



## *Service Manual*

**Lexmark™ W840 Printer**

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**4024-XXX**

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## Notices

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### Laser notice

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

Class I laser products are not considered to be hazardous. The printer contains internally a Class IIIb (3b) laser that is nominally a 5 milliwatt gallium arsenide laser operating in the wavelength region of 770-795 nanometers. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

---

### Laser

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

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

---

### Avis relatif à l'utilisation de laser

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

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

---

### Avvertenze sui prodotti laser

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

I prodotti laser di classe non sono considerati pericolosi. La stampante contiene al suo interno un laser di classe IIIb (3b) all'arseniuro di gallio della potenza di 5mW che opera sulla lunghezza d'onda compresa tra 770 e 795 nanometri. Il sistema laser e la stampante sono stati progettati in modo tale che le persone a contatto con la stampante, durante il normale funzionamento, le operazioni di servizio o quelle di assistenza tecnica, non ricevano radiazioni laser superiori al livello della classe 1.

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## Avisos sobre el láser

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

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

---

## Declaração sobre Laser

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

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

---

## Laserinformatie

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

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

---

## Lasermeddelelse

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

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

---

## Huomautus laserlaitteesta

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

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

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

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

---

## Laser-notis

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

Laserprodukter i Klass I anses ej hälsovådliga. Skrivaren har en inbyggd laser av Klass IIIb (3b) som består av en laserenhet av gallium-arsenid på 5 milliwatt som arbetar i våglängdsområdet 770-795 nanometer.

Lasersystemet och skrivaren är utformade så att det aldrig finns risk för att någon person utsätts för laserstrålning över Klass I-nivå vid normal användning, underhåll som utförs av användaren eller annan föreskriven serviceåtgärd.

---

## Laser-melding

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

Klasse I-laserprodukter er ikke å betrakte som farlige. Skriveren inneholder internt en klasse IIIb (3b)-laser, som består av en gallium-arsenlaserenhet som avgir stråling i bølglengdeområdet 770-795 nanometer.

Lasersystemet og skriveren er utformet slik at personer aldri utsettes for laserstråling ut over klasse I-nivå under vanlig bruk, vedlikehold som utføres av brukeren, eller foreskrevne serviceoperasjoner.

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## Avís sobre el Làser

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

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

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#### レーザーに関するお知らせ

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

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

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#### 注意：

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

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

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

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

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## 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.

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## Consignes de sécurité

- La sécurité de ce produit repose sur des tests et des agrégations 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.

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## 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.

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## 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.

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## 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.

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## 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 segurança, 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 기술자용으로 작성된 것이므로, 비전문가는 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 표시입니다. 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

The service information for the Lexmark W840 is contained within three service manuals:

- *Printer Service Manual*– Contains the base printer service information including the options and finisher error codes and tests.
- *Options Service Manual*– Contains specific information for the 2X 500-Sheet Drawer (2TM), 2000-Sheet Dual Input (TTM), Duplex, High Capacity Feeder and Exit 2 options and a list of error codes and tests.
- *Finisher Service Manual*– Contains specific information for the Finisher option, list of error codes and tests.

The printer service 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 are required, as well as general environmental and safety instructions.
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. **Component locations** uses illustrations to identify the component 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.

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## Definitions

**Note:** A note provides additional information.

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

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



**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.

# 1. General information

## *About this manual*

This manual is a standard service manual containing information required for maintenance of the Lexmark™ W840 (4024) laser printer.

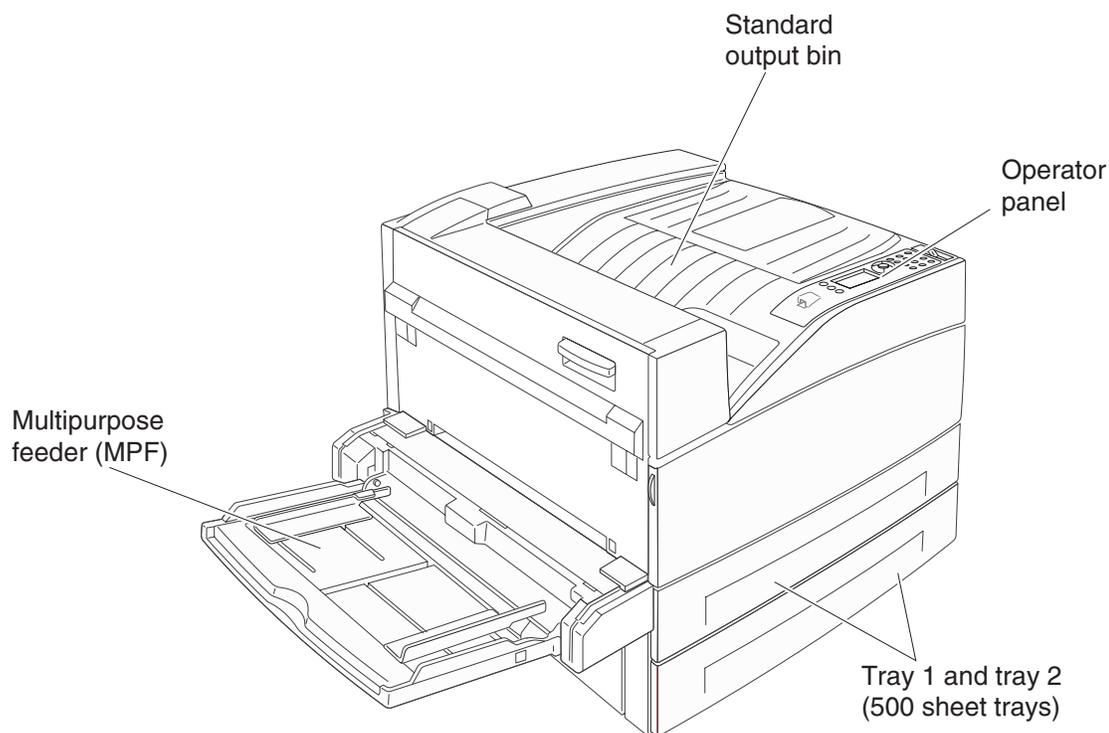
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## Printer overview

**CAUTION:** Do not set up this product or make any electrical or cabling connections, such as the power cord or options and features, during a lightning storm.

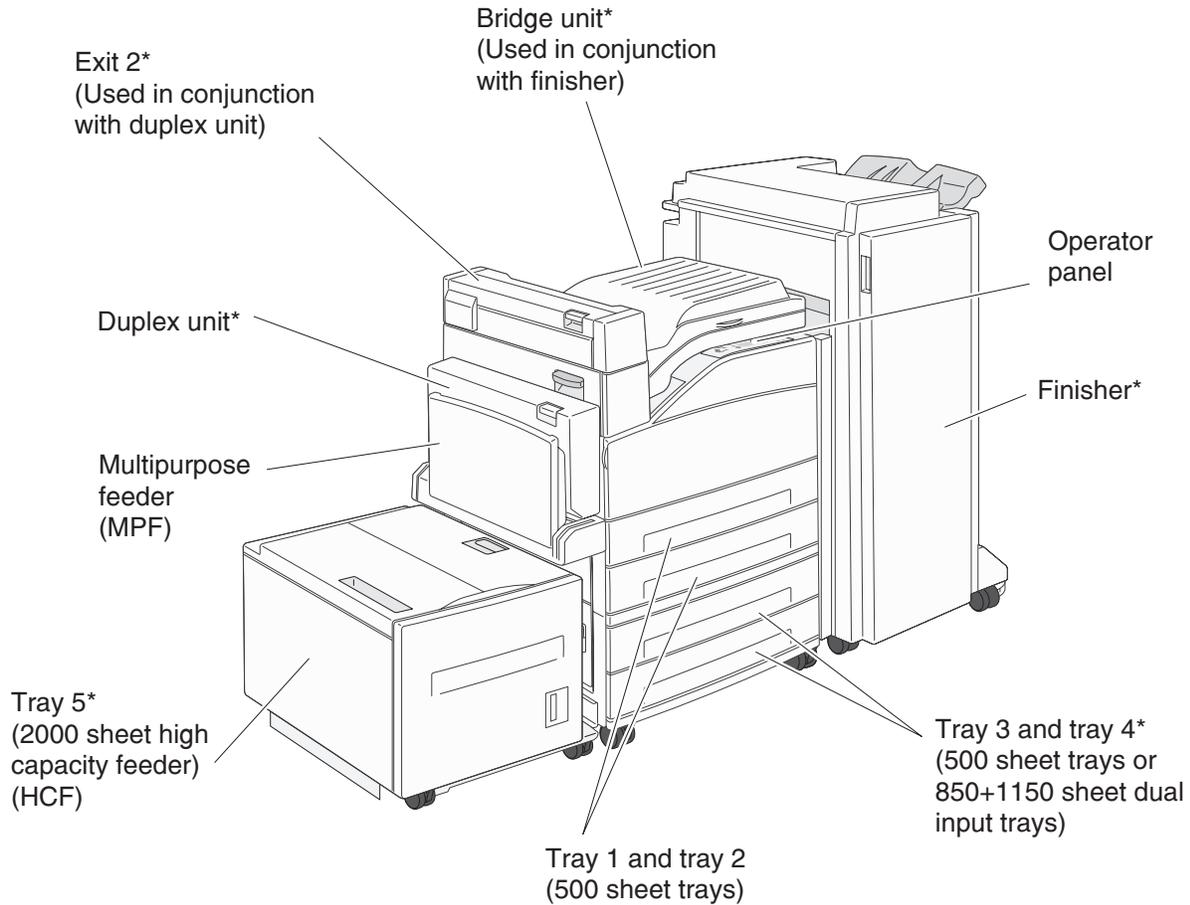
### *Basic model*

The following illustration shows a printer with its base features.



## Configured model

The following illustration shows a fully configured printer. Items denoted with an asterisk (\*) are options.




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## Tools required for service

- Flat-blade screwdriver
- #1 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic short-blade
- Needle nose pliers
- Diagonal side cutters
- Spring hook
- Analog or digital multi meter
- Parallel wrap plug 1319128
- Twinax/serial debug cable (#1381963)
- Coax/serial debug cable (#1381964)
- 5.5 mm hexdriver (magnetic)

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## Acronyms

2TM	2 Tray Module
AC	Alternate Current
ASIC	Application Specific Integrated Circuit
CRU	Customer Replaceable Unit
CSU	Customer Setup
DC	Direct Current
DIMM	Dual Inline Memory Module
DRAM	Dynamic Random Access Memory
EDO	Enhanced Data Out
EP	Electrophotographic Process
EPROM	Erasable Programmable Read-only Memory
ESD	Electrostatic Discharge
FRU	Field Replaceable Unit
GB	Gigabyte
GFI	Ground Fault Interrupter
HCF	High-Capacity Feeder
HVPS	High Voltage Power Supply
LASER	Light Amplification by Stimulated Emission of Radiation
LCD	Liquid Crystal Display
LD	Laser Diode
LED	Light-Emitting Diode
LEF	Long Edge Feed
LVPS	Low Voltage Power Supply
MPF	Multi-Purpose Feeder
MS	Microswitch
NVM	Nonvolatile Memory
NVRAM	Nonvolatile Random Access Memory
OEM	Original Equipment Manufacturer
OPT	Optical Sensor
PC	Photoconductor
PEL	Picture element
POR	Power-on Reset
POST	Power-on Self Test
PPM	Pages Per Minute
PSC	Parallel Synchronous Communications
PSD	Position Sensing Device
PWM	Pulse Width Modulation
RFID	Radio Frequency Identification
RIP	Raster Imaging Processor
ROM	Read only Memory
RPM	Parallel Synchronous Communications
SDRAM	Synchronous Dual Random Access Memory
SEF	Short Edge Feed
SIMM	Single Inline Memory Module
SOS	Start of scan
SRAM	Static Random Access Memory
TTM	Tandem Tray Module
UPR	Used Parts Return
V	Volts
V ac	Volts alternating current
V dc	Volts direct current



## 2. Diagnostic information

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### Start



**CAUTION:** Unplug the power cord from the printer or 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.

**CAUTION:** The printer weighs 47.7 kg (105 lb.) and requires at least two people to lift it safely. Make sure your fingers are not under the printer when you lift or set the printer down.

**CAUTION:** If the printer is kept on, never touch the conductive parts while it is not specifically required. The power switch and inlet of the low voltage power supply card (LVPS card) assembly is live even while the power supply is cut off. Never touch the live parts.

**Warning:** When operating the driving units using the diagnostics or other tools, be sure to keep them covered unless otherwise specified.

**Warning:** When operating the driving units using the diagnostics or other tools, never touch the driving units. When operating the driving units using diagnostics or other tools, be sure to follow the procedures in this manual.

