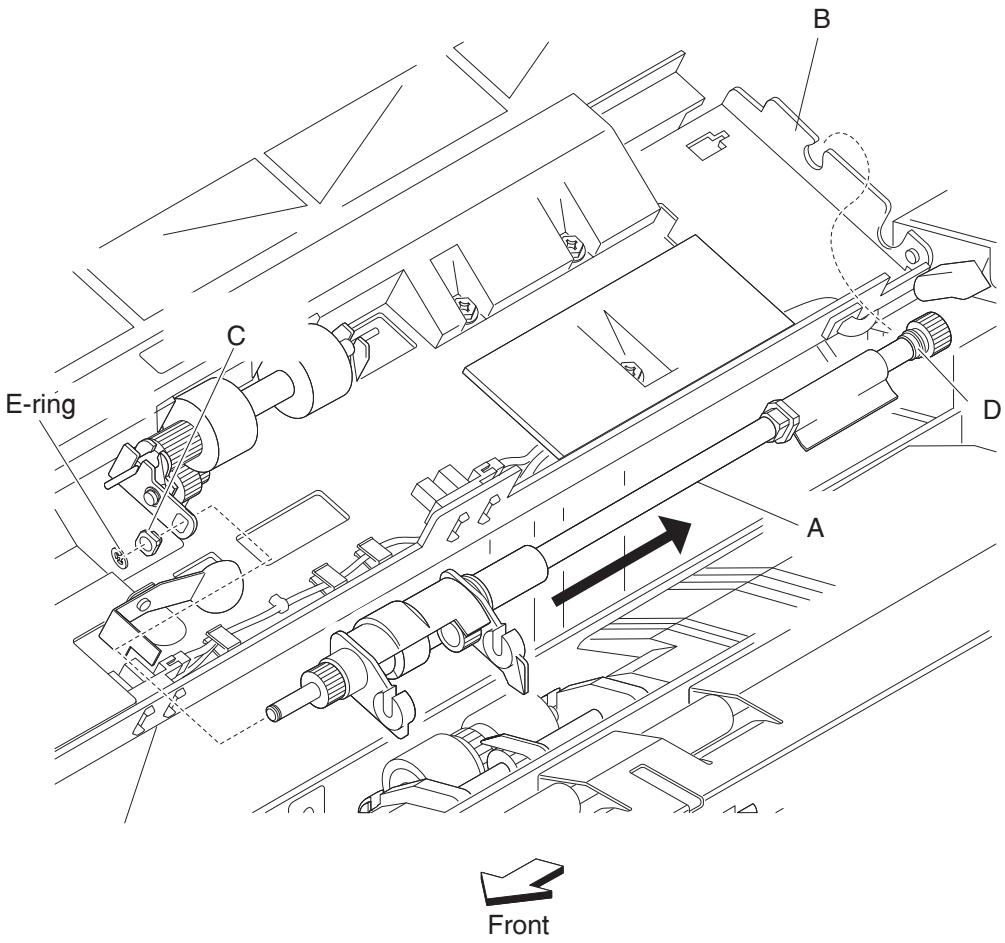


Note: Before re-installing the HCF pick roll assembly (A), do not touch the rubber surface.

HCF pick roll shaft assembly removal

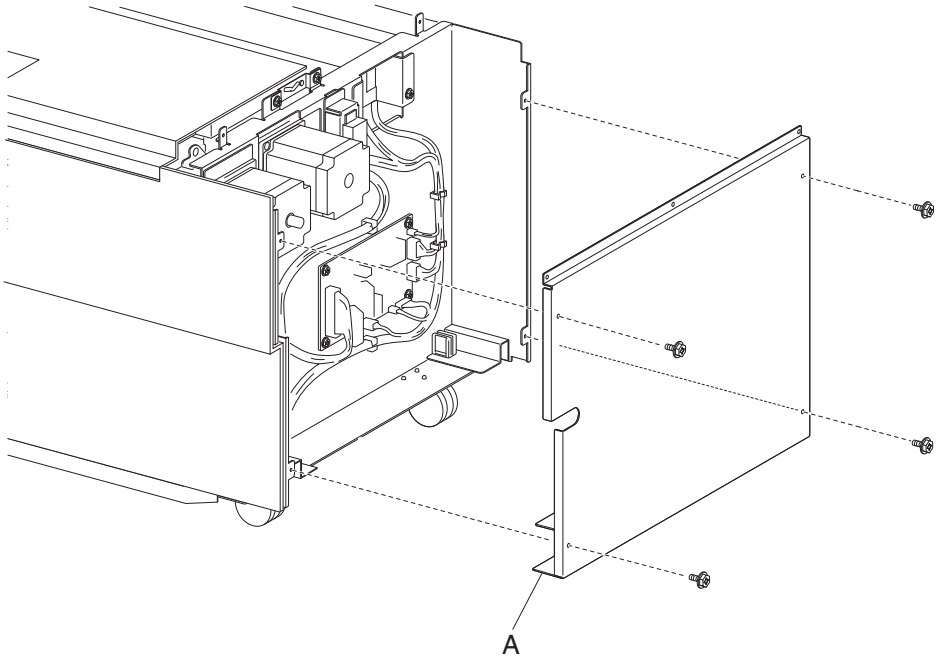
1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Remove the HCF pick roll assembly. See **“HCF pick roll assembly removal” on page 4-446**.
4. Use a prying tool to remove the e-clip securing the HCF pick roll shaft assembly (A) to the HCF media feed unit assembly (B).
5. Remove the bushing (C) from the HCF media feed unit assembly (B).
6. Remove the bearing (D) from the HCF media feed unit assembly (B).

7. Remove the HCF pick roll shaft assembly (A).



HCF rear cover removal

1. Remove the four screws securing the HCF rear cover (A) to the unit.
2. Remove the HCF rear cover (A).

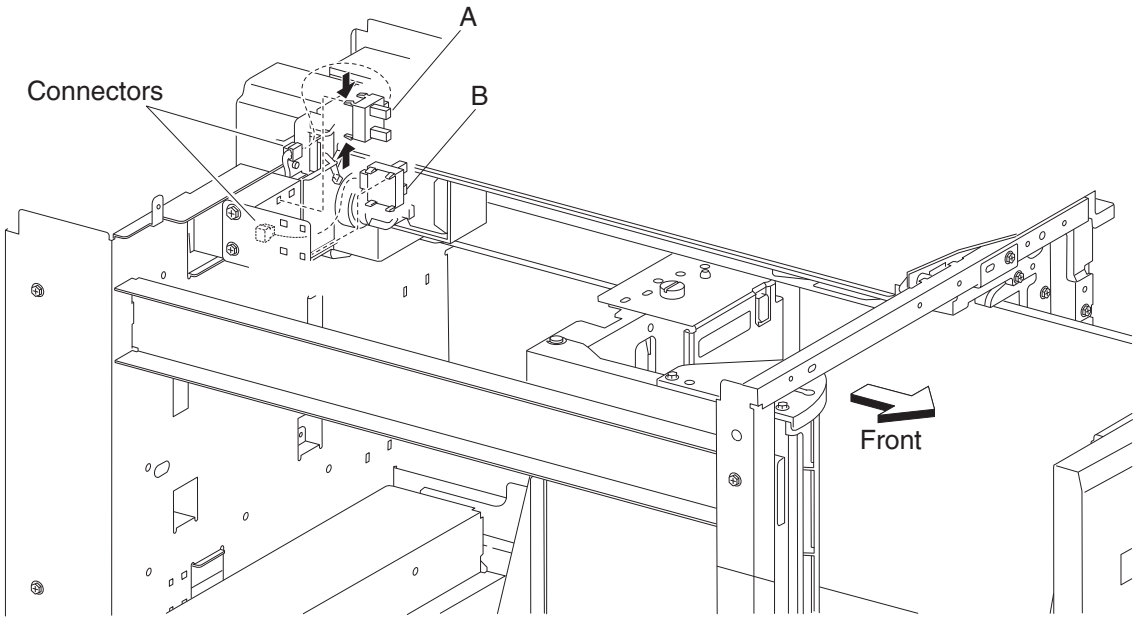


HCF sensor (HCF media size) removal

Note: This procedure can be applied to HCF sensor (media size L) and the HCF sensor (media size R).

1. Remove the HCF media tray. See **"HCF media tray assembly removal" on page 4-443**.
2. Remove the HCF top cover. See **"HCF top cover removal" on page 4-453**.
3. Remove the HCF rear cover. See **"HCF rear cover removal" on page 4-448**.
4. Disconnect the connector from the sensor (HCF media size R) (A) or the sensor (HCF media size L) (B).
5. Release the hooks securing the sensor (HCF media size R) (A) or the sensor (HCF media size L) (B) to the unit.

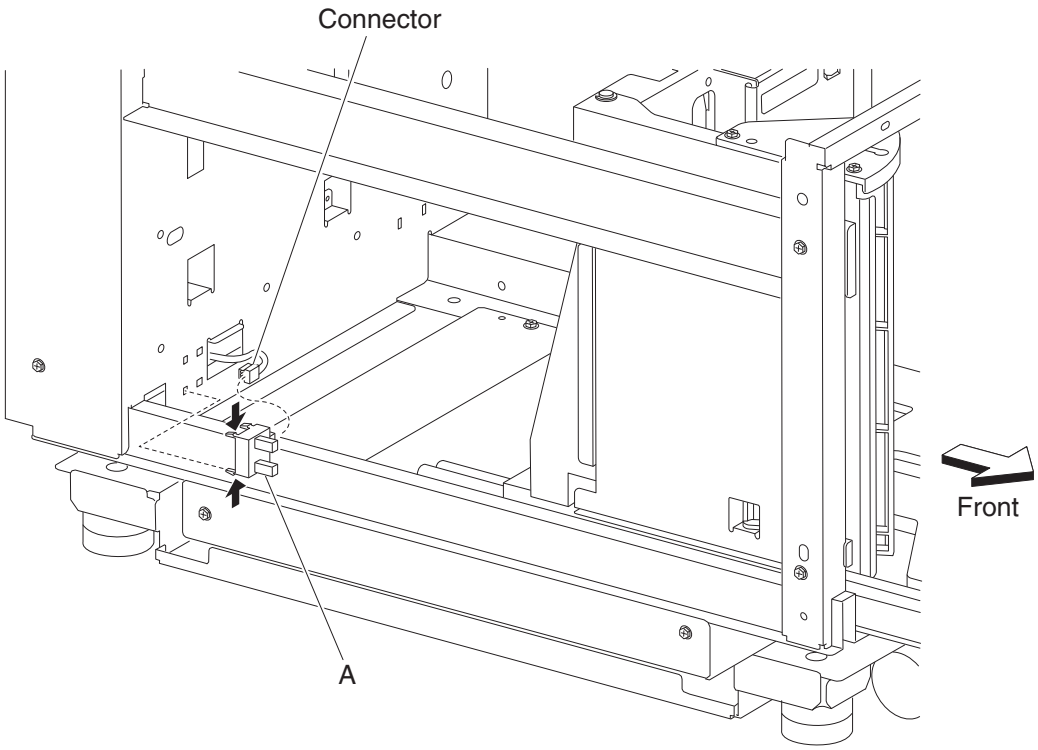
6. Remove the sensor (HCF media size R) (A) or the sensor (HCF media size L) (B).



HCF sensor (HCF media tray set) removal

1. Pull out the HCF media tray.
2. Remove the HCF left cover. See **"HCF left cover removal" on page 4-439**.
3. Remove the HCF rear cover. See **"HCF rear cover removal" on page 4-448**.
4. Disconnect the connector from the sensor (HCF media tray set) (A).
5. Release the hooks securing the sensor (HCF media tray set) (A) to the unit.

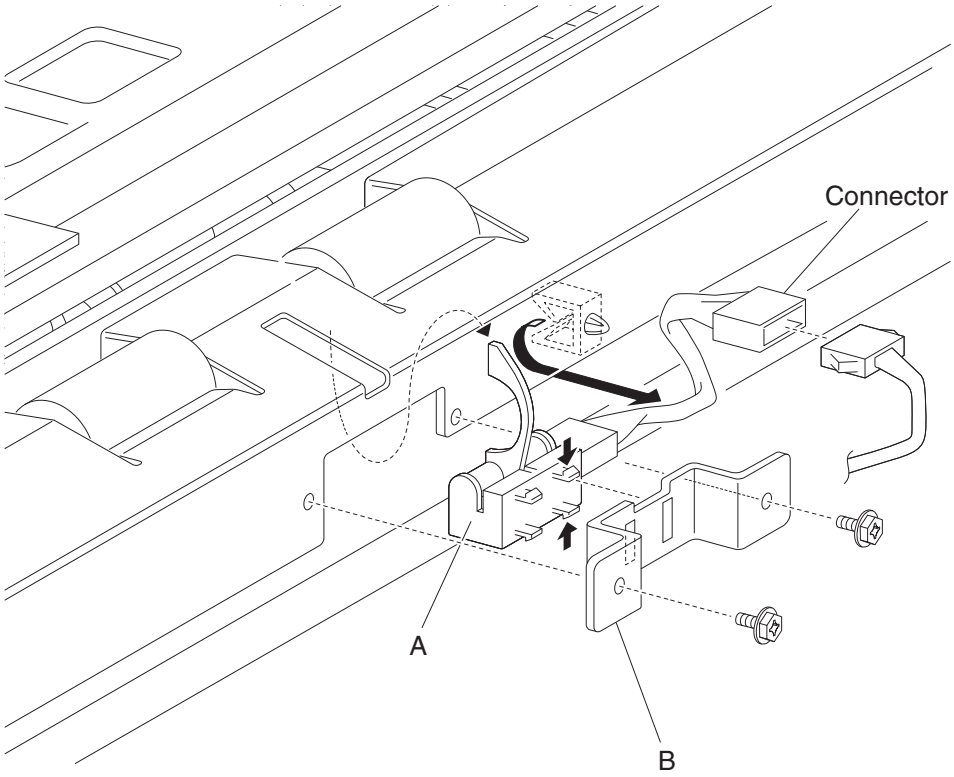
6. Remove the sensor (HCF media tray set) (A).



HCF sensor (tray 5 feedout) removal

1. Remove the HCF unit from the printer.
2. Open the HCF top door assembly.
3. Remove the two screws securing the bracket (B) to the unit.
4. Remove the bracket (B).
5. Disconnect the connector from the sensor (tray 5 feedout) (A).
6. Release the hooks securing the sensor (tray 5 feedout) (A) to the bracket (B).

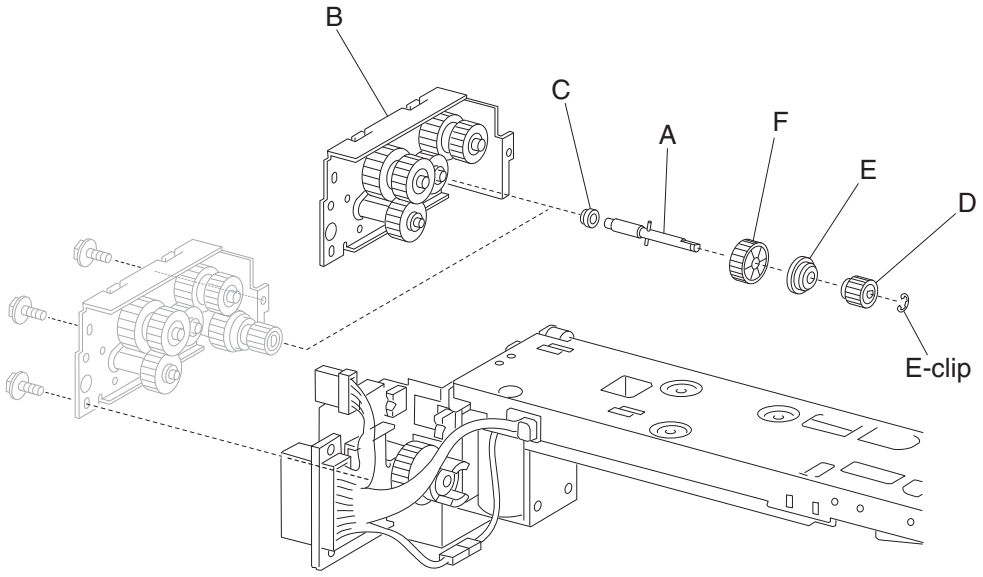
7. Remove the sensor (tray 5 feedout) (A).



HCF separation drive gear kit removal

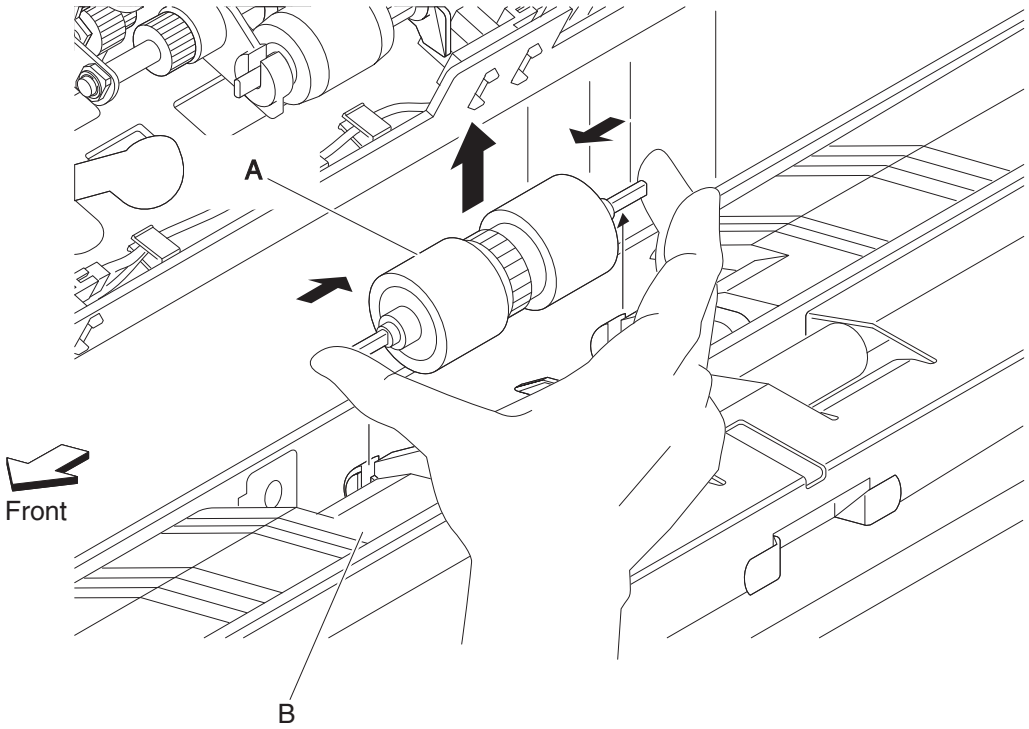
1. Remove the HCF media tray assembly from the printer. See **"HCF media tray assembly removal" on page 4-443**.
2. Remove the HCF feed unit. See **"HCF feed unit removal" on page 4-439**.
3. Remove the HCF feed lift motor. See **"HCF feed lift motor removal" on page 4-437**.
4. Remove the HCF lift feed gear bracket. See **"HCF feed lift gear bracket removal" on page 4-437**.
5. Remove the shaft (A) from the HCF lift feed gear bracket (B).
   Note: Bearing (C) may become detached.
6. Use a prying tool to remove the e-clip securing the separation gear -19 tooth (D) to shaft (A).
7. Remove the separation gear - 19 tooth (D).
8. Remove the bushing (E).

9. Remove the separation gear - 25 tooth (F).



HCF separation roll assembly removal

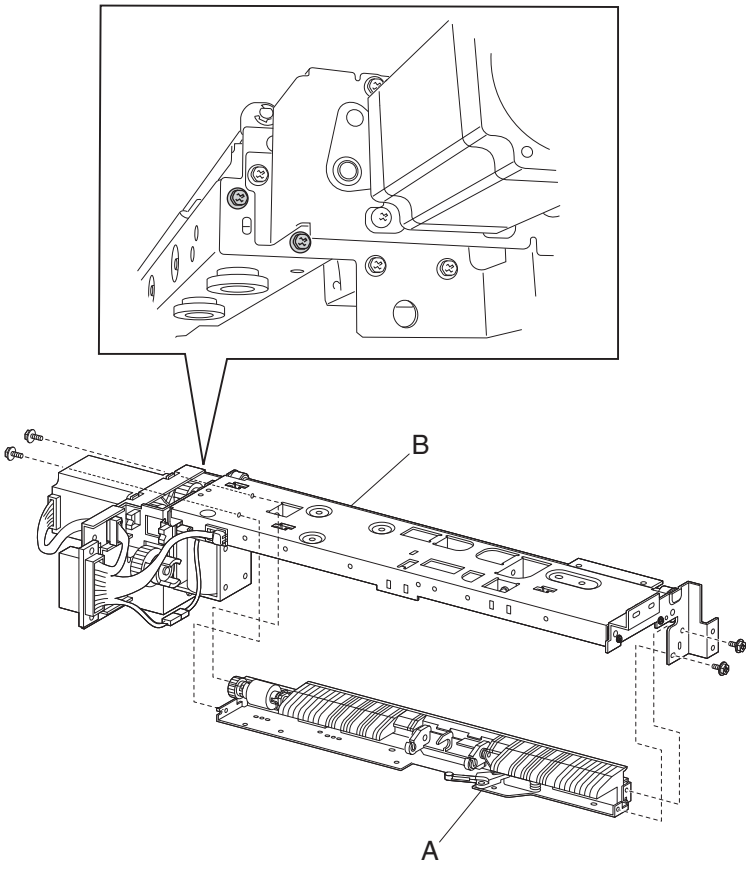
1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Push the two ends of the HCF separation roll assembly (A) inward, and move it upward in the direction of the arrow to release it from the HCF media feed unit assembly (B).
4. Remove the HCF separation roll assembly (A).
   Note: When removing the HCF separation roll assembly (A), do not touch the rubber surface.



Note: Before re-installing the HCF separation roll assembly (A), do not touch the rubber surface.

HCF separation roll shaft assembly removal

1. Remove the HCF media tray assembly. See **"HCF media tray assembly removal" on page 4-443**.
2. Remove the HCF media feed unit assembly. See **"HCF feed unit removal" on page 4-439**.
3. Remove the HCF feed lift motor. See **"HCF feed lift motor removal" on page 4-437**.
4. Remove the HCF feed lift gear bracket. See **"HCF feed lift gear bracket removal" on page 4-437**.
5. Remove the HCF separation roll assembly. See **"HCF separation roll assembly removal" on page 4-452**.
6. Remove the four screws securing the separation roll shaft assembly (A) to the media feed unit assembly (B).
7. Remove the separation roll shaft assembly (A).
   Note: The HCF media feed unit assembly (B) becomes detached from the separation roll shaft assembly (A) at the hinge point.

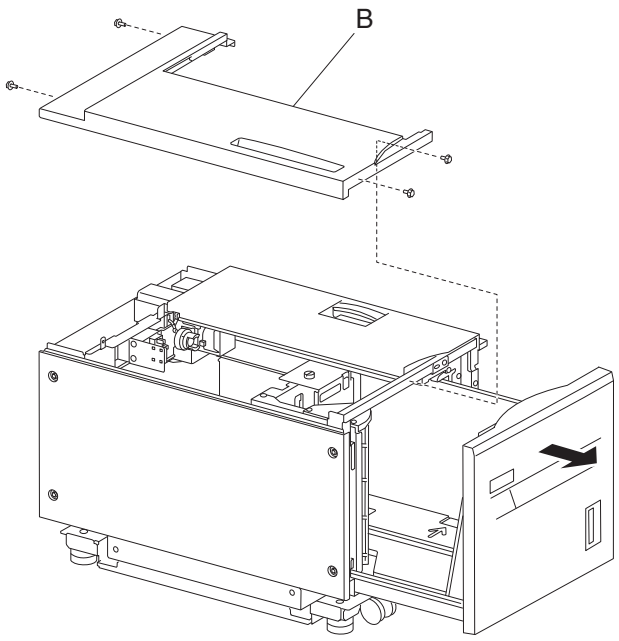


Note: Before re-installing the separation roll shaft assembly (A), ensure the HCF media feed unit assembly (B) is re-attached at the two hinge points.

HCF top cover removal

1. Pull out the HCF media tray.
2. Remove the four screws securing the HCF top cover (B).

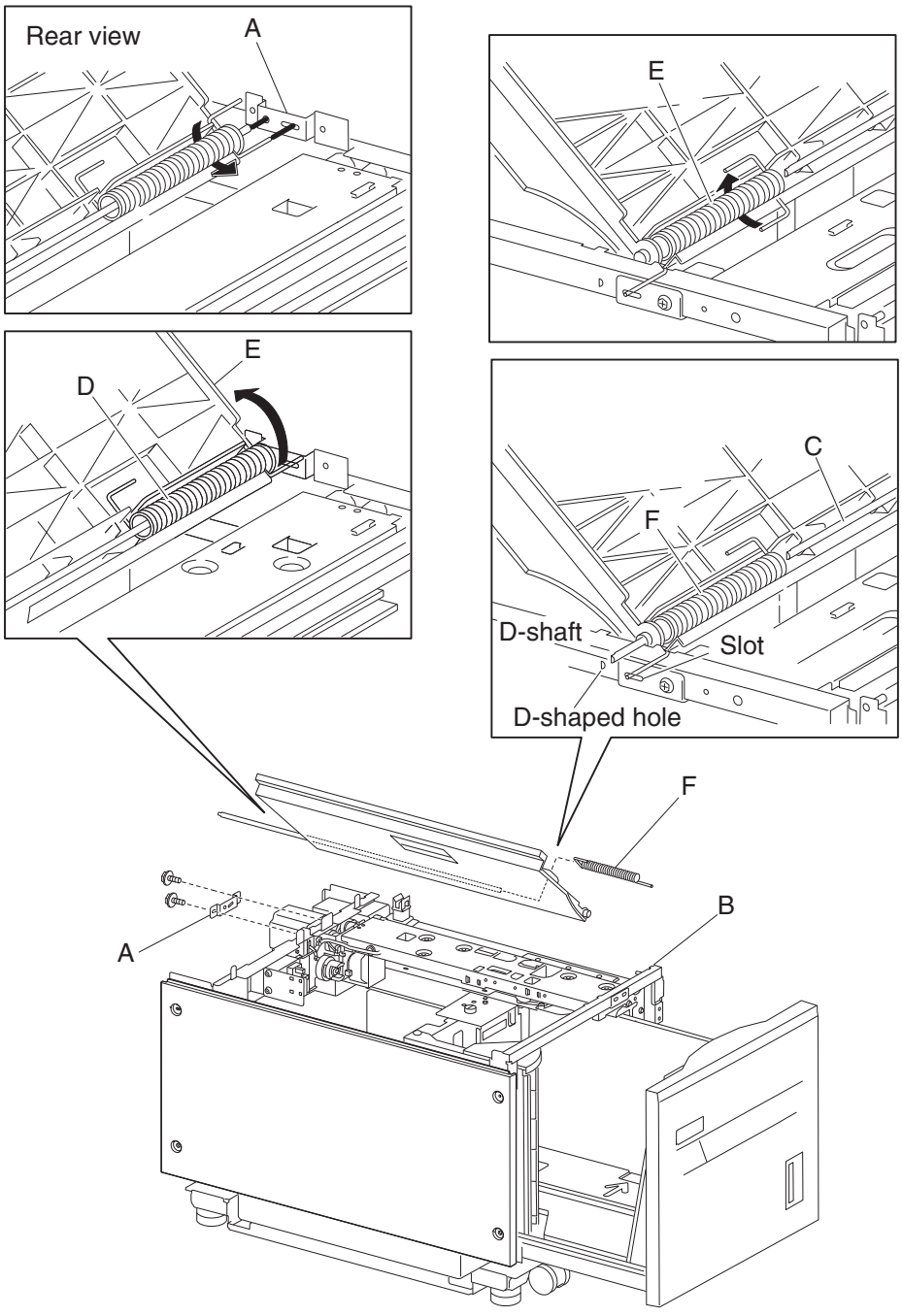
3. Remove the HCF top cover (B).



HCF top door assembly removal

1. Remove the HCF unit from the printer.
2. Remove the HCF top cover. See **“HCF top cover removal” on page 4-453**.
3. Remove the HCF rear cover. See **“HCF rear cover removal” on page 4-448**.
4. Open the HCF top door assembly.
5. Remove the two screws securing the bracket (A) to the frame assembly (B).

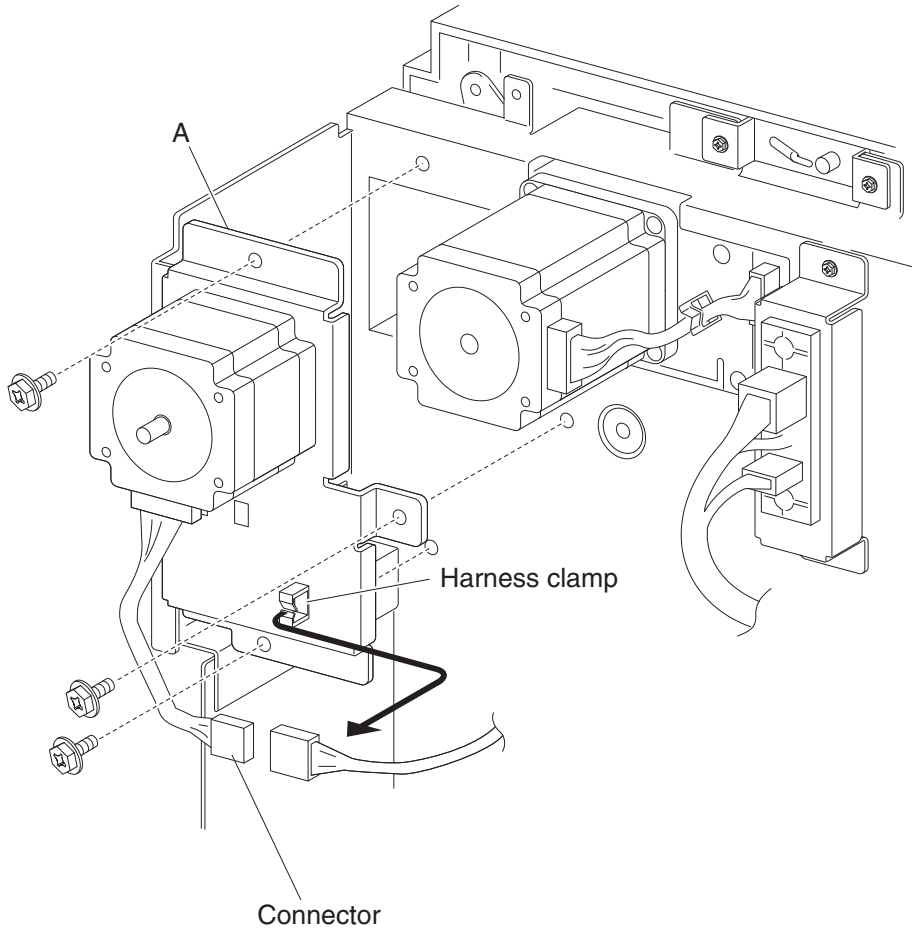
6. Remove the bracket (A).
Note: When removing the bracket (A), leave the shaft (C) and the HCF top door spring R (D) attached to the top door assembly.



7. Lift the HCF top door (E) and remove the shaft (C) from the hole in the frame assembly (B).
8. Remove the HCF top door spring L (F) from the slot in the frame assembly (B).
9. Remove the HCF top door assembly.
10. Remove the shaft (C).
11. Remove the top door spring R (D).
12. Remove the top door spring L (F).

HCF transport motor removal

1. Remove the HCF unit from the printer.
2. Remove the HCF rear cover. See **“HCF rear cover removal” on page 4-448**.
3. Disconnect the connector from the HCF transport motor (A).
4. Release the harness from the clamp.
5. Remove the three screws securing the HCF transport motor (A) to the unit.
6. Remove the HCF transport motor (A).

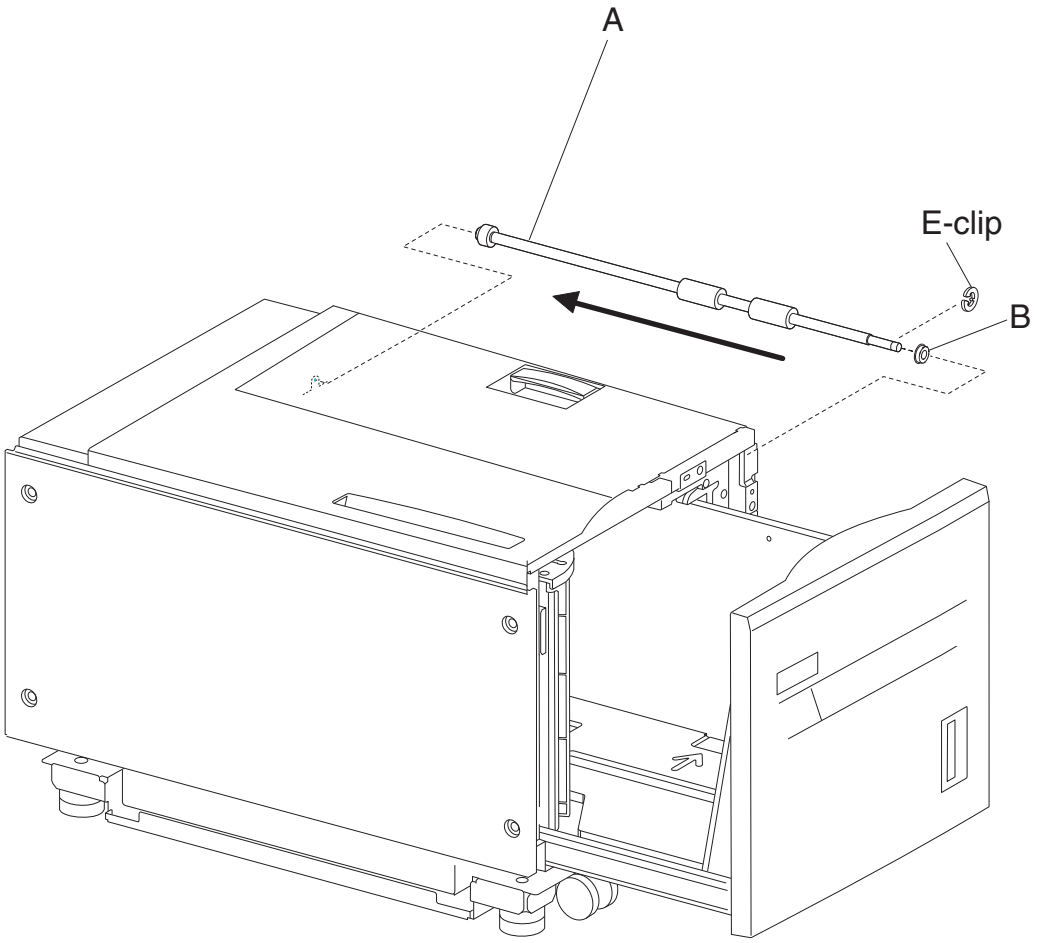


HCF transport roller kit removal

1. Remove the HCF unit from the printer.
2. Use needle nose pliers to remove the e-clip on the front side securing the HCF transport roller kit (A) to the unit.

3. Move the HCF transport shaft assembly (A) toward the rear in the direction of the arrow to remove it from the bearing (B).
   Note: The bearing (B) may become detached.

   Note: When removing the HCF transport roller kit (A), do not touch the rubber surface.



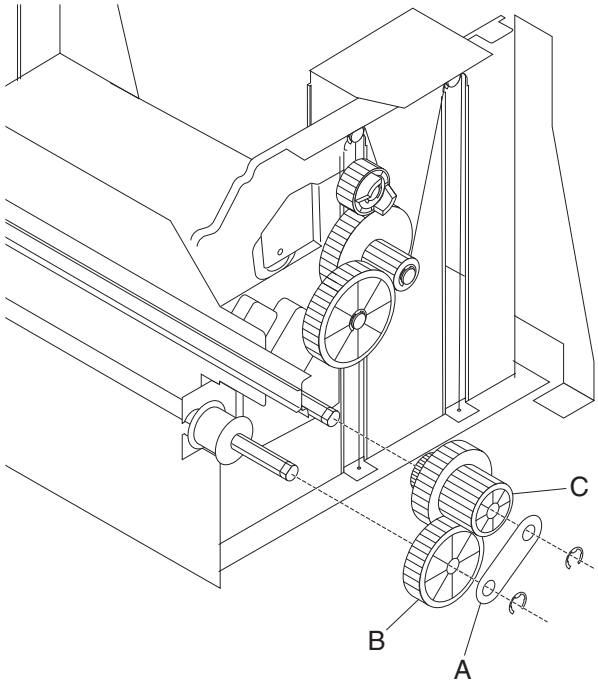
Note: Before re-installing the HCF transport roller kit (A), do not touch the rubber surface.

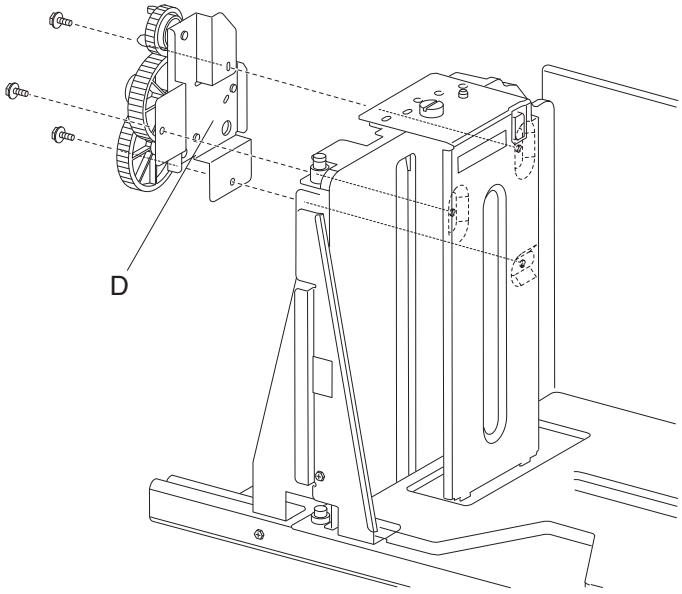
HCF tray lift gear bracket removal

1. Remove the HCF media tray assembly. See **"HCF media tray assembly removal" on page 4-443**.
2. Remove the two e-clips with a prying tool securing the plastic retainer (A).
3. Remove the plastic retainer (A).
4. Remove the media tray lift shaft gear 51T (B).
5. Remove the media tray lift gear 25/40/14T (C).
6. Remove the three screws securing the HCF tray lift gear bracket (D) from the media tray.

7. Remove the HCF tray lift gear bracket (D).

Note: Ensure that all gears rotate smoothly without binding. If necessary, loosen the three screws and adjust the HCF tray lift gear bracket (D).

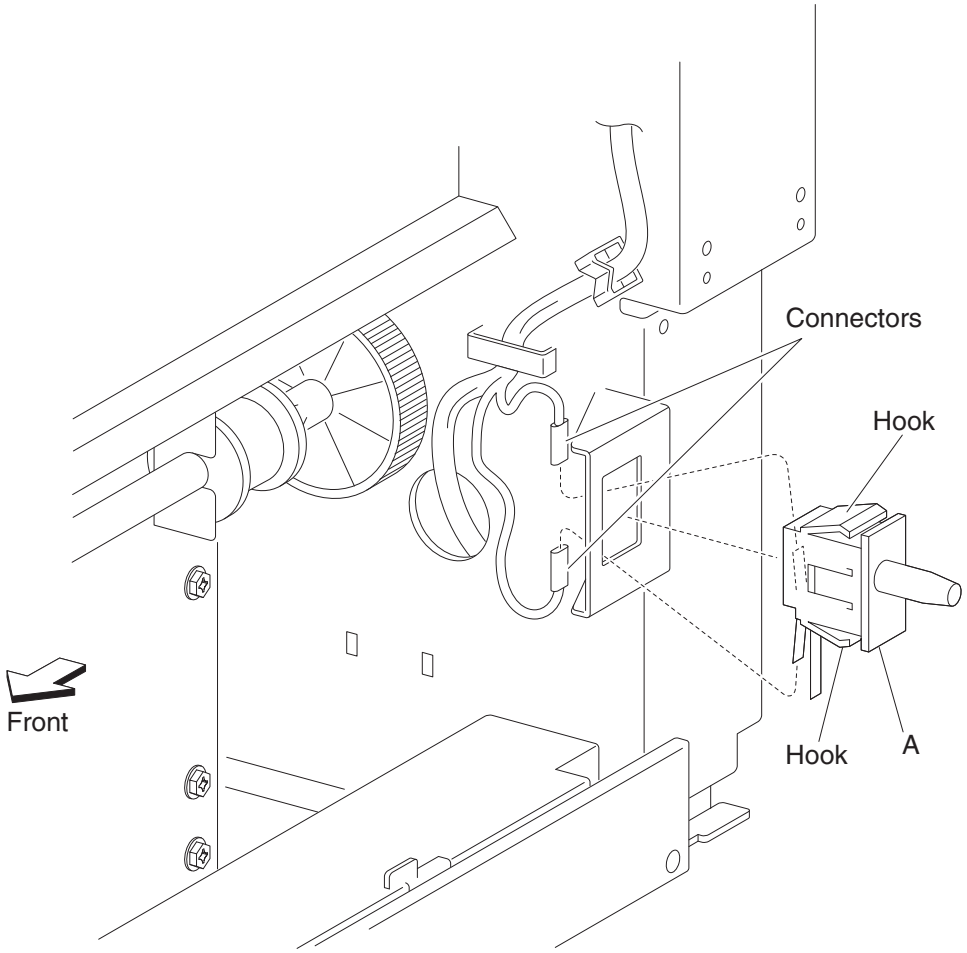




Sensor (HCF docking interlock) removal

1. Remove the HCF media tray.
2. Disconnect the connector from the sensor (HCF unit docking interlock) (A).
3. Release the hooks securing the sensor (HCF unit docking interlock) (A) to the unit.

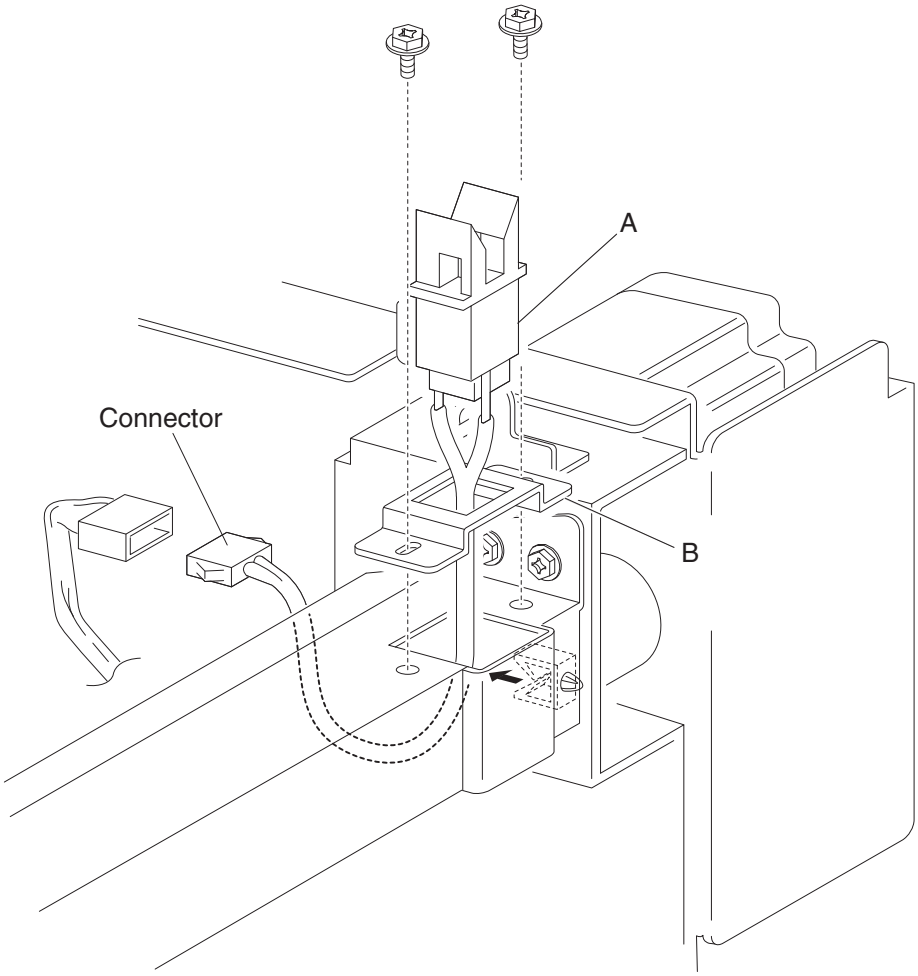
4. Remove the sensor (HCF unit docking interlock) (A).



Sensor (HCF top door interlock) removal

1. Remove the HCF unit to the printer.
2. Open the HCF top door assembly.
3. Disconnect the connector from the sensor (HCF top door interlock) (A).
4. Remove the two screws securing the bracket (B) to the unit.
5. Remove the bracket (B).
6. Release the hooks securing the sensor (HCF top door interlock) (A) to the bracket (B).

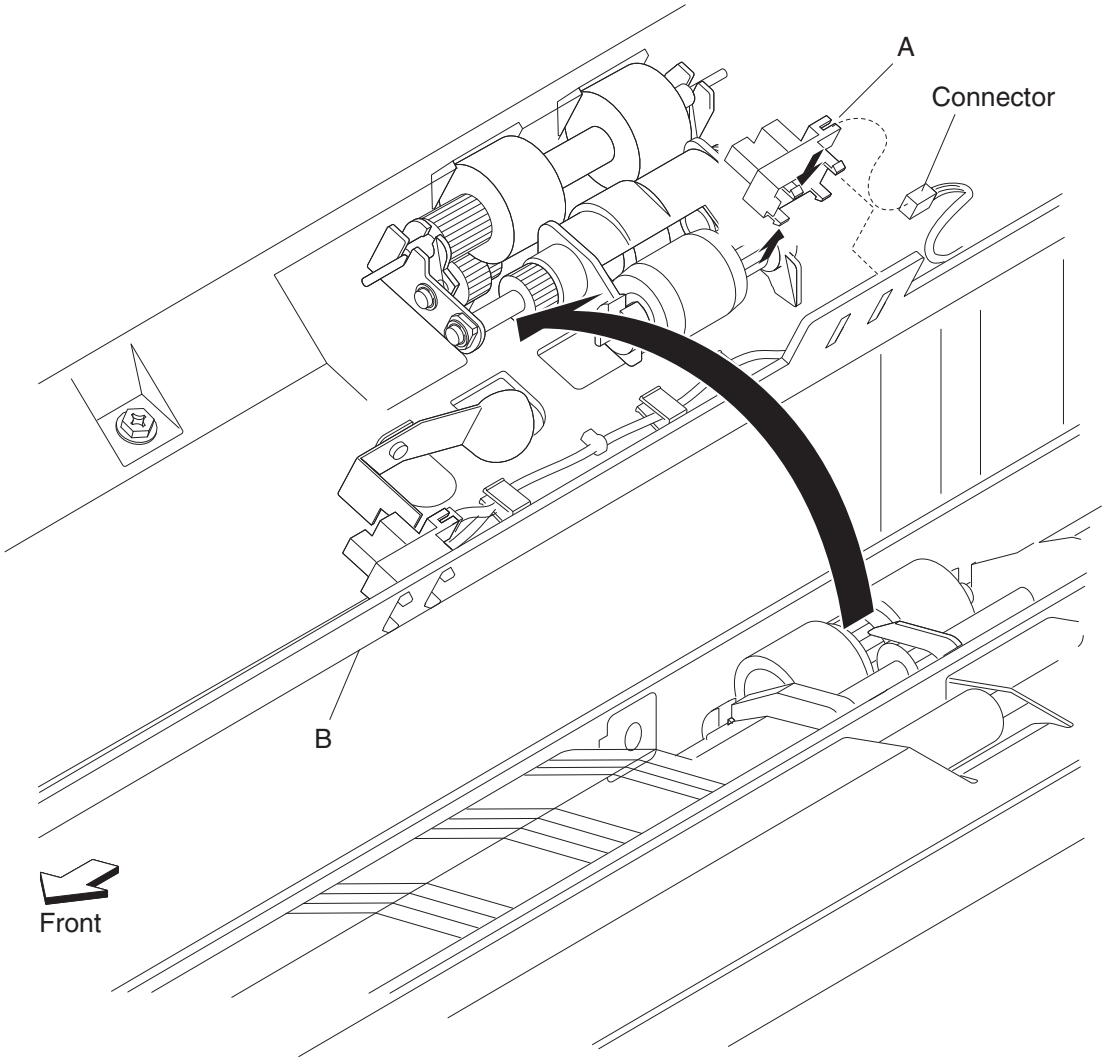
7. Remove the sensor (HCF top door interlock) (A).



Sensor (tray 5 media level) removal

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Disconnect the connector from the sensor (tray 5 media level) (A).
4. Release the hooks securing the sensor (tray 5 media level) (A) from the HCF feed unit assembly (B).

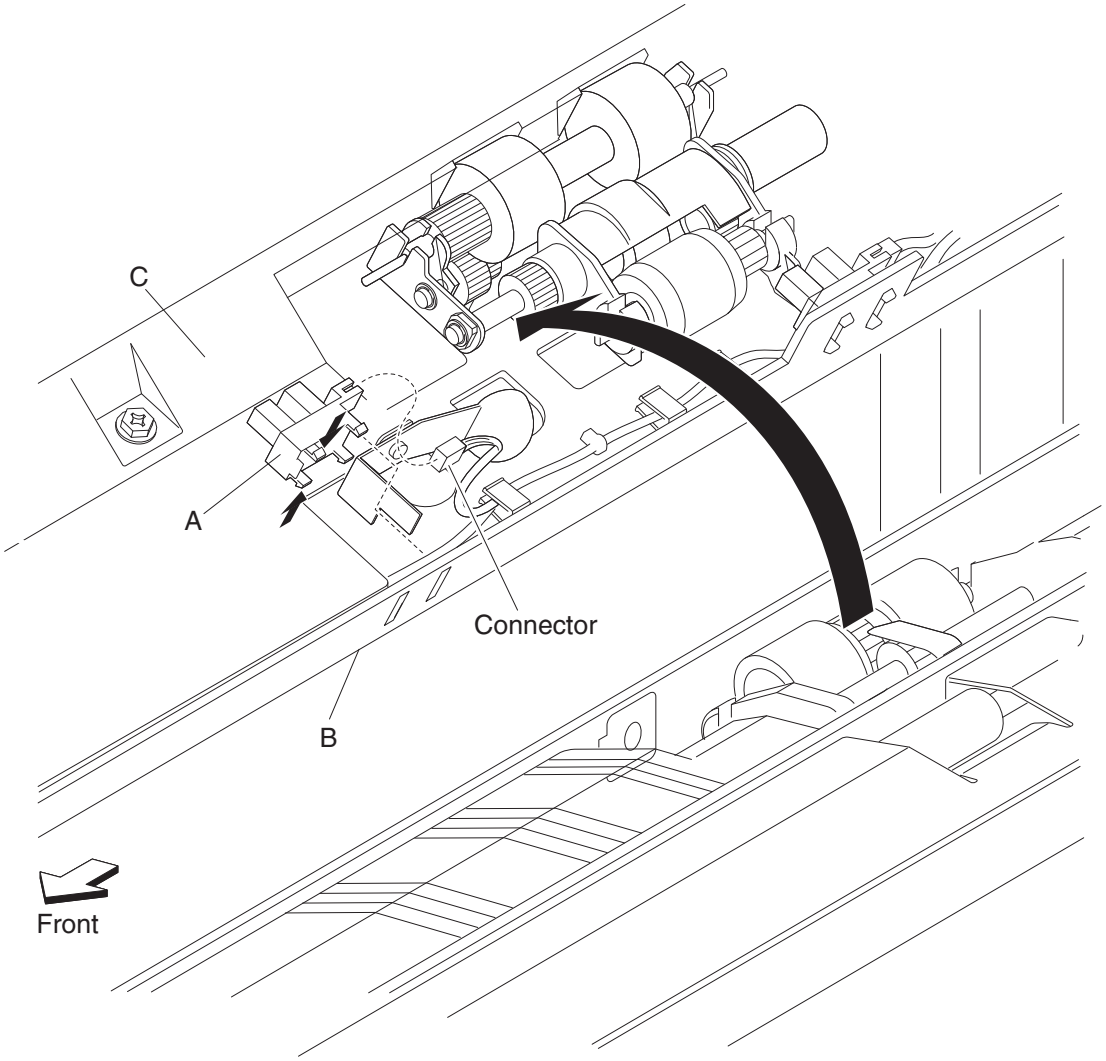
5. Remove the sensor (tray 5 media level) (A).



Sensor (tray 5 media out) removal

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Remove the connector from the sensor (tray 5 media out) (A).
4. Release the hooks securing the sensor (tray 5 media out) (A) to the HCF feed unit assembly (B).

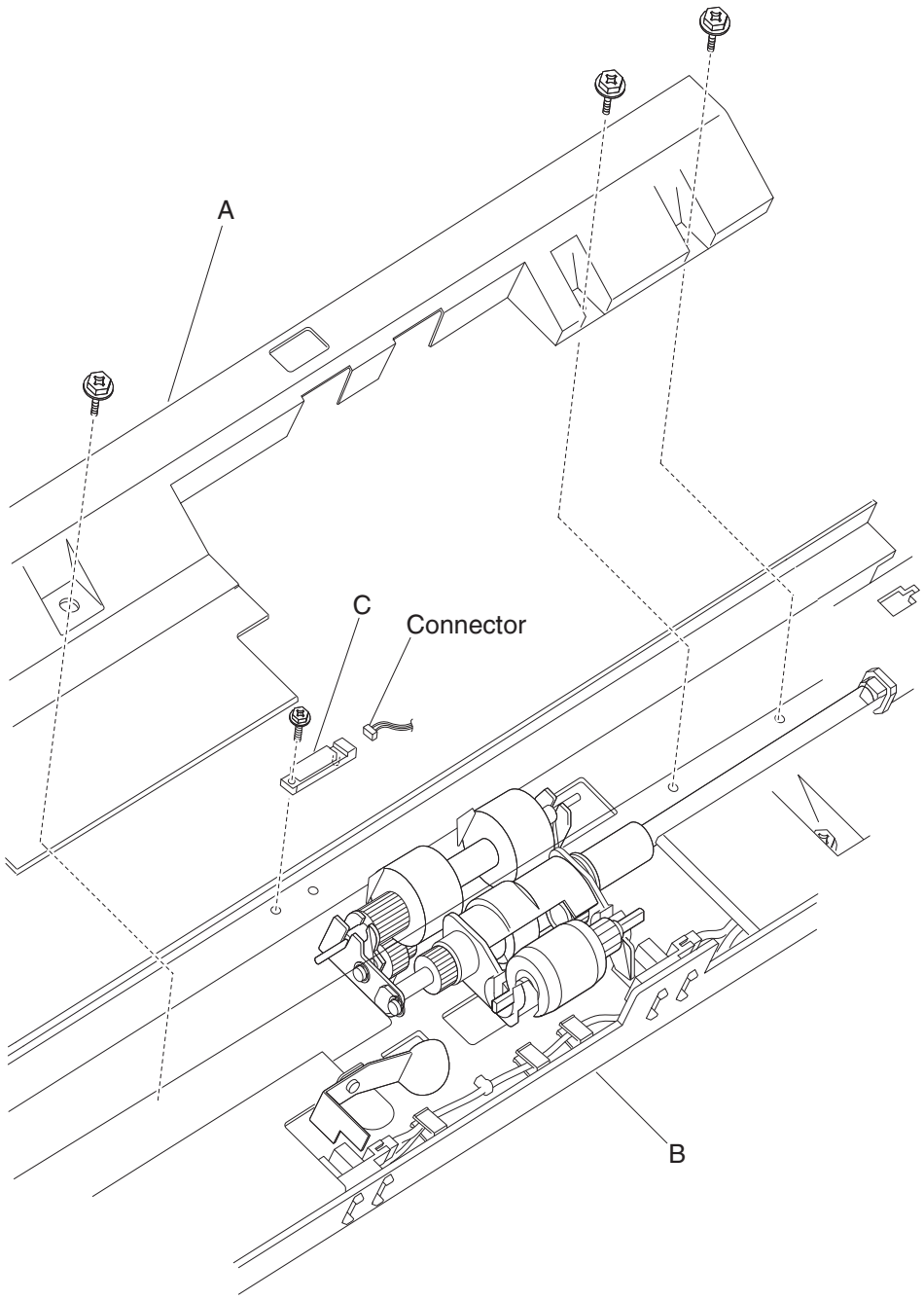
5. Remove the sensor (tray 5 media out) (A).
   Note: The sensor (tray 5 media out) (A) may be easier to replace if the upper guide (C) is removed to provide access.



Sensor (tray 5 pre feed) removal

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Remove the three screws securing the upper guide (A) to the HCF feed unit assembly (B).
4. Remove the upper guide (A).
5. Remove the connector from the sensor (tray 5 pre-feed) (C).
6. Remove the one screw securing the sensor (tray 5 pre feed) (C) to the HCF feed unit assembly (B).

7. Remove sensor (tray 5 pre feed) (C).

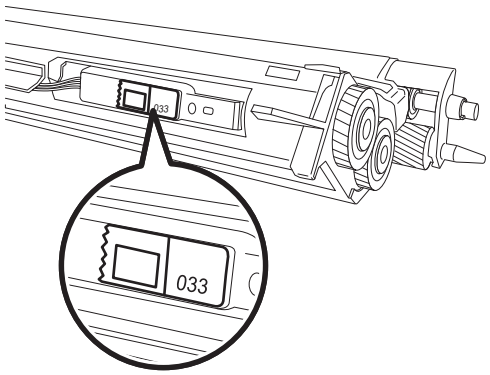


Setup and adjustments

Sensor (ATC) setup

Warning: This procedure must be done for all new developer housings being installed or print quality problems may occur.

Note: This procedure is applicable only to firmware versions LHS2.TQ.P244a and above. Before re-installing the new developers, make sure the latest firmware is installed on the device.

1	Before installing any new developer housings in the machine, record the barcode number located on the sensor (ATC) for all new developer housings to be installed. Example: 
2	From the Diagnostics menu, navigate to **Engine Adjust > ATC Sensor Adjust Values**. Enter the values recorded in step 1 to its applicable settings: • ATC SENSOR BARCODE_NO[Y] • ATC SENSOR BARCODE_NO[M] • ATC SENSOR BARCODE_NO[C] • ATC SENSOR BARCODE_NO[K] Touch **Submit** to save the settings.
3	Without exiting Diagnostics mode, navigate to the Engine Adjust menu and touch **ATC Sensor Adjust Cycle**. The operation runs, until the operator panel prompts as “passed”. After this operation, the ATC Sensor Adjust Values settings other than the barcode settings are automatically computed.

4

Without exiting Diagnostics mode, enter again the **ATC Sensor Adjust Values** to view the settings.

Use the ATC value conversion chart to get the corresponding Coefficient and Offset NVM values for each barcode. See **"ATC value conversion chart" on page 4-466**. Check the settings shown on the menu if they match the values on the ATC value conversion chart. If the values are different, then update the following settings to correctly match:

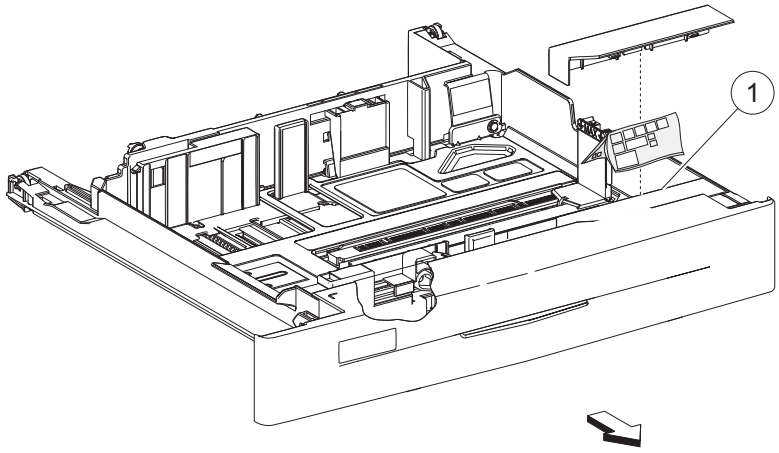
Settings to update	Values from the ATC value conversion chart
ATC SETUP COEFFICIENT (Y)	ATC Setup Coefficient for Y
ATC SETUP COEFFICIENT (M)	ATC Setup Coefficient for M
ATC SETUP COEFFICIENT (C)	ATC Setup Coefficient for C
ATC SETUP COEFFICIENT (K)	ATC Setup Coefficient for K
ATC SETUP OFFSET (Y)	ATC Setup Offset for Y
ATC SETUP OFFSET (M)	ATC Setup Offset for M
ATC SETUP OFFSET (C)	ATC Setup Offset for C
ATC SETUP OFFSET (K)	ATC Setup Offset for K

Touch **Submit** to save the settings.

5

Warning: The following step must be performed, or the new machine settings will not match the settings listed on the birth certificate if it is required for NVM value replacement.

Retrieve the birth certificate from the compartment (1) in the media tray 1.



Using the the same Coefficient and Offset NVM values taken from step 2, overwrite the following settings found on the birth certificate:

- ATC Setup Coefficient for Y
- ATC Setup Coefficient for M
- ATC Setup Coefficient for C
- ATC Setup Coefficient for K
- ATC Setup Offset for Y
- ATC Setup Offset for M
- ATC Setup Offset for C
- ATC Setup Offset for K

Return the birth certificate to the settings sheet compartment (1).

6

Exit diagnostics mode and perform a print test.

ATC value conversion chart

Barcode number (last 2 digits)	ATC Setup Coefficient Value	ATC Setup Offset Value
00	1638	-266
01	1462	-181
02	1321	-133
03	1204	-56
04	1107	-9
05	1024	31
06	952	66
07	890	96
08	835	123
09	787	146
10	1638	-276
11	1462	-190
12	1321	-121
13	1204	-63
14	1107	-16
15	1024	25
16	952	60
17	890	91
18	835	118
19	787	141
20	1638	-286
21	1462	-199
22	1321	-129
23	1204	-71
24	1107	-23
25	1024	19
26	952	54
27	890	85
28	835	112
29	787	136
30	1638	-296

ATC value conversion chart

Barcode number (last 2 digits)	ATC Setup Coefficient Value	ATC Setup Offset Value
31	1462	-208
32	1321	-137
33	1204	-78
34	1107	-29
35	1024	12
36	952	49
37	890	80
38	835	107
39	787	132
40	1638	-306
41	1462	-217
42	1321	-145
43	1204	-85
44	1107	-36
45	1024	6
46	952	43
47	890	74
48	835	102
49	787	127
50	1638	-316
51	1462	-225
52	1321	-153
53	1204	-93
54	1107	-43
55	1024	0
56	952	37
57	890	69
58	835	97
59	787	122
60	1638	-326
61	1462	-234

ATC value conversion chart

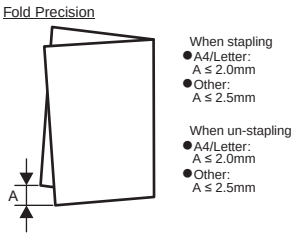
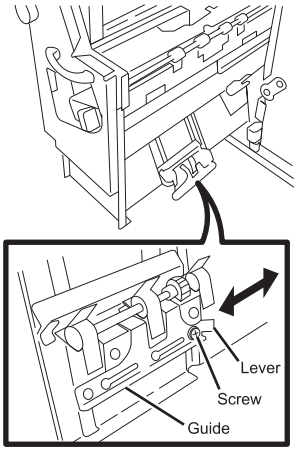
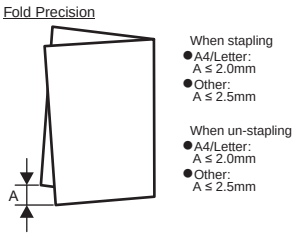
Barcode number (last 2 digits)	ATC Setup Coefficient Value	ATC Setup Offset Value
62	1321	-161
63	1204	-100
64	1107	-49
65	1024	-6
66	952	31
67	890	64
68	835	92
69	787	117
70	1638	-336
71	1462	-243
72	1321	-169
73	1204	-107
74	1107	-56
75	1024	-12
76	952	26
77	890	58
78	835	87
79	787	112
80	1638	-346
81	1462	-252
82	1321	-177
83	1204	-114
84	1107	-63
85	1024	-19
86	952	20
87	890	53
88	835	82
89	787	108
90	1638	-356
91	1462	-261
92	1321	-185

ATC value conversion chart

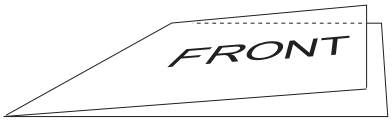
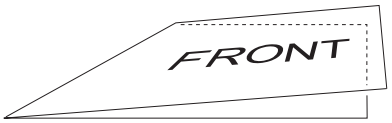
Barcode number (last 2 digits)	ATC Setup Coefficient Value	ATC Setup Offset Value
93	1204	-122
94	1107	-70
95	1024	-25
96	952	14
97	890	47
98	835	77
99	787	103

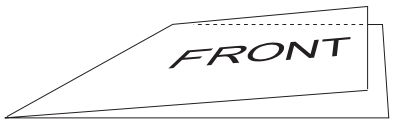
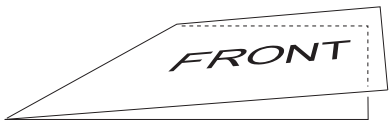
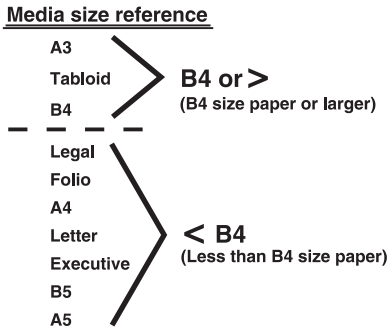
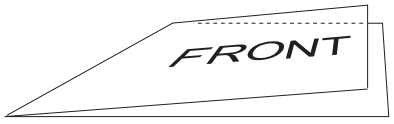
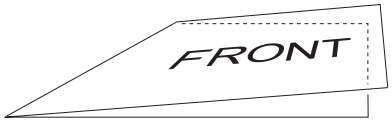
Booklet maker setup & adjustment

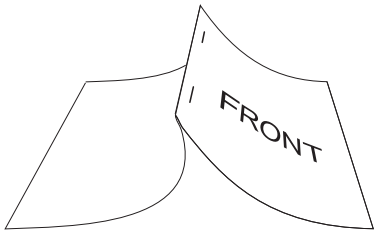
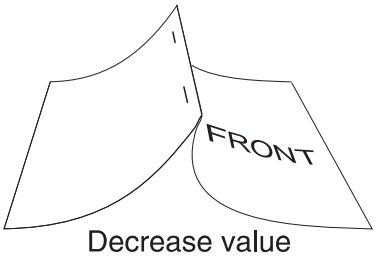
Folding precision skew adjustment

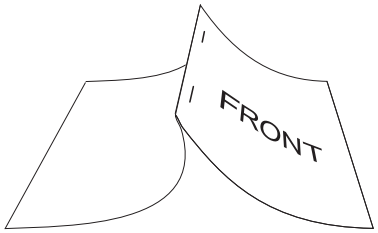
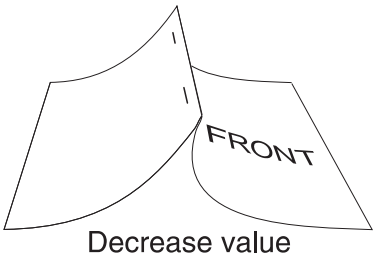
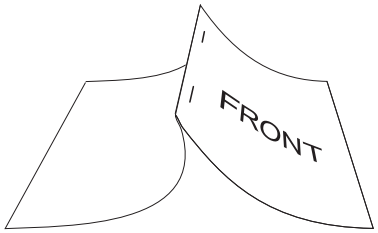
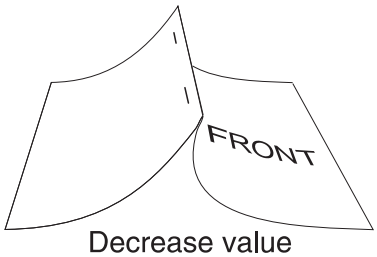
Step	Check	Yes	No
1	Print a 2 sheet booklet using the booklet maker. Does the booklet appear skewed as shown in the graphic below? 	Go to step 2.	The folding precision skew adjustment is in spec.
2	Check the booklet maker precision skew adjuster. 1. Open the finisher front door 2. Pull the booklet maker out of the finisher. 3. Loosen the screw securing the end guide skew lever.  4. Adjust the end guide skew lever by moving it either forward or rearward. 1 step on the scale = 1 mm shift. 5. Once the adjustment is made, tighten the screw. Print a 2 sheet booklet using the booklet maker. Do the booklet sheet edges appear skewed as shown in the graphic below? 	Repeat step 2 until the end guide precision skew is in spec.	Problem solved.

2-sheet fold & staple position fine adjustment

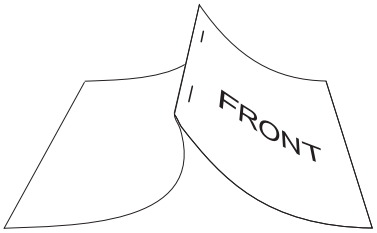
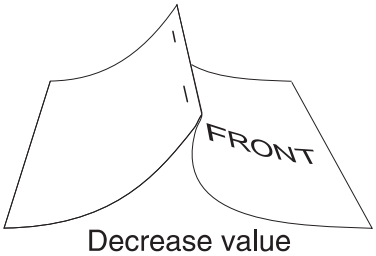
Step	Check	Yes	No
1	Print a 2 sheet booklet using the booklet maker. Does the booklet sheet edges appear overlapped as shown in the graphic below?  Decrease value  Increase value	Go to step 2.	The 2 sheet fold position fine adjustment is in spec. Go to step 3.

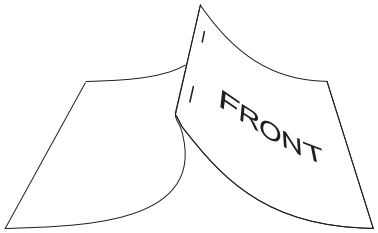
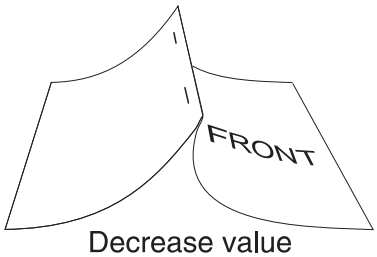
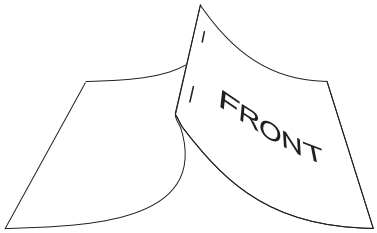
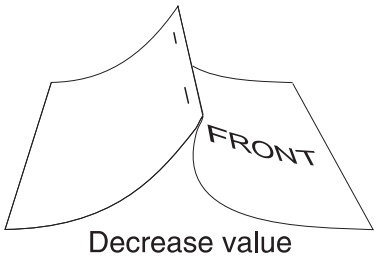
Step	Check	Yes	No
2	Adjust the 2 sheet position fine adjustment value based on the graphic below:  Decrease value  Increase value 1. Enter the diagnostic mode. 2. Touch **ENGINE ADJUST**. 3. Touch **Booklet fold adjust**. 4. Touch **Booklet 2 sheet.** 5. Make required fold position value adjustments according to the media size as shown in the graphic below. 1 step = .1 mm shift. Target amount to be adjusted is half the amount of the total Fold Misalignment.  6. Touch **Submit**. Print a 2 page booklet using the booklet maker. Do the booklet sheet edges appear overlapped as shown in the graphic below?  Decrease value  Increase value	Repeat step 2 until the 2 sheet fold position fine adjustment is in spec. Go to step 3.	Problem solved.

Step	Check	Yes	No
3	Print a 2 sheet stapled booklet using the booklet maker. Does the staple position fine adjustment appear to be offset from the fold as shown in the graphic below?  Increase value  Decrease value	Go to step 4.	The 2 sheet staple position fine adjustment is in spec.

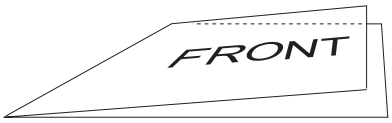
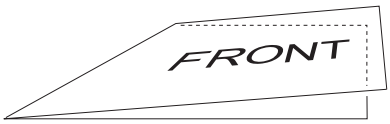
Step	Check	Yes	No
4	Adjust the 2 sheet staple position fine adjustment value as shown in the graphic below:  Increase value  Decrease value 1. Enter the diagnostic mode. 2. Touch **ENGINE ADJUST**. 3. Touch **Booklet fold adjust**. 4. Touch **Booklet 2 sheet.** 5. Make required staple position adjustments according to media size. 1 step =.1 mm shift. 6. Touch **Submit**. Print a 2 page booklet using the booklet maker. Does the staple position fine adjustment appear to be offset from the fold as shown in the graphic below?  Increase value  Decrease value	Repeat step 2 until the 2 sheet staple position fine adjustment is in spec.	Problem solved.

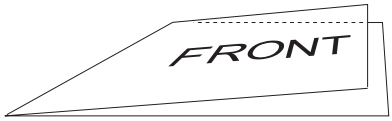
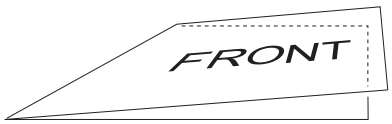
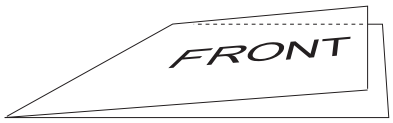
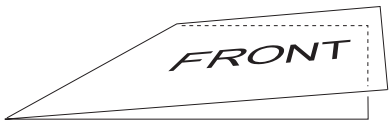
15 sheet staple position fine adjustment

Step	Check	Yes	No
1	Print a 15 sheet stapled booklet using the booklet maker. Does the staple position fine adjustment appear to be offset from the fold as shown in the graphic below?  Increase value  Decrease value	Go to step 2.	The 15 sheet staple position fine adjustment is in spec.

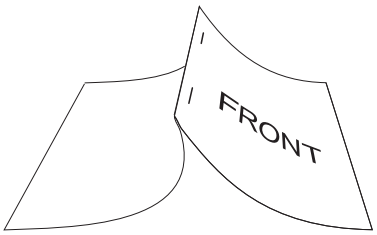
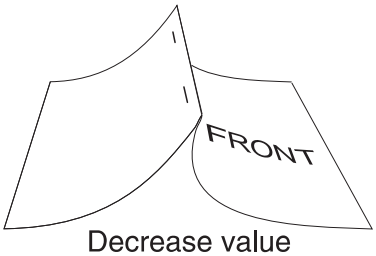
Step	Check	Yes	No
2	Adjust the 15 sheet staple position fine adjustment value as shown in the graphic below:  Increase value  Decrease value 1. Enter the diagnostic mode. 2. Touch **ENGINE ADJUST**. 3. Touch **Booklet fold adjust**. 4. Touch **Booklet 15 sheet.** 5. Make required staple position adjustments according to media size. 1 step = .1 mm shift. 6. Touch **Submit**. Print a 15 page booklet using the booklet maker. Does the staple position fine adjustment appear to be offset from the fold as shown in the graphic below?  Increase value  Decrease value	Repeat step 2 until the 15 sheet staple position fine adjustment is in spec.	Problem solved.

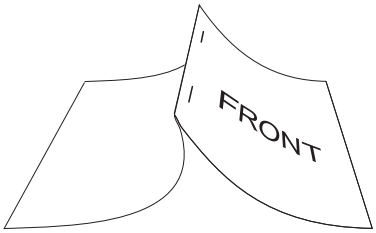
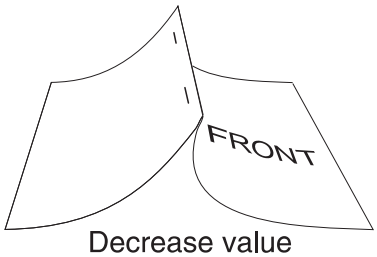
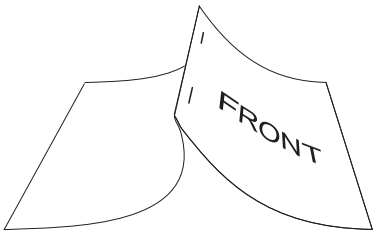
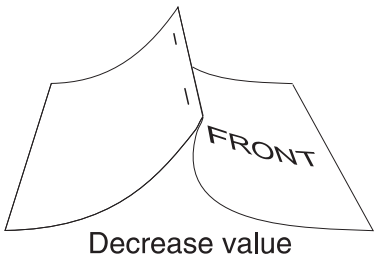
Booklet fold position fine adjustment (3-15 sheets)

Step	Check	Yes	No
1	**Note:** The booklet fold position fine adjustment is different depending on the amount of sheets that compose the booklet and the size of the media. Volume 1 = 3 sheets Volume 2 = 4 sheets Volume 3 = 5-7 sheets Volume 4 = 8-15 sheets S = media < B4 L = B4 media or > Print the appropriate booklet using the booklet maker. Do the booklet sheet edges appear overlapped as shown in the graphic below?  Decrease value  Increase value	Go to step 2.	The booklet fold position fine adjustment is in spec.

Step	Check	Yes	No
2	Adjust the fold position fine adjustment value based on the graphic below:  Decrease value  Increase value 1. Enter the diagnostic mode. 2. Touch **ENGINE ADJUST**. 3. Touch **Booklet fold adjust**. 4. Touch **Booklet fold pos fine adj.** 5. Make required adjustments according to media size. 1 step = .1 mm shift. Target amount to be adjusted is half the amount of the total Fold Misalignment 6. Touch **Submit**. Enter the user mode and print the appropriate booklet using the booklet maker. Do the booklet sheet edges appear overlapped as shown in the graphic below?  Decrease value  Increase value	Repeat step 2 until the Booklet fold position fine adjustment is in spec.	Problem solved.

Booklet staple position fine adjustment (3-14 sheets)

Step	Check	Yes	No
1	**Note:** The booklet staple position fine adjustment is different depending on the amount of sheets that compose the booklet. Volume 1 = 3 sheets Volume 2 = 4 sheets Volume 3 = 5-7 sheets Volume 4 = 8-14 sheets Print the appropriate booklet using the booklet maker. Does the staple position fine adjustment appear to be offset from the fold as shown in the graphic below?  Increase value  Decrease value	Go to step 2.	The booklet staple position fine adjustment is in spec.

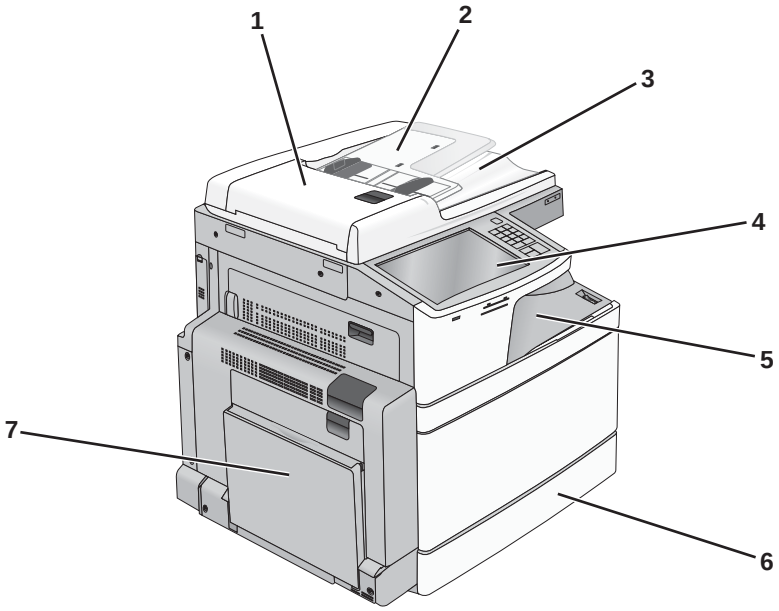
Step	Check	Yes	No
2	Adjust the booklet staple position fine adjustment value as shown in the graphic below:  Increase value  Decrease value 1. Enter the diagnostic mode. 2. Touch **ENGINE ADJUST**. 3. Touch **Booklet fold adjust**. 4. Touch **Booklet fold pos fine adj.** 5. Make required adjustments according to media size. 1 step = .1 mm shift. Target amount to be adjusted is half the amount of the total Fold Misalignment. 6. Touch **Submit**. Enter user mode and print the appropriate booklet using the booklet maker. Does the staple position fine adjustment appear to be offset from the fold as shown in the graphic below?  Increase value  Decrease value	Repeat step 2 until the Booklet staple position fine adjustment is in spec.	Problem solved.