**CAUTION:** Be careful to avoid burns by safely handling hot parts.

**Warning:** Servicers should wear a wrist band or the like to remove static electricity from their body, grounding their body while working. Go to **“Handling ESD-sensitive parts” on page 4-1.**

### Using service checks

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

- Verify the installation status. Go to **“Confirm the installation status” on page 2-2.**
- Does POR (power on reset) stop? Check the POR sequence. Go to **“POR sequence” on page 2-2.**
- If you get an error code message, go to **“Error code messages” on page 2-4.**
  - For detailed information on specific error codes and error messages, go to **“Service checks” on page 2-22.**
- If you have an attendance messages, refer to the *User’s Guide*.
- Additional operator panel information, go to **“Printer operator panel” on page 2-3.**

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

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## Confirm the installation status

Be sure to check the following items before starting the troubleshooting procedures.

- With the power cord unplugged from the wall outlet, check that the cord is free from breakage, short-circuit, disconnected wire, or incorrect connection in the power cord.
- The printer is properly grounded. Check the power cord ground terminal.
- The printer is not installed at a place subjected to extreme temperature, extreme humidity or rapid changes in temperature.
- The printer is not installed close to water service, humidifier, heat generating unit, fire, in a very dusty place, or a place exposed to air flow from the air conditioning system.
- The printer is not installed in a place where volatile gas or inflammable gas is generated.
- The printer is not installed in direct sun.
- The printer is installed on a level and stable surface.
- Media meets specifications and is installed properly.
- Customer maintenance parts have been replaced at the specified intervals.
- Check all attached options for proper attachment and electrical connection.
- Refer to the *User's Guide* for proper installation.

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## POR sequence

The following is an example of the events that occur during the POR sequence for the base machine with no media handling options installed.

1. Power the machine on.
2. The RIP card assembly cooling fan turns on.
3. Operator panel LED becomes solid.
4. While loading code, a series of dots scroll across the screen.
5. The transport motor turns on.
6. The fuser unit assembly lamps turn on.
7. The fuser cooling fan turns on.
8. The following is an example of the screen that displays after the code is loaded.

<b>256MB</b>	<b>625Mhz</b>
<b>256MB = Amount of Memory</b>	<b>625Mhz = Processor Speed</b>

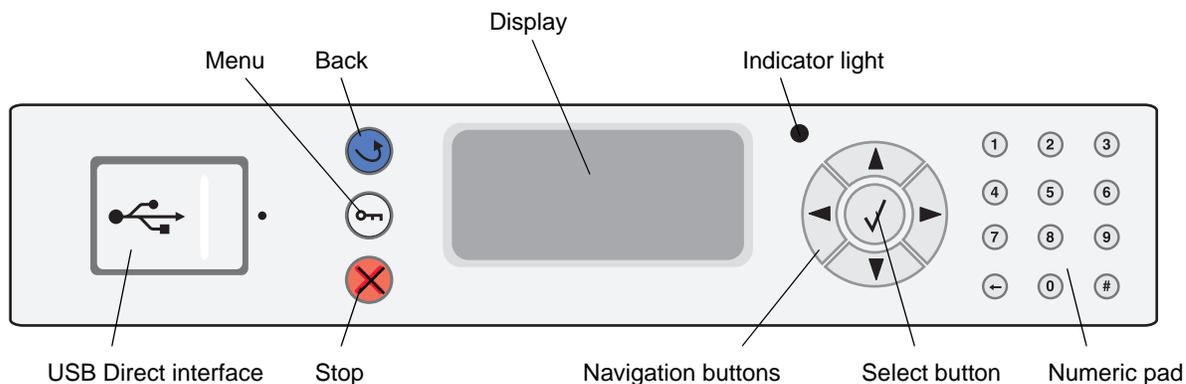
9. An animated stopwatch appears on the screen.
10. Ready appears on the screen.

## Printer operator panel

The operator panel consists of the these items:

- A 4-line, back-lit, gray-scale display that can show both graphics and text
- Eight buttons
- Indicator light
- Numeric pad
- USB Direct Interface

The use of the buttons and the layout of the display panel is described in the following table.



### Operator panel button functions

Button	Button function
Back	 Button returns to the previous menu level.
Menu	 Button opens the Administrator Menu
Stop	Button suspends all job activity.
Navigation	Select  ,  ,  , and  buttons navigate the menu items and scroll items that wrap off of the screen.
Select	 Button varies depending on what is currently highlighted on the display panel.
Numeric Keypad	Digits 1– 9,  for backspacing and # key.

## Error code messages

Error code or message	Error contents	Description/Action
200.00 Paper jam Check area A	Sensor (registration) off jam (too long)	The sensor (registration) is not turned off within the specified time after the registration clutch is turned on.  Go to <b>“200.00 Sensor (registration) off jam (too long)” on page 2-22.</b>
200.01 Paper jam Check area A	Sensor (registration) static jam	Media remains on the sensor (registration). Go to <b>“200.01 Sensor (registration) static on jam” on page 2-23.</b>
201.00 Paper jam Check area A	Sensor (fuser exit) on jam	The sensor (fuser exit) is not turned on within the specified time after the registration clutch is turned on.  Go to <b>“201.00 Sensor (fuser exit) on jam” on page 2-24.</b>
202.00 Paper jam Check area A	Sensor (fuser exit) off jam	The sensor (fuser exit) is not turned off within the specified time after the sensor (fuser exit) is turned on.  Go to <b>“202.00 Sensor (fuser exit) off jam” on page 2-25.</b>
202.01 Paper jam Check area A	Sensor (fuser exit) off (too short) jam	The sensor (fuser exit) is turned off earlier than the specified time after the sensor (fuser exit) is turned on.  Go to <b>“202.01 Sensor (fuser exit) off (too short) jam” on page 2-26.</b>
202.02 Paper jam Check area A	Sensor (fuser exit) static jam	Media remains on the sensor (fuser exit). Go to <b>“202.02 Sensor (fuser exit) static jam” on page 2-27.</b>
203.00 Paper jam Check area A	Sensor (exit 2) on jam	The sensor (exit 2) is not turned on within the specified time after the sensor (fuser exit) is turned on.  Refer to <b>“203.00 Sensor (exit 2) on jam” on page 2-27.</b>
203.01 Paper jam Check areas A, E	Sensor (exit 2) off jam	The sensor (exit 2) is not turned off within the specified time after the sensor (exit 2) is turned on.  Go to <b>“203.01 Sensor (exit 2) off jam” on page 2-29.</b>
203.02 Jam in A	Sensor (exit 2) on in standard bin or simplex finisher	The sensor (exit 2) was turned on when the media is delivered to the exit 1 standard bin or simplex finisher.  Refer to <i>Options Service Manual</i>
203.03 Jam in A, E	Sensor (exit2) static jam	Media remains on the sensor (exit2). Refer to <i>Options Service Manual</i>

Error code or message	Error contents	Description/Action
230.00 Paper jam Check areas A, E	Sensor (duplex wait) on jam	The sensor (duplex wait) is not turned on within the specified time after the exit2 motor is turned on. Refer to <i>Options Service Manual</i>
230.01 Paper jam Check area D	sensor (duplex wait) static jam	Media remains on the sensor (duplex wait). Refer to <i>Options Service Manual</i>
231.01 Check areas A, D	Sensor (registration) on jam (duplex media feed)	Sensor (registration) is not turned on within the specified time after the sensor (duplex wait) is turned on. Refer to <i>Options Service Manual</i>
231 Paper jam Jam in A, D	Sensor (registration) on jam (duplex media feed)	Sensor (registration) is not turned on within the specified time after the duplex motor is turned on. Refer to <i>Options Service Manual</i>
241.00 Paper Jam Check area, tray 1	Sensor (pre-feed) on jam (tray 1 feed)	The sensor (pre-feed) tray 1 is not turned on within the specified time after the tray 1 media feed lift motor is turned on. Go to <b>“241.00 Sensor (pre-feed) on jam (tray 1 feed)” on page 2-30.</b>
241.01 Paper jam check areas A, tray 1	Sensor (registration) on jam (tray 1 feed)	The sensor (registration) is not turned on within the specified time after the sensor (pre-feed) media feed unit 1 is turned on. Go to <b>“241.01 Sensor (registration) on jam (tray 1 feed)” on page 2-32.</b>
242.00 Paper jam Check area tray 2	Sensor (pre-feed) on jam (tray 2 feed)	The sensor (pre-feed) tray 2 is not turned on within the specified time after the tray 2 media feed lift motor is turned on. Go to <b>“242.00 Sensor (pre-feed) on jam (tray 2 feed)” on page 2-33.</b>
242.01 Paper jam Check area B, tray 2	Sensor (tray 2 feed-out) on jam (tray 2 feed)	The sensor (tray 2 feed-out) is not turned on within the specified time after the sensor (pre-feed) media feed unit 2 is turned on. Go to <b>“242.01 Sensor (tray 2 feed-out) on jam (tray 2 feed)” on page 2-34.</b>
242.02 Paper jam Check area B	Sensor (registration) on jam (tray 2 feed)	The sensor (registration) is not turned on within the specified time after the sensor (tray 2 feed-out) is turned on. Go to <b>“242.02 Sensor (registration) on jam (tray 2 feed)” on page 2-36.</b>
242.03 Paper jam Check area B	Sensor (tray 2 feed-out) static jam	Media remains on the sensor (tray 2 feed-out). Go to <b>“242.03 Sensor (tray 2 feed-out) static jam” on page 2-37.</b>
243.00 Paper jam Check area 3	Sensor (pre-feed) on jam (tray 3 media feed)	The sensor (pre-feed) is not turned on within the specified time after the tray 3 feed lift motor is turned on. Refer to <i>Options Service Manual</i>

Error code or message	Error contents	Description/Action
243.01 Paper jam Check areas C, tray 3	Sensor (tray 3 feed-out) on jam (tray 3 media feed)	The sensor (tray 3 feed-out) is not turned on within the specified time after the pre-feed sensor3 is on. Refer to <i>Options Service Manual</i>
243.02 Paper jam Check areas A, B	Sensor (tray 2 feed-out) on jam (tray 3 media feed)	The sensor (tray 2 feed-out) is not turned on within the specified time after the sensor (tray 3 feed-out) is turned on. Refer to <i>Options Service Manual</i>
243.03 Paper jam Check area B	Sensor (registration) on jam (tray 3 media feed)	The sensor (registration) is not turned on within the specified time after the sensor (tray 3 feed-out) is turned on. Refer to <i>Options Service Manual</i>
243.04 Paper jam Check area C	Sensor (tray 3 feed-out) static jam	Media remains on the sensor (tray 3 feed-out). Refer to <i>Options Service Manual</i>
244.00 Paper jam Check areas C, tray 4	Sensor (tray 4 feed-out) on jam (tray 4 media feed)	The sensor (tray 4 feed-out) is not turned on within the specified time after the sensor (pre-feed) is turned on. Refer to <i>Options Service Manual</i>
244.01 Paper jam Check areas C, tray 4	Sensor (tray 3 feed-out) on jam (tray 4 media feed)	The sensor (tray 3 feed-out) is not turned on within the specified time after the sensor (tray 4 feed-out) is turned on. Refer to <i>Options Service Manual</i>
244.02 Paper jam Check areas B, C	Sensor (tray 2 feed-out) on jam (tray 4 media feed)	The sensor (tray 2 feed-out) is not turned on within the specified time after the sensor (tray 4 feed-out) is turned on. Refer to <i>Options Service Manual</i>
244.03 Paper jam Check area B	Sensor (registration) on jam (tray 4 media feed)	The sensor (registration) is not turned on within the specified time after the sensor (tray 4 feed-out) is turned on. Refer to <i>Options Service Manual</i>
244.04 Paper jam Check area tray 4	Sensor (pre-feed) on jam (tray 4 media feed)	The sensor (pre-feed) is not turned on within the specified time after the tray 4 feed lift motor is turned on. Refer to <i>Options Service Manual</i>
244.05 Paper jam Check areas C, tray 4	Sensor (tray 4 feed-out) static jam	Media remains on the sensor (tray 4 feed-out). Refer to <i>Options Service Manual</i>
245.00 Paper jam Check area K, tray 5	Sensor (tray 5 feed-out) on jam	The sensor (tray 5 feed-out) is not turned on with in the specified time after the HCF feed lift motor is turned on. Refer to <i>Options Service Manual</i>

Error code or message	Error contents	Description/Action
245.01 Paper jam Check area K	Sensor (tray 2 feed-out) on jam	The sensor (tray 2 feed-out) on the printer is not turned on within the specified time after the HCF feed lift motor is turned on. <i>Refer to <a href="#">Options Service Manual</a></i>
245.02 Paper jam Check area B	Sensor (registration) on jam	The sensor (registration) on the printer is not turned on within the specified time after the HCF feed lift motor is turned on. <i>Refer to <a href="#">Options Service Manual</a></i>
245.03 Paper jam Check area K	Sensor (tray 5 feed-out) static jam.	Paper remains on the sensor (tray 5 feed-out). <i>Refer to <a href="#">Options Service Manual</a></i>
250.00 Paper jam Check areas A, MPF	Sensor (registration) on jam (MPF pick)	The sensor (registration) is not turned on within the specified time after the MPF pick solenoid is turned on. <b>Go to “250.00 Sensor (registration) on jam (MPF pick)” on page 2-38.</b>
280.00 Paper jam Check areas A	Sensor (bridge unit media entrance) on jam	Sensor (bridge unit media entrance) is not turned on within the specified time after the sensor (fuser exit) in the printer is turned on. <i>Refer to <a href="#">Finisher Service Manual</a></i>
280.01 Paper jam Check area A	Sensor (bridge unit media entrance) Static jam A	Paper remains on the sensor (bridge unit media entrance). <i>Refer to <a href="#">Finisher Service Manual</a></i>
280.02 Check area F	Sensor (bridge unit media entrance) Static jam B	Paper remains on the sensor (bridge unit media entrance). <i>Refer to <a href="#">Finisher Service Manual</a></i>
281.00 Paper jam Check area A	Sensor (bridge unit media exit) on jam A	Sensor (bridge unit media exit) is not turned on within the specified time after the sensor (bridge unit media entrance) is turned on. At this time, the sensor (fuser exit) in the printer is in the on state. <i>Refer to <a href="#">Finisher Service Manual</a></i>
281.01 Paper jam Check area F	Sensor (bridge unit media exit) on jam B	Sensor (bridge unit media exit) is not turned on within the specified time after the sensor (bridge unit media entrance) is turned on. At this time, the sensor (bridge unit media entrance) is in the on state. <i>Refer to <a href="#">Finisher Service Manual</a></i>
281.02 Paper jam Check area F	Sensor (bridge unit media exit) on jam C	Sensor (bridge unit media exit) is not turned on within the specified time after the sensor (bridge unit media entrance) is turned on. <i>Refer to <a href="#">Finisher Service Manual</a></i>
281.03 Paper jam Check area F	Sensor (bridge unit media exit) Static jam A	Paper remains on the sensor (bridge unit media exit). <i>Refer to <a href="#">Finisher Service Manual</a></i>

Error code or message	Error contents	Description/Action
282.00 Paper jam Check area F	Sensor (bridge unit media exit) on jam	Sensor (finisher media entrance) is not turned on with the specified time after the sensor (bridge unit media exit) is turned on. <i>Refer to Finisher Service Manual</i>
282.01 Paper jam Check areas F	Sensor (finisher media entrance) Static jam A	Paper remains on the sensor (finisher media entrance). At this time, the sensor (bridge unit media exit) is turned on. <i>Refer to Finisher Service Manual</i>
283.00 Paper jam Check areas G, G4	Sensor (buffer path) on jam A	Sensor (buffer path) is not turned on within the specified time after the sensor (finisher media entrance) is turned on. <i>Refer to Finisher Service Manual</i>
283.01 Paper jam Check area G2	Sensor (buffer path) on jam B	Sensor (buffer path) is not turned on within the specified time after the sensor (finisher media entrance) is turned on. At this time, the sensor (diverter gate) is turned on. <i>Refer to Finisher Service Manual</i>
283.02 Paper jam Check areas G2, G3	Sensor (buffer path) Static jam A	Paper remains on the sensor (finisher buffer path). At this time, both sensor (diverter gate) and sensor (transport exit) are on state. <i>Refer to Finisher Service Manual</i>
283.03 Paper jam Check areas G2	Sensor (buffer path) Static jam B	Paper remains on the sensor (finisher buffer path). At this time, the sensor (diverter gate) is on state but the sensor (finisher media entrance) is turned off. <i>Refer to Finisher Service Manual</i>
283.04 Paper jam Check areas G4	Sensor (buffer path) Static jam C	Paper remains on the sensor (finisher buffer path). At this time, the sensor (diverter gate) is turned off. <i>Refer to Finisher Service Manual</i>
284.00 Paper jam Check area F	Sensor (lower media exit) off jam A	Sensor (lower media exit) is not turned off within the specified time after the finisher sensor (lower media exit) on. At this time, the sensor (bridge unit media exit) is turned off. <i>Refer to Finisher Service Manual.</i>
284.01 Paper jam Check area F	Sensor (lower media exit) on jam A	Sensor (buffer path) is not turned on within the specified time after the sensor (finisher media entrance) is turned on. At this time the sensor (bridge unit media exit) is turned on. <i>Refer to Finisher Service Manual</i>

Error code or message	Error contents	Description/Action
284.02 Paper jam Check areas G2, G3	Sensor (lower media exit) on jam B	Sensor (buffer path) is not turned on within the specified time after the sensor (bridge unit media entrance) is turned on. At this time, the sensor (finisher media entrance) is turned on. Refer to <i>Finisher Service Manual</i>
284.03 Paper jam Check area G2	Sensor (lower media exit) on jam C	Finisher sensor (lower media exit) not turned on within the specified time after the sensor (buffer path) is turned on. Refer to <i>Finisher Service Manual</i>
284.04 Paper jam Check area H	Sensor (lower media exit) off jam B	Finisher sensor (lower media exit) not turned off within the specified time after the finisher sensor (lower media exit) on. At this time, the sensor (finisher media entrance) is turned on. Refer to <i>Finisher Service Manual</i>
284.05 Paper jam Check area H	Sensor (lower media exit) Static jam	Paper remains on the sensor (lower media exit). Refer to <i>Finisher Service Manual</i>
285.00 Paper jam Check area H	Finisher set eject jam	Finisher sensor (compiler media in) is not turned on within the specified time after the media eject motor is turned on. Refer to <i>Finisher Service Manual</i>
286.00 Paper jam Check area H	Sensor (compiler media in) Static jam	Paper remains on the sensor (compiler media in). Refer to <i>Finisher Service Manual</i>
287.00 Check area F	Sensor (upper media exit) on jam A	Sensor (upper media exit) is not turned on within the specified time after the sensor (finisher media entrance) is turned on. At this time, the sensor (bridge unit media exit) is turned on. Refer to <i>Finisher Service Manual</i>
287.01 Check area F	Sensor (upper media exit) off jam A	Sensor (upper media exit) is not turned off within the specified time after the sensor (upper media exit) is turned on. At this time, the sensor (bridge unit media exit) is turned on. Refer to <i>Finisher Service Manual</i>
287.02 Paper jam Check areas G1, G3	Sensor (upper media exit) on jam B	Sensor (upper media exit) is not turned on within the specified time after the sensor (finisher media entrance) is turned on. At this time, the sensor (bridge unit media exit) is on state Refer to <i>Finisher Service Manual</i>

Error code or message	Error contents	Description/Action
287.03 Paper jam Check area G1	Sensor (upper media exit) on jam C	Sensor (upper media exit) is not turned on within the specified time after the sensor (finisher media entrance) is turned on.  At this time, the sensor (bridge unit media exit) is turned on.  Refer to <i>Finisher Service Manual</i>
287.04 Paper jam Check area G	Sensor (upper media exit) off jam B	Sensor (upper media exit) is not turned off within the specified time after the sensor (upper media exit) is turned off.  At this time, the sensor (bridge unit media exit) is turned off.  Refer to <i>Finisher Service Manual</i>
287.05 Paper jam Check area F	Sensor (upper media exit) Static jam A	Paper remains on the sensor (upper media exit). At this time, the sensor (bridge unit media exit) is turned on.  Refer to <i>Finisher Service Manual</i>
287.06 Paper jam Check areas G1, G3	Sensor (upper media exit) Static jam B	Paper remains on the sensor (upper media exit). At this time, the sensor (bridge unit media exit) is off state but the finisher sensor (finisher media entrance) is turned on.  Refer to <i>Finisher Service Manual</i>
287.07 Paper jam Check area G1	Sensor (upper media exit) Static jam C	Paper remains on the sensor (upper media exit). At this time, both sensor (bridge unit media exit) and sensor (finisher media entrance) are turned off.  Refer to <i>Finisher Service Manual</i>
288.00 Paper jam Check area F	Sensor (diverter gate) on jam	Sensor (diverter gate) is not turned on within the specified time after the sensor (bridge unit media exit) is turned on.  Refer to <i>Finisher Service Manual</i>
288.01 Paper jam Check area F	Sensor (diverter gate) Static jam (to top bin) A	Paper remains on the sensor (diverter gate) when the finisher is in the upper bin exit mode.  At this time the sensor (bridge unit media exit) is turned on.  Refer to <i>Finisher Service Manual</i>
288.02 Paper jam Check areas G2, G3	Sensor (diverter gate) Static jam (to top bin) B	Paper remains on the sensor (diverter gate) when the finisher is in the upper bin exit mode.  At this time, the sensor (finisher media entrance) is turned on, but the sensor (bridge unit media exit) is turned off.  Refer to <i>Finisher Service Manual</i>
288.03 Paper jam Check area G1	Sensor (diverter gate) Static jam (to top bin) C	Paper remains on the sensor (diverter gate) when the finisher is in the upper bin exit mode.  At this time, both sensor (finisher media entrance) and sensor (bridge unit media exit) are turned off.  Refer to <i>Finisher Service Manual</i>

Error code or message	Error contents	Description/Action
288.04 Paper jam Check area F	Sensor (diverter gate) Static jam (to stacker bin) A	Paper remains on the sensor (diverter gate) when the finisher is in the stacker bin exit mode. At this time, the sensor (bridge unit media exit) is turned on. Refer to <i>Finisher Service Manual</i>
288.05 Paper jam Check areas G2, G3	Sensor (diverter gate) Static jam (to stacker bin) B	Paper remains on the sensor (diverter gate) when the finisher is in the stacker bin exit mode. At this time, the sensor (finisher media entrance) is turned on, but the sensor (bridge unit media exit) is turned off. Refer to <i>Finisher Service Manual</i>
288.06 Paper jam Check area G2	Sensor (diverter gate) Static jam (to stacker bin) C	Paper remains on the sensor (diverter gate) when the finisher is in the stacker bin exit mode. At this time, both sensor (finisher media entrance) and sensor (bridge unit media exit) are turned off. Refer to <i>Finisher Service Manual</i>
32 Unsupported toner cartridge	Toner cartridge RFID failure	A toner cartridge of a incorrect specification is installed. Go to <b>“Toner cartridge RFID failure” on page 2-75</b>
34 Incorrect media, check tray 1 guides.	Tray 1 media size mismatch in length	The media length detected by the sensor (registration) after the media is fed from media tray 1 does not match the length detected by media tray 1 switch (media size). Go to <b>“Tray 1 media size mismatch in length” on page 2-77.</b>
34 Incorrect media, check tray 2 guides	Tray 2 media size mismatch in length	The media length detected by the sensor (registration) after the media is fed from media tray 2 does not match the length detected by media tray 2 switch (media size). Go to <b>“Tray 2 media size mismatch in length” on page 2-79.</b>
34 Incorrect media, check tray 3 guides	Tray 3 media size mismatch in length	Refer to <i>Options Service Manual</i>
34 Incorrect media, check tray 4 guides	Tray 4 media size mismatch in length	Refer to <i>Options Service Manual</i>
80 Scheduled maintenance	Scheduled maintenance required	Service is required to maintain printer performance. Go to <b>“Scheduled maintenance required” on page 2-70.</b>
84 Insert PC unit	PC cartridge set failure	The PC cartridge is not installed or is not installed properly. Go to <b>“PC cartridge set failure” on page 2-68.</b>
84 PC unit abnormal	PC cartridge RFID failure	A PC cartridge of a incorrect specification is installed. Go to <b>“PC cartridge RFID failure” on page 2-67.</b>