5. Connector locations

Locations

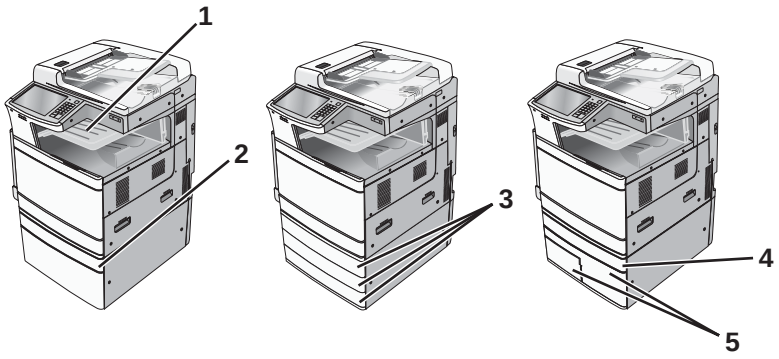
Configurations

Base machine



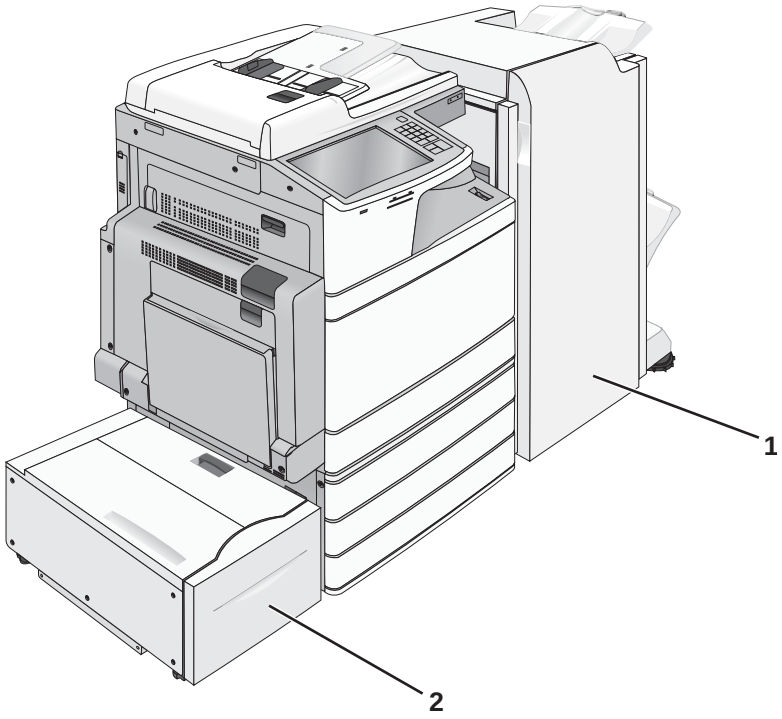
Callout	Part name
1	Automatic Document Feeder (ADF)
2	ADF input tray
3	ADF exit bin
4	Printer control panel
5	Standard exit bin
6	Standard 520-sheet tray
7	Multipurpose feeder

Base machine with add-ons



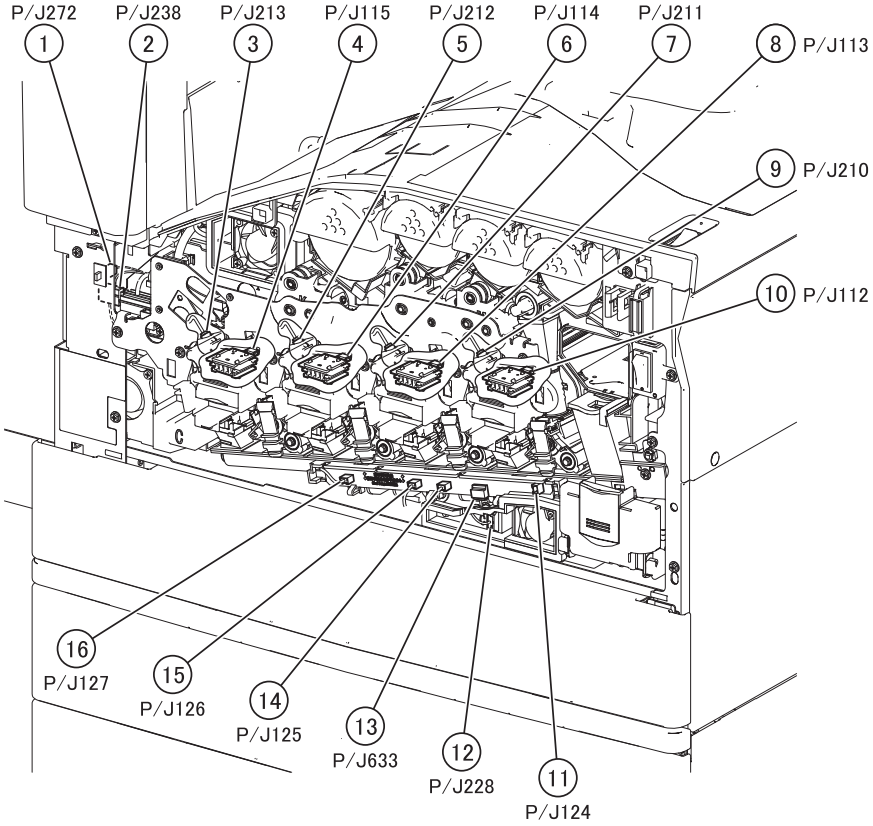
Callout	Part name
1	Exit tray 2 **Note:** Exit tray 2 is applicable to any configurations except when a finisher is installed.
2	Optional 520-sheet tray (Tray 2)
3	Optional 520-sheet tray (Tray 2)
4	Optional 520-sheet tray (Tray 2)
5	Optional 2,000-sheet tandem-tray module • 850-sheet tray (Tray 3) • 1,150-sheet tray (Tray 4)

Full configuration



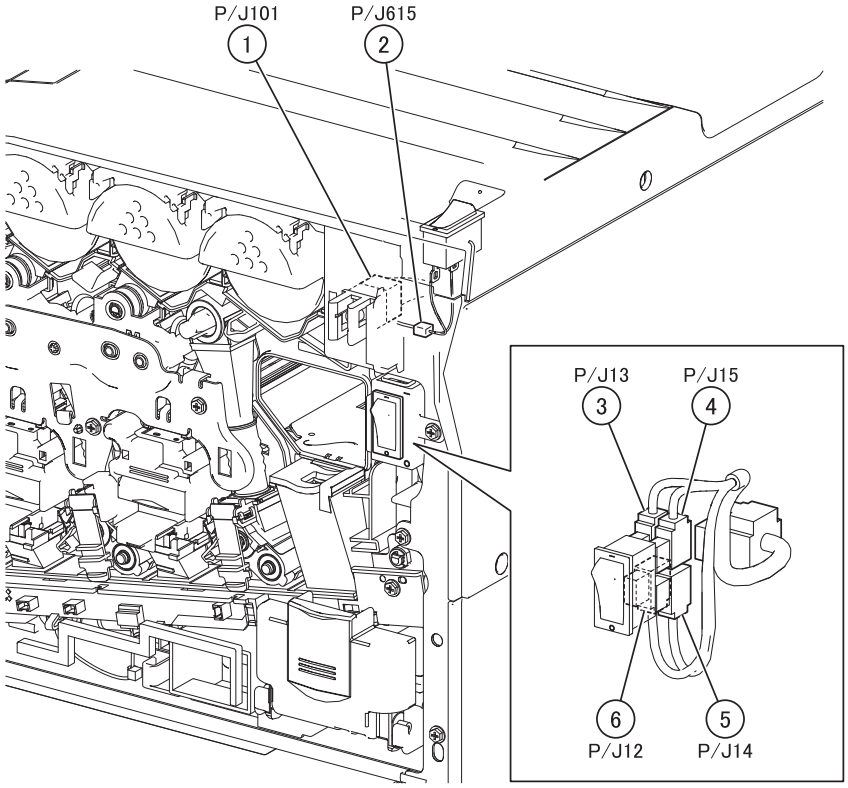
Callout	Part name
1	Finisher bin The finisher bin can either be one of the following two options: • Standard finisher (Punch/Stapler) • Booklet finisher (Punch/Stapler/Booklet)
2	2,000-sheet high-capacity feeder

Print engine



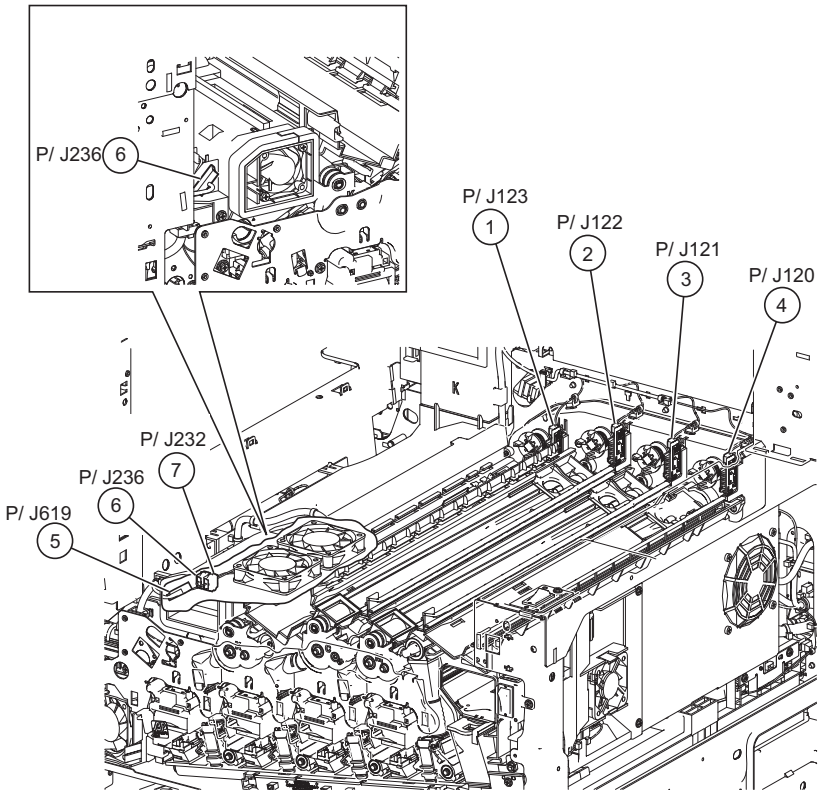
Plug/Jack	Callout	Plug/jack description	Connects to
P/J112	10	PC smart chip socket (Y)	Lower engine PCBA
P/J113	8	PC smart chip socket (M)	Lower engine PCBA
P/J114	6	PC smart chip socket (C)	Lower engine PCBA
P/J115	4	PC smart chip socket (K)	Lower engine PCBA
P/J124	11	ATC sensor (Y)	ATC sensor PCB
P/J125	14	ATC sensor (M)	ATC sensor PCB
P/J126	15	ATC sensor (C)	ATC sensor PCB
P/J127	16	ATC sensor (K)	ATC sensor PCB
P/J210	9	Erase lamp (Y)	Upper engine PCBA
P/J211	7	Erase lamp (M)	Upper engine PCBA
P/J212	5	Erase lamp (C)	Upper engine PCBA
P/J213	3	Erase lamp (K)	Upper engine PCBA
P/J228	12	Front right cooling fan	Lower engine PCBA
P/J238	2	Front left cooling fa	Upper engine PCBA
P/J272	1	Front door sensor	Upper engine PCBA
P/J633	13	ATC sensor PCB	Lower engine PCBA

Main Power/Front Cover Interlock Switch



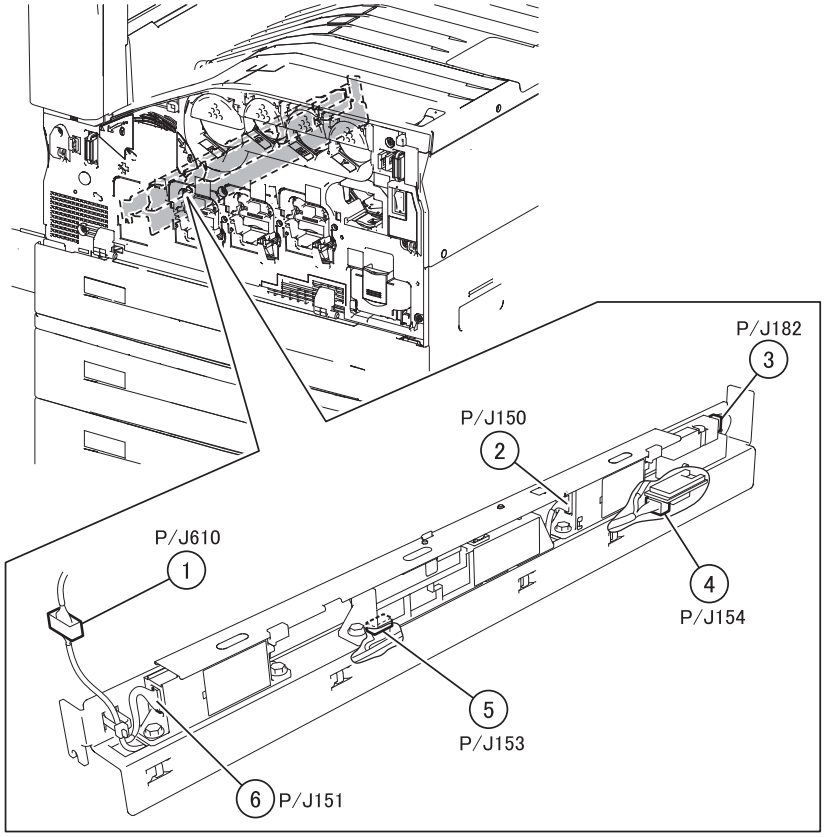
Plug/Jack	Callout	Plug/jack description	Connects to
P/J12	6	Main power switch	LVPS PCBA
P/J13	3	Main power switch	LVPS PCBA
P/J14	5	Main power switch	LVPS PCBA
P/J15	4	Main power switch	LVPS PCBA
P/J101	1	Sensor (printer right front door interlock)	Lower engine PCBA
P/J615	2	Main power switch	Upper engine PCBA

Toner smart chip, cooling fan



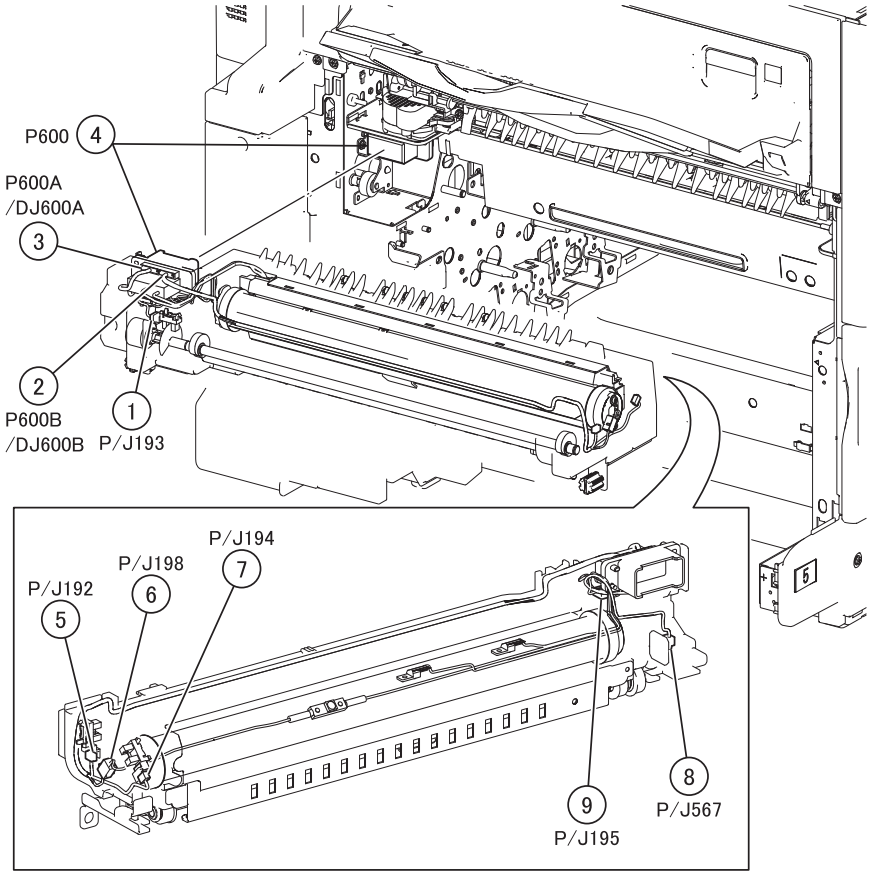
Plug/Jack	Callout	Plug/jack description	Connects to
P/J120	4	Toner smart chip PCB (Y)	Upper engine PCBA
P/J121	3	Toner smart chip PCB (M)	Upper engine PCBA
P/J122	2	Toner smart chip PCB (C)	Upper engine PCBA
P/J123	1	Toner smart chip PCB (K)	Upper engine PCBA
P/J232	7	N/A	N/A
P/J236	6	Front upper cooling fan	Upper engine PCBA
P/J619	5	Front upper cooling fan	Upper engine PCBA

Image calibration



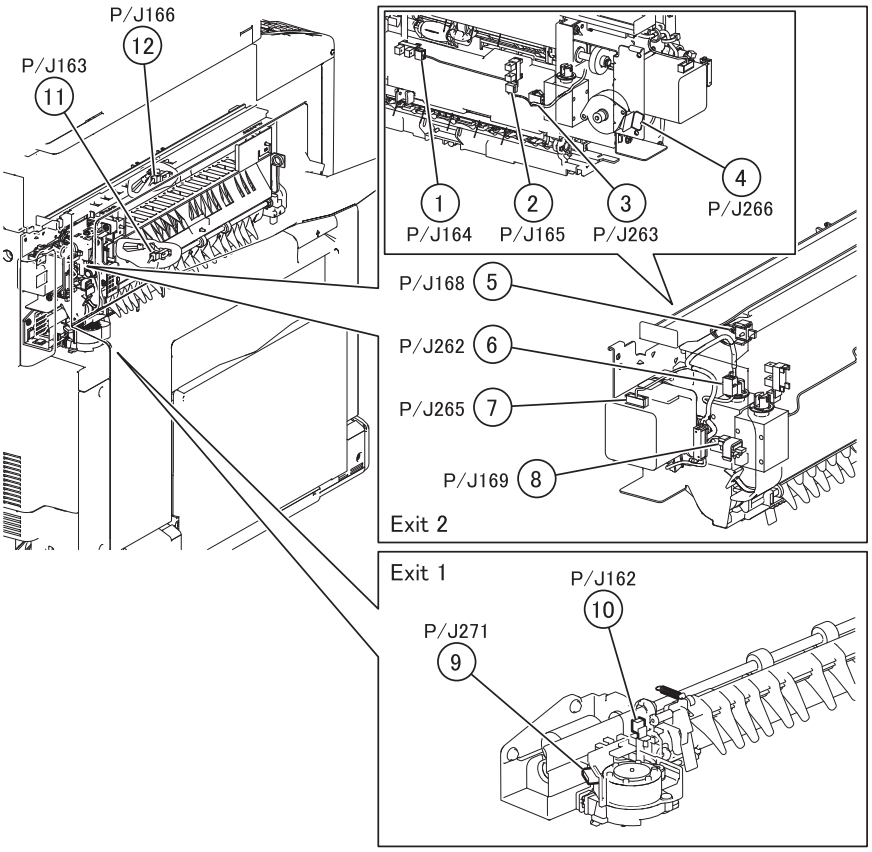
Plug/Jack	Callout	Plug/jack description	Connects to
P/J150	2	Sensor (image calibration)	Upper engine PCBA
P/J151	6	Sensor (image calibration)	Upper engine PCBA
P/J153	5	Sensor (image calibration)	Upper engine PCBA
P/J154	4	Sensor (image calibration)	Upper engine PCBA
P/J182	3	Sensor (image calibration)	Upper engine PCBA
P/J610	1	Sensor (image calibration)	Upper engine PCBA

Fuser



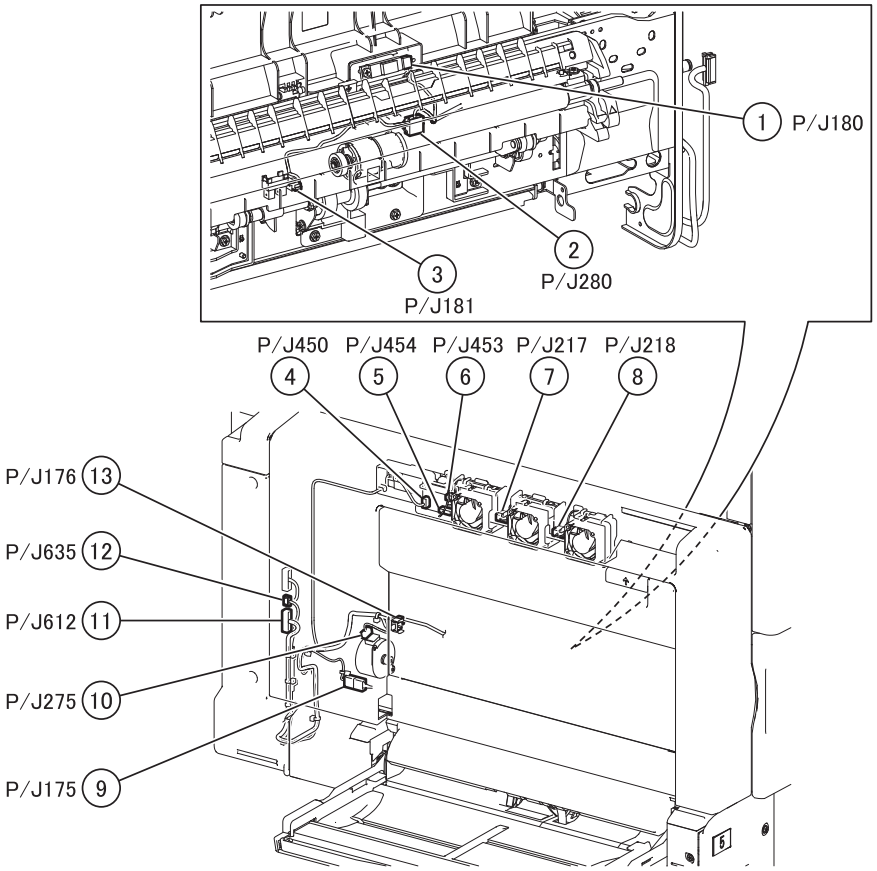
Plug/Jack	Callout	Plug/jack description	Connects to
P/J192	5	Fuser assembly	Upper engine PCBA
P/J193	1	Fuser assembly	Upper engine PCBA
P/J194	7	Fuser assembly	Upper engine PCBA
P/J195	9	Fuser assembly	Upper engine PCBA
P/J198	6	Fuser assembly	Upper engine PCBA
P/J567	8	Fuser assembly	Upper engine PCBA
P600A/ DJ600A	3	Fuser assembly	Upper engine PCBA
P600B/ DJ600B	2	Fuser assembly	Upper engine PCBA
P600	4	Fuser assembly	Upper engine PCBA

Exit



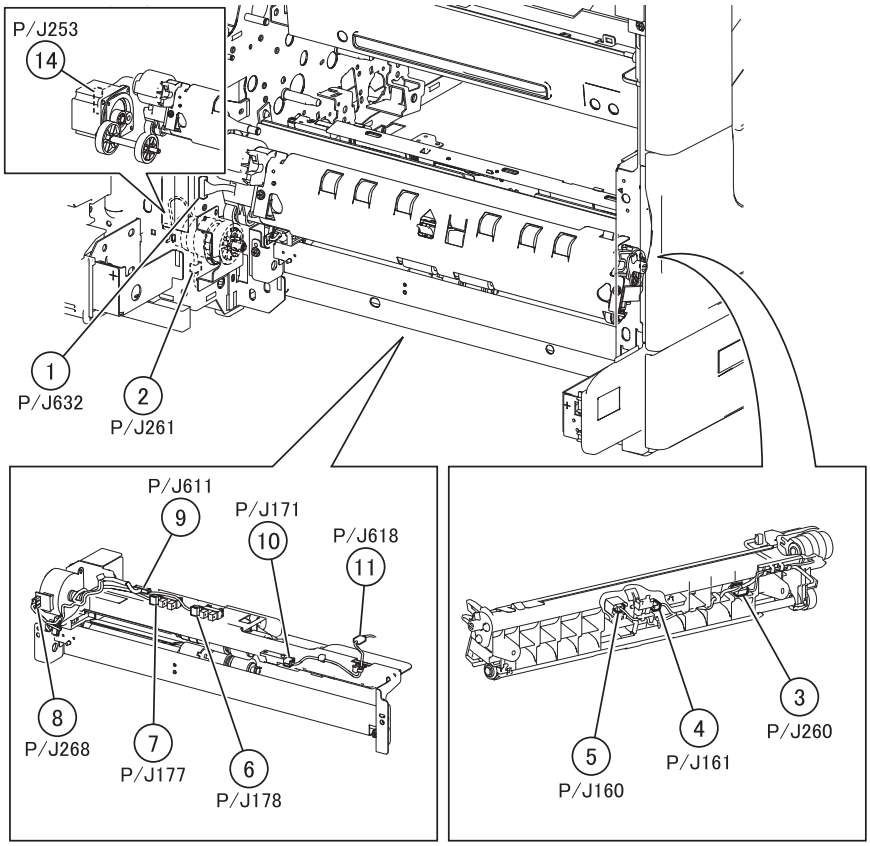
Plug/Jack	Callout	Plug/jack description	Connects to
P/J162	10	Sensor (lower redrive shift HP)	Lower engine PCBA
P/J163	11		
P/J164	1	Upper redrive assembly	Lower engine PCBA
P/J165	2	Upper redrive assembly	Lower engine PCBA
P/J166	12		
P/J168	5	Upper redrive assembly	Lower engine PCBA
P/J169	8	Upper redrive assembly	Lower engine PCBA
P/J262	6	Upper redrive assembly	Lower engine PCBA
P/J263	3	Upper redrive assembly	Lower engine PCBA
P/J265	7	Upper redrive assembly	Lower engine PCBA
P/J266	4	Upper redrive assembly	Lower engine PCBA
P/J271	9	Lower redrive shift motor assembly	Lower engine PCBA

Duplex cover



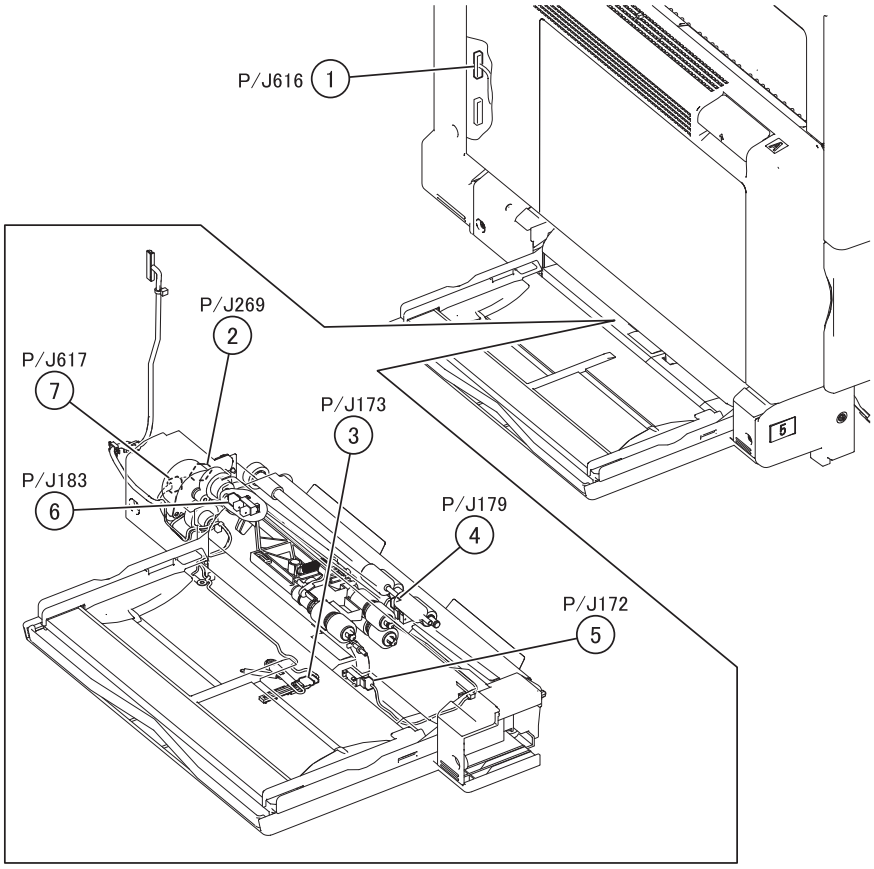
Plug/Jack	Callout	Plug/jack description	Connects to
P/J175	9	Printer left duplex door assembly	Lower engine PCBA
P/J176	13	Printer left duplex door assembly	Lower engine PCBA
P/J180	1	Printer left duplex door assembly	Lower engine PCBA
P/J181	3	Printer left duplex door assembly	Lower engine PCBA
P/J217	7	Printer left duplex fan 2	Printer left duplex fan PCBA
P/J218	8	Printer left duplex fan 3	Printer left duplex fan PCBA
P/J275	10	Printer left duplex door assembly	Lower engine PCBA
P/J280	2	Printer left duplex door assembly	Lower engine PCBA
P/J450	4	Printer left duplex door assembly	Lower engine PCBA
P/J453	6	Printer left duplex fan PCBA	Printer left duplex fan 1
P/J454	5	Printer left duplex fan PCBA	Printer left duplex fan 2
P/J612	11	Printer left duplex door assembly	Lower engine PCBA
P/J635	12	Printer left duplex door assembly	Lower engine PCBA

Registration



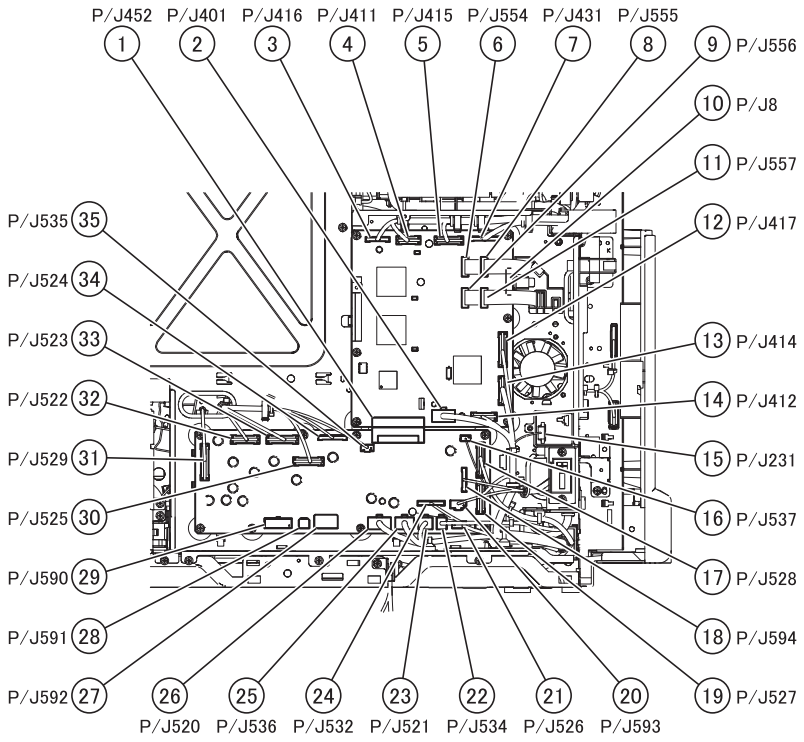
Plug/Jack	Callout	Plug/jack description	Connects to
P/J160	5	Registration/transport roller assembly	Lower engine PCBA
P/J161	4	Registration/transport roller assembly	Lower engine PCBA
P/J171	10	Tray 1 pre-feed sensor	Lower engine PCBA
P/J177	7	Tray 1 media level sensor	Lower engine PCBA
P/J178	6	Tray 1 media out sensor	Lower engine PCBA
P/J253	14	Media transport/MPF drive motor	Lower engine PCBA
P/J260	3	Registration/transport roller assembly	Lower engine PCBA
P/J261	2	N/A	N/A
P/J268	8	Media feed lift motor	Lower engine PCBA
P/J611	9	Tray 1 media level sensor	Lower engine PCBA
P/J618	11	Tray 1 pre-feed sensor	Lower engine PCBA
P/J632	1	Registration/transport roller assembly	Lower engine PCBA

MPF



Plug/Jack	Callout	Plug/jack description	Connects to
P/J172	5	MPF tray feeder	Lower engine PCBA
P/J173	3	MPF tray feeder	Lower engine PCBA
P/J179	4	MPF tray feeder	Lower engine PCBA
P/J183	6	MPF tray feeder	Lower engine PCBA
P/J269	2	MPF tray feeder	Lower engine PCBA
P/J616	1	MPF tray feeder	Lower engine PCBA
P/J617	7	MPF tray feeder	Lower engine PCBA

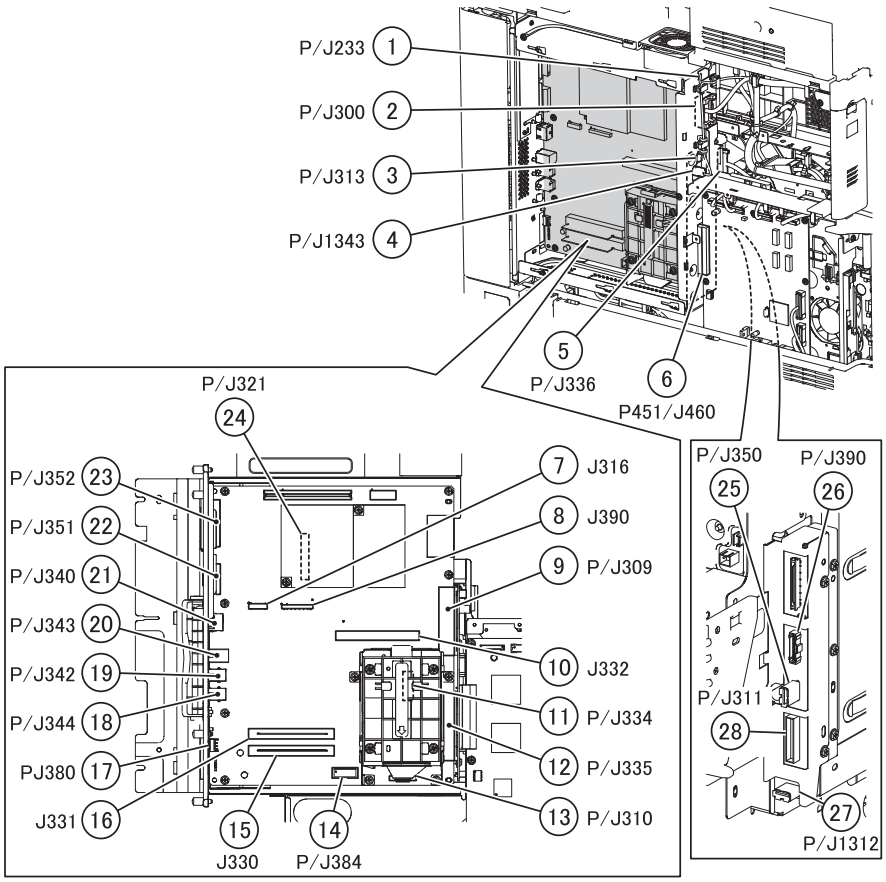
Upper/lower engine PCBA



Plug/Jack	Callout	Plug/jack description	Connects to
P/J8	10	Sub LVPS PCBA	LVPS PCBA
P/J231	15	Suction fan	Upper engine PCBA
P/J401	2	Upper engine PCBA	• LVPS PCBA • Power switch
P/J411	4	Upper engine PCBA	Toner smart chip PCB
P/J412	14	Upper engine PCBA	Charge roll HVPS PCBA
P/J414	13	Upper engine PCBA	• Transfer roll HVPS PCBA • Fuser driver PCBA • Upper exhaust fan
P/J415	5	Upper engine PCBA	Sensor (image calibration)
P/J416	3	Upper engine PCBA	• Front door sensor • Front left cooling fan • Front upper cooling fan
P/J417	12	Upper engine PCBA	• Media size switch PCB • 1st transfer retract clutch assembly • Waste toner sensor guide • Suction fan • Charge roll HVPS cooling fan • PC/developer drive motor cooling fan
P/J431	7	Upper engine PCBA	Fuser assembly
P/J452	1	Lower engine PCBA	Upper engine PCBA

Plug/Jack	Callout	Plug/jack description	Connects to
P/J520	26	Lower engine PCBA	LVPS PCBA
P/J521	23	Lower engine PCBA	Sensor (printer right front door interlock)
P/J522	32	Lower engine PCBA	Upper redrive assembly
P/J523	33	Lower engine PCBA	• Registration/transport roller assembly • Printer left duplex door assembly • Sensor (media on belt)
P/J524	34	Lower engine PCBA	• Fuser pressure roll retract motor • Fuser cooling fan, Sensor (lower redrive shift HP) • Upper redrive assembly
P/J525	30	Lower engine PCBA	• Registration drive motor • MPF tray feeder • Fuser drive motor
P/J526	21	Lower engine PCBA	PC/Developer drive motor assembly
P/J527	19	Lower engine PCBA	PC/Developer drive motor assembly
P/J528	17	Lower engine PCBA	• Media feed lift motor • Tray 1 media level sensor • Tray 1 pre-feed sensor • PC smart chip socket • ATC sensor PCB
P/J529	31	Lower engine PCBA	• Media transport/MPF drive motor • Toner dispense motor • Waste toner agitator motor • Center exhaust fan • Fuser driver PCBA cooling fan • LVPS sub cooling fan
P/J532	24	Lower engine PCBA	Printhead interface contact
P/J534	22	Lower engine PCBA	Sensor (printer left duplex door interlock)
P/J535	35	Lower engine PCBA	• Registration drive motor • Fuser drive motor
P/J536	25	Lower engine PCBA	• Sub LVPS PCBA • Bridge PCBA
P/J537	16	Lower engine PCBA	Front right cooling fan
P/J554	6	Lower engine PCBA	Printhead interface contact
P/J555	8	Lower engine PCBA	Printhead interface contact
P/J556	9	Lower engine PCBA	Printhead interface contact
P/J557	11	Lower engine PCBA	Printhead interface contact
P/J590	29	Lower engine PCBA	Finisher
P/J591	28	Lower engine PCBA	Finisher
P/J592	27	Lower engine PCBA	Tray module controller PCBA
P/J593	20	Lower engine PCBA	HCF
P/J594	18	Lower engine PCBA	HCF

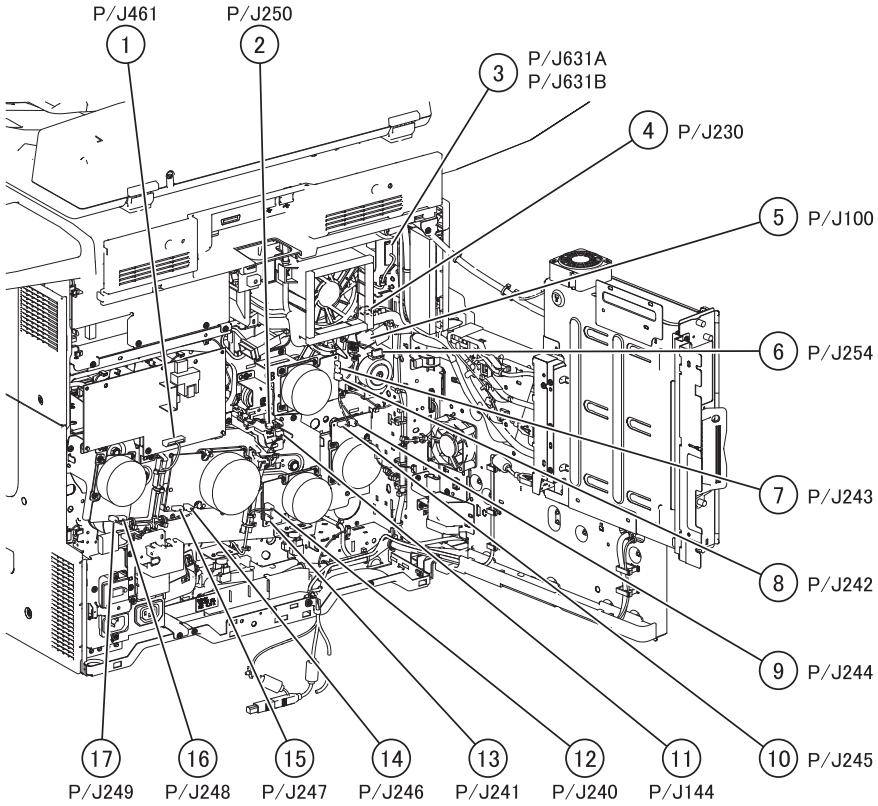
Controller



Plug/Jack	Callout	Plug/jack description	Connects to
P/J233	1	Bridge PCBA	Controller cooling fan
P/J300	2		
P/J309	9		
P/J310	13		
P/J311	28		
P/J313	3	Bridge PCBA	Controller cooling fan
J316	7		
P/J321	24		
J330	15		
J331	16		
J332	10		
P/J334	11		
P/J335	12		
P/J336	5	Bridge PCBA	Scanner controller PCBA
P/J340	21		
P/J342	19		

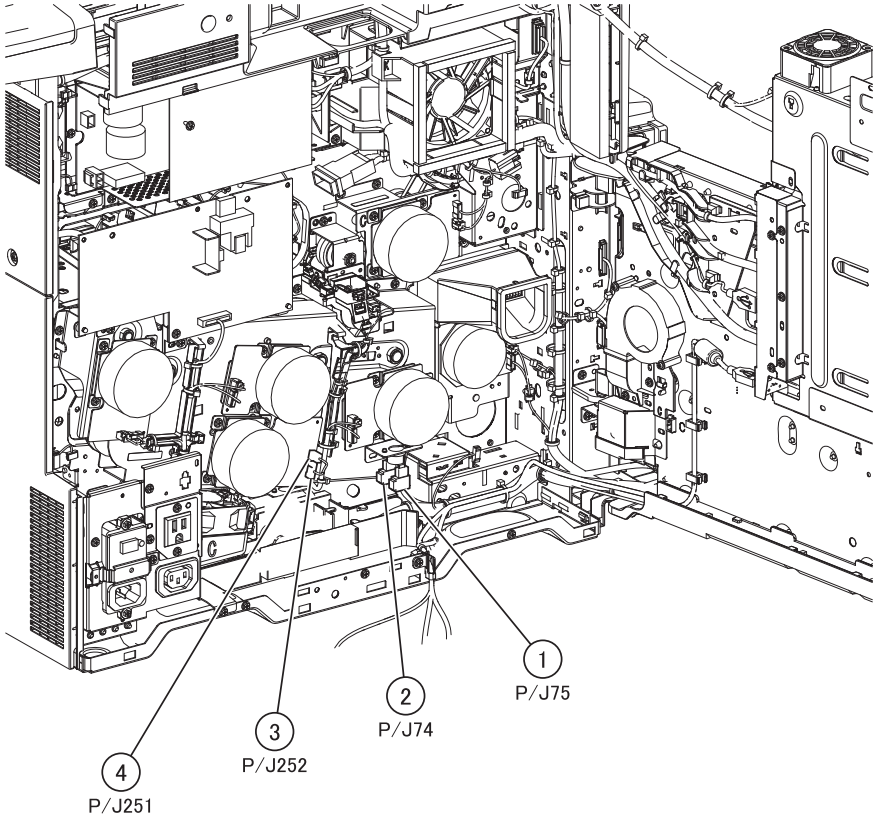
Plug/Jack	Callout	Plug/jack description	Connects to
P/J343	20		
P/J350	25		
P/J351	22		
P/J352	23		
P/J384	14		
J390	8	Bridge PCBA	Scanner controller PCBA
P/J390	26	Bridge PCBA	Scanner controller PCBA
P451/J460	6	Bridge PCBA	Upper engine PCBA
P/J1312	27		
P/J1343	4	Bridge PCBA	Lower engine PCBA

Electrical, rear



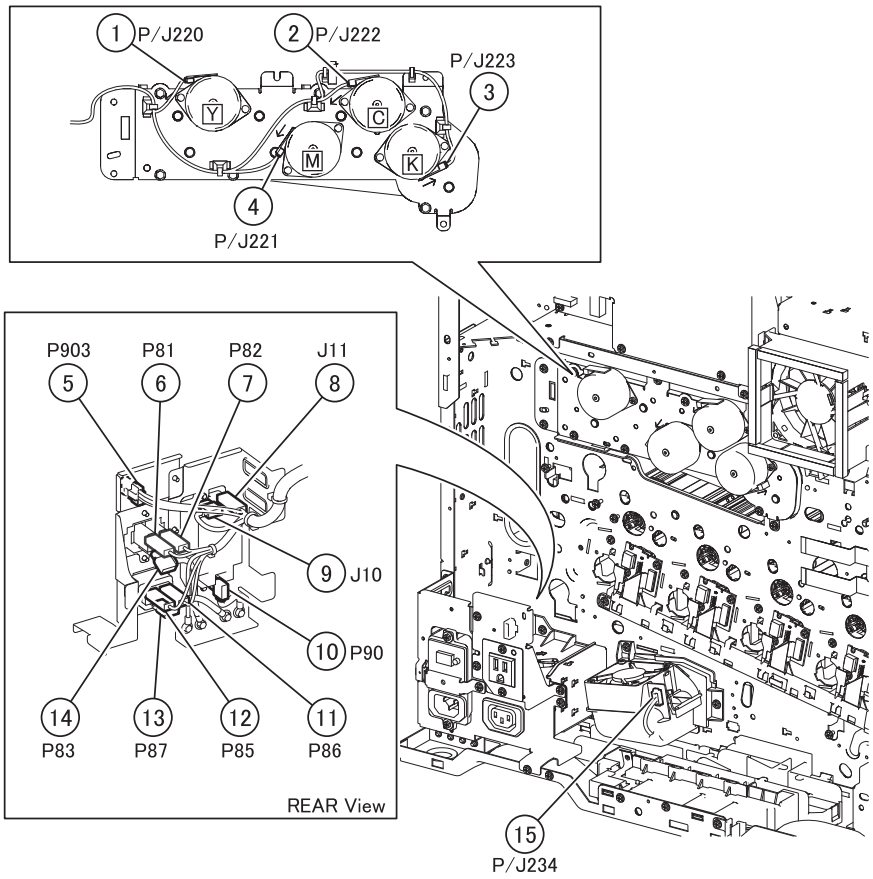
Plug/Jack	Callout	Plug/jack description	Connects to
P/J100	5	Sensor (printer left duplex door interlock)	Lower engine PCBA
P/J144	11	1st transfer retract clutch assembly	Upper engine PCBA
P/J230	4	Fuser cooling fan	Lower engine PCBA
P/J240	12	PC/developer drive motor assembly	Lower engine PCBA
P/J241	13	PC/developer drive motor assembly	Lower engine PCBA
P/J242	8	Fuser motor	Lower engine PCBA
P/J243	7	Fuser motor	Lower engine PCBA
P/J244	9	Registration drive motor	Lower engine PCBA
P/J245	10	Registration drive motor	Lower engine PCBA
P/J246	14	PC/developer drive motor assembly	Lower engine PCBA
P/J247	15	PC/developer drive motor assembly	Lower engine PCBA
P/J248	16	PC/developer drive motor assembly	Lower engine PCBA
P/J249	17	PC/developer drive motor assembly	Lower engine PCBA
P/J250	2	1st transfer retract clutch assembly	Upper engine PCBA
P/J254	6	Fuser pressure roll retract motor	Lower engine PCBA
P/J461	1	Transfer roll HVPS PCBA	Upper engine PCBA
P/J631A	3	Upper redrive assembly	Lower engine PCBA
P/J631B	3	Upper redrive assembly	Lower engine PCBA

Developer drive motor



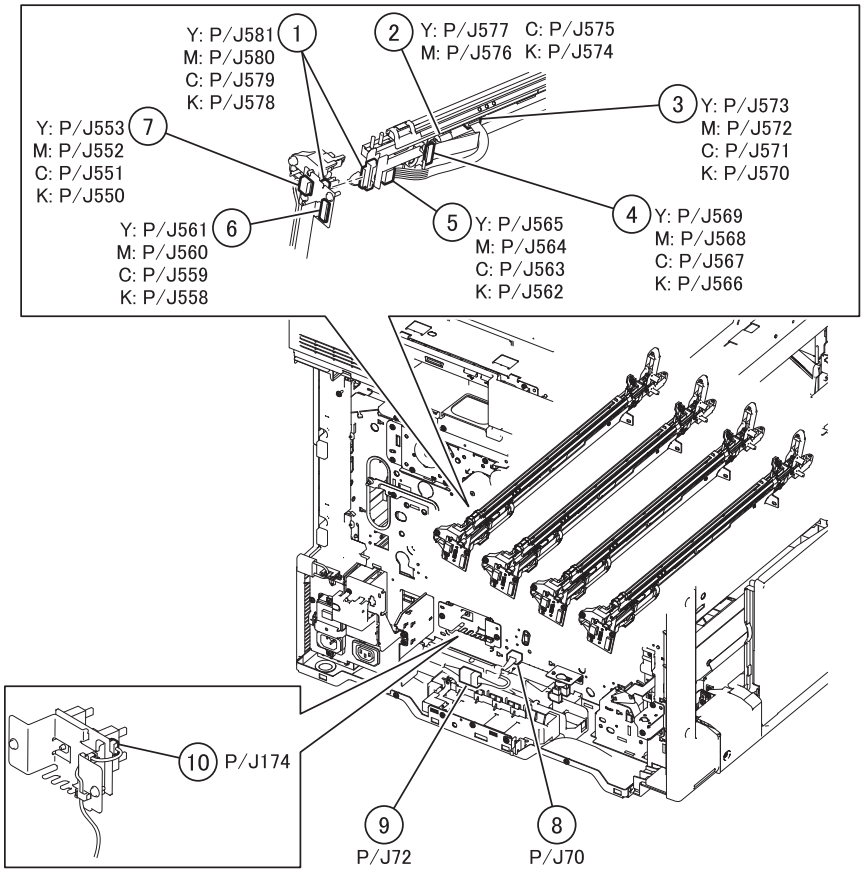
Plug/Jack	Callout	Plug/jack description	Connects to
P/J74	2		
P/J75	1		
P/J251	4	PC/developer drive motor	Lower engine PCBA
P/J252	3	PC/developer drive motor	Lower engine PCBA

Toner dispense motor (Y,M,C,K), GFI interface



Plug/Jack	Callout	Plug/jack description	Connects to
J10	9	Main power GFI interface	LVPS PCBA
J11	8	Main power GFI interface	LVPS PCBA
P81	6	Main power GFI interface	LVPS PCBA
P82	7	Main power GFI interface	LVPS PCBA
P83	14	Main power GFI interface	LVPS PCBA
P85	12	Main power GFI interface	LVPS PCBA
P86	11	Main power GFI interface	LVPS PCBA
P87	13	Main power GFI interface	LVPS PCBA
P90	10	Main power GFI interface	GND
P/J220	1	Toner dispense motor	Lower engine PCBA
P/J221	4	Toner dispense motor	Lower engine PCBA
P/J222	2	Toner dispense motor	Lower engine PCBA
P/J223	3	Toner dispense motor	Lower engine PCBA
P/J234	15	PC/developer drive motor cooling fan	Upper engine PCBA
P903	5		

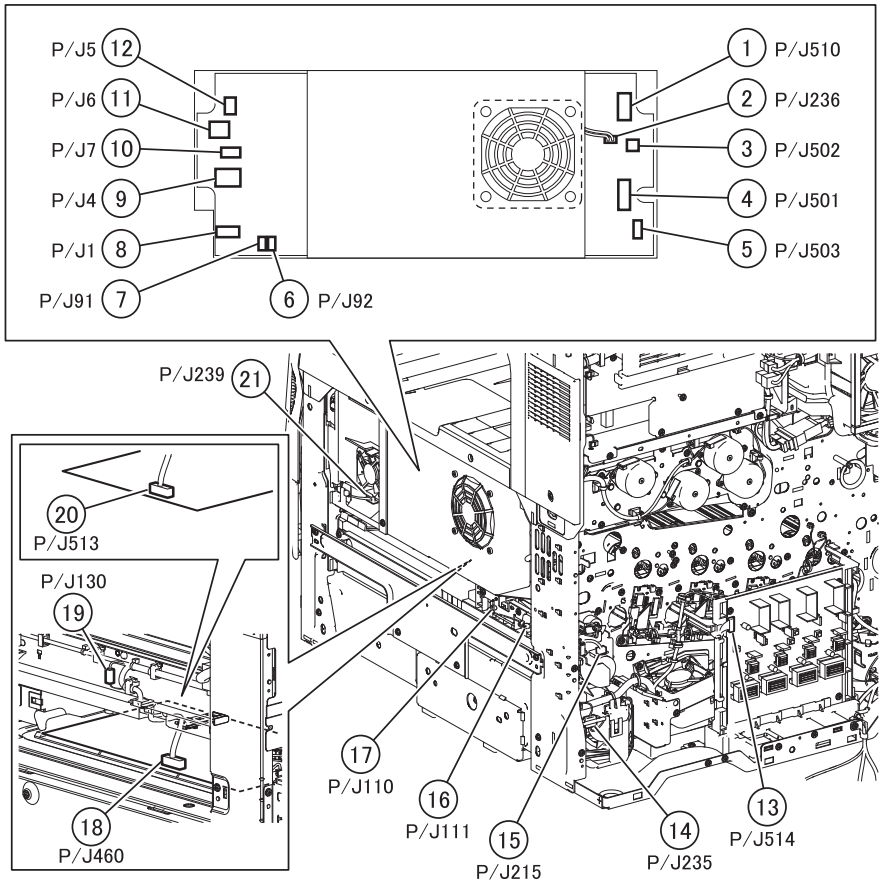
LED printhead



Plug/Jack	Callout	Plug/jack description	Connects to
P/J70	8		
P/J72	9		
P/J174	10	Media size switch PCB	Upper engine PCBA
P/J550	7	Printhead interface contact	Lower engine PCBA
P/J551	7	Printhead interface contact	Lower engine PCBA
P/J552	7	Printhead interface contact	Lower engine PCBA
P/J553	7	Printhead interface contact	Lower engine PCBA
P/J558	6	Printhead interface contact	Upper engine PCBA
P/J559	6	Printhead interface contact	Upper engine PCBA
P/J560	6	Printhead interface contact	Upper engine PCBA
P/J561	6	Printhead interface contact	Upper engine PCBA
P/J562	5	Printhead interface contact	LED printhead
P/J563	5	Printhead interface contact	LED printhead
P/J564	5	Printhead interface contact	LED printhead
P/J565	5	Printhead interface contact	LED printhead
P/J566	4	Printhead interface contact	LED printhead

Plug/Jack	Callout	Plug/jack description	Connects to
P/J567	4	Printhead interface contact	LED printhead
P/J568	4	Printhead interface contact	LED printhead
P/J569	4	Printhead interface contact	LED printhead
P/J570	3	LED printhead	Printhead interface contact
P/J571	3	LED printhead	Printhead interface contact
P/J572	3	LED printhead	Printhead interface contact
P/J573	3	LED printhead	Printhead interface contact
P/J574	2	LED printhead	Printhead interface contact
P/J575	2	LED printhead	Printhead interface contact
P/J576	2	LED printhead	Printhead interface contact
P/J577	2	LED printhead	Printhead interface contact
P/J578	1	Printhead interface contact	LED printhead
P/J579	1	Printhead interface contact	LED printhead
P/J580	1	Printhead interface contact	LED printhead
P/J581	1	Printhead interface contact	LED printhead

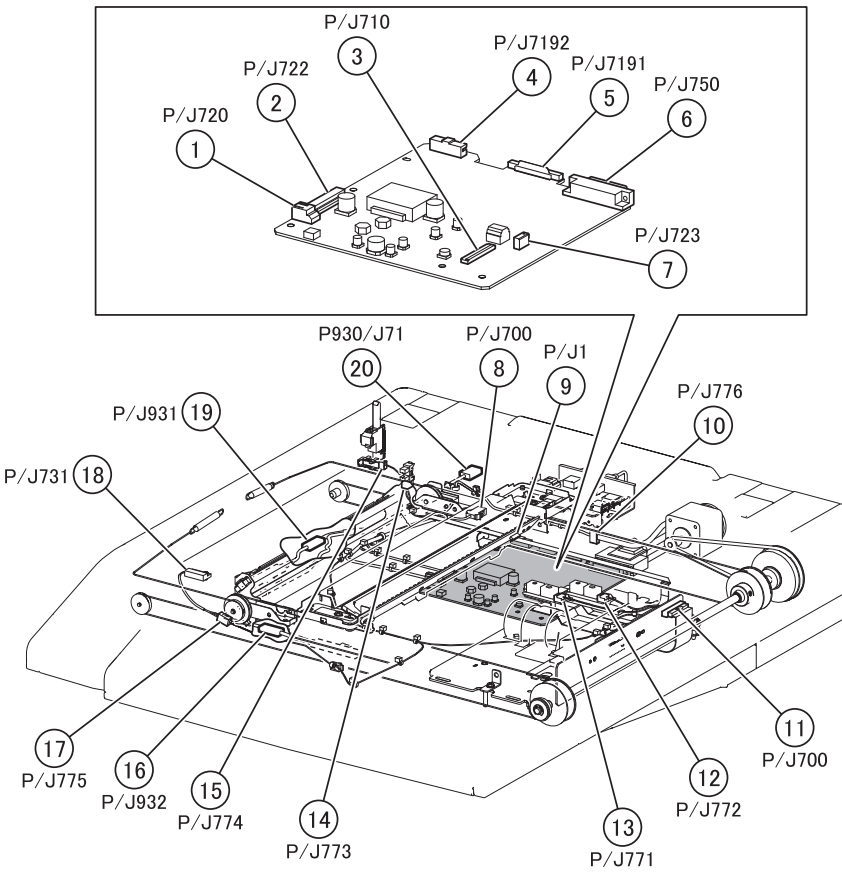
LVPS, HVPS, and waste toner agitator motor



Plug/Jack	Callout	Plug/jack description	Connects to
P/J1	8	LVPS PCBA	Main power GFI interface
P/J4	9	LVPS PCBA	Main power switch
P/J5	12	LVPS PCBA	Main power GFI interface
P/J6	11	LVPS PCBA	• Fuser driver PCBA • Sub LVPS PCBA
P/J7	10	LVPS PCBA	Main power GFI interface
P/J91	7		
P/J92	6		
P/J110	17	Waste toner sensor guide	Upper engine PCBA
P/J111	16	Waste toner sensor guide	Upper engine PCBA
P/J130	19		
P/J215	15	Waste toner agitator motor	Lower engine PCBA
P/J235	14	Charge roll HVPS cooling fan	Upper engine PCBA
P/J236	2	LVPS Fan	
P/J239	21	LVPS sub cooling fan	Lower engine PCBA
P/J460	18	HVPS (DEVE/BCR)	
P/J501	4		

Plug/Jack	Callout	Plug/jack description	Connects to
P/J502	3	LVPS PCBA	Lower engine PCBA
P/J503	5	LVPS PCBA	Lower engine PCBA
P/J510	1	LVPS PCBA	Lower engine PCBA
P/J513	20	Charge roll HVPS cooling fan	Upper engine PCBA
P/J514	13	Developer HVPS PCBA	Upper engine PCBA

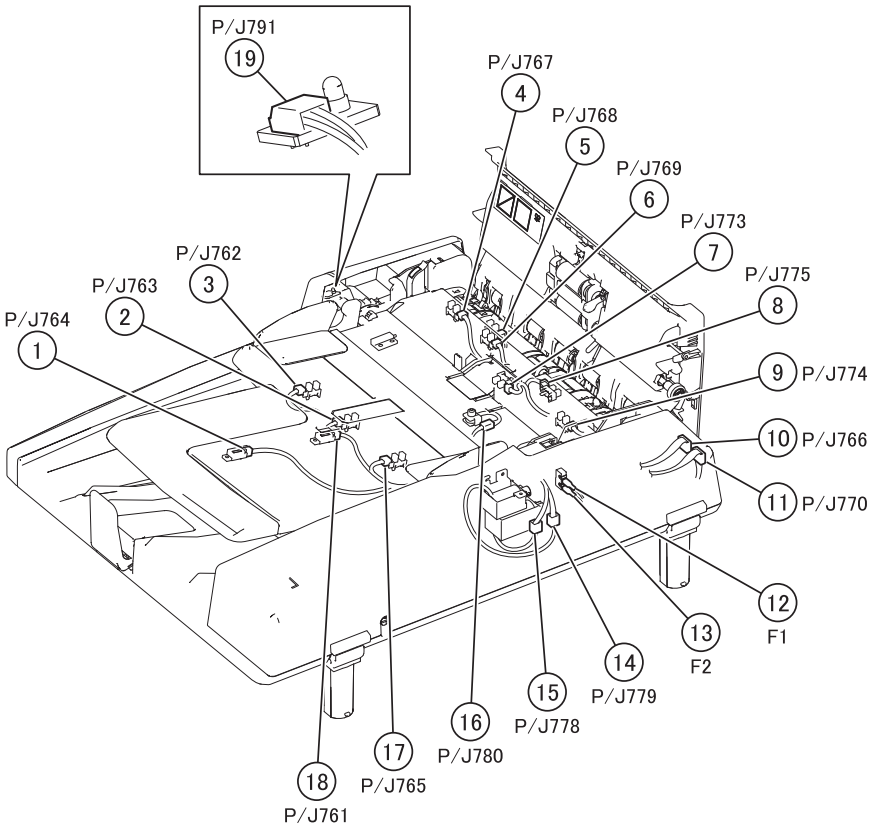
Flatbed



Plug/Jack	Callout	Plug/jack description	Connects to
P/J1	9	LED exposure bar	Scanner controller PCBA
P/J700	8	Scanner controller PCBA	Sub LVPS PCBA
P/J700	11	FB CCD sensor assembly	Scanner controller PCBA
P/J710	3	Scanner controller PCBA	FB CCD sensor assembly
P/J720	1	Scanner controller PCBA	Sub LVPS PCBA
P/J722	2	Scanner controller PCBA	• Scanner carriage motor • Sensor (FB scanner HP) • Sensor (ADF closed interlock)
P/J723	7	Scanner controller PCBA	LED exposure bar
P/J731	18		
P/J750	6	Scanner controller PCBA	ADF controller PCBA
P/J771	13	Sensor (FB platen length) assembly	Scanner controller PCBA
P/J772	12		
P/J773	14	Sensor (FB scanner HP)	Scanner controller PCBA
P/J774	15	Sensor (ADF angle)	Scanner controller PCBA
P/J775	17	Sensor (ADF closed interlock)	Scanner controller PCBA
P/J776	10	Scanner carriage motor	Scanner controller PCBA

Plug/Jack	Callout	Plug/jack description	Connects to
P930/J71	20		
P/J931	19		
P/J932	16		
P/J7191	5	Scanner controller PCBA	Bridge PCBA
P/J7192	4	Scanner controller PCBA	Bridge PCBA

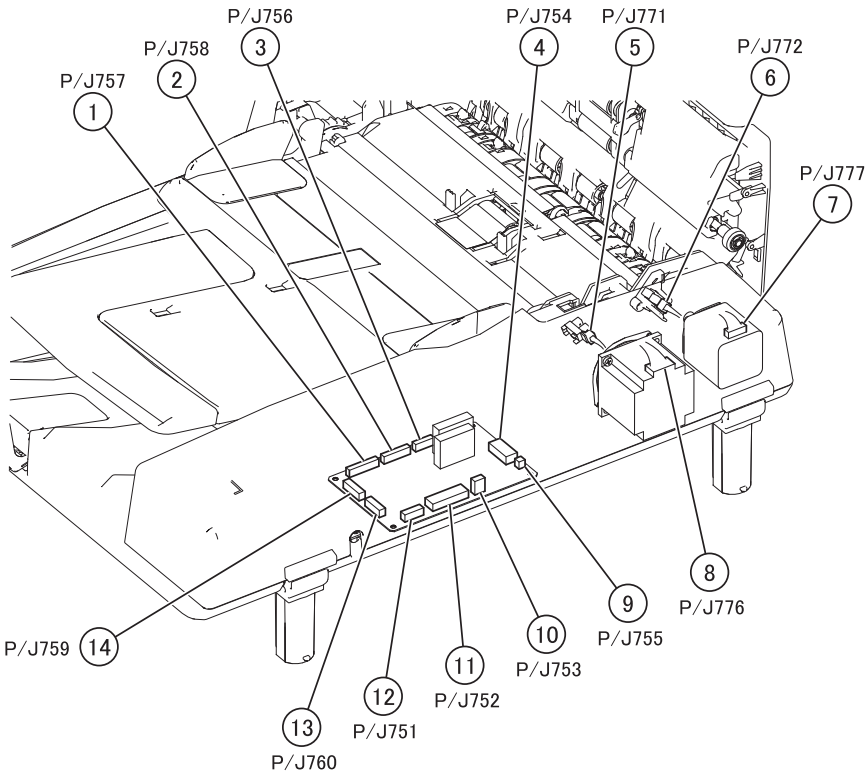
ADF



Plug/Jack	Callout	Plug/jack description	Connects to
P/J751	12	ADF controller PCBA	Scanner controller PCBA
P/J752	11	ADF controller PCBA	Scanner controller PCBA
P/J753	10	ADF controller PCBA	Sensor (ADF top door interlock)
P/J754	4	ADF controller PCBA	• ADF diverter gate solenoid • ADF feed motor • ADF registration motor • ADF nip release solenoid
P/J755	9		
P/J756	3	ADF controller PCBA	• ADF document set LED • Sensor (document tray length 2) • Sensor (ADF document tray width 3)
P/J757	1	ADF controller PCBA	• Sensor (ADF document set) • Sensor (ADF feed out) • Sensor (ADF registration)
P/J758	2	ADF controller PCBA	• Sensor (ADF scan width 1) • Sensor (ADF scan width 2) • Sensor (ADF scan width 3)
P/J759	14		
P/J760	13		
P/J771	5	Sensor (ADF document set)	ADF controller PCBA

Plug/Jack	Callout	Plug/jack description	Connects to
P/J772	6	Sensor (ADF feed out)	ADF controller PCBA
P/J776	8	ADF feed motor	ADF controller PCBA
P/J777	7	ADF registration motor	ADF controller PCBA

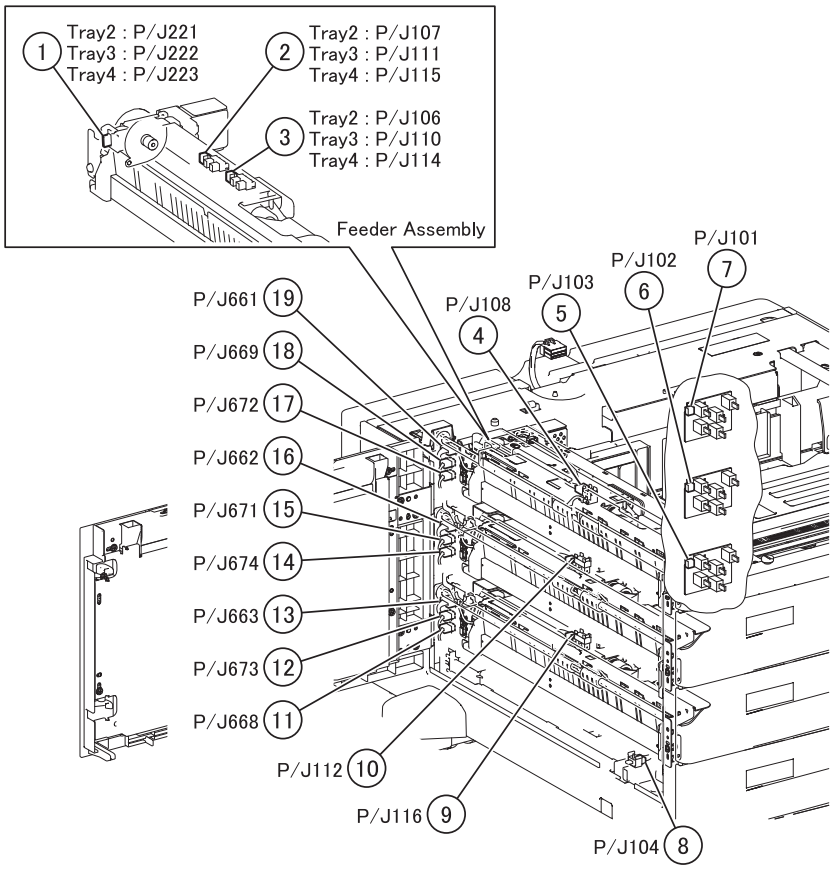
ADF controller



Plug/Jack	Callout	Plug/jack description	Connects to
P/J751	12	ADF controller PCBA	Scanner controller PCBA
P/J752	11	ADF controller PCBA	Scanner controller PCBA
P/J753	10	ADF controller PCBA	Sensor (ADF top door interlock)
P/J754	4	ADF controller PCBA	• ADF diverter gate solenoid • ADF feed motor • ADF registration motor • ADF nip release solenoid
P/J755	9		
P/J756	3	ADF controller PCBA	• ADF document set LED • Sensor (document tray length 2) • Sensor (ADF document tray width 3)
P/J757	1	ADF controller PCBA	• Sensor (ADF document set) • Sensor (ADF feed out) • Sensor (ADF registration) • Sensor (ADF pre registration)
P/J758	2	ADF controller PCBA	• Sensor (ADF scan width 1) • Sensor (ADF scan width 2) • Sensor (ADF scan width 3)
P/J759	14		
P/J760	13		
P/J771	5	Sensor (ADF document set)	ADF controller PCBA

Plug/Jack	Callout	Plug/jack description	Connects to
P/J772	6	Sensor (ADF feed out)	ADF controller PCBA
P/J776	8	ADF feed motor	ADF controller PCBA
P/J777	7	ADF registration motor	ADF controller PCBA

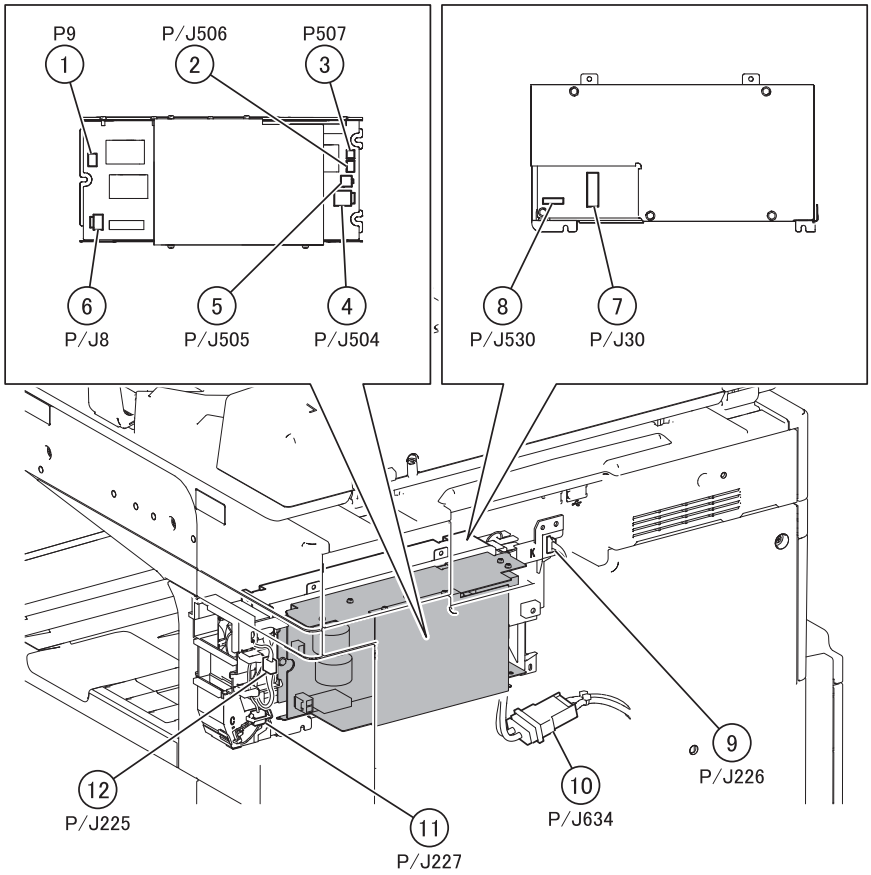
3TM—tray2/3/4 media feeder, feed-out sensor, media size sensor



Plug/Jack	Callout	Plug/jack description	Connects to
P/J101	7	Media size switch PCB	Tray module controller PCBA
P/J102	6	Media size switch PCB	Tray module controller PCBA
P/J103	5	Media size switch PCB	Tray module controller PCBA
P/J104	8	Sensor (tray module left door interlock)	Tray module controller PCBA
P/J106	3	Tray 2 media out sensor	Tray module controller PCBA
P/J107	2	Tray 2 media level sensor	Tray module controller PCBA
P/J108	4	Sensor (tray module feed out)	Tray module controller PCBA
P/J110	3	Tray 3 media out sensor	Tray module controller PCBA
P/J111	2	Tray 3 media level sensor	Tray module controller PCBA
P/J112	10	Sensor (tray module feed out)	Tray module controller PCBA
P/J114	3	Tray 4 media out sensor	Tray module controller PCBA
P/J115	2	Tray 4 media level sensor	Tray module controller PCBA
P/J116	9	Sensor (tray module feed out)	Tray module controller PCBA
P/J221	1	Media feed lift motor	Tray module controller PCBA
P/J222	1	Media feed lift motor	Tray module controller PCBA
P/J223	1	Media feed lift motor	Tray module controller PCBA

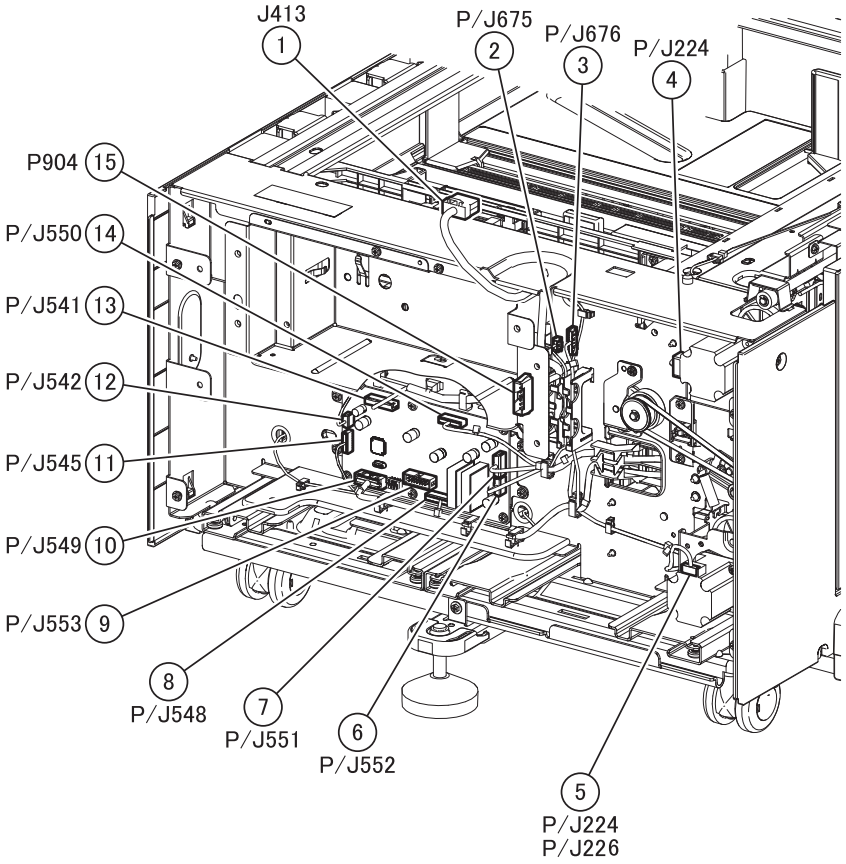
Plug/Jack	Callout	Plug/jack description	Connects to
P/J661	19	Media feed lift motor	Tray module controller PCBA
P/J662	16	Media feed lift motor	Tray module controller PCBA
P/J663	13	Media feed lift motor	Tray module controller PCBA
P/J668	11	Sensor (tray module left door interlock)	Tray module controller PCBA
P/J669	18	• Tray 2 media level sensor • Tray 2 media out sensor	Tray module controller PCBA
P/J671	15	• Tray 3 media level sensor • Tray 3 media out sensor	Tray module controller PCBA
P/J672	17	Sensor (tray module feed out)	Tray module controller PCBA
P/J673	12	• Tray 4 media level sensor • Tray 4 media out sensor	Tray module controller PCBA
P/J674	14	Sensor (tray module feed out)	Tray module controller PCBA

Fuser drive, sub LVPS



Plug/Jack	Callout	Plug/jack description	Connects to
P/J8	6	Sub LVPS PCBA	LVPS PCBA
P9	1		
P/J30	7	Fuser driver PCBA	LVPS PCBA
P/J225	12	Upper exhaust fan	Upper engine PCBA
P/J226	9	Fuser driver PCBA cooling fan	Lower engine PCBA
P/J227	11	Front upper cooling fan	Lower engine PCBA
P/J504	4	Sub LVPS PCBA	Lower engine PCBA
P/J505	5	Sub LVPS PCBA	Scanner controller PCBA
P/J506	2	Sub LVPS PCBA	Lower engine PCBA
P507	3		
P/J530	8	Fuser driver PCBA	Upper engine PCBA
P/J634	10	Fuser assembly	Fuser driver PCBA

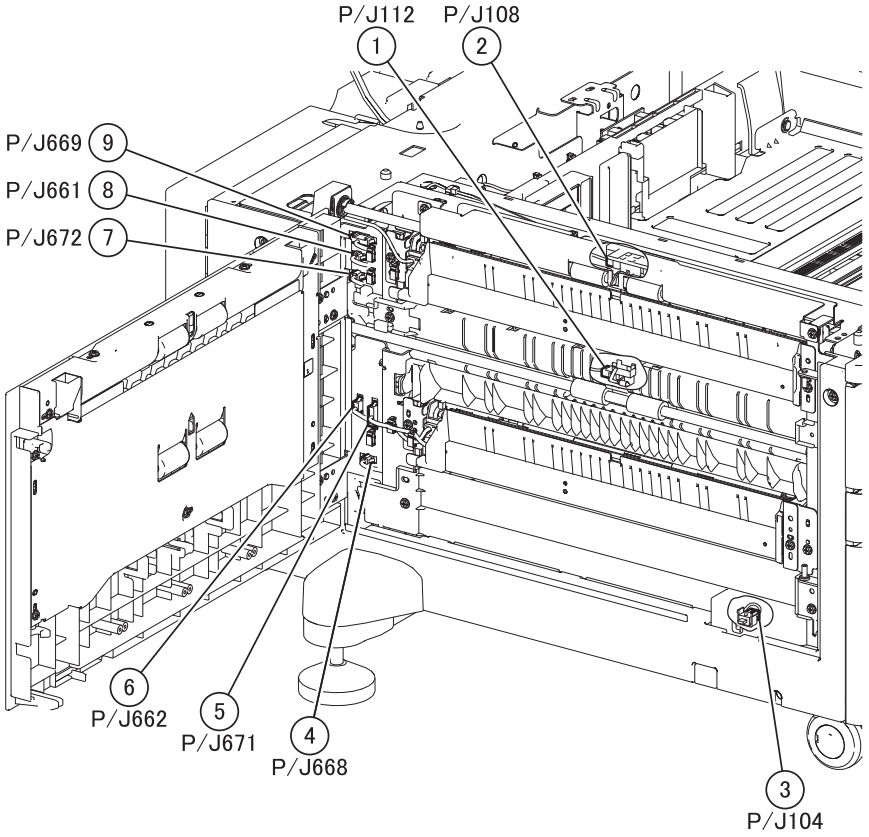
TTM—rear



Plug/Jack	Callout	Plug/jack description	Connects to
P/J224	4	Tray module lower transport motor	Tray module controller PCBA
P/J226	5	Tray module upper transport motor	Tray module controller PCBA
J413	1		
P/J541	13	Tray module controller PCBA	Tray module controller PCBA
P/J542	12		
P/J545	11		
P/J548	8	Tray module controller PCBA	• Tray 3 media level sensor • Tray 3 media out sensor • Tray 4 media level sensor • Tray 4 media out sensor • Sensor (tray module feed out)
P/J549	10	Tray module controller PCBA	• Media size switch PCB • Tray 2 media level sensor • Tray 2 media out sensor • Sensor (tray module feed out) • Sensor (tray module left door interlock)
P/J550	14	Tray module controller PCBA	Media feed lift motor
P/J551	7	Tray module controller PCBA	Tray module lower transport motor
P/J552	6	Tray module controller PCBA	Tray module upper transport motor
P/J553	9		

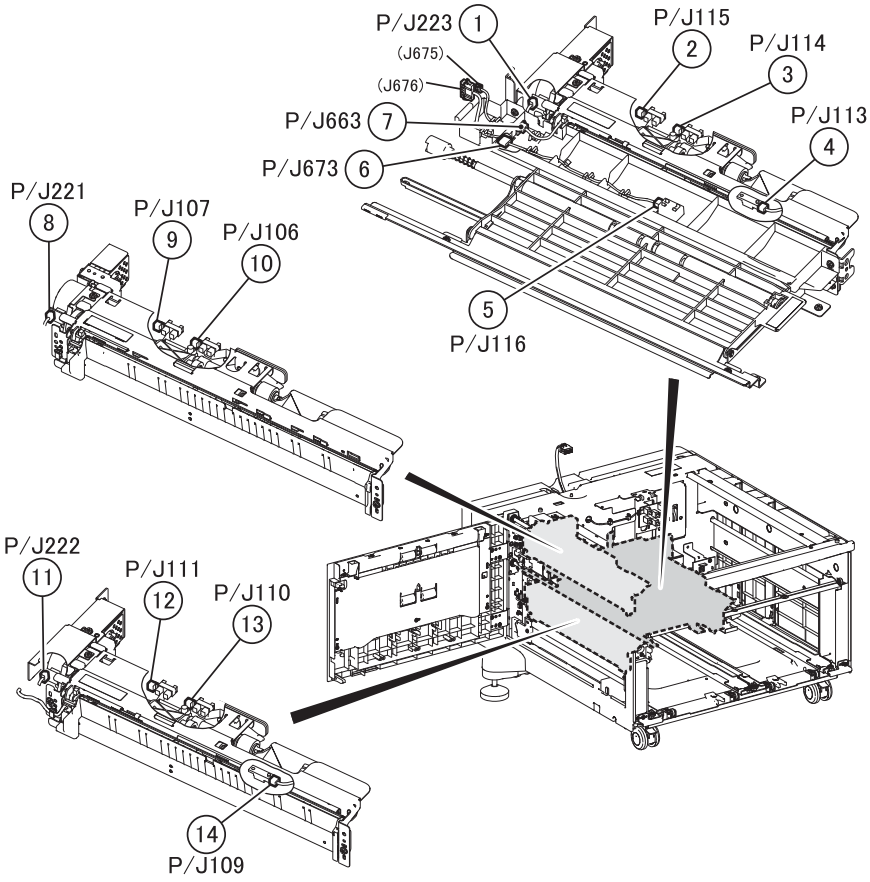
Plug/Jack	Callout	Plug/jack description	Connects to
P/J675	2		
P/J676	3		
P904	15		

TTM—left



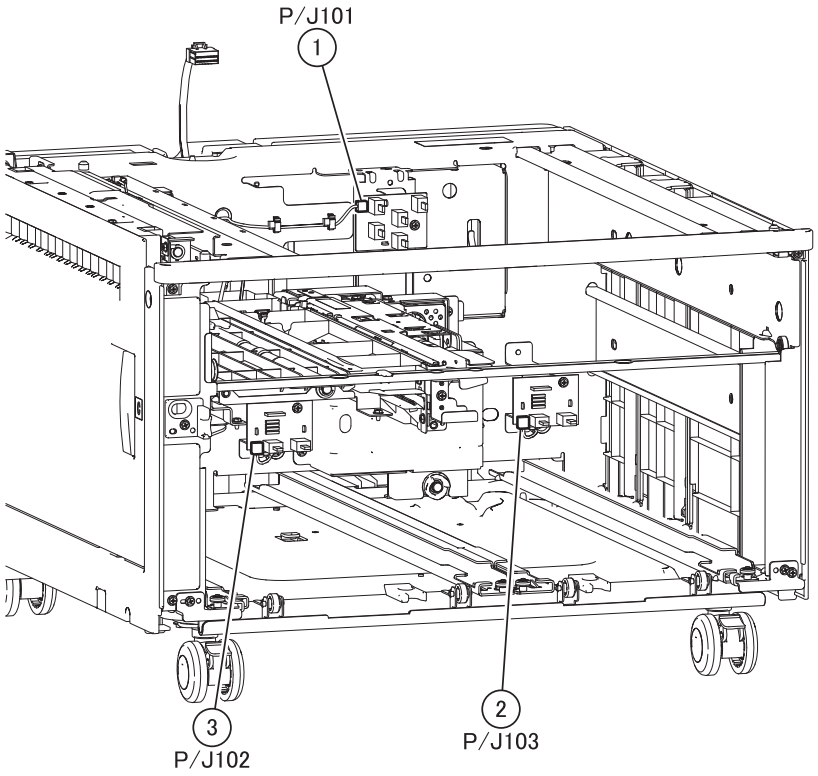
Plug/Jack	Callout	Plug/jack description	Connects to
P/J104	3	Sensor (tray module left door interlock)	Tray module controller PCBA
P/J108	2	Sensor (tray module feed out)	Tray module controller PCBA
P/J112	1	Sensor (tray module feed out)	Tray module controller PCBA
P/J661	8	Media feed lift motor	Tray module controller PCBA
P/J662	6	Media feed lift motor	Tray module controller PCBA
P/J668	4	Sensor (tray module left door interlock)	Tray module controller PCBA
P/J669	9	Tray 2 media level sensor	Tray module controller PCBA
P/J671	5	Tray 3 media level sensor	Tray module controller PCBA
P/J672	7	Sensor (tray module feed out)	Tray module controller PCBA