Error code or message	Error contents	Description/Action
84 Replace PC unit	PC cartridge end of life	The PC cartridge needs to be replaced. Go to <b>“PC cartridge end of life” on page 2-67.</b>
84 PC unit life warning	PC cartridge life near end	The PC cartridge needs to be replaced soon. Go to <b>“PC cartridge end of life” on page 2-66.</b>
88 Toner low	Toner cartridge near empty	The toner cartridge needs to be replaced soon. Go to <b>“Toner cartridge near empty” on page 2-73.</b>
88 Replace toner	Toner cartridge empty	All toner in the toner cartridge is consumed, or toner supply is clogged. Go to <b>“Toner cartridge empty” on page 2-72.</b>
900.XX Service RIP software	RIP card assembly software failure	A failure has occurred in the RIP card assembly software. Go to <b>“900.XX RIP card assembly software failure” on page 2-39.</b>
903.00 Service engine error	RAM read/write check failure	Read/write of RAM on the printer engine card assembly failed. Go to <b>“903.00 RAM read/write check failure” on page 2-40.</b>
904.00 Service engine error	NVM data failure	A data error of NVM on the printer engine card assembly occurred. Go to <b>“904.00 NVM data failure” on page 2-40.</b>
905.00 Service engine error	NVM read/write cannot be executed failure	Read/write of the NVM on the printer engine card assembly failed. Go to <b>“905.00 NVM read/write cannot be executed failure” on page 2-41.</b>
906.00 Service engine error	CPU power to access NVM failure	An internal process for data write of the NMVM on the printer engine card assembly failed. Go to <b>“906.00 CPU power to access NVM failure” on page 2-41.</b>
907.00 Service engine error	RFID ASIC failure	The RFID control circuit failed. Go to <b>“907.00 RFID ASIC failure” on page 2-42.</b>
908.00 Service engine error	PPM data failure	An incorrect NVM data is saved on the PPM. Go to <b>“908.00 PPM data failure” on page 2-42.</b>
910.00 Service motor error	Transport motor stop failure	Due to the malfunction in the control system of the printer engine card assembly, the transport motor does not stop when media is not transported. Go to <b>“910.00 Transport motor stop failure” on page 2-43.</b>
911.00 Service motor error	Transport motor failure	The transport motor does not rotate at the specified speed. Go to <b>“911.00 Transport motor failure” on page 2-44.</b>

Error code or message	Error contents	Description/Action
912.00 Service motor error	PC cartridge unit motor failure	The PC cartridge motor does not rotate at the specified speed. Go to <b>“912.00 PC cartridge unit motor failure” on page 2-44.</b>
913.00 Service motor error	Printhead assembly failure	Rotation speed of the printhead motor is less than the specified value even when the specified time is passed after the motor starts rotating. Light intensity of the LD1 is less than the specified value. Go to <b>“913.00 Printhead assembly failure” on page 2-45.</b>
914.00 Service motor error	Toner add motor assembly failure	The toner concentration in the PC cartridge does not increase when the toner add motor is turned on for more than the specified time. Go to <b>“914.00 Toner add motor assembly failure” on page 2-45.</b>
915.00 Service fan error	Fuser cooling fan failure	The fuser cooling fan failed. Go to <b>“915.00 Fuser cooling fan failure” on page 2-46.</b>
916.00 Service fan error	PC cartridge cooling fan failure	The PC cartridge cooling fan failed. Go to <b>“916.00 PC cartridge cooling fan failure” on page 2-47.</b>
918.00 Service std. bin 1 error	Sensor (exit 1 media shift HP) failure	The sensor (exit 1 media shift HP) is not turned on within the specified period after the exit 1 media shift motor is turned on. Go to <b>“918.00 Sensor (exit 1 media shift HP) failure” on page 2-47.</b>
919.00 Service std. bin 2 error	Sensor (exit 2 media shift HP) failure	The sensor (exit 2 media shift HP) is not turned on within the specified time after the exit 2 shift motor is turned on. Refer to <i>Options Service Manual</i>
919.01 Service std. bin 2	Exit 2 media shift failure	Exit 2 unit assembly is missing or damaged. Refer to <i>Options Service Manual</i>

Error code or message	Error contents	Description/Action
920.00 Service fuser error	Fuser unit assembly on time failure	<p>During the warm-up period, the control thermistor does not detect the ready temperature even when the specified time is passed after the main lamp is turned on.</p> <p>During the standby period, the control thermistor does not detect the specified temperature even when the specified time is passed after the main lamp is on.</p> <p>During the standby period, the control thermistor does not detect the specified temperature even when the specified time is passed after the sub lamp in on.</p> <p>During idling, after power-on, the control thermistor does not detect the idling stop temperature even after the specified time is passed.</p> <p>During print, the control thermistor does not detect the specified temperature even when the specified time is passed after the main lamp is turned on.</p> <p>During print, the control thermistor does not detect the specified temperature even when the specified time is passed after the sub lamp is turned on.</p> <p>Go to <b>“920.00 Fuser unit assembly on time failure” on page 2-48.</b></p>
921.00 Service fuser error	Over heat temperature failure	<p>The control thermistor detects a temperature higher than the specified value.</p> <p>The lamp change thermistor detects a temperature higher than the specified value.</p> <p>Go to <b>“921.00 Over heat temperature failure” on page 2-49.</b></p>
922.00 Service fuser error	Center thermistor failure	<p>The center thermistor has failed.</p> <p>Go to <b>“922.00 Center thermistor failure” on page 2-49.</b></p>
923.00 Service fuser error	Rear thermistor failure	<p>The rear thermistor has failed.</p> <p>Go to <b>“923.00 Rear thermistor failure” on page 2-50.</b></p>
924.00 Service fuser error	Pressure roll thermistor failure	<p>The pressure roll thermistor has failed.</p> <p>Go to <b>“924.00 Pressure roll thermistor failure” on page 2-50.</b></p>
925.00 Service fuser error	Fuser operating temperature failure.	<p>Fuser temperature is not high enough during printing.</p> <p>Go to <b>“925.00 Fuser operating temperature failure” on page 2-50.</b></p>
927.00 Service PC cartridge	PC cartridge RFID data write failure	<p>A data write error occurred on the PC cartridge RFID tag in the PC cartridge.</p> <p>Go to <b>“927.00 PC cartridge RFID data write failure” on page 2-51.</b></p>
928.00 Service PC cartridge	PC cartridge RFID communication failure	<p>A communication error occurred between the PC cartridge RFID tag in the PC cartridge and the RFID ASIC on the printer engine card assembly.</p> <p>Go to <b>“928.00 PC cartridge RFID communication failure” on page 2-51.</b></p>

Error code or message	Error contents	Description/Action
929.00 Service PC cartridge	Sensor (ATC) failure	The sensor (ATC) failed. Go to <b>“929.00 Sensor (ATC) failure” on page 2-52.</b>
930.00 Service printhead error	Laser power failure	Light intensity of the LD2 is less than the specified value. Go to <b>“930.00 Laser power failure” on page 2-52.</b>
932.00 Toner cartridge	Toner cartridge RFID data write failure	A data write error occurred on the toner cartridge RFID tag in the toner cartridge. Go to <b>“932.00 Toner cartridge RFID data write failure” on page 2-53.</b>
933.00 Toner cartridge	Toner cartridge RFID communication failure	A communication error occurred between the toner RFID tag in the toner cartridge and the RFID ASIC on the printer engine card assembly. Go to <b>“933.00 Toner cartridge RFID communication failure” on page 2-53.</b>
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 <b>“939.00 RIP card assembly communication failure” on page 2-55.</b>
941.00 Service tray 1 failure	Media tray 1 lift up / no tray failure	The media tray 1 sensor (media level) is not turned on within the specified time after the tray 1 media feed lift motor is turned on. The media tray 1 switch (media size) detected no media tray. Go to <b>“941.00 Media tray 1 lift up / no media tray failure” on page 2-55.</b>
942.00 Service tray 2 failure	Media tray 2 lift up / no tray failure	The media tray 2 sensor (media level) is not turned on within the specified time after the media tray 2 media feed lift motor is turned on. The media tray 2 switch (media size) detected no media tray. Go to <b>“942.00 Media tray 2 lift up / no media tray failure” on page 2-56.</b>
943.00 Service tray 3 failure	Media tray 3 lift up / no tray failure	The 2TM-tray 3 sensor (media level) is not turned on within the specified time after the 2TM-tray 3 media feed lift motor is turned on. The 2TM-tray 3 switch (media size) detected no tray. Refer to <i>Options Service Manual</i>
944.00 Service tray 4 failure	Media tray 4 lift up / no tray failure	The 2TM-tray 4 sensor (media level) is not turned on within the specified time after the 2TM-tray 4 media feed lift motor is turned on. The 2TM-tray 4 switch (media size) detected no tray. Refer to <i>Options Service Manual</i>
945.00 Service tray 5 failure	Media tray 5 lift up / no tray failure	The sensor (HCF media level) is not turned on with the specified time after the HCF feed lift motor is turned on. Refer to <i>Options Service Manual</i>

Error code or message	Error contents	Description/Action
945.01 Service tray 5 failure	Tray 5 HCF NVM R/W failure	A read/write error has occurred on the NVM of the tray 5 HCF controller card assembly. Refer to <i>Options Service Manual</i>
950.00 through 950.29 Service NVRAM mismatch	EPROM mismatch failure	<p>This error code indicates a mismatch between the operator panel assembly and the interconnect card assembly.</p> <p><b>Warning:</b> When replacing any of the following components:</p> <ul style="list-style-type: none"> <li>• Operator panel assembly</li> <li>• RIP card assembly</li> <li>• Interconnect card assembly</li> </ul> <p>Only replace one component at a time. Replace the required component and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one or the printer will be rendered inoperable.</p> <p><b>Warning:</b> Never install and remove components listed above as a method of troubleshooting components. Once a component has been installed in a machine, it can not be used in another machine. It must be returned to the manufacturer.</p> <p>Go to <b>“950.00 through 950.29 EPROM mismatch failure” on page 2-58.</b></p>
950.30 through 950.60 Service NVRAM mismatch	EPROM mismatch failure	<p>This error code indicates a mismatch between the RIP card assembly and the interconnect card assembly.</p> <p><b>Warning:</b> When replacing any of the following components:</p> <ul style="list-style-type: none"> <li>• Operator panel assembly</li> <li>• RIP card assembly</li> <li>• Interconnect card assembly</li> </ul> <p>Only replace one component at a time. Replace the required component and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one or the printer will be rendered inoperable.</p> <p><b>Warning:</b> Never install and remove components listed above as a method of troubleshooting components. Once a component has been installed in a machine, it can not be used in another machine. It must be returned to the manufacturer.</p> <p>Go to <b>“950.30 through 950.60 EPROM mismatch failure” on page 2-59.</b></p>
951.XX Service NVRAM failure	RIP card assembly NVRAM failure	A failure has occurred in the RIP card asm NVRAM. Go to <b>“951.XX RIP card assembly NVRAM failure” on page 2-59.</b>

Error code or message	Error contents	Description/Action
952.XX Service NV failure	Interconnect card assembly NVRAM CRC failure	A recoverable NVRAM Cyclic redundancy check (CRC) error occurred. Go to <b>“952.XX Interconnect card assembly NVRAM CRC failure” on page 2-60.</b>
953.XX Service NVRAM failure	Operator panel assembly NVRAM failure	NVRAM chip failure with operator panel assembly (mirror). Go to <b>“953.XX Operator panel assembly NVRAM failure” on page 2-60.</b>
954.XX Service NVRAM failure	Interconnect card assembly NVRAM failure	NVRAM chip failure with interconnect card assembly. Go to <b>“954.XX Interconnect card assembly NVRAM failure” on page 2-61.</b>
955.XX Service Code CRC	RIP card assembly NAND CRC failure	The code ROM or NAND flash failed the cyclic redundancy check. Go to <b>“955.XX RIP card assembly NAND CRC failure” on page 2-62.</b>
956.00 Service system board	RIP card assembly processor failure	The RIP card processor has failed. Go to <b>“956.00 RIP card assembly processor failure” on page 2-62.</b>
956.01 Service system board	RIP card assembly processor over temperature failure	The RIP card assembly has exceeded safe operating temperature. Go to <b>“956.01 RIP card assembly processor over temperature failure” on page 2-63.</b>
956.02 Service system board	RIP card assembly cooling fan failure	The RIP card assembly cooling fan is not functioning properly. Go to <b>“956.02 RIP card assembly cooling fan failure” on page 2-63.</b>
980.00 Service tray 3 comm.	Tray 3/4 communication failure	A communication error occurred between the printer engine card assembly and the 2TM/TTM controller card assembly. Refer to <i>Options Service Manual</i> .
980.01 Service tray 5 comm.	Tray 5 HCF communication failure	A communication error occurred between the printer engine card assembly and the HCF controller card assembly. Refer to <i>Options Service Manual</i>
980.02 Service finisher error	Printer engine card-finisher communication failure	A communication error occurred between the printer engine card assembly and the finisher. Refer to <i>Finisher Service Manual</i>
980.03 Service standard bin comm.	Exit interface card assembly, communication failure	A communication error occurred between the printer engine card assembly and the exit interface card assembly. Go to <b>“980.03 Exit interface card assembly communication failure” on page 2-64.</b>
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. Refer to <i>Options Service Manual</i>

Error code or message	Error contents	Description/Action
981.00 Service finisher error	Stacker bin failure	The sensor (stacker bin level) is not turned on within the specified period after the stacker bin starts rising. <i>Refer to Finisher Service Manual</i>
981.01 Service finisher error	Stacker bin upper limit failure	The stacker bin abnormally rises beyond the specified upper limit position (stacker bin level). <i>Refer to Finisher Service Manual</i>
981.02 Service finisher error	Stacker bin lower limit failure	The stacker bin abnormally lowers beyond the specified lower limit position (full stack). <i>Refer to Finisher Service Manual</i>
982.00 Service finisher error	Sensor (front tamper HP) on failure	The sensor (front tamper HP) is not turned on after the front tamper starts moving to the front tamper home position. <i>Refer to Finisher Service Manual</i>
982.01 Service finisher error	Sensor (front tamper HP) off failure	The sensor (front tamper HP) is not turned off within the specified time after the front tamper starts leaving from the front tamper home position. Or the sensor (front tamper HP) is turned on again after the sensor (compiler front tamper HP) is turned off, and the front tamper stopped its moving. <i>Refer to Finisher Service Manual</i>
983.00 Service finisher error	Sensor (rear tamper HP) on failure	The sensor (rear tamper HP) is not turned on after the rear tamper starts moving to the rear tamper home position. <i>Refer to Finisher Service Manual</i>
983.01 Service finisher error	Sensor (compiler rear tamper HP) off failure	The sensor (compiler rear tamper HP) is not turned off within the specified time after the rear tamper starts leaving from the rear tamper home position. Or the sensor (compiler rear tamper HP) is turned on again after the sensor (compiler rear tamper HP) is turned off, and the rear tamper stopped its moving. <i>Refer to Finisher Service Manual</i>
984.00 Service finisher error	Sensor (punch unit HP) on failure	The sensor (punch unit HP) is not turned on even when the specified time passed after the punch unit motor is turned on. <i>Refer to Finisher Service Manual</i>
984.01 Service finisher error	Sensor (punch unit HP) off failure	The sensor (punch unit HP) is not turned off even when the specified time passed after the punch unit motor is turned on. <i>Refer to Finisher Service Manual</i>
985.00 Service finisher error	Sensor (punch carriage shift HP) on failure	The sensor (punch carriage shift HP) is not turned on even when the specified time passed after the punch carriage shift motor assembly is turned on. Or the sensor (punch carriage shift HP) is turned off again after the sensor (punch carriage shift HP) is turned on and the punch carriage shift motor assembly stopped its rotation. <i>Refer to Finisher Service Manual</i>

Error code or message	Error contents	Description/Action
985.01 Service finisher error	Sensor (punch carriage shift HP) off failure	The sensor (punch carriage shift HP) is not turned off even when the specified time passed after the punch carriage shift motor assembly is turned on. Or the sensor (punch carriage shift HP) is turned on again after the sensor (punch carriage shift HP) is turned off and the punch carriage shift motor assembly stopped its rotation. Refer to <i>Finisher Service Manual</i>
986.00 Service finisher error	Sensor (eject clamp HP) on failure	The sensor (eject clamp HP) is not turned on within 500 ms after the eject clamp up starts. Refer to <i>Finisher Service Manual</i>
986.01 Service finisher error	Sensor (eject clamp HP) off failure	The sensor (eject clamp HP) is not turned off within 200 ms after the eject clamp down starts. Refer to <i>Finisher Service Manual</i>
987.00 Service finisher error	Sensor (media eject shaft HP) on failure	The sensor (media eject shaft HP) is not turned on within 200 ms after the set clamp starts operating. Refer to <i>Finisher Service Manual</i>
987.01 Service finisher error	Sensor (media eject shaft HP) off failure	The sensor (media eject shaft HP) is not turned off within the specified time after the set clamp ends operating. Refer to <i>Finisher Service Manual</i>
988.00 Service finisher error	Sensor (punch unit side reg 1) on failure Sensor (punch unit side reg 2) on failure	The sensor (punch unit side reg 1) or sensor (punch unit side reg 2) did not detect the media correctly or is defective. Refer to <i>Finisher Service Manual</i> .
988.01 Service finisher error	Sensor (punch unit side reg 1) off failure Sensor (punch unit side reg 2) off failure	The sensor (punch unit side reg 1) or sensor (punch unit side reg 2) did not detect the media correctly or is defective. Refer to <i>Finisher Service Manual</i>
989.00 Service finisher error	Stapler unit failure	The off/on status of the sensor (stapler unit motor HP) is not detected within the specified time after the stapler unit motor (forward operation). Or the sensor (stapler unit motor HP) is not turned on within the specified timer after the stapler unit motor is on (reverse operation). Refer to <i>Finisher Service Manual</i>
990.00 Service finisher error	Sensor (stapler carriage HP) on failure	The sensor (stapler carriage HP) is not turned on within two seconds after the stapler starts moving toward the staple position, and also the sensor (stapler carriage HP) is turned off. Or the sensor (stapler carriage HP) is not turned on after the stapler was moved to the staple position. Or the sensor (stapler carriage HP) is turned off again after the sensor (stapler carriage HP) is turned on, and the stapler stopped its moving. Refer to <i>Finisher Service Manual</i>

Error code or message	Error contents	Description/Action
990.01 Service finisher error	Sensor (stapler carriage HP) off failure	<p>The sensor (stapler carriage HP) is not turned off within 500 ms after stapler starts moving to the staple position, and sensor (stapler carriage HP) is turned off.</p> <p>Or the sensor (stapler carriage HP) is not turned off after the stapler was moved to the staple position.</p> <p>Or the sensor (stapler carriage HP) is turned on again after the sensor (stapler carriage HP) is turned off, and the stapler stopped its moving.</p> <p>Refer to <i>Finisher Service Manual</i></p>
995.00 Service finisher NV	Finisher NVM R/W failure	<p>A read/write error occurred on the NVM of the finisher controller card assembly.</p> <p>Refer to <i>Finisher Service Manual</i></p>
996.00 Service wrong finisher	Finisher type failure	<p>An incorrect type of finisher is connected.</p> <p>Refer to <i>Finisher Service Manual</i></p>
997.00 Service wrong duplex	Duplex controller card assembly type failure	<p>A duplex controller card assembly of a different specification is installed.</p> <p>Refer to <i>Options Service Manual</i></p>
999.00 Service finisher error	Finisher engine/RIP functional failure	<p>The engine reported a finisher failure that the RIP card assembly did not recognize.</p> <p>Refer to <i>Finisher Service Manual</i>.</p>
Check tray 1 guides	Tray 1 media size failure.	<p>Although tray 1 is in the printer, the media size is not detected correctly.</p> <p>Go to <b>“Tray 1 media size failure” on page 2-76.</b></p>
Check tray 1 or 2 orientation or guides	Paper is installed (short edge) in the media paper tray.	<p>This error occurs when short edge printing is disabled, and the paper in the tray is not installed long edge. (Letter A4)</p> <p>Go to <b>“Paper is installed (short edge) in the media paper tray” on page 2-66.</b></p>
Check tray 1 or tray 2 orientation or guides	Media size mismatch in width.	<p>The media width is incorrect.</p> <p>Go to <b>“Media size mismatch in width” on page 2-64.</b></p>
Check tray 2 guides	Tray 2 media size failure.	<p>Although tray 2 is in the printer, the media size is not detected correctly.</p> <p>Go to <b>“Tray 2 media size failure” on page 2-76.</b></p>
Check tray 3 or check tray 4 orientation or guides	Media size mismatch in width.	<p>The media width is incorrect.</p> <p>Refer to <i>Options Service Manual</i></p>
Close cover F	Bridge unit cover is open.	<p>The bridge unit assembly cover is open.</p> <p>Refer to <i>Finisher Service Manual</i></p>
Close cover K	HCF top door open	<p>The tray 5 HCF top door is open.</p> <p>Refer to <i>Options Service Manual</i></p>
Close door A	Printer left door open.	<p>The printer left door assembly is open.</p> <p>Go to <b>“Printer left door open” on page 2-69.</b></p>

Error code or message	Error contents	Description/Action
Close door B	Printer left lower door open.	The printer left lower door assembly is open. Go to <b>“Printer left lower door open” on page 2-70.</b>
Close door C	2TM/TTM left door assembly open	The 2TM/TTM door is open. Refer to <i>Options Service Manual</i>
Close door D	Duplex left door open	The duplex left cover is open. Refer to <i>Options Service Manual</i>
Close door F	Exit 2 left door open	The exit 2 left door is open. Refer to <i>Options Service Manual</i>
Close door G	Finisher front door open.	The finisher front door is open. Refer to <i>Finisher Service Manual</i>
Close door J	Printer front door open.	The printer front door assembly is open. Go to <b>“Printer front door open” on page 2-68.</b>
Close surface H	Eject cover open.	Finisher eject cover is open. Refer to <i>Finisher Service Manual</i>
Empty hole punch box	Punch waste box full.	The punch waste box is full. Refer to <i>Finisher Service Manual</i>
Insert hole punch box	Punch waste box missing.	No punch waste box. Refer to <i>Finisher Service Manual</i>
Load staples	Staple cartridge empty.	Staple cartridge empty. Refer to <i>Finisher Service Manual</i>
Load tray 1 or tray 2 with <media>	No media in the selected media tray.	Media is not loaded in the tray. Go to <b>“No media in the select media tray” on page 2-65.</b>
Load tray 3 or tray 4 with <media>	No media in the selected media tray.	Media is not loaded in the tray. Refer to <i>Options Service Manual</i>
Load tray 5 with <media>	No media in the selected media tray.	Media is not loaded in the tray. Refer to <i>Options Service Manual</i>
Remove paper from bin 1	Finisher upper media bin full.	Stacker set over count The upper media bin has reached maximum capacity. Refer to <i>Finisher Service Manual</i>
Remove paper from bin 2	Stacker media bin full (no mix)	The stacker media bin has reached maximum capacity (no mix). Refer to <i>Finisher Service Manual</i>
Remove paper from bin 2	Stacker media bin full (mix size)	The stacker media bin has reached maximum capacity (mix size). Refer to <i>Finisher Service Manual</i>

Error code or message	Error contents	Description/Action
Remove paper from standard output bin	Standard bin 1 full.	Media in standard bin 1 is at maximum capacity. Go to <b>“Standard bin 1 full” on page 2-71.</b>
Remove paper from standard output bin	Standard bin 2 full.	Media in standard bin 2 is at maximum capacity. Go to <b>“Standard bin 2 full” on page 2-71.</b>
Toner low	Toner cartridge near empty	The toner in the toner cartridge is low, but can be used. Go to <b>“Toner cartridge near empty” on page 2-73.</b>
Toner unsupported	Toner cartridge RFID failure	A toner cartridge of a different specification is installed. Go to <b>“Toner cartridge RFID failure” on page 2-75.</b>
Tray 5 missing	HCF unit docking failure or HCF tray 5 set failure.	The tray 5 HCF unit is not properly docked with the printer or the HCF tray 5 is not set. Refer to <i>Options Service Manual</i>

## Service checks

### 200.00 Sensor (registration) off jam (too long)

Step	Check	Yes	No
1	Check the media position. Open the printer left door assembly and visually check it. Does the media touch the sensor (registration)?	Remove the media	Go to step 2.
2	Check the roll. Open the printer left door assembly and check it. Is the transport roll assembly free of excess wear and contamination?	Go to step 3.	Clean or replace the transport roll assembly. Go to <b>“Transfer roll assembly removal” on page 4-71.</b>
3	Check the sensor (registration) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS</b> 3. Select <b>Media Path</b> 4. Select <b>Registration</b>  Open the printer left door assembly and check it. Does the display, on the operator panel, change every time the sensor actuator is operated?	Go to step 5.	Go to step 4.

Step	Check	Yes	No
4	Check the sensor (registration) connection. Is the sensor (registration) properly connected?	Replace the sensor (registration). Go to <b>“Sensor (registration) removal” on page 4-79.</b>	Replace the connection.
5	Check the registration clutch for proper operation. 1. Enter Diagnostics mode. 2. Select <b>MOTOR TESTS.</b> 3. Select <b>Regi strat clutch</b>  Does the registration clutch make an audible clicking sound when activated?	Go to step 7.	Go to step 6.
6	Check the registration clutch connection. Is the registration clutch properly connected?	Replace the registration clutch. Go to <b>“Registration clutch assembly removal” on page 4-78.</b>	Replace the connection.
7	Perform a print test. Does the error continue?	Replace the printer engine card assembly Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 200.01 Sensor (registration) static on jam

Step	Check	Yes	No
1	Check the media position. Open the printer left door assembly and visually check it. Does the media touch the sensor (registration)?	Remove the media	Go to step 2.
2	Check the sensor (registration) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS</b> 3. Select <b>Media path.</b> 4. Select <b>Regi strati on</b>  Open the printer left door assembly and check it. 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 (registration) connection. Is the sensor (registration) properly connected?	Replace the sensor (registration) Go to <b>“Sensor (registration) removal” on page 4-79.</b>	Replace the connection.