TTM—tray 2/3/4 feeder



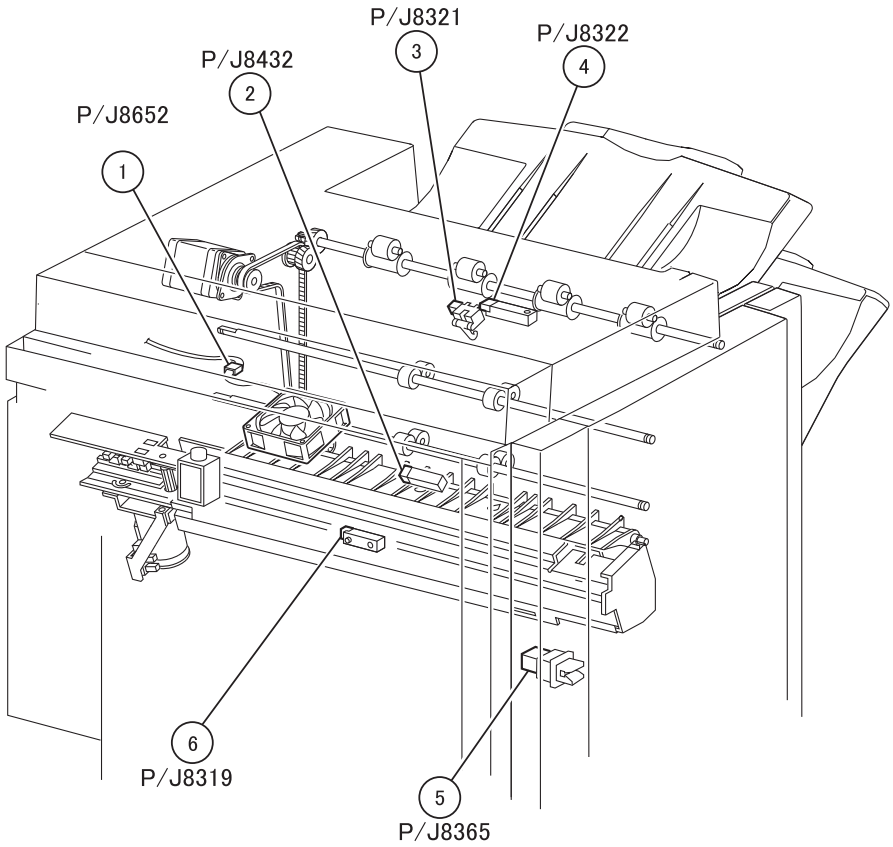
Plug/Jack	Callout	Plug/jack description	Connects to
P/J106	10	Media size switch PCB	Tray module controller PCBA
P/J107	9	Tray 2 media level sensor	Tray module controller PCBA
P/J109	14		
P/J110	13	Tray 3 media out sensor	Tray module controller PCBA
P/J111	12	Tray 3 media level sensor	Tray module controller PCBA
P/J113	4		
P/J114	3	Tray 4 media out sensor	Tray module controller PCBA
P/J115	2	Tray 4 media level sensor	Tray module controller PCBA
P/J116	5	Sensor (tray module feed out)	Tray module controller PCBA
P/J221	8	Media feed lift motor	Tray module controller PCBA
P/J222	11	Media feed lift motor	Tray module controller PCBA
P/J223	1	Media feed lift motor	Tray module controller PCBA
P/J663	7	Media feed lift motor	Tray module controller PCBA
P/J673	6	Tray 4 media out sensor, Tray 4 media level sensor	Tray module controller PCBA

TTM—tray 2/3/4 media size sensor



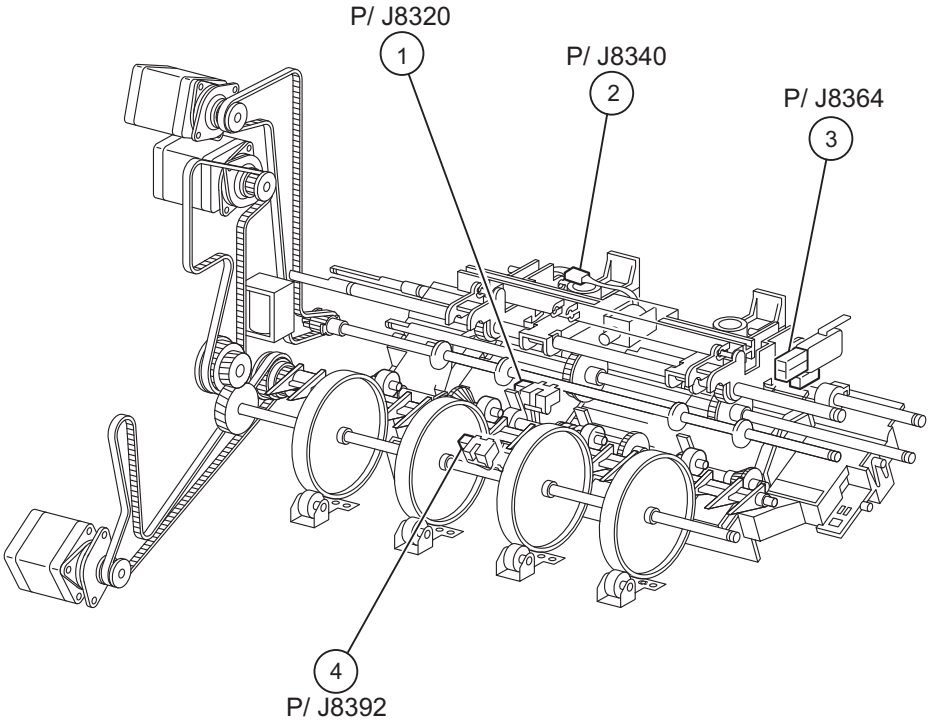
Plug/Jack	Callout	Plug/jack description	Connects to
P/J101	1	Media size switch PCB	Tray module controller PCBA
P/J102	3	Media size switch PCB	Tray module controller PCBA
P/J103	2	Media size switch PCB	Tray module controller PCBA

Finisher—sensors



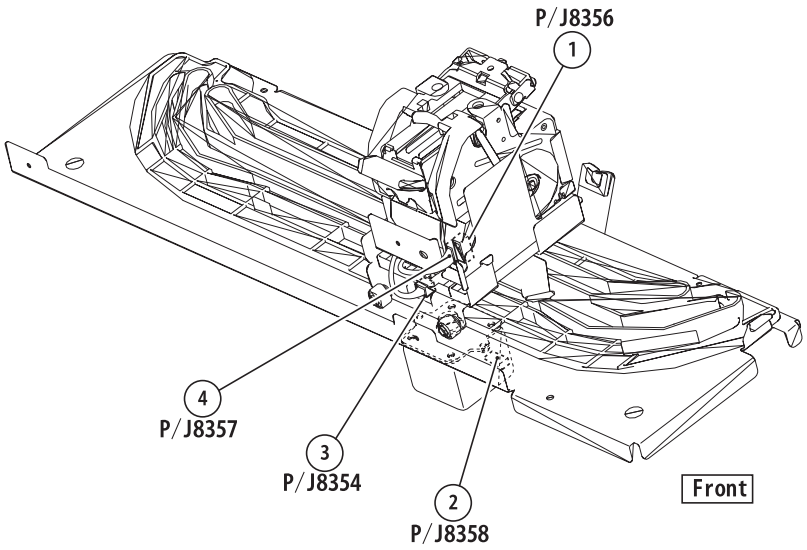
Plug/Jack	Callout	Plug/jack description	Connects to
P/J8319	6	Sensor (finisher media entrance)	Finisher controller PCBA
P/J8321	3	Sensor (upper media exit)	Finisher controller PCBA
P/J8322	4	Sensor (upper media bin full)	Finisher controller PCBA
P/J8365	5	Sensor (finisher front door interlock)	• Eject cover interlock switch • Finisher controller PCBA
P/J8432	2	Sensor (diverter gate)	Finisher controller PCBA
P/J8652	1		

Finisher—compiler



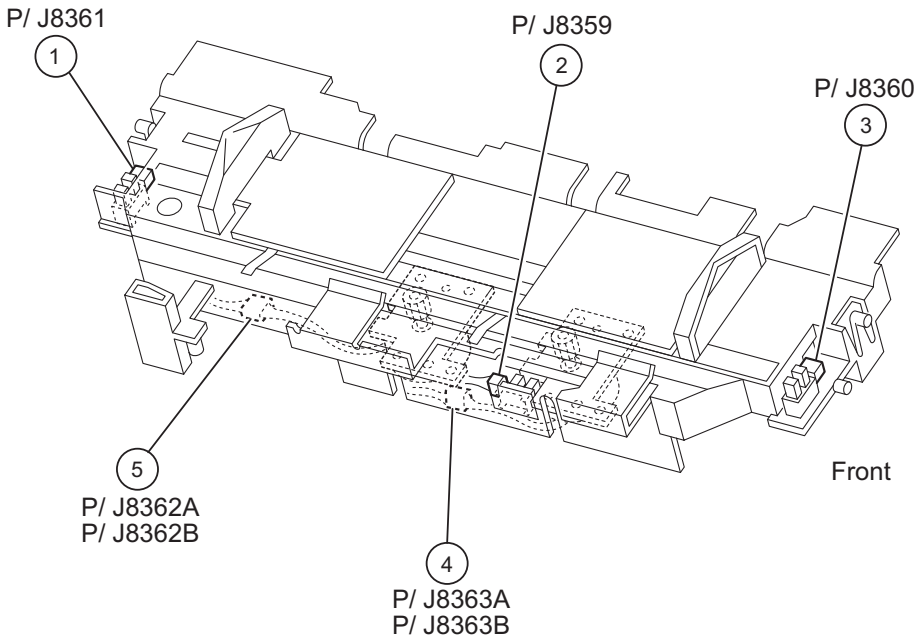
Plug/Jack	Callout	Plug/jack description	Connects to
P/J8320	1	Sensor (lower media exit)	Finisher controller PCBA
P/J8340	2	Sub paddle solenoid	Finisher controller PCBA
P/J8364	3	Eject cover interlock switch	Finisher controller PCBA
P/J8392	4	Sensor (buffer path)	Finisher controller PCBA

Finisher—stapler



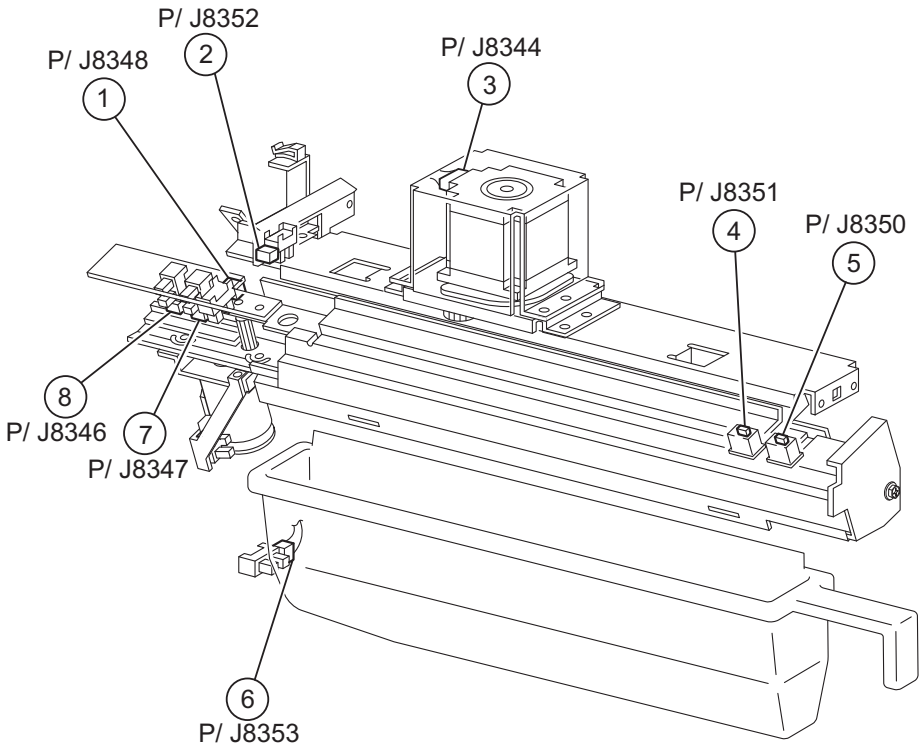
Plug/Jack	Callout	Plug/jack description	Connects to
P/J8354	3	Complete stapler	Finisher controller PCBA
P/J8356	1	Stapler unit assembly	Finisher controller PCBA
P/J8357	4	Stapler unit assembly	Finisher controller PCBA
P/J8358	2	Stapler transport motor	Finisher controller PCBA

Finisher—media compiler guide



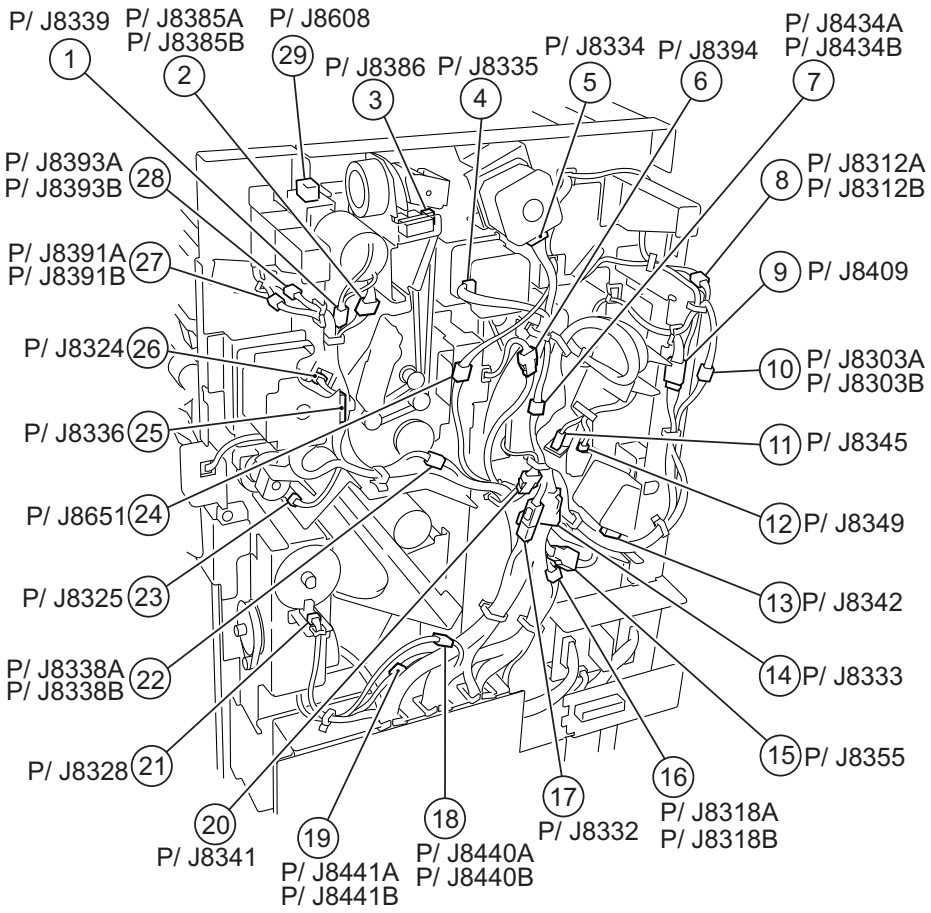
Plug/Jack	Callout	Plug/jack description	Connects to
P/J8359	2	Media compiler guide	Finisher controller PCBA
P/J8360	3	Media compiler guide	Finisher controller PCBA
P/J8361	1	Media compiler guide	Finisher controller PCBA
P/J8362A	5	Media compiler guide	Finisher controller PCBA
P/J8362B	5	Media compiler guide	Finisher controller PCBA
P/J8363A	4	Media compiler guide	Finisher controller PCBA
P/J8363B	4	Media compiler guide	Finisher controller PCBA

Finisher—punch unit



Plug/Jack	Callout	Plug/jack description	Connects to
P/J8344	3	Punch carriage shift motor	Finisher controller PCBA
P/J8346	8	Punch unit frame	Finisher controller PCBA
P/J8347	7	Punch unit frame	Finisher controller PCBA
P/J8348	1	Punch unit frame	Finisher controller PCBA
P/J8350	5	Sensor (punch unit side reg 1)	Finisher controller PCBA
P/J8351	4	Sensor (punch unit side reg 2)	Finisher controller PCBA
P/J8352	2	Punch unit frame	Finisher controller PCBA
P/J8353	6	Punch waste box bottle	Finisher controller PCBA

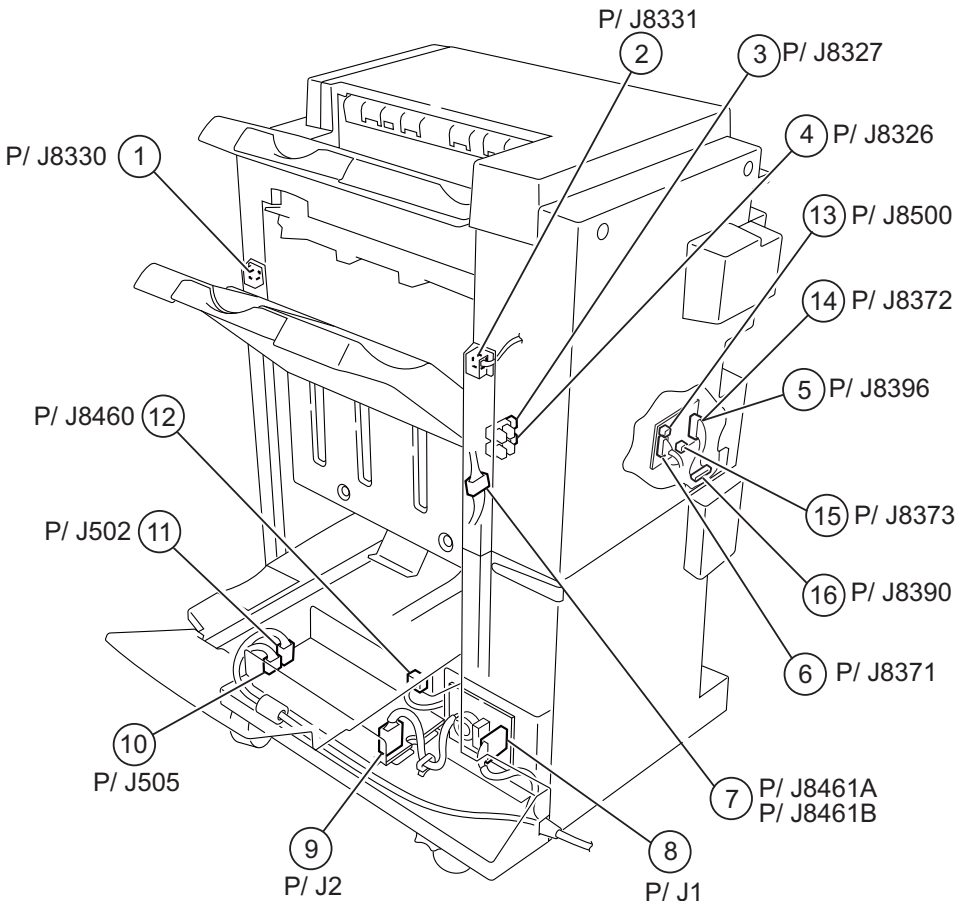
Finisher—rear



Plug/Jack	Callout	Plug/jack description	Connects to
P/J8303A	10	Sensor (finisher media entrance)	Finisher controller PCBA
P/J8303B	10	Sensor (finisher media entrance)	Finisher controller PCBA
P/J8312A	8	Sensor (upper media exit)	Finisher controller PCBA
P/J8312B	8	Sensor (upper media exit)	Finisher controller PCBA
P/J8318A	16	Sensor (buffer path)	Finisher controller PCBA
P/J8318B	16	Sensor (buffer path)	Finisher controller PCBA
P/J8324	26	Sensor (media eject clamp HP)	Finisher controller PCBA
P/J8325	23	Sensor (media eject shaft HP)	Finisher controller PCBA
P/J8328	21	Sensor (stacker encoder)	Finisher controller PCBA
P/J8332	17	Punch unit motor	Finisher controller PCBA
P/J8333	14	Finisher controller PCBA	• Punch unit frame • Sensor (punch unit side reg 1) • Sensor (punch unit motor encoder)
P/J8334	5	Stepper motor	Finisher controller PCBA
P/J8335	4	Stepper motor	Finisher controller PCBA

Plug/Jack	Callout	Plug/jack description	Connects to
P/J8336	25	Eject shaft roll motor	Finisher controller PCBA
P/J8338A	22	Media eject clamp clutch	Finisher controller PCBA
P/J8338B	22	Media eject clamp clutch	Finisher controller PCBA
P/J8339	1	Clamp drive motor	Finisher controller PCBA
P/J8341	20	Diverter solenoid	Finisher controller PCBA
P/J8342	13	Stepper motor	Finisher controller PCBA
P/J8345	11	Punch unit motor	Finisher controller PCBA
P/J8349	12	Sensor (punch unit motor encoder)	Finisher controller PCBA
P/J8355	15	Sensor (punch waste box set)	Finisher controller PCBA
P/J8385A	2		
P/J8385B	2		
P/J8386	3		
P/J8391A	27	Sensor (lower media exit)	Finisher controller PCBA
P/J8391B	27	Sensor (lower media exit)	Finisher controller PCBA
P/J8393A	28	Sensor (upper media bin full)	Finisher controller PCBA
P/J8393B	28	Sensor (upper media bin full)	Finisher controller PCBA
P/J8394	6	Buffer solenoid	Finisher controller PCBA
P/J8409	9	Booklet gate solenoid	Booklet controller card assembly
P/J8434A	7	Sensor (diverter gate)	Finisher controller PCBA
P/J8434B	7	Sensor (diverter gate)	Finisher controller PCBA
P/J8440A	18	Sensor (stacker bin level F)	Finisher controller PCBA
P/J8440B	18	Sensor (stacker bin level F)	Finisher controller PCBA
P/J8441A	19	Sensor (stacker bin upper limit)	Finisher controller PCBA
P/J8441B	19	Sensor (stacker bin upper limit)	Finisher controller PCBA
P/J8651	24		
P/J8608	29		

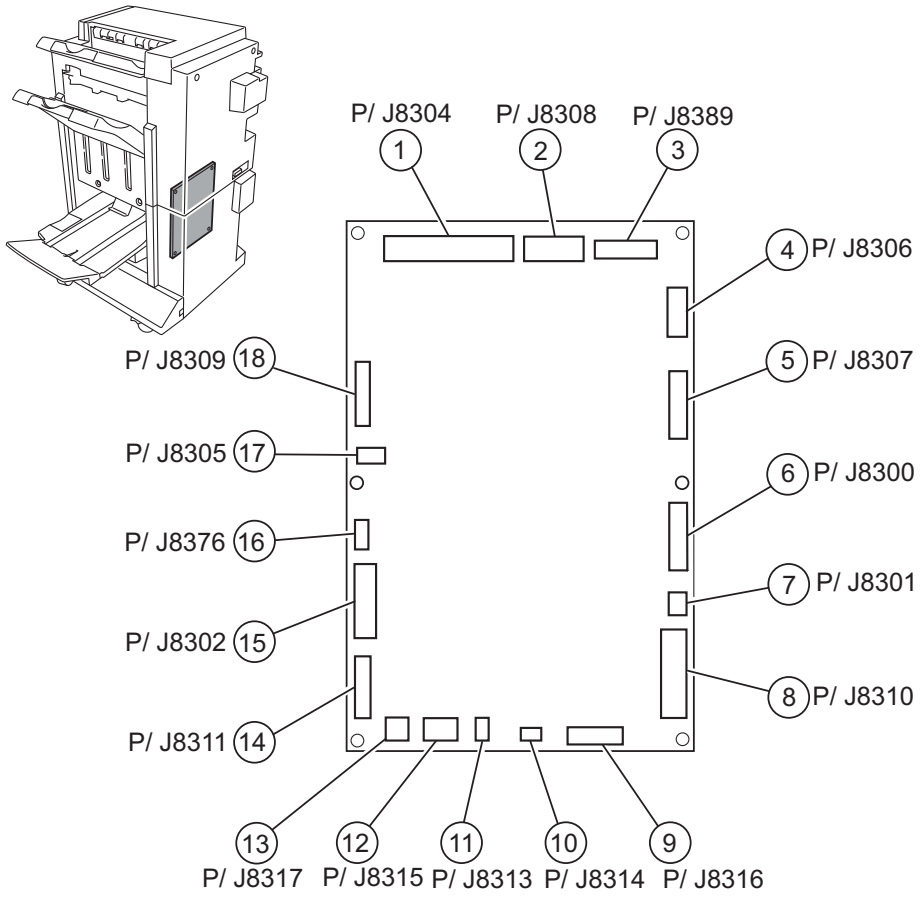
Finisher—LVPS, stacker



Plug/Jack	Callout	Plug/jack description	Connects to
P/J1	8	Finisher AC filter PCBA	
P/J2	9	Finisher LVPS PCBA	Finisher AC filter PCBA
P/J502	11	Finisher LVPS PCBA	Finisher controller PCBA
P/J505	10	Finisher LVPS PCBA	Finisher controller PCBA
P/J8326	4	Sensor (stacker bin no media)	Finisher controller PCBA
P/J8327	3	Sensor (stacker bin upper limit)	Finisher controller PCBA
P/J8330	1	Sensor (stacker bin level F)	Finisher controller PCBA
P/J8331	2	Sensor (stacker bin level R)	Finisher controller PCBA
P/J8371	6	Bridge PCBA	Finisher controller PCBA
P/J8372	14		
P/J8373	15		
P8390	16		

Plug/Jack	Callout	Plug/jack description	Connects to
P/J8396	5	Bridge PCBA	• Sensor (bridge top door interlock) • Bridge drive motor • Sensor (bridge media entrance) • Bridge decurler cam clutch • Sensor (decurler cam HP)
P8444	17	Bridge PCBA	• Sensor (bridge top door interlock) • Bridge drive motor • Sensor (bridge media entrance) • Decurler clutch • Sensor (decurler cam HP)
P/J8460	12	Booklet output tray	Booklet controller card assembly
P/J8461A	7	Finisher controller PCBA	Media compiler guide
P/J8461B	7	Finisher controller PCBA	Media compiler guide
P/J8500	13		

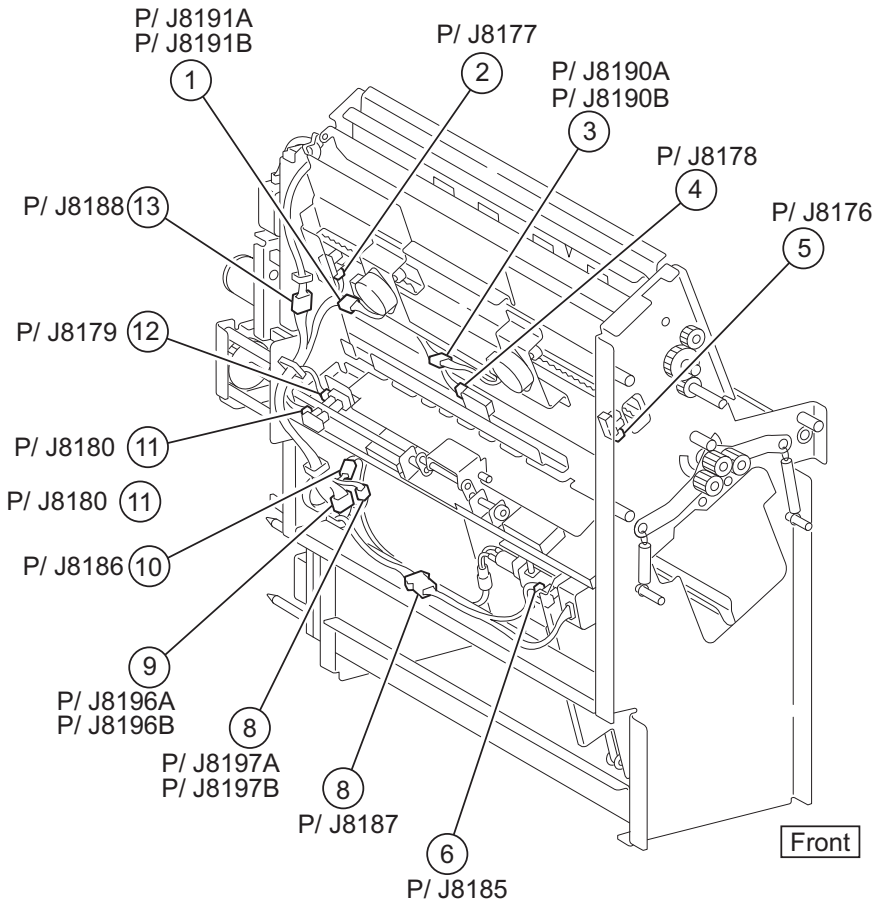
Finisher—controller PCBA



Plug/Jack	Callout	Plug/jack description	Connects to
P/J8300	6	Finisher controller PCBA	
P/J8301	7		
P/J8302	15	Finisher controller PCBA	• Sensor (finisher media entrance) • Sensor (upper media bin full) • Sensor (buffer path) • Sensor (media eject clamp HP) • Sensor (media eject shaft HP) • Sensor (stacker bin level R) • Sensor (stacker bin level encoder)
P/J8304	1	Finisher controller PCBA	• Stepper motor • Diverter solenoid • Buffer diverter solenoid • Clamp drive motor • Media eject motor assembly
P/J8305	17	Finisher controller PCBA	Stacker bin lift motor
P/J8306	4	Finisher controller PCBA	• Punch carriage shift motor • Punch unit motor

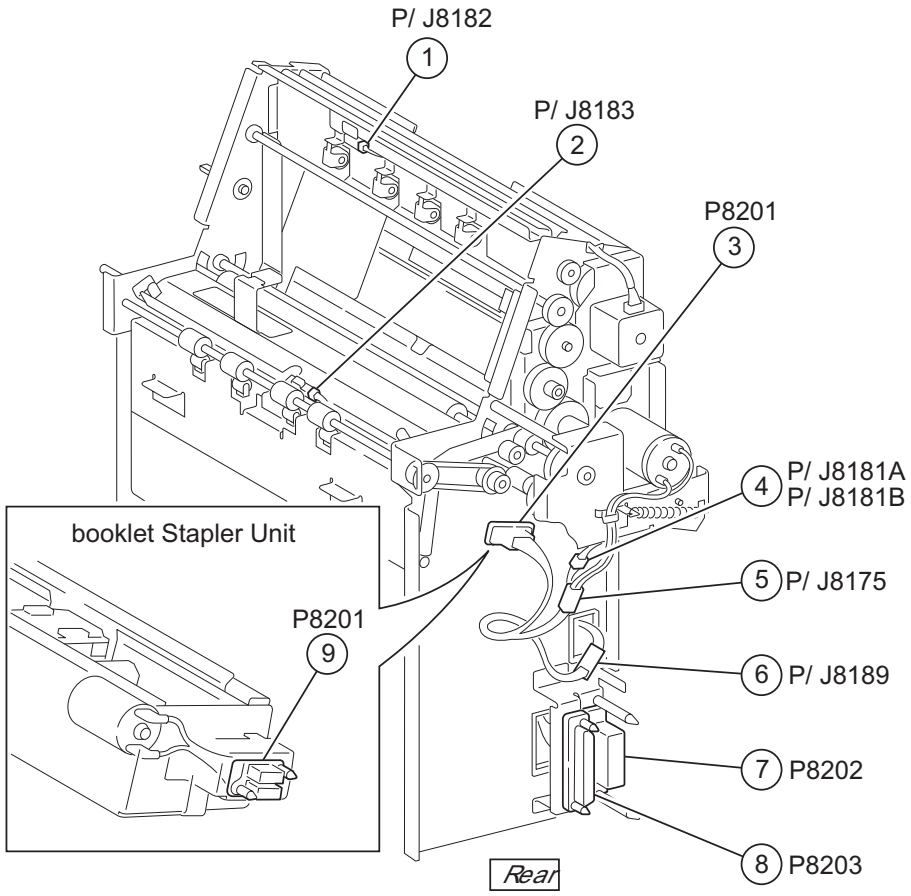
Plug/Jack	Callout	Plug/jack description	Connects to
P/J8307	5	Finisher controller PCBA	• Sensor (punch carriage shift HP) • Sensor (punch hole select) • Sensor (punch cam front) • Sensor (punch cam HP) • Sensor (punch unit motor encoder) • Sensor (punch unit side reg 1) • Sensor (punch unit side reg 2)
P/J8308	2	Finisher controller PCBA	• Stapler transport motor • Sensor (stapler carriage HP) • Stapler unit assembly,
P/J8309	18	Finisher controller PCBA	• Media compiler guide • Sensor (compiler media present) • Sensor (front tamper HP) • Sensor (rear tamper HP)
P/J8310	8	Finisher controller PCBA	Bridge PCBA
P8311	14		
P/J8313	11	Finisher controller PCBA	Eject cover interlock switch Sensor (finisher front door interlock)
P/J8314	10	Finisher controller PCBA	Sensor (finisher front door interlock)
P/J8315	12	Finisher controller PCBA	Finisher LVPS PCBA
P/J8316	9	Finisher controller PCBA	Booklet controller card assembly
P/J8317	13	Finisher controller PCBA	Booklet controller card assembly
P/J8376	16	Finisher controller PCBA	Sensor (diverter gate)
P/J8389	3		

Finisher—booklet maker 1



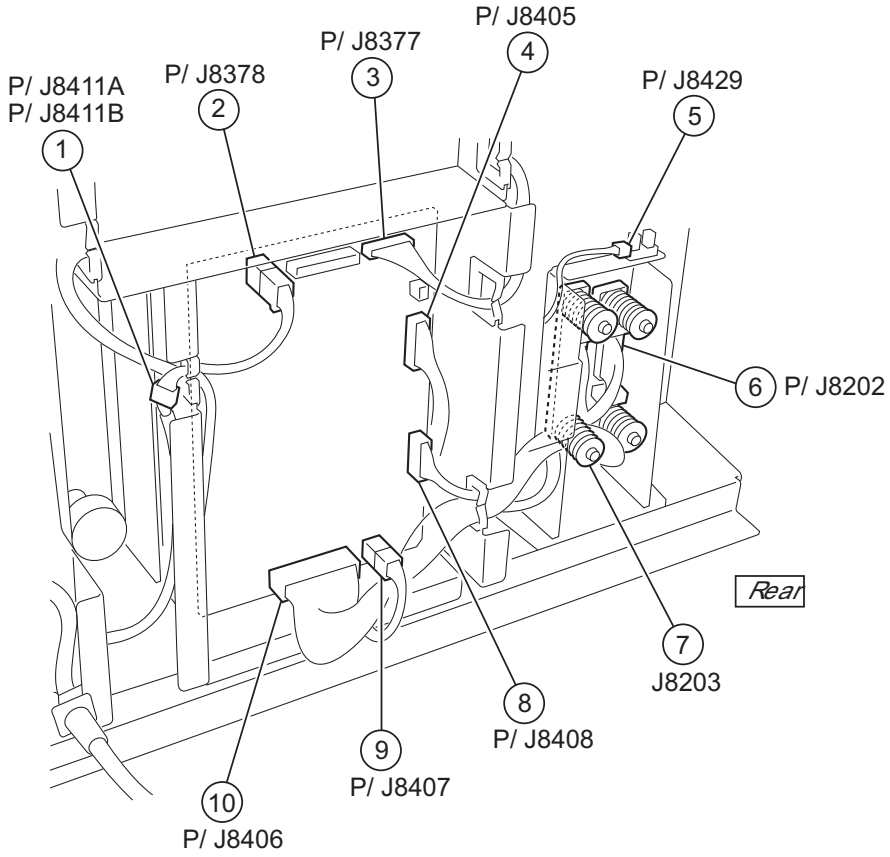
Plug/Jack	Callout	Plug/jack description	Connects to
P/J8176	5	Sensor (booklet front tamper HP)	Booklet controller card assembly
P/J8177	2	Sensor (booklet rear tamper HP)	Booklet controller card assembly
P/J8178	4	Sensor (booklet media entrance)	Booklet controller card assembly
P/J8179	12	Sensor (booklet knife folding)	Booklet controller card assembly
P/J8180	11	Sensor (booklet knife HP)	Booklet controller card assembly
P/J8185	6	Sensor (booklet end guide HP)	Booklet controller card assembly
P/J8186	10	Booklet paddle drive motor assembly	Booklet controller card assembly
P/J8187	7	Booklet end guide drive motor	Booklet controller card assembly
P/J8188	13	Booklet folding/exit motor	Booklet controller card assembly
P/J8190A	3	Booklet front tamper motor	Booklet controller card assembly
P/J8190B	3	Booklet front tamper motor	Booklet controller card assembly
P/J8191A	1	Booklet rear tamper motor	Booklet controller card assembly
P/J8191B	1	Booklet rear tamper motor	Booklet controller card assembly
P/J8196A	9	Sensor (booklet knife HP)	Booklet controller card assembly
P/J8196B	9	Sensor (booklet knife HP)	Booklet controller card assembly
P/J8197A	8	Sensor (booklet media entrance)	Booklet controller card assembly
P/J8197B	8	Sensor (booklet media entrance)	Booklet controller card assembly

Finisher—booklet maker 2



Plug/Jack	Callout	Plug/jack description	Connects to
P/J8175	5	Booklet folding/exit motor	Booklet controller card assembly
P/J8181A	4	Booklet fold solenoid	Booklet controller card assembly
P/J8181B	4	Booklet fold solenoid	Booklet controller card assembly
P/J8182	1	Sensor (booklet media exit)	Booklet controller card assembly
P/J8183	2	Sensor (booklet media entrance)	Booklet controller card assembly
P/J8189	6	Booklet stapler unit assembly	Booklet controller card assembly
P8201	3	Booklet stapler unit assembly	Booklet controller card assembly
J8201	9	Booklet stapler unit assembly	Booklet controller card assembly
P8202	7	Booklet controller card assembly	• Booklet fold solenoid • Sensor (booklet knife HP) • Sensor (booklet knife folding) • Booklet folding/exit motor • Sensor (booklet media exit) • Sensor (booklet media entrance) • Sensor (booklet rear tamper HP) • Sensor (booklet front tamper HP) • Sensor (booklet end guide HP)
P8203	8	Booklet controller card assembly	Booklet stapler unit assembly

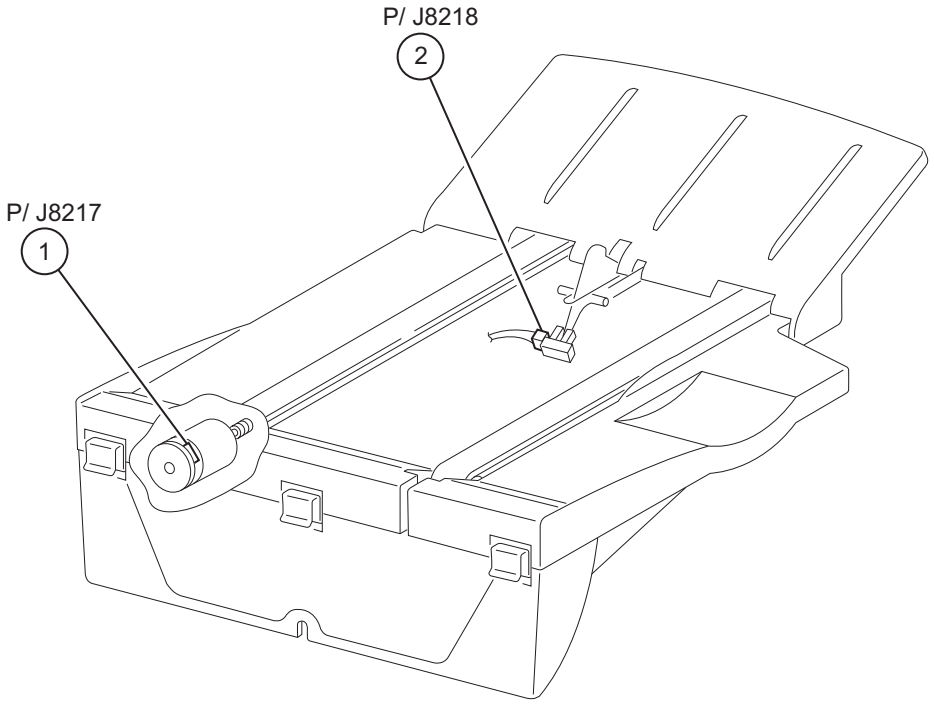
Finisher—controller card



Plug/Jack	Callout	Plug/jack description	Connects to
J8202	6	Booklet controller card assembly	• Booklet fold solenoid • Sensor (booklet knife HP) • Sensor (booklet knife folding) • Booklet folding/exit motor • Sensor (booklet media exit) • Sensor (booklet media entrance) • Sensor (booklet rear tamper HP) • Sensor (booklet front tamper HP) • Sensor (booklet end guide HP)
J8203	7	Booklet controller card assembly	Booklet stapler unit assembly
P/J8377	3	Booklet controller card assembly	Finisher controller PCBA
P/J8378	2	Booklet controller card assembly	Finisher controller PCBA

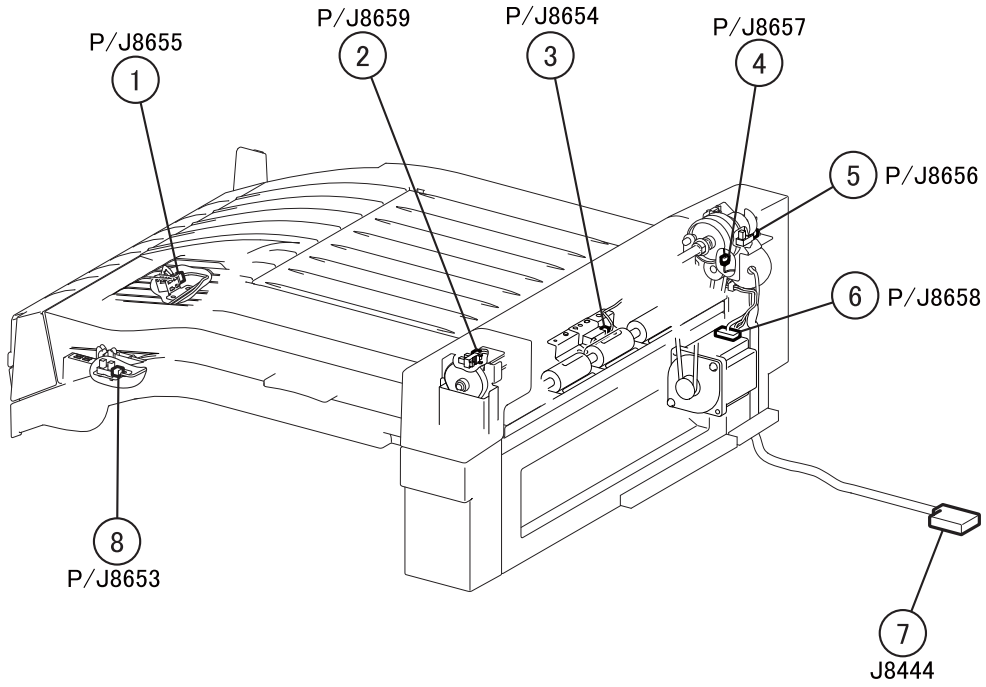
Plug/Jack	Callout	Plug/jack description	Connects to
P/J8405	4	Booklet controller card assembly	• Booklet fold solenoid • Sensor (booklet knife HP) • Sensor (booklet knife folding) • Sensor (booklet media exit) • Booklet unit interface contact • Sensor (booklet media exit) • Sensor (booklet media entrance) • Sensor (booklet rear tamper HP) • Sensor (booklet front tamper HP) • Sensor (booklet end guide HP)
P/J8406	10	Booklet controller card assembly	• Booklet folding/exit motor • Booklet rear tamper motor • Booklet front tamper motor • Booklet end guide drive motor • Booklet paddle drive motor assembly • Booklet stapler unit assembly
P/J8407	9	Booklet controller card assembly	• Booklet folding/exit motor • Booklet stapler unit assembly
P/J8408	8	Booklet controller card assembly	• Booklet output tray • Booklet diverter gate solenoid
P/J8411A	1	Booklet controller card assembly	Booklet output tray
P/J8411B	1	Booklet controller card assembly	Booklet output tray
P/J8429	5	Booklet unit interface contact	Booklet controller card assembly

Finisher—booklet output tray



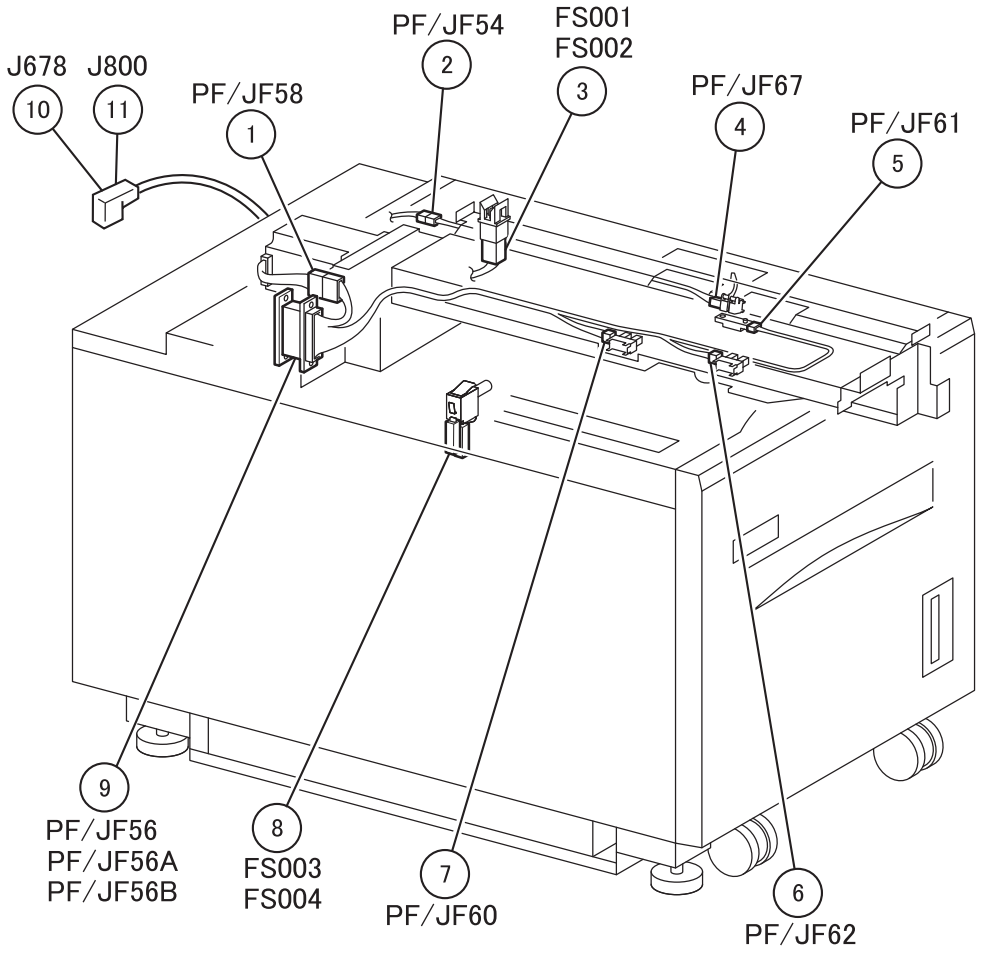
Plug/Jack	Callout	Plug/jack description	Connects to
P/J8217	1	Booklet output tray	Booklet controller card assembly
P/J8218	2	Booklet output tray	Booklet controller card assembly

Finisher—bridge



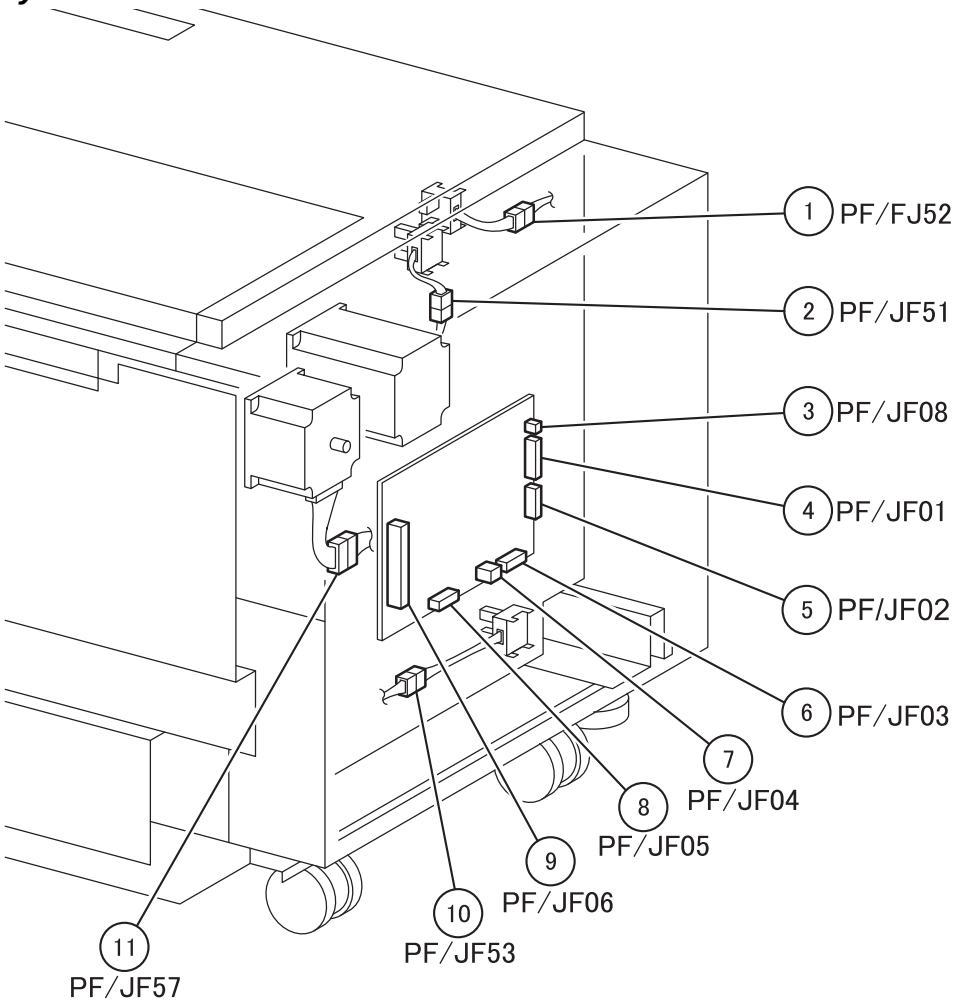
Plug/Jack	Callout	Plug/jack description	Connects to
J8444	7	Bridge PCBA	• Bridge drive motor • Sensor (bridge media entrance) • Bridge decurler cam clutch • Sensor (bridge top door interlock) • Sensor (decurler cam HP)
P/J8653	8	Sensor (bridge top door interlock)	Bridge PCBA

High capacity feeder 1



Plug/Jack	Callout	Plug/jack description	Connects to
J678	10	Lower engine PCBA	HCF controller card PCBA
J800	11		
PF/JF54	2	Sensor (tray 5 feed out)	HCF controller card PCBA
PF/JF56	9	HCF feed lift motor	HCF controller card PCBA
PF/JF56A	9	Sensor (tray 5 media out)	HCF controller card PCBA
PF/JF56B	9	HCF controller card PCBA	• Sensor (tray 5 media level) • Sensor (tray 5 pre-feed)
PF/JF58	1	HCF feed lift motor	HCF controller card PCBA
PF/JF60	7	Sensor (tray 5 media out)	HCF controller card PCBA
PF/JF61	5	Sensor (tray 5 pre-feed)	HCF controller card PCBA
PF/JF62	6	Sensor (tray 5 media level)	HCF controller card PCBA
PF/JF67	4	Sensor (tray 5 feed out)	HCF controller card PCBA
FS001	3	Sensor (HCF top door interlock)	HCF controller card PCBA
FS002	3	Sensor (HCF top door interlock)	HCF controller card PCBA
FS003	8	Sensor (HCF unit docking interlock)	HCF controller card PCBA
FS004	8	Sensor (HCF unit docking interlock)	HCF controller card PCBA

High capacity feeder 2



Plug/Jack	Callout	Plug/jack description	Connects to
PF/JF01	4	HCF controller card PCBA	• Sensor (HCF media size) • Sensor (tray 5 feed out)
PF/JF02	5	HCF controller card PCBA	• Sensor (tray 5 media out) • Sensor (tray 5 pre-feed) • Sensor (tray 5 media level)
PF/JF03	6	HCF controller card PCBA	• Lower engine PCBA • Upper engine PCBA
PF/JF04	7	HCF controller card PCBA	Base printer
PF/JF05	8	HCF controller card PCBA	Sensor (HCF top door interlock)
PF/JF06	9	HCF controller card PCBA	• HCF feed lift motor • HCF transport motor
PF/JF08	3	HCF controller card PCBA	Sensor (HCF unit docking interlock)
PF/JF51	2	HCF controller card PCBA	Sensor (HCF media size)
PF/FJ52	1	HCF controller card PCBA	Sensor (HCF media size)
PF/JF53	10	HCF controller card PCBA	Sensor (HCF media tray set)
PF/JF57	11	HCF controller card PCBA	HCF transport motor

6. Preventive maintenance

This chapter describes procedures for printer preventive maintenance. Follow these recommendations to help prevent problems and maintain optimum performance.

Inspection guide

The purpose of this inspection guide is to aid you in identifying the intervals, based on page count, at which parts must be inspected (for visible physical damage), cleaned, or replaced.

As you service the machine, check the following:

- Damaged, missing, or altered parts, especially in the area of the On/Off switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top cover and the power supply cover
- Possible safety exposure from any non-Lexmark attachments

Lexmark X950, X952, X954	**EVERY SERVICE CALL**	**EVERY 160K**	**EVERY 320K**	**EVERY 480K**	**NOTES**
MEDIA TRAY—ALL					
Media side guides	Inspect	Inspect	Inspect	Inspect	Check for correct positioning
Media end guide	Inspect	Inspect	Inspect	Inspect	Check for correct positioning
Separation pad	Inspect	Clean	Clean	Clean	Damp cloth
Tray lift gear assembly		Inspect	Inspect	Inspect	
MEDIA FEEDERS—ALL					
Feed roller	Inspect	Replace	Replace	Replace	Verify page count before replacing
Pick roller	Inspect	Replace	Replace	Replace	Verify page count before replacing
Separation roller	Inspect	Replace	Replace	Replace	Verify page count before replacing
MPF feed rollers	Inspect	Inspect	Inspect	Clean	Water or alcohol
Media transport roll assembly		Clean	Clean	Clean	Water or alcohol
Sensor (registration)		Clean	Clean	Clean	Brush or blower brush
Sensor (tray 1 feed-out)		Clean	Clean	Clean	Brush or blower brush
Sensor (tray 2 feed-out)		Clean	Clean	Clean	Brush or blower brush
Sensor (tray 3 feed-out)		Clean	Clean	Clean	Brush or blower brush
Sensor (tray 4 feed-out)		Clean	Clean	Clean	Brush or blower brush
PRINTHEAD					
Printhead slit glass (4)	Clean	Clean	Clean	Clean	Printhead cleaning tool

Lexmark X950, X952, X954	EVERY SERVICE CALL	EVERY 160K	EVERY 320K	EVERY 480K	NOTES
DEVELOPER UNITS Transfer					
Developer housing (4)				Replace	
C developer carrier				Replace	
M developer carrier				Replace	
Y developer carrier				Replace	
K developer carrier				Replace	
TRANSFER ROLL					
2nd transfer roll	Inspect	Inspect	Replace	Inspect	
TRANSFER BELT UNIT					
Transfer belt	Inspect	Inspect	Inspect	Replace	
Transfer belt cleaning assembly	Inspect	Replace	Replace	Replace	
FUSER UNIT					
Fuser unit	Inspect	Inspect	Replace	Inspect	
Sensor (fuser exit)		Clean	Clean	Clean	Blower brush
DUPLEX					
Duplex media transport roll (2)		Inspect	Inspect	Clean	Water or alcohol
FLATBED SCANNER					
Mirrors (3)	Inspect	Clean	Clean	Clean	Glass cleaner
Lens	Inspect	Clean	Clean	Clean	Glass cleaner
Small platen glass	Clean	Clean	Clean	Clean	Glass cleaner
Large platen glass	Clean	Clean	Clean	Clean	Glass cleaner

Lexmark X950, X952, X954	EVERY SERVICE CALL	EVERY 200K	NOTES
ADF			
Feed pick roller assembly	Inspect	Inspect	
ADF feed roller	Clean	Replace	Water or alcohol
ADF pick roller	Clean	Replace	Water or alcohol
ADF separation roller guide	Inspect	Replace	
ADF registration roller	Inspect	Replace	Water or alcohol

Lexmark X950, X952, X954	EVERY SERVICE CALL	EVERY 200K	NOTES
ADF feedout roller	Inspect	Replace	Water or alcohol
ADF exit roller assembly		Clean	Water or alcohol
ADF transport roll assembly		Clean	Water or alcohol

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. Use IBM no. 10 oil, P/N 1280443 (Approved equivalents: Mobil DTE27, Shell Tellus 100, Fuchs Renolin MR30), IBM no. 23 grease (Approved equivalent Shell Darina 1), and grease, P/N 99A0394 to lubricate appropriate areas. Use Nyogel type 774 to lubricate the Fuser Drive Assembly and Nyogel 744 to lubricate the ITU and Cartridge Drive assemblies.

Scheduled maintenance

The LCD displays **80 scheduled maintenance (xxxK)** when it reaches 160K, 320K and 480K page counts. It is necessary to replace the appropriate maintenance kit at this interval to maintain the print quality and reliability of the printer.

The LCD displays **80 scheduled maintenance (80K)** when multiple jams occur from a specific media feeder after the counter exceeds 80K. It is necessary to replace the media feed rollers at this interval to maintain the reliability of the printer. The replacement media feed roller kit can be located in the media tray 1 beneath the plastic cover, as shown in the following image.

The parts are available as a maintenance kit with the following part numbers:

Kit	Contents
40X7540—160K Maintenance Kit	• Transfer belt cleaner • 2nd transfer roller • Suction filter • Media feed roller kit (12)
40X7550—320K Maintenance Kit (110V)	• Fuser (110V) • Transfer belt cleaner • 2nd transfer roller • Suction filter • Media feed roller kit (12)
40X7568—320K Maintenance Kit (100V)	• Fuser (100V) • Transfer belt cleaner • 2nd transfer roller • Suction filter • Media feed roller kit (12)
40X7569—320K Maintenance Kit (220V)	• Fuser (220V) • Transfer belt cleaner • 2nd transfer roller • Suction filter • Media feed roller kit (12)

Kit	Contents
40X7560—480K Maintenance Kit	• Transfer belt • Transfer belt cleaner • 2nd transfer roller • Suction filter • Media feed roller kit (12) • Empty developer housing (4) • C developer carrier • M developer carrier • Y developer carrier • K developer carrier

After replacing the kit, the maintenance count must be reset to zero to clear the “80 scheduled maintenance” message.

The ADF requires scheduled maintenance at each 200K page-count interval. It is necessary to replace the ADF feed roller, the ADF pick roller, and the ADF separation roller guide at this interval to maintain ADF media feed reliability. The parts are available as a maintenance kit with the following part number:

40X7530—200K ADF Maintenance Kit (MFP only)

After replacing the kit, the maintenance count must be reset to zero to clear the “80 scheduled maintenance” message.

To reset the maintenance count

1. Turn off the printer.
2. Enter the Configuration Menu.
   2.1 Press and hold the **2** and **6** buttons simultaneously.
   2.2 Turn on the printer.
   2.3 Release the buttons after 10 seconds. The Configuration Menu appears on the LCD.
3. Touch **Reset Maintenance Counter** from the Configuration Menu.
4. From the options displayed, select the maintenance kit to reset.
5. Touch **Yes** to reset the maintenance counter value. Touch **No** or **Back** to return to the previous menu.

The maintenance count resets to zero, and the LCD returns to the Configuration Menu.

When performing the 160K, 320K, or 480K scheduled maintenance procedure, the following areas should be cleaned of media dust and toner contamination:

- Media trays
- PC cartridge area
- Developer housings area (480K)
- Transfer roll area
- Duplex area
- Standard bin
- Bridge unit area (if equipped)
- Finisher media bins (if equipped)

Cleaning the printer

Cleaning the exterior of the printer

1. Make sure that the printer is turned off and unplugged from the electrical outlet.

CAUTION—SHOCK HAZARD:

To avoid the risk of electric shock when cleaning the exterior of the printer, unplug the power cord from the wall outlet and disconnect all cables to the printer before proceeding.

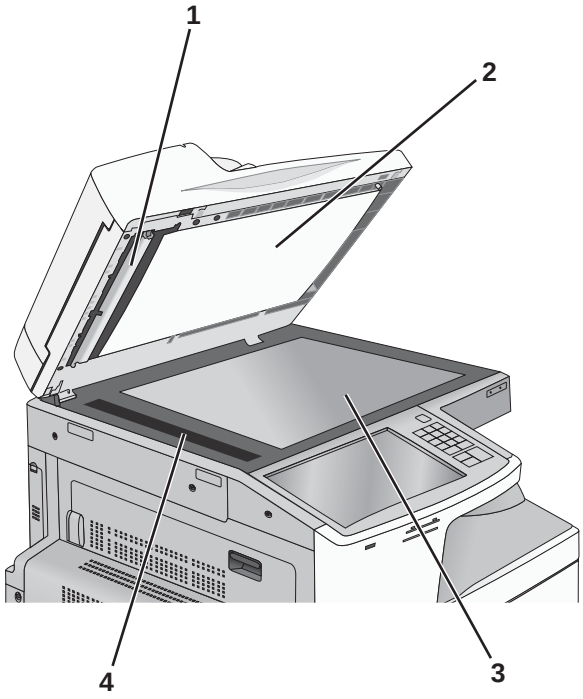
2. Remove paper from the standard exit bin.
3. Dampen a clean, lint-free cloth with water.
   Warning: Do not use household cleaners or detergents, as they may damage the finish of the printer.
4. Wipe only the outside of the printer, making sure to include the standard exit bin.
   Warning: Do not use household cleaners or detergents, as they may damage the finish of the printer.
5. Make sure the paper support and standard exit bin are dry before beginning a new print job.

Cleaning the scanner glass

Clean the scanner glass if print quality problems such as streaks on copied or scanned images are encountered.

1. Slightly dampen a soft, lint-free cloth or paper towel with water.
2. Open the scanner cover.

3. Wipe the areas shown below and let them dry.



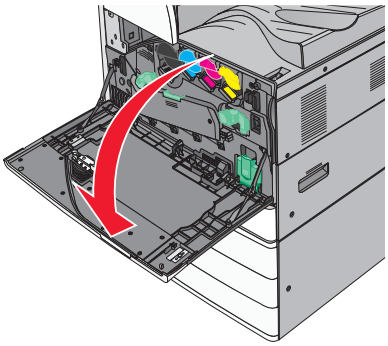
Callout	Description
1	White underside of the ADF cover
2	White underside of the scanner cover
3	Scanner glass
4	ADF glass

4. Close the scanner cover.

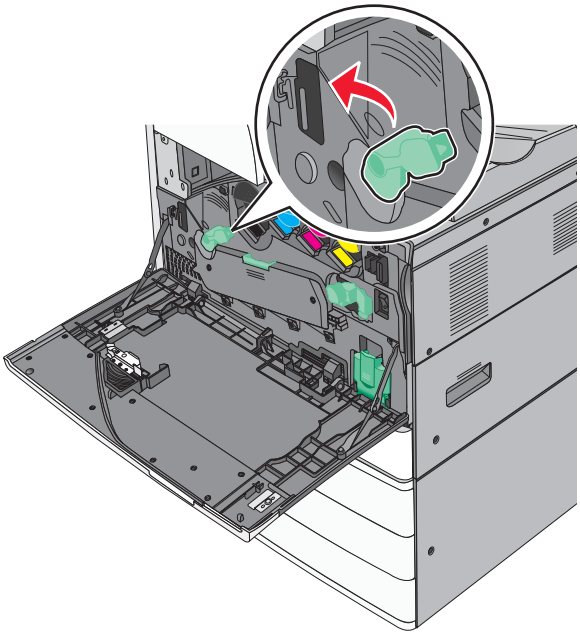
Cleaning the printhead lenses

Clean the printhead lenses when you encounter print quality problems.

1. Open the front door.

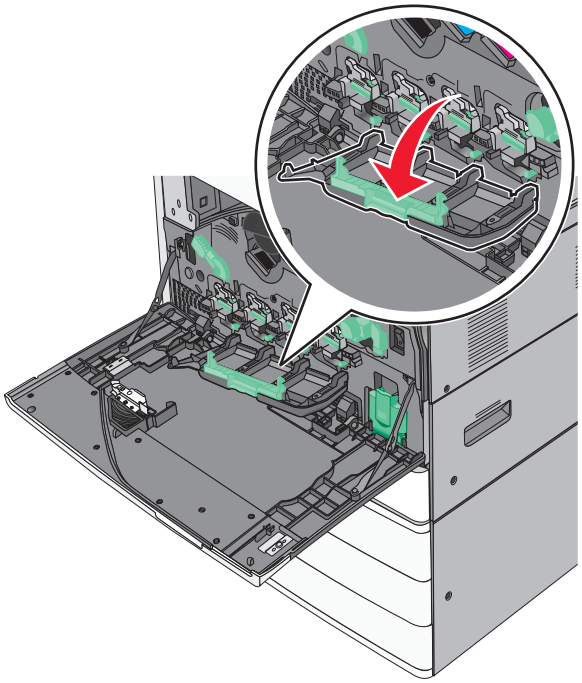


2. Slide the release lever to the left to unlock the cover.

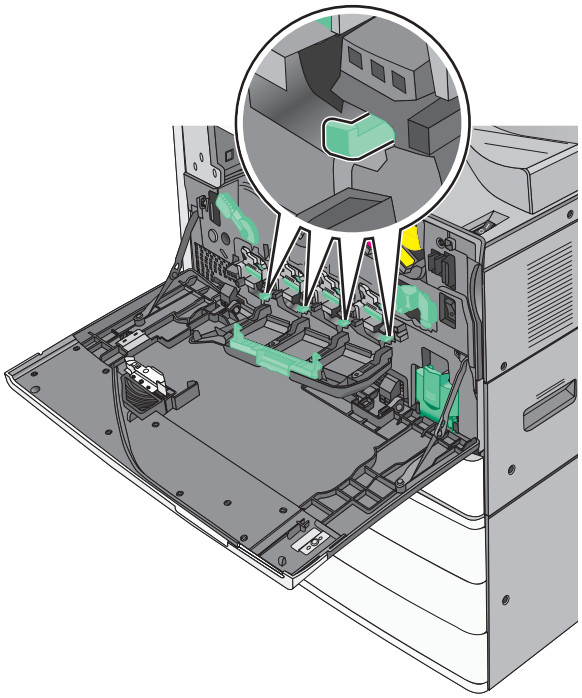


3. Open the cover.

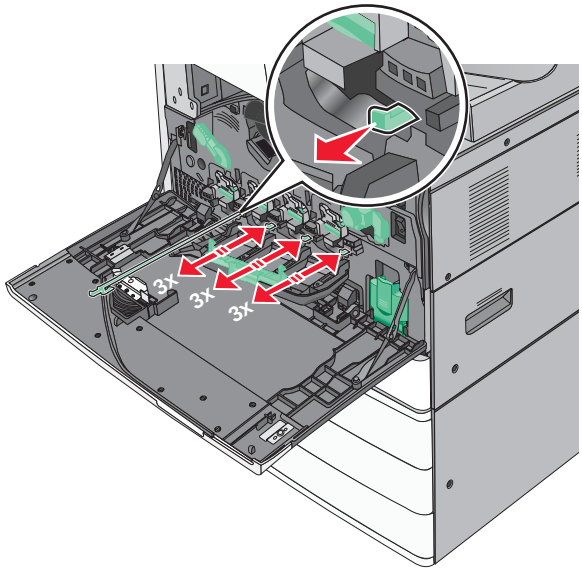
Warning: To avoid overexposing the photoconductor unit, do not leave the cover open for more than 10 minutes.



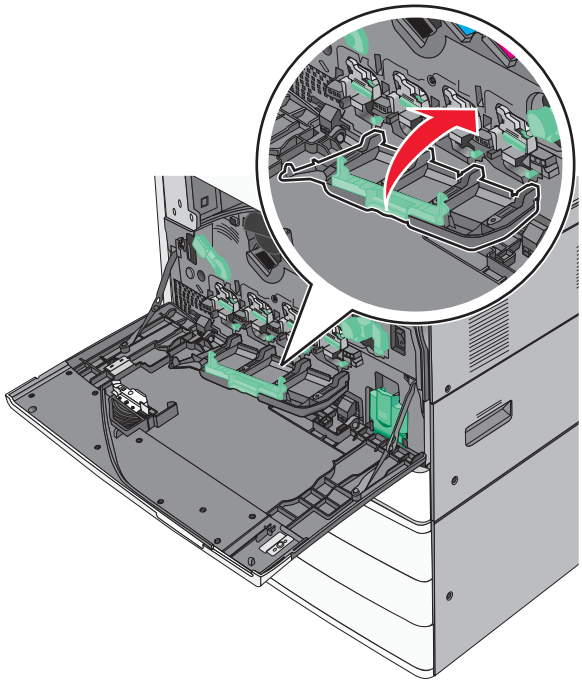
4. Locate the printhead wipers.



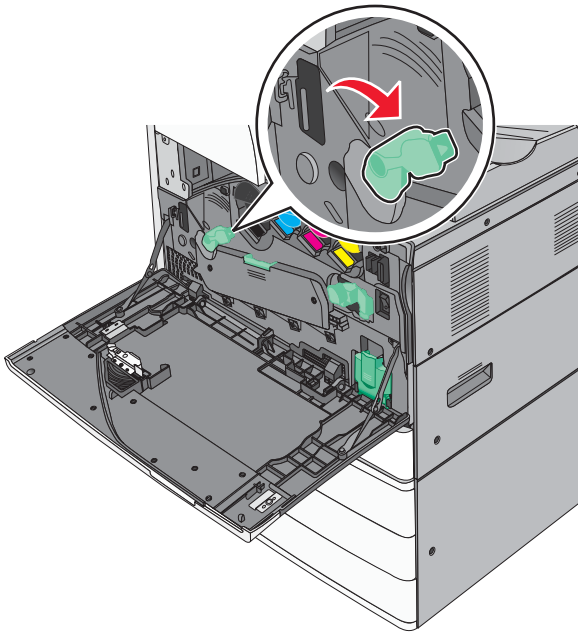
5. Gently pull the printhead wipers out until it stops, and then slowly slide them back into place.



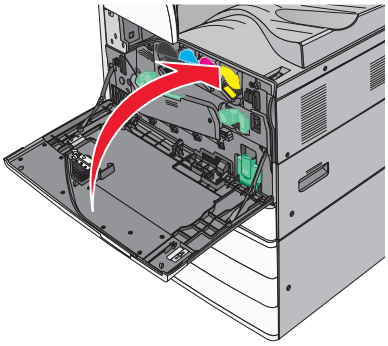
6. Close the cover.



7. Slide the release lever to the right to lock the cover.



8. Close the front door.



7. Parts catalog

How to use this parts catalog

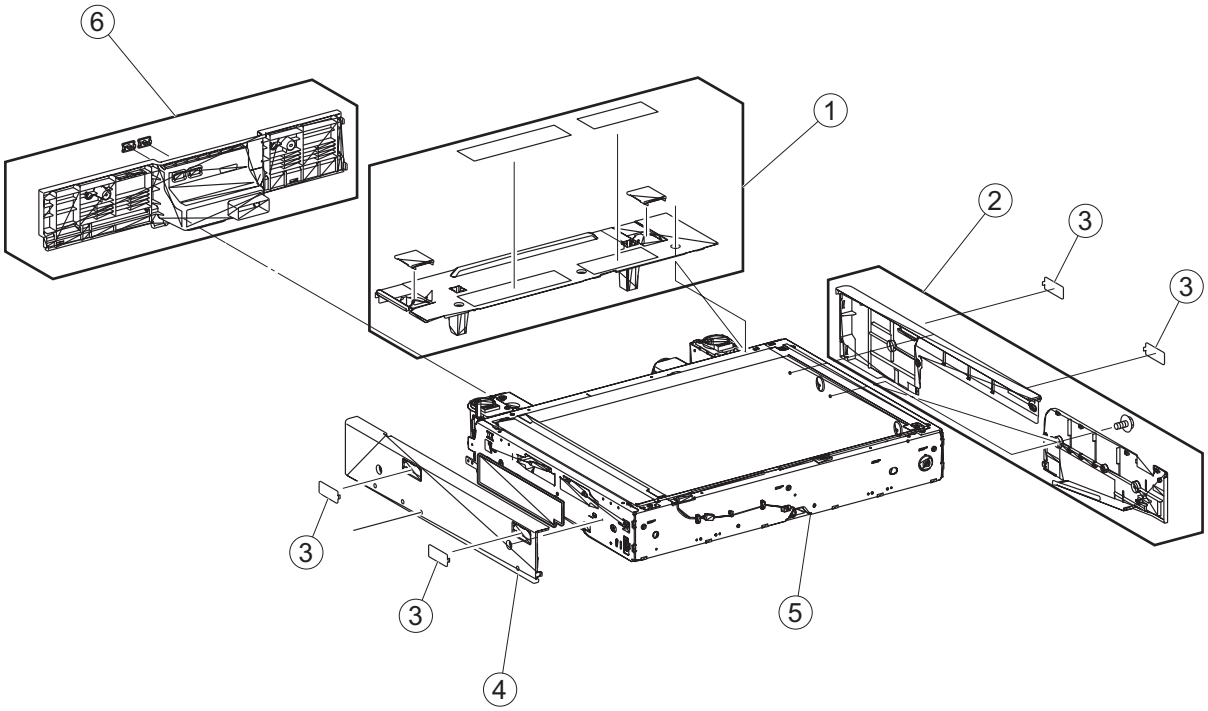
The following legend is used in the parts catalog:

Asm-index	Part number	Units/mach - OR - Units/option	Units/ FRU	Description

- **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**: Refers to the unique number that identifies the 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.
- **NS**: (Not shown) in the Asm-Index column indicates that the part is procurable but is not pictured in the illustration.
- **PP**: (Parts Packet) in the parts description column indicates the part is contained in a parts packet.
- Model information used in the parts catalog:

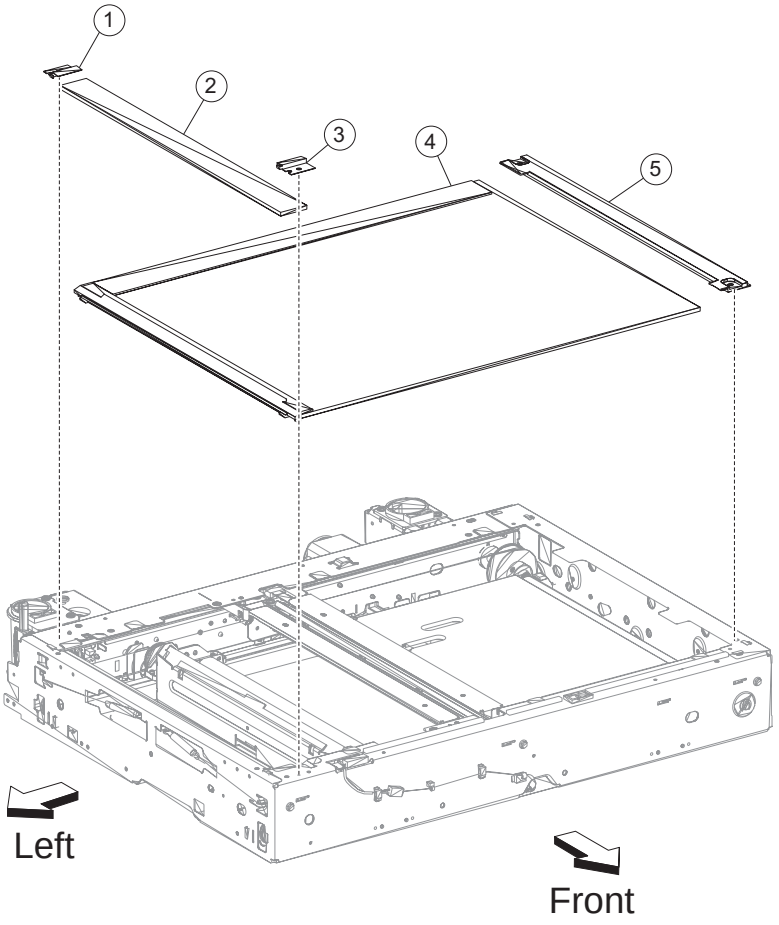
Model name	Machine type and model	Description
Lexmark X950de	7558-036	Network/Duplex A3 Color printhead LED MFP, Duplex Scanner, w/Fax
Lexmark X952dte	7558-236	Network/Duplex A3 Color printhead LED MFP, Duplex Scanner, w/Fax, Extra Trays
Lexmark X954dhe	7558-436	Network/Duplex A3 Color printhead LED MFP, Duplex Scanner, w/Fax, w/Hard drive

Assembly 1: Scanner covers



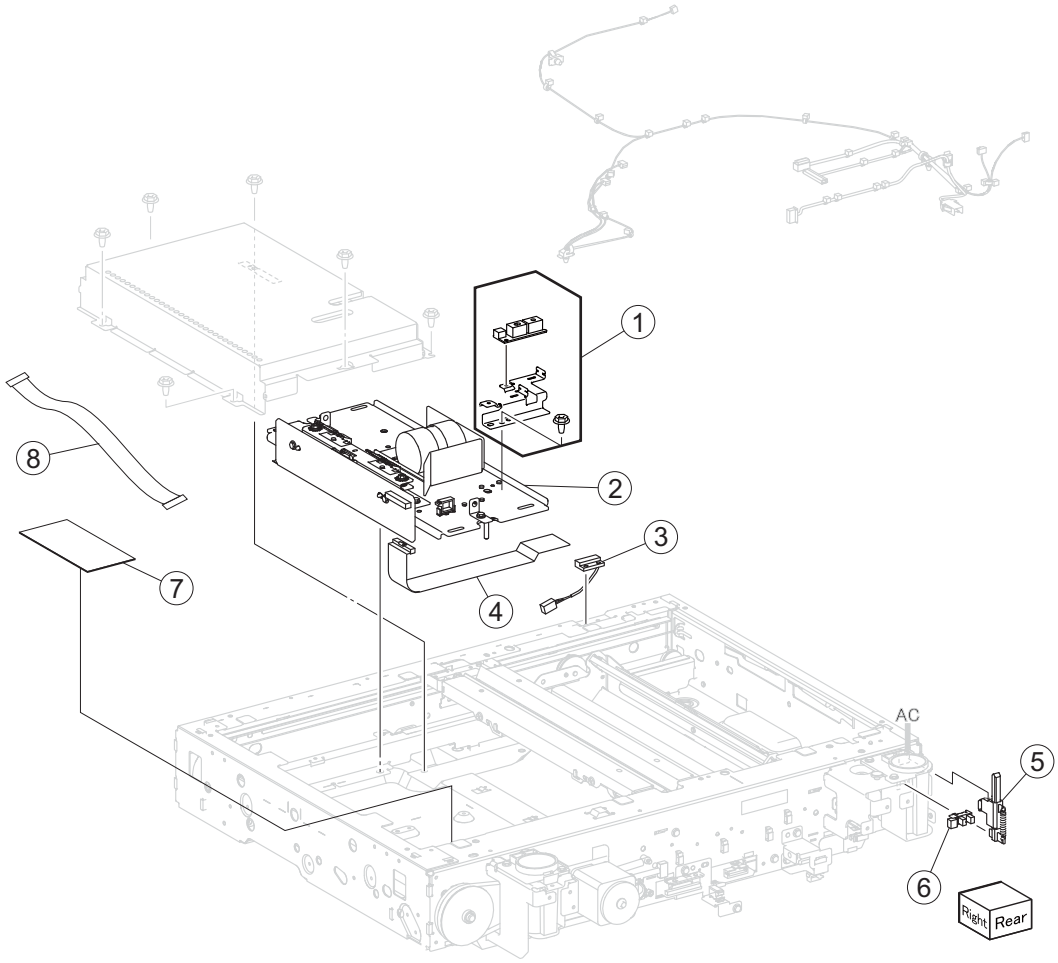
Asm-index	Part number	Units/ mach	Units/ FRU	Description
1-1	40X6551	1	1	Scanner top cover
2	40X6550	1	1	Scanner right cover
3	40X6553	4	1	Scanner blind cover
4	40X6092	1	1	Scanner left cover
5	40X6554	1	1	Flatbed scanner assembly
6	40X6552	1	1	Scanner rear cover
NS	40X7461			Rubber screw caps

Assembly 2: Platen glass



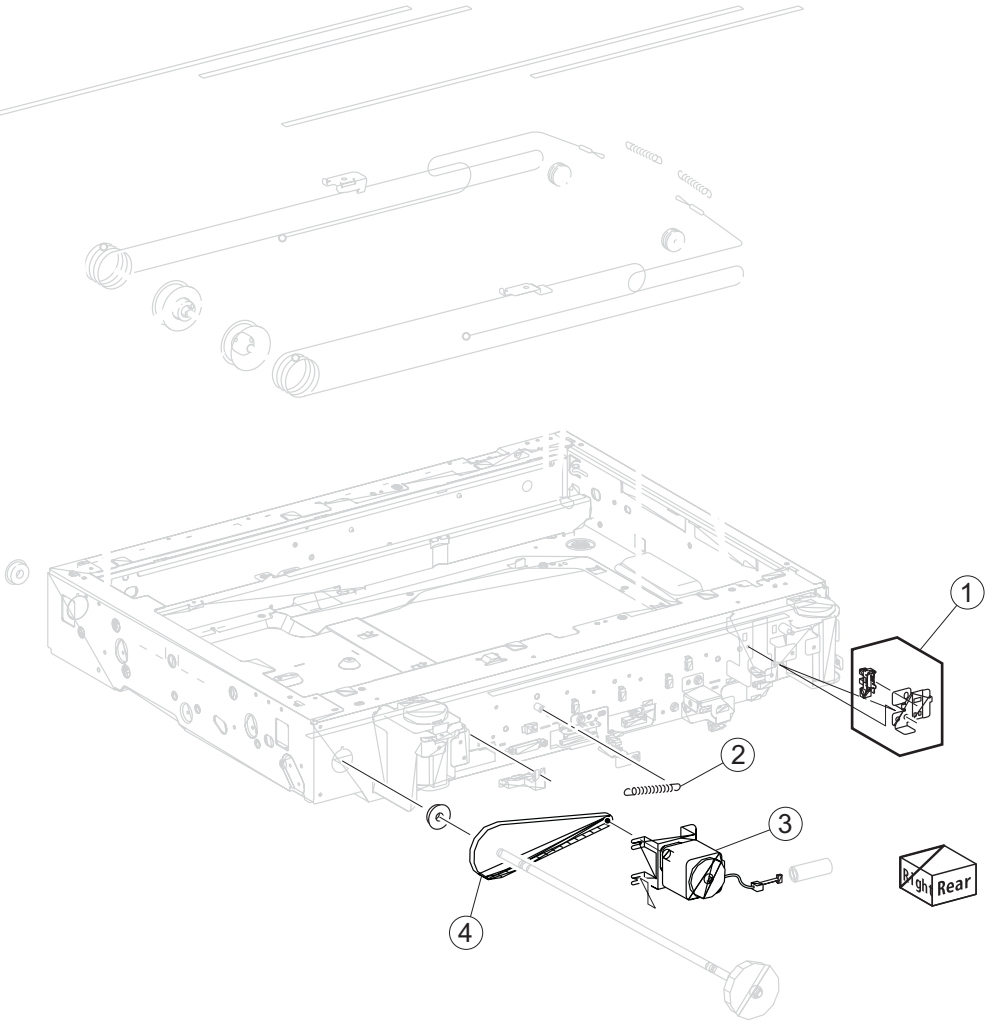
Asm-index	Part number	Units/ mach	Units/ FRU	Description
2-1	40X6711	1	1	Small platen rear retainer
2	40X2214	1	1	Small platen glass
3	40X6727	1	1	Small platen front retainer
4	40X6577	1	1	Large platen glass
5	40X6592	1	1	Large platen retainer

Assembly 3: CCD assembly



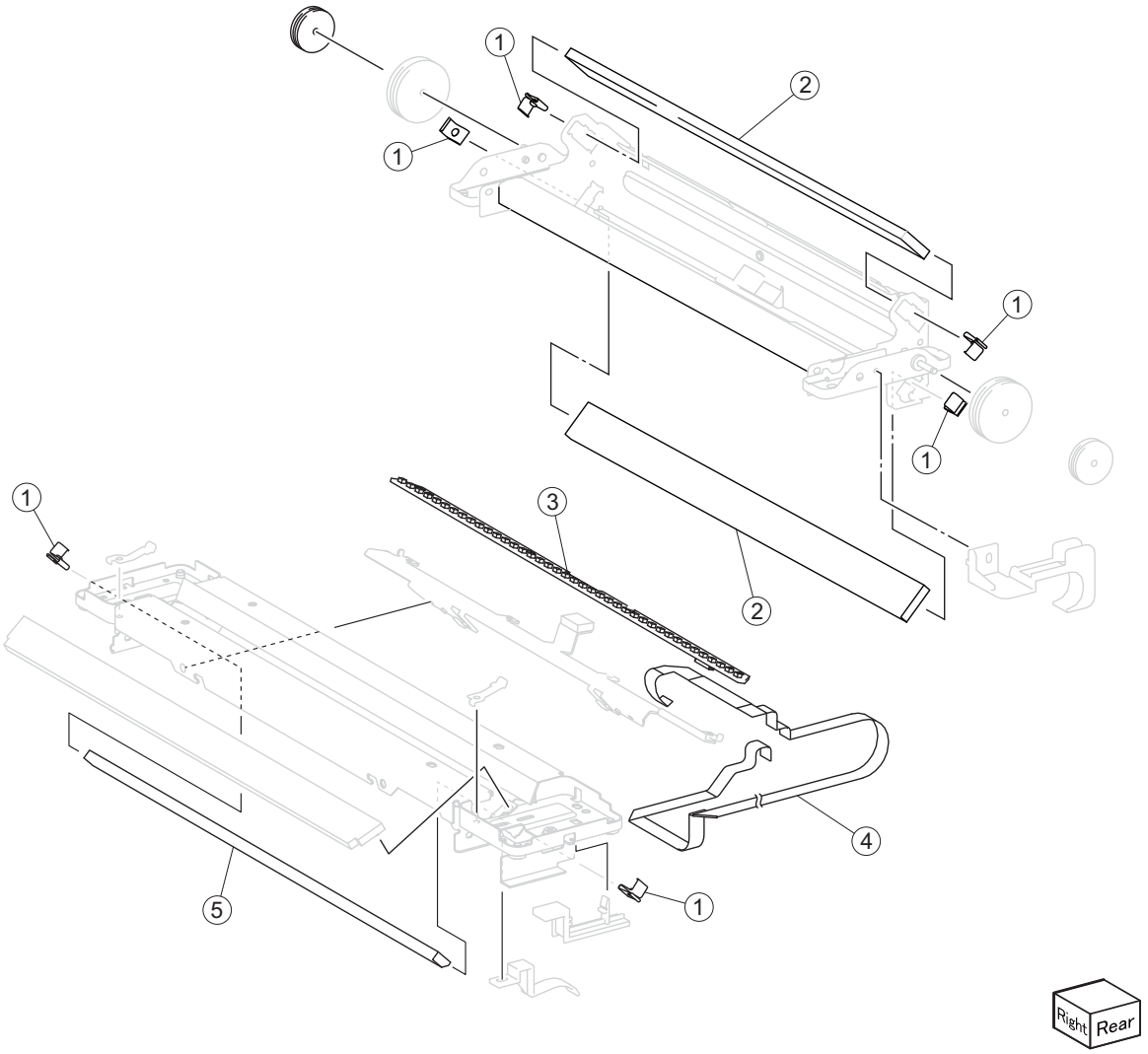
Asm-index	Part number	Units/ mach	Units/ FRU	Description
3-1	40X6555	2	1	Sensor (FB platen length) assembly
2	40X6556	1	1	FB CCD sensor assembly
3	40X6768	1	1	Sensor (ADF closed interlock)
4	40X6557	1	1	Rear scanner ribbon cable
5	40X6558	1	1	ADF angle actuator
6	40X2223	1	1	Sensor (ADF angle)
7	40X6564	1	1	Authentication PCBA
8	40X7531	1	1	Front scanner ribbon cable

Assembly 4: Carriage drive



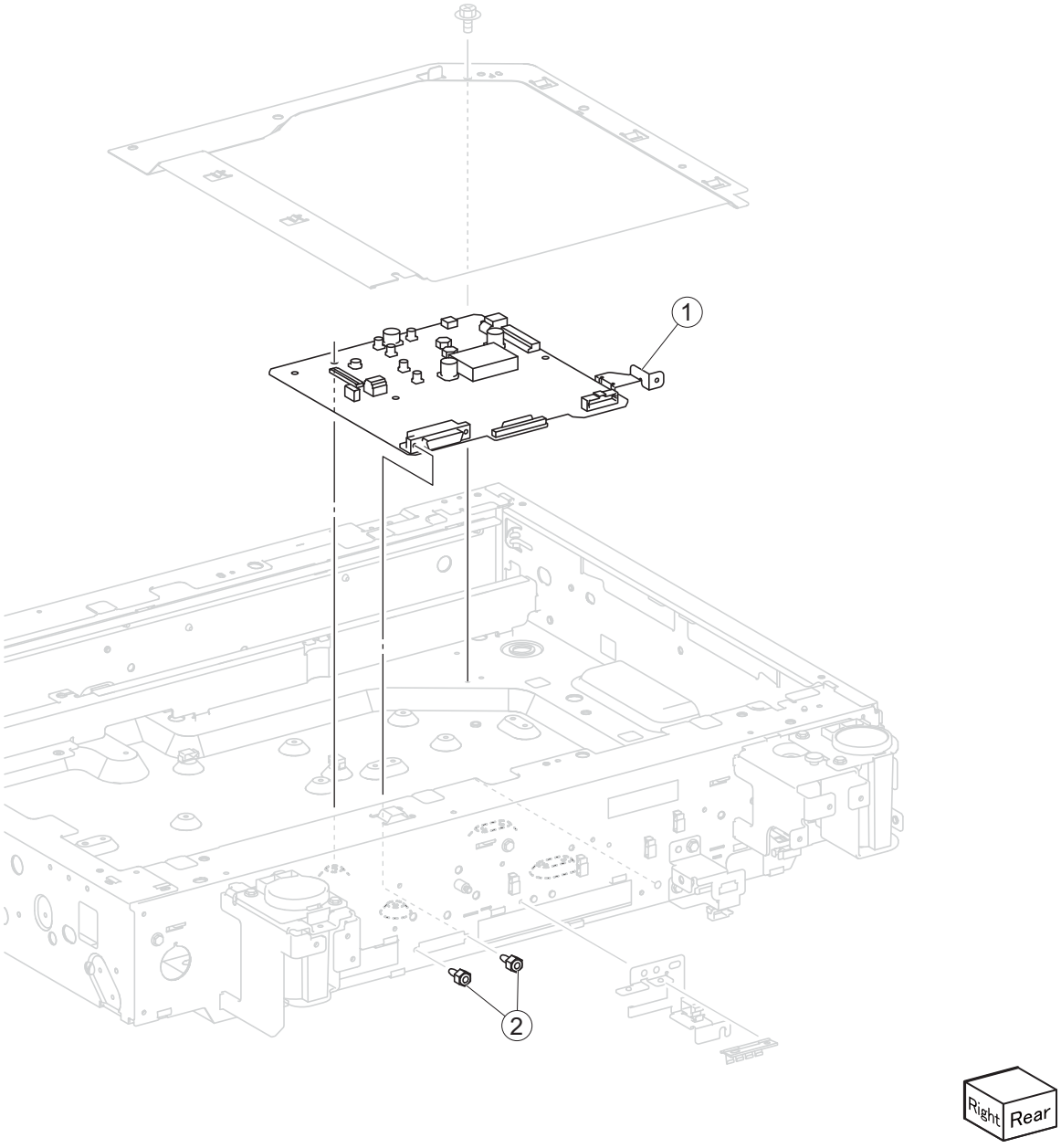
Asm-index	Part number	Units/ mach	Units/ FRU	Description
4-1	40X6560	1	1	Sensor (FB scanner HP)
2	40X6559	1	1	Spring
3	40X3868	1	1	Scanner carriage motor
4	40X2226	1	1	Scanner drive belt

Assembly 5: Scanner optics



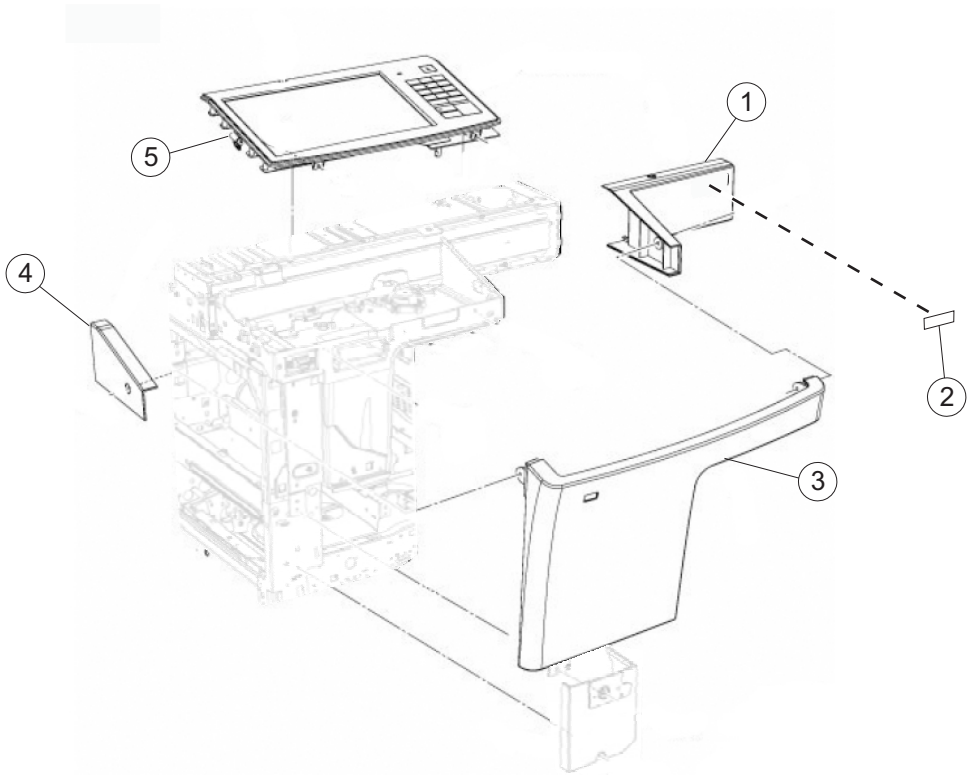
Asm-index	Part number	Units/ mach	Units/ FRU	Description
5-1	40X6561	6	1	Mirror retainer clip
2	40X2232	2	1	Number 2/3 mirror
3	40X6563	1	1	LED exposure bar
4	40X6562	1	1	Exposure lamp flat cable
5	40X2234	1	1	Number 1 mirror

Assembly 6: Scanner controller board



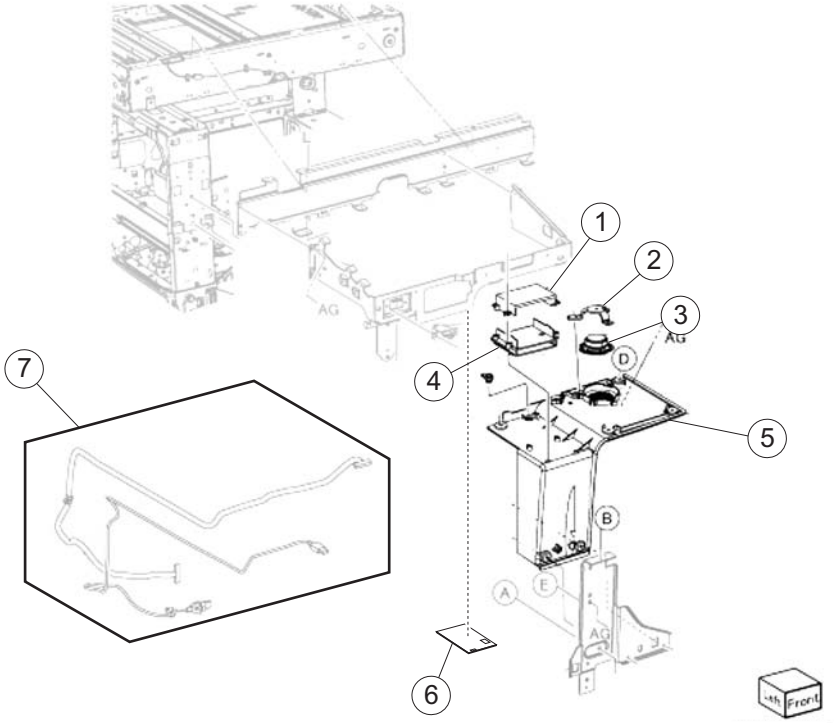
Asm-index	Part number	Units/ mach	Units/ FRU	Description
6-1	40X7559	1	1	Scanner controller PCBA
2	40X2217	2	1	Screw

Assembly 7: Operator panel covers (MFP) 1



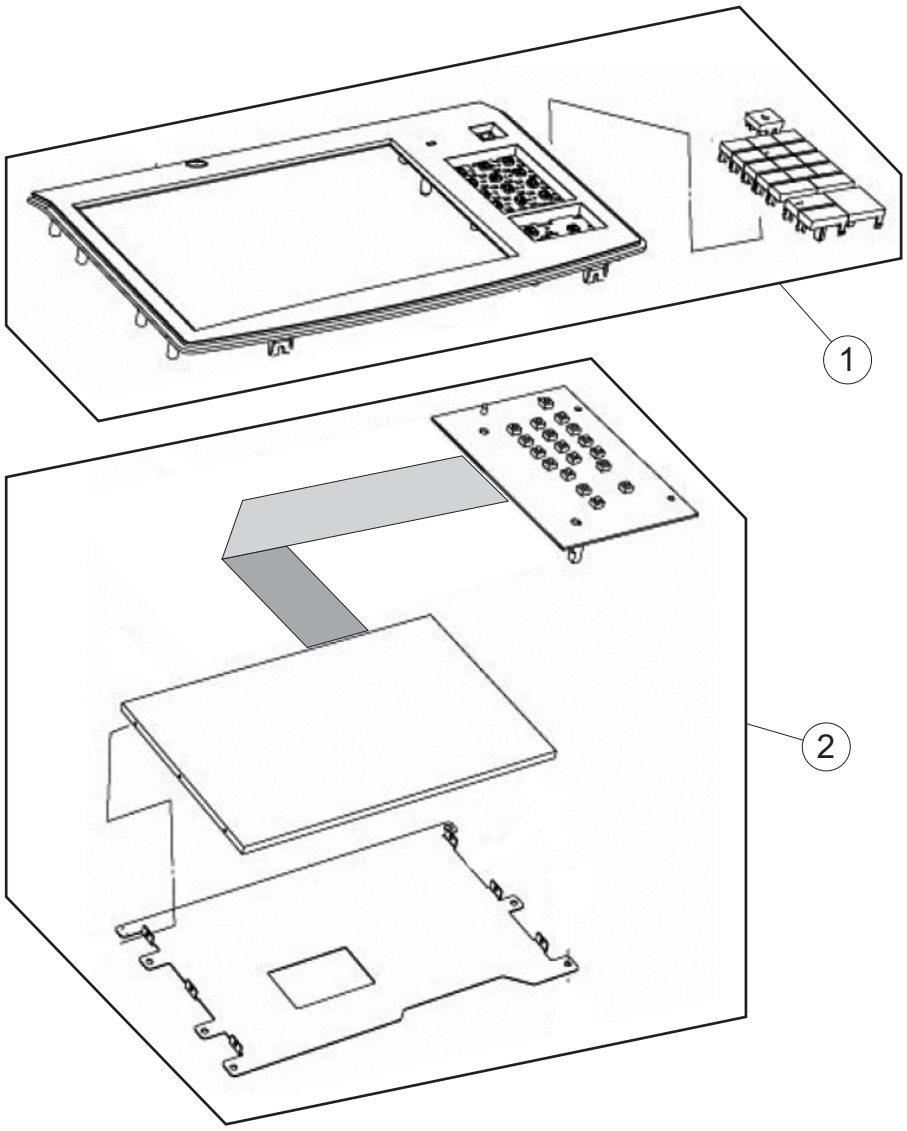
Asm-index	Part number	Units/ mach	Units/ FRU	Description
7-1	40X6989	1	1	Operator panel right cover (MFP)
2	40X6985	1	1	X950 model bezel
2	40X7900	1	1	X952 model bezel
2	40X7064	1	1	X954 model bezel
3	40X6987	1	1	Operator panel front cover (MFP)
3	40X7458	1	1	Operator panel front cover with slot (MFP)
4	40X6988	1	1	Operator panel left cover (MFP)
5	40X6986	1	1	Operator panel (MFP)

Assembly 8: Operator panel covers (MFP) 2



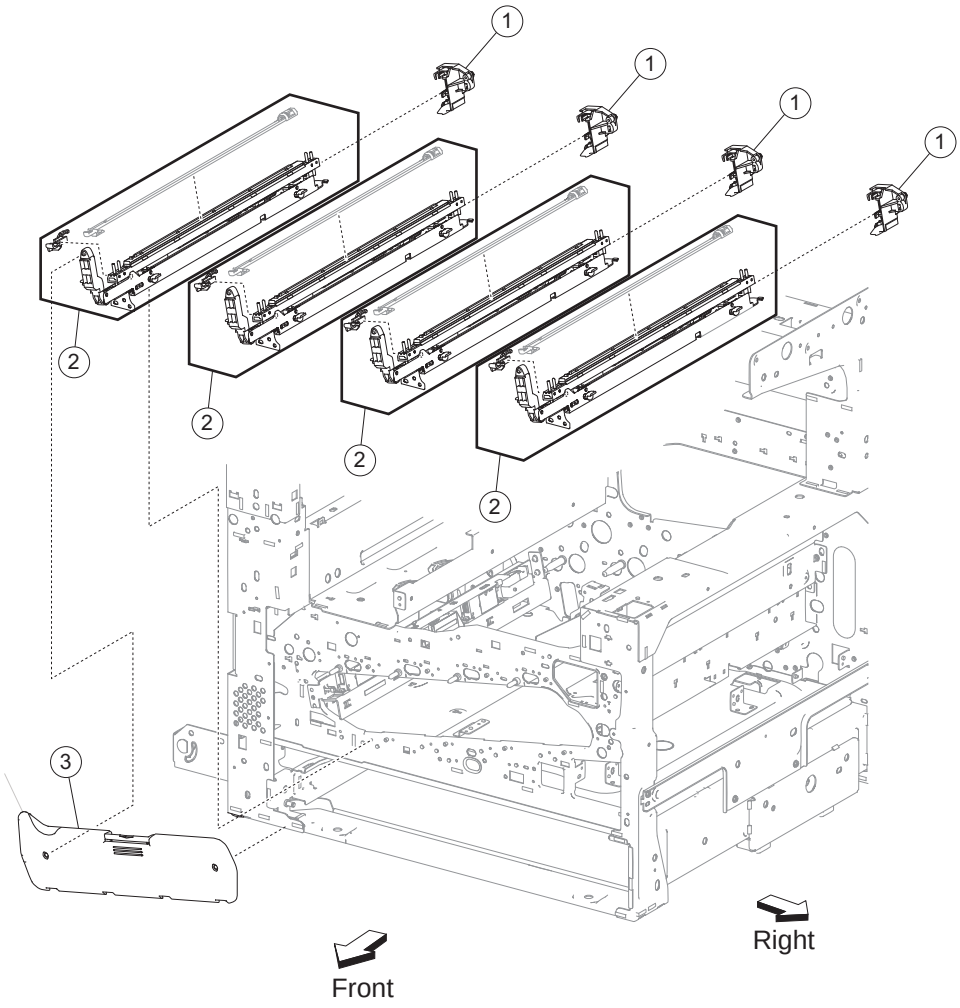
Asm-index	Part number	Units/ mach	Units/ FRU	Description
8-1	40X7099	1	1	Smart card cover (MFP)
2	40X7463	1	1	Speaker holder
3	40X6993	1	1	Operator panel speaker
4	40X7098	1	1	Smart card housing (MFP)
5	40X7097	1	1	Operator panel housing (MFP)
6	40X4602	1	1	Card reader assembly (3121 contact)
6	40X4603	1	1	Card reader assembly (5121 contact/RFID)
6	40X4604	1	1	Card reader assembly (5125 contact/HID)
7	40X7331	1	5	MFP operator panel cable kit includes: • Cable (front USB to operator panel PCBA) • Cable (RIP PCBA to operator panel PCBA) • Cable (RIP PCBA [USB] to operator panel PCBA) • Cable (card reader to operator panel PCBA) • Cable (touch screen to operator panel PCBA)

Assembly 9: Operator panel (MFP)



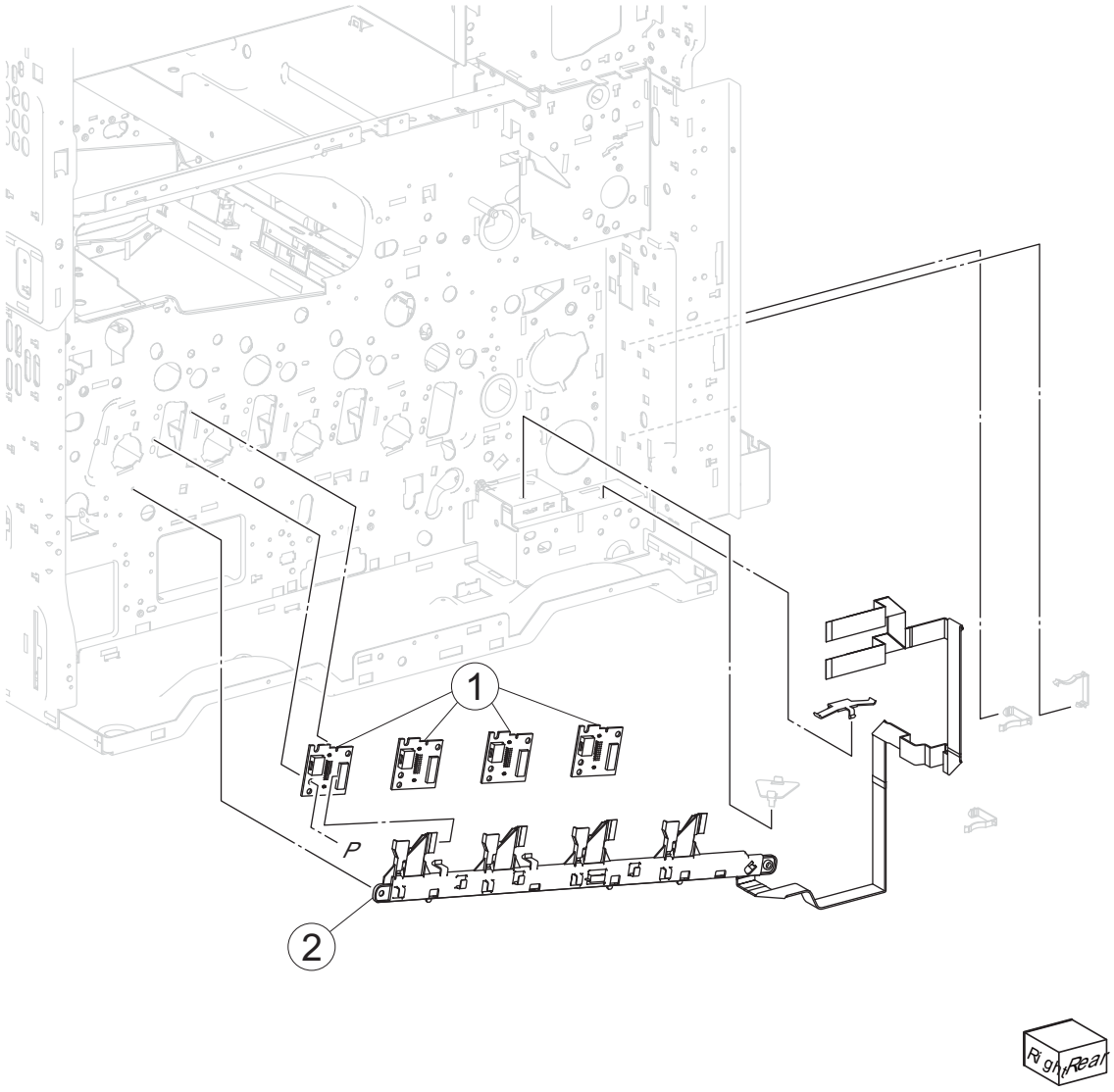
Asm-index	Part number	Units/ mach	Units/ FRU	Description
9-1	40X6999	1	1	Operator panel top cover (MFP)
2	40X9241	1	1	Control panel board and display kit

Assembly 10: Printhead 1



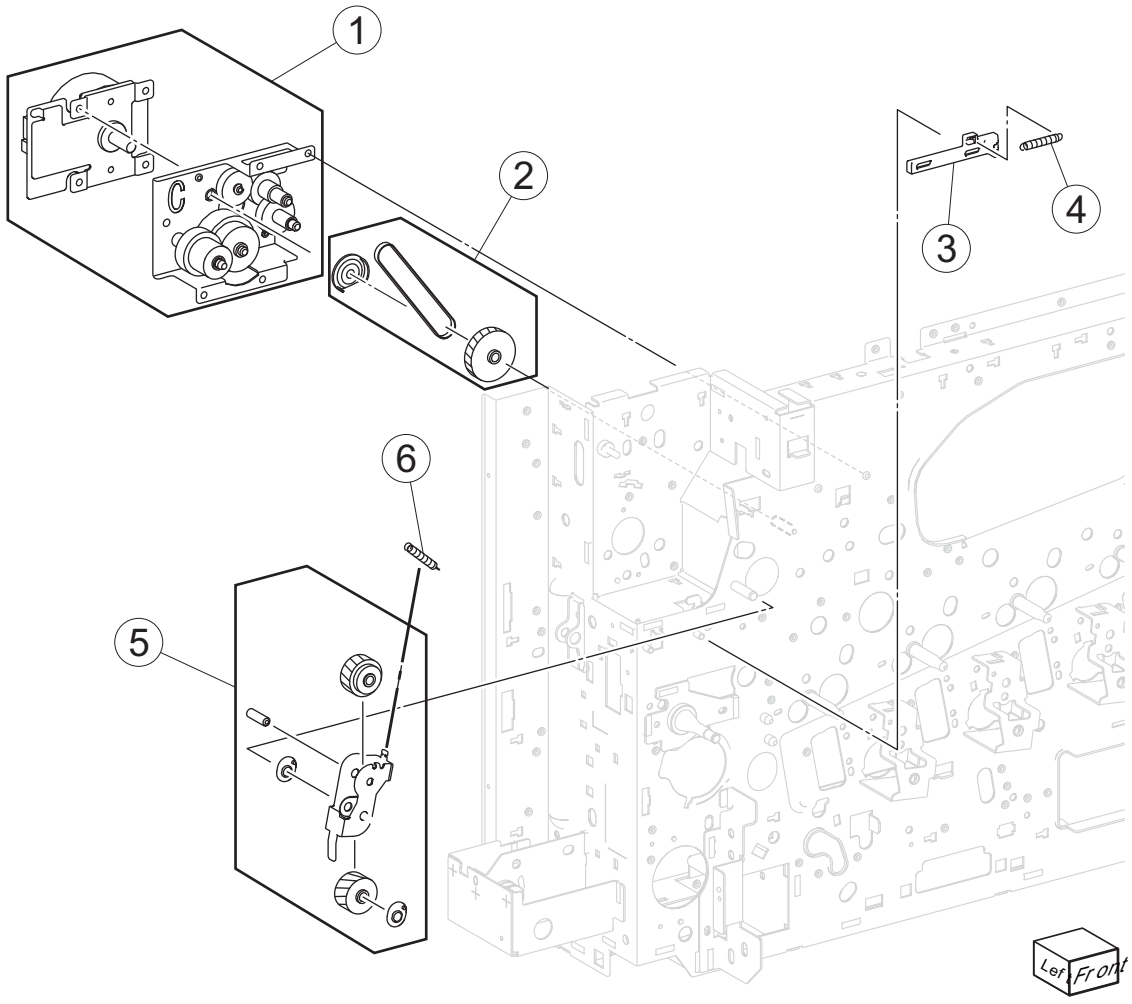
Asm-index	Part number	Units/ mach	Units/ FRU	Description
10-1	40X6565	4	1	Printhead rear block
2	40X6566	4	1	LED printhead
3	40X6567	1	1	Printhead retract door

Assembly 11: Printhead 2



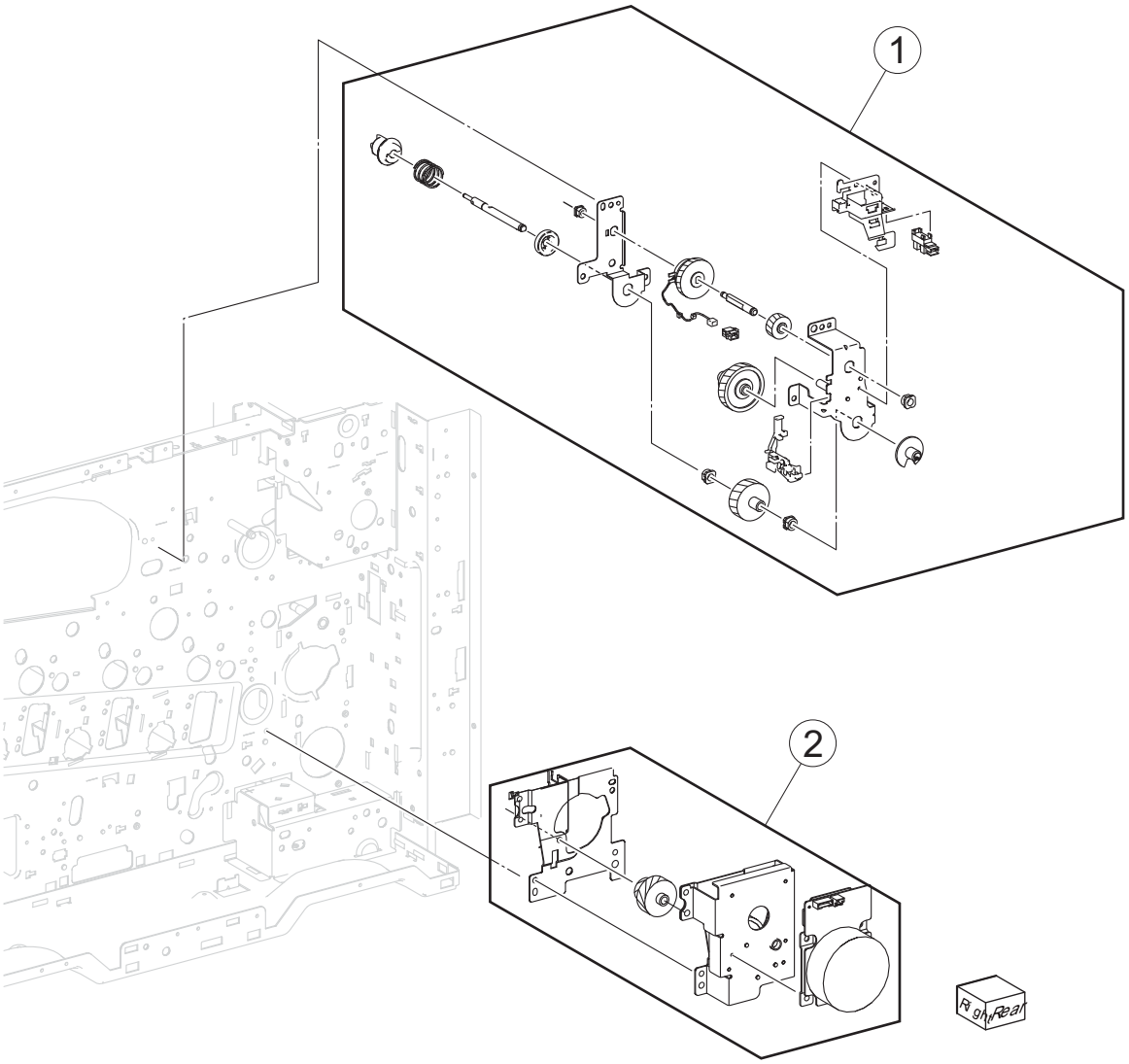
Asm-index	Part number	Units/ mach	Units/ FRU	Description
11-1	40X6569	4	1	Printhead interface contact
2	40X6568	1	1	Printhead flat data cable

Assembly 12: Drive 1



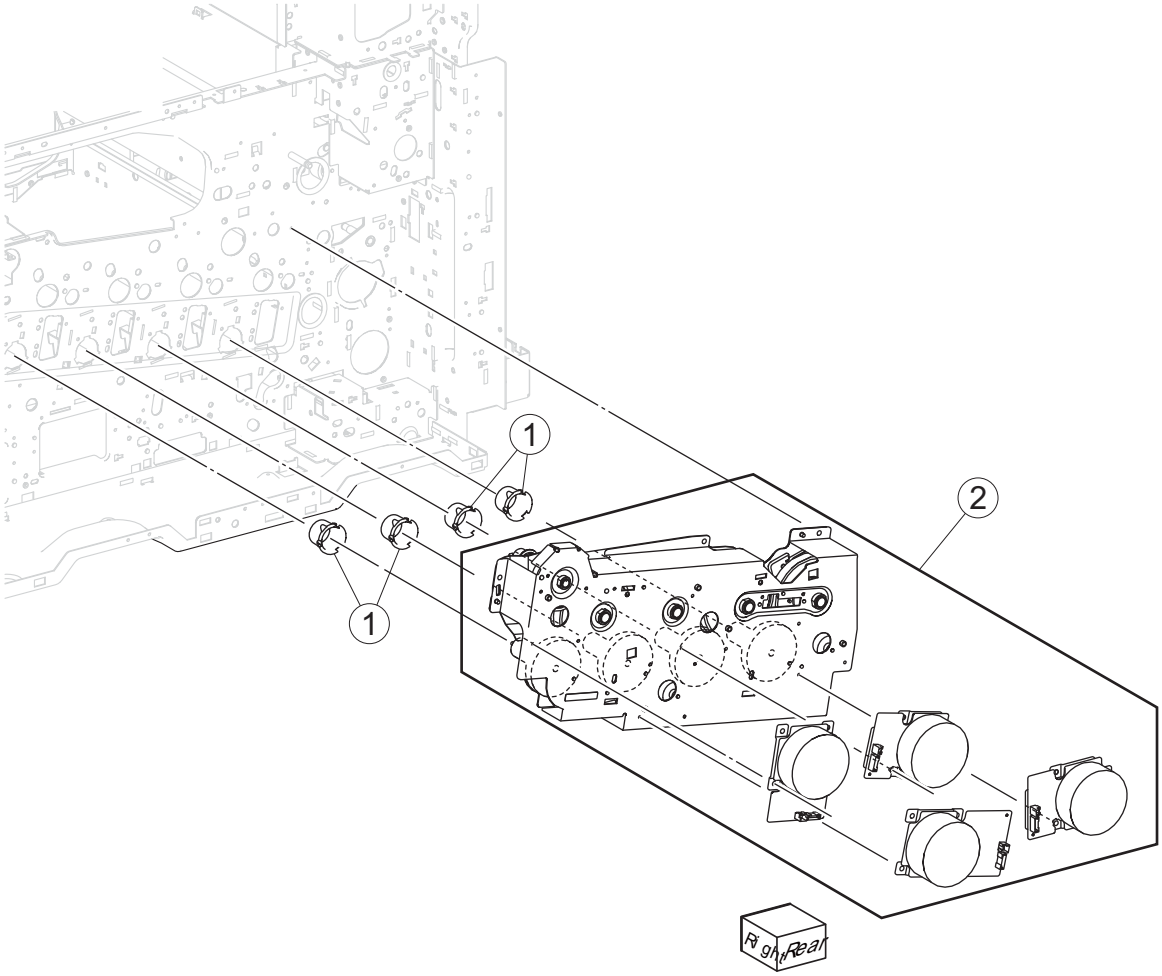
Asm-index	Part number	Units/ mach	Units/ FRU	Description
12-1	40X6574	1	1	Fuser drive/lower redrive/1st BTR retract motor
2	40X6575	1	1	Gear 40T/23T & belt
3	40X6572	1	1	Fuser drive release link
4	40X6573	1	1	Fuser release link spring
5	40X6570	1	1	Fuser drive release bracket
6	40X6571	1	1	Spring

Assembly 13: Drive 2



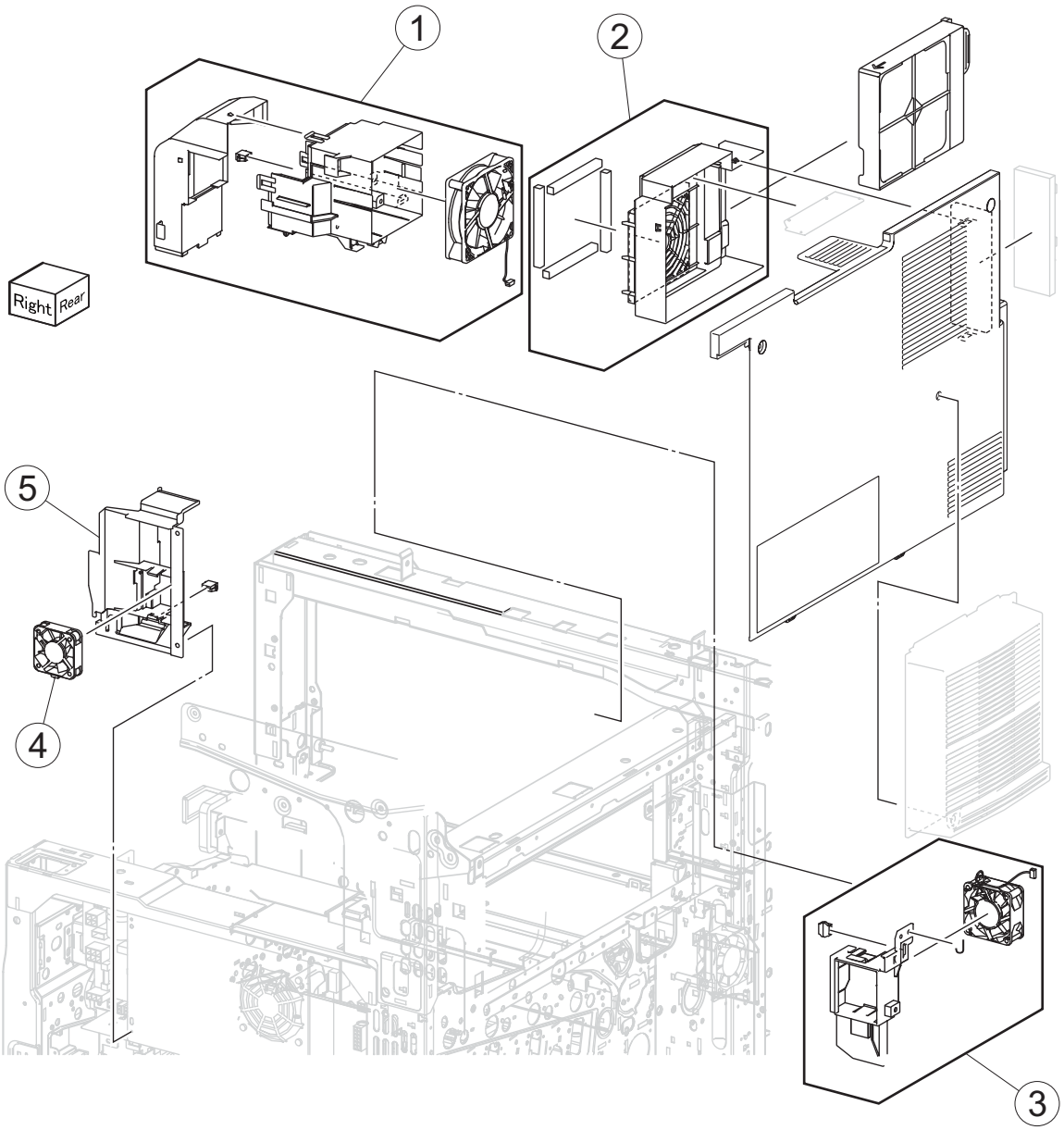
Asm-index	Part number	Units/ mach	Units/ FRU	Description
13-1	40X6584	1	1	1st transfer retract clutch assembly
2	40X6585	1	1	Registration drive motor

Assembly 14: Drive 3



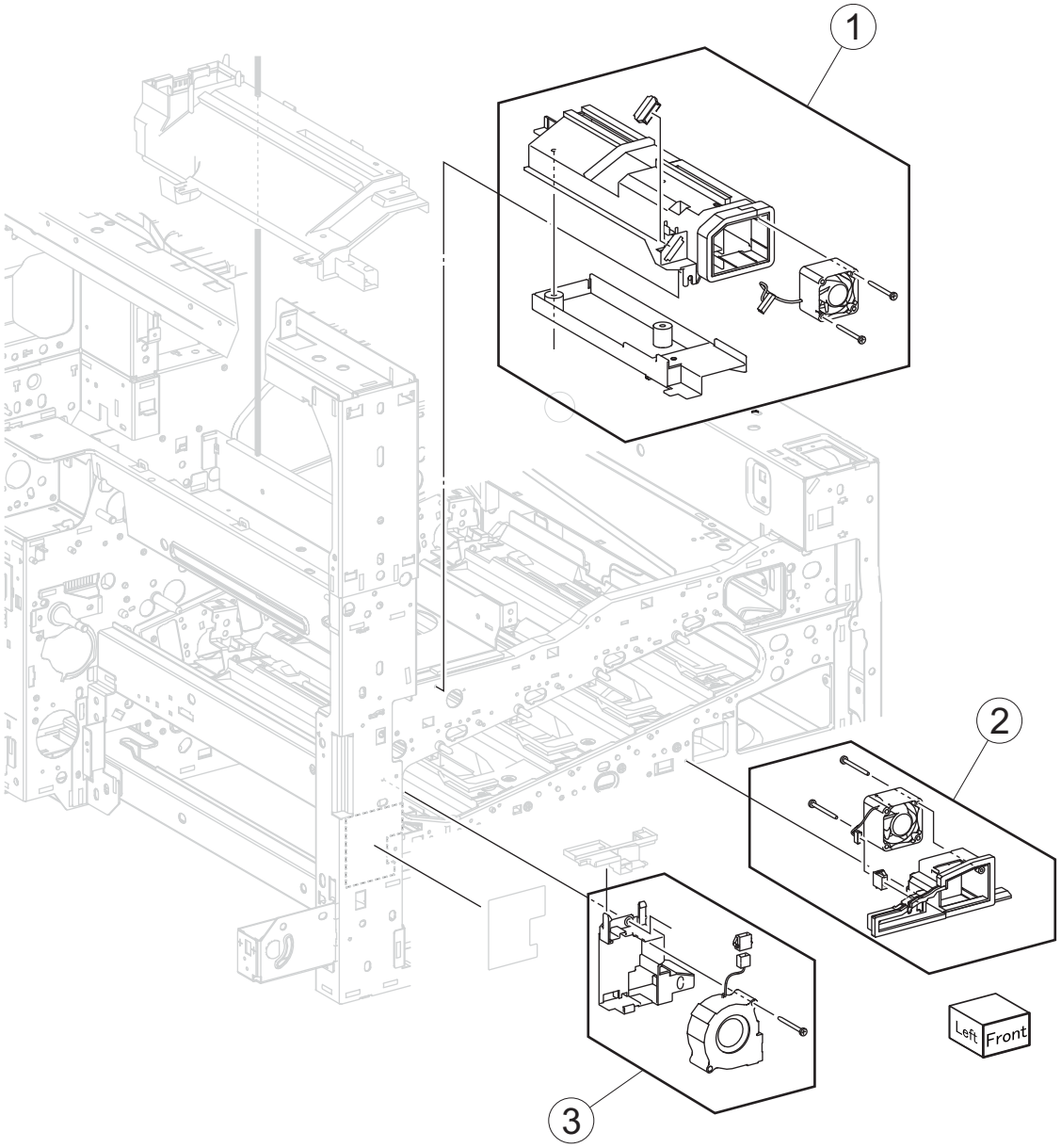
Asm-index	Part number	Units/ mach	Units/ FRU	Description
14-1	40X6587	4	1	Coupler
2	40X6586	1	1	PC/developer drive motor assembly

Assembly 15: Cooling fans 1



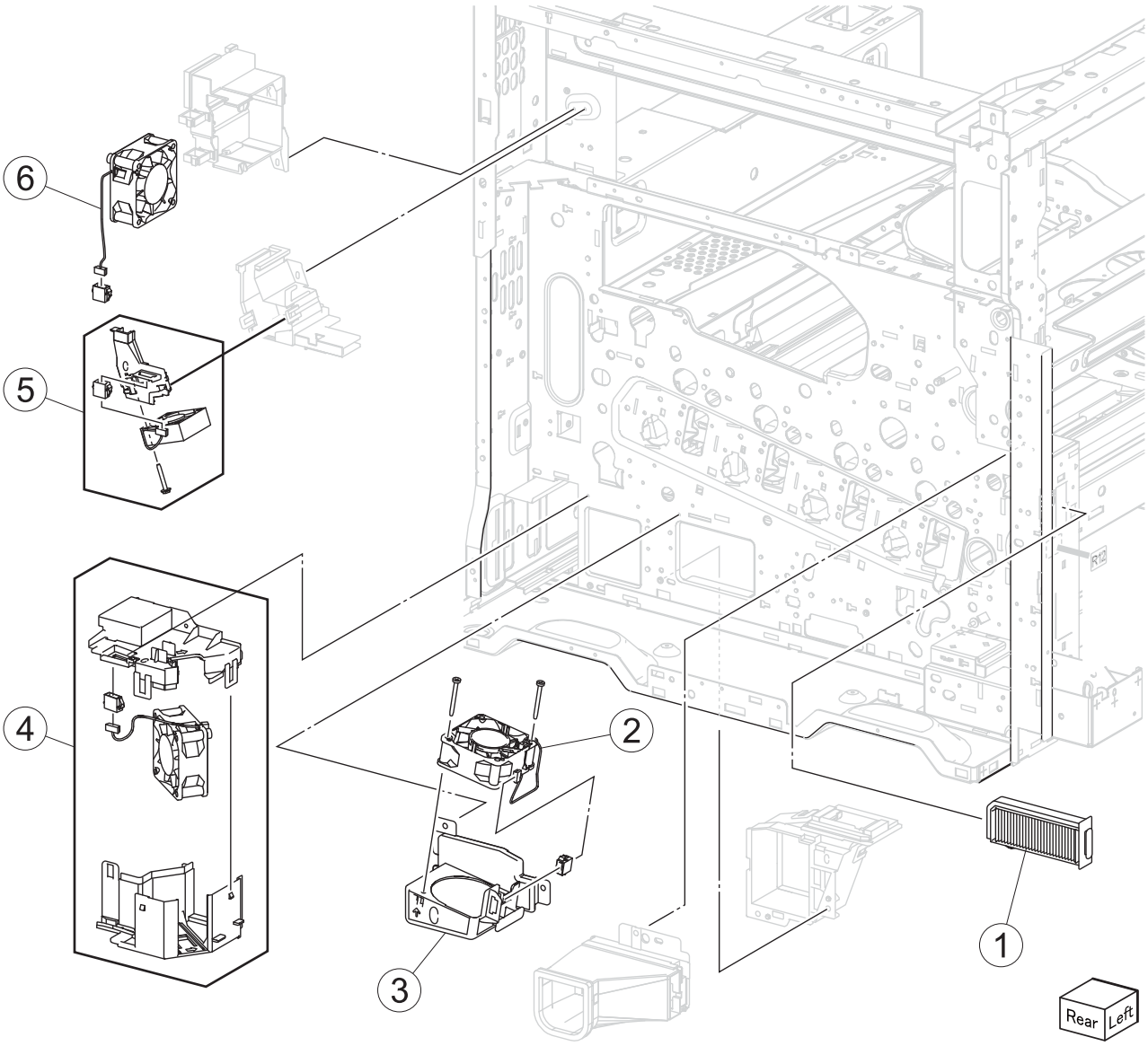
Asm-index	Part number	Units/ mach	Units/ FRU	Description
15-1	40X6588	1	1	Fuser cooling fan
2	40X6590	1	1	Fuser fan duct
3	40X6591	1	1	Fuser driver PCBA cooling fan
4	40X6589	1	1	LVPS sub cooling fan
5	40X6770	1	1	LVPS sub cooling duct

Assembly 16: Cooling fans 2



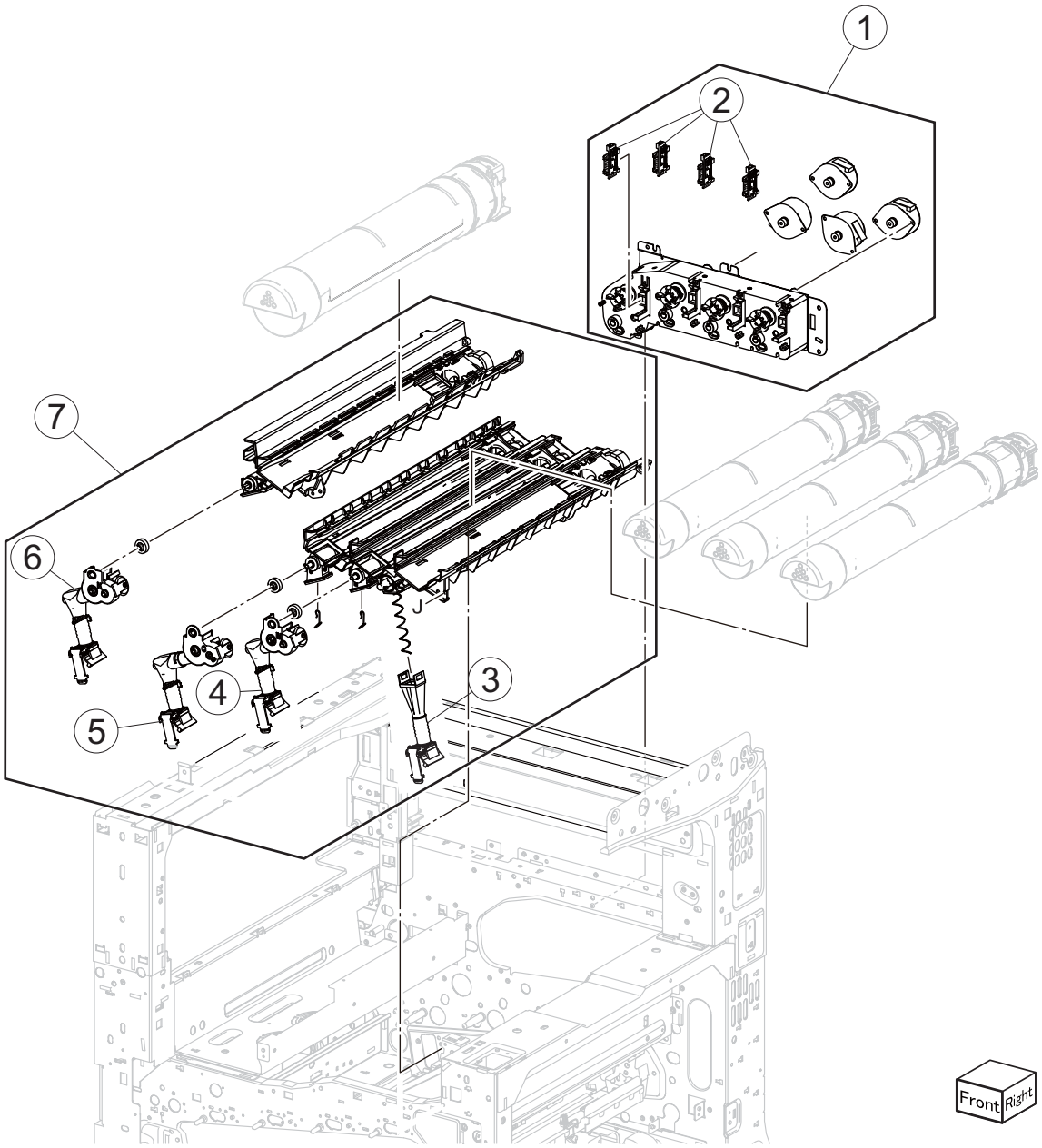
Asm-index	Part number	Units/ mach	Units/ FRU	Description
16-1	40X6593	1	1	Front upper cooling fan
2	40X6595	1	1	Front right cooling fan
3	40X6594	1	1	Front left cooling fan

Assembly 17: Cooling fans 3



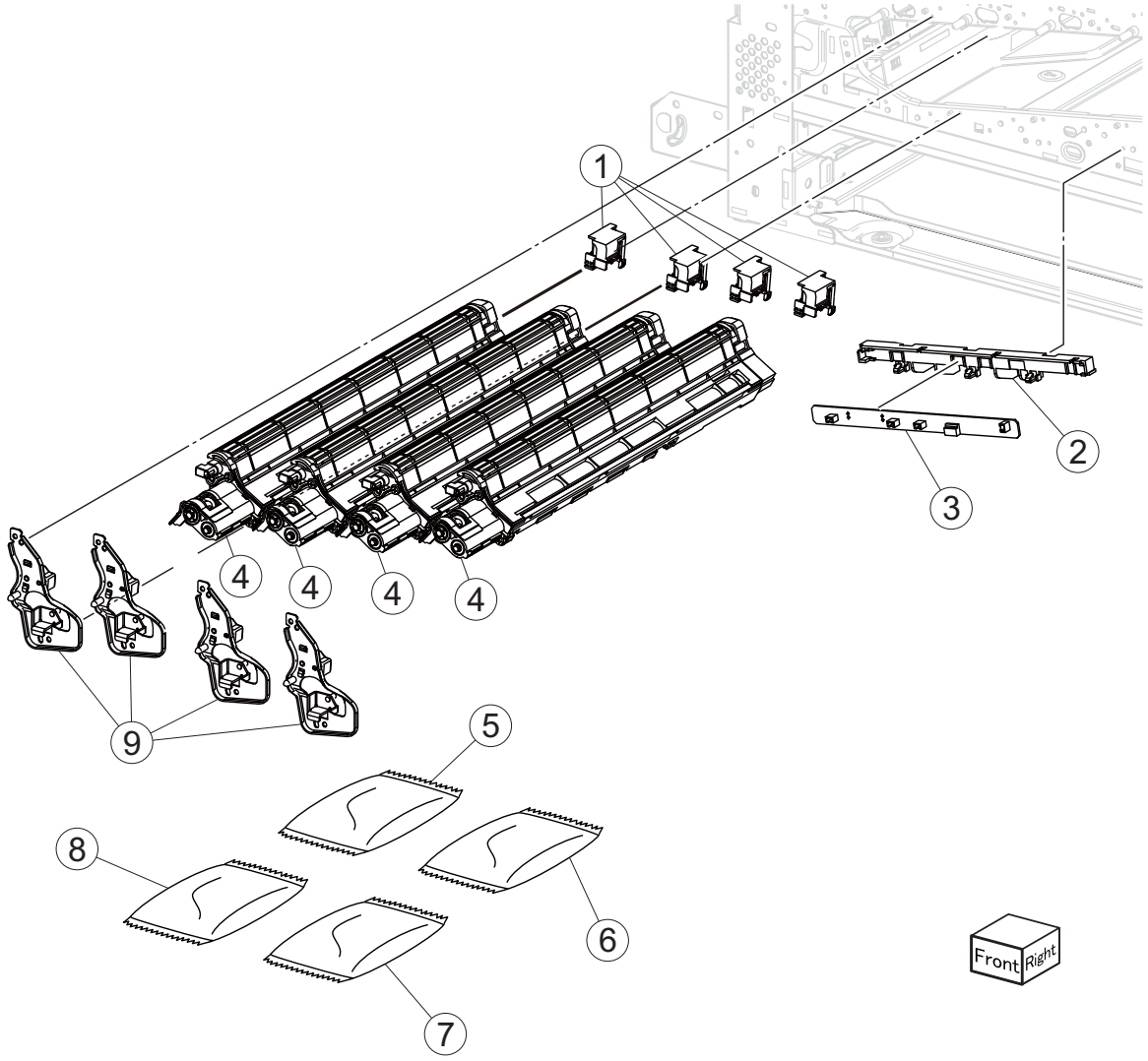
Asm-index	Part number	Units/ mach	Units/ FRU	Description
17-1	40X6599	1	1	Suction filter
2	40X6596	1	1	PC/developer drive motor cooling fan
3	40X6771	1	1	Rear center duct
4	40X6597	1	1	Charge roll HVPS cooling fan
5	40X6600	1	1	Center exhaust fan
6	40X6598	1	1	Upper exhaust fan

Assembly 18: Developer 1



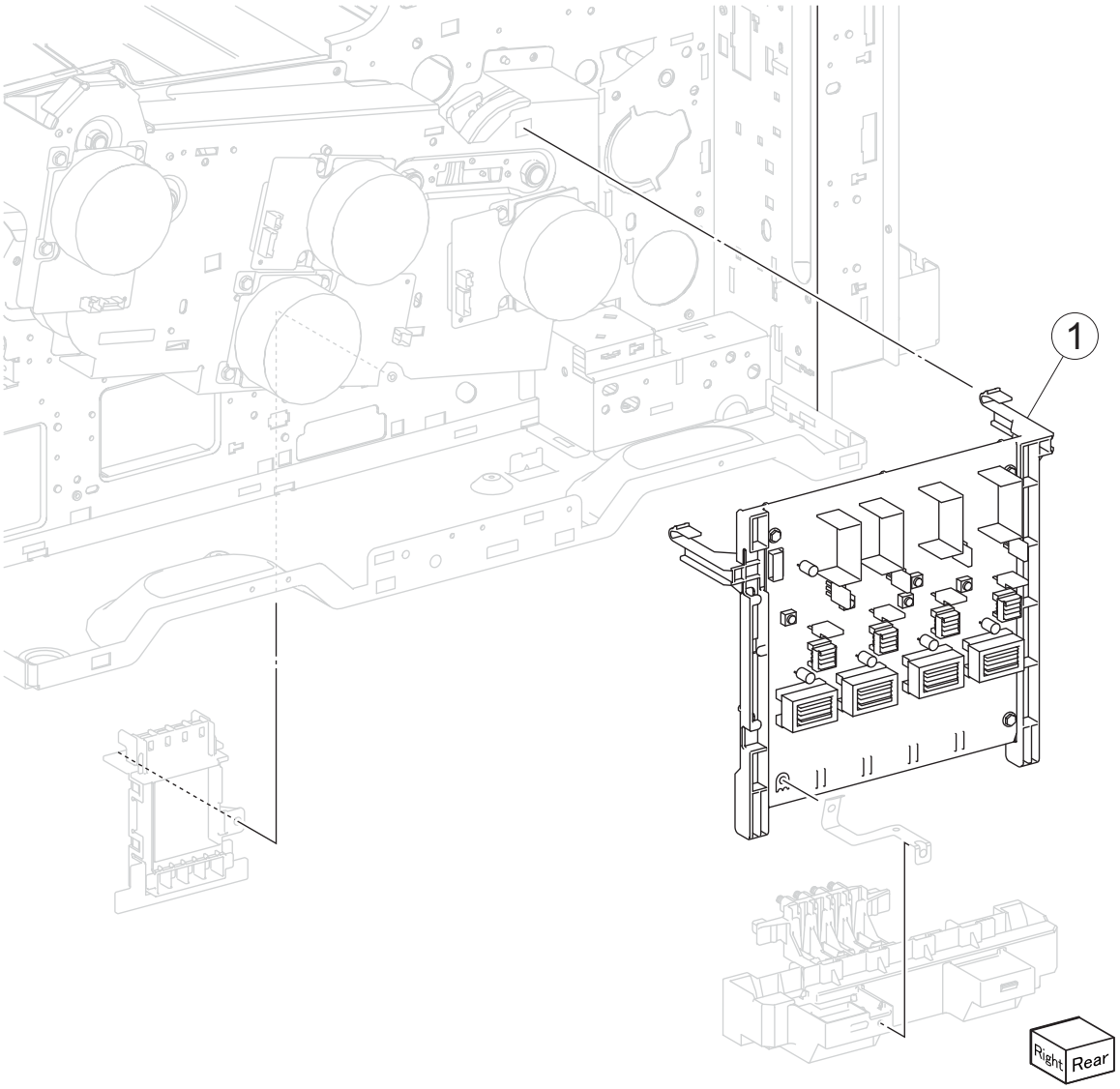
Asm-index	Part number	Units/ mach	Units/ FRU	Description
18-1	40X6601	1	1	Toner dispense motor
2	40X6602	4	1	Toner smart chip PCB
3	40X6603	1	1	Y toner drop auger
4	40X6604	1	1	M toner drop auger
5	40X6605	1	1	C toner drop auger
6	40X6606	1	1	K toner drop auger
7	40X6607	1	1	CMYK toner dispense auger assembly

Assembly 19: Developer 2



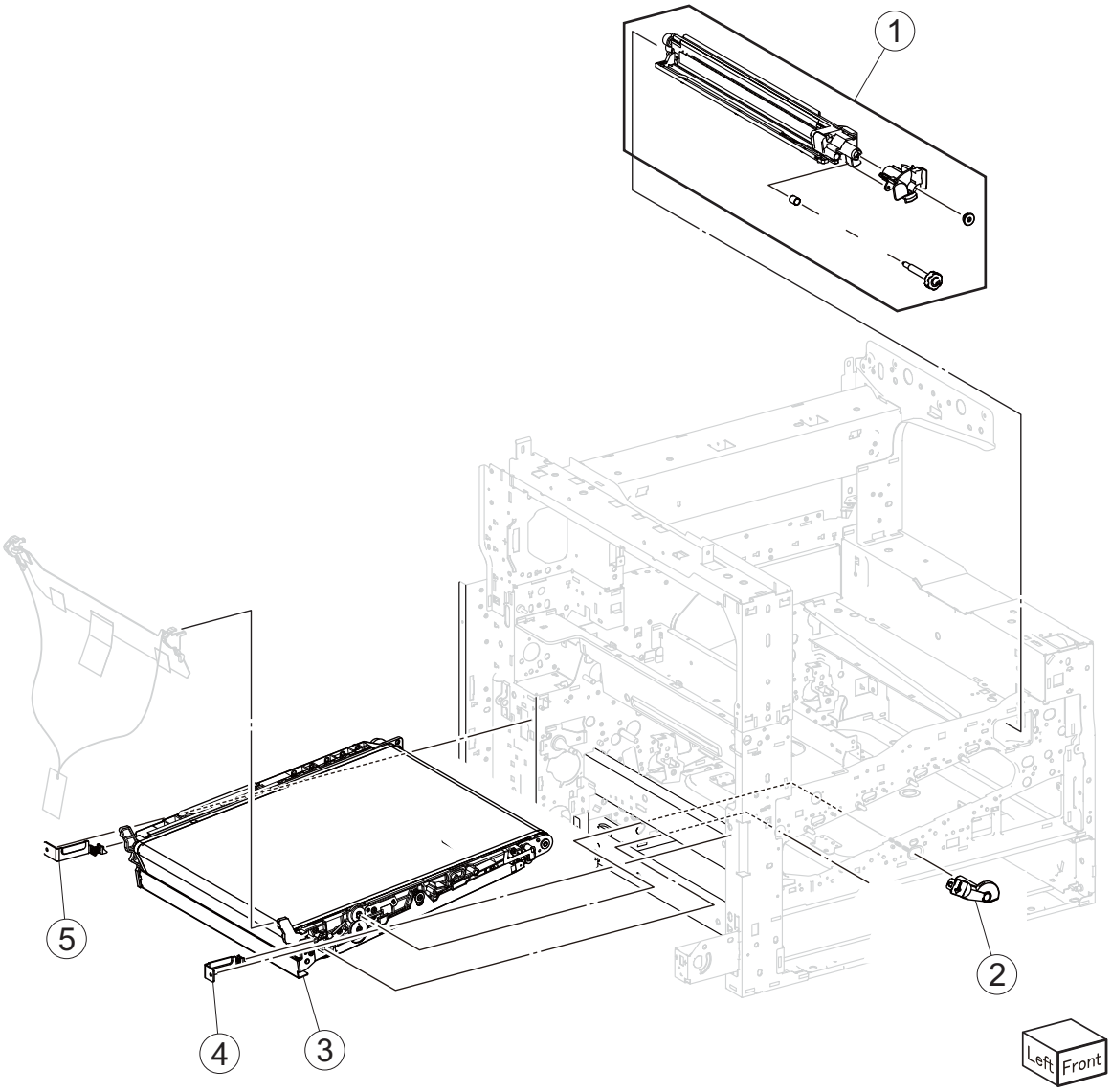
Asm-index	Part number	Units/ mach	Units/ FRU	Description
19-1	40X7332	4	1	Developer housing rear plunger
2	40X6614	1	1	ATC sensor PCB bracket
3	40X6613	1	1	ATC sensor PCB
4	40X6615	1	1	Developer housing
5	40X6609	1	1	K developer carrier
6	40X6610	1	1	C developer carrier
7	40X6612	1	1	Y developer carrier
8	40X6611	1	1	M developer carrier
9	40X6608	4	1	Developer bracket

Assembly 20: HVPS



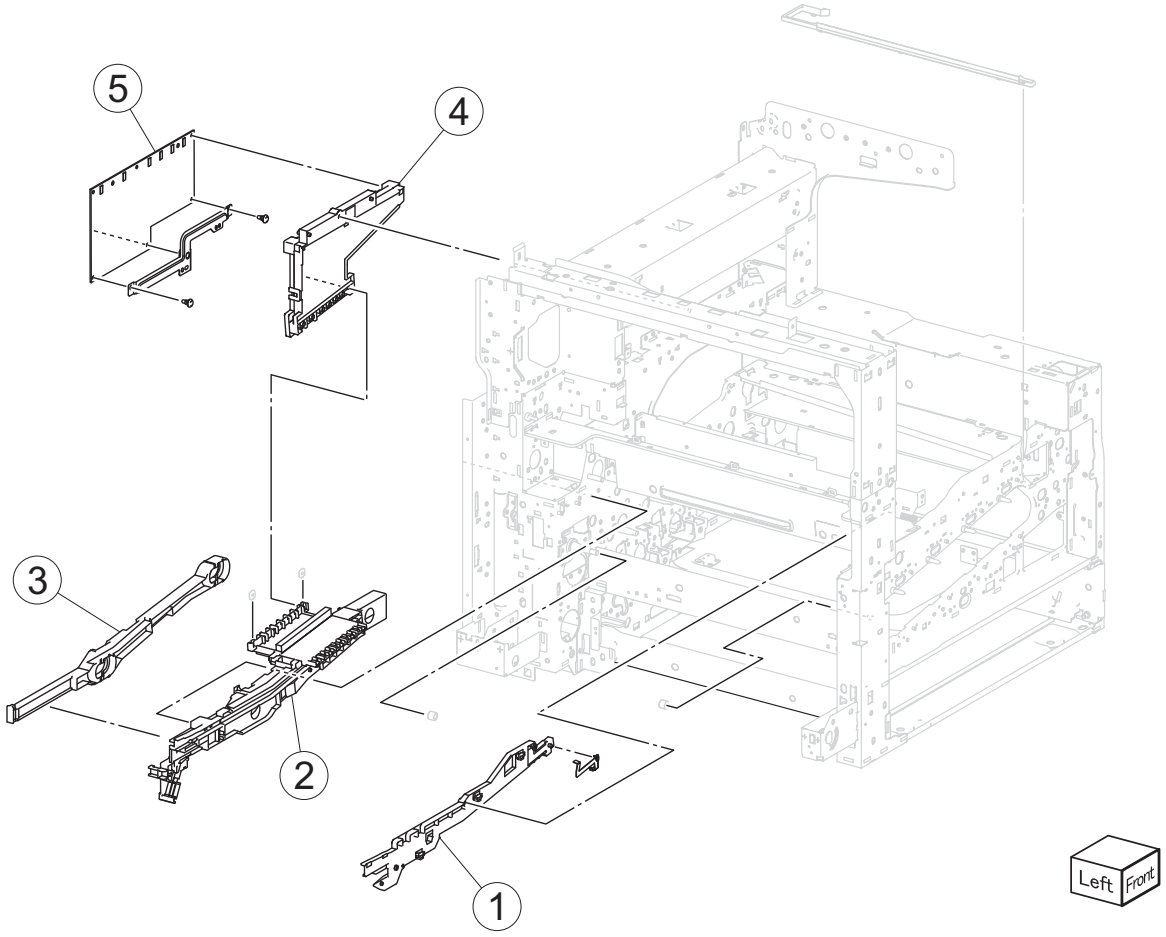
Asm-index	Part number	Units/ mach	Units/ FRU	Description
20-1	40X6619	1	1	Developer HVPS PCBA

Assembly 21: Transfer belt 1



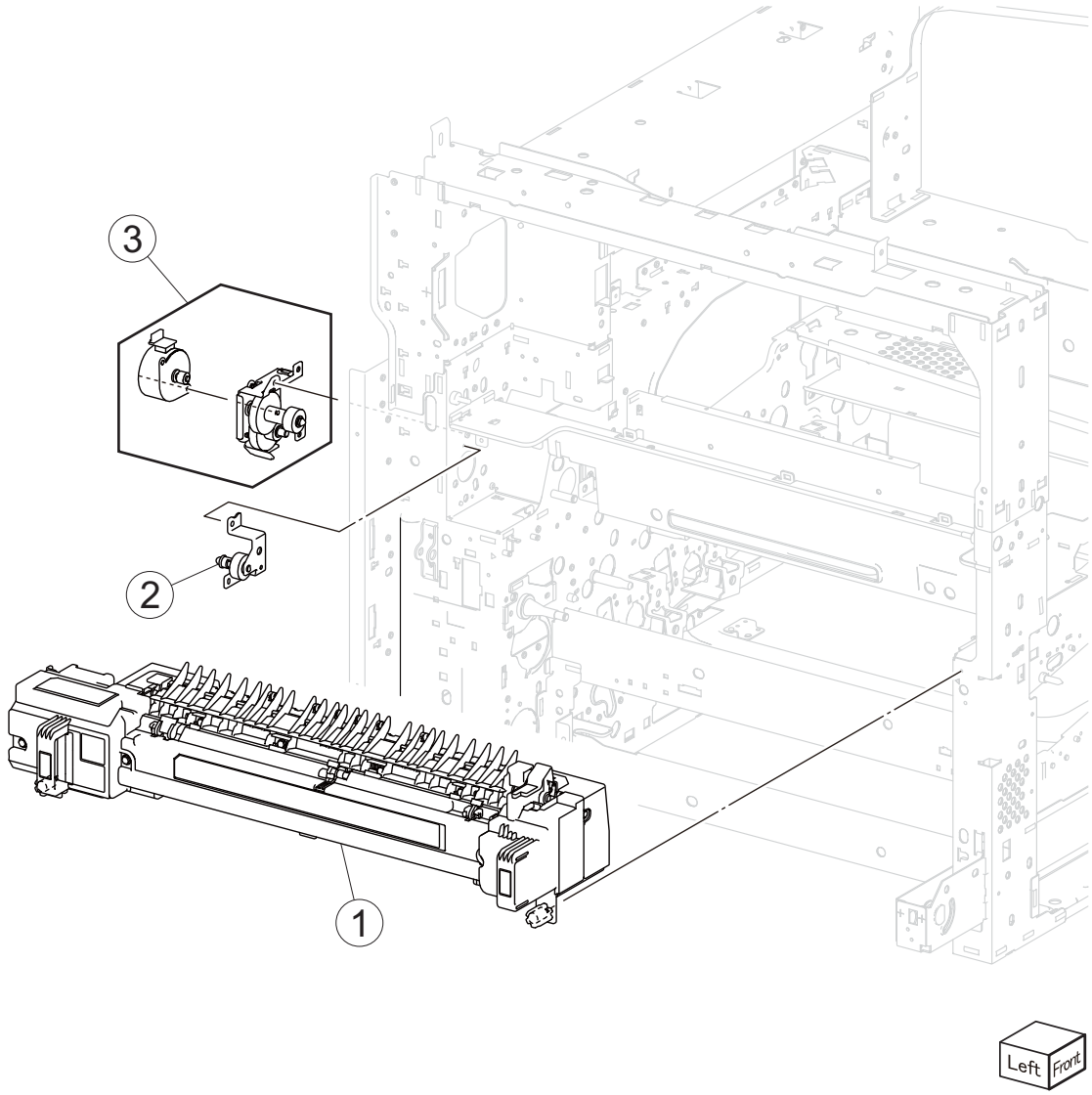
Asm-index	Part number	Units/ mach	Units/ FRU	Description
21-1	40X6623	1	1	Transfer belt cleaning assembly
2	40X6622	1	1	Transfer belt lever
3	40X6624	1	1	Transfer belt assembly
4	40X6620	1	1	Front transfer belt retaining bracket
5	40X6621	1	1	Rear transfer belt retaining bracket

Assembly 22: Transfer belt 2



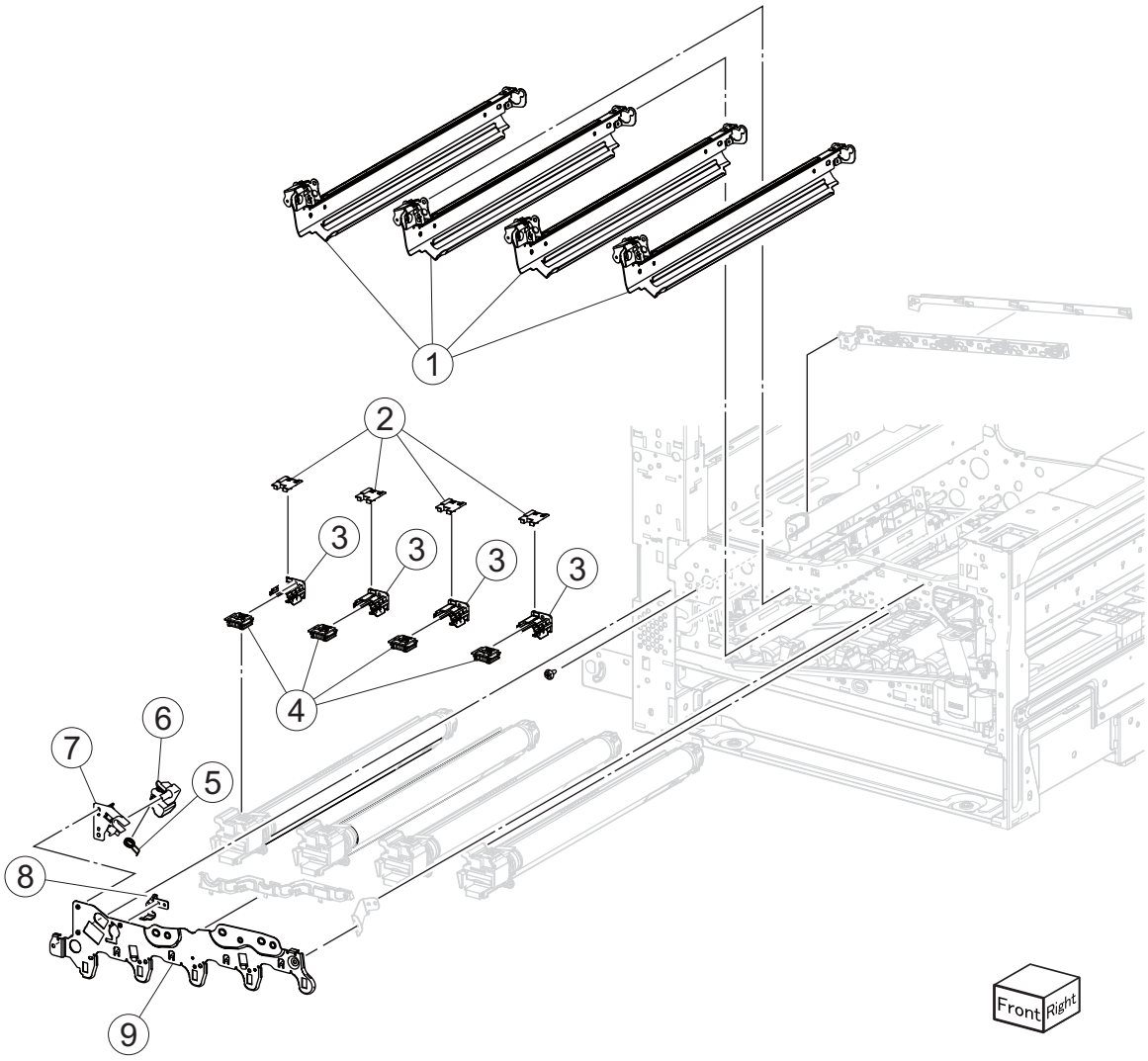
Asm-index	Part number	Units/ mach	Units/ FRU	Description
22-1	40X6625	1	1	Front transfer belt guide
2	40X6627	1	1	Rear transfer belt guide
3	40X6626	1	1	Belt removal actuator
4	40X7333			1st transfer conductor housing
5	40X6628	1	1	Transfer roll HVPS PCBA

Assembly 23: Fuser



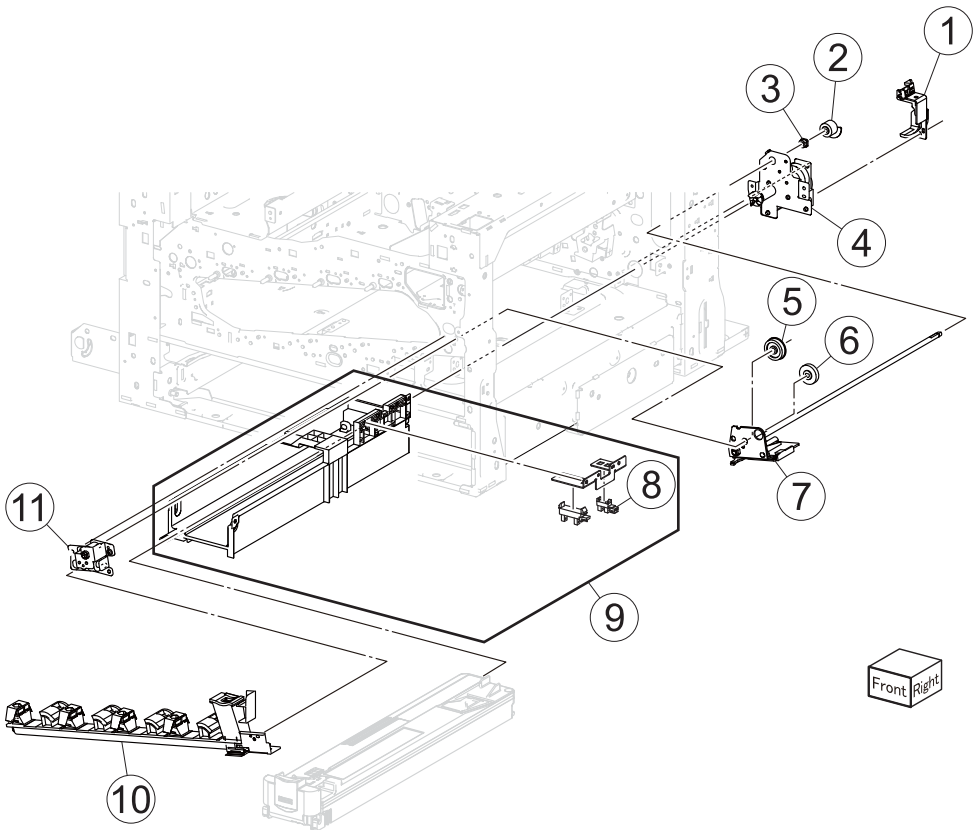
Asm-index	Part number	Units/ mach	Units/ FRU	Description
23-1	40X7532	1	1	Fuser assembly 100V
1	40X6629	1	1	Fuser assembly 110V
1	40X6630	1	1	Fuser assembly 220V
2	40X6632	1	1	Fuser pressure roll retract gear
3	40X6631	1	1	Fuser pressure roll retract motor