Step	Check	Yes	No
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120</b>	Problem solved.

### 201.00 Sensor (fuser exit) on jam

Step	Check	Yes	No
1	Check the media position. Does the media touch the sensor (fuser exit)? Open the printer left door assembly and visually check it.	Remove the media	Go to step 2.
2	Check the roll. Open the printer left door assembly and check it. Is the transport roll assembly free of excess wear and contamination?	Go to step 3.	Clean or replace the transport roll assembly.  Go to <b>“Transfer roll assembly removal” on page 4-71.</b>
3	Check the sensor (fuser exit) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS</b> 3. Select <b>MEDIA PATH.</b> 4. Select <b>Fuser exit.</b>  Open the printer left door assembly and check it. <b>Warning:</b> The area around the actuator is very hot. Allow the fuser area to cool before proceeding. 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 (fuser exit) connection. Is the sensor (fuser exit) properly connected?	Replace the sensor (fuser exit).  Go to <b>“Sensor (fuser exit) removal” on page 4-104.</b>	Replace the connection.
5	Check the registration clutch for proper operation. 1. Enter Diagnostics mode. 2. Select <b>MOTOR TESTS.</b> 3. Select <b>Registration clutch.</b>  Does the registration clutch make an audible clicking sound when activated?	Go to step 7.	Go to step 6.

Step	Check	Yes	No
6	Check the registration clutch connection. Is the registration clutch properly connected?	Replace the registration clutch. Go to <b>“Registration clutch assembly removal” on page 4-78.</b>	Replace the connection.
7	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120</b>	Problem solved.

### 202.00 Sensor (fuser exit) off jam

Step	Check	Yes	No
1	Check the media position. Open the printer left door assembly and visually check it. Does the media touch the sensor (fuser exit)?	Remove the media	Go to step 2.
2	Check the roll Open the printer left door assembly and check it. Is the transport roll assembly free of excess wear and contamination?	Go to step 3.	Clean or replace the transport roll assembly.
3	Check the sensor (fuser exit) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS.</b> 3. Select <b>Media path.</b> 4. Select <b>Fuser exit.</b>  Open the printer left door assembly and check it. The area around the actuator is very hot. Allow the fuser area to cool before proceeding. Does the display, on the operator panel, change every time the sensor actuator is operated?	Go to step 5.	Go to step
4	Check the sensor (fuser exit) connection. Is the sensor (fuser exit) properly connected?	Replace the sensor (fuser exit). Go to <b>“Sensor (fuser exit) removal” on page 4-104.</b>	Replace the connection.
5	Perform a print test. Does the error continue?	Replace the printer engine card assembly.	Problem solved.

**202.01 Sensor (fuser exit) off (too short) jam**

Step	Check	Yes	No
1	Check the media position. Open the printer left door assembly and visually check it. Does the media touch the sensor (fuser exit)?	Remove the media	Go to step 2.
2	Check the fuser unit assembly for a media jam. Open the printer left door assembly and check it. Is there a media jam in the fuser unit assembly?	Remove the media	Go to step 3.
3	Check the fuser unit assembly for installation. Open the printer left door assembly and check it. Is the fuser unit assembly installed securely?	Go to step 4.	Install the fuser unit assembly securely. Go to <b>“Fuser unit assembly removal” on page 4-105</b>
4	Checking the roll. Open the printer left door assembly and check it. Is the transport roll assembly free of excess wear and contamination?	Go to step 5.	Clean or replace the transport roll assembly. Go to <b>“Transfer roll guide assembly removal” on page 4-75.</b>
5	Check the sensor (fuser exit) for operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS</b> 3. Select <b>Media Path</b> 4. Select <b>Fuser exit</b>  Open the printer left door assembly and check it. <b>Warning:</b> The area around the actuator is very hot. Allow the fuser area to cool before proceeding. Does the display, on the operator panel, change every time the sensor actuator is operated?	Go to step 7.	Go to step 6.
6	Check the sensor (fuser exit) connection. Is the sensor (fuser exit) properly connected?	Replace the sensor (fuser exit). Go to <b>“Sensor (fuser exit) removal” on page 4-104.</b>	Replace the connection.
7	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**202.02 Sensor (fuser exit) static jam**

Step	Check	Yes	No
1	Check the media position. Open the printer left door assembly and visually check it. Does the media touch the sensor (fuser exit). Open the printer left door assembly and visually check it.?	Remove the media	Go to step 2.
2	Check the sensor (fuser exit) for operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TEST</b> . 3. Select <b>Media path</b> . 4. Select <b>Fuser exit</b> .  Open the printer left door assembly and check it. <b>Warning:</b> The area around the actuator is very hot. Allow the fuser area to cool before proceeding. Does the display, on the operator panel, change every time the sensor actuator is operated?	Go to step 4.	Go to step 3.
3	Is the sensor (fuser exit) properly connected?	Replace the sensor (fuser exit).  Go to <b>“Sensor (fuser exit) removal” on page 4-104.</b>	Replace the connection.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**203.00 Sensor (exit 2) on jam**

Step	Check	Yes	No
1	Check the media position. Open the printer left door assembly, and visually check it. Does the media touch the sensor (fuser exit)?	Remove the media.	Go to step 2.
2	Check the media position. Open the exit 2 left door assembly, and visually check it. Does the media touch the sensor (exit 2)?	Remove the media.	Go to step 3.
3	Check the roll. Open printer left door assembly. Is the exit 1 media exit roll assembly free of excess wear and contamination?	Go to step 4.	Clean or replace the exit 1 media shift assembly.  Go to <b>“Exit 1 media shift assembly removal” on page 4-106.</b>

Step	Check	Yes	No
4	Check the drive power transmission. Does the exit 1 media exit roll assembly and the other gears rotate smoothly?	Go to step 5.	Replace damaged components. Go to <b>“Exit 1 media shift assembly removal” on page 4-106.</b>
5	Check the sensor (fuser exit) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS.</b> 3. Select <b>Media Path.</b> 4. Select <b>Fuser exit.</b>  Open the printer left door assembly, and visually check it. Does the display on the operator panel change every time the actuator on the above sensor operates?	Go to step 7.	Go to step 6.
6	Check the sensor (fuser exit). Is the above sensor connected properly?	Replace the sensor (fuser exit). Go to <b>“Sensor (fuser exit) removal” on page 4-104.</b>	Replace the connection.
7	Check the exit 2 drive motor for proper operation. 1. Enter Diagnostics mode. 2. Select <b>MOTOR TESTS.</b> 3. Select <b>Exit2 drive mtr.</b>  Does the above motor rotate normally?	Go to step 9.	Go to step 8.
8	Check the exit 2 drive motor for proper operation. Is the above motor connected properly?	Replace the exit 2 unit assembly. Refer to <i>Options Service Manual.</i>	Replace the connection.
9	Check the sensor (exit 2) for proper operation. Open the printer left door assembly and the exit 2 left door assembly. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS.</b> 3. Select <b>Media Path.</b> 4. Select <b>Exit2.</b>  Does the display on the operator panel change every time the actuator on the above sensor operates?	Go to step 11.	Go to step 10.
10	Check the sensor (exit 2) for proper connection. Is the above sensor connected properly?	Replace the sensor (exit 2). Refer to <i>Options Service Manual.</i>	Replace the connection.
11	Check the media diverter solenoid for proper operation. 1. Enter Diagnostics mode. 2. Select <b>MOTOR TESTS.</b> 3. Select <b>Diverter solenoid.</b>  Does the above component operate normally?	Go to step 13.	Go to step 12.

Step	Check	Yes	No
12	Check the media diverter solenoid for proper connection. Is the above component connect properly?	Replace the media diverter solenoid. Refer to <i>Options Service Manual</i> .	Replace the connection.
13	Perform a print test. Does the error still occur?	Replace the exit interface card assembly. Go to <b>“Exit interface card assembly removal” on page 4-119.</b> Go to step 14.	Problem solved.
14	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 203.01 Sensor (exit 2) off jam

Step	Check	Yes	No
1	Check the media position. Open the exit 2 left door assembly, and visually check it. Does the media touch the sensor (exit 2)?	Remove the media.	Go to step 2.
2	Check the roll. Open the exit 2 left door assembly. Is the exit 2 media transport roll assembly free of excess wear and contamination?	Go to step 3.	Clean or replace the exit 2 unit assembly. Refer to <i>Options Service Manual</i> .
3	Check the drive power transmission. Do the exit 2 media transport roll assembly and the other gears rotate smoothly?	Go to step 4.	Replace damaged parts. Refer to <i>Options Service Manual</i> .
4	Check the roll. Open exit 2 left door assembly. Is the exit 2 media exit roll assembly free of excess wear and contamination?	Go to step 5.	Clean or replace the exit 2 unit assembly. Refer to <i>Options Service Manual</i> .
5	Check the drive power transmission. Do the exit 2 media exit roll assembly and the other gears rotate smoothly?	Go to step 6.	Replace damaged parts. Refer to <i>Options Service Manual</i> .
6	Check the sensor (exit 2) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS</b> . 3. Select <b>Media Path</b> . 4. Select <b>Exit2</b> .  Does the display on the operator panel change every time the actuator on the above sensor operates?	Go to step 8.	Go to step 7.

Step	Check	Yes	No
7	Check the sensor (exit 2) for proper connection. Is the above sensor connected properly?	Replace the sensor (exit 2). Go to <b>“Exit 2 sensor (exit 2) removal” on page 4-312.</b>	Replace the connection.
8	Check the exit 2 drive motor for proper operation. 1. Enter Diagnostics mode. 2. Select <b>MOTOR TESTS</b> . 3. Select <b>Exit2 drive mtr</b> .  Does the above motor rotate normally?	Go to step 10.	Go to step 9.
9	Check the exit 2 drive motor for proper connection. Is the above motor connected properly?	Replace the exit 2 unit assembly. Go to <b>“Exit 2 unit assembly removal” on page 4-299.</b>	Replace the connection.
10	Perform a print test. Does the error still occur?	Replace the exit interface card assembly. Go to <b>“Exit interface card assembly removal” on page 4-114.</b> Go to step 11.	Problem solved.
11	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-115.</b>	Problem solved.

### 241.00 Sensor (pre-feed) on jam (tray 1 feed)

Step	Check	Yes	No
1	Check the media condition. Is the media in the tray crumpled or damaged?	Replace the damaged media with new.	Go to step 2.
2	Check the media size setup. Does the media size, in use, match the size set for tray 1?	Go to step 3.	Replace the media, or change the media size setup.

Step	Check	Yes	No
3	<p>Check the rolls for tray 1. Remove tray 1, check it over. Is the feed roll, separation roll, and pick roll free of excess wear and contamination?</p>	Go to step 4.	<p>Clean or replace the feed roll, separating roll, or pick roll. Go to <b>“Feed roll removal” on page 4-43, “Separation roll removal” on page 4-47, and “Pick roll removal” on page 4-49.</b></p>
4	<p>Check the media position. Open the printer left door assembly and visually check it. Does the media touch the sensor (pre-feed) in tray 1 media feed unit assembly?</p>	Remove the media	Go to step 5
5	<p>Check the sensor (pre-feed) for proper operation in tray 1. 1. Enter Diagnostics mode. 2. Select INPUT TRAY TESTS 3. Select Sensor test 4. Select Tray 1 5. Select Pre-feed.  Remove the media tray assembly and check it. Does the display, on the operator panel, change every time a white piece of paper is placed over the sensing area?</p>	<p>Ensure the media feed unit front guide is installed properly. Go to step 7.</p>	Go to step 6.
6	<p>Check the sensor (pre-feed) connection. Is the sensor (pre-feed) properly connected?</p>	Replace the sensor (pre-feed)	Replace the connection.
7	<p>Check the media feed lift motor in tray 1 for proper operation. 6. Enter Diagnostics mode. 7. Select INPUT TRAY TESTS. 8. Select Sensor Test. 9. Select Tray1. 10. Select Pre-feed.  Pull out tray 1 and check over. Does the media feed lift motor rotate normally?</p>	Go to step 10.	Skip to step 9.
8	<p>Check the media feed lift motor connection. Is the media feed lift motor properly connected?</p>	Go to step 9.	Replace the connection.
9	<p>Check the media feed lift motor for proper operation of tray 1. Replace the media feed lift motor for tray 1 with one from tray 2. 1. Enter Diagnostics mode. 2. Select MOTOR TESTS. 3. Select Tray1 feed mtr.  Does the motor rotate normally?</p>	<p>Re-install the media feed lift motor for tray 2 as it previously was and replace the tray 1 motor with a new one. Go to <b>“Media feed lift motor removal” on page 4-31.</b></p>	Go to step 10.