Assembly 24: Photoconductor



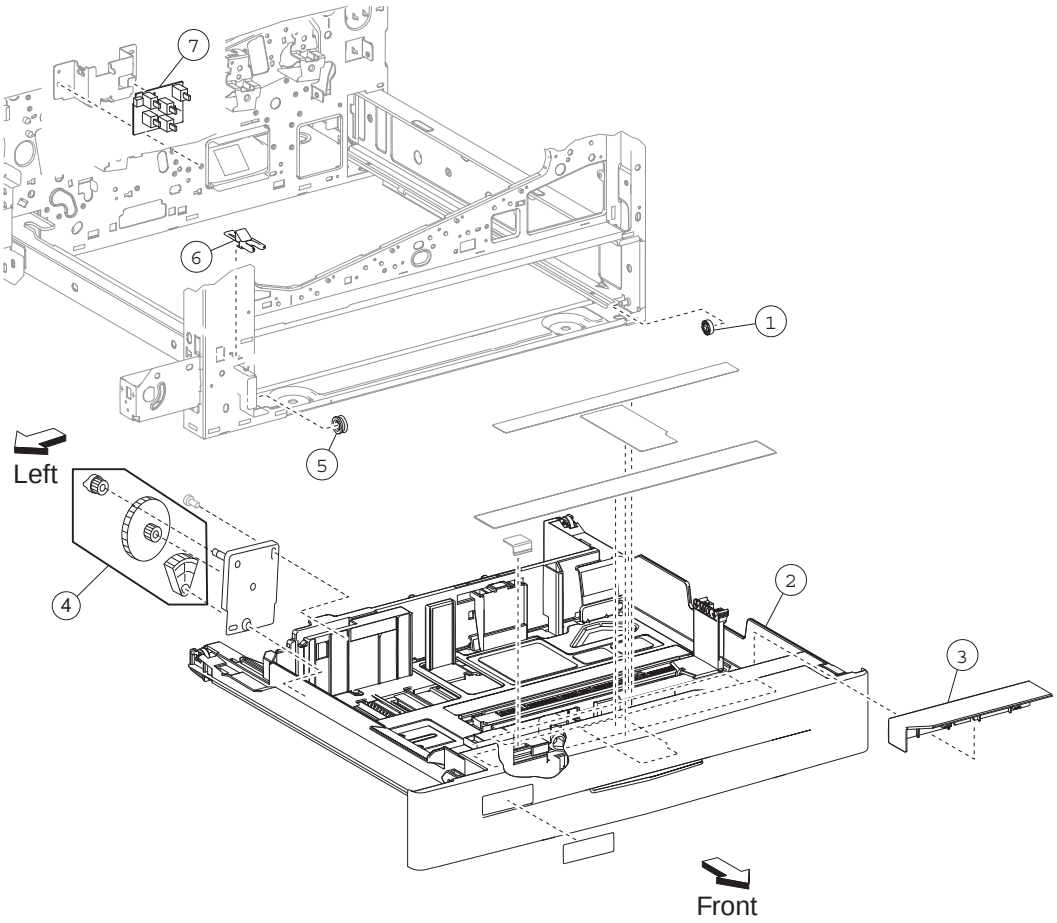
Asm-index	Part number	Units/ mach	Units/ FRU	Description
24-1	40X6636	4	1	Erase lamp
2	40X6634	4	1	PC smart chip cover
3	40X6633	4	1	PC smart chip holder
4	40X6635	4	1	PC smart chip socket
5	40X6640	1	1	Torsion spring
6	40X6638	1	1	Belt lever lock
7	40X6639	1	1	Belt lock bracket
8	40X6641	1	1	Plate spring
9	40X6637	1	1	Inner plate

Assembly 25: Waste toner transfer



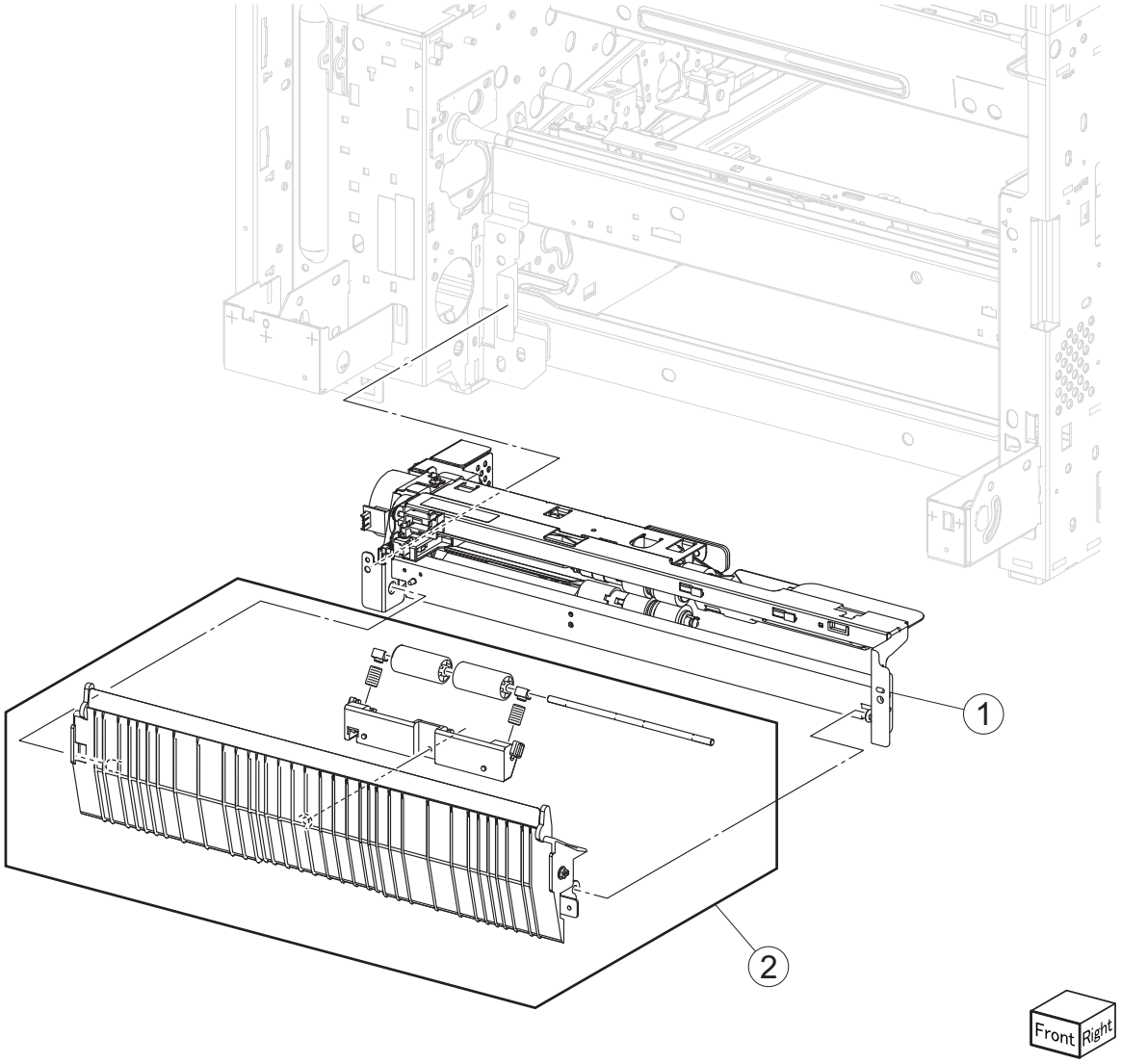
Asm-index	Part number	Units/ mach	Units/ FRU	Description
25-1	40X6649	1	1	Motor cover
2	40X6648	1	1	Actuator gear
3	40X0880	1	1	Plastic bushing
4	40X6643	1	1	Waste toner agitator motor
5	40X6646	1	1	Waste toner gear 31T
6	40X6645	1	1	Waste toner gear 29T
7	40X6647	1	1	Waste toner shaft gate
8	40X3820			Waste toner bottle present sensor
9	40X6650	1	1	Waste toner sensor guide
10	40X6642	1	1	Waste toner auger chute
11	40X6644	1	1	Waste toner gear bracket

Assembly 26: Media feed 1



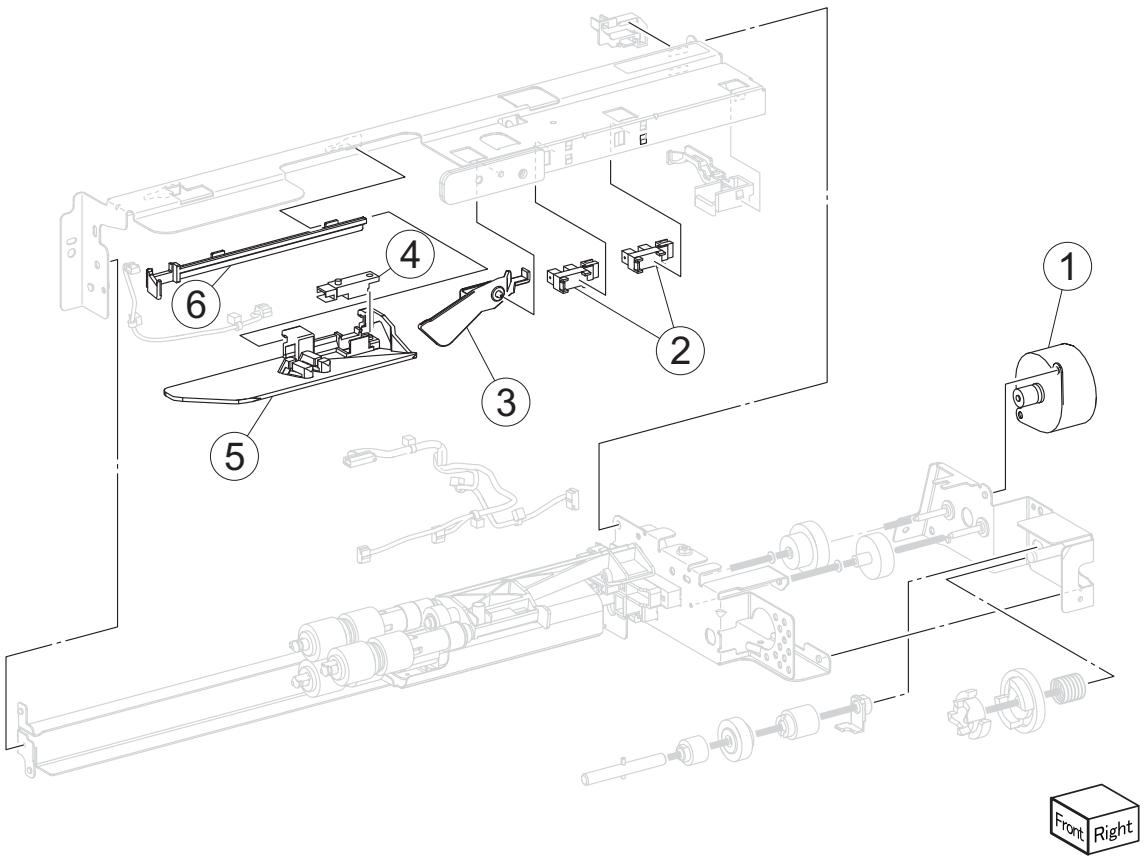
Asm-index	Part number	Units/ mach	Units/ FRU	Description
26-1	40X6653	1	1	Media tray right roller
2	40X6654	1	1	Printer media tray # 1
3	40X6655	1	1	Media tray compartment cover
4	40X0580	2	3	Media tray lift gear kit includes: • Tray lift coupling gear 13T • Tray lift gear 13/60T • Tray lift sector gear 12T
5	40X6652	1	1	Media tray left roller
6	40X6651	1	1	Media tray stop
7	40X7533	6	1	Media size switch PCB

Assembly 27: Media feed 2



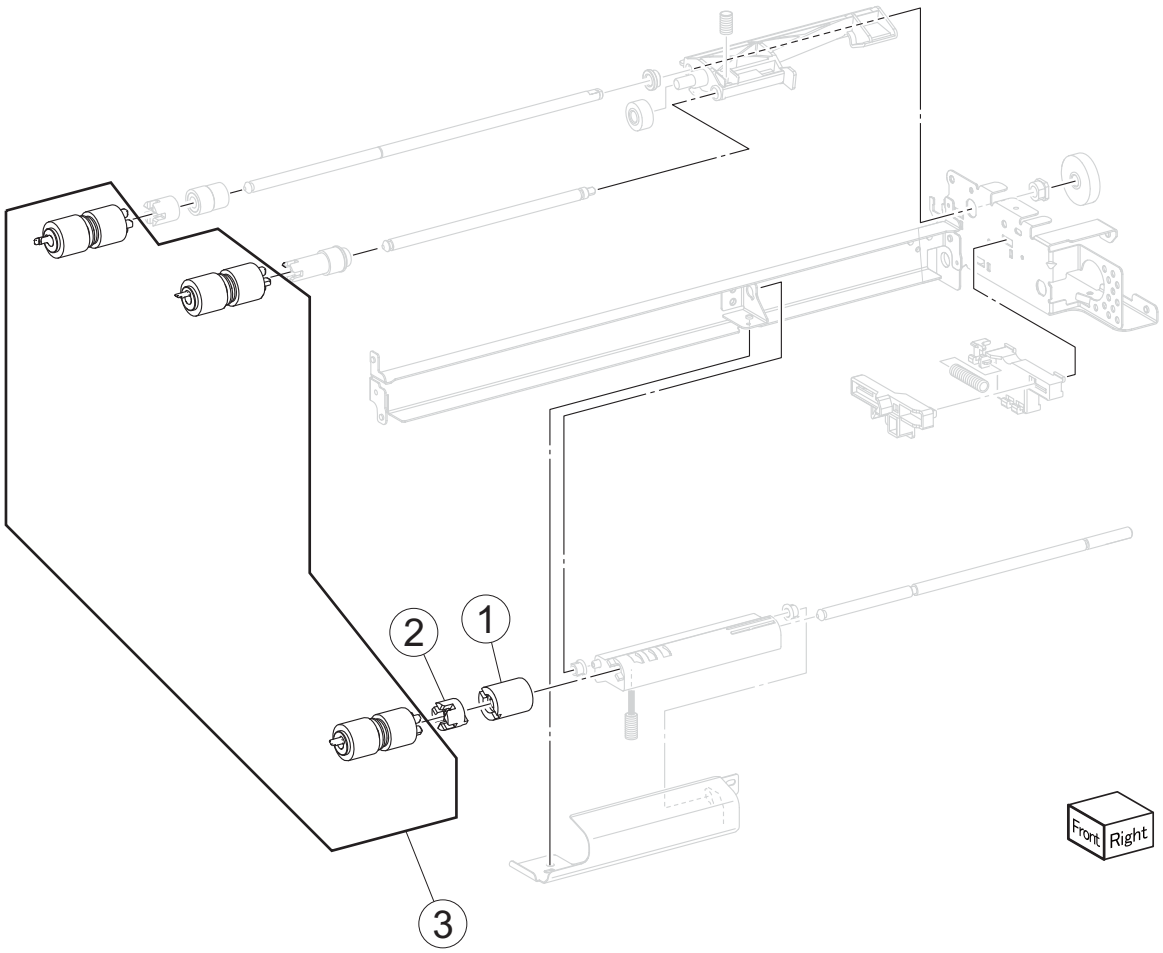
Asm-index	Part number	Units/ mach	Units/ FRU	Description
27-1	40X6656	1	1	Printer tray 1 media feeder
2	40X6657	1	1	Printer media turn guide

Assembly 28: Media feed 3



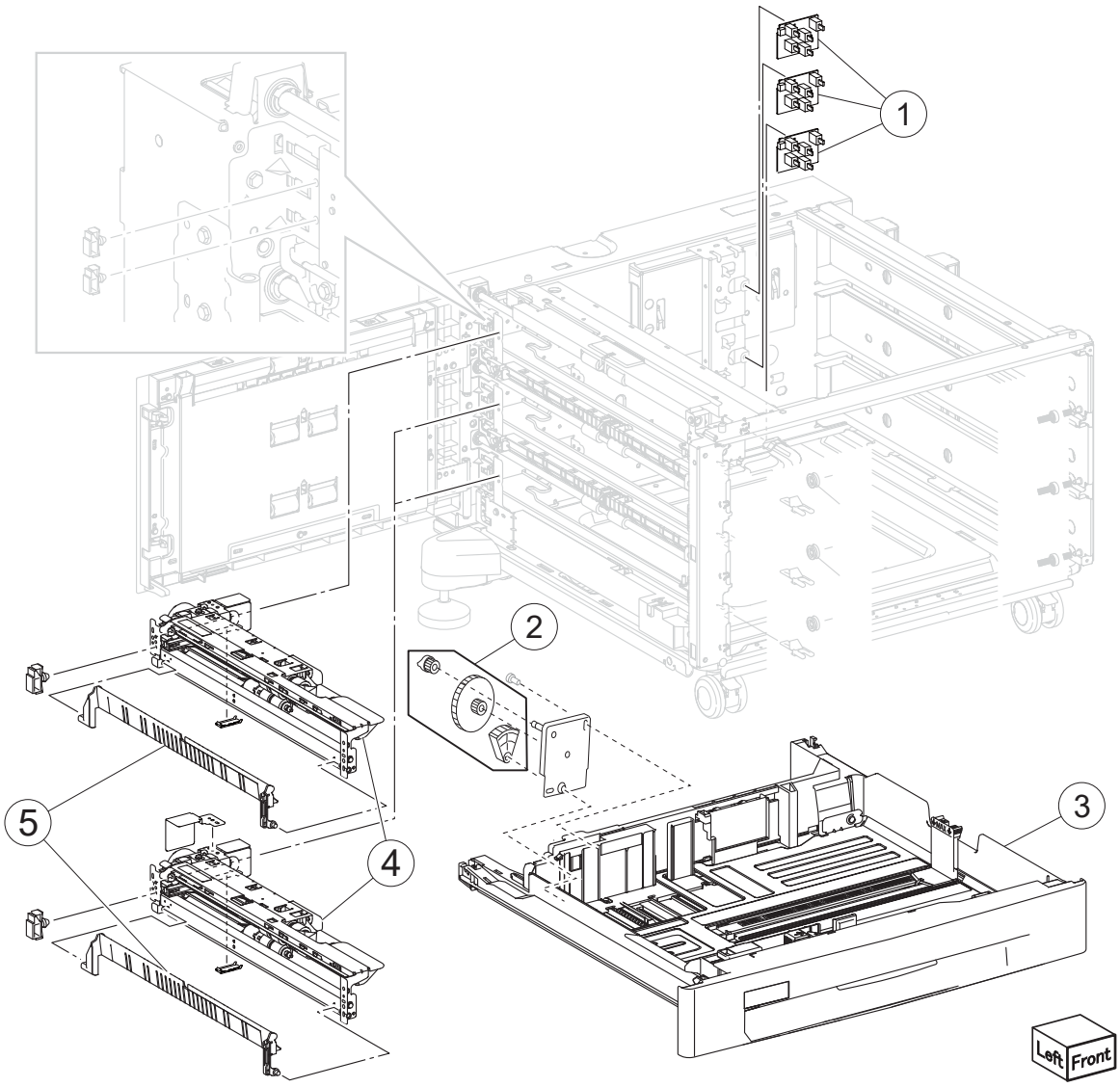
Asm-index	Part number	Units/ mach	Units/ FRU	Description
28-1	40X6658	8	1	Media feed lift motor
2	40X0588	1	1	Tray 1 media level sensor
2	40X0588	1	1	Tray 1 media out sensor
2	40X0588	1	1	Tray 2 media level sensor
2	40X0588	1	1	Tray 2 media out sensor
2	40X0588	1	1	Tray 3 media level sensor
2	40X0588	1	1	Tray 3 media out sensor
2	40X0588	1	1	Tray 4 media level sensor
2	40X0588	1	1	Tray 4 media out sensor
3	40X0587	8	1	Media out actuator
4	40X0589	2	1	Tray 1 pre-feed sensor
5	40X6659	8	1	Feeder slide guide
6	40X6773	8	1	Feeder unit slide rail

Assembly 29: Media feed 4



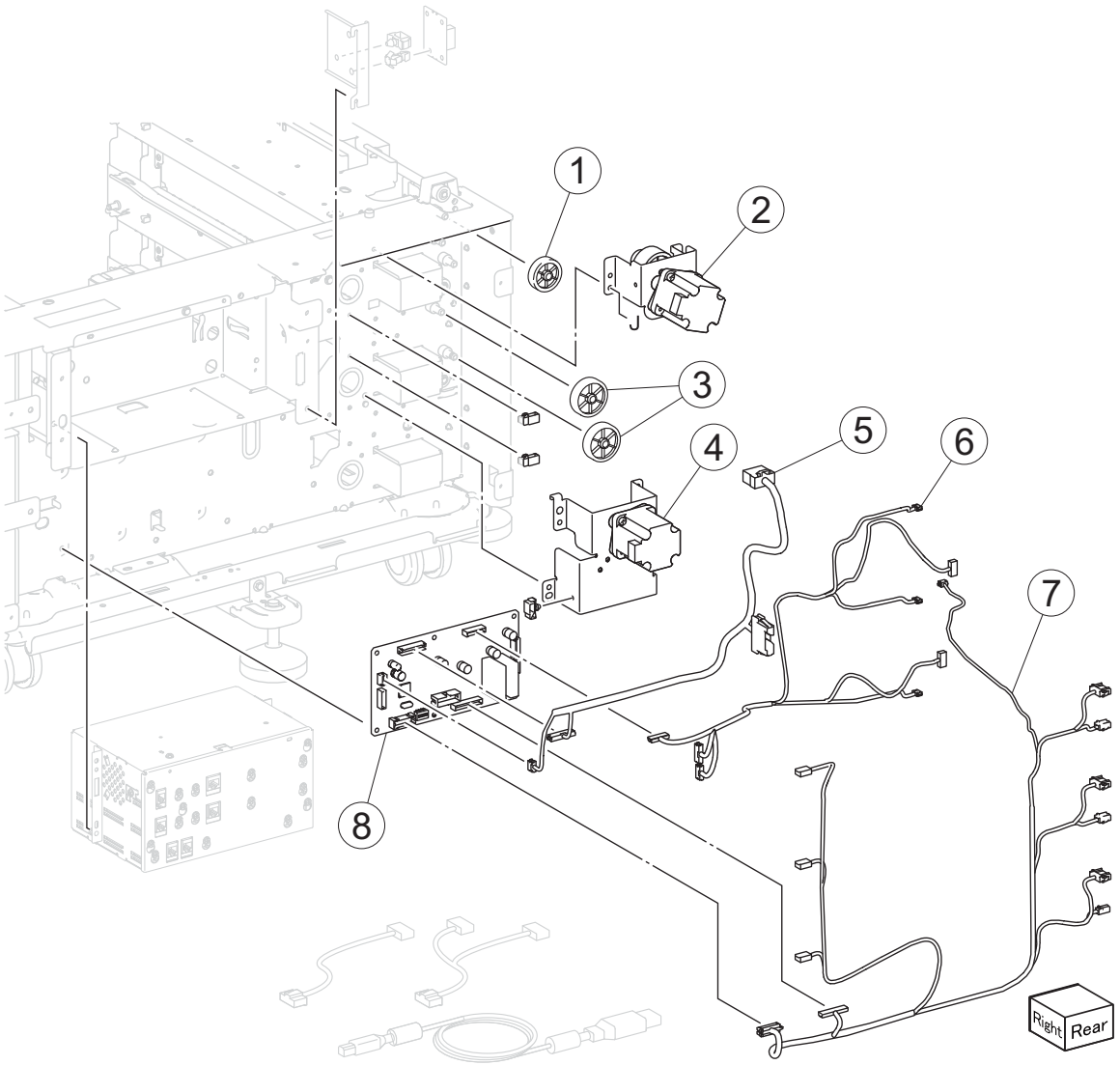
Asm-index	Part number	Units/ mach	Units/ FRU	Description
29-1	40X6660	8	1	Separation limiter clutch
2	40X6661	8	1	Separation spacer
3	40X6805	7	12	Pick roller kit includes: • Pick rollers • Feed rollers • Separation rollers

Assembly 30: Tray module media feed



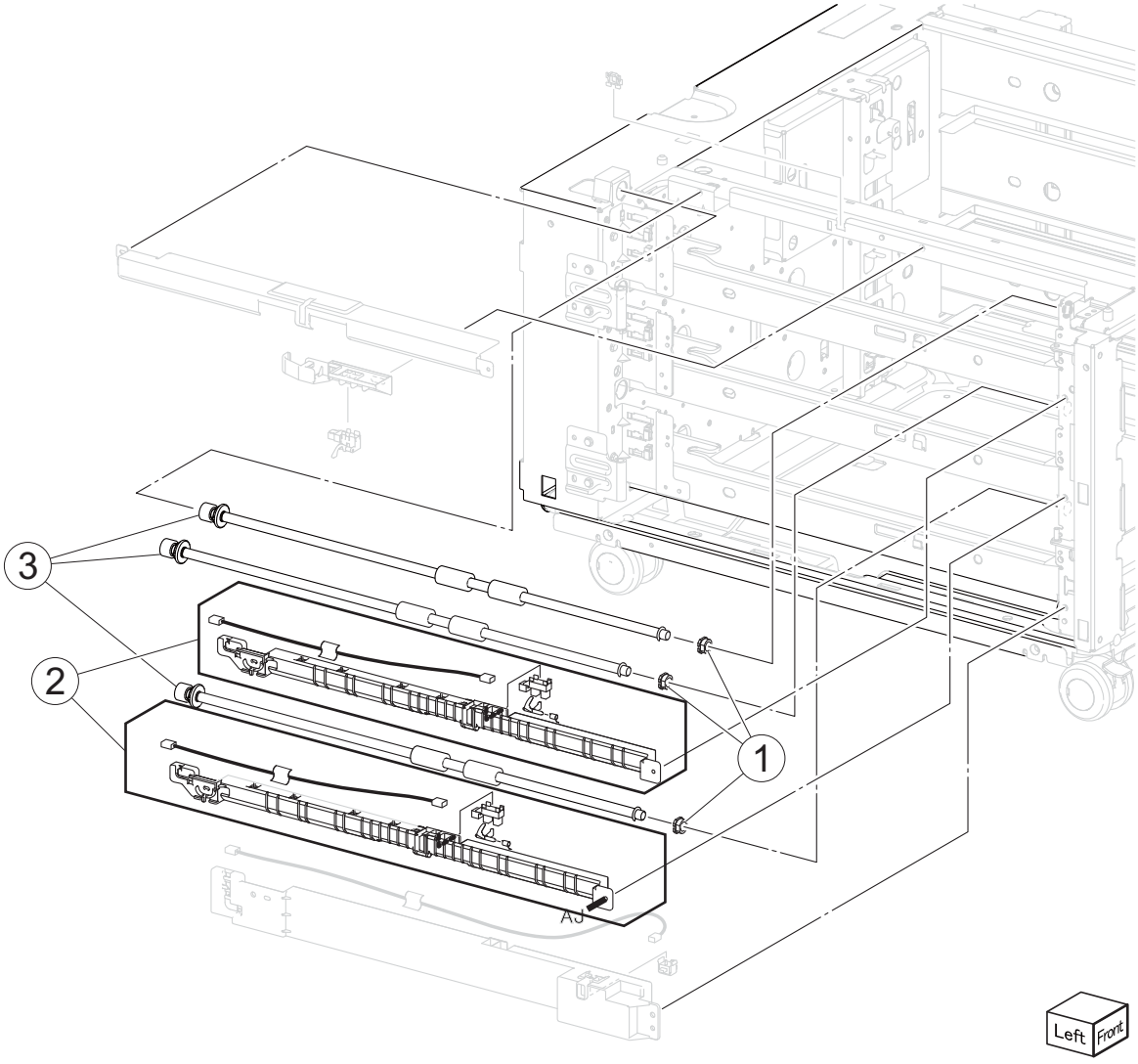
Asm-index	Part number	Units/ mach	Units/ FRU	Description
30-1	40X7533	6	1	Media size switch PCB
2	40X0580	2	3	Media tray lift gear kit includes: • Tray lift coupling gear 13T • Tray lift gear 13/60T • Tray lift sector gear 12T
3	40X6665	3	1	Tray module media tray
4	40X6662	3	1	Tray module media feeder
5	40X6663	3	1	Tray module tray 2 media turn guide

Assembly 31: Tray module media transport 1



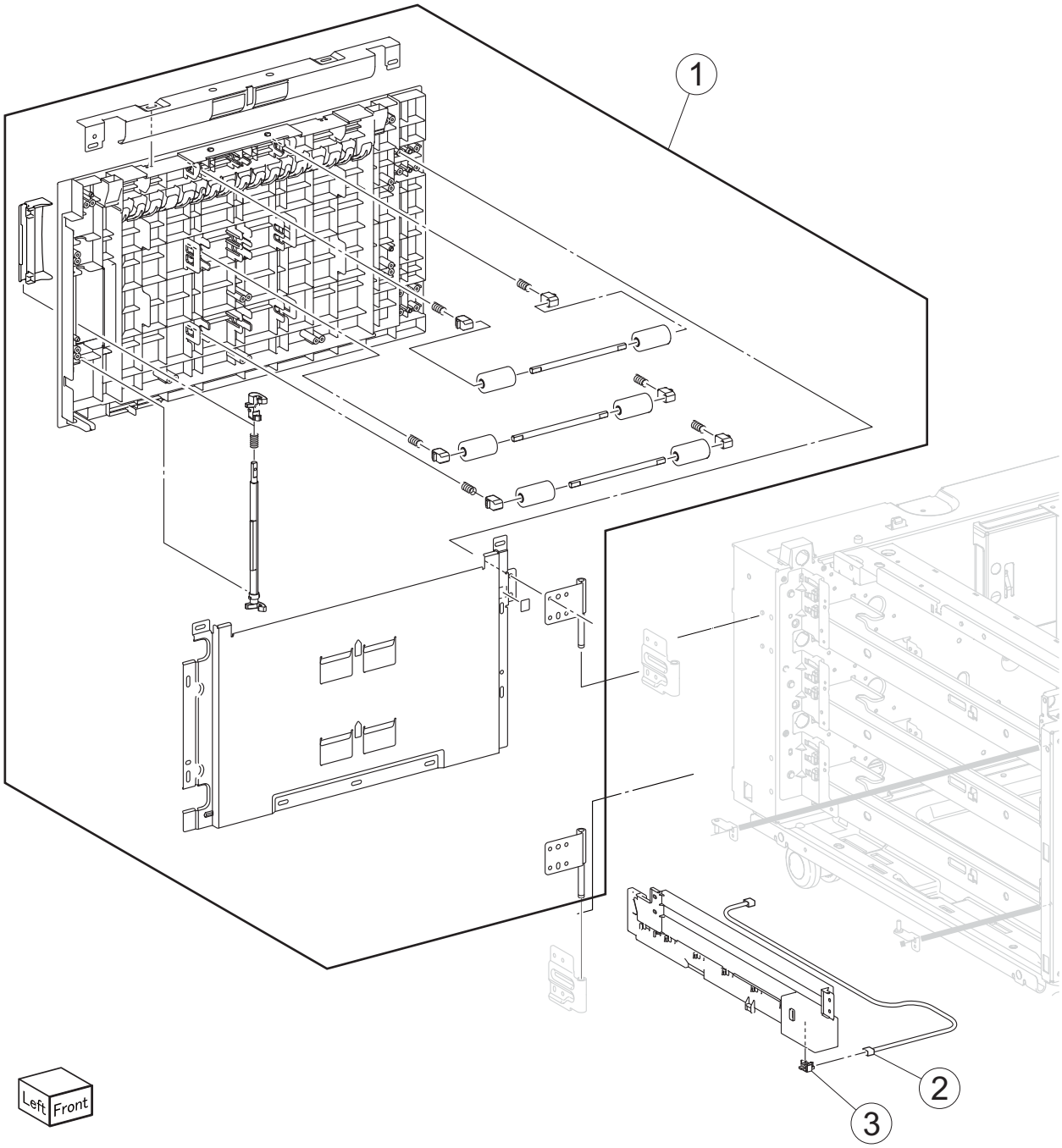
Asm-index	Part number	Units/ mach	Units/ FRU	Description
31-1	40X6668	1	1	3TM 34T gear
2	40X6674	2	1	Tray module upper transport motor
3	40X6669	2	1	3TM/TTM 39T gear
4	40X6670	1	1	Tray module lower transport motor
5	40X6673	1	1	3TM interface cable
6	40X6672	1	1	3TM motor cable
7	40X6671	1	1	3TM sensor cable
8	40X6667	3	1	Tray module controller PCBA

Assembly 32: Tray module media transport 2



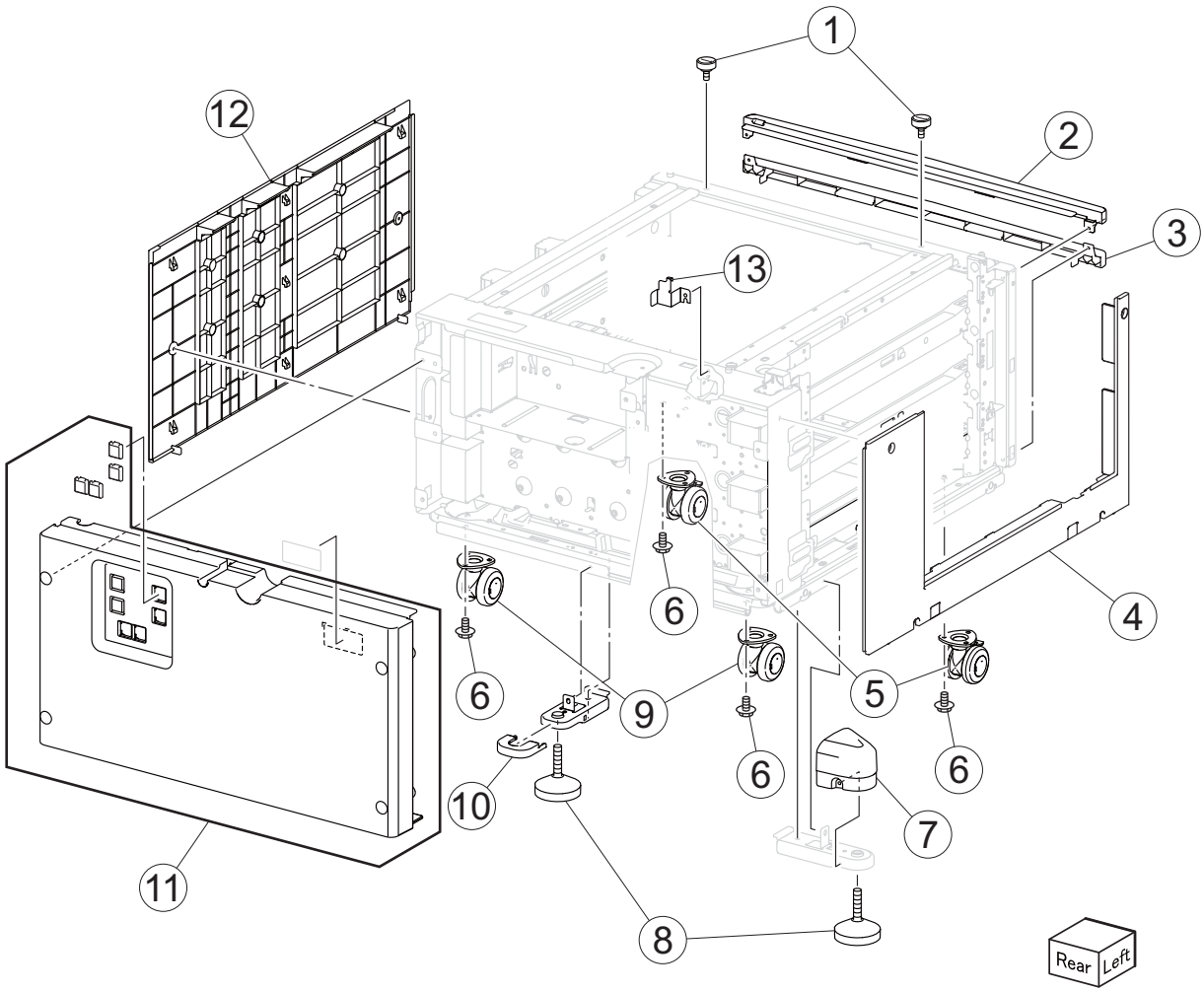
Asm-index	Part number	Units/ mach	Units/ FRU	Description
32-1	40X3915	7	1	Bearing
2	40X6675	1	1	Sensor tray (module feed out)
3	40X6677	6	1	Tray module transport roller

Assembly 33: Tray module covers 1



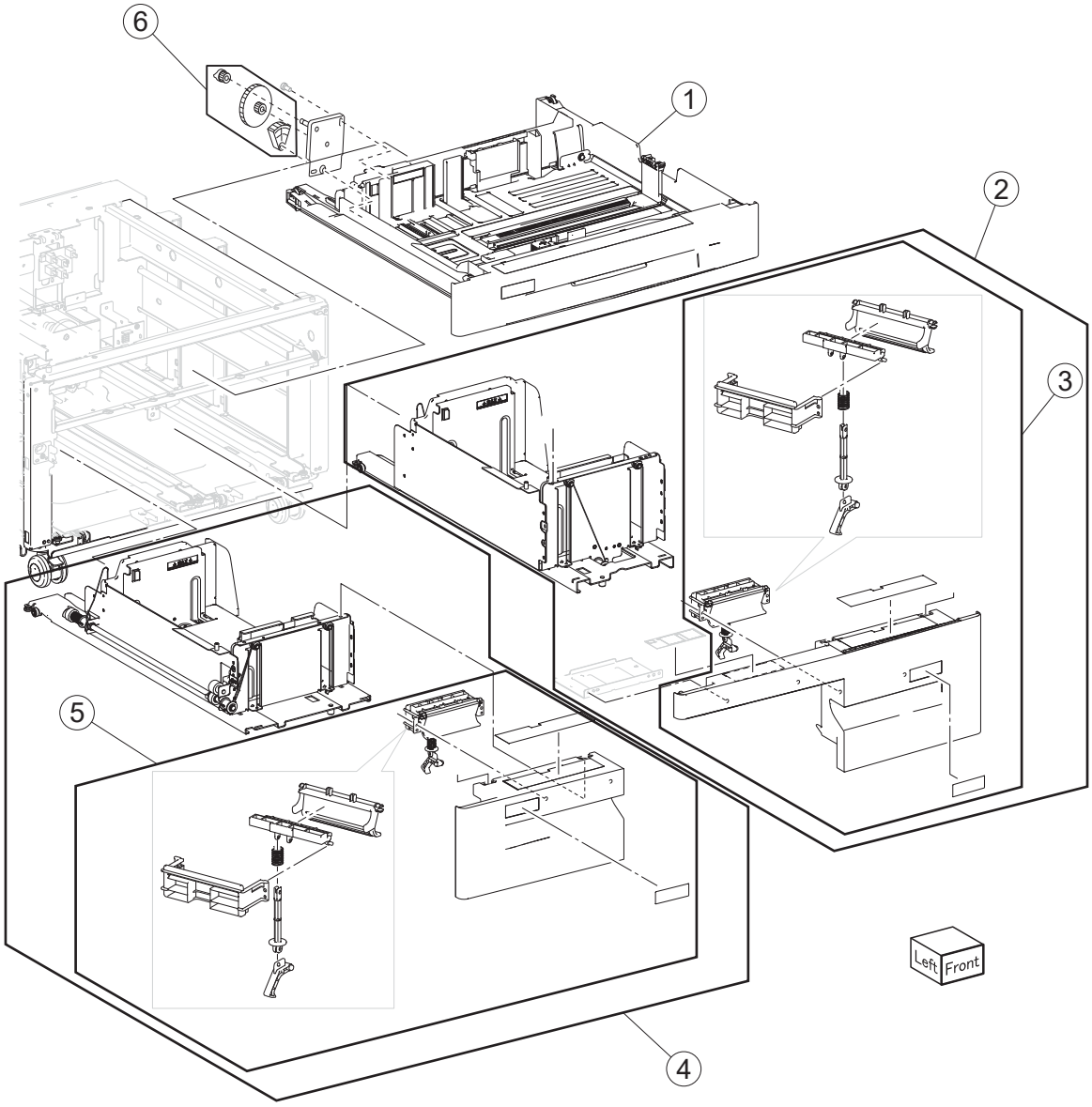
Asm-index	Part number	Units/ mach	Units/ FRU	Description
33-1	40X6678	1	1	3TM left door
2	40X6701	1	1	Tray module left door sensor cable
3	40X6700	2	1	Sensor (tray module left door interlock)

Assembly 34: Tray module covers 2



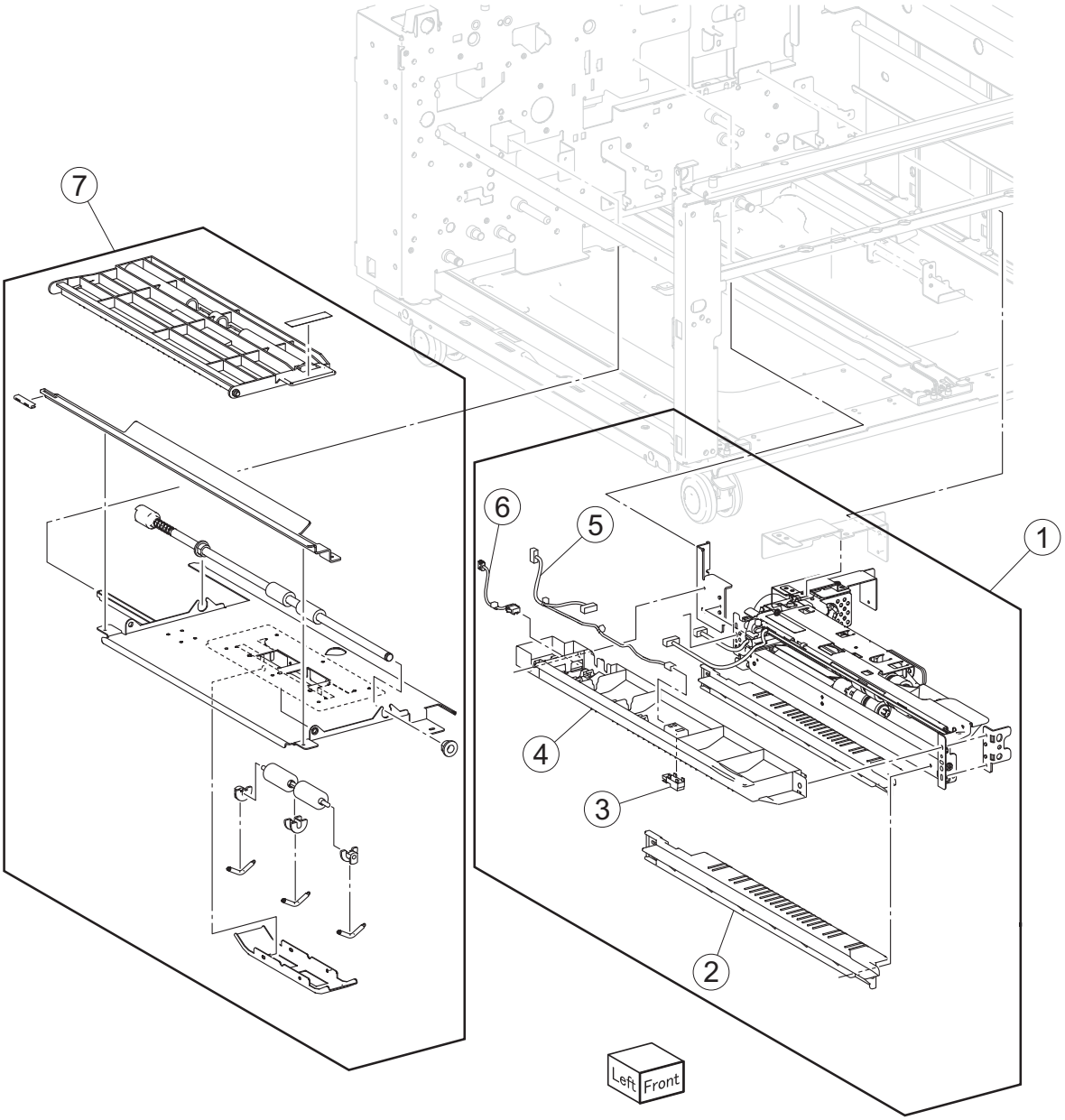
Asm-index	Part number	Units/ mach	Units/ FRU	Description
34-1	40X6683	6	2	Docking screw
2	40X6688	3	1	Tray module top cover
3	40X6689	2	1	Tray module bottom cover
4	40X6690	3	1	Tray module left cover
5	40X6685	6	1	1TM/TTM/3TM locking caster
6	40X6583	12	1	1TM/TTM/3TM caster screw
7	40X6681	3	1	1TM/TTM/3TM foot side cover
8	40X6680	6	1	1TM/TTM/3TM adjuster foot
9	40X6686	6	1	1TM/TTM/3TM non-locking caster
10	40X6682	3	1	1TM/TTM/3TM foot rear cover
11	40X6687	3	1	Tray module rear cover
12	40X6691	3	1	Tray module right cover
13	40X6684	3	1	1TM/TTM/3TM docking bracket

Assembly 35: TTM trays



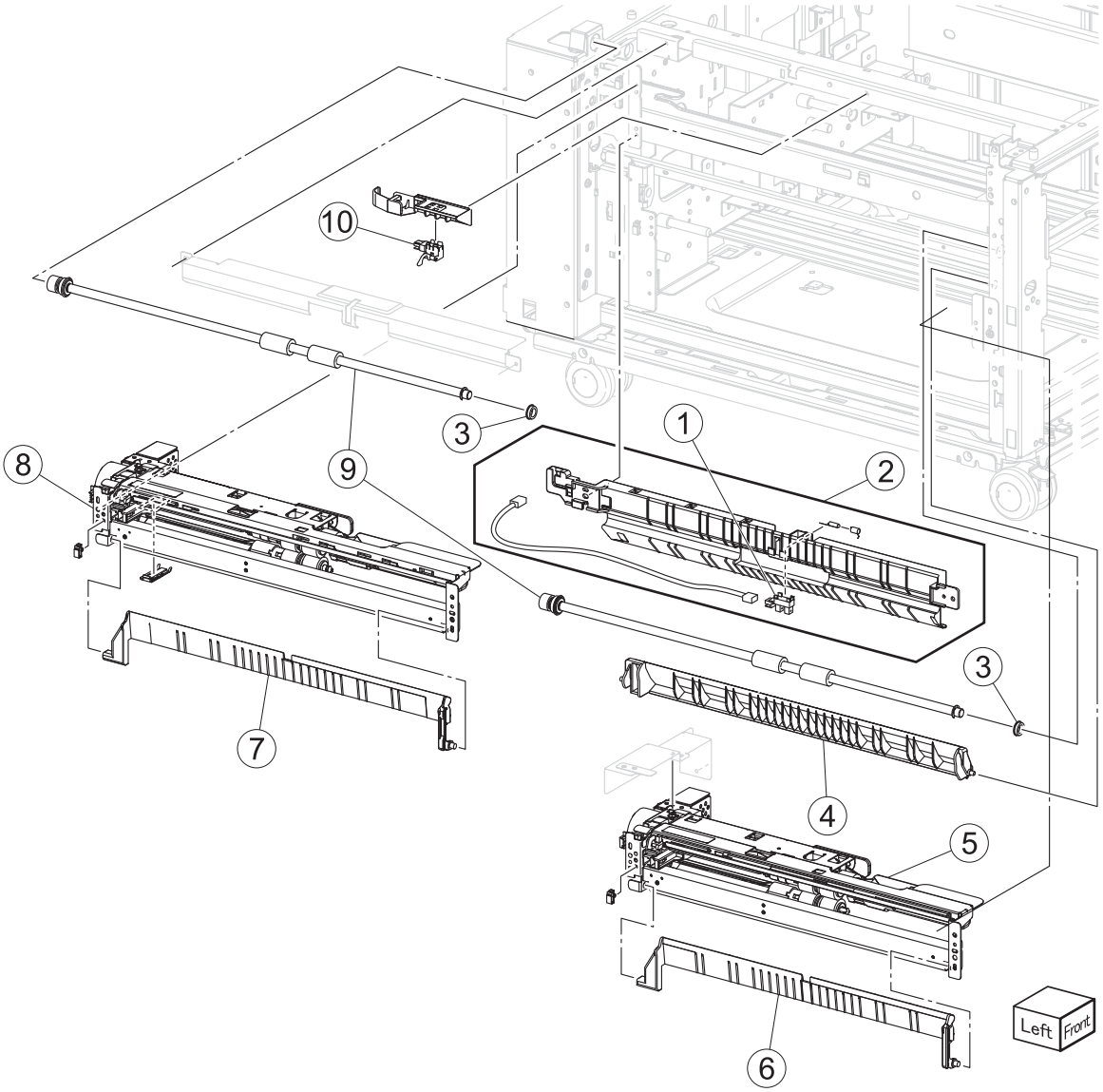
Asm-index	Part number	Units/ mach	Units/ FRU	Description
35-1	40X6665	3	1	Tray module media tray
2	40X6698	1	1	TTM tray 4 media tray
3	40X6693	1	1	TTM tray 4 media tray cover
4	40X6694	1	1	TTM tray 3 media tray
5	40X6695	1	1	TTM tray 3 media tray cover
6	40X0580	2	3	Media tray lift gear kit includes: • Tray lift coupling gear 13T • Tray lift gear 13/60T • Tray lift sector gear 12T

Assembly 36: TTM media feed 1



Asm-index	Part number	Units/ mach	Units/ FRU	Description
36-1	40X6696	1	1	TTM tray 4 media feeder
2	40X6834	1	1	TTM tray 4 feeder lower guide
3	40X0727	1	1	Sensor (TTM tray 4 feedout)
4	40X6871	1	1	TTM tray 4 feeder upper guide
5	40X6883	1	1	TTM tray 4 feeder sensor cable
6	40X6896	1	1	TTM tray 4 feeder motor cable
7	40X6697	1	1	TTM tray 4 media transport

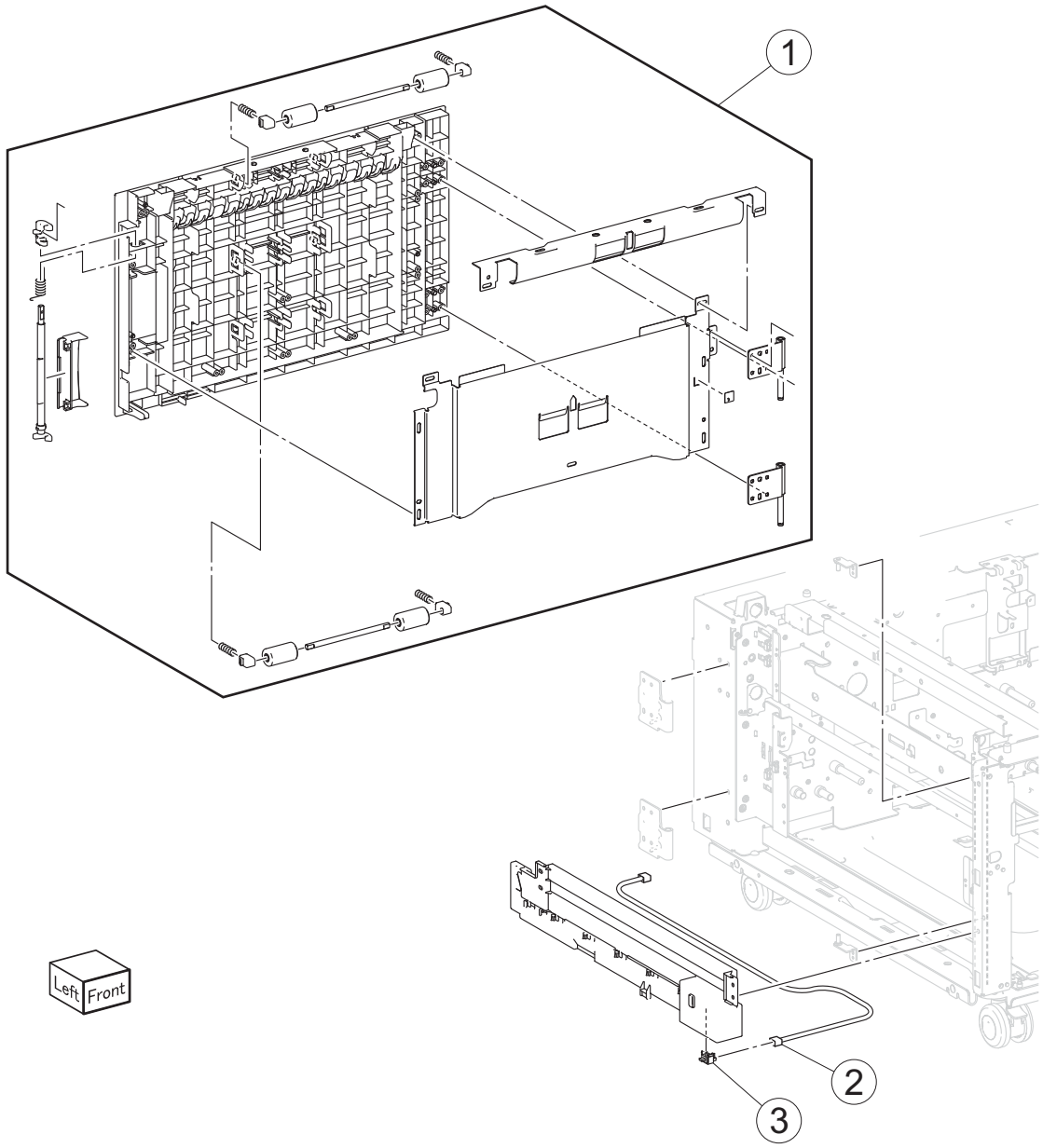
Assembly 37: TTM media feed 2



Assembly 37: TTM media feed 2

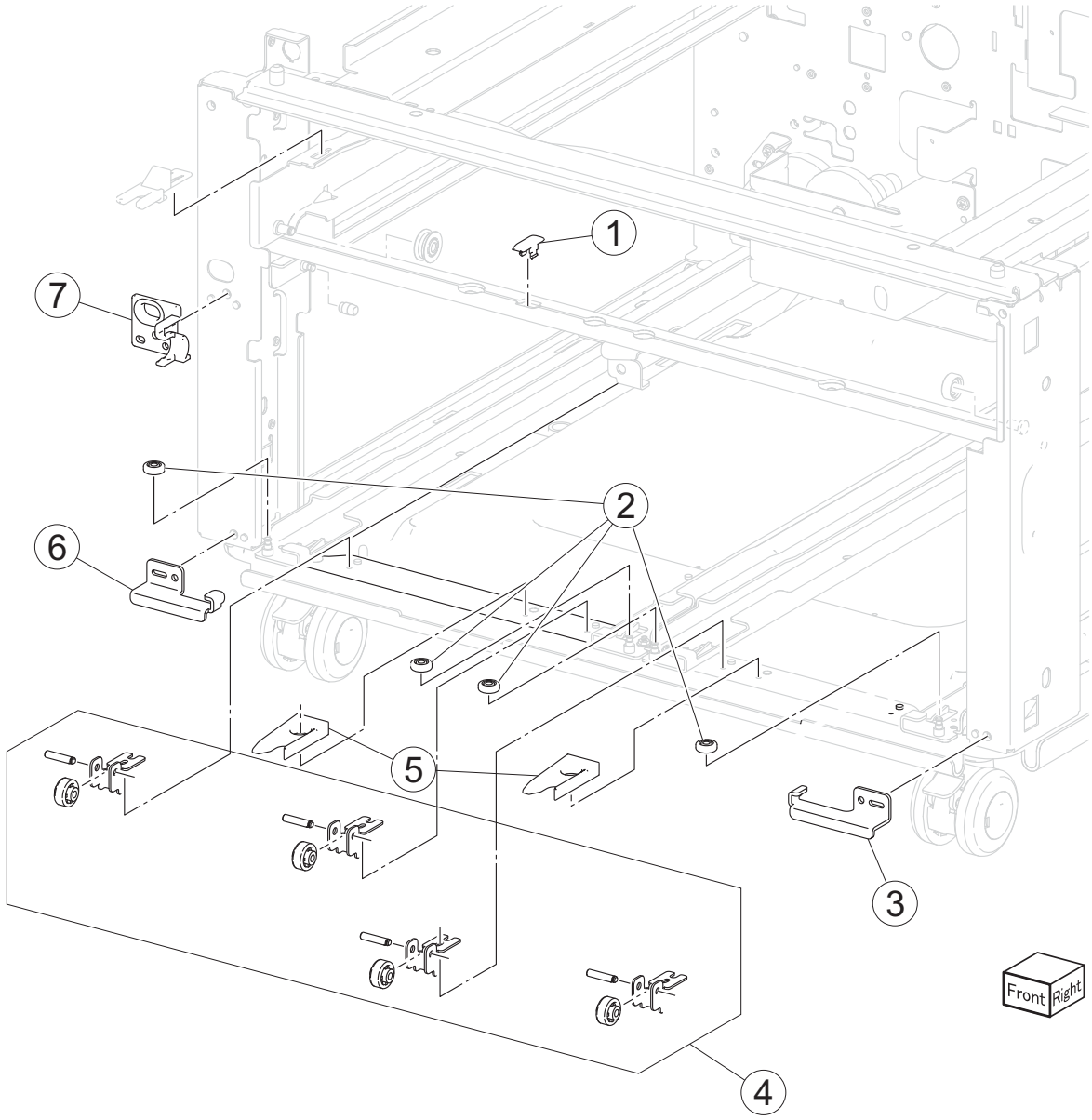
Asm-index	Part number	Units/ mach	Units/ FRU	Description
37-1	40X0588	1	1	Sensor (TTM tray 2 feed out)
2	40X7334	1	1	TTM Tray 2 feed out guide
3	40X3915	7	1	Bearing
4	40X7341	1	1	TTM tray 4 media turn guide
5	40X7340	1	1	TTM tray 3 feeder
6	40X6699	1	1	TTM tray 3 media turn guide
7	40X6663	3	1	1TM/3TM/TTM media turn guide
8	40X6662	3	1	3TM/TTM media feeder
9	40X6677	6	1	Tray module transport roller
10	40X6676	1	1	Sensor (Tray module feedout)

Assembly 38: TTM left door



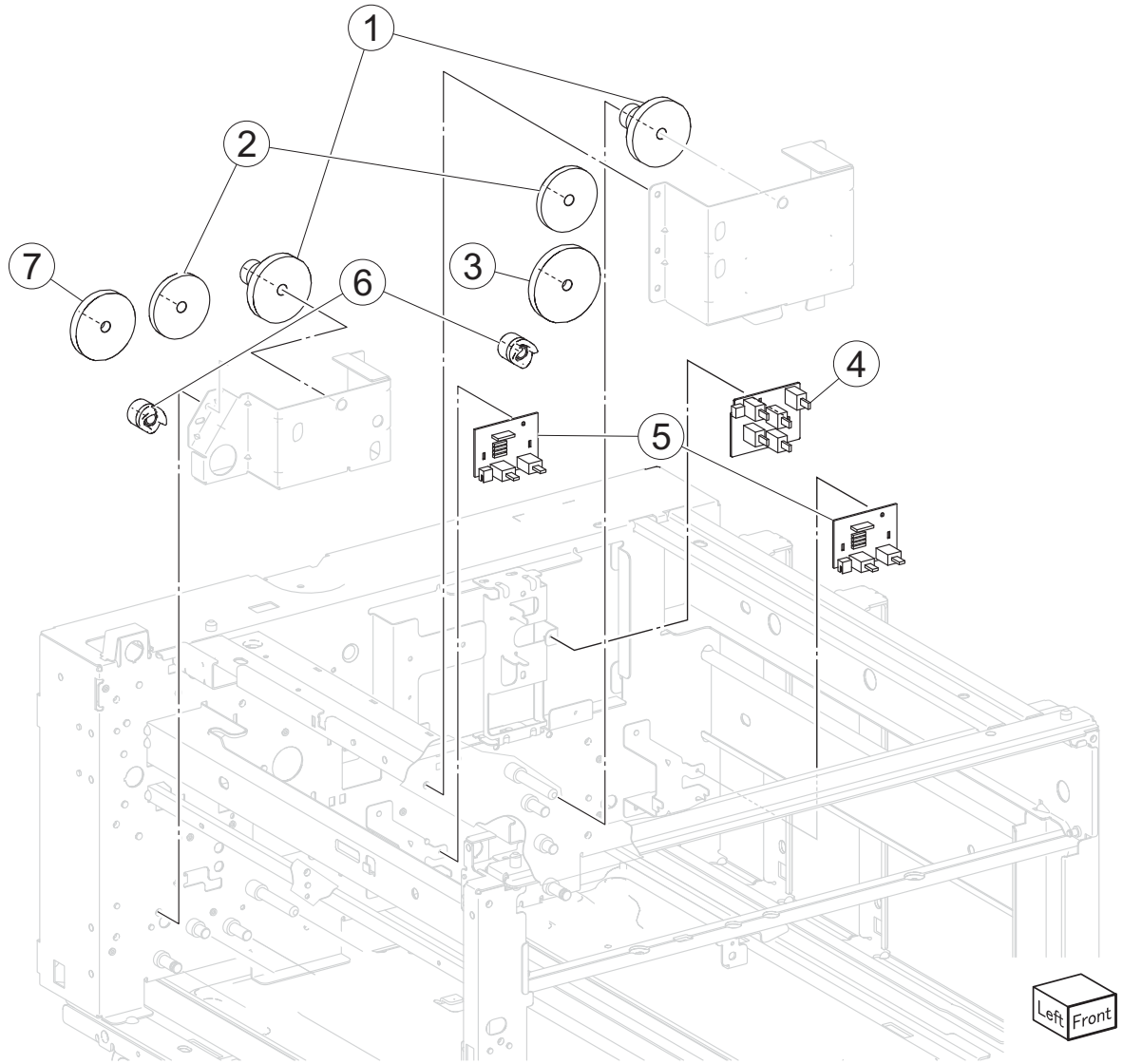
Asm-index	Part number	Units/ mach	Units/ FRU	Description
38-1	40X6702	1	1	TTM left door
2	40X6701	1	1	Tray module left door sensor cable
3	40X6700	2	1	Sensor (tray module left door interlock)

Assembly 39: TTM tray support



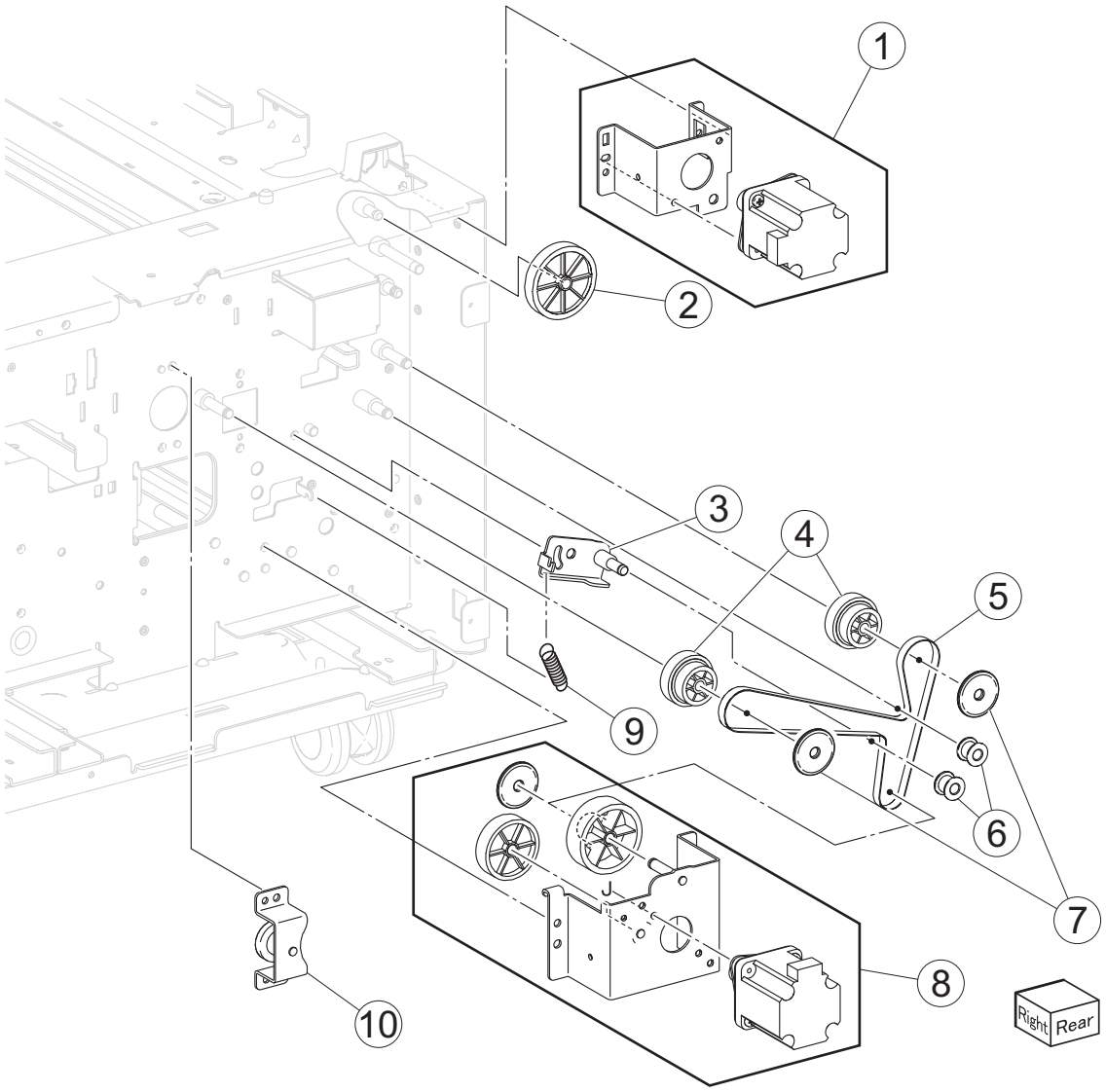
Asm-index	Part number	Units/ mach	Units/ FRU	Description
39-1	40X7342	1	1	TTM tray spacer
2	40X7344	4	1	TTM tray side roller
3	40X7347	1	1	TTM tray 4 lock
4	40X7343	4	1	TTM tray 3/4 tray roller
5	40X7348	2	1	TTM tray 3/4 stopper
6	40X7346	1	1	TTM tray 3 lock
7	40X7345	1	1	TTM upper stopper

Assembly 40: TTM drive 1



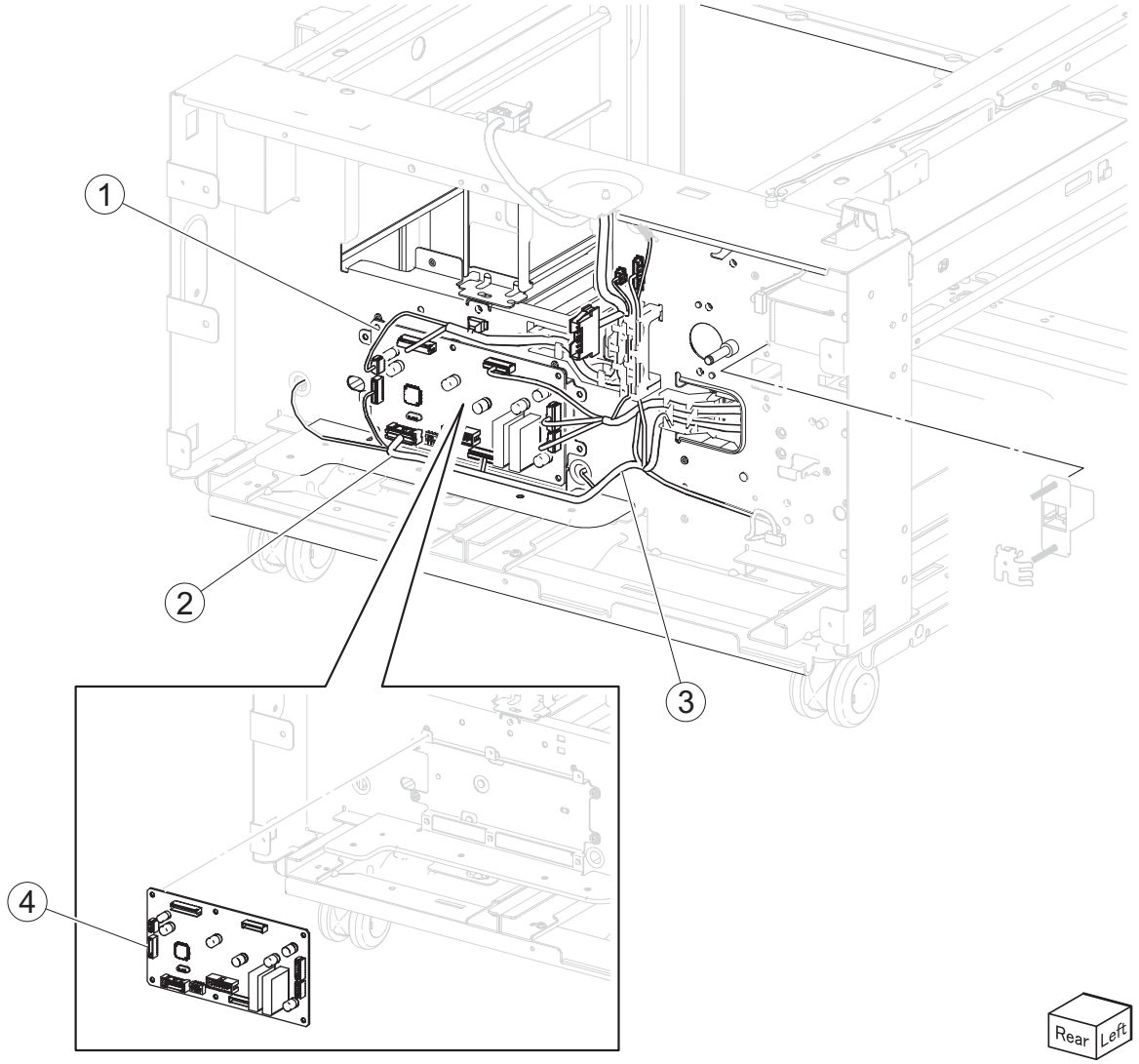
Asm-index	Part number	Units/ mach	Units/ FRU	Description
40-1	40X7350	2	1	TTM gear 17T/50T
2	40X7351	2	1	TTM gear 16T/48T
3	40X7352	1	1	TTM gear 57T
4	40X7533	6	1	Media size switch PCB
5	40X0729	2	1	Sensor (TTM media size)
6	40X7353	2	1	Coupler
7	40X7354	1		TTM gear 51T

Assembly 41: TTM drive 2



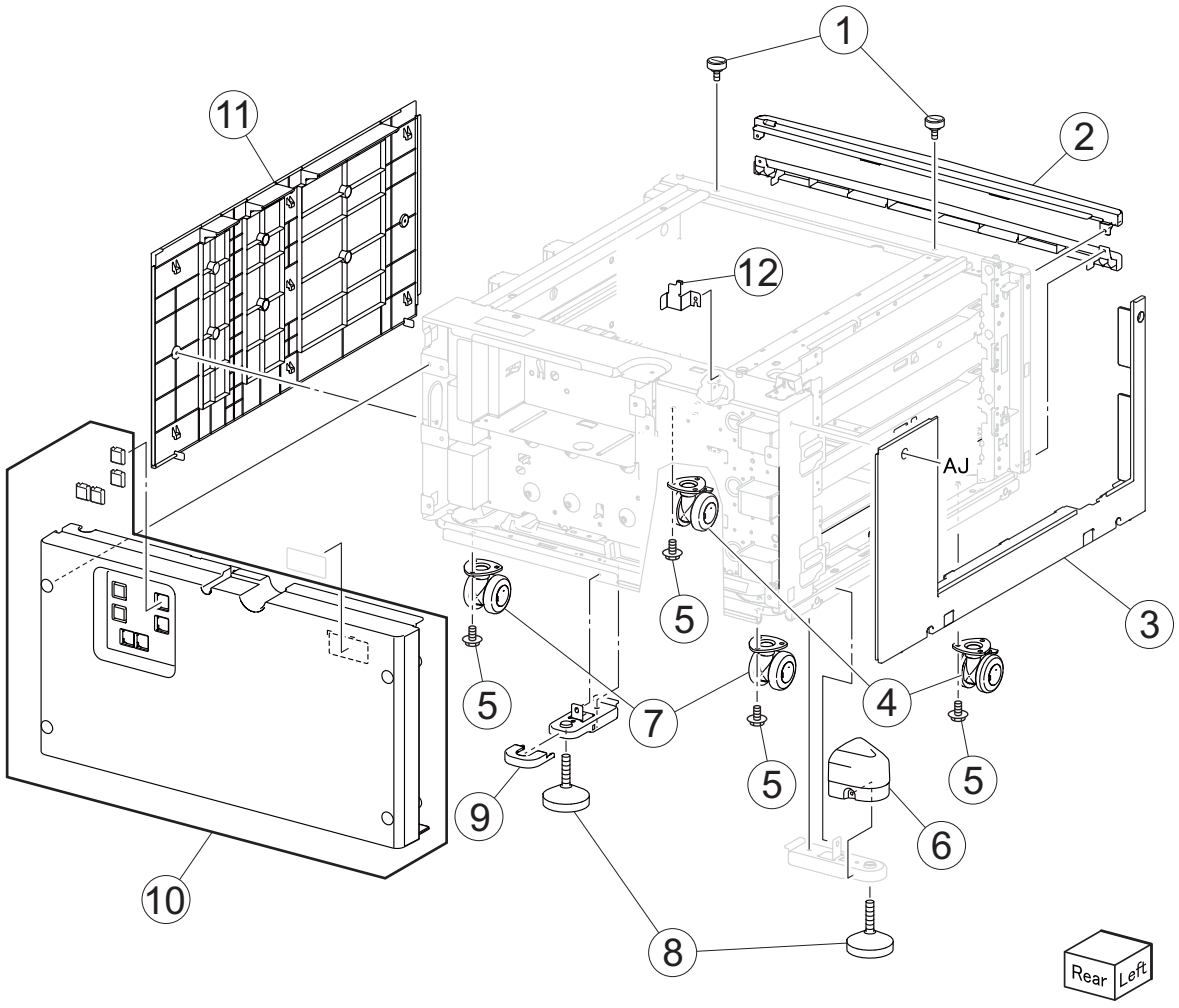
Asm-index	Part number	Units/ mach	Units/ FRU	Description
41-1	40X6704	1	1	TTM upper transport motor
2	40X7355	1	1	TTM gear 52T
3	40X7361	1	1	TTM tension bracket
4	40X7357	1	1	TTM drive gear
5	40X7359	1	1	TTM drive belt
6	40X7358	1	1	TTM idler pulley
7	40X7356	1	1	TTM drive flange
8	40X6703	1	1	TTM lower transport motor
9	40X7360	1	1	Spring
10	40X7363	1	1	TTM tray 4 drive gear

Assembly 42: TTM cables



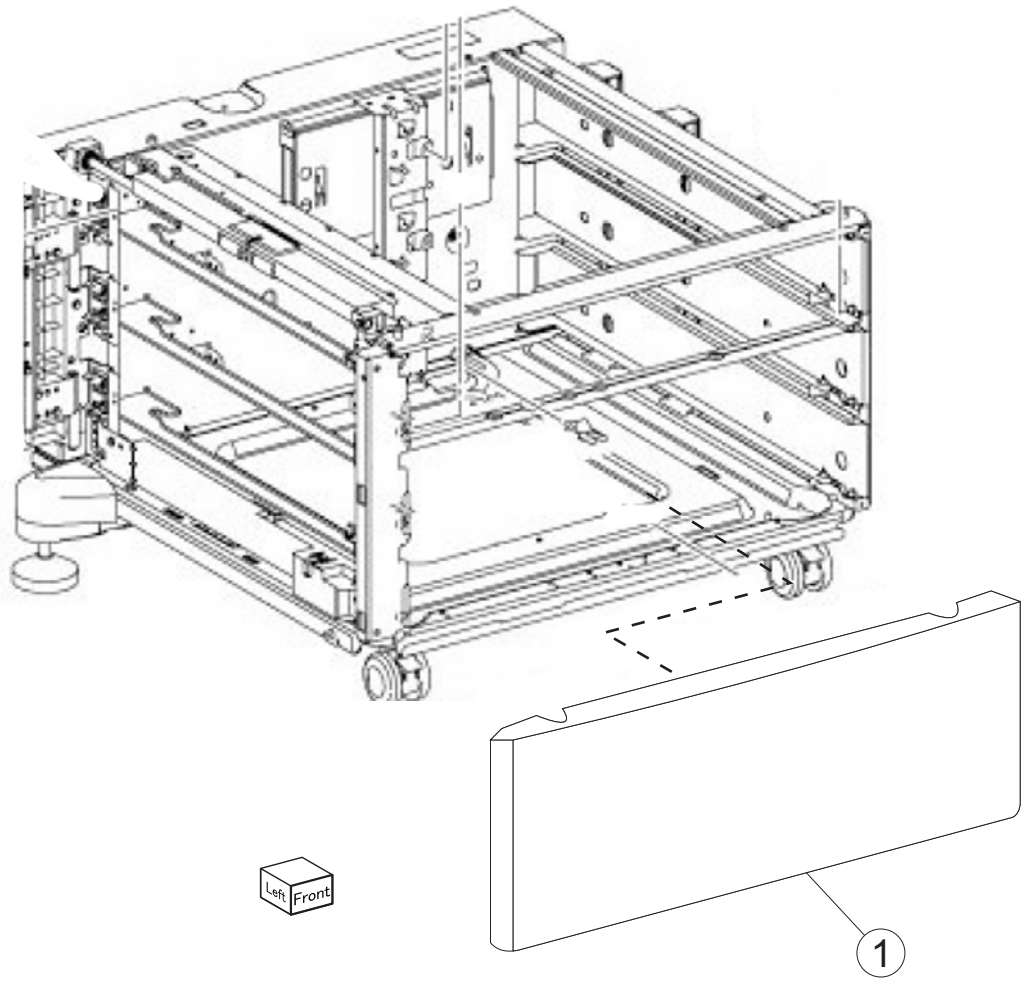
Asm-index	Part number	Units/ mach	Units/ FRU	Description
42-1	40X7366	1	1	TTM interface cable
2	40X7364	1	1	TTM sensor cable
3	40X7365	1	1	TTM motor cable
4	40X6667	3	1	1TM/3TM/TTM controller PCBA

Assembly 43: TTM covers



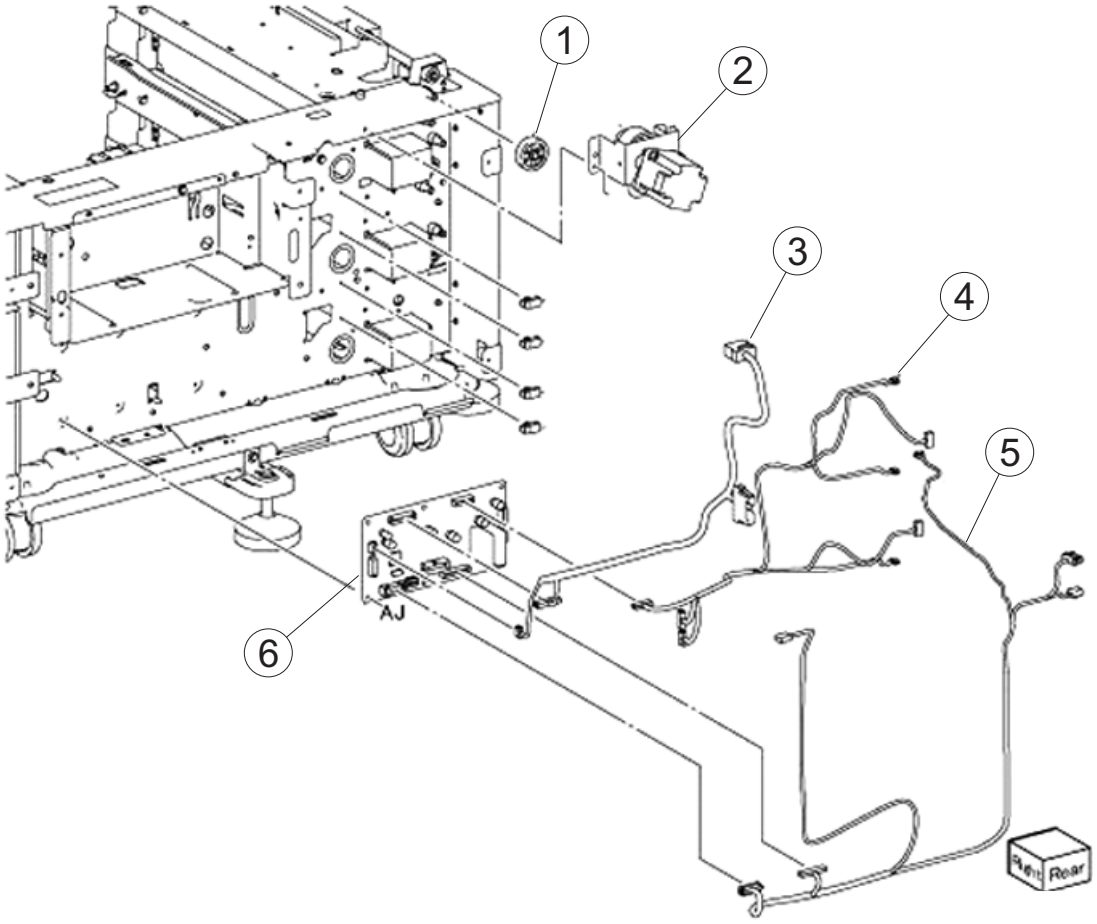
Asm-index	Part number	Units/ mach	Units/ FRU	Description
43-1	40X6683	6	2	Docking screw
2	40X6688	3	1	Tray module top cover
3	40X6690	3	1	Tray module left cover
4	40X6685	6	1	1TM/TTM/3TM locking caster
5	40X6583	12	1	1TM/TTM/3TM caster screw
6	40X6681	3	1	1TM/TTM/3TM foot side cover
7	40X6686	6	1	1TM/TTM/3TM non-locking caster
8	40X6680	6	1	1TM/TTM/3TM adjuster foot
9	40X6682	3	1	1TM/TTM/3TM foot rear cover
10	40X6687	3	1	Tray module rear cover
11	40X6691	3	1	Tray module right cover
12	40X6684	3	1	1TM/TTM/3TM docking bracket