Step	Check	Yes	No
10	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 241.01 Sensor (registration) on jam (tray 1 feed)

Step	Check	Yes	No
1	Check the media condition. Is the media in the tray crumpled or damaged?	Replace with new media; ensure it is dry.	Go to step 2.
2	Check the media size setup. Does the size of media in use match the size set for tray 1?	Go to step 3.	Replace the media or change the media size setup.
3	Check the rolls for tray 1. Remove and check tray 1. Are the feed roll, separation roll, and pick roll free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll. Go to <b>“Feed roll removal” on page 4-43, “Separation roll removal” on page 4-47, and “Pick roll removal” on page 4-49.</b>
4	Check the media position. Open the printer left door assembly, and visually check it. Does the media touch the sensor (registration) or the sensor (pre-feed) in tray 1 media feed unit assembly?	Remove the media.	Go to step 5.
5	Check the sensor (registration) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TEST.</b> 3. Select <b>media path.</b> 4. Select <b>registration.</b>  Open and check the printer left door assembly. Does the display on the operator panel change every time the sensor actuator operates?	Go to step 7.	Go to step 6.
6	Check the sensor (registration) connection. Is the sensor (registration) properly connected?	Replace the sensor (registration). Go to <b>“Sensor (registration) removal” on page 4-79.</b>	Replace the connection.

Step	Check	Yes	No
7	<p>Check the sensor (pre-feed) for proper operation in tray 1.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode.</li> <li>2. Select INPUT TRAY TESTS.</li> <li>3. Select Sensor test.</li> <li>4. Select Tray1.</li> <li>5. Select pre-feed.</li> </ol> <p>Remove the media tray assembly, and check it.</p> <p>Does the display on the operator panel change every time a white piece of paper is placed over the sensing area?</p>	<p>Ensure the media feed unit front guide is installed properly.</p> <p>Go to step 9.</p>	<p>Replace the sensor (pre-feed).</p> <p>Go to <b>“Sensor (pre-feed) removal” on page 4-39</b></p>
8	<p>Check the sensor (pre-feed) connection.</p> <p>Is the sensor (pre-feed) properly connected?</p>	<p>Replace the sensor (pre-feed).</p> <p>Go to <b>“Sensor (pre-feed) removal” on page 4-39.</b></p>	<p>Replace the connection.</p>
9	<p>Perform a print test.</p> <p>Does the error continue?</p>	<p>Replace the printer engine card assembly</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120.</b></p>	<p>Problem solved.</p>

### 242.00 Sensor (pre-feed) on jam (tray 2 feed)

Step	Check	Yes	No
1	<p>Check the media condition.</p> <p>Is the media in the tray crumpled or damaged?</p>	<p>Replace the media with new media; ensure it is dry.</p>	<p>Go to step 2.</p>
2	<p>Check the media size setup.</p> <p>Does the media size in use match the size set for tray 2?</p>	<p>Go to step 3.</p>	<p>Replace the media, or change the media size setup.</p>
3	<p>Check the rolls for tray 2.</p> <p>Remove tray 2 and check it.</p> <p>Are the feed roll, separation roll, pick roll free of excess wear and contamination?</p>	<p>Go to step 4.</p>	<p>Clean or replace the feed roll, separation roll, and pick roll.</p> <p>Go to <b>“Feed roll removal” on page 4-43, “Separation roll removal” on page 4-47, and “Pick roll removal” on page 4-49.</b></p>
4	<p>Check the media position.</p> <p>Open the printer left lower door assembly, and visually check it.</p> <p>Does the media touch the sensor (pre-feed) in the tray 2 media feed unit?</p>	<p>Remove the media.</p>	<p>Go to step 5.</p>

Step	Check	Yes	No
5	<p>Check the sensor (pre-feed) in tray 2 for proper operation.</p> <ol style="list-style-type: none"> <li>1. Select Diagnostics mode.</li> <li>2. Select INPUT TRAY TESTS.</li> <li>3. Select Sensor test.</li> <li>4. Select Tray2.</li> <li>5. Select Pre-feed.</li> </ol> <p>Remove the media tray assembly, and check it.</p> <p>Does the display on the operator panel change every time a white piece of paper is placed over the sensing area?</p>	<p>Ensure the media feed unit front guide is installed properly.</p> <p>Go to step 7.</p>	Go to step 6.
6	<p>Check the sensor (pre-feed) connection.</p> <p>Is the sensor (pre-feed) properly connected?</p>	<p>Replace the sensor (pre-feed).</p> <p>Go to <b>“Sensor (pre-feed) removal” on page 4-39.</b></p>	<p>Replace the connection.</p> <p>Go to <b>“Sensor (pre-feed) removal” on page 4-39.</b></p>
7	<p>Check the media feed lift motor in tray 2 for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode.</li> <li>2. Select MOTOR TESTS.</li> <li>3. Select Tray 2 feed mtr.</li> </ol> <p>Pull out tray 1, and check it.</p> <p>Does the media feed lift motor rotate normally?</p>	Go to step 10.	Go to step 8.
8	<p>Check the media feed lift motor connection.</p> <p>Is the media feed lift motor properly connected?</p>	Go to step 9.	<p>Replace the connection.</p> <p>Go to <b>“Sensor (pre-feed) removal” on page 4-39</b></p>
9	<p>Check the media feed lift motor in tray 2 for proper operation.</p> <p>Replace the media feed lift motor for tray 2 with the one from tray 1.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode.</li> <li>2. Select MOTOR TESTS.</li> <li>3. Select Tray 2 feed motor.</li> </ol> <p>Does the media feed lift motor rotate normally?</p>	<p>Install the media feed lift motor for tray 1 as it previously was and replace the motor for tray 2 with a new motor.</p> <p>Go to <b>“Media feed lift motor removal” on page 4-31.</b></p>	Go to step 10.
10	<p>Perform a print test.</p> <p>Does the error continue?</p>	Replace the printer engine card assembly.	Problem solved.

### 242.01 Sensor (tray 2 feed-out) on jam (tray 2 feed)

Step	Check	Yes	No
1	<p>Check the media condition.</p> <p>Is the media in the tray crumpled or damaged?</p>	Replace the media with new media; ensure it is dry.	Go to step 2.

Step	Check	Yes	No
2	Check the media size setup. Does the media size, in use, match the size set for tray 2?	Go to step 2.	Replace the media, or change the media size setup.
3	Check the rolls for tray 2. Pull out tray 2, and check it. Open the printer left lower door assembly, and visually check it. Are the feed roll, separation roll, and pick roll free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll. Go to <b>“Feed roll removal” on page 4-43</b> , <b>“Separation roll removal” on page 4-47</b> , and <b>“Pick roll removal” on page 4-49</b> .
4	Check the media position. Does the media touch the sensor (tray 2 feed-out) or the tray 2 media feed unit?	Remove the media.	Go to step 5.
5	Check the sensor (tray 2 feed-out) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>INPUT TRAY TESTS</b> . 3. Select <b>Sensor test</b> . 4. Select <b>Tray 2</b> . 5. Select <b>Media out</b> .  Open the printer left lower door assembly and check it. Does the display on the operator panel change every time a white piece of paper is placed over the sensing area?	Go to step 7.	Go to step 6.
6	Check the sensor (tray 2 feed-out) connection. Is the sensor (tray 2 feed-out) properly connected?	Replace the sensor (tray 2 feed-out). Go to <b>“Sensor (tray 2 feed-out) removal” on page 4-82</b> .	Replace the connection.
7	Check the sensor (pre-feed), in tray 2, for proper operation. 1. Enter Diagnostics mode. 2. Select <b>INPUT TRAY TESTS</b> . 3. Select <b>Sensor test</b> . 4. Select <b>Tray 2</b> . 5. Select <b>Pre-feed</b> .  Remove the media tray assembly and check it. Does the display, on the operation panel, change every time a white piece of paper is placed over the sensing area?	<ul style="list-style-type: none"> <li>• Ensure the media feed unit front guide is installed properly.</li> <li>• Go to step 9.</li> </ul>	Replace the sensor (pre-feed).
8	Check the sensor (pre-feed) connection. Is the sensor (pre-feed) properly connected?	Replace the sensor (pre-feed).	Replace the connection.

Step	Check	Yes	No
9	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 242.02 Sensor (registration) on jam (tray 2 feed)

Step	Check	Yes	No
1	Check the media condition. Is the media, in the tray, crumpled or damaged?	Replace the media with new; ensure it is dry.	Go to step 2.
2	Check the media size setup. Does the media size, in use, match the size set for tray 2?	Go to step 3.	Replace the media or change the media size setup.
3	Check the roll for tray 2. Remove tray 2 and check it. Are the feed roll, separation roll, and pick roll free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll.  Go to <b>“Feed roll removal” on page 4-43</b> , <b>“Separation roll removal” on page 4-47</b> , and <b>“Pick roll removal” on page 4-49.</b>
4	Check the media position. Open the printer left door assembly and visually check it. Does the media touch the sensor (registration)?	Remove the media.	Go to step 5.
5	Check the media position. Open the printer left lower door assembly and visually check it. Does the media touch the sensor (tray 2 feed-out)?	Remove the media.	Go to step 6.
6	Check the sensor (registration) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS</b> . 3. Select <b>Media Path</b> . 4. Select <b>Registration</b> .  Open the printer left door assembly, and check it. Does the display on the operator panel change every time the sensor actuator is operated?	Go to step 8.	Go to step 7.

Step	Check	Yes	No
7	Check the sensor (registration) connection. Is the sensor (registration) properly connected?	Replace the sensor (registration). Go to <b>“Sensor (registration) removal” on page 4-79.</b>	Replace the connection.
8	Check the sensor (tray 2 feed-out) for proper operation. 1. Enter Diagnostics mode 2. Select <b>INPUT TRAY TESTS.</b> 3. Select <b>Sensor Test.</b> 4. Select <b>Tray 2.</b> 5. Select <b>feed-out.</b>  Open the printer left lower door assembly, and check it. Does the display on the operator panel change every time a white piece of paper is placed over the sensing area?	Go to step 10.	Go to step 9.
9	Check the sensor (tray 2 feed-out) connection. Is the sensor (tray 2 feed-out) properly connected?	Replace the sensor (tray 2 feed-out). Go to <b>“Sensor (tray 2 feed-out) removal” on page 4-82.</b>	Replace the sensor (tray 2 feed-out).
10	Perform a print test. Does the error continue?	Replace the printer engine card assembly Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 242.03 Sensor (tray 2 feed-out) static jam

Step	Check	Yes	No
1	Check the media position. Does the media touch the sensor (tray 2 feed-out)? Open the printer left lower door assembly, and visually check it.	Remove the media.	Go to step 2.
2	Check the sensor (tray 2 feed-out) for proper operation. 1. Enter Diagnostics mode. 2. Select <b>INPUT TRAY TESTS.</b> 3. Select <b>Sensor test.</b> 4. Select <b>Tray2.</b> 5. Select <b>Feed-out.</b>  Open the printer left lower door assembly, and check it. Does the display on the operator panel change every time a white piece of paper is placed over the sensing area?	Go to step 4.	Go to step 3

Step	Check	Yes	No
3	Check the sensor (tray 2 feed-out) connection. Is the sensor (tray 2 feed-out) properly connected?	Replace the sensor (tray 2 feed-out).	Replace the connection.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 250.00 Sensor (registration) on jam (MPF pick)

Step	Check	Yes	No
1	Check the media condition. Is the media in the MPF tray crumpled or damaged?	Replace the media with new; ensure it is dry.	Go to step 2.
2	Check the media size setup. Does the media size in use match the size set for MPF tray?	Go to step 3.	Replace the media or change the media size setup.
3	Check the media position. Open the printer left door assembly, and visually check it. Does the media touch the sensor (registration)?	Remove the media.	Go to step 4.
4	Check the MPF media side guides for proper operation. Do the MPF media side guides operate smoothly?	Go to step 5.	Adjust the MPF media side guides correctly.
5	Check the MPF for installation. Remove the MPF feed unit assembly, and reinstall it. Perform a print test. Does an error occur during print test?	Go to step 6.	Problem solved.
6	Check the roll. Remove the MPF pick unit asm. Is the MPF feed roll assembly free of excess wear and contamination?	Go to step 7.	Clean or replace the MPF feed roll assembly.  Go to <b>“MPF feed unit assembly removal” on page 4-52.</b>
7	Check the roll. Remove the MPF feed unit assembly. Is the MPF feed roll assembly free of excess wear and contamination?	Go to step 8.	Clean or replace the MPF feed roll assembly.  Go to <b>“MPF feed unit assembly removal” on page 4-52.</b>

Step	Check	Yes	No
8	<p>Check the sensor (registration) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode.</li> <li>2. Select <b>BASE SENSOR TESTS</b></li> <li>3. Select <b>Media path</b></li> <li>4. Select <b>Registration</b>.</li> </ol> <p>Open the printer left door assembly and check it.</p> <p>Does the display, on the operator panel, change every time the sensor actuator is operated?</p>	Go to step 10.	Go to step 9.
9	<p>Check the sensor (registration) connection.</p> <p>Is the sensor (registration) properly connected?</p>	<p>Replace the sensor (registration)</p> <p>Go to <b>“Sensor (registration) removal” on page 4-79</b></p>	Replace the connection.
10	<p>Check the MPF pick solenoid for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode.</li> <li>2. Select <b>MOTOR TESTS</b>.</li> <li>3. Select <b>Mpf pick solenoid</b></li> </ol> <p>Does the MPF pick solenoid make an audible clicking sound when activated?</p>	Go to step 12.	Go to step 11.
11	<p>Check the MPF pick solenoid connection.</p> <p>Is the MPF pick solenoid properly connected?</p>	<p>Replace the MPF pick solenoid.</p> <p>Go to <b>“MPF pick solenoid / pick lever removal” on page 4-60</b></p>	Replace the connection.
12	<p>Perform a print test.</p> <p>Does the error continue?</p>	<p>Replace the printer engine card assembly.</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120</b></p>	Problem solved.