Assembly 44: 1TM front cover



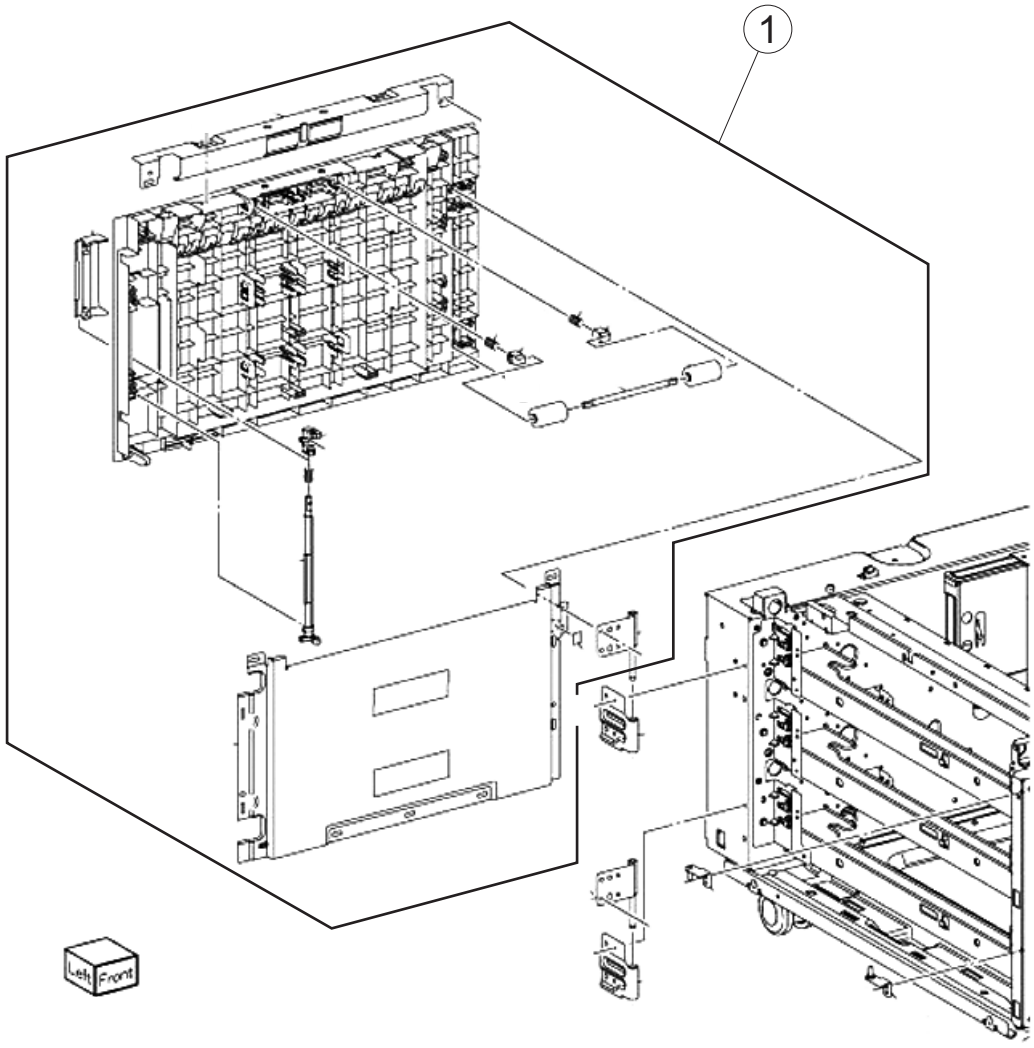
Asm-index	Part number	Units/ mach	Units/ FRU	Description
44-1	40X7367	1	1	1TM front cover

Assembly 45: 1TM cables



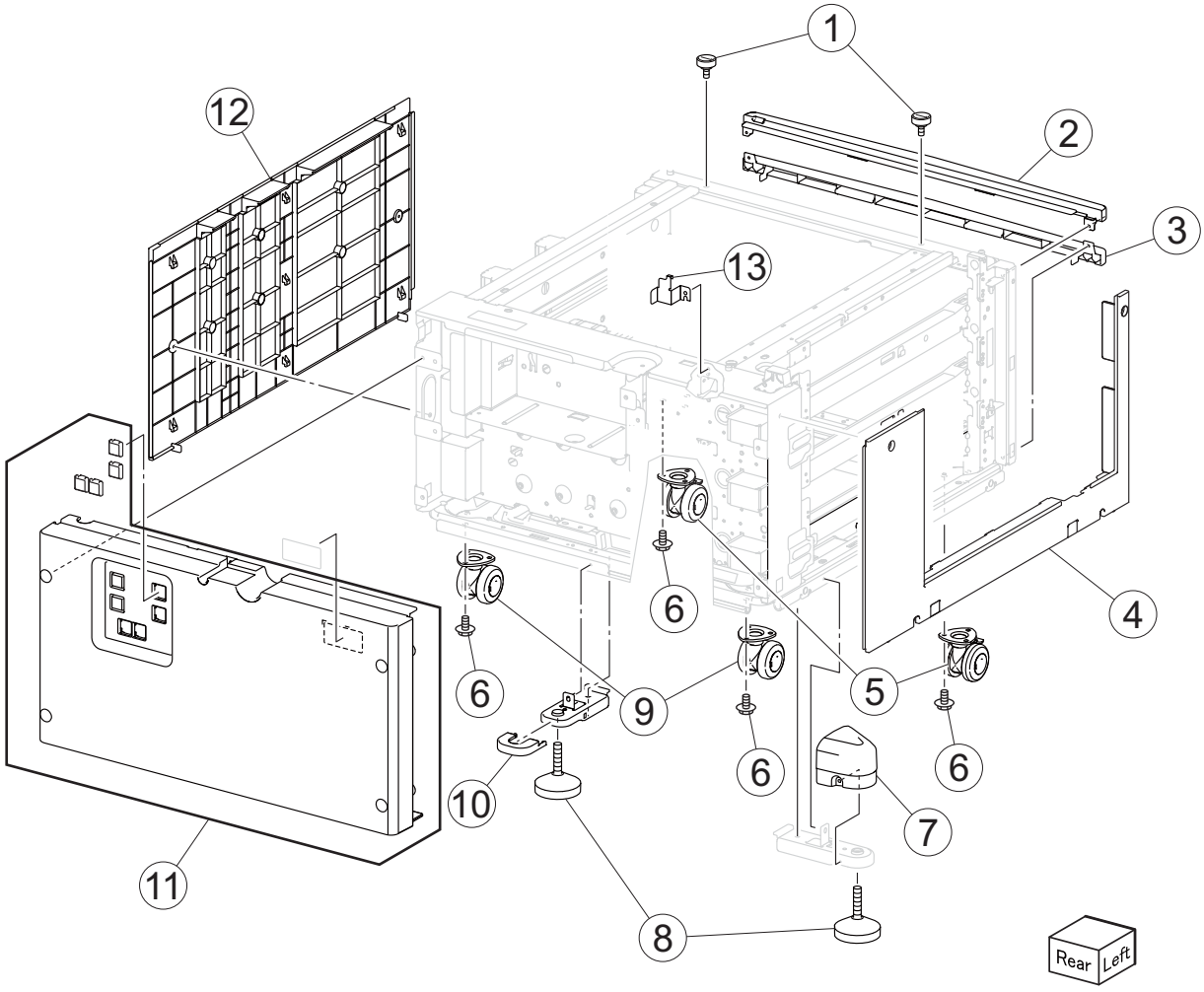
Asm-index	Part number	Units/ mach	Units/ FRU	Description
45-1	40X6668	1	1	3TM 34T gear
2	40X6674	2	1	Tray module upper transport motor
3	40X7370	1	1	1TM interface cable
4	40X7369	1	1	1TM motor cable
5	40X7368	1	1	1TTM sensor cable
6	40X6667	3	1	1TM/3TM/TTM controller PCBA

Assembly 46: 1TM left door



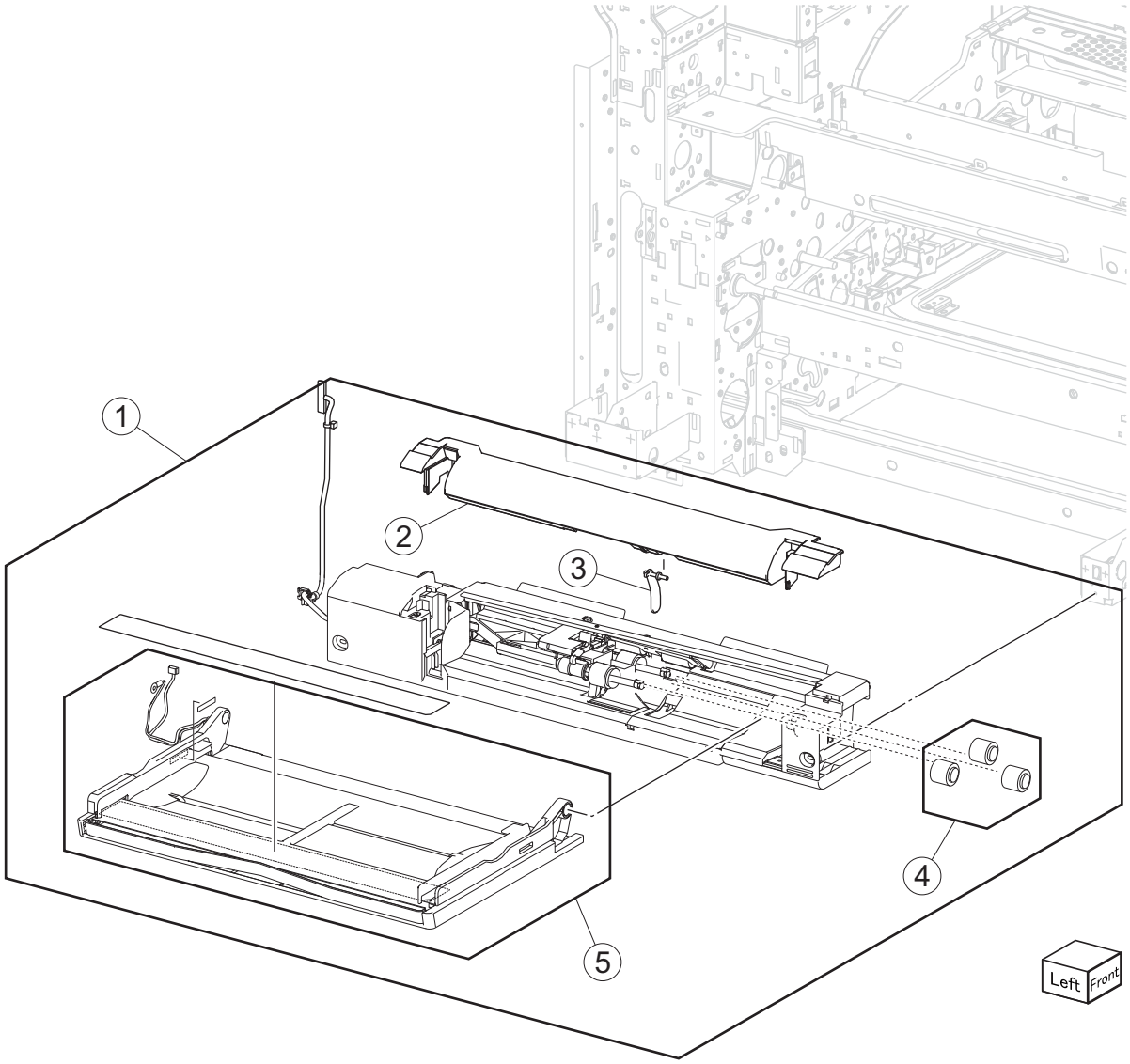
Asm-index	Part number	Units/ mach	Units/ FRU	Description
46-1	40X7371	1	1	1TM left door

Assembly 47: 1TM covers



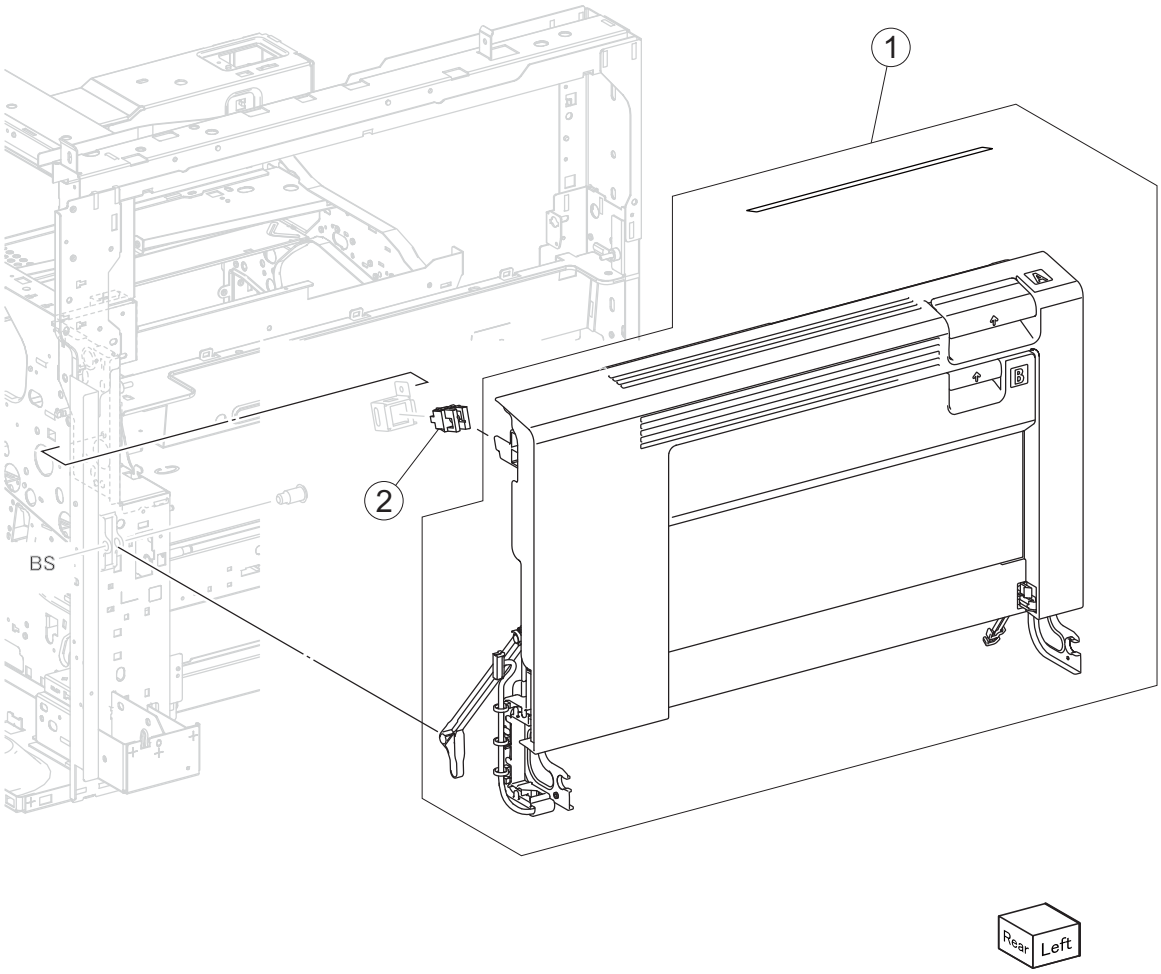
Asm-index	Part number	Units/ mach	Units/ FRU	Description
47-1	40X6683	6	2	Docking screw
2	40X6688	3	1	Tray module top cover
3	40X6689	2	1	Tray module bottom cover
4	40X6690	3	1	Tray module left cover
5	40X6685	6	1	1TM/TTM/3TM locking caster
6	40X6583	12	1	1TM/TTM/3TM caster screw
7	40X6681	3	1	1TM/TTM/3TM foot side cover
8	40X6680	6	1	1TM/TTM/3TM adjuster foot
9	40X6686	6	1	1TM/TTM/3TM non-locking caster
10	40X6682	3	1	1TM/TTM/3TM foot rear cover
11	40X6687	3	1	Tray module rear cover
12	40X6691	3	1	Tray module right cover
13	40X6684	3	1	1TM/TTM/3TM docking bracket

Assembly 48: MPF



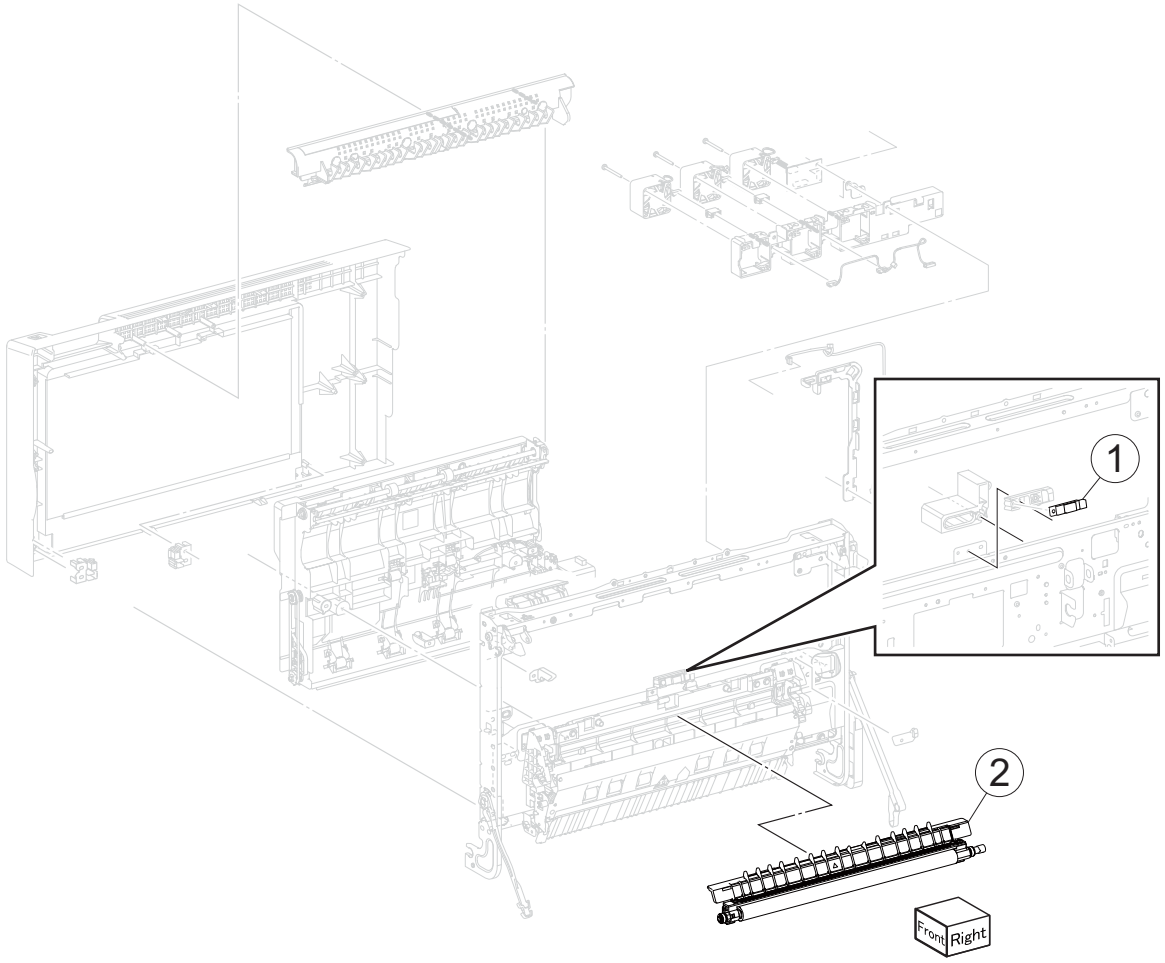
Asm-index	Part number	Units/ mach	Units/ FRU	Description
48-1	40X6707	1	1	MPF tray feeder
2	40X6708	1	1	MPF top cover
3	40X6709	1	1	MPF media present actuator
4	40X7534	1	1	MPF roller kit includes: • MPF pick roller • MPF feed roller • MPF separation roller
5	41X1313	1	1	MPF tray door

Assembly 49: Printer left duplex door



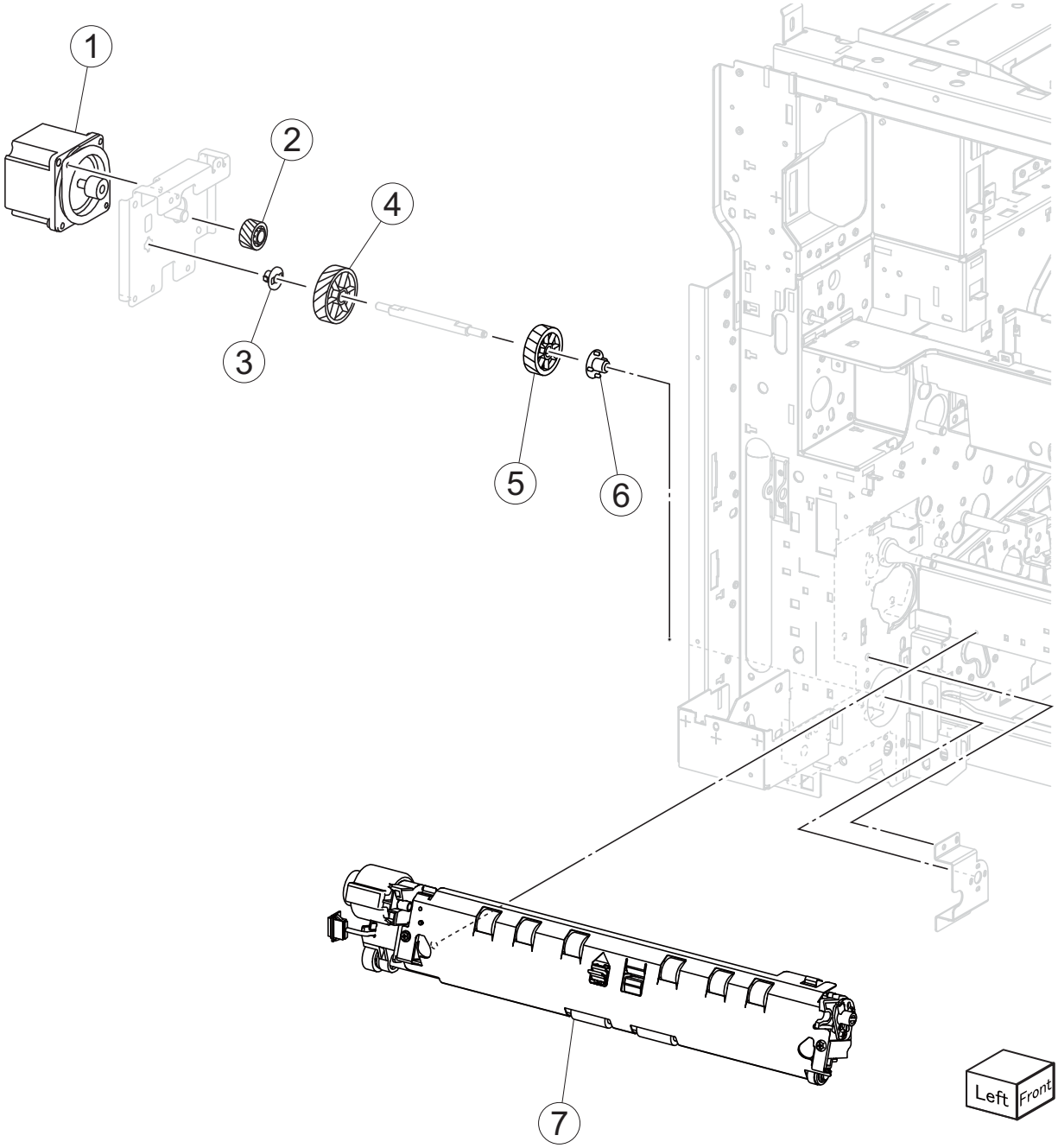
Asm-index	Part number	Units/ mach	Units/ FRU	Description
49-1	40X7372	1	1	Printer left duplex door assembly
2	40X6710	1	1	Sensor (printer left duplex door interlock)

Assembly 50: 2nd transfer roller



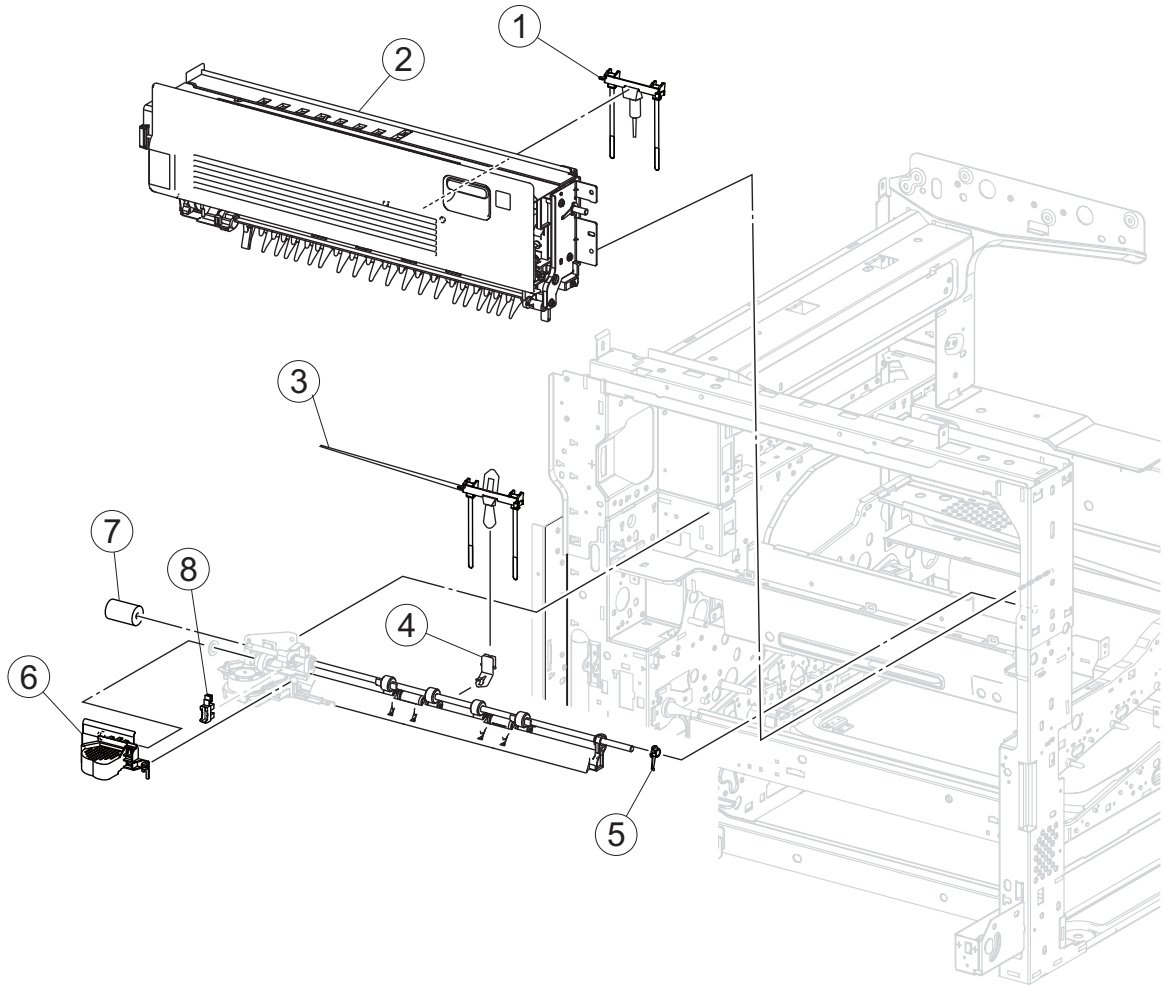
Asm-index	Part number	Units/ mach	Units/ FRU	Description
50-1	40X3703			Sensor (media on belt)
2	40X6712	1	1	2nd transfer roller

Assembly 51: Registration drive



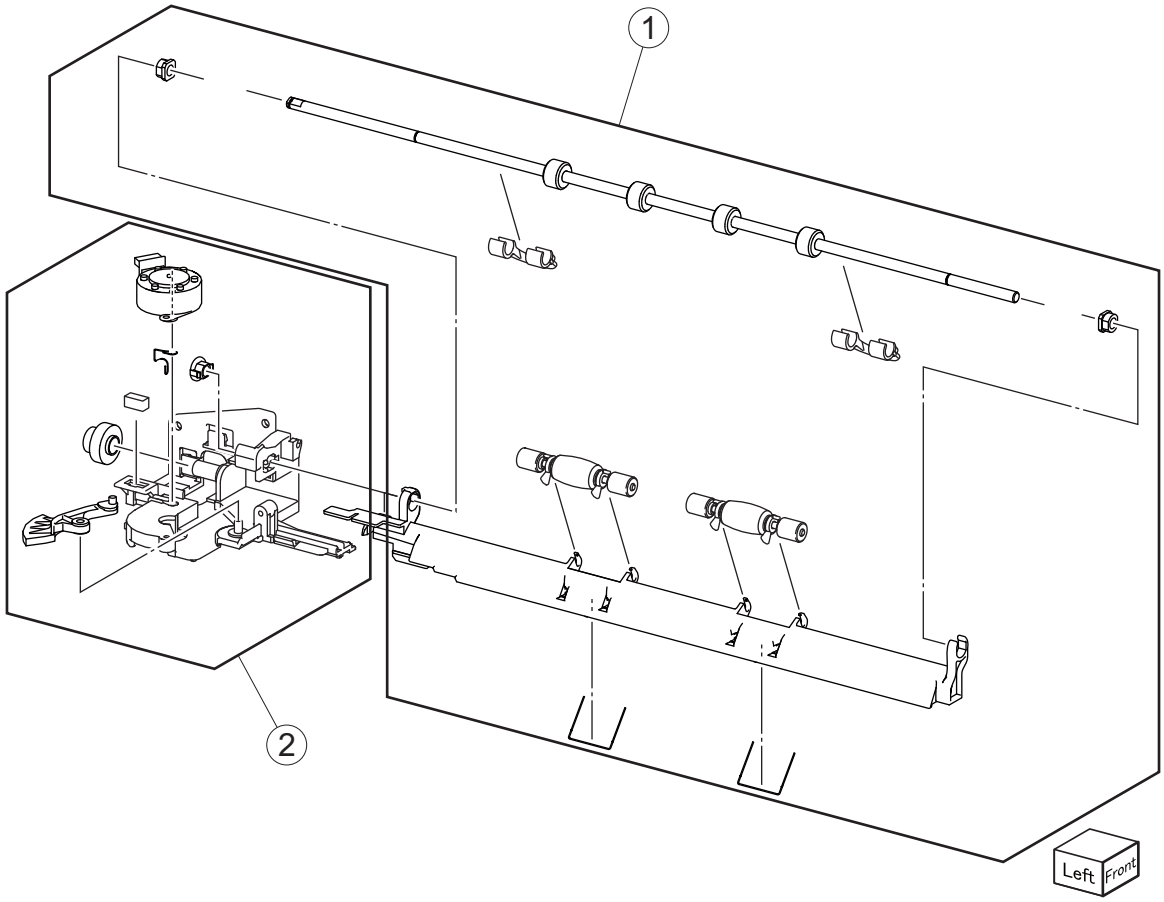
Asm-index	Part number	Units/ mach	Units/ FRU	Description
51-1	40X6716	1	1	Media transport/MPF drive motor
2	40X6718	1	1	Transport 29T gear
3	40X6717	1	1	Rear bushing
4	40X6719	1	1	Transport 60T gear
5	40X6713	1	1	Registration 40T gear
6	40X6714	1	1	Front bushing
7	40X6715	1	1	Registration/transport roller assembly

Assembly 52: Redrive 1



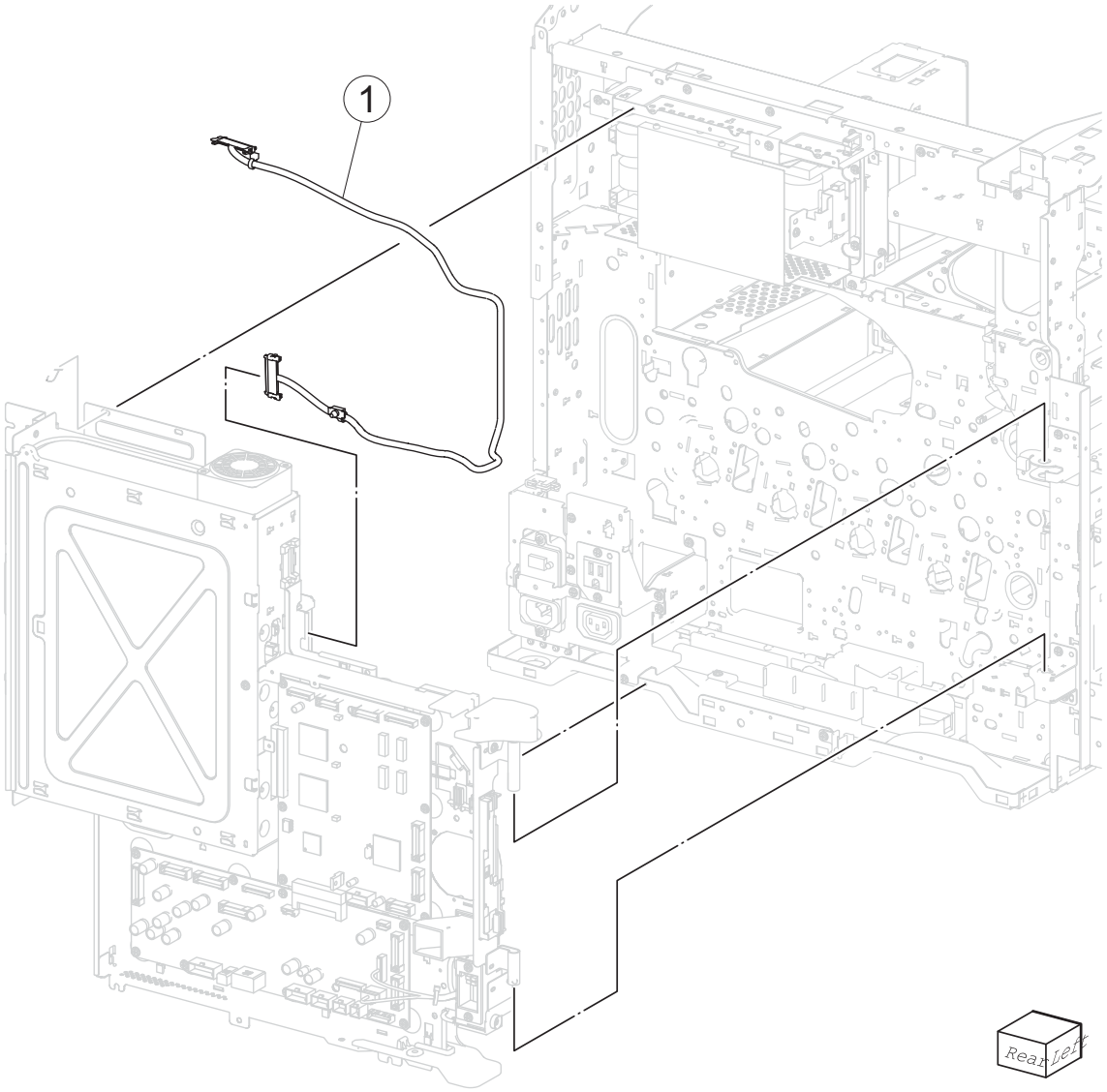
Asm-index	Part number	Units/ mach	Units/ FRU	Description
52-1	40X8361	1	1	Media bail (upper internal bin)
2	40X6723	1	1	Upper redrive assembly
3	40X6722	1	1	Media bail (standard bin)
4	40X6724	1	1	Lower redrive guard
5	40X6721	1	1	Lower redrive front bushing
6	40X7373	1	1	Plastic motor cover
7	40X6720	1	1	Lower redrive 19T gear
8	40X0588	17	1	Sensor (lower redrive shift HP)

Assembly 53: Redrive 2



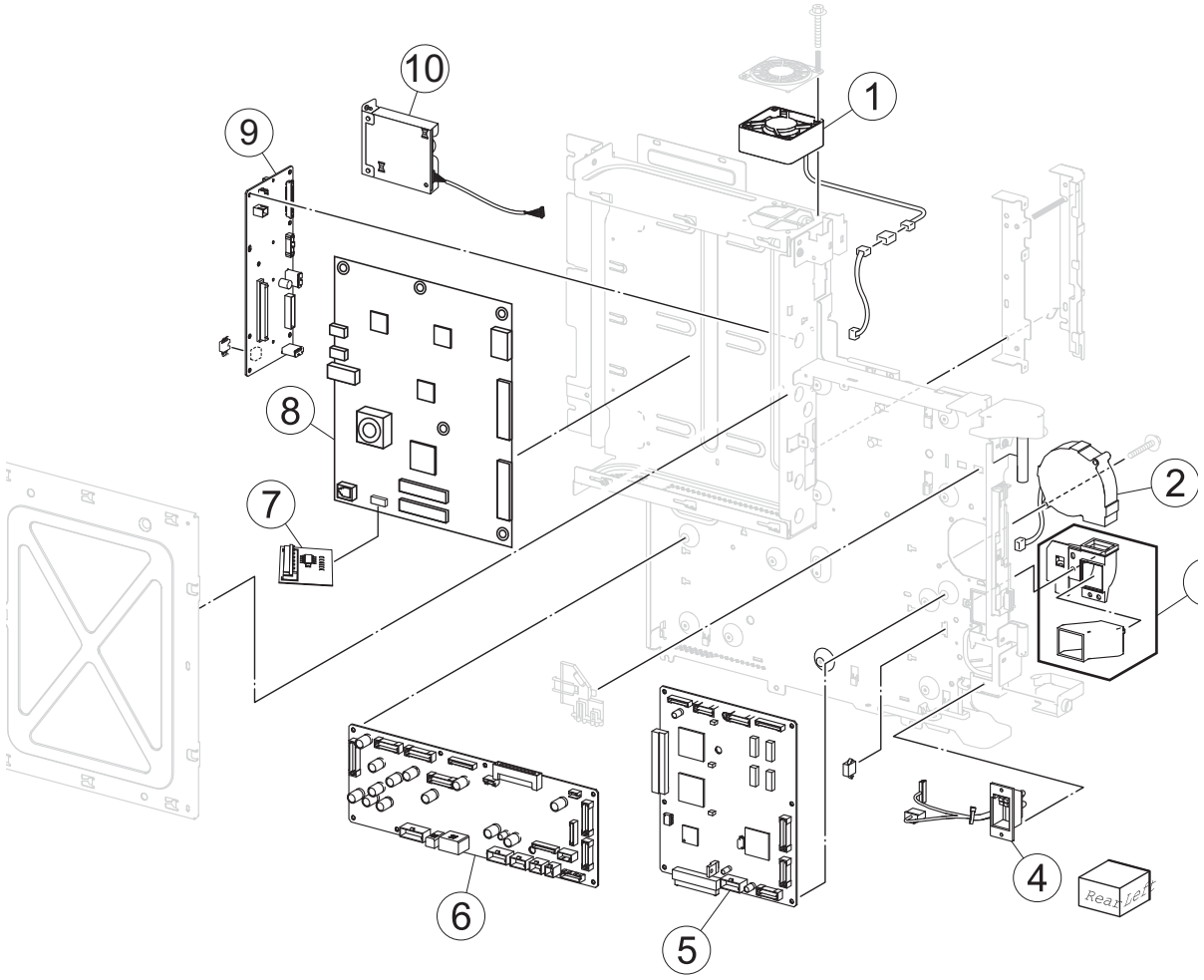
Asm-index	Part number	Units/ mach	Units/ FRU	Description
53-1	40X7472	1	1	Lower redrive shaft assembly
2	40X6725	1	1	Lower redrive shift motor assembly

Assembly 54: Scanner interface cable



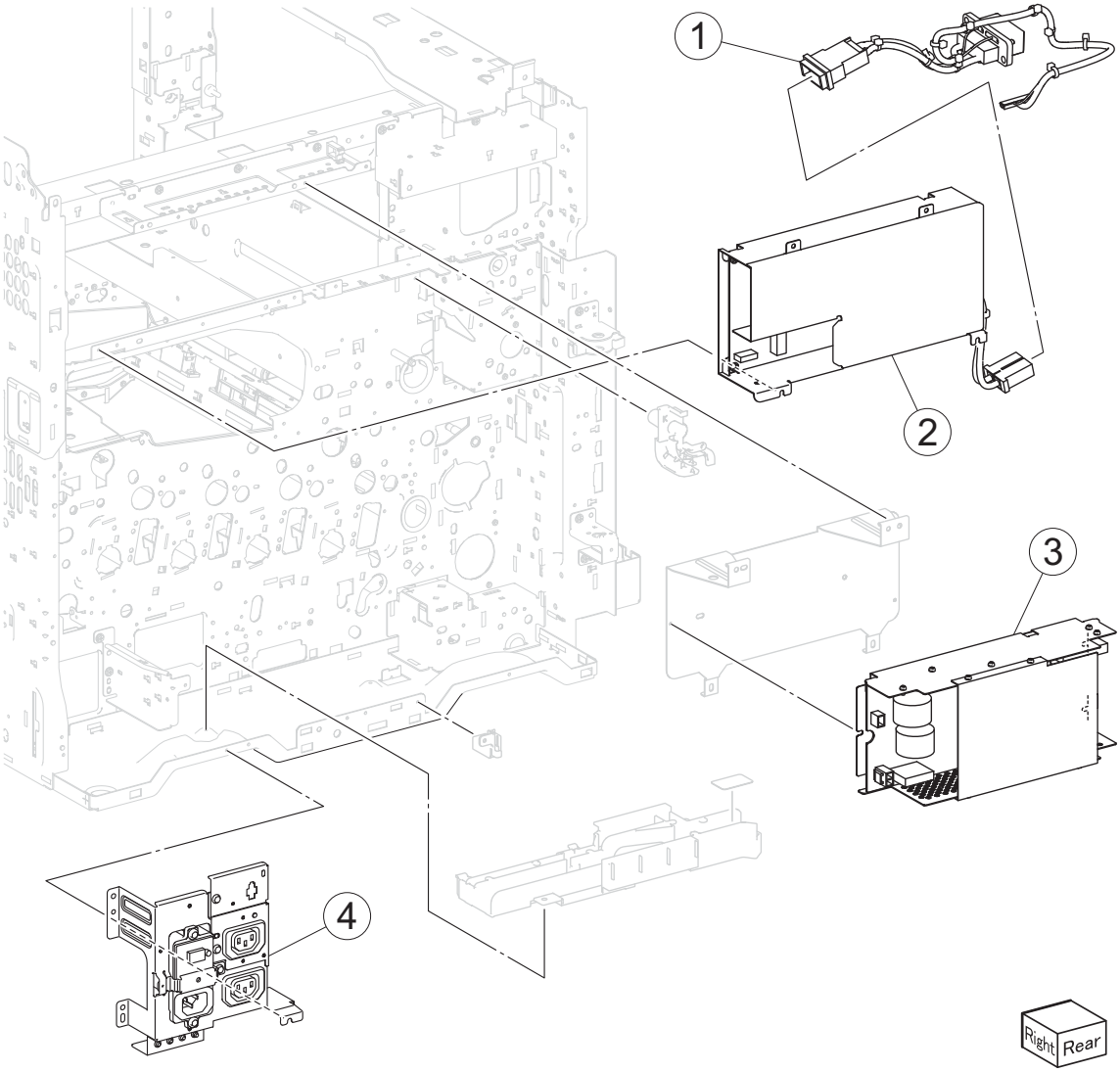
Asm-index	Part number	Units/ mach	Units/ FRU	Description
54-1	40X7468	1	1	Scanner interface cable

Assembly 55: Electrical 1



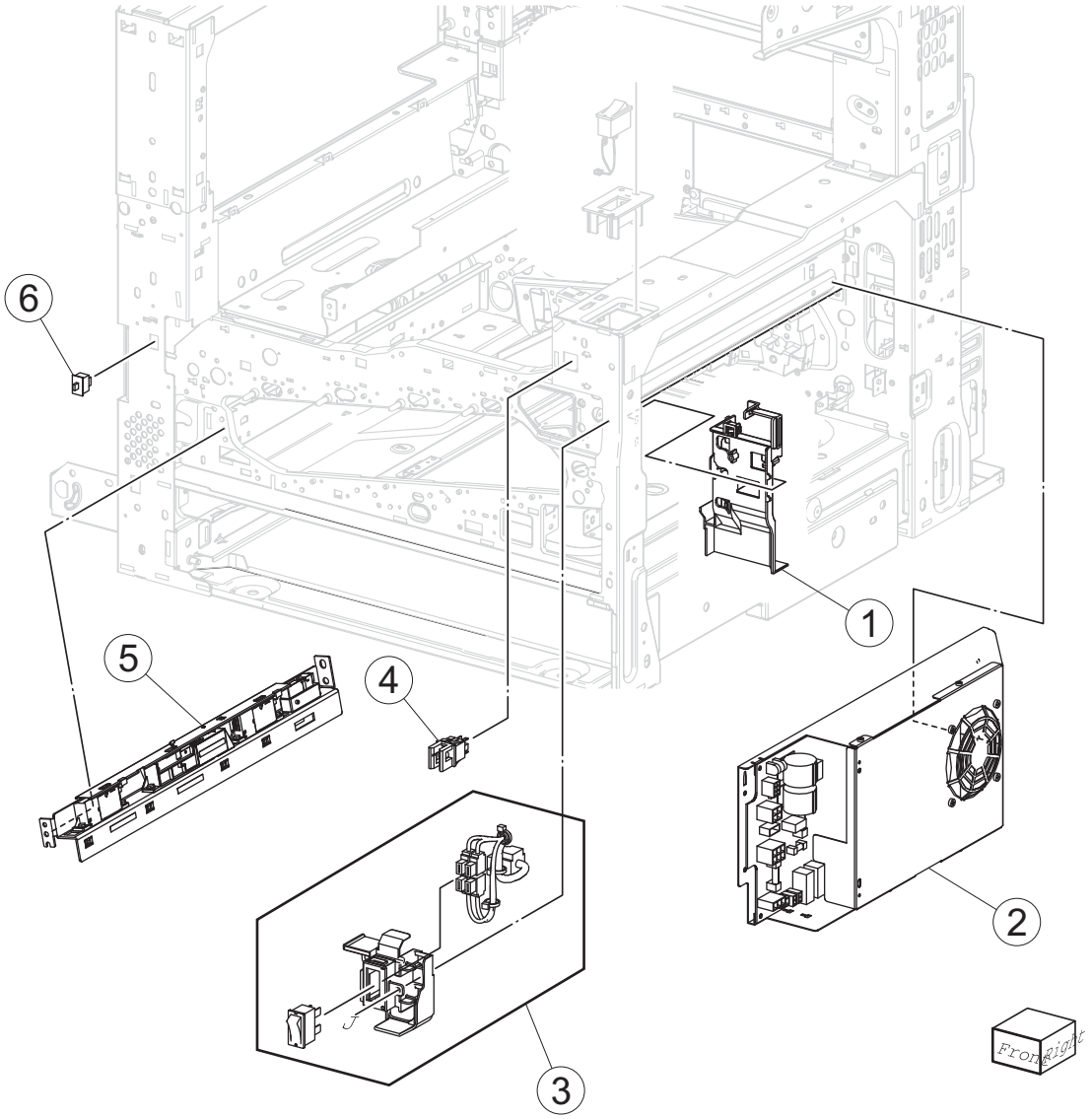
Asm-index	Part number	Units/ mach	Units/ FRU	Description
55-1	40X6728	1	1	Controller cooling fan
2	40X6729	1	1	Suction fan
3	40X6733	1	2	Suction fan duct
4	40X6732	1	1	HCF interface contact
5	40X6730	1	1	Upper printer engine PCBA **Warning:** Upon replacement, ensure that the NVM EPROM is removed from the defective PCBA and installed to the new PCBA or damage to the machine may occur. For more details, go to **"Upper engine PCBA reinstallation" on page 4-194**.
6	40X6731	1	1	Lower engine PCBA
7	40X6091	1	1	NVRAM card
8	40X7500	1	1	RIP card PCBA (MFP)
9	40X6726	1	1	Bridge PCBA (MFP)
10	40X7055	1	1	Fax card

Assembly 56: Electrical 2



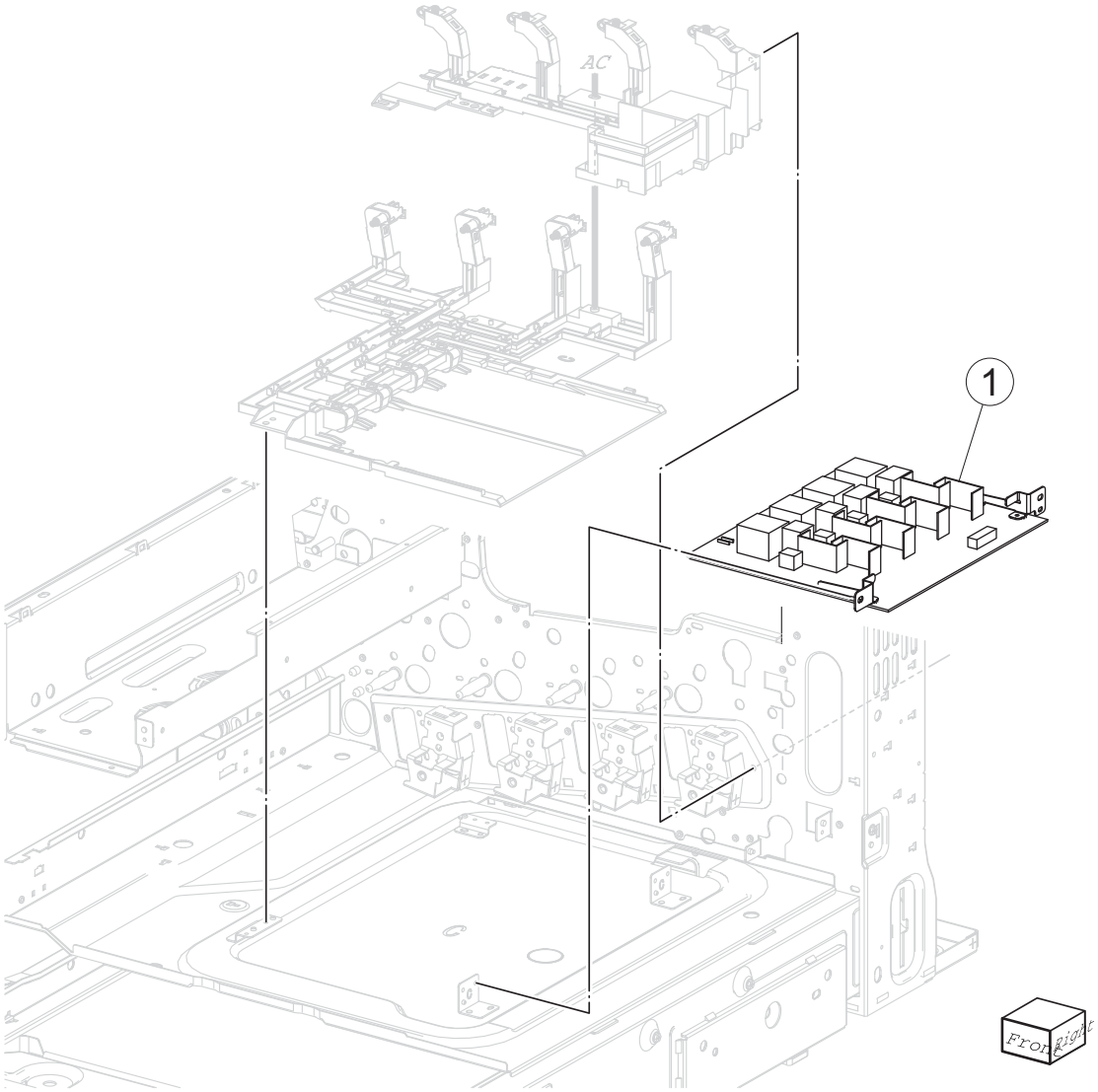
Asm-index	Part number	Units/ mach	Units/ FRU	Description
56-1	40X6736	1	1	Fuser power contact 110V
1	40X7376	1	1	Fuser power contact 220V
2	40X6735	1	1	Fuser driver PCBA 110V
2	40X7375	1	1	Fuser driver PCBA 220V
3	40X6737	1	1	Sub LVPS PCBA
4	40X6734	1	1	Main power GFI interface 110V
4	40X7374			Main power GFI interface 220V

Assembly 57: Electrical 3



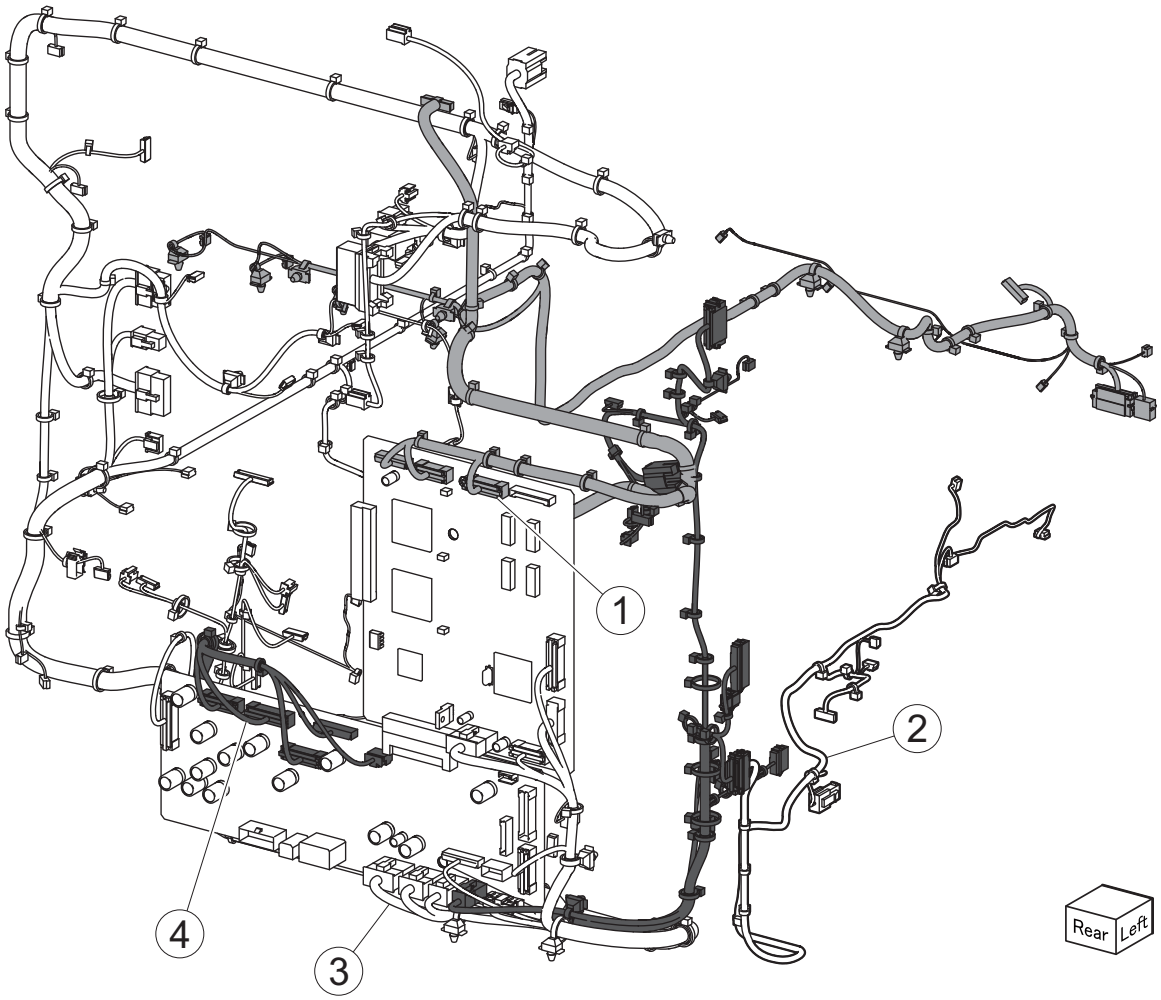
Asm-index	Part number	Units/ mach	Units/ FRU	Description
57-1	40X6739	1	1	LVPS front fan guide
2	40X6762	1	1	LVPS PCBA
3	40X6738	1	1	Main power switch
4	40X6710	1	1	Sensor (printer right front door interlock)
5	40X6740	1	1	Sensor (Image calibration)
6	40X6761	1	1	Front door sensor

Assembly 58: Electrical 4



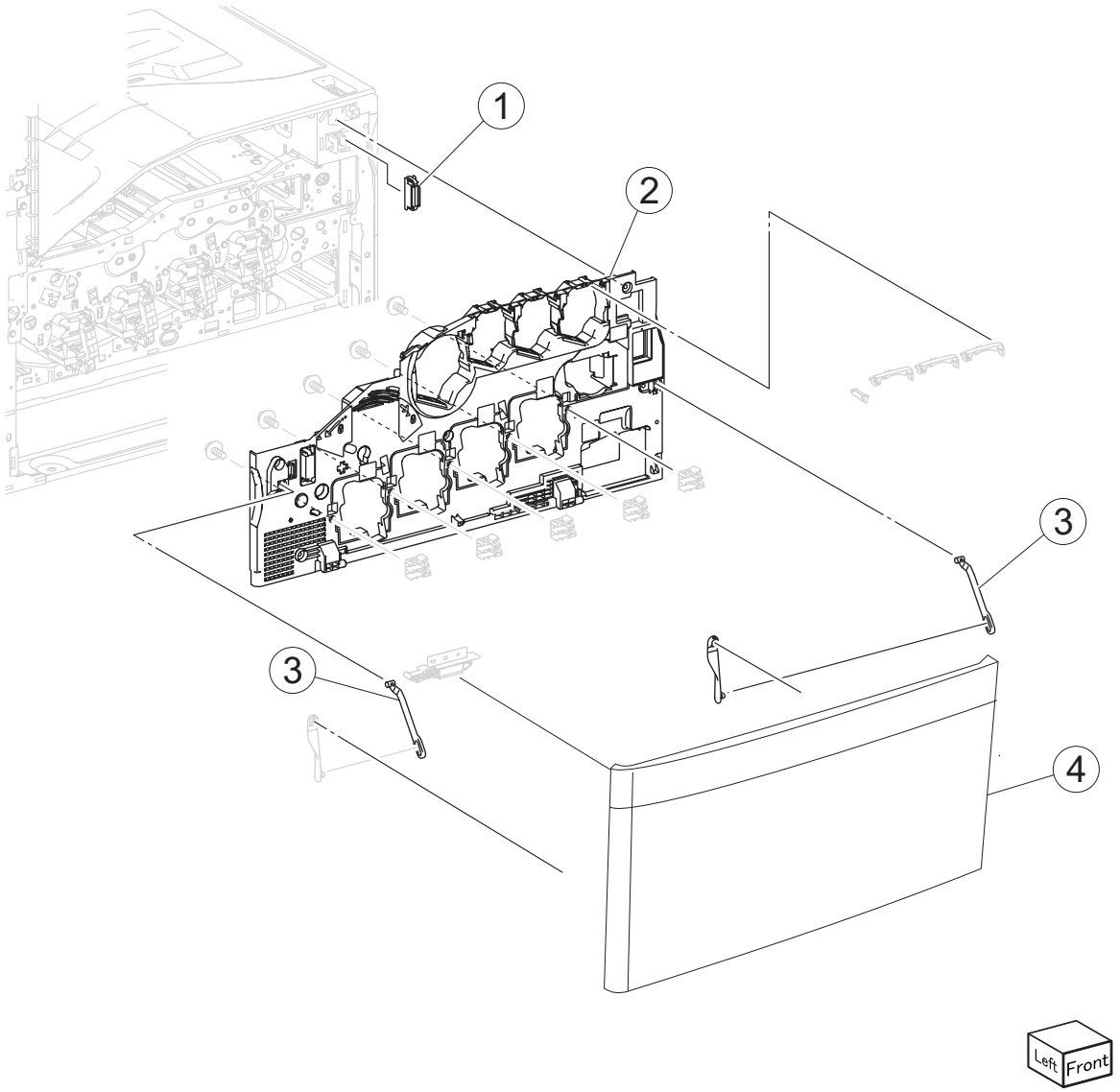
Asm-index	Part number	Units/ mach	Units/ FRU	Description
58-1	40X6763	1	1	Charge roll HVPS PCBA

Assembly 59: Base wiring cables



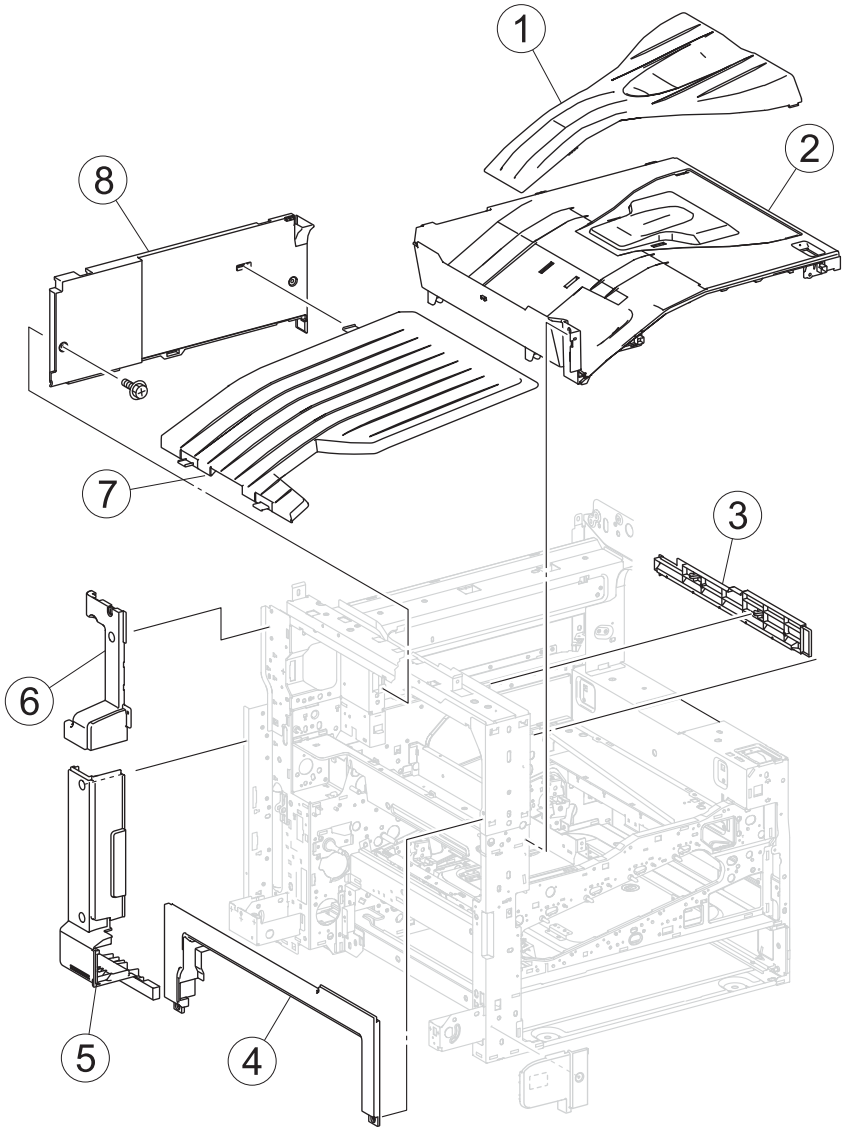
Asm-index	Part number	Units/ mach	Units/ FRU	Description
59-1	40X6766	1	1	Base wiring top cable
2	40X6764	1	1	Base left wiring cable
3	40X6765	1	1	Base right wiring cable
4	40X6767	1	1	Base wiring bottom cable

Assembly 60: Printer covers 1



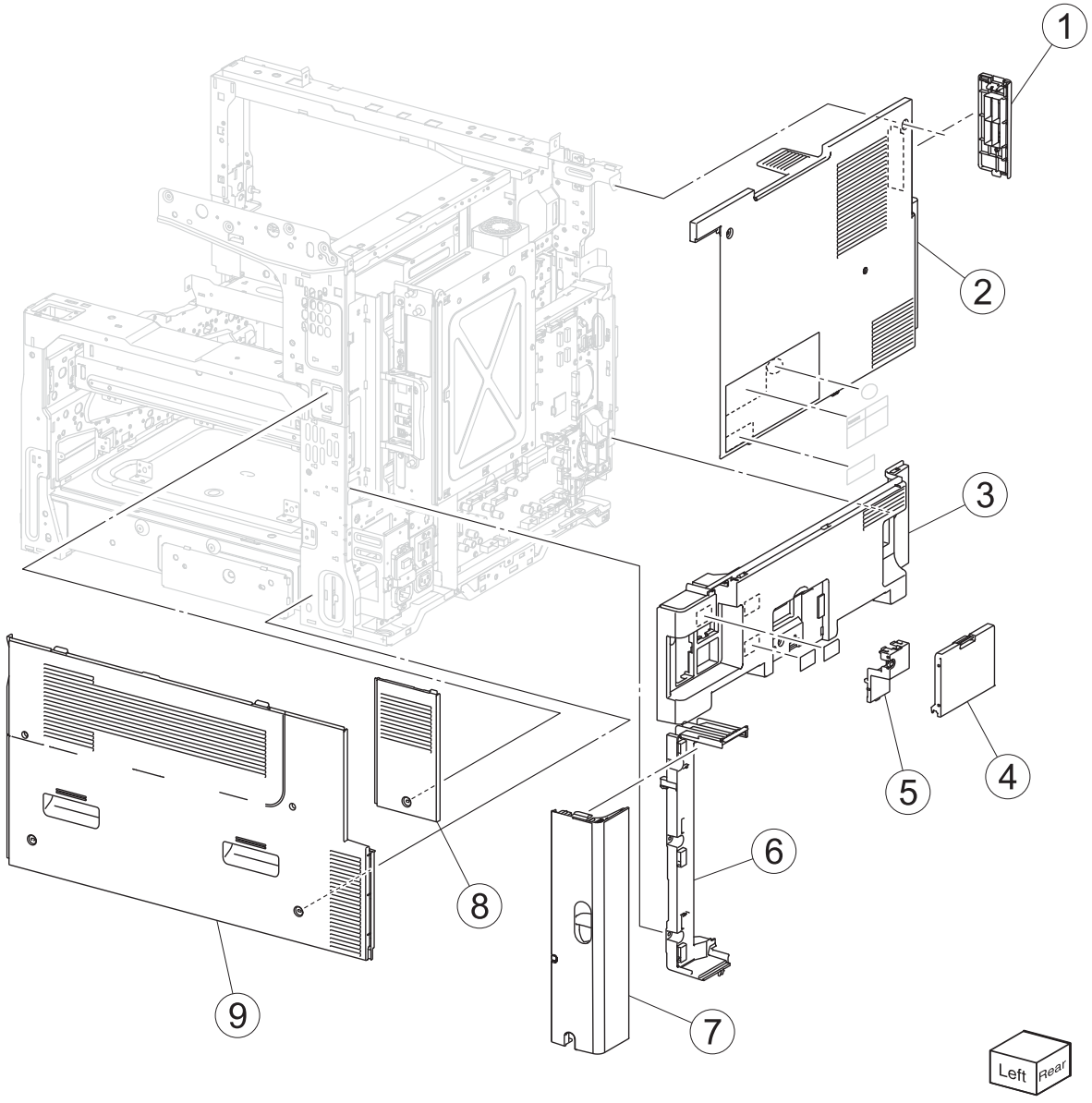
Asm-index	Part number	Units/ mach	Units/ FRU	Description
60-1	40X7377	2	1	Magnetic catch
2	40X7381	1	1	Inner cover
3	40X7378	2	1	Printer front door support strap
4	40X7379	1	1	Printer front door

Assembly 61: Printer covers 2



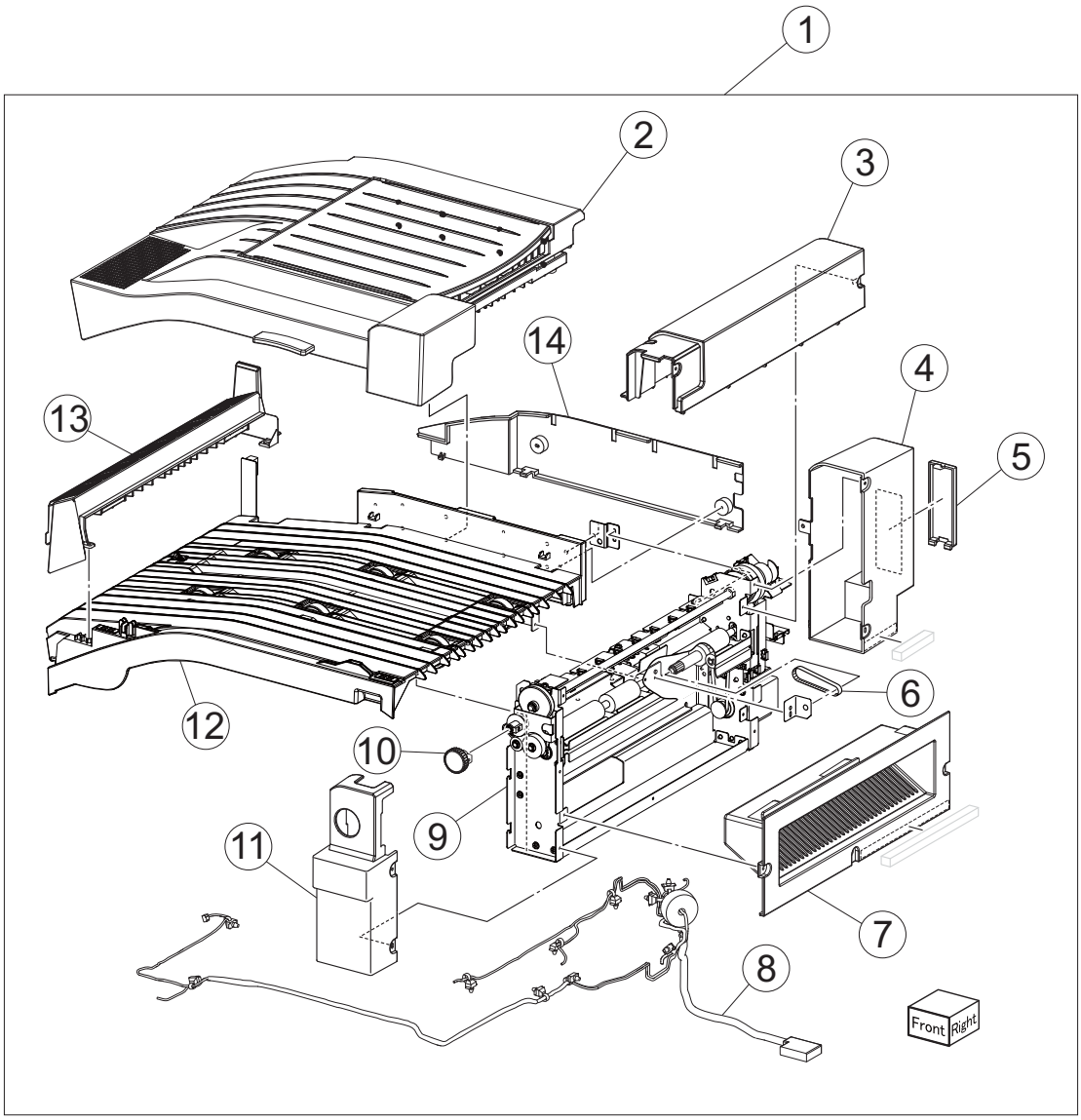
Asm-index	Part number	Units/ mach	Units/ FRU	Description
61-1	40X6772	1	1	Standard bin insert
2	40X6774	1	1	Printer top cover
3	40X6779	1	1	Internal top cover (MFP)
4	40X6777	1	1	Left upper cover (MFP)
5	40X6776	1	1	Left rear lower cover
6	40X6775	1	1	Left rear upper cover (MFP)
7	40X7764	1	1	Upper internal bin
8	40X6780	1	1	Internal rear cover (MFP)

Assembly 62: Printer covers 3



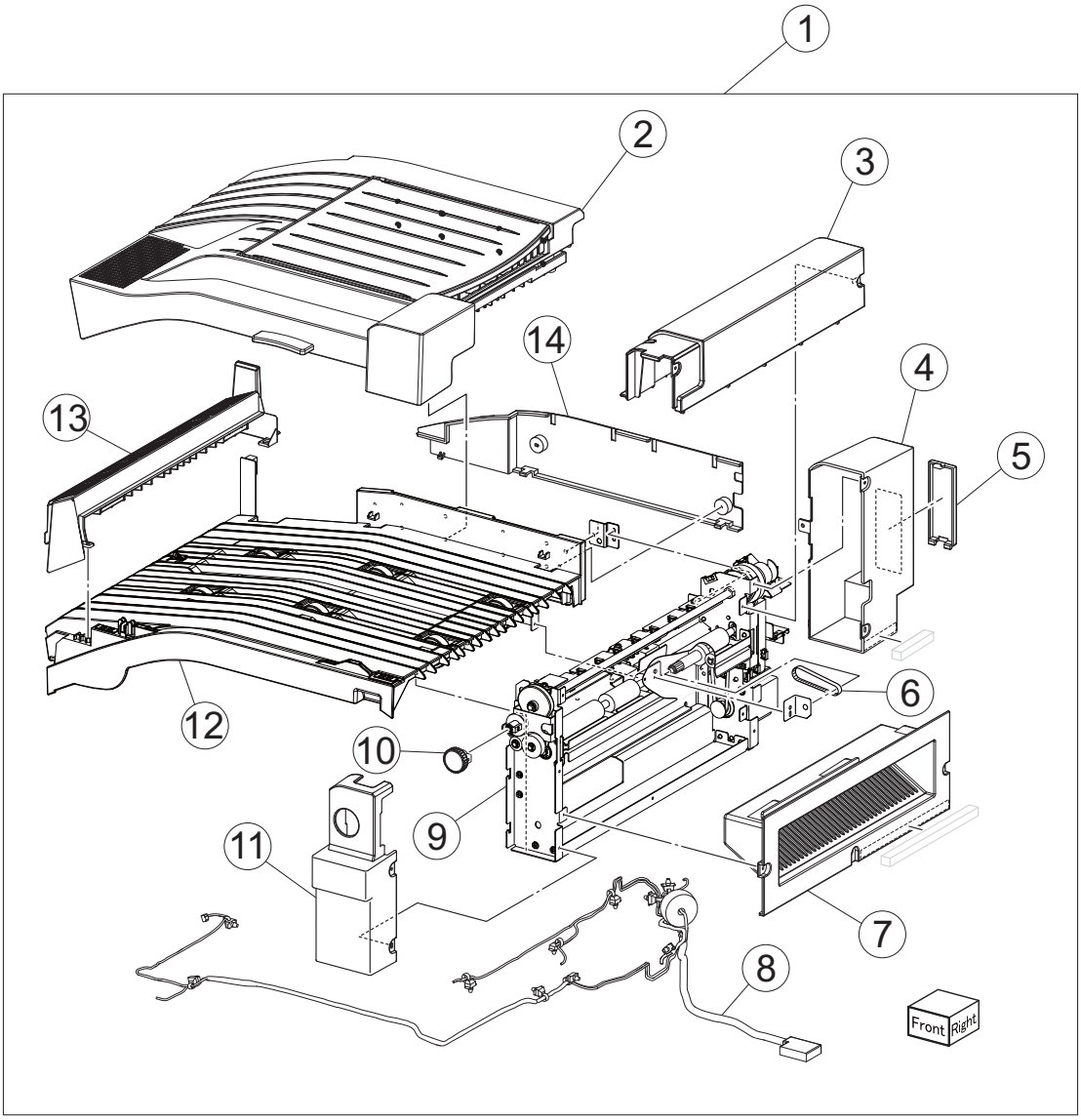
Asm-index	Part number	Units/ mach	Units/ FRU	Description
62-1	40X6784	1	1	Filter cover (MFP)
2	40X6783	1	1	Rear upper cover (MFP)
3	40X7535	1	1	Rear lower cover
4	40X6785	1	1	Input tray interface cover
5	40X7387	1	1	EPSV cover
6	40X6786	1	1	Controller box cover (MFP)
7	40X6787	1	1	Cable interface door
8	40X6782	1	1	Right rear cover (MFP)
9	40X6781	1	1	Printer right cover

Assembly 63: Finisher—bridge unit



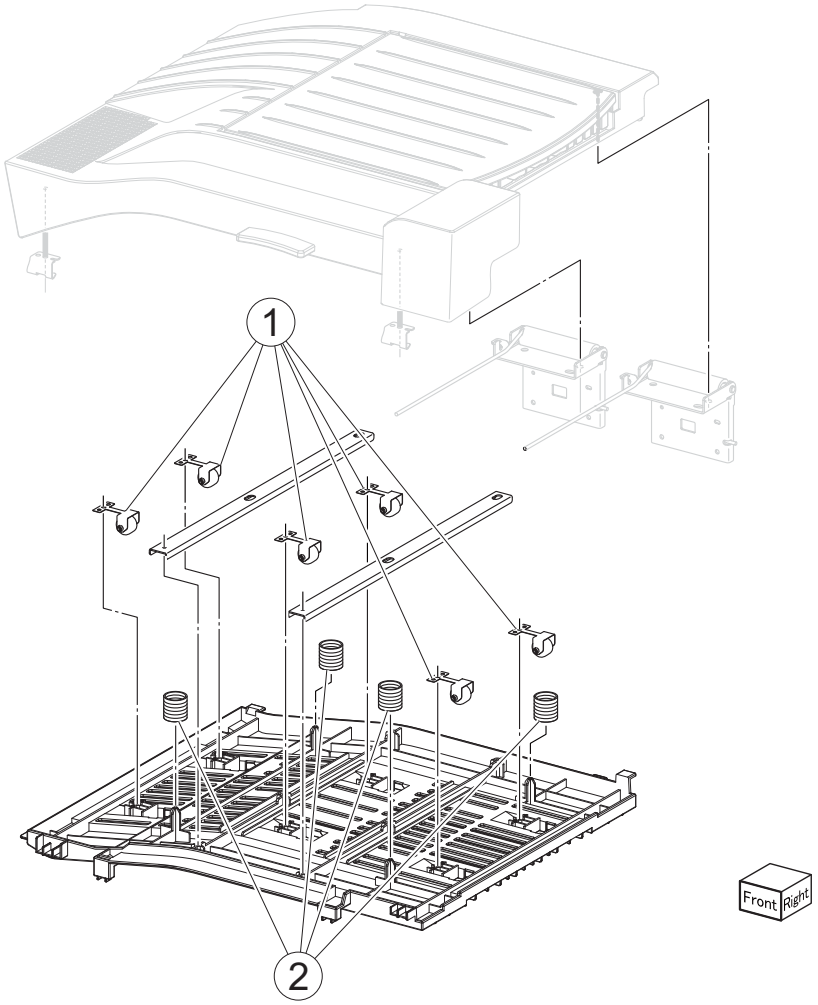
Asm-index	Part number	Units/ mach	Units/ FRU	Description
63-1	40X6826	1	1	Bridge unit
2	40X6838	1	1	Bridge top door assembly
3	40X6836	1	1	Bridge decurler top cover
4	40X6833	1	1	Bridge decurler rear cover
5	40X7405	1	1	Connector cover
6	40X6830	1	1	Bridge unit small belt
7	40X6835	1	1	Bridge decurler right cover
8	40X6837	1	1	Bridge interface cable
9	40X6829	1	1	Bridge media exit transport
10	40X6827	1	1	Clutch knob
11	40X6831	1	1	Bridge front cover

Assembly 63 (continued): Finisher—bridge unit



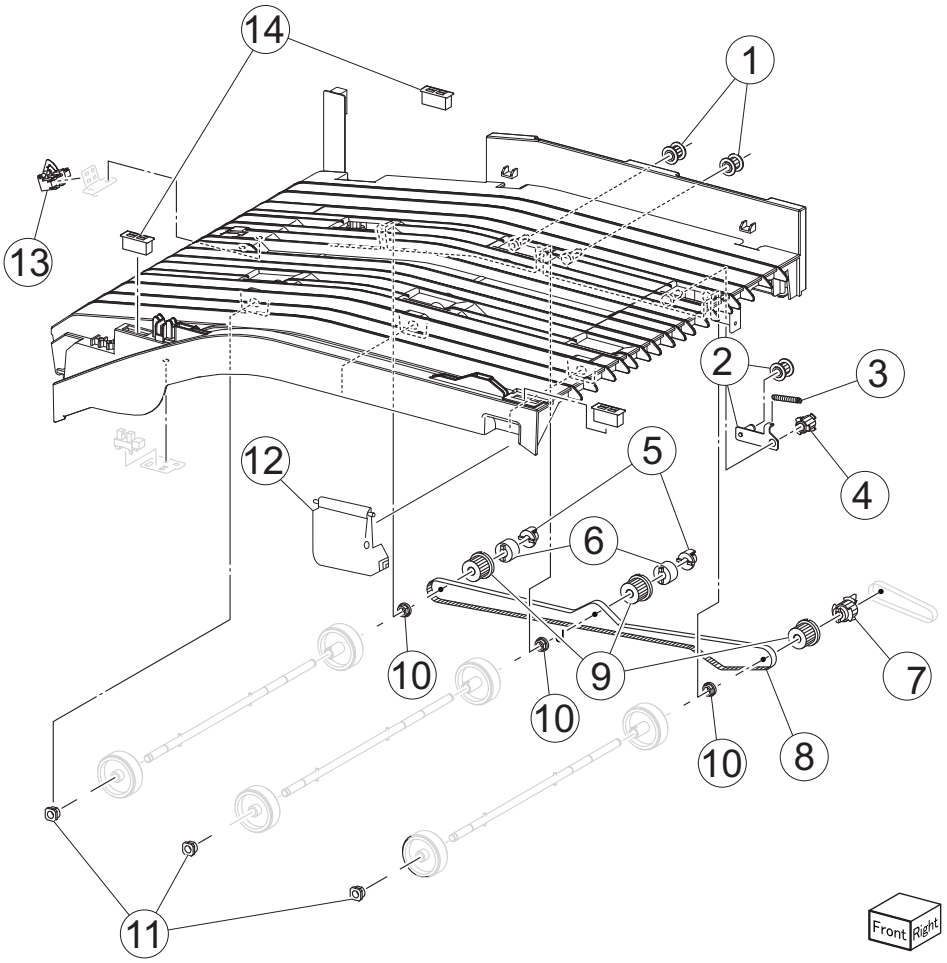
Asm-index	Part number	Units/ mach	Units/ FRU	Description
12	40X7404	1	1	Bridge unit base assembly
13	40X6828	1	1	Bridge entry guide
14	40X6832	1	1	Bridge rear cover

Assembly 64: Finisher—bridge top door assembly



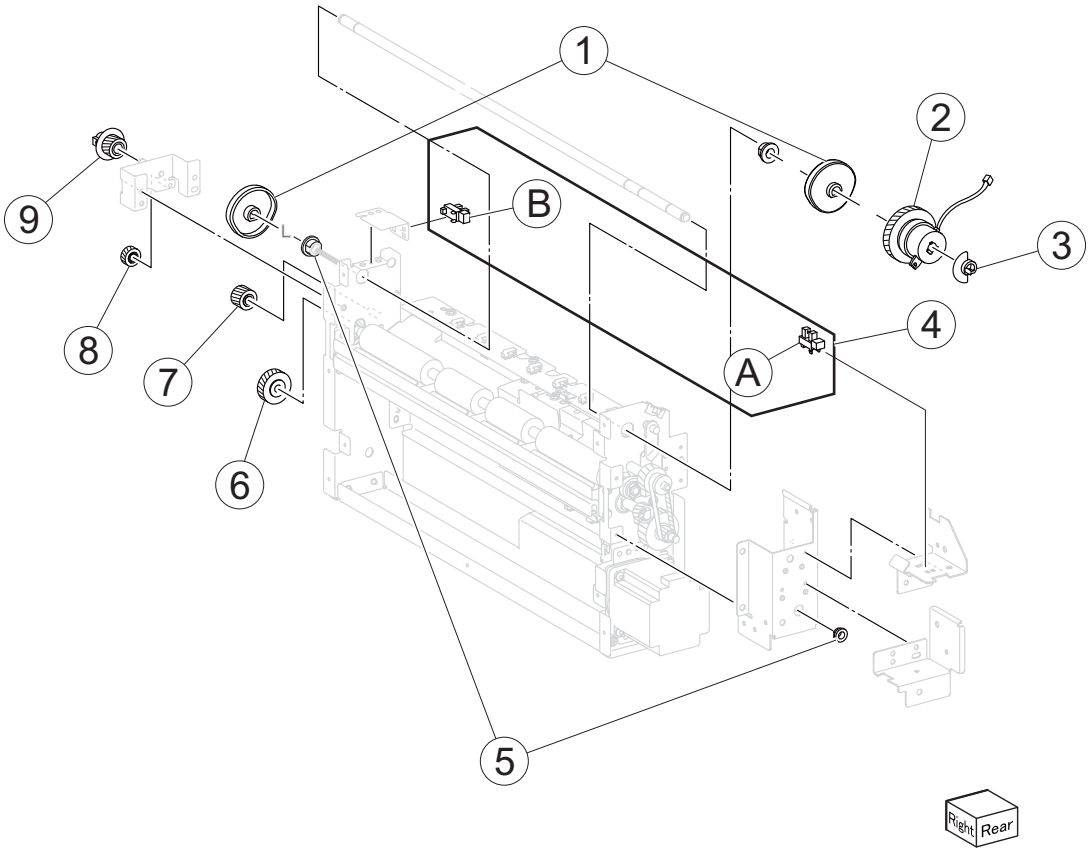
Asm-index	Part number	Units/ mach	Units/ FRU	Description
64-1	40X0918	6	1	Upper media exit pinch roll
2	40X6839	4	1	Bridge unit top door spring

Assembly 65: Finisher—media drive 1



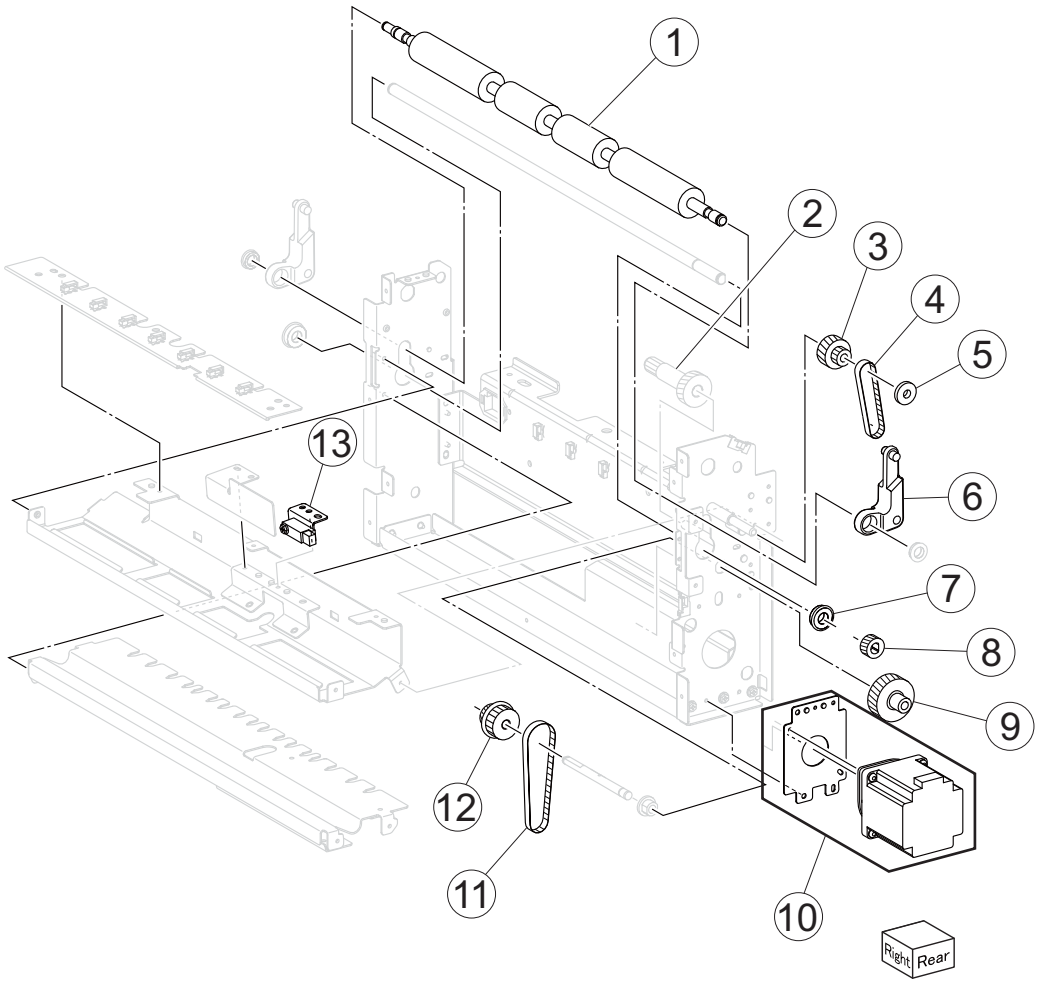
Asm-index	Part number	Units/ mach	Units/ FRU	Description
65-1	40X4128	2	1	Belt idler pulley
2	40X6844	1	1	Bridge tension bracket
3	40X6845	1	1	Recoil spring
4	40X6840	1	1	Bridge idler pulley
5	40X3963	2	1	Retainer
6	40X3962	2	1	Torque limiter
7	40X6841	1	1	Bridge drive pulley
8	40X7408	1	1	Bridge large drive belt
9	40X6842	3	1	Bridge drive pulley
10	40X7406	3	1	Bushing
11	40X0880	3	1	Plastic bushing
12	40X7409	1	1	Power switch cover
13	40X6843	1	1	Sensor (bridge media entrance)
14	40X0824	2	1	Magnetic catch

Assembly 66: Finisher—media drive 2



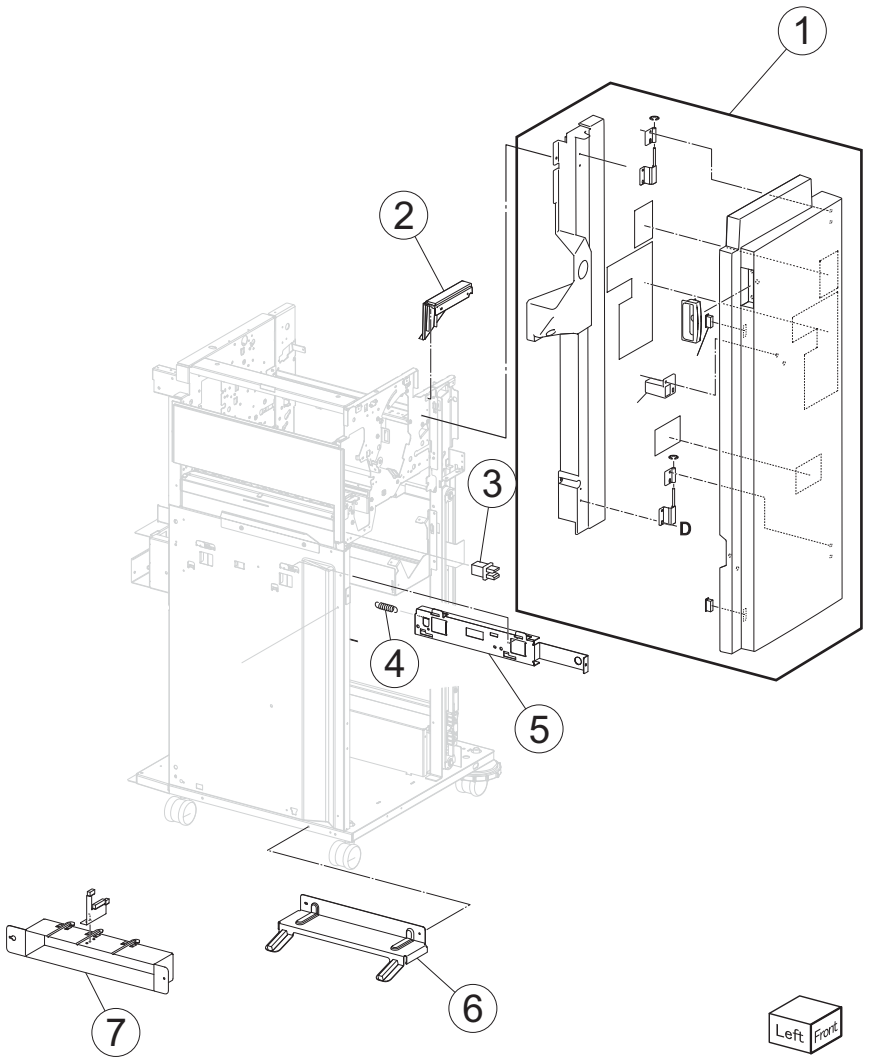
Asm-index	Part number	Units/ mach	Units/ FRU	Description
1	40X6847	1	1	Bridge decurler cam
2	40X6848	1	1	Bridge decurler cam clutch
3	40X3917	1	1	Sensor flag
4	40X0825	3	1	A) Sensor (decurler cam HP) B) Sensor (decurler cover interlock)
5	40X1388	1	1	Bearing
6	40X6111	1	1	Bridge one way gear
7	40X6850	1	1	Bridge gear 18T
8	40X6851	1	1	Bridge gear 16T
9	40X6849	1	1	Bridge knob gear 18T

Assembly 67: Finisher—media drive 3



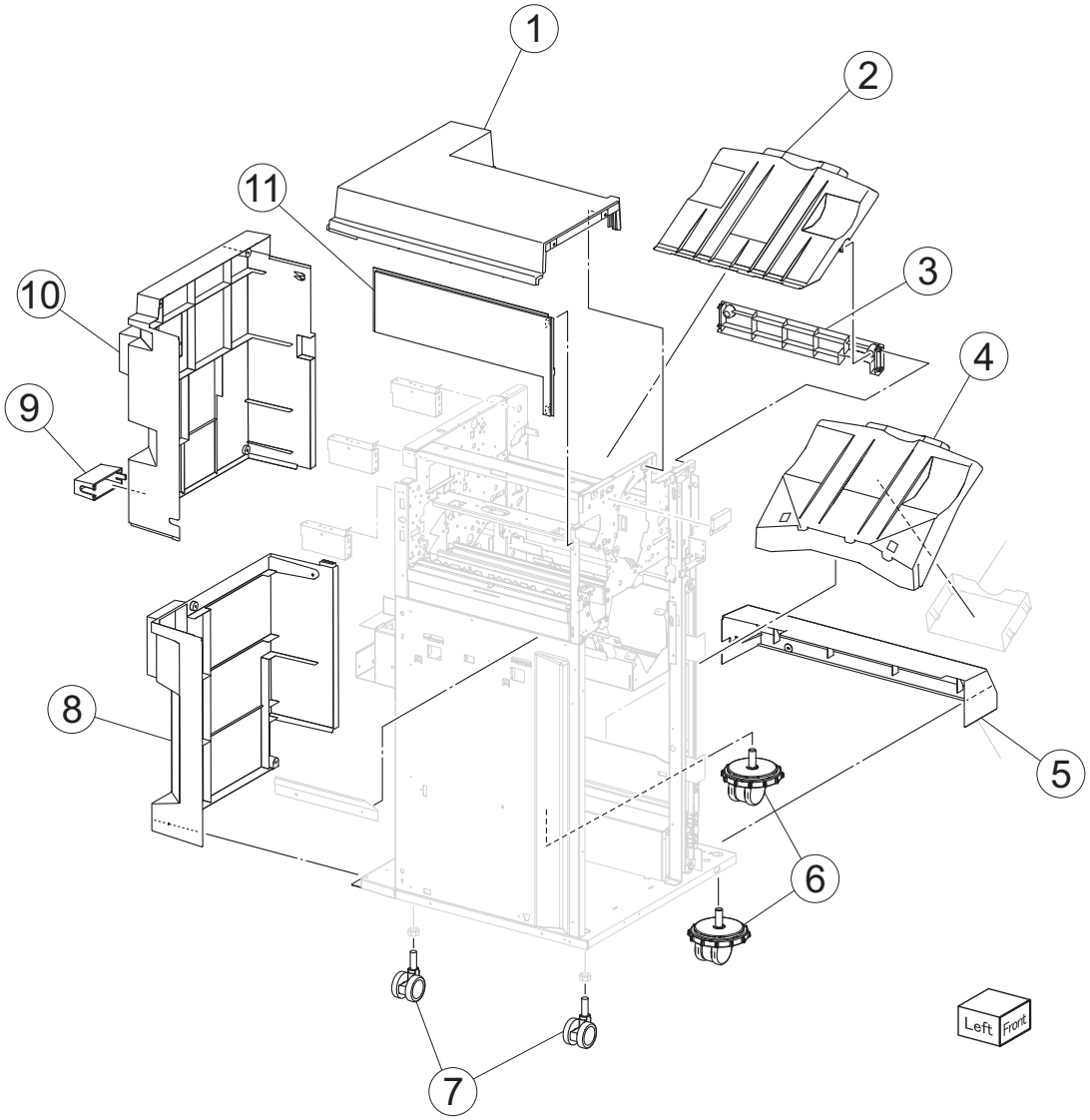
Asm-index	Part number	Units/ mach	Units/ FRU	Description
67-1	40X6854	1	1	Bridge decurler roll
2	40X6859	1	1	Bridge gear 27T/18T
3	40X6858	1	1	Bridge gear 24T/20T
4	40X7413	1	1	Bridge upper drive belt
5	40X7410	1	1	Bridge drive retainer
6	40X6853	2	1	Bridge decurler arm
7	40X1388	2	1	Bushing
8	40X6856	1	1	Bridge gear 16T
9	40X6852	1	1	Bridge gear 36T/18T
10	40X6860	1	1	Bridge drive motor
11	40X7412	1	1	Bridge lower drive belt
12	40X6857	1	1	Bridge gear 18T/36T
13	40X6855	1	1	Sensor (bridge media exit)

Assembly 68: Finisher—covers and front door



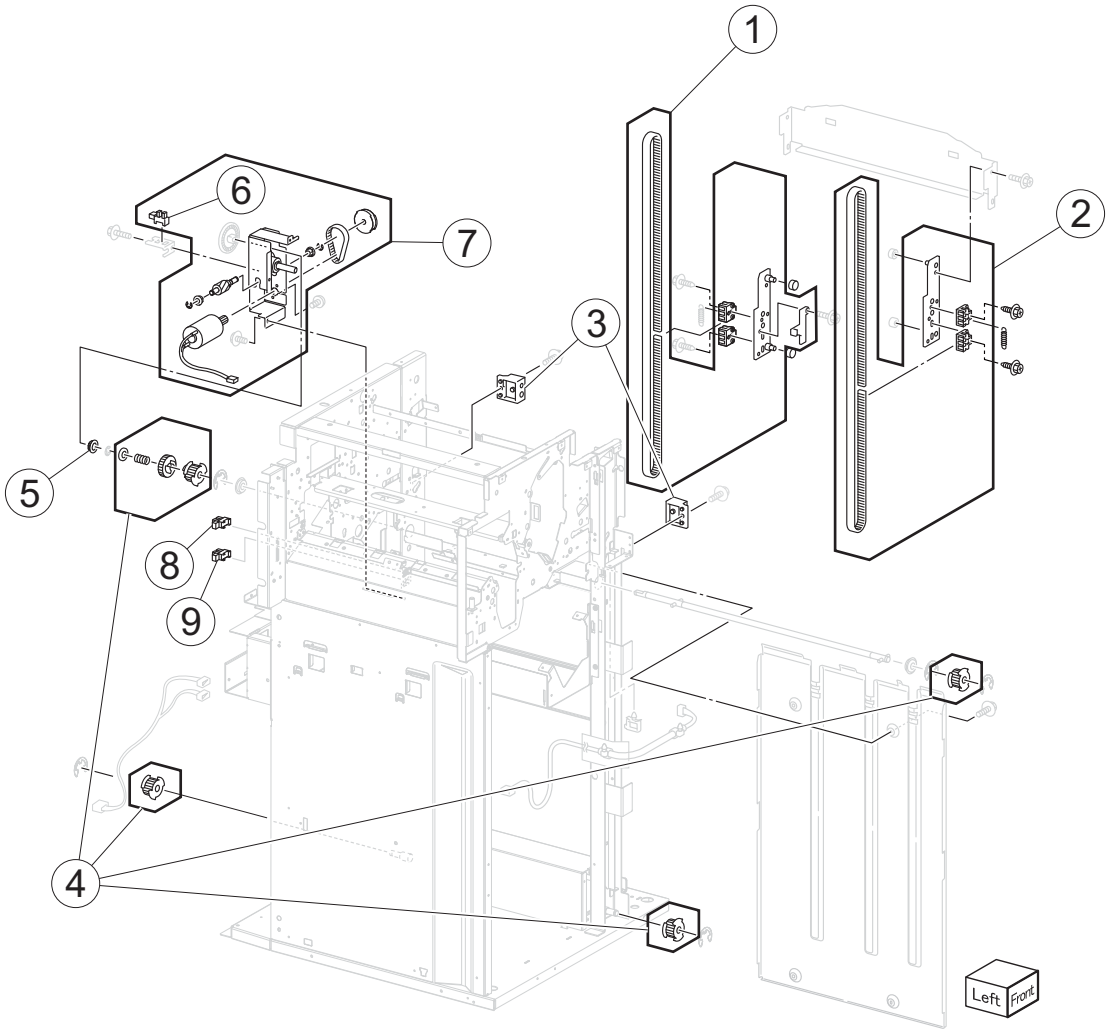
Asm-index	Part number	Units/ mach	Units/ FRU	Description
68-1	40X7415	1	1	Finisher front door assembly
2	40X7414	1	1	Upper media bin front cover
3	40X0840	1	1	Sensor (finisher front door interlock)
4	40X7470	1	1	Spring
5	40X3932	1	1	Finisher dock plate
6	40X7475	1	1	Finisher grounding plate
7	40X7474	2	1	Finisher docking bracket

Assembly 69: Finisher—covers



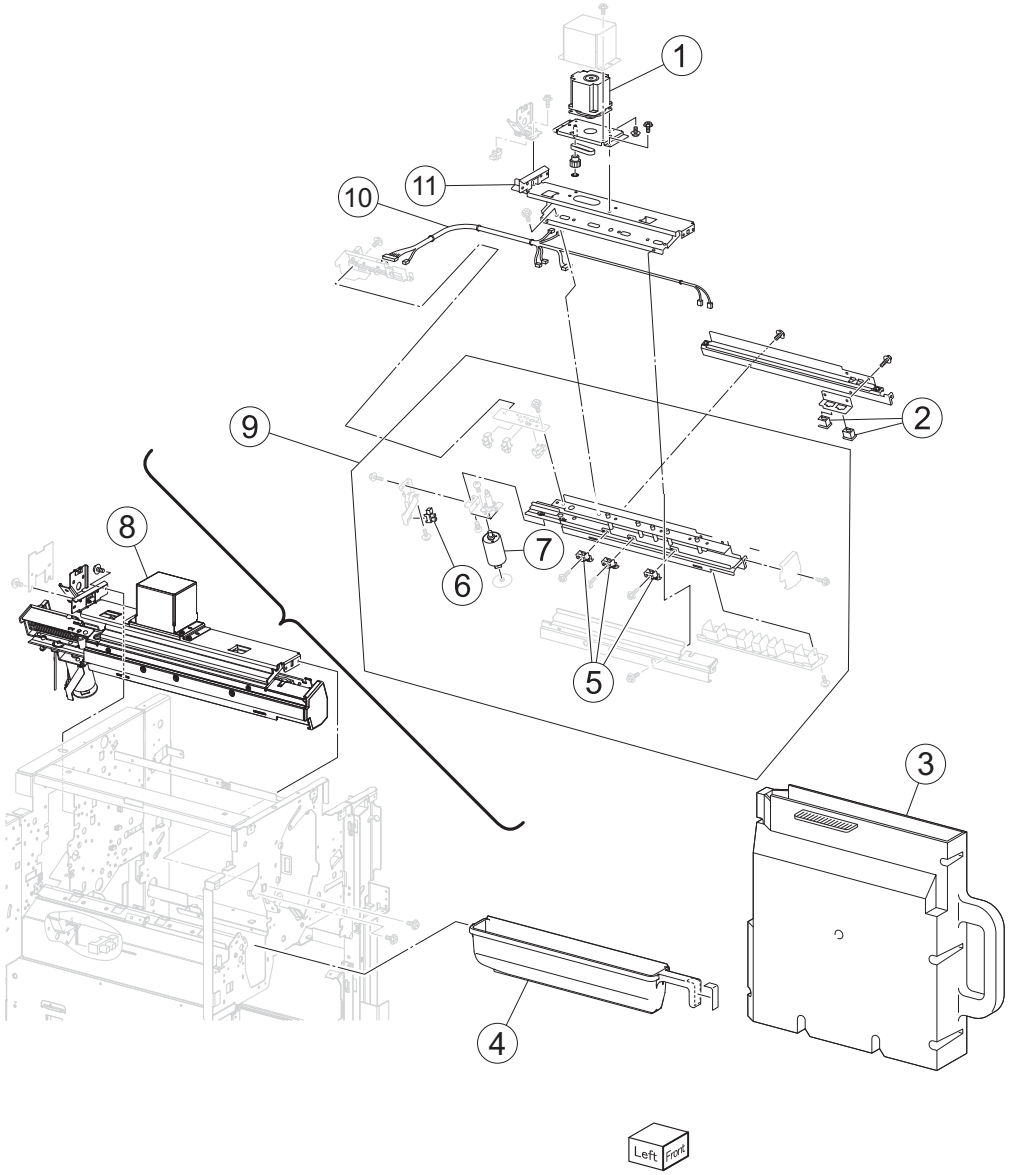
Asm-index	Part number	Units/ mach	Units/ FRU	Description
69-1	40X6862	1	1	Finisher top cover
2	40X7476	1	1	Upper media bin
3	40X7416	1	1	Right eject cover
4	40X7465	1	1	Stacker media bin
5	40X7417	1	1	Finisher bottom cover
6	40X4405	1	1	Adjustable caster
7	40X6664	1	1	Non-adjusting caster
8	40X7418	1	1	Finisher rear lower cover
9	40X7405	1	1	Connector cover
10	40X6864	1	1	Finisher rear upper cover
11	40X7420	1	1	Finisher left upper cover

Assembly 70: Finisher—stacker bin lift



Asm-index	Part number	Units/ mach	Units/ FRU	Description
1	40X4043	1	1	Finisher right lift carriage assembly
2	40X4040	1	1	Finisher left lift carriage assembly
3	40X8663	2	1	Sensor (stacker bin level F)
3	40X8663	2	1	Sensor (stacker bin level R)
4	40X0849	5	1	Stacker slip clutch pulley kit includes: • Pulley 18T (3) • Slip clutch pulley 18T • Slip clutch gear 24T • Spring • Washer
5	40X0852	1	1	Bearing
6	40X0850	3	1	Sensor (stacker bin level encoder)
7	40X7477	1	1	Stacker bin lift motor
8	40X0850	3	1	Sensor (stacker bin upper limit)
9	40X0850	3	1	Sensor (stacker bin no media)

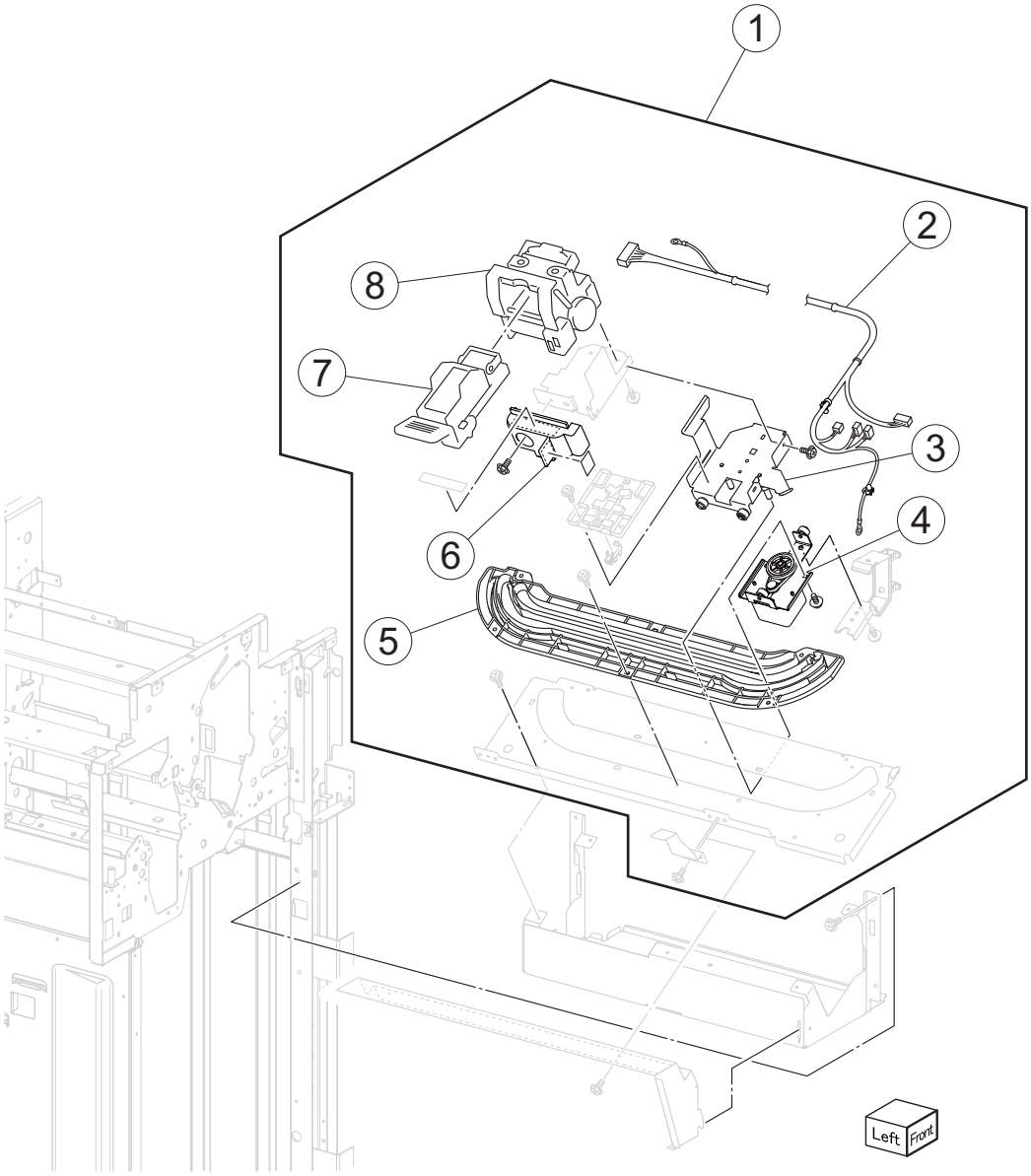
Assembly 71: Finisher—punch



Assembly 71: Finisher—punch

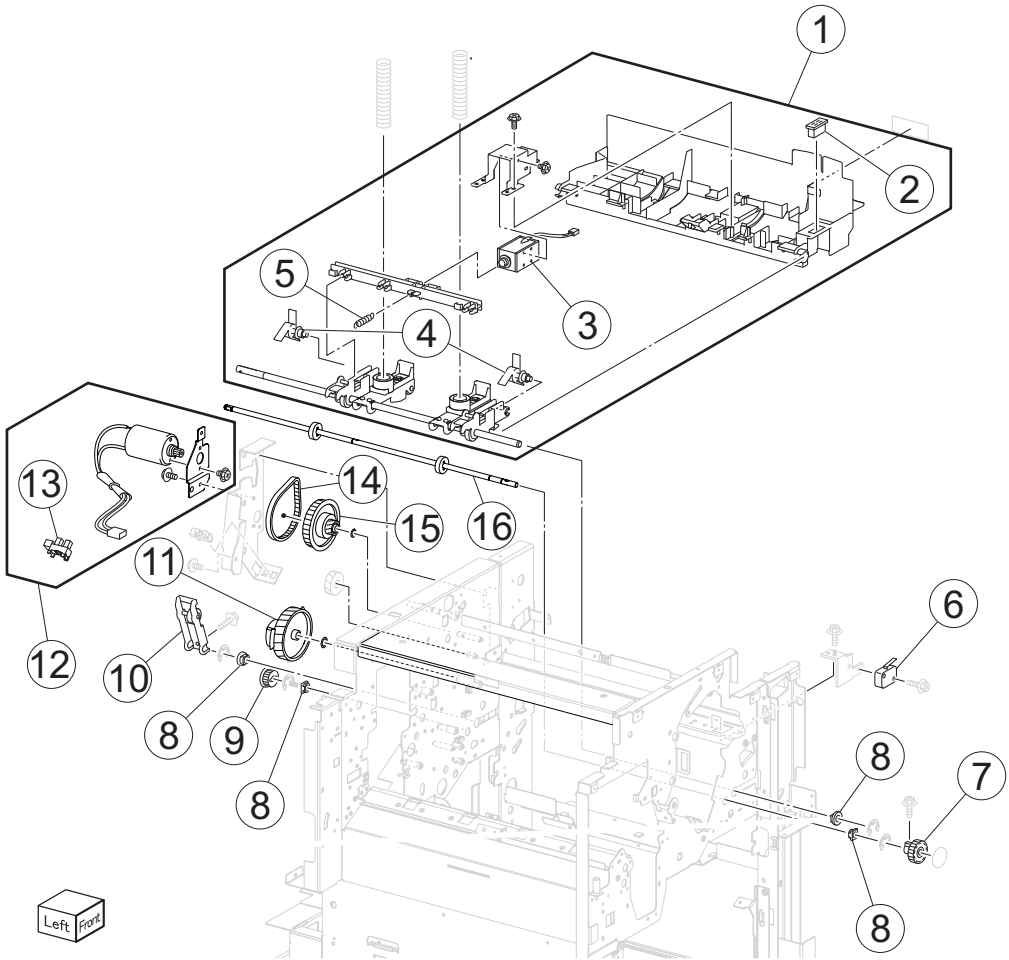
Asm-index	Part number	Units/ mach	Units/ FRU	Description
71-1	40X0854	1	1	Punch carriage shift motor
2	40X3905	2	1	Sensor (punch unit side reg 1)
2	40X3905	2	1	Sensor (punch unit side reg 2)
3	40X0862	1	1	Punch waste box
4	40X7537	1	1	Punch waste box bottle
5	40X0859	1	1	Punch unit stopper
6	40X7438	1	1	Sensor (punch unit motor encoder)
7	40X3943	1	1	Punch unit motor
8	40X6865	1	1	3-hole punch unit assembly
8	40X3937	1	1	2-hole punch unit assembly
8	40X7536	1	1	4-hole punch unit assembly
9	40X0857	1	1	2/3 punch hammer sub-assembly
9	40X0858	1	1	2/4 punch hammer sub-assembly
10	40X7422	1	1	Punch unit main cable
11	40X0855	1	1	Punch carriage

Assembly 72: Finisher—stapler



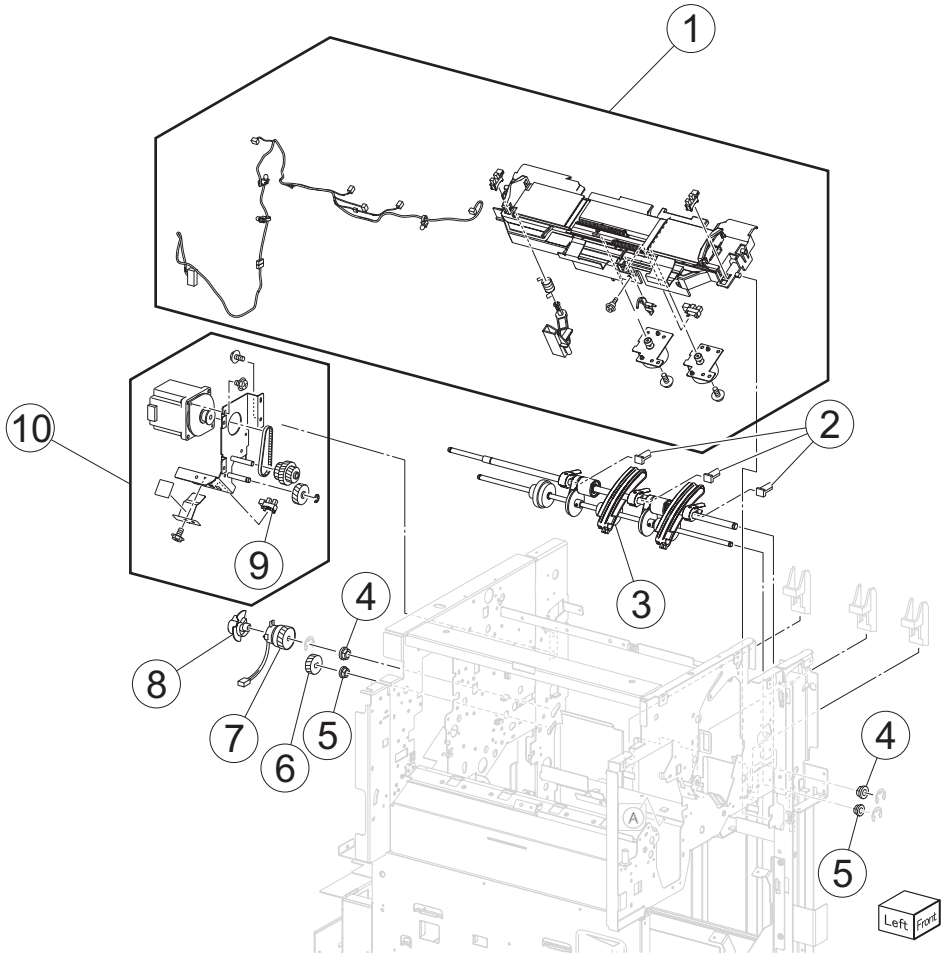
Asm-index	Part number	Units/ mach	Units/ FRU	Description
72-1	40X7561	1	1	Complete stapler
2	40X6867	1	1	Stapler harness
3	40X4050	1	1	Stapler carriage
4	40X7339	1	1	Stapler transport motor
5	40X0872	1	1	Stapler carriage rack gear
6	40X7423	1	1	Stapler unit cover
7	40X0866	1	1	Staple cartridge
8	40X0867	1	1	Stapler unit assembly

Assembly 73: Finisher—media eject



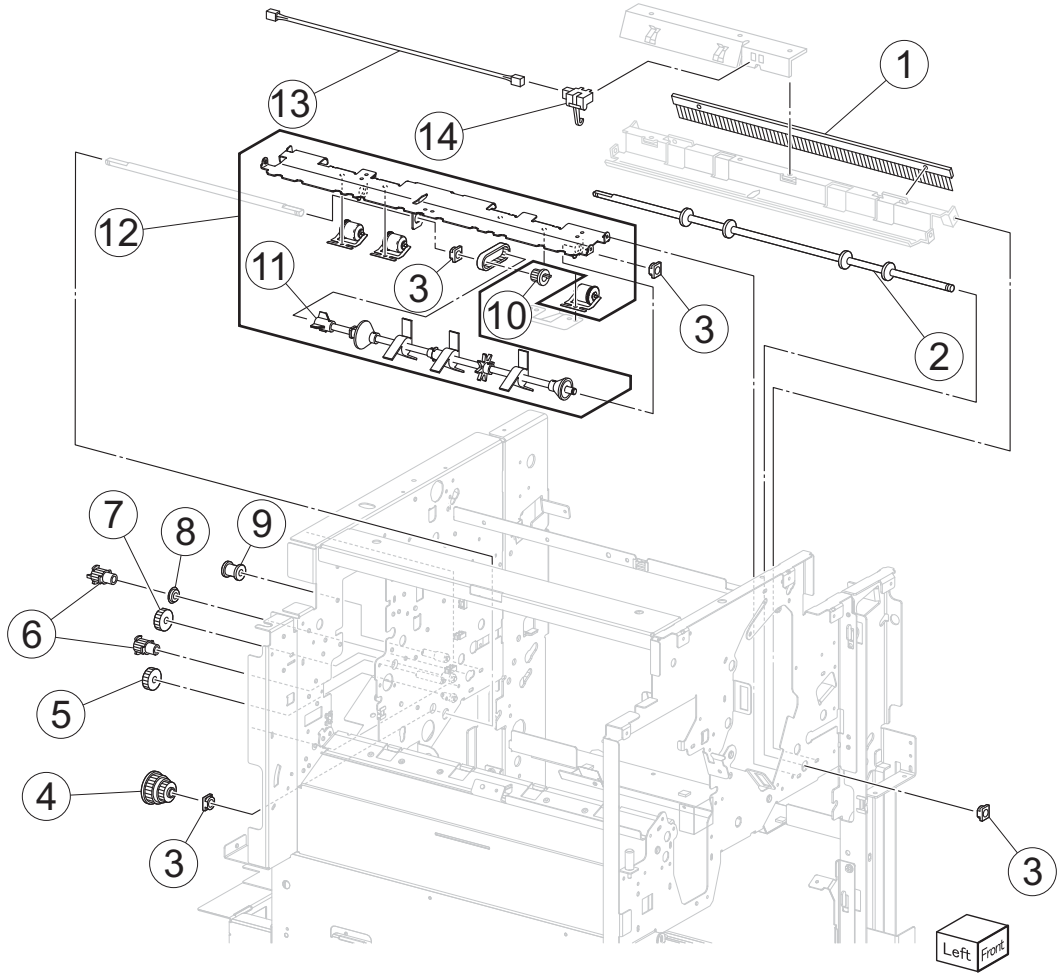
Asm-index	Part number	Units/ mach	Units/ FRU	Description
73-1	40X7424	1	1	Media eject unit frame
2	40X0824	1	1	Magnetic catch
3	40X4120	1	1	Sub paddle solenoid
4	40X0874	1	1	Sub paddle
5	40X4147	1	1	Spring
6	40X0882	1	1	Eject cover interlock switch
7	40X7746	1	1	Knob
8	40X0888	5	1	Bushing
9	40X6868	2	1	Gear 23T
10	40X0877	1	1	Eject clamp lever assembly
11	40X6869	1	1	Cam pulley
12	40X7426	1	1	Clamp drive motor
13	40X0825	1	1	Sensor (media eject clamp HP)
14	40X7425	1	1	Clamp drive belt
15	40X6870	1	1	Drive pulley
16	40X7362	1	1	Paddle shaft

Assembly 74: Finisher—eject and compiler unit



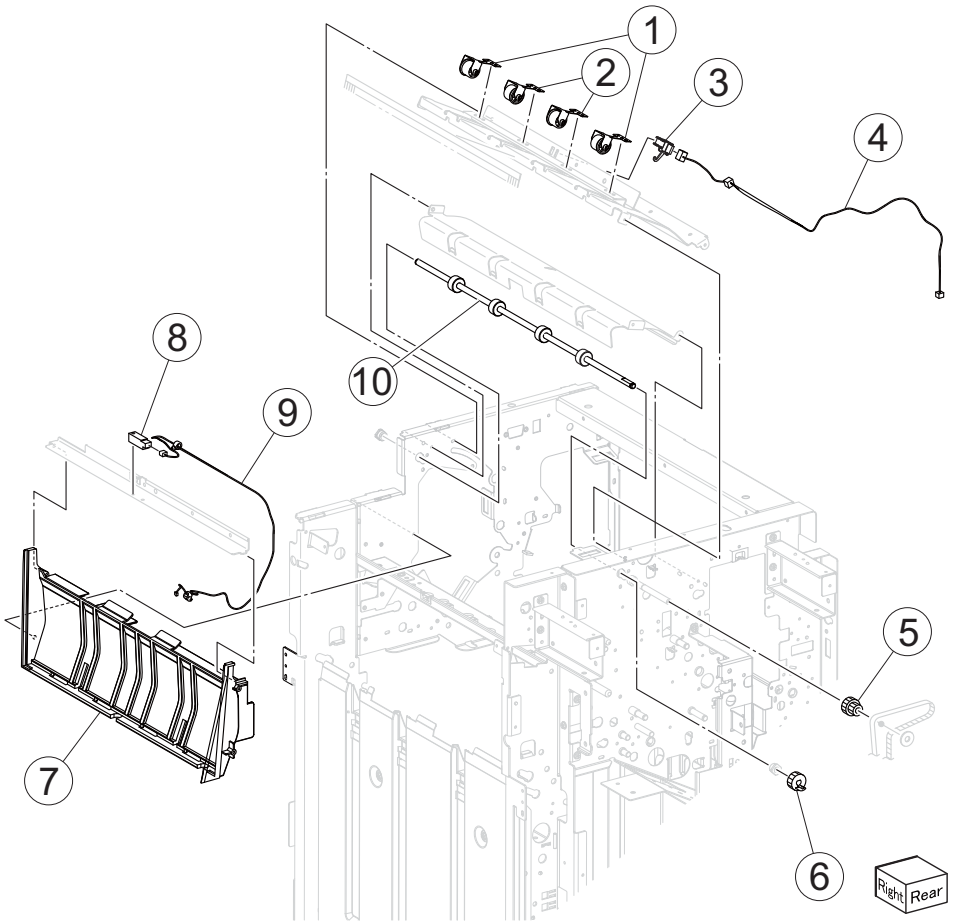
Asm-index	Part number	Units/ mach	Units/ FRU	Description
74-1	40X6886	1	1	Media compiler guide
2	40X6881	1	1	Eject shaft paddle
3	40X0886	1	1	Eject shaft roll
4	40X1388	1	1	Bearing
5	40X0888	5	1	Bushing
6	40X0889	1	1	Media eject gear
7	40X4062	2	1	Media eject clamp clutch
8	40X6884	1	1	Eject shaft actuator
9	40X0825	3	1	Sensor (media eject shaft HP)
10	40X6885	1	1	Eject shaft roll motor

Assembly 75: Finisher—lower exit drive



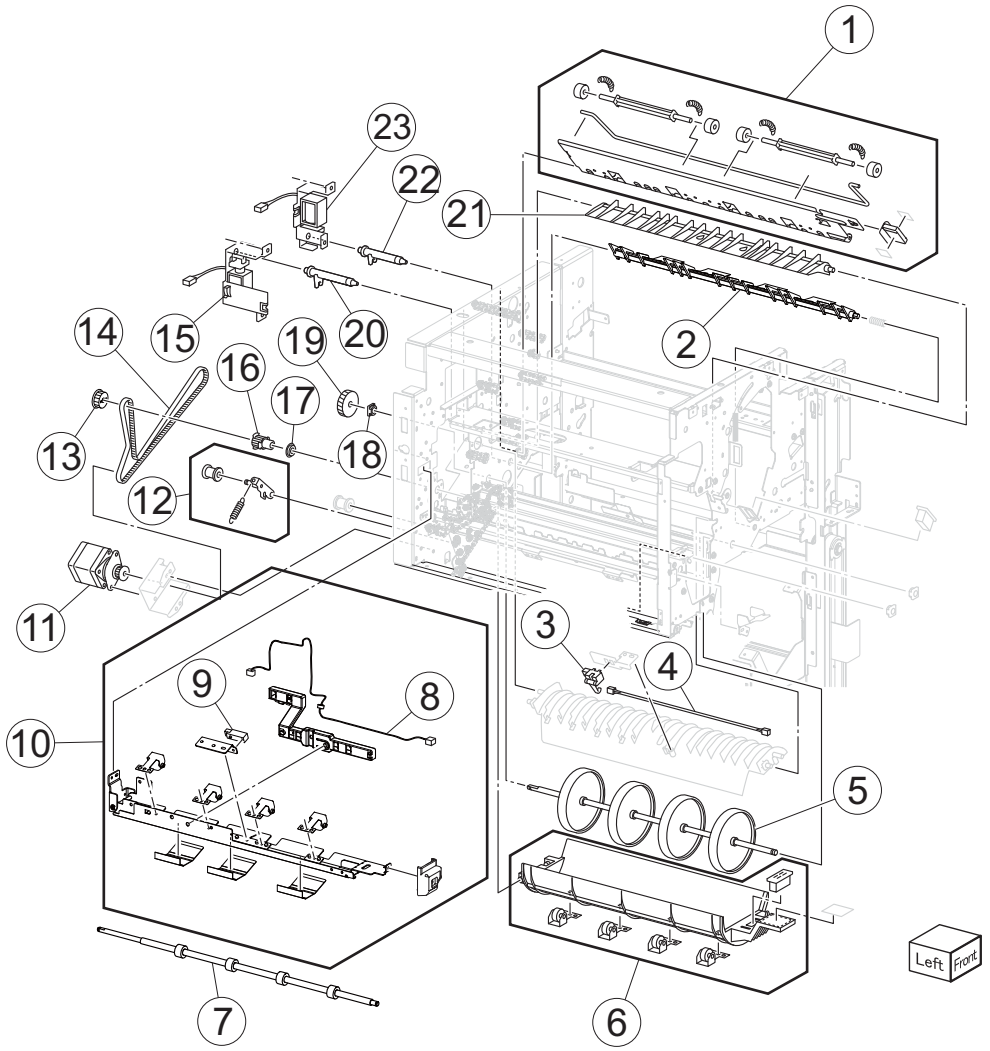
Asm-index	Part number	Units/ mach	Units/ FRU	Description
75-1	40X0894	1	1	Static eliminator brush
2	40X0895	1	1	Lower media exit roll
3	40X0888	5	1	Bushing
4	40X0900	1	1	Main paddle drive pulley/gear 44/20T
5	40X3959	1	1	Gear (23T)
6	40X0898	2	1	Lower exit roll drive pulley kit includes: • lower exit roll drive pulley 20T • idler pulley 20T
7	40X4066	1	1	Gear (23T)
8	40X0913	2	1	Ball bearing 6mm
9	40X4128	1	1	Idler pulley
10	40X4106	1	1	Main paddle shaft drive pulley 17T
11	40X6887	1	1	Main paddle shaft
12	40X6890	1	1	Lower exit pinch roll
13	40X7427	1	1	Lower exit sensor cable
14	40X0893	2	1	Sensor (lower media exit)

Assembly 76: Finisher—upper drive



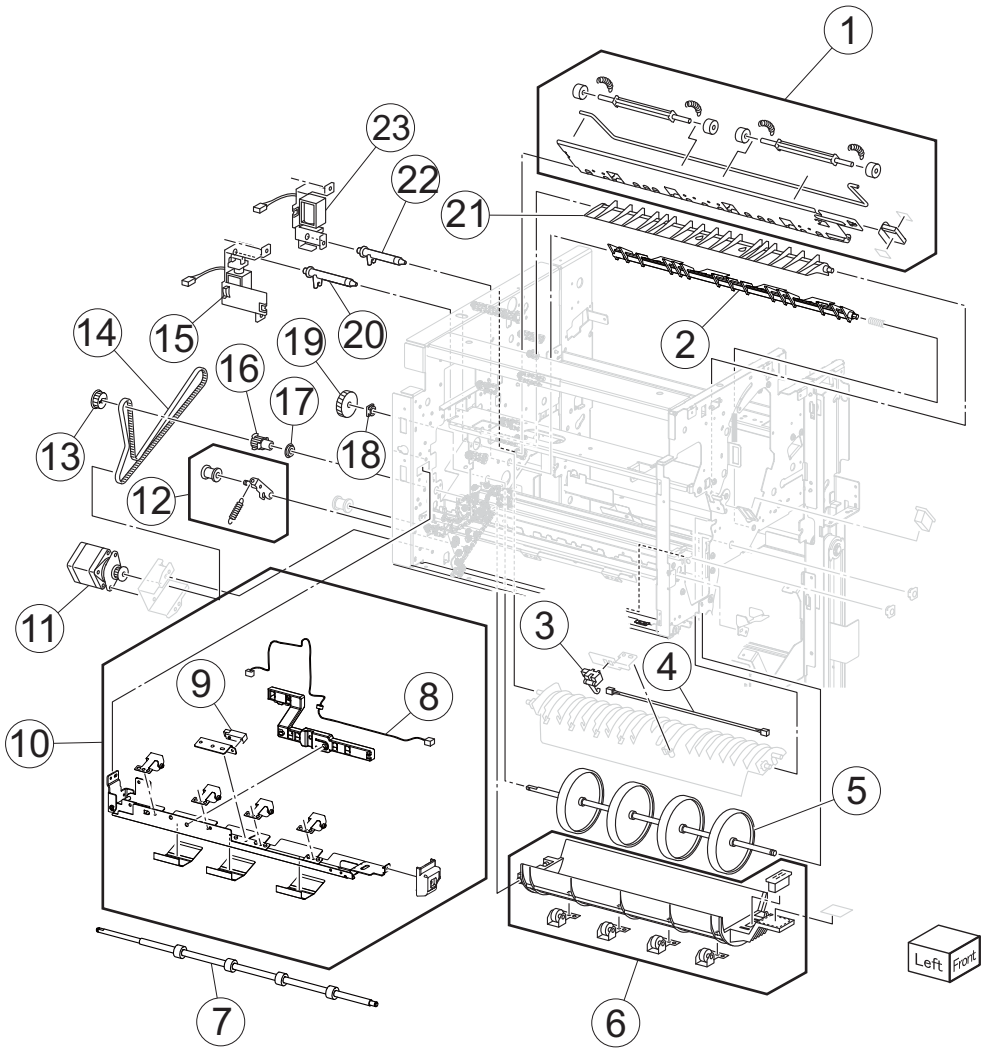
Asm-index	Part number	Units/ mach	Units/ FRU	Description
76-1	40X6893	1	1	Left upper exit nip roll
2	40X6894	1	1	Right upper exit nip roll
3	40X0893	2	1	Sensor (upper media exit)
4	40X6892	1	1	Upper exit sensor cable
5	40X0926	1	1	Upper media transport roll drive pulley/gear 20/20T
6	40X0927	1	1	Upper media exit roll drive gear 20T
7	40X7429	1	1	Finisher upper bin vertical cover
8	40X0908	1	1	Sensor (upper media bin full)
9	40X7428	1	1	Upper bin full sensor cable
10	40X6891	1	1	Upper media exit roll

Assembly 77: Finisher—buffer and entrance drive



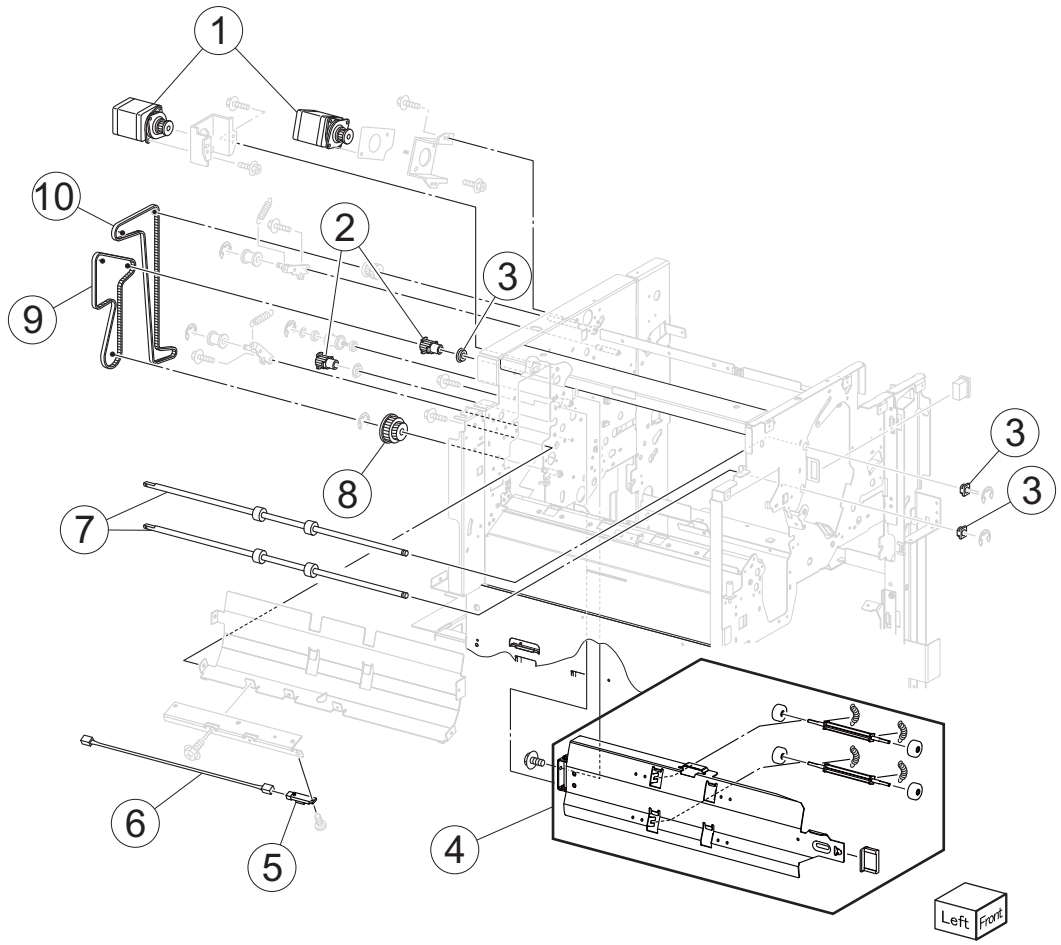
Asm-index	Part number	Units/ mach	Units/ FRU	Description
77-1	40X7538	1	1	Lower pinch guide roller
2	40X4149	1	1	Buffer diverter gate
3	40X0893	2	1	Sensor (buffer path)
4	40X7430	1	1	Buffer path sensor cable
5	40X0905	1	1	Buffer roll
6	40X6875	1	1	Buffer pinch guide assembly
7	40X0909	1	1	Finisher media entrance roll
8	40X7478	1	1	Finisher entrance sensor cable
9	40X0908	1	1	Sensor (finisher media entrance)
10	40X6895	1	1	Media entrance pinch guide
11	40X0910	1	1	Stepper motor

Assembly 77 (continued): Finisher—buffer and entrance drive



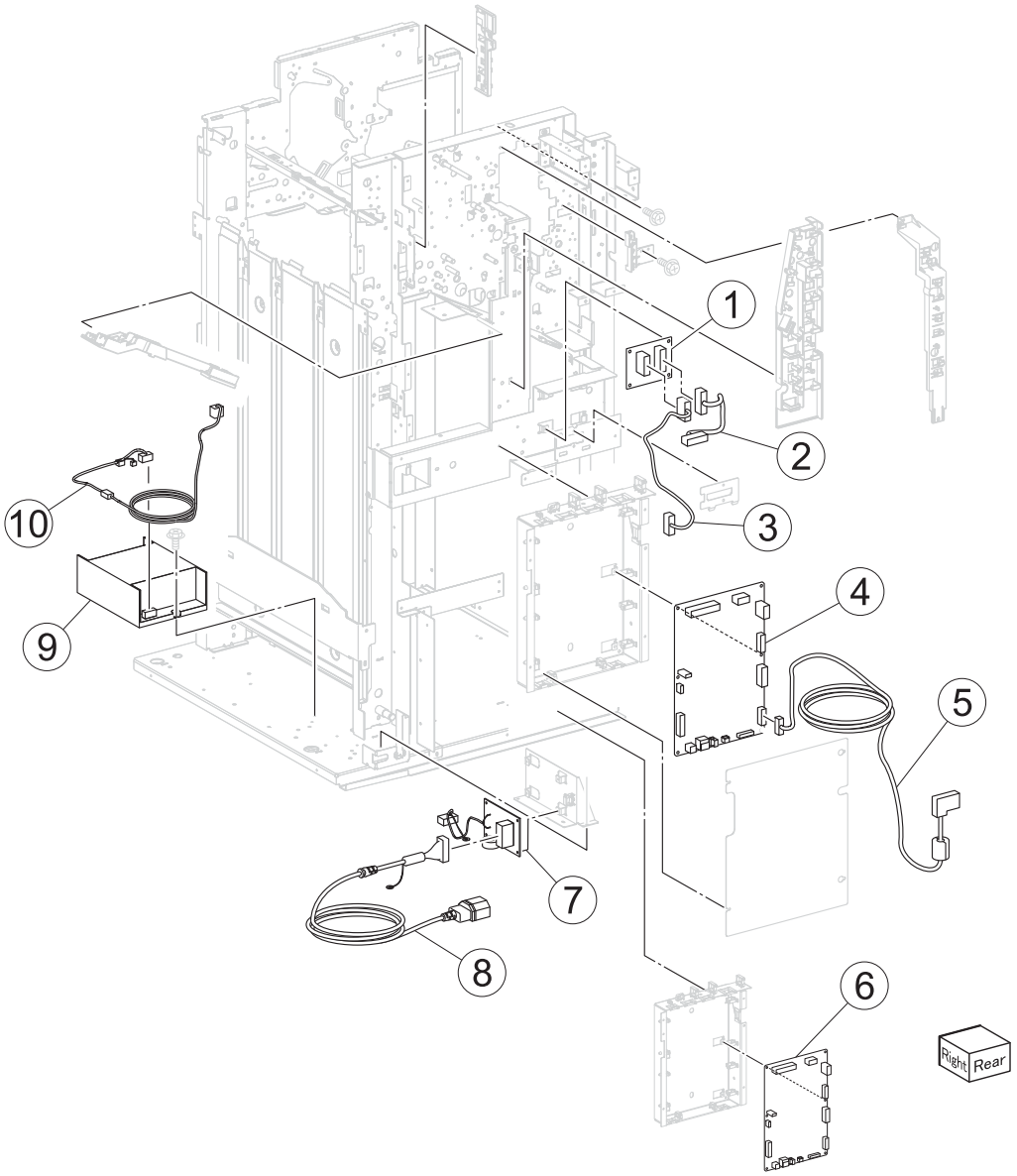
Asm-index	Part number	Units/ mach	Units/ FRU	Description
12	40X0912	3	1	Belt idler pulley • Spring • Belt tensioner bracket
13	40X0888	5	1	Bushing
14	40X0911	1	1	Belt entrance/paddle 31.6 cm
15	40X6897	1	1	Diverter solenoid
16	40X0914	1	1	Media entrance roll drive pulley 20T
17	40X0913	2	1	Ball bearing 6 mm
18	40X0888	5	1	Bushing
19	40X0915	1	1	Buffer roll drive gear 46T
20	40X4083	1	1	Diverter solenoid link
21	40X7522	1	1	Finisher diverter gate
22	40X4070	1	1	Buffer solenoid link
23	40X6898	1	1	Buffer solenoid

Assembly 78: Finisher—buffer, transport, and upper drive



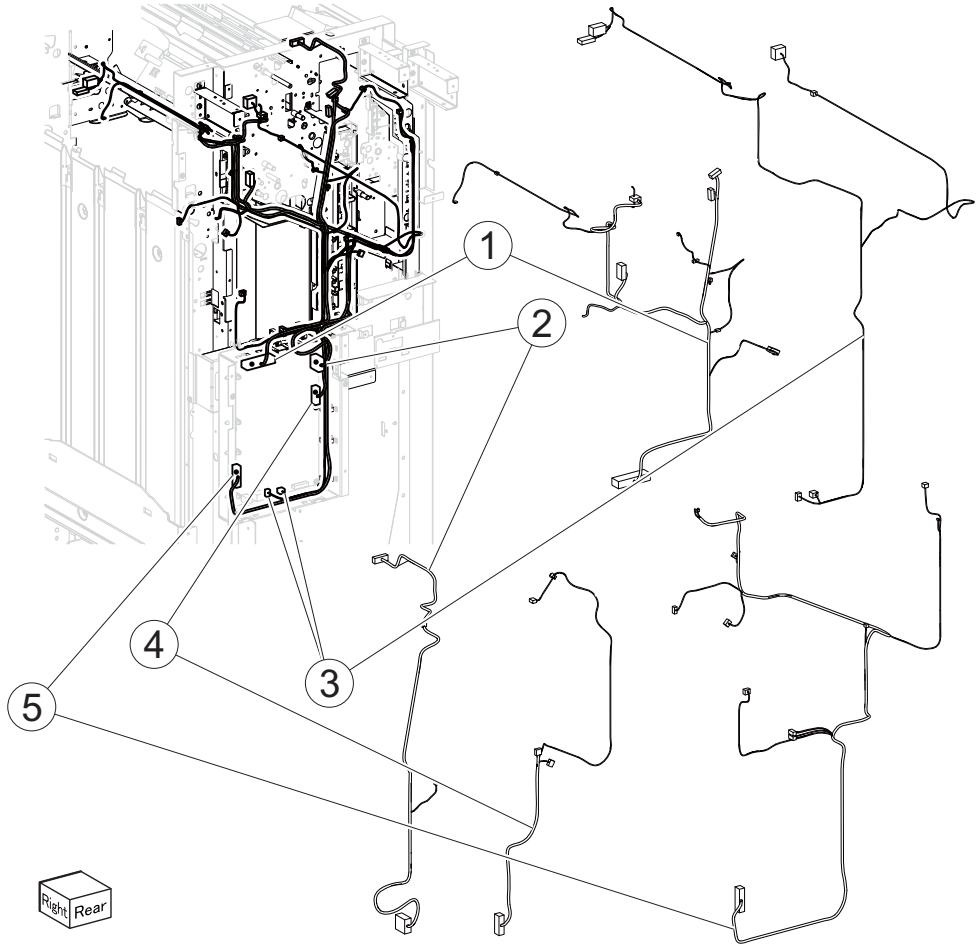
Asm-index	Part number	Units/ mach	Units/ FRU	Description
78-1	40X0910	1	1	Stepper motor
2	40X0925	1	1	Upper media transport roll drive pulley 20T
3	40X0888	5	1	Bushing
4	40X6900	1	1	Upper pinch guide
5	40X0921	1	1	Sensor (diverter gate)
6	40X7480	1	1	Diverter gate sensor cable
7	40X6901	1	1	Upper transport roll
8	40X0924	1	1	Buffer roll drive pulley/gear 53/23T
9	40X0928	1	1	Belt (buffer/transport) 19.8 cm
10	40X0929	1	1	Belt (exit) 27.7 cm

Assembly 79: Finisher—electronics



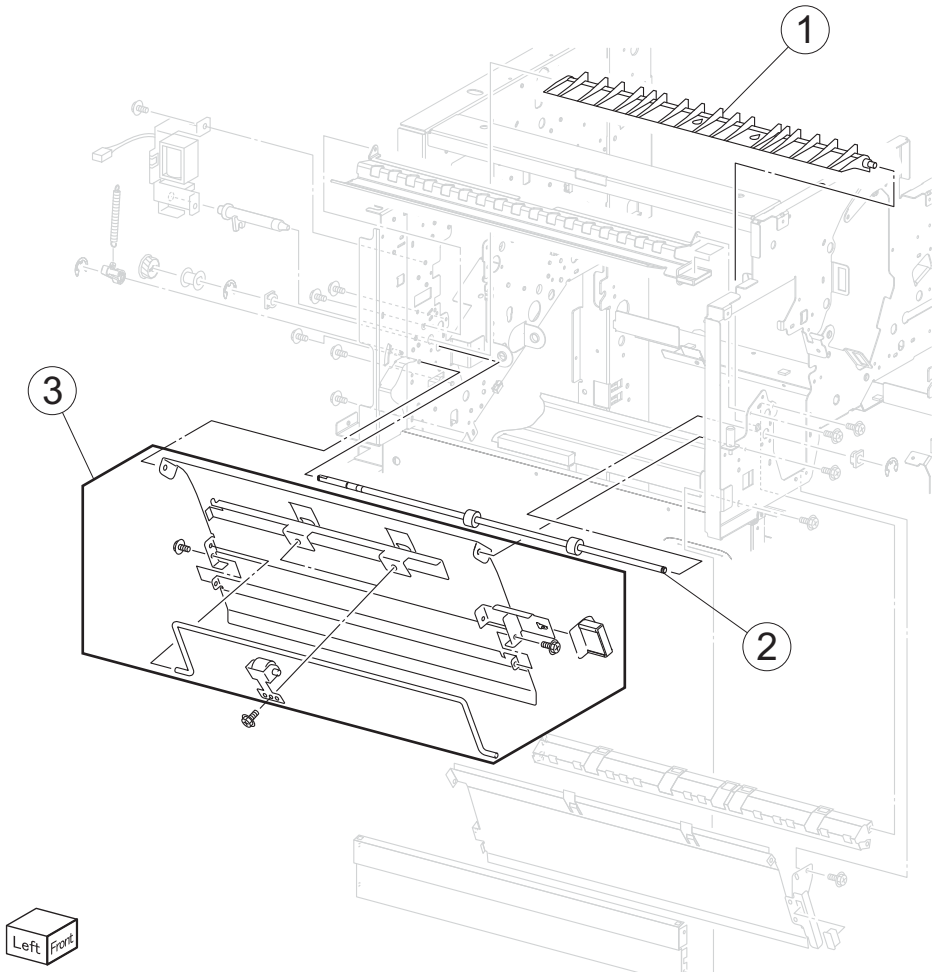
Asm-index	Part number	Units/ mach	Units/ FRU	Description
79-1	40X3969	1	1	Bridge PCBA
2	40X3970	1	1	Bridge unit connect cable assembly
3	40X0933	1	1	Bridge interface card cable
4	40X6902	1	1	Finisher controller PCBA
5	40X4412	1	1	Finisher interface cable
6	40X7481	1	1	Booklet controller card assembly
7	40X6904	1	1	Finisher AC filter PCBA
8	40X0935	1	1	Finisher power cable
9	40X7521	1	1	Finisher LVPS PCBA
10	40X7431	1	1	Finisher LVPS cable

Assembly 80: Finisher—cables



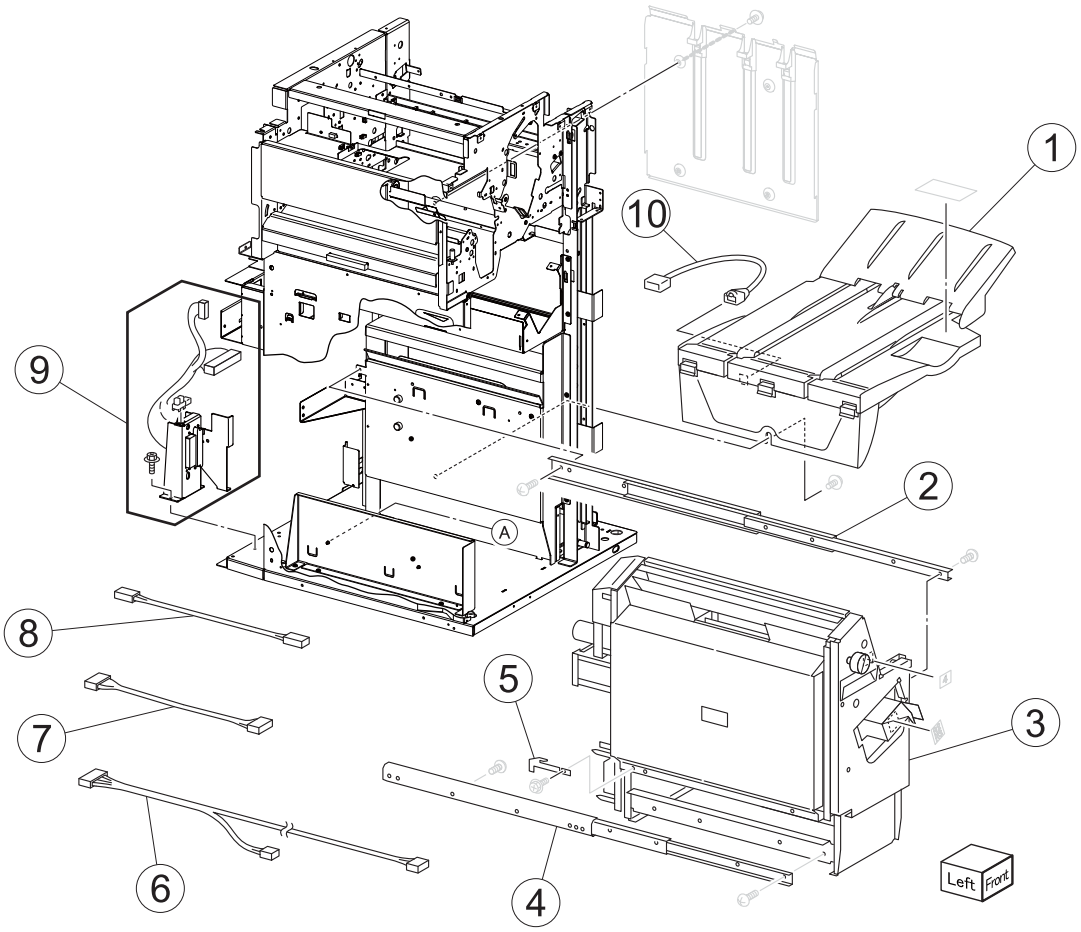
Asm-index	Part number	Units/ mach	Units/ FRU	Description
80-1	40X6906	1	1	Finisher motor cable
2	40X6907	1	1	Punch drive motor
3	40X6909	1	1	Interlock cable
4	40X6908	1	1	Punch sensor cable
5	40X6905	1	1	Finisher sensor cable

Assembly 81: Booklet maker 1



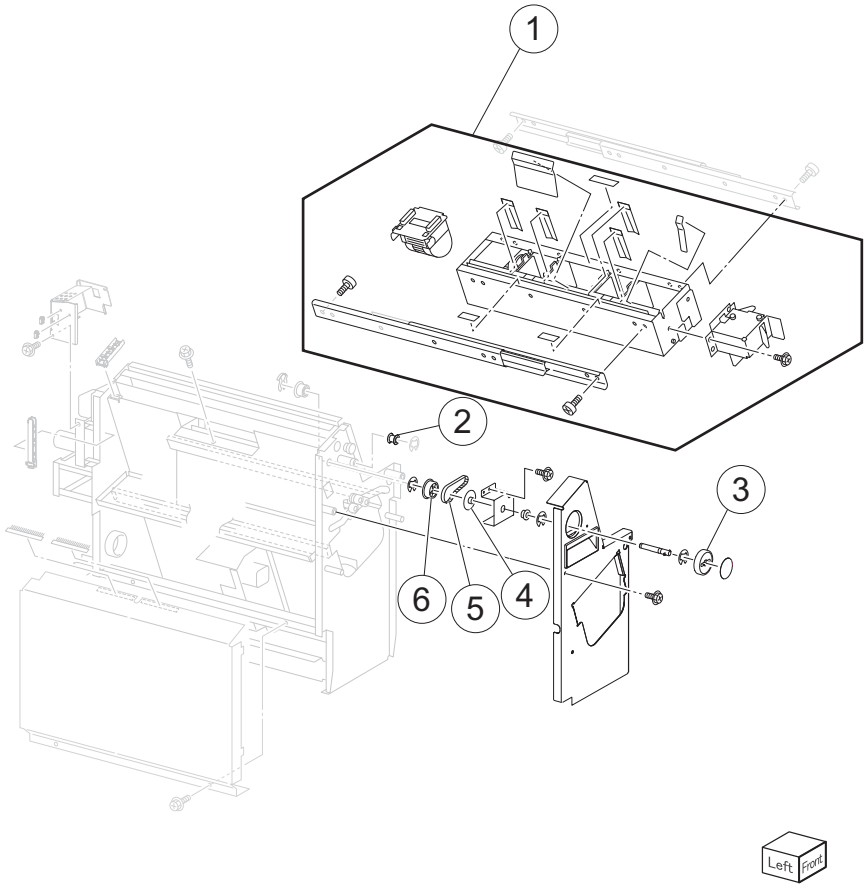
Asm-index	Part number	Units/ mach	Units/ FRU	Description
81-1	40X7479	1	1	Booklet diverter gate
2	40X6899	1	1	Booklet path roll
3	40X7519	1	1	Booklet pinch guide

Assembly 82: Booklet maker 2



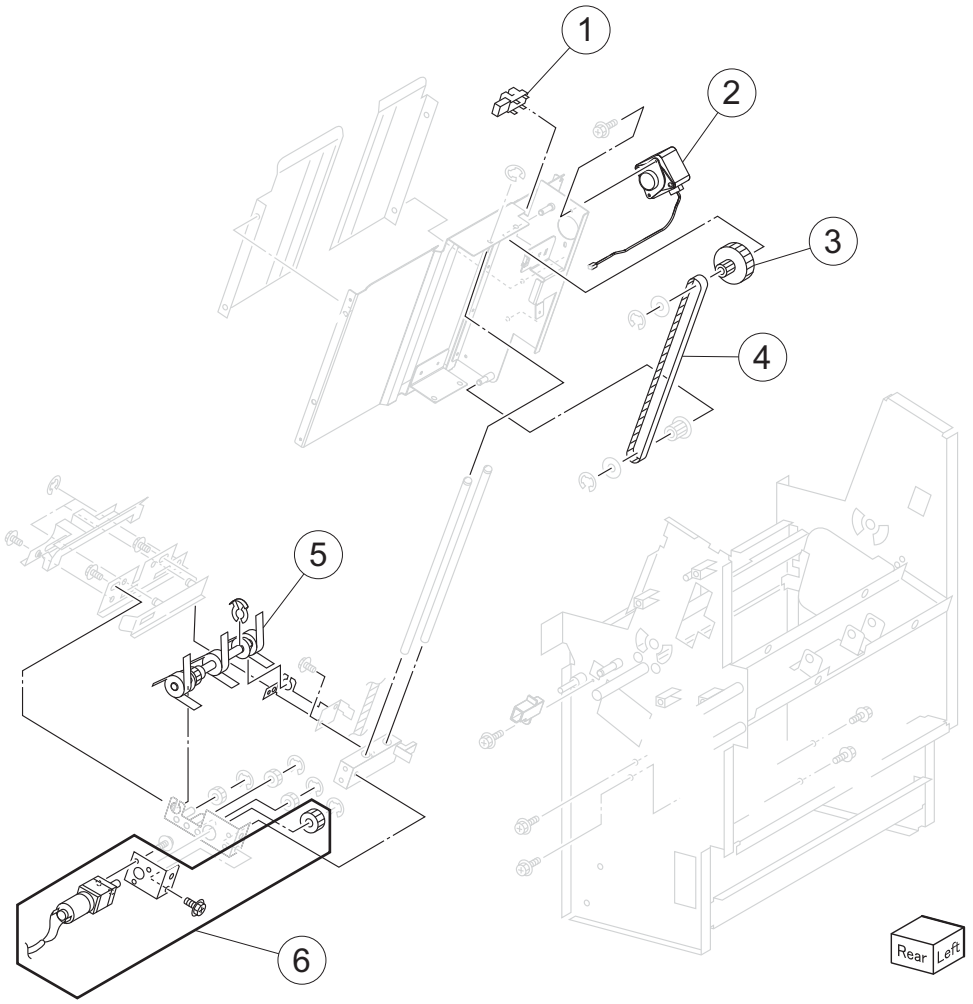
Asm-index	Part number	Units/ mach	Units/ FRU	Description
82-1	40X6910	1	1	Booklet output tray
2	40X7482	1	1	Booklet right glide
3	40X6915	1	1	Booklet unit chassis
4	40X7483	1	1	Booklet left glide
5	40X3988	1	1	Booklet unit catch
6	40X6913	1	1	Booklet unit cable
7	40X6912	1	1	Booklet diverter cable
8	40X6911	1	1	Booklet controller power cable
9	40X6914	1	1	Booklet unit interface contact
10	40X3987	1	1	Booklet bin hookup cable assembly

Assembly 83: Booklet maker 3



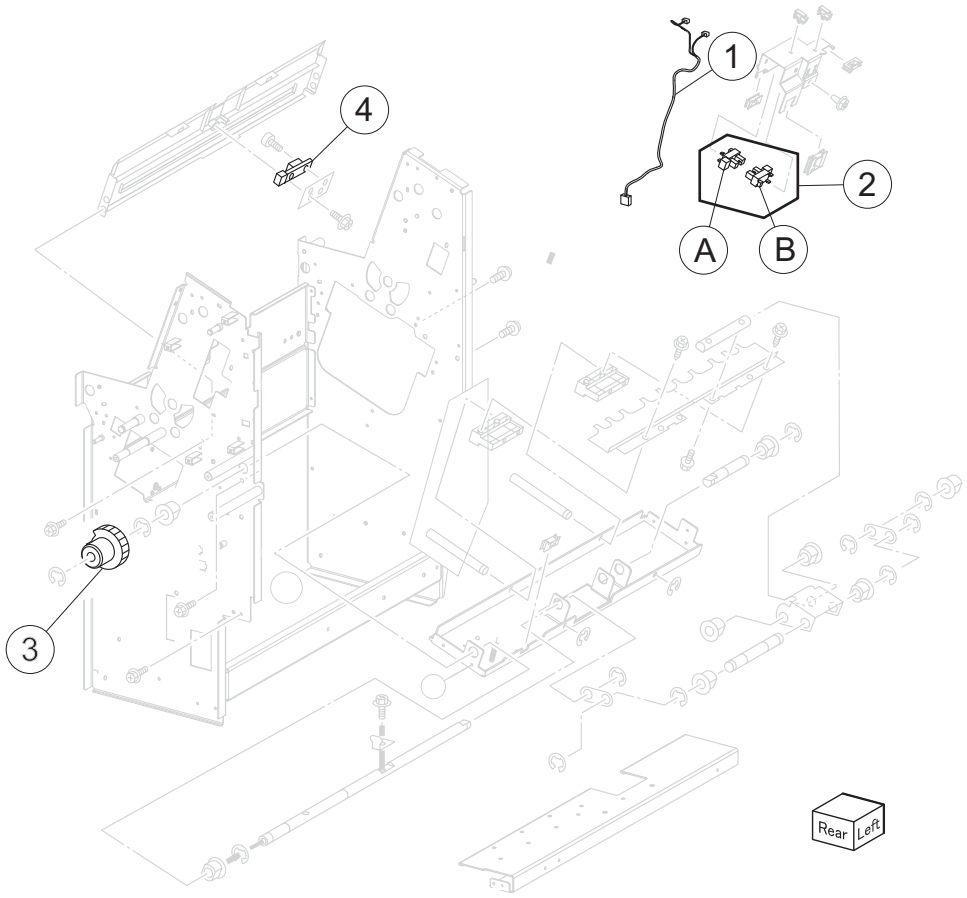
Asm-index	Part number	Units/ mach	Units/ FRU	Description
83-1	40X7486	1	1	Booklet stapler unit assembly
2	40X7488	1	1	Pulley
3	40X7485	1	1	Booklet knob
4	40X7484	1	1	Belt flange
5	40X7432	1	1	Booklet front drive belt
6	40X6916	1	1	Booklet gear 31T

Assembly 84: Booklet maker 4



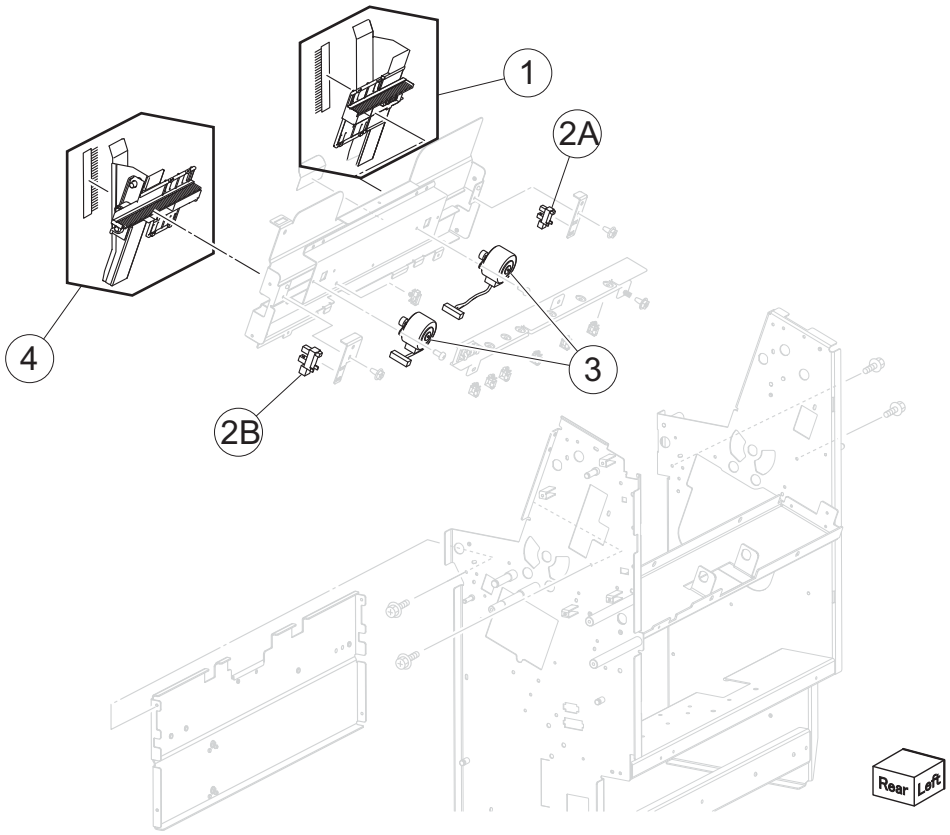
Asm-index	Part number	Units/ mach	Units/ FRU	Description
84-1	40X0825	3	1	Sensor (booklet end guide HP)
2	40X7489	1	1	Booklet end guide drive motor
3	40X3993	1	1	Gear pulley 40/20T
4	40X3994	1	1	Booklet end guide drive belt
5	40X6917	1	1	Booklet paddle roll
6	40X7490	1	1	Booklet paddle drive motor assembly

Assembly 85: Booklet maker 5



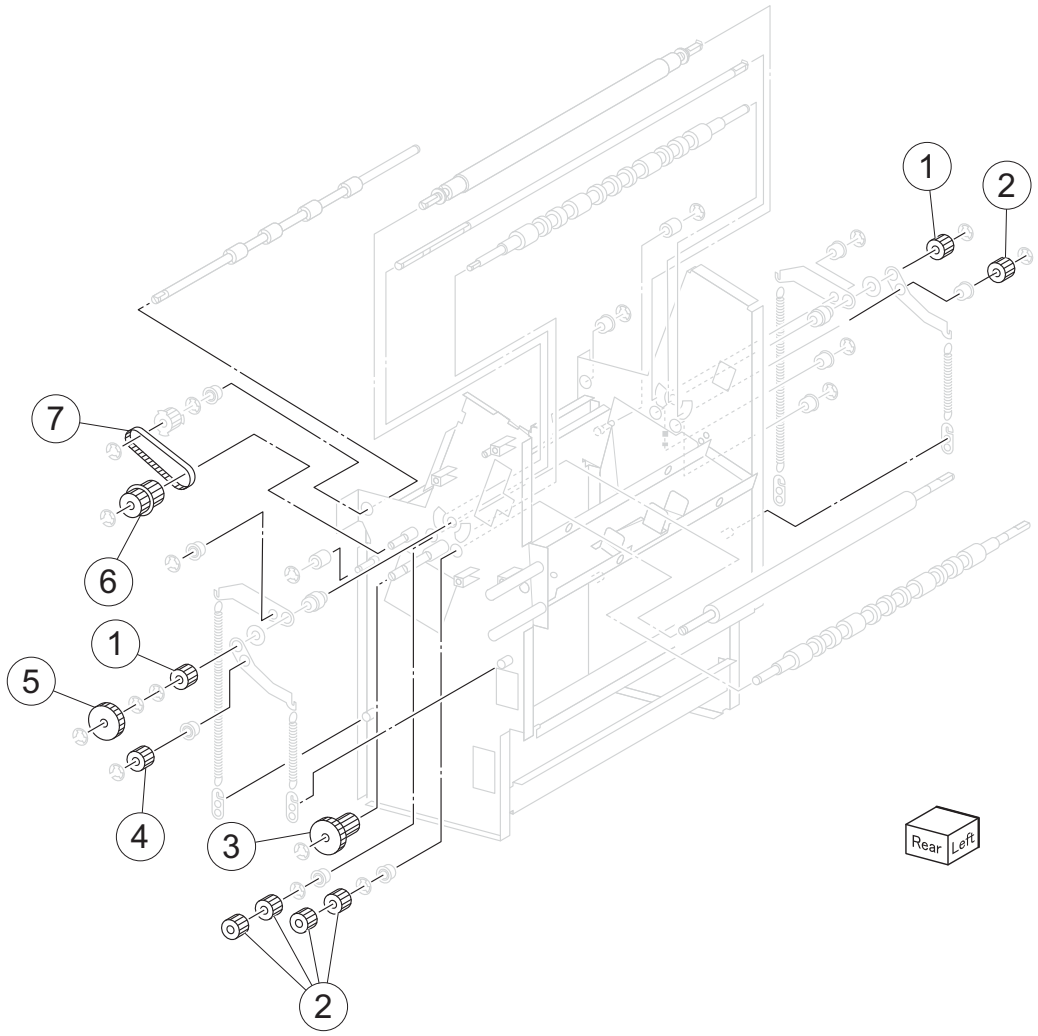
Asm-index	Part number	Units/ mach	Units/ FRU	Description
85-1	40X7491	1	1	Booklet knife HP sensor cable assembly
2	40X0825	3	1	A) Sensor (booklet knife folding) B) Sensor (booklet knife HP)
3	40X3999	1	1	Booklet knife sector drive gear 42T
4	40X0921	1	1	Sensor (booklet media entrance)

Assembly 86: Booklet maker 6



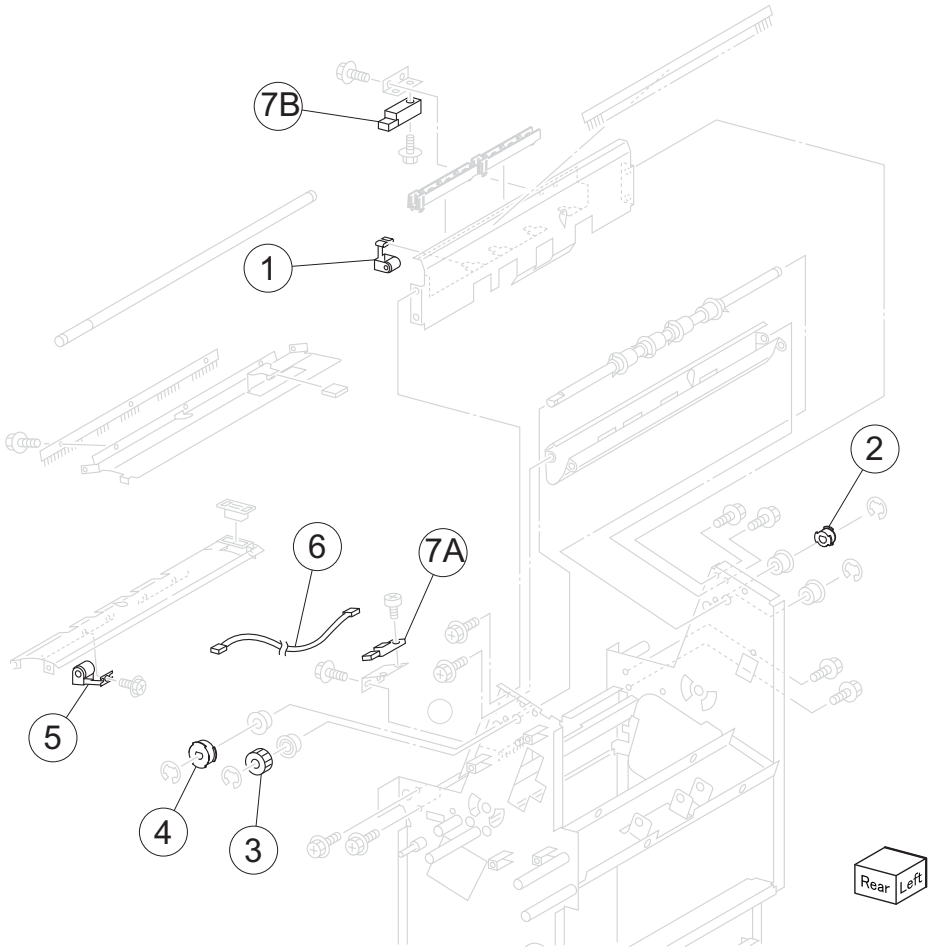
Asm-index	Part number	Units/ mach	Units/ FRU	Description
1	40X7433	1	1	Booklet front tamper guide
2	40X0825	3	1	A) Sensor (booklet front tamper HP) B) Sensor (booklet rear tamper HP)
3	40X4002	1	1	Booklet rear tamper motor
3	40X4002	1	1	Booklet front tamper motor
4	40X7434	1	1	Booklet rear tamper guide

Assembly 87: Booklet maker 7



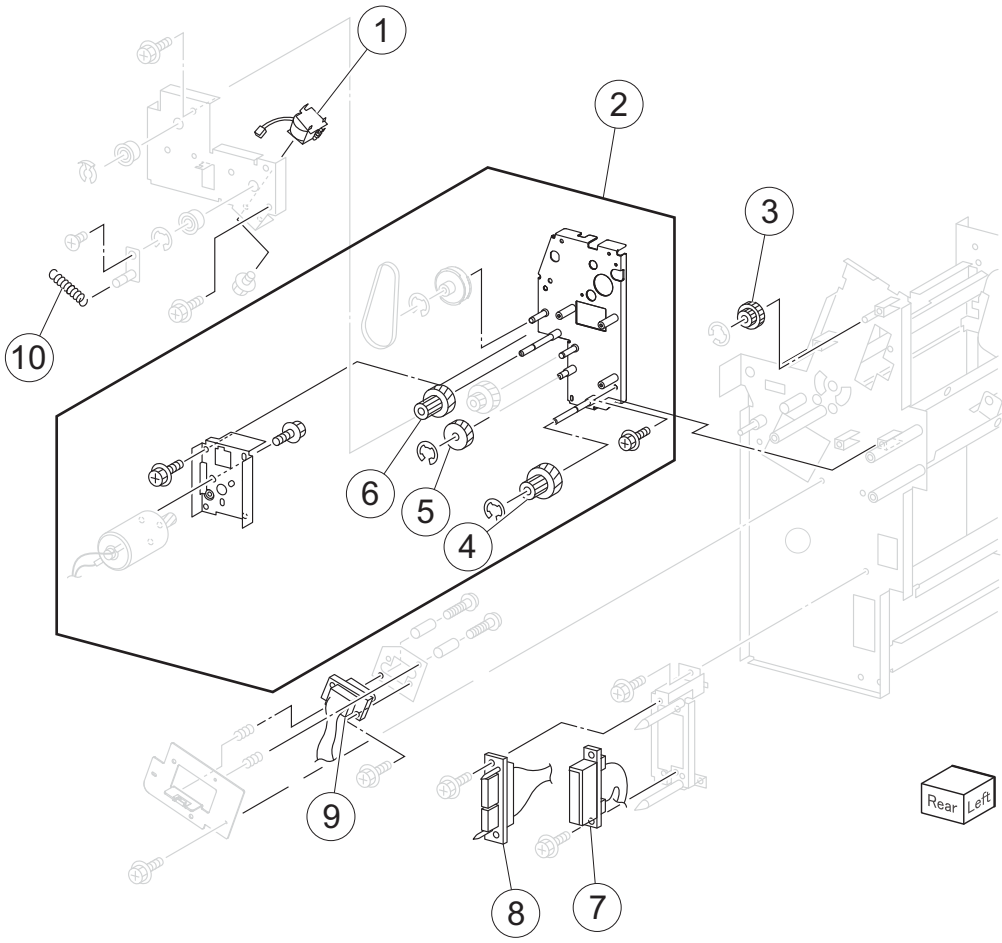
Asm-index	Part number	Units/ mach	Units/ FRU	Description
87-1	40X4008	1	1	Gear 18T
2	40X4006	1	1	Gear 16T
3	40X4007	1	1	Booklet folding roll drive gear 38/18T
4	40X7523	1	1	Gear 16T
5	40X4010	1	1	Gear 37T
6	40X4004	1	1	Gear pulley 20/25T
7	40X4005	1	1	Booklet exit roll drive belt

Assembly 88: Booklet maker 8



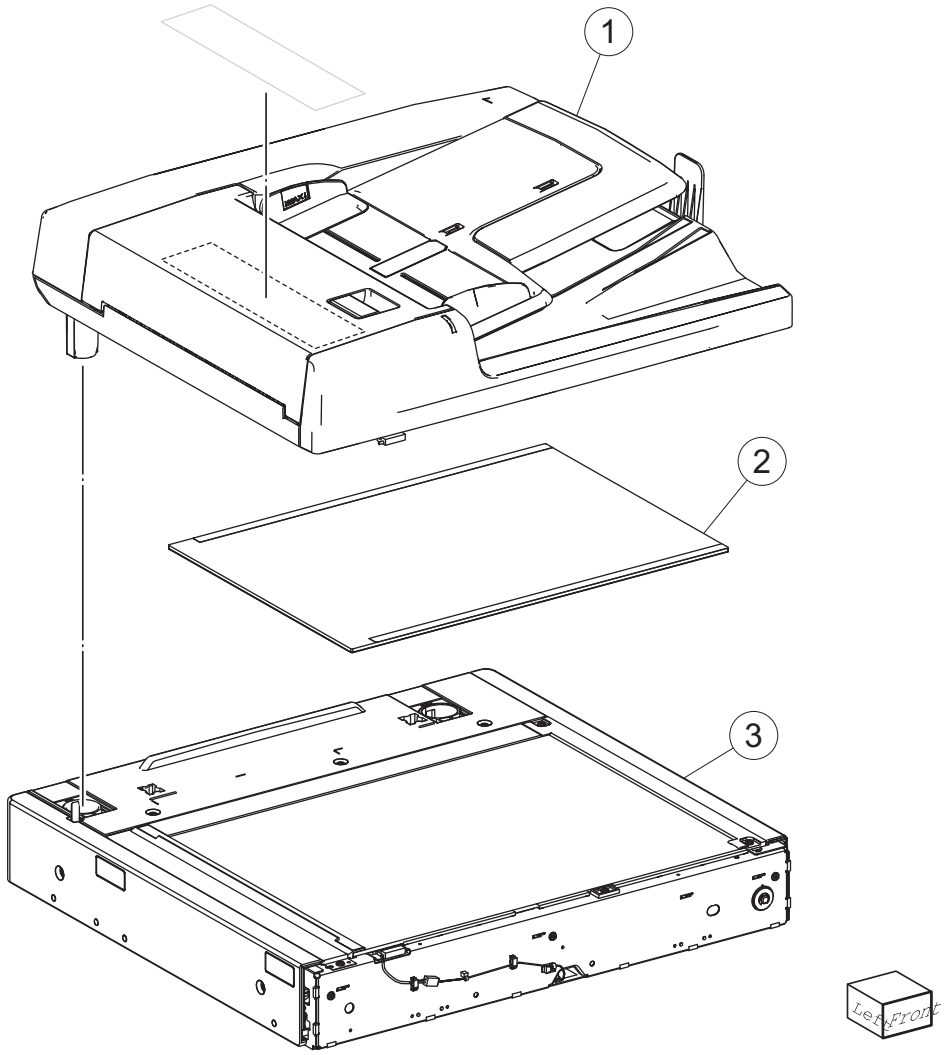
Asm-index	Part number	Units/ mach	Units/ FRU	Description
88-1	40X7565	1	1	Booklet media pinch roll assembly
2	40X7436	1	1	Booklet front pulley
3	40X7523	1	1	Gear (16T)
4	40X7435	1	1	Booklet entrance drive pulley
5	40X4011			Booklet media exit pinch roller
6	40X7494	1	1	Media exit sensor cable assembly
7	40X0921	1	1	A) Sensor (booklet media entrance) B) Sensor (booklet media exit)

Assembly 89: Booklet maker 9



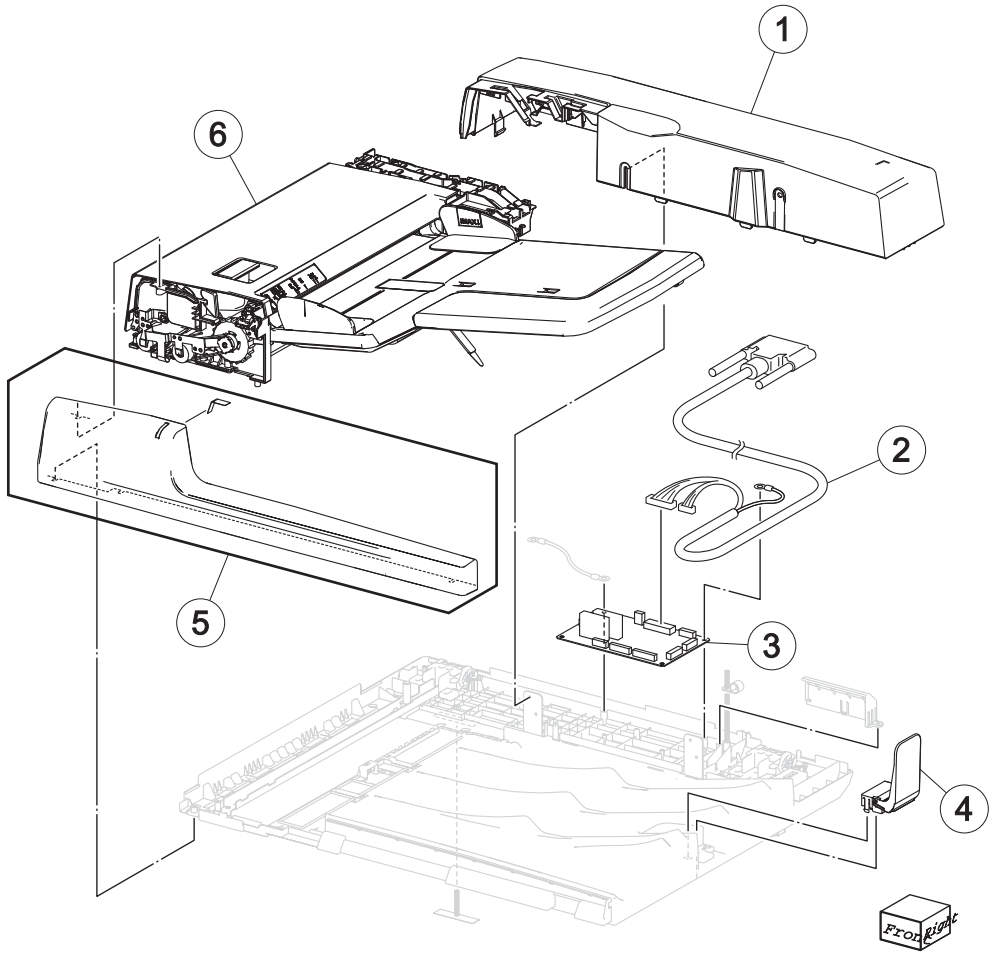
Asm-index	Part number	Units/ mach	Units/ FRU	Description
89-1	40X7497	1	1	Booklet fold solenoid
2	40X7524	1	1	Booklet rear gear bracket
3	40X4019	1	1	Booklet gear 27/34T
4	40X4024	1	1	Gear 18/39T
5	40X4015	1	1	Booklet gear 45T
6	40X4017	1	1	Booklet gear 16/44T
7	40X7501	1	1	Booklet sensor interface cable assembly
8	40X7499	1	1	Booklet motor interface cable assembly
9	40X7498	1	1	Booklet stapler interface cable assembly
10	40X4020	1	1	Spring

Assembly 90: ADF assembly



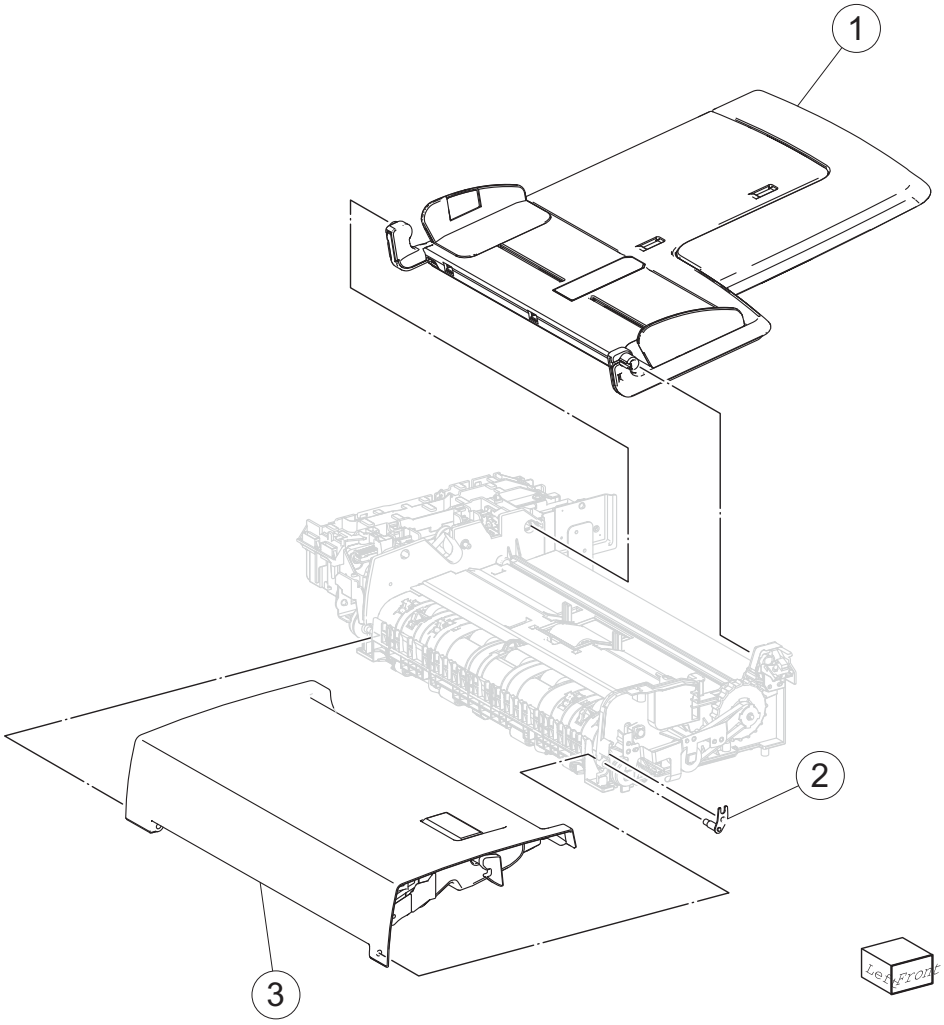
Asm-index	Part number	Units/ mach	Units/ FRU	Description
90-1	40X6795	1	1	Automatic document feeder assembly
2	40X6794	1	1	ADF platen pad
3	40X6554	1	1	Flatbed scanner assembly

Assembly 91: ADF covers and components 1



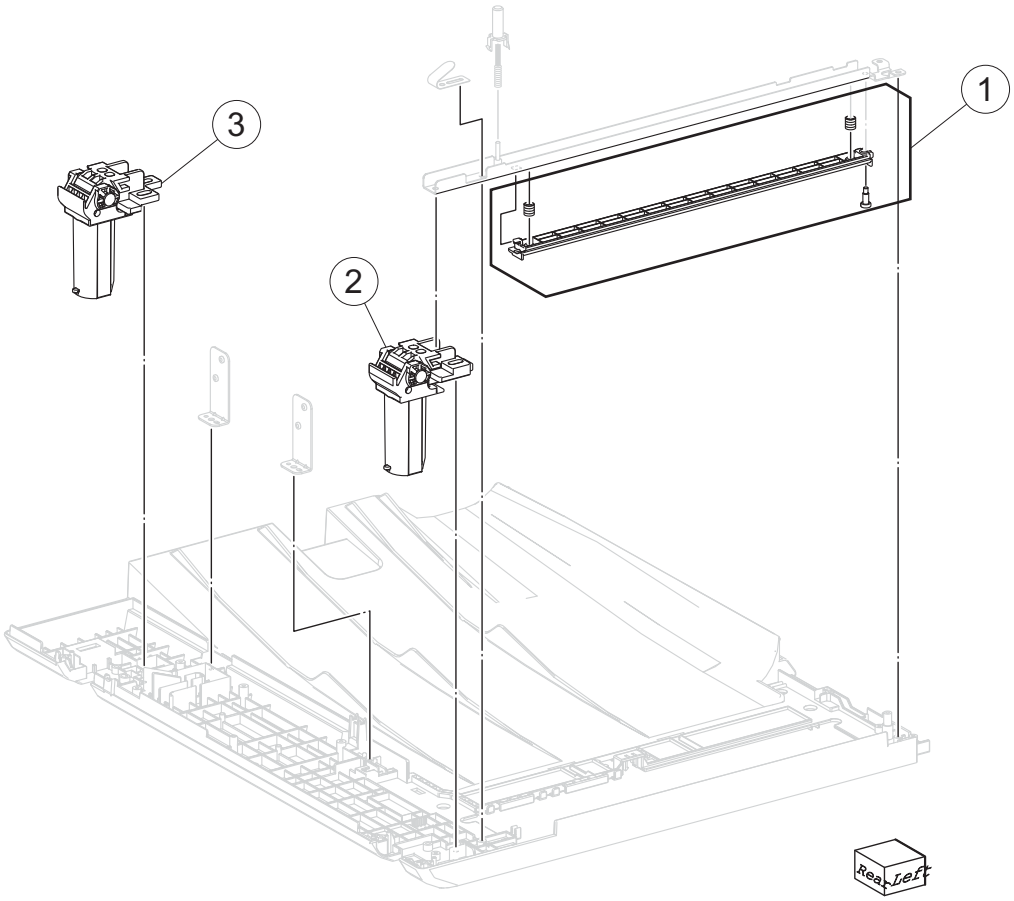
Asm-index	Part number	Units/ mach	Units/ FRU	Description
91-1	40X6797	1	1	ADF rear cover
2	40X6799	1	1	ADF interface cable
3	40X6800	1	1	ADF controller PCBA
4	40X6801	1	1	ADF media stop
5	40X6798	1	1	ADF front cover
6	40X6796	1	1	ADF main drive sub assembly

Assembly 92: ADF covers and components 2



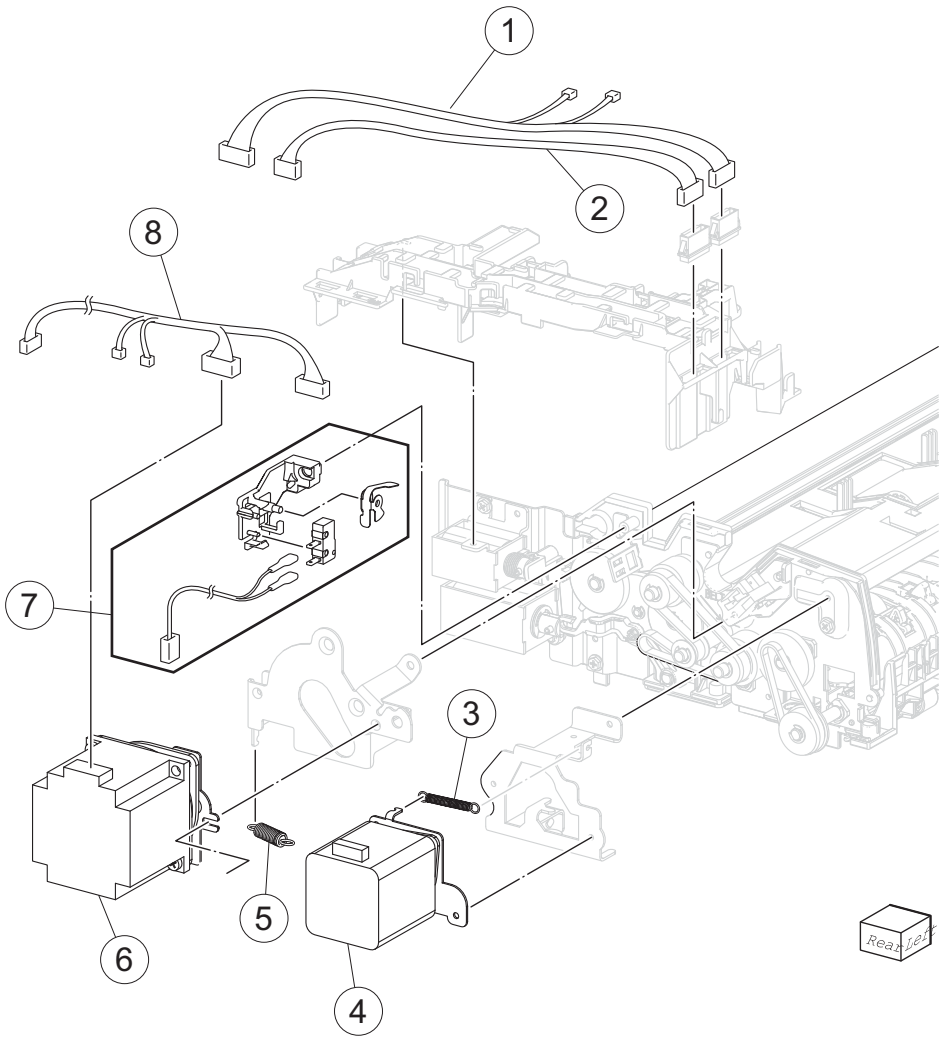
Asm-index	Part number	Units/ mach	Units/ FRU	Description
92-1	40X6806	1	1	ADF document tray
2	40X6808	1	1	ADF left door retainer
3	40X6807	1	1	ADF top door

Assembly 93: ADF base



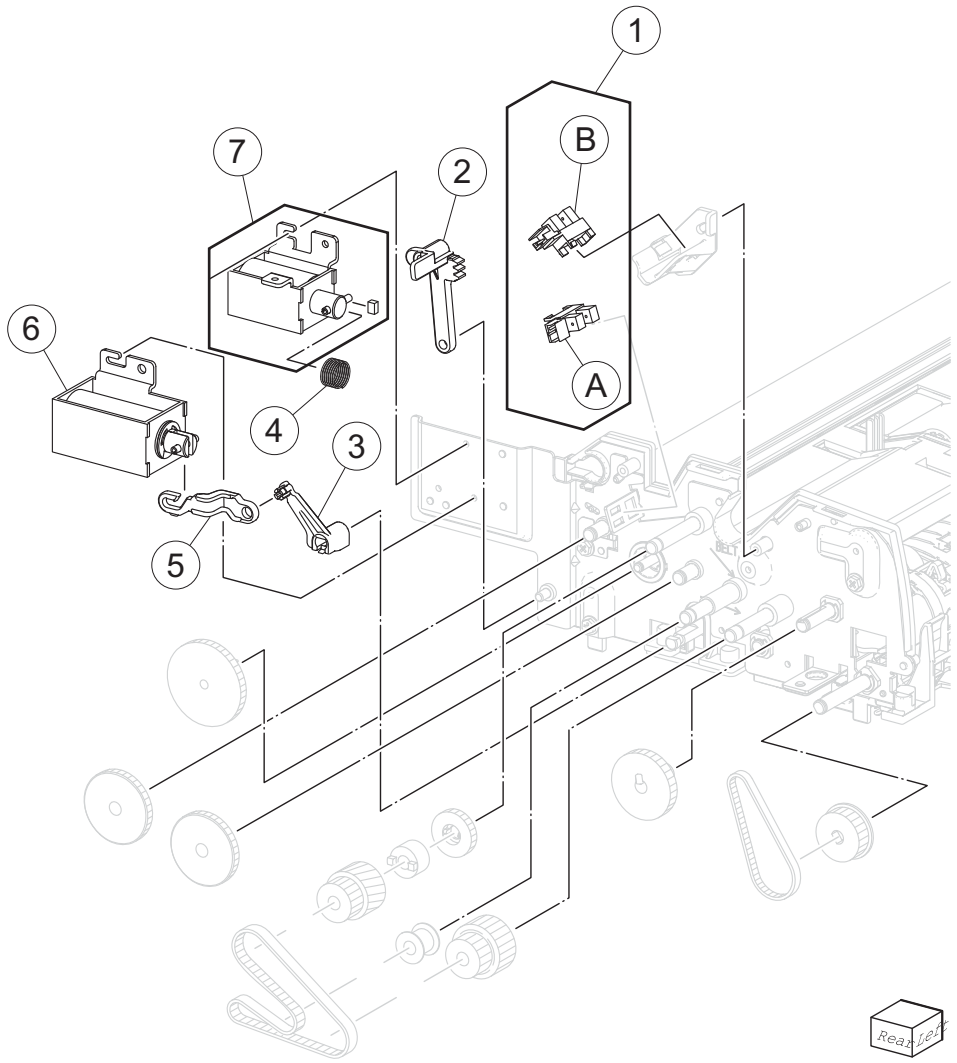
Asm-index	Part number	Units/ mach	Units/ FRU	Description
93-1	40X6804	1	1	ADF scan pad
2	40X6802	1	1	ADF left hinge
3	40X6803	1	1	ADF right hinge

Assembly 94: ADF drive



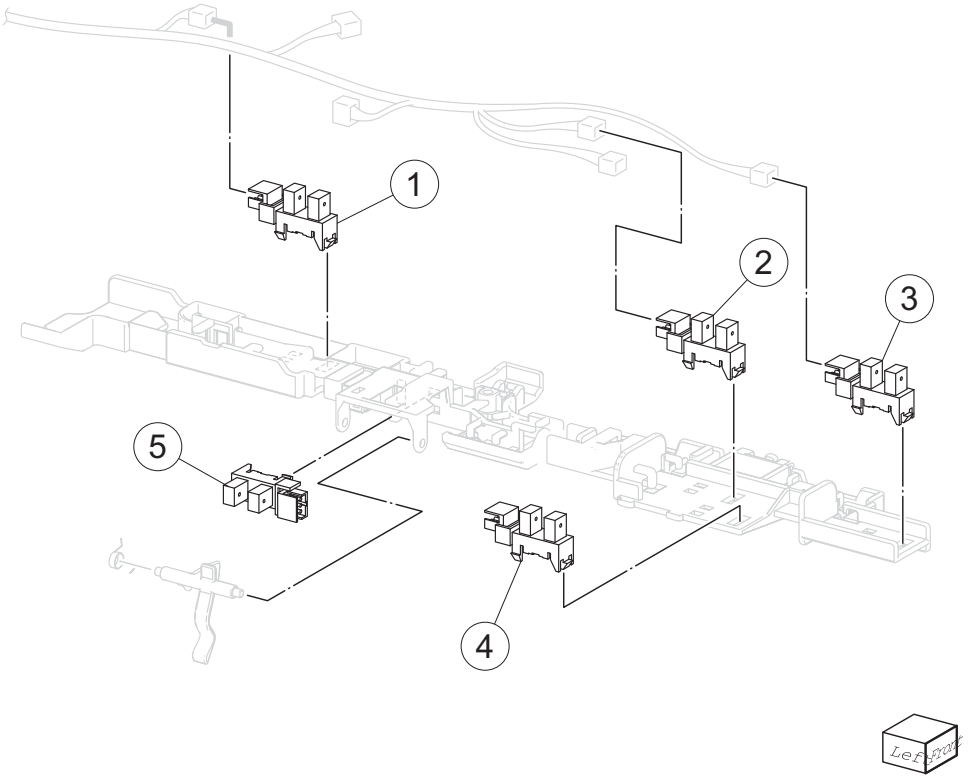
Asm-index	Part number	Units/ mach	Units/ FRU	Description
94-1	40X6813	1	1	ADF sensor 1 cable
2	40X6815	1	1	ADF sensor 2 cable
3	40X2348	1	1	Spring
4	40X6811	1	1	ADF registration motor
5	40X6812	1	1	ADF feed motor spring
6	40X6810	1	1	ADF feed motor
7	40X6809	1	1	Sensor (ADF top door interlock)
8	40X6814	1	1	ADF motor cable

Assembly 95: ADF sensors 1



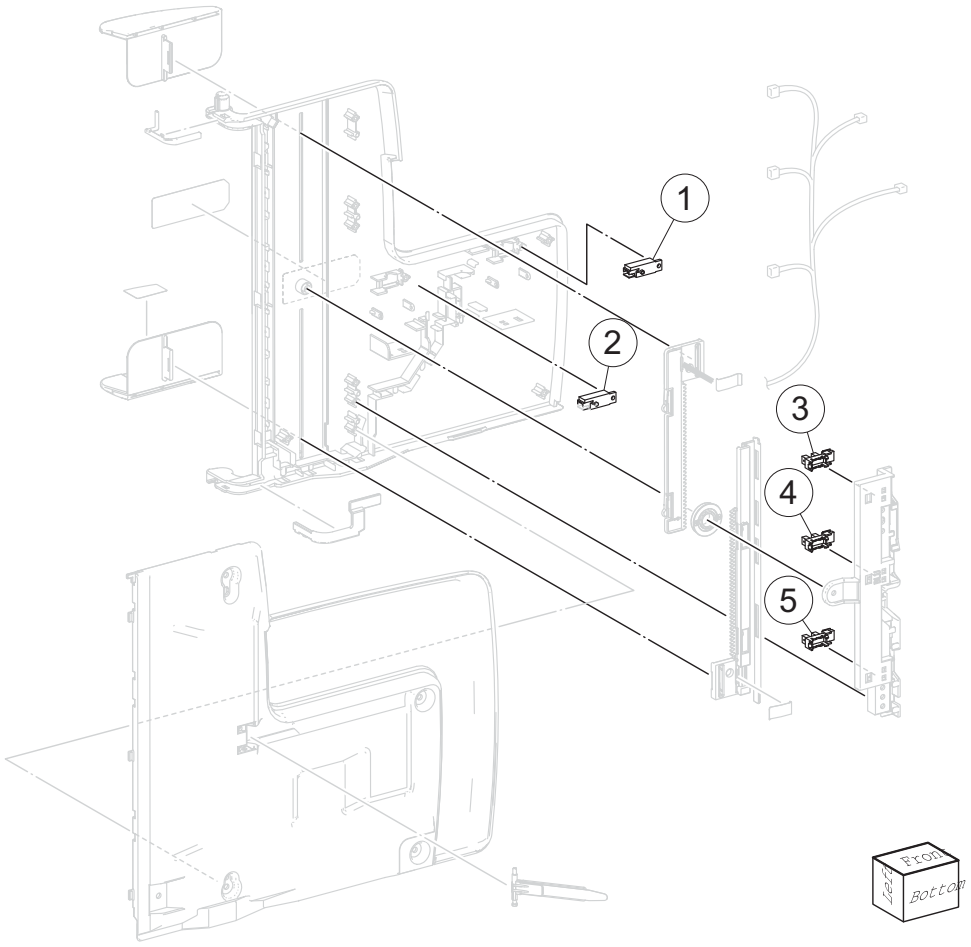
Asm-index	Part number	Units/ mach	Units/ FRU	Description
95-1	40X7403	1	1	A) Sensor (ADF document set) B) Sensor (ADF feed out)
2	40X7401	1	1	ADF document set solenoid
3	40X7400	1	1	ADF nip release lever
4	40X6818	1	1	Spring
5	40X7402	1	1	ADF nip release link
6	40X6817	1	1	ADF nip release solenoid
7	40X6816	1	1	ADF diverter gate solenoid

Assembly 96: ADF sensors 2



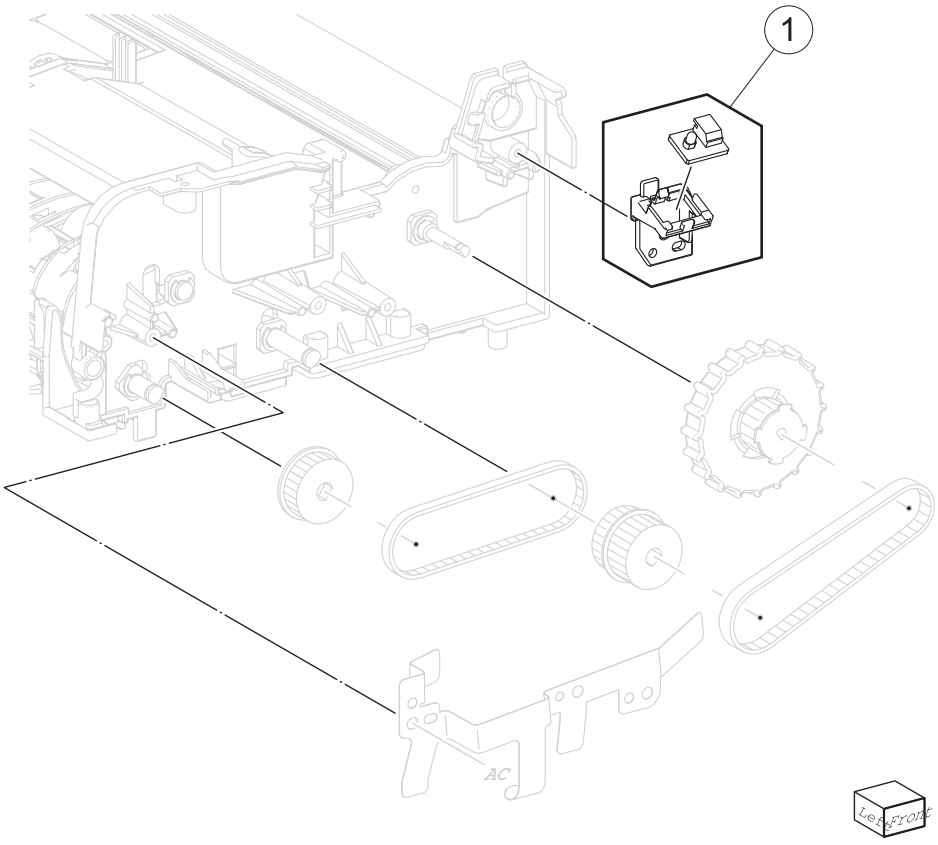
Asm-index	Part number	Units/ mach	Units/ FRU	Description
96-1	40X7403		1	Sensor (ADF pre registration)
2	40X7403		1	Sensor (ADF scan width 2)
3	40X7403		1	Sensor (ADF scan width 3)
4	40X7403		1	Sensor (ADF scan width 1)
5	40X7403		1	Sensor (ADF registration)

Assembly 97: ADF sensors 3



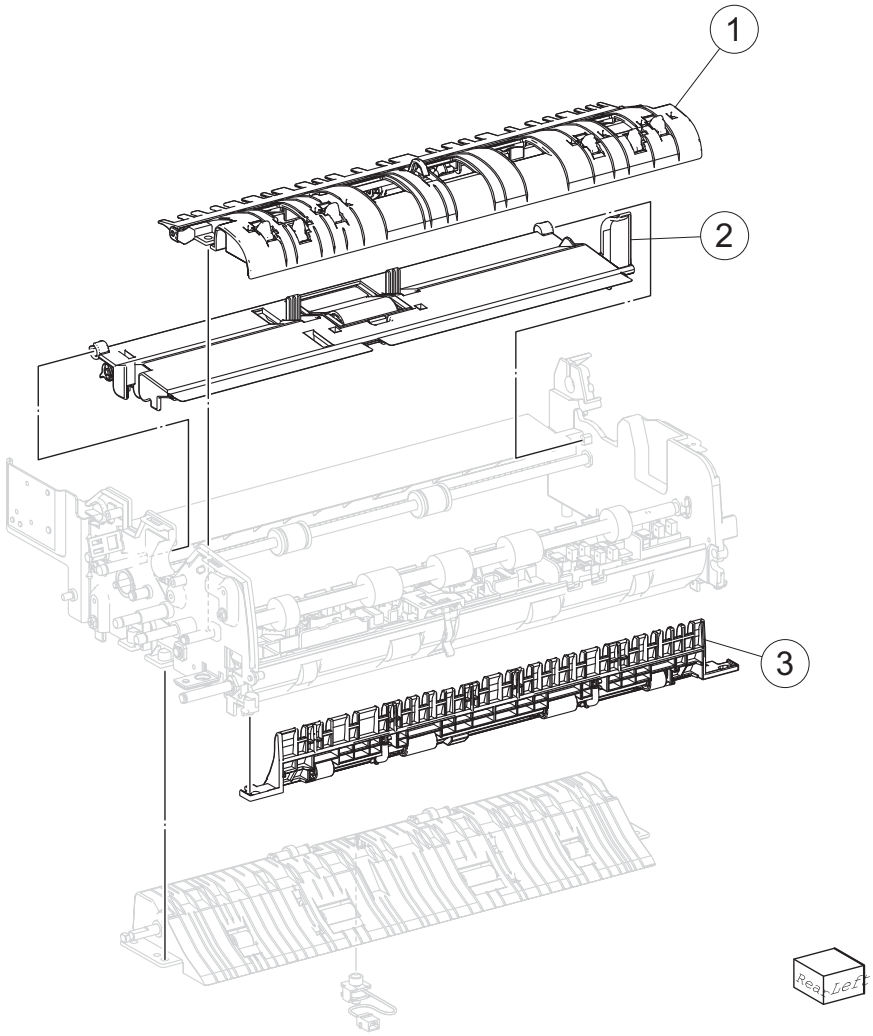
Asm-index	Part number	Units/ mach	Units/ FRU	Description
97-1	40X3892			Sensor (document tray length 2)
2	40X3892			Sensor (document tray length 1)
3	40X7403		1	Sensor (ADF document tray width 1)
4	40X7403		1	Sensor (ADF document tray width 2)
5	40X7403		1	Sensor (ADF document tray width 3)

Assembly 98: ADF LED PCB



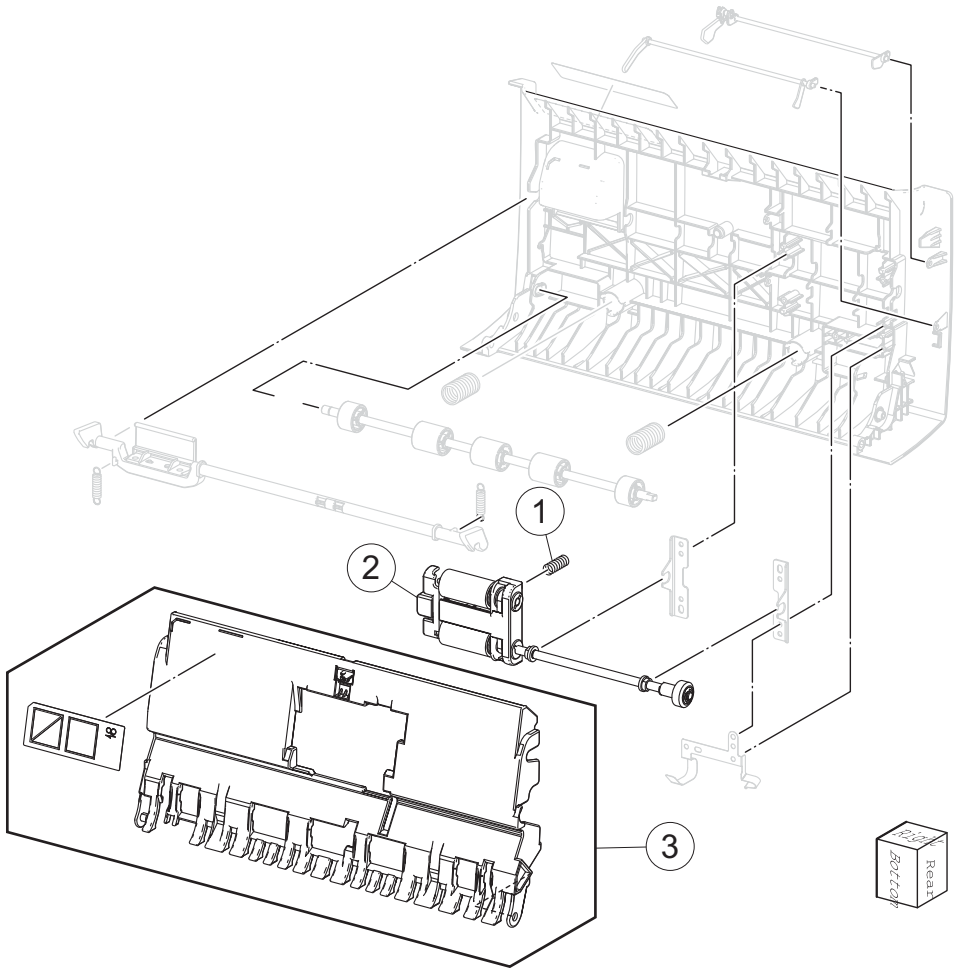
Asm-index	Part number	Units/ mach	Units/ FRU	Description
98-1	40X6819	1	1	ADF LED PCB

Assembly 99: ADF media guide



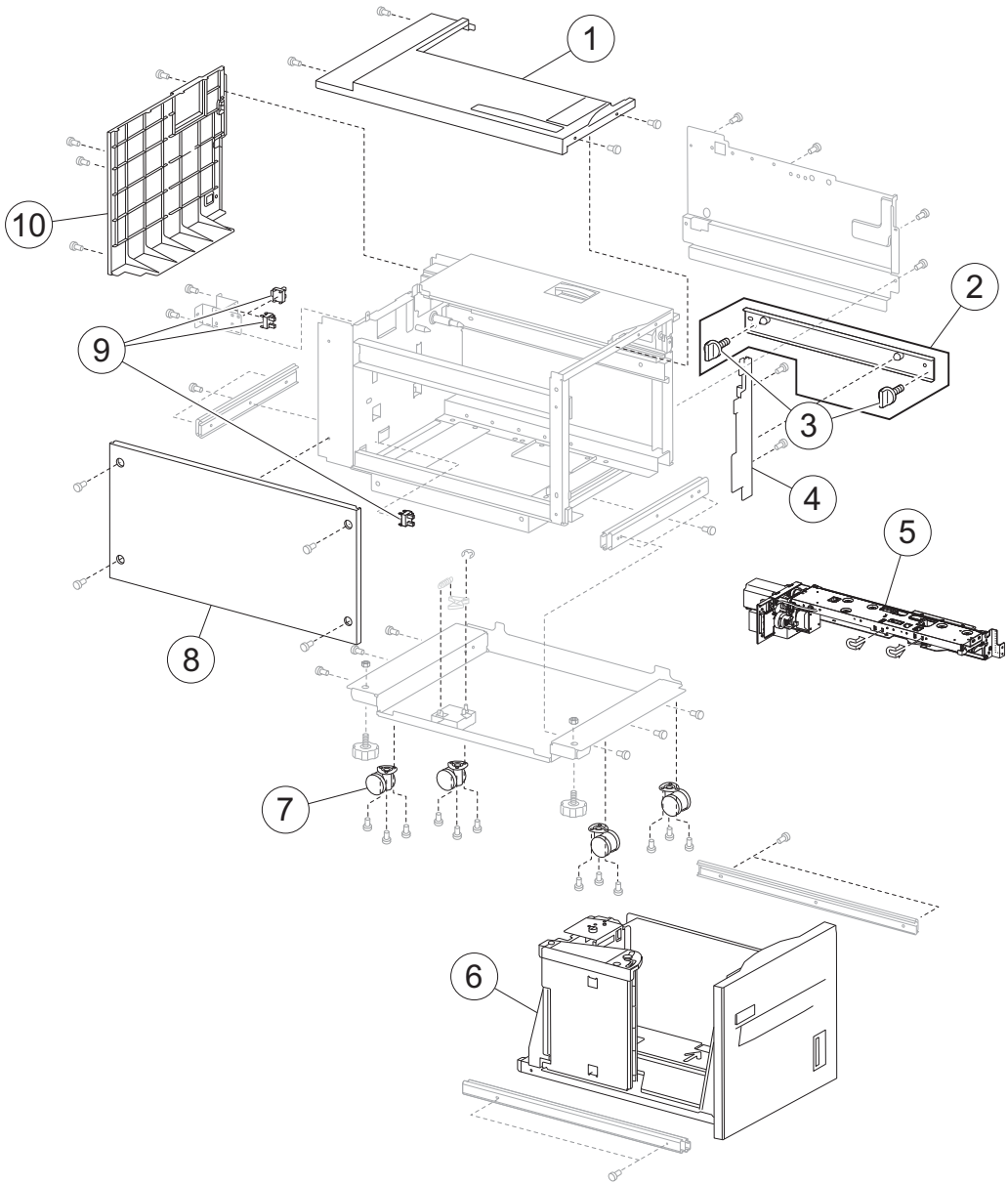
Asm-index	Part number	Units/ mach	Units/ FRU	Description
99-1	40X6822	1	1	ADF sensor actuator guide
2	40X6821	1	1	ADF separation roller guide
3	40X6820	1	1	ADF registration turn guide

Assembly 100: ADF left door



Asm-index	Part number	Units/ mach	Units/ FRU	Description
100-1	40X6825	1	1	Spring
2	40X6824	1	1	ADF feed/pick roller assembly
3	40X6823	1	1	ADF left door inner cover

Assembly 101: High capacity feed (HCF)—covers and media tray



Assembly 101: High capacity feed (HCF)—covers and media tray

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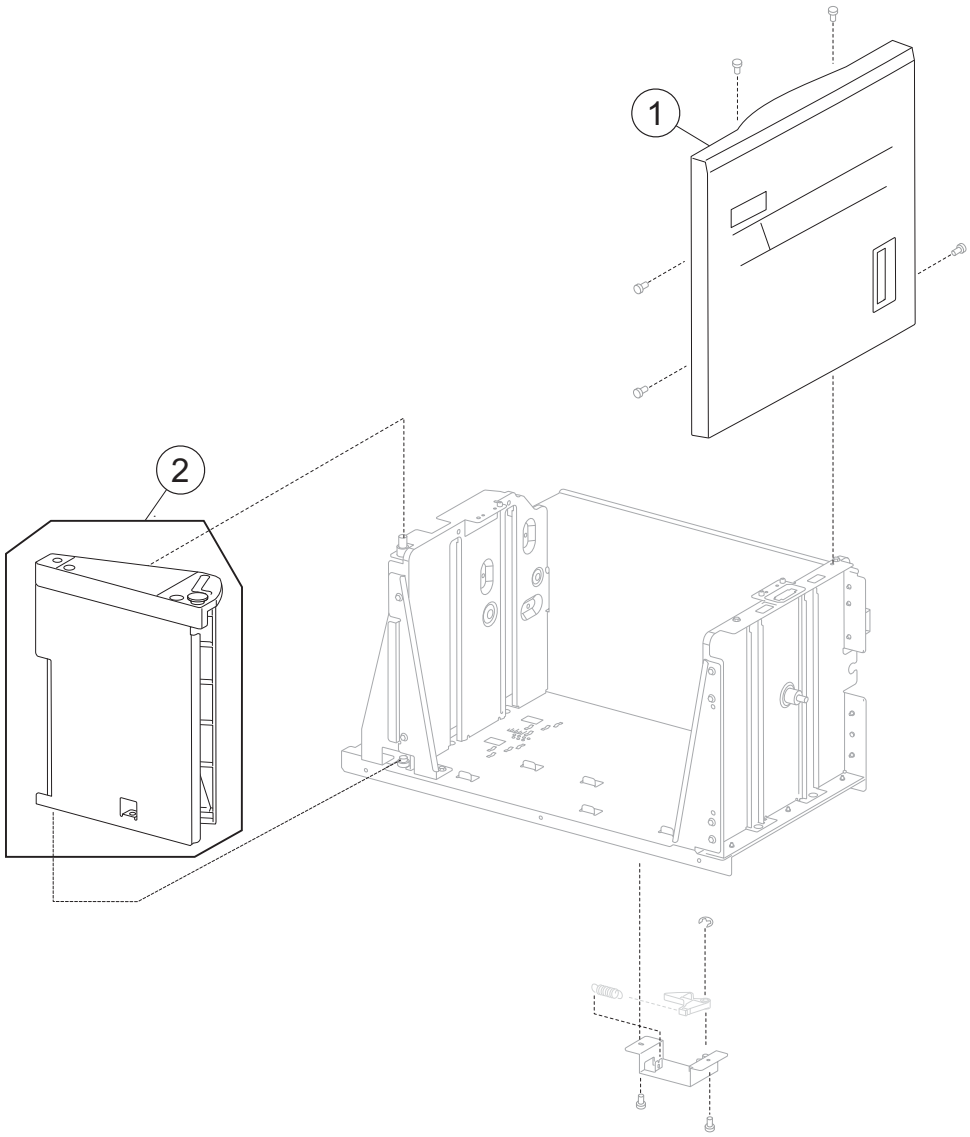
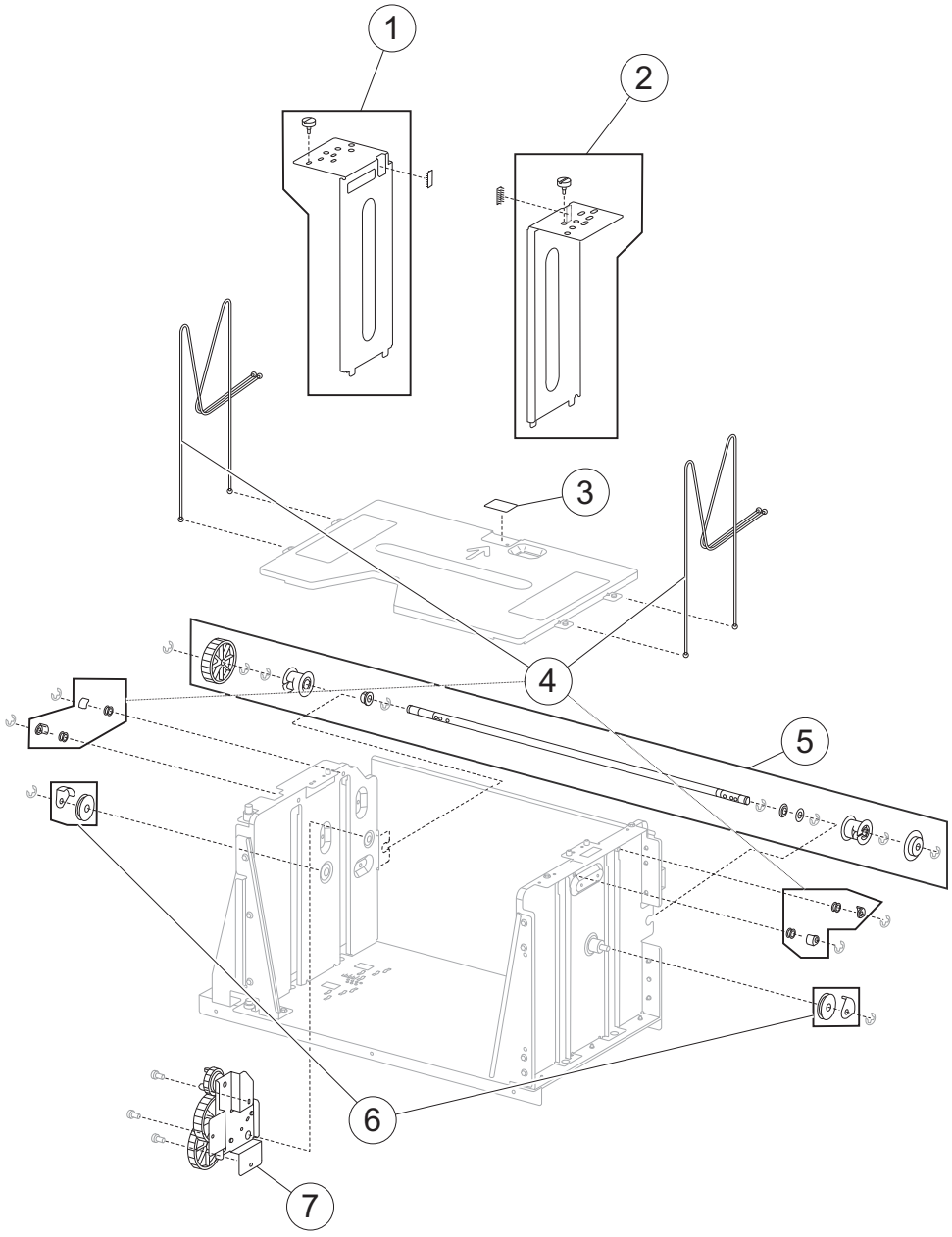
Asm-index	Part number	Units/ mach	Units/ FRU	Description
101-1	40X7394	1	1	HCF top cover
2	40X0745	1	3	HCF docking bracket kit includes: • HCF docking bracket • HCF docking bracket screw (2)
3	40X2238	1	1	Mounting screw
4	40X7395	1	1	HCF inner front cover
5	40X7398	1	1	HCF tray 5 feeder assembly
6	40X6789	1	1	HCF media tray assembly
7	40X0741	4	1	Caster
8	40X7396	1	1	HCF left cover
9	40X0739	1	1	Senser (HCF media tray set) • Sensor (HCF media size L) • Sensor (HCF media size R)
10	40X7397	1	1	HCF rear cover

Assembly 102: High capacity feed (HCF)—media tray



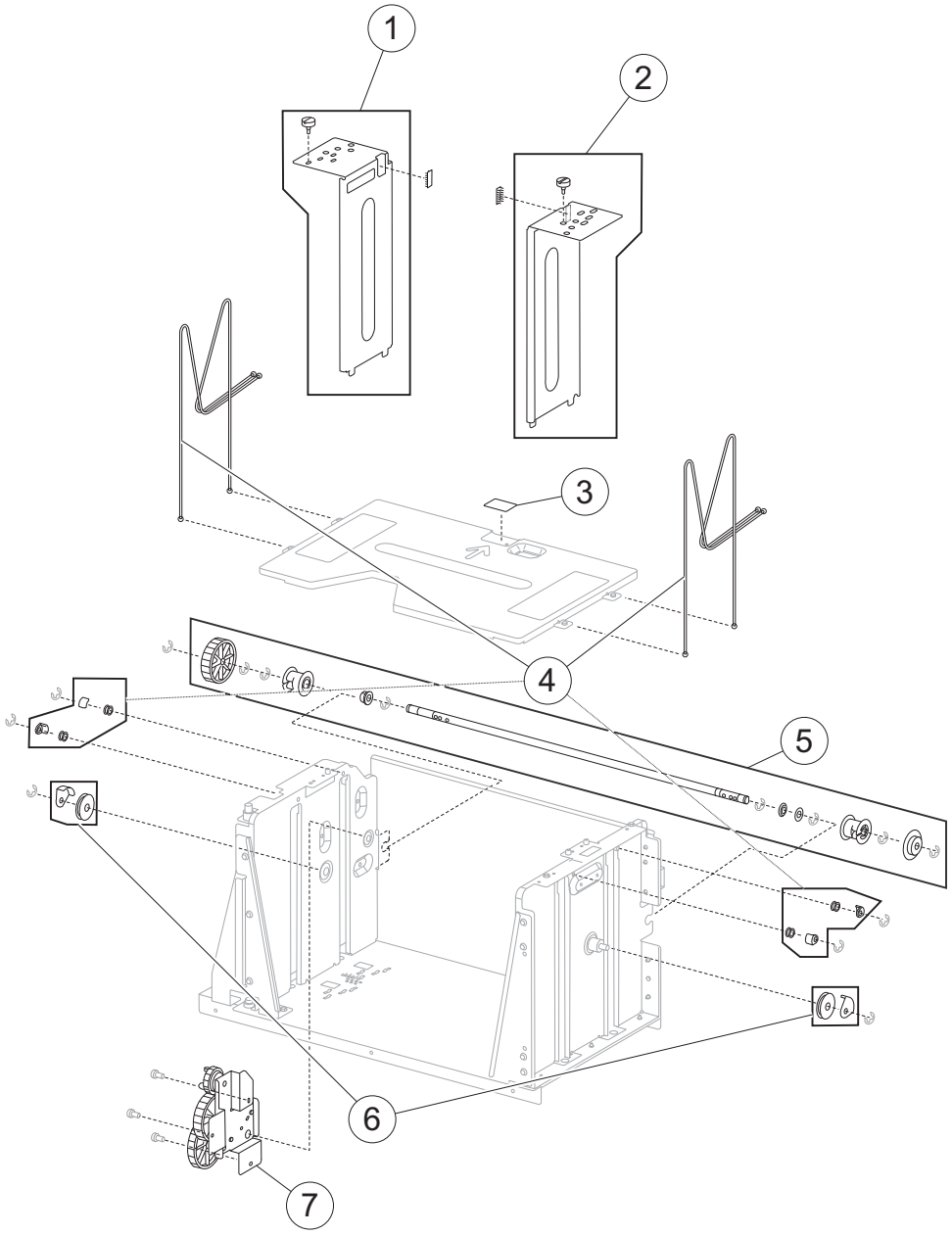
Asm-index	Part number	Units/ mach	Units/ FRU	Description
102-1	40X7399	1	1	HCF media tray front cover
2	40X0749	1	2	HCF media long-edge guide kit includes: • Media long-edge guide • Wave washer

Assembly 103: High capacity feed (HCF)—media tray lift



Asm-index	Part number	Units/ mach	Units/ FRU	Description
103-1	40X0750	1	2	HCF rear media guide kit includes: • HCF rear media guide • Screw
2	40X0751	1	2	HCF front media guide kit includes: • HCF front media guide • Screw
3	40X0752	1	1	HCF separation pad

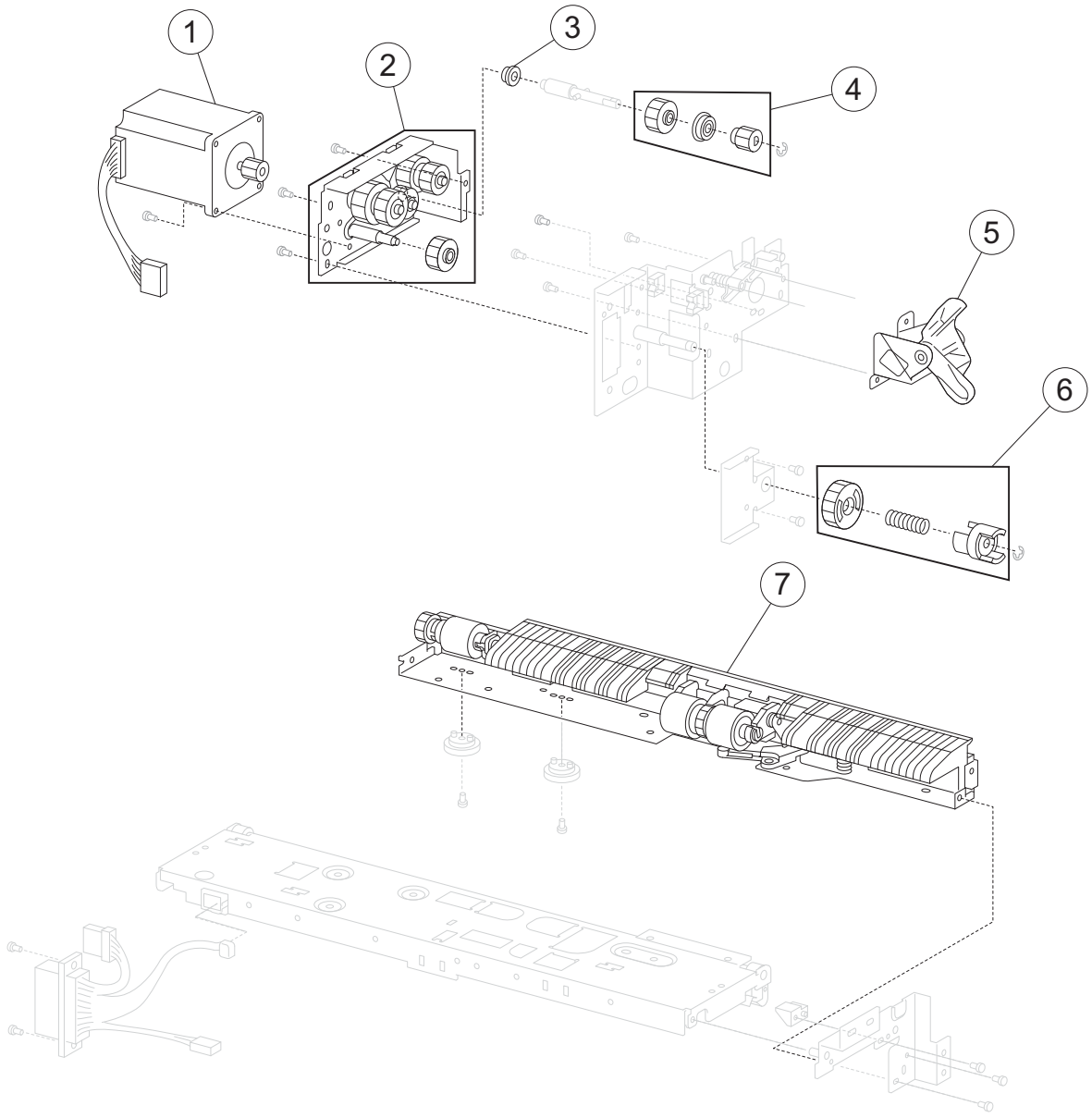
Assembly 103 (continued): High capacity feed (HCF)—media tray lift



Assembly 103 (continued): High capacity feed (HCF)—media tray lift

Asm-index	Part number	Units/mach	Units/FRU	Description
4	40X0757	1	12	HCF lift cable kit includes: • Lift cable (4) • Lift cable pulley (4) • Lift cable guide (4)
5	40X0754	1	7	HCF media tray lift shaft kit includes: • Bushing 8 mm front • HCF media tray lift shaft • Bushing 8 mm rear • Washer • HCF media tray lift shaft cable pulley • HCF media tray lift shaft gear 10T • HCF media tray lift shaft gear 51T
6	40X0756	2	2	HCF lift cable large pulley kit includes: • HCF lift cable large pulley • HCF lift cable large guide
7	40X0753	1	1	HCF media tray lift gear bracket

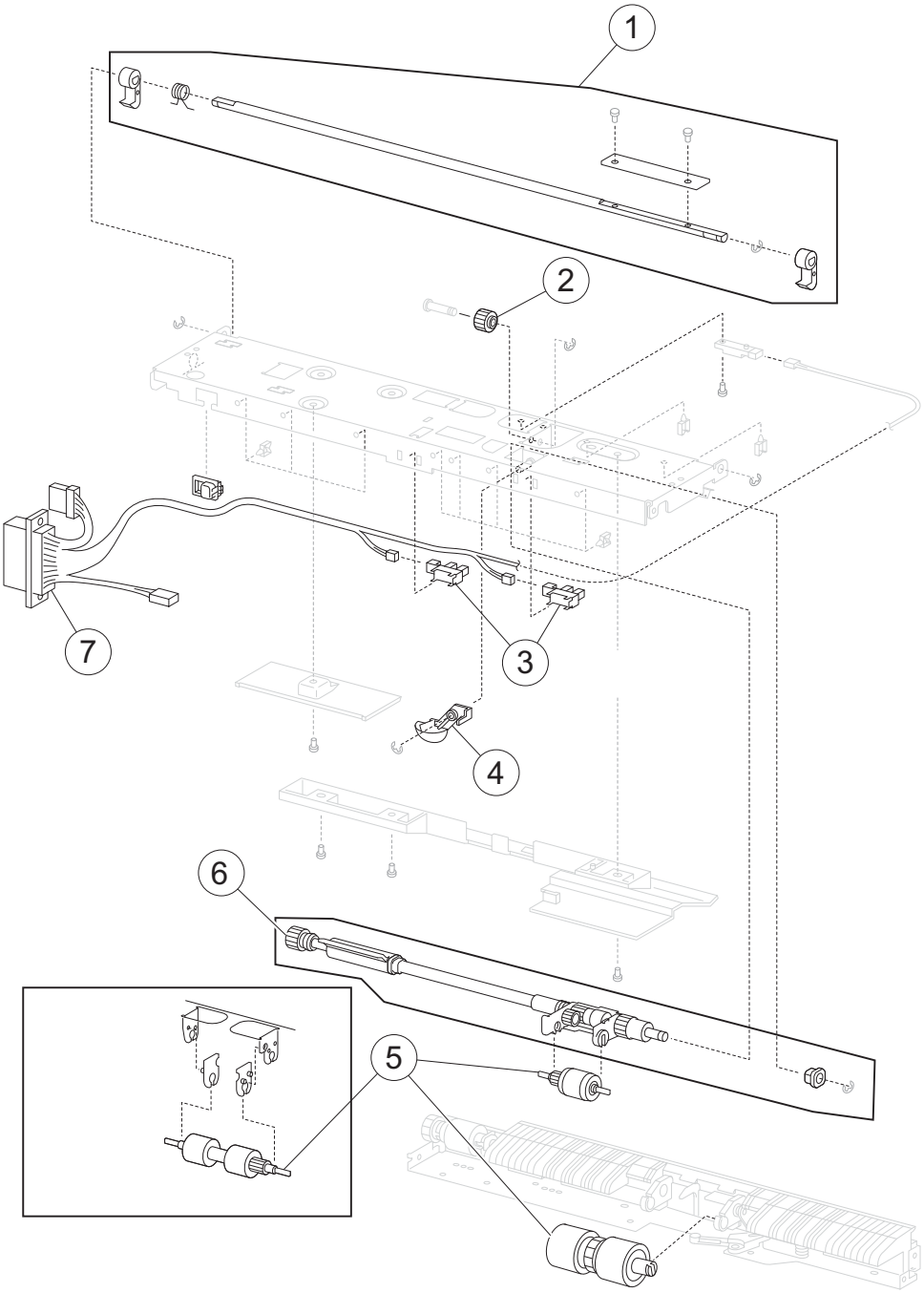
Assembly 104: High capacity feed (HCF)—media feed unit 1



Assembly 104: High capacity feed (HCF)—media feed unit 1

Asm-index	Part number	Units/ mach	Units/ FRU	Description
104-1	40X0759	1	1	HCF feed lift motor
2	40X0760	1	1	HCF feed lift gear bracket
3	40X0913	1	1	Ball bearing 6 mm
4	40X0761	1	3	HCF separation drive gear kit includes: • HCF separation drive gear 25T • Bushing 6 mm • HCF separation drive gear 19T
5	40X6790			HCF pick roller raise lever
6	40X0763	1	3	HCF media tray lift coupling kit includes: • HCF media tray lift coupling gear 40T • Spring • HCF media tray lift coupling
7	40X0771	1	1	HCF separation roller shaft assembly

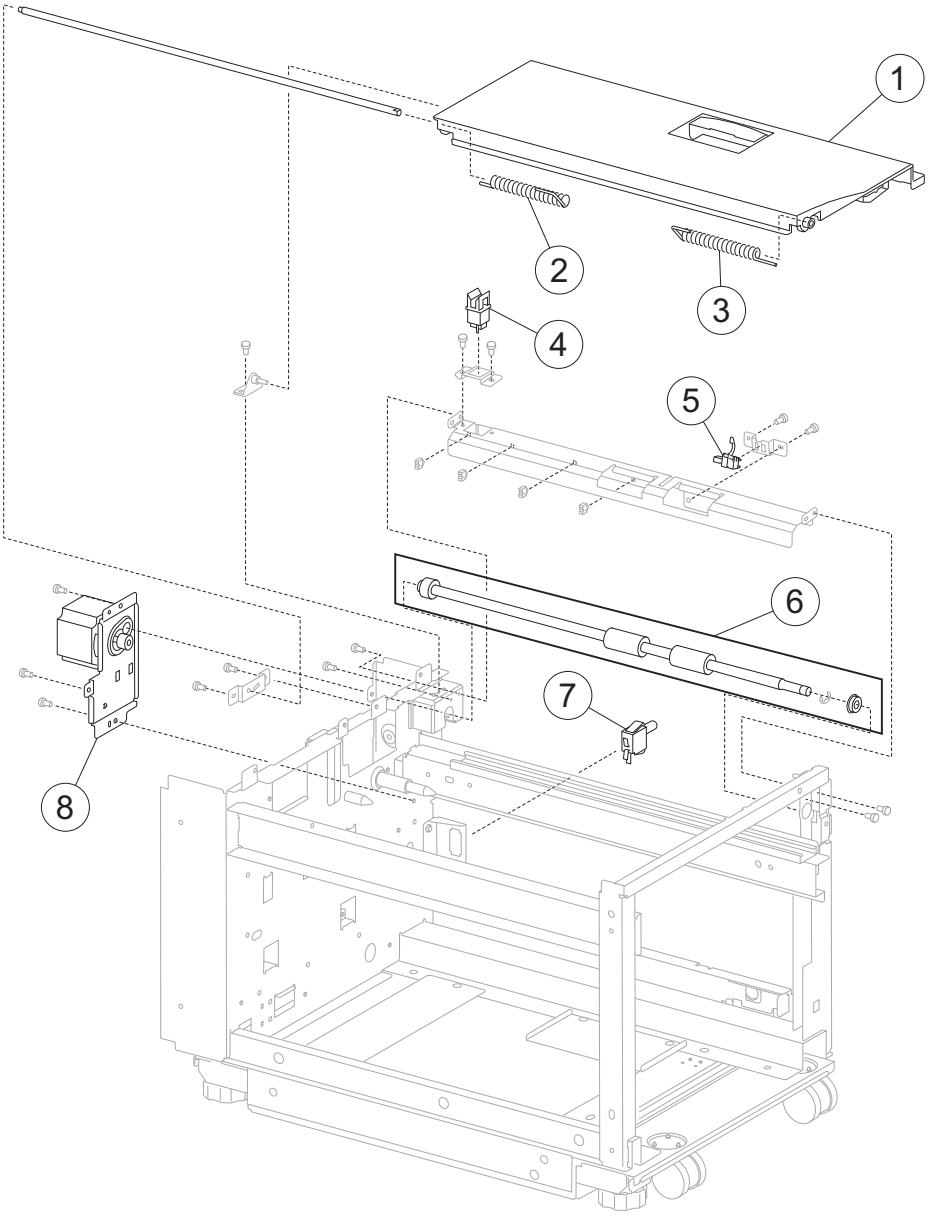
Assembly 105: High capacity feed (HCF)—media feed unit 2



Assembly 105: High capacity feed (HCF)—media feed unit 2

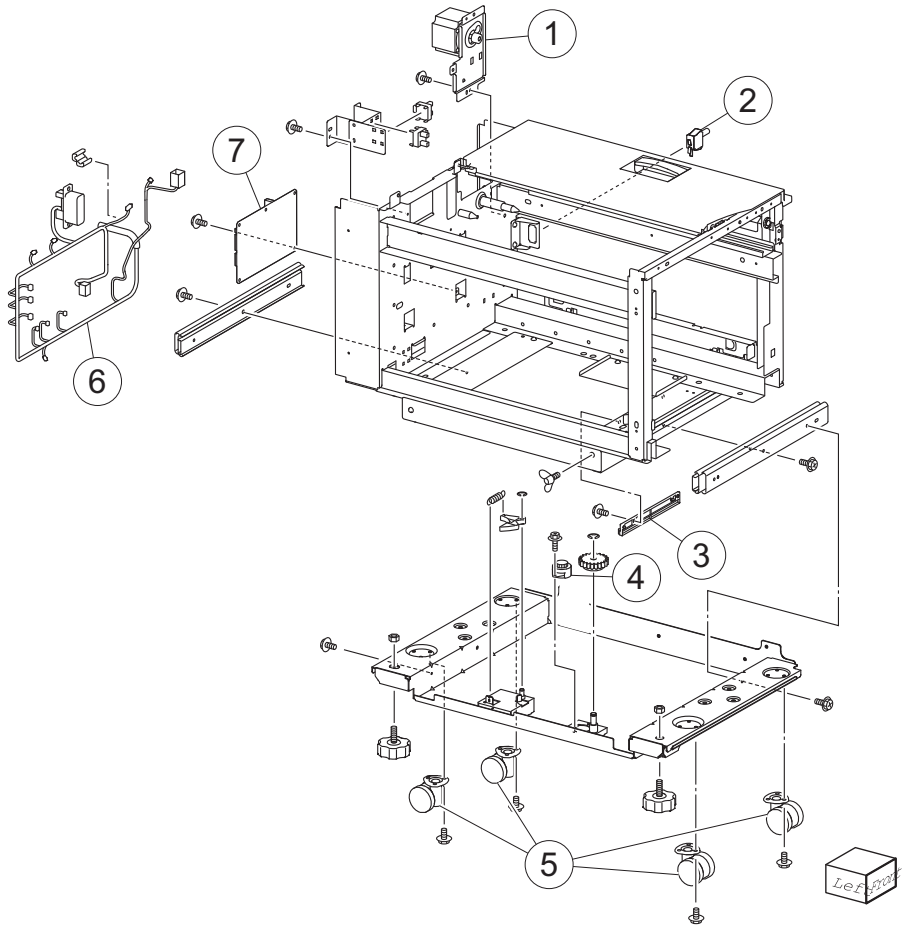
Asm-index	Part number	Units/ mach	Units/ FRU	Description
105-1	40X0764	1	5	HCF feed unit latch kit includes: • HCF feed unit latch • Spring • HCF feed unit latch shaft • HCF feed unit latch cover
2	40X0765	1	1	HCF pick roller idler gear
3	40X0768	1	1	Sensor (tray 5 media out)
3	40X0768	1	1	Sensor (tray 5 media level)
4	40X0767	1	1	HCF media out actuator
5	40X0770	1	3	HCF feed unit roller kit includes: • Feed roller • Pick roller • Separation roller
6	40X0769	1	2	HCF pick roller shaft kit includes: • HCF pick roller shaft assembly • Bushing 6mm
7	40X0766	1	1	HCF feed unit cable assembly

Assembly 106: High capacity feed (HCF)—top door and transport



Asm-index	Part number	Units/ mach	Units/ FRU	Description
106-1	40X7471			HCF top door
2	40X7440			HCF top door rear spring
3	40X7450			HCF top door front spring
4	40X0553	1	1	Sensor (HCF top door interlock)
5	40X0774	1	1	Sensor (tray 5 feed out)
6	40X0775	1	2	HCF media transport roller kit includes: • HCF media transport roller assembly • 8mm ball bearing
7	40X0777	1	1	Sensor (HCF unit docking interlock)
8	40X0776	1	1	HCF transport motor

Assembly 107: High capacity feed (HCF)—drive and electrical



Asm-index	Part number	Units/ mach	Units/ FRU	Description
107-1	40X0776	1	1	HCF transport motor
2	40X0777	1	1	Sensor (HCF unit docking interlock)
3	40X6792	1	1	HCF rack gear
4	40X6793	1	1	HCF sliding damper
5	40X0741	1	1	HCF caster
6	40X0779	1	1	HCF main cable
7	40X6791	1	1	HCF controller card PCBA

Assembly 108: Miscellaneous

Asm-index	Part number	Units/ FRU	Description
NS	40X5301	1	256MB memory option
NS	40X5302	1	512MB memory option
NS	40X5303	1	1GB memory option
NS	40X7058	1	160GB hard drive
NS	40X5704	1	256MB flash memory
NS	40X7515	1	Bar code card assembly (Lexmark X95x)
NS	40X7512	1	IPDS card assembly (Lexmark X95x)
NS	40X7509	1	PRESCRIBE card assembly (Lexmark X95x)
NS	40X7051	1	PrintCryption card assembly
NS	40X5969	1	Korean font card
NS	40X5970	1	Simplified Chinese font card
NS	40X5971	1	Traditional Chinese font card
NS	40X5972	1	Japanese font card
NS	40X6337	1	Arabic font card
NS	40X4826	1	MarkNet N8120 gigabit ethernet print server
NS	40X9652	1	MarkNet N8130 fiber ethernet print server
NS	40X7062	1	MarkNet N8250 802.11b/g/n wireless print server (US/Americas)
NS	40X7063	1	MarkNet N8250 802.11b/g/n wireless print server (rest of the world)
NS	40X4819	1	RS-232C serial interface card
NS	40X4823	1	Parallel 1284-B interface card
NS	40X1367	1	10-Foot parallel printer cable
NS	40X1368	1	2-meter USB printer cable
NS	40X7530	1	200K maintenance ADF kit
NS	40X7540	1	160K maintenance kit
NS	40X7550	1	320K maintenance kit (110V)
NS	40X7568	1	320K maintenance kit (100V)
NS	40X7569	1	320K maintenance kit (220V)
NS	40X7560	1	480K maintenance kit
NS	40X0271	1	UK straight power cord
NS	40X0301	1	Australia 8ft straight power cord
NS	40X3609	1	Japan power cord
NS	40X1792	1	Korea power cord
NS	40X0303	1	PRC power cord
NS	40X1791	1	Taiwan power cord
NS	40X7104	1	USA power cord
NS	40X0288	1	Argentina power cord

Assembly 108 (continued): Miscellaneous

Asm-index	Part number	Units/ FRU	Description
NS	40X3141	1	Spain 8ft straight power cord
NS	40X4596	1	Brazil power cord
NS	40X0273	1	Chile Uruguay power cord
NS	40X0275	1	Israel power cord
NS	40X1773	1	South Africa power cord
NS	40X1772	1	Switzerland power cord
NS	40X6963	1	CAC card reader
NS	40X6964	1	Small CAC card reader case
NS	40X6965	1	Large CAC card reader case

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