### 900.XX RIP card assembly software failure

Step	Check	Yes	No
1	<p>Perform a POR.</p> <p>Does the error occur when the power is turned off/on?</p>	Go to step 2.	<p>Perform several print tests.</p> <p>If the problem remains, go to step 2.</p>
2	<p>Turn the printer off for 60 seconds.</p> <p>Does the error occur when the power is turned off/on again?</p>	<p>Replace the RIP card assembly.</p> <p>Go to <b>“RIP card assembly removal” on page 4-127</b>.</p> <p>Go to step 3.</p>	Problem solved.

Step	Check	Yes	No
3	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 903.00 RAM read/write check failure

Step	Check	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, 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 <b>“RIP card assembly removal” on page 4-127.</b>  Go to step 3.	Problem solved.
3	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 904.00 NVM data failure

Step	Check	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, 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 <b>“RIP card assembly removal” on page 4-127.</b>  Go to step 3.	Problem solved.

Step	Check	Yes	No
3	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 905.00 NVM read/write cannot be executed failure

Step	Check	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, 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 <b>“RIP card assembly removal” on page 4-127.</b>  Go to step 3.	Problem solved.
3	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 906.00 CPU power to access NVM failure

Step	Check	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, 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 <b>“RIP card assembly removal” on page 4-127.</b>  Go to step 3.	Problem solved.

Step	Check	Yes	No
3	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 907.00 RFID ASIC failure

Step	Check	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, 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 connector P419 on the printer engine card assembly. Is connector P419 on the printer engine card assembly properly connected?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b> Go to step 4.	Replace the connection.
4	Perform a print test. Does the error still occur?	Replace the RIP card assembly.  Go to <b>“RIP card assembly removal” on page 4-127.</b>	Problem solved.

### 908.00 PPM data failure

Step	Check	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, 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 <b>“RIP card assembly removal” on page 4-127.</b> Go to step 3.	Problem solved.

Step	Check	Yes	No
3	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 910.00 Transport motor stop failure

Step	Check	Yes	No
1	Check the dual drive motor assembly installation. Is the dual drive motor assembly properly installed? Open the rear motor cover and check it.	Go to step 2.	Install the PC cartridge properly.
2	Check the dual drive motor assembly rotation operation. Open the rear motor cover and check it.  1. Enter Diagnostics mode. 2. Select MOTOR TESTS. 3. Select Transport motor  Does the motor rotate normally?	Go to step 4	Go to step 3.
3	Check the dual drive motor assembly connection. Is the dual drive motor assembly properly connected?	Replace the dual drive motor assembly.	Replace the connection.
4	Check ROM for the latest version. Is ROM the latest version?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Upgrade ROM to the latest version.
5	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**911.00 Transport motor failure**

Step	Check	Yes	No
1	Check the dual drive motor assembly for operation. Open the rear motor cover and check it. 1. Enter Diagnostics mode. 2. Select <b>MOTOR TESTS</b> . 3. Select <b>Transport motor</b> .  Does the motor rotate normally?	Go to step 3	Go to step 2.
2	Check the dual drive motor assembly for installation Remove the rear motor cover and check it. Is the dual drive motor assembly installed securely?	Go to step 3.	Install the dual drive motor assembly securely.
3	Check the rotation of the rotor in the dual drive motor assembly. Open the rear motor cover and check it. Can the rotor be rotated by hand without excessive load?	Go to step 4.	Install the dual drive motor assembly properly.
4	Check the dual drive motor assembly connection. Is the dual drive motor assembly properly connected?	Replace the dual drive motor assembly.	Replace the connection.
5	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to " <b>Printer engine card assembly removal</b> " on page 4-120.	Problem solved.

**912.00 PC cartridge unit motor failure**

Step	Check	Yes	No
1	Check the PC cartridge for installation. Is the PC cartridge installed securely?	Go to step 2.	Install the PC cartridge securely.
2	Check the dual drive motor assembly for operation. Open the rear motor cover and check it. 1. Enter Diagnostics mode. 2. Select <b>MOTOR TESTS</b> . 3. Select <b>Drum unit motor</b> .  Does the motor rotate normally.	Go to step 4	Go to step 3.
3	Check the dual drive motor assembly for installation. Open the rear motor cover and check it. Is the dual drive motor assembly installed securely?	Go to step 4.	Install the dual drive motor assembly securely.
4	Check the rotation of the rotor in the dual drive motor assembly. Open the rear motor cover and check it. Can the rotor be rotated by hand without excessive load?	Go to step 5.	Install the dual drive motor assembly securely.

Step	Check	Yes	No
5	Check the dual drive motor assembly connection. Is the dual drive motor assembly properly connected?	Replace the dual drive motor assembly.	Replace the connection.
6	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 913.00 Printhead assembly failure

Step	Check	Yes	No
1	Check the printhead assembly for installation. Is the printhead assembly installed securely?	Go to step 2.	Install the printhead assembly securely.
2	Check the printhead assembly connection. Is the printhead assembly properly connected?	Replace the printhead.	Replace the connection.
3	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 914.00 Toner add motor assembly failure

Step	Check	Yes	No
1	Check the toner cartridge for installation. Remove the toner cartridge and reinstall it. Does it operate properly?	Problem solved	Go to step 2.
2	Check the gear rotation for the toner cartridge guide assembly. Remove the toner guide assembly. Does the gear, located at the lower part of the toner cartridge guide assembly, rotate smoothly?	Go to step 3.	Replace the toner cartridge guide assembly.
3	Check the toner cartridge guide assembly for pipe clogging. Is the pipe, located at the lower part of the toner cartridge guide assembly, clogged?	Go to step 4.	Clean the pipe.

Step	Check	Yes	No
4	<p>Check the toner add motor assembly for operation.</p> <p><b>Warning:</b> Only perform this test in segments of three seconds or less or toner spill will occur.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode.</li> <li>2. Select MOTOR TESTS.</li> <li>3. Select Toner add motor</li> </ol> <p>Does the motor rotate normally?</p>	Go to step 6.	Go to step 5.
5	<p>Check the toner add motor assembly connection.</p> <p>Is the toner add motor assembly properly connected?</p>	<p>Replace the toner add motor.</p> <p><b>“Toner cartridge guide assembly removal” on page 4-95</b></p>	Replace the connection.
6	<p>Perform a print test.</p> <p>Does the error continue?</p>	<p>Replace the printer engine card assembly.</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120.</b></p>	Problem solved.

### 915.00 Fuser cooling fan failure

Step	Check	Yes	No
1	<p>Check the fuser cooling fan for installation.</p> <p>Is the fuser cooling fan installed securely?</p>	Go to step 2.	Install the fuser cooling fan securely.
2	<p>Visually check the fuser cooling fan for rotation.</p> <p>Is the fuser cooling fan visually rotating?</p>	Go to step 3.	Go to step 3.
3	<p>Check the fuser cooling fan for operation.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode.</li> <li>2. Select MOTOR TESTS.</li> <li>3. Select Fuser cooling fan.</li> </ol> <p>Does the display, on the operator panel, change every time the connector (CN102) of the fuser cooling fan is removed then replaced?</p>	Go to step 5.	Go to step 4.
4	<p>Check the fuser cooling fan for operation.</p> <p>Is CN102 on the dual drive motor assembly connected properly?</p>	Replace the fuser cooling fan.	Replace the connection.
5	<p>Perform a print test.</p> <p>Does the error continue?</p>	<p>Replace the printer engine card assembly.</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120.</b></p>	Problem solved.

**916.00 PC cartridge cooling fan failure**

Step	Check	Yes	No
1	Visually check the PC cartridge cooling fan rotation. Is the PC cartridge cooling fan visually rotating?	Go to step 3.	Go to step 2.
2	Check the PC cartridge cooling fan. Is there an object blocking the PC cartridge cooling fan rotation?	Remove the object blocking the rotation.	Go to step 3.
3	Check the PC cartridge cooling fan for operation. 1. Enter Diagnostics mode. 2. Select MOTOR TESTS. 3. Select Pc unit cooling fan  Does the fan rotate normally?	Go to step 5.	Go to step
4	Check the PC cartridge cooling fan connection. Is the PC cartridge cooling fan properly connected?	Replace the PC cartridge cooling fan.  Go to <b>“PC cartridge cooling fan removal” on page 4-103</b>	Replace the connection.
5	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**918.00 Sensor (exit 1 media shift HP) failure**

Step	Check	Yes	No
1	Check the sensor (exit 1 media shift HP) for operation. 1. Enter Diagnostics mode 2. Select BASE SENSOR TESTS 3. Select Media Path 4. Select Exit 1 shift HP  Move the shift assembly, with your finger, in a side to side motion.  Does the display, on the operator panel, change every time the sensing area is blocked?	Go to step 3	Go to step 2
2	Check the sensor (exit 1 media shift HP) for connection. Is the sensor (exit 1 media shift HP) connected?	Replace the sensor (exit 1 media shift HP).  Go to <b>“Exit 1 media shift assembly removal” on page 4-106.</b>	Replace the connection.

Step	Check	Yes	No
3	<p>Check the media shift motor for operation.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode.</li> <li>2. Select MOTOR TESTS.</li> <li>3. Select Exit shift motor</li> </ol> <p><b>Note:</b> A continuous operation check is allowed up to twice for each direction.</p> <p>Does the motor operate normally?</p>	Go to step 5.	Go to step 4.
4	<p>Check the media shift motor for connection.</p> <p>Is the above motor connected properly?</p>	<p>Replace the media exit shift motor.</p> <p>Go to <b>“Media shift motor removal” on page 4-108.</b></p>	Replace the connection.
5	<p>Check the printer engine card assembly for connection P421 and the exit interface card assembly connector P431.</p> <p>Are the above cards connected properly?</p>	<p>Replace the exit interface card assembly.</p> <p>Go to <b>“Exit interface card assembly removal” on page 4-119.</b></p>	Replace the connection.
6	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120.</b></p>	Problem solved.

### 920.00 Fuser unit assembly on time failure

Step	Check	Yes	No
1	<p>Check the fuser unit assembly for a media jam.</p> <p>Open the printer left door assembly and check it.</p> <p>Is there a media jam in the fuser unit assembly?</p>	Remove the media.	Go to step 2.
2	<p>Leave the printer powered on with the error code displayed for 10 minutes, then perform a POR.</p> <p>Does the error still occur?</p>	Go to step 3.	Problem solved.
3	<p>Check the fuser unit assembly for installation.</p> <p>Open the printer left door assembly and check it.</p> <p>Is the fuser unit assembly installed securely?</p>	Go to step 4.	Install the fuser unit assembly securely.
4	<p>Check the fuser unit assembly connection.</p> <p>Is the fuser unit assembly properly connected?</p>	Go to step 5.	<p>Replace the connection.</p> 
5	<p>Check between the LVPS card assembly P525 and the printer engine card assembly P401 for proper connection.</p> <p>Are the cards connected properly?</p>	Replace the fuser unit assembly.	<p>Replace the connection.</p> 

Step	Check	Yes	No
6	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 921.00 Over heat temperature failure

Step	Check	Yes	No
1	Check the fuser unit assembly for installation. Open the printer left door assembly and check it. Is the fuser unit assembly installed securely?	Go to step 2.	Install the fuser unit assembly securely.
2	Check the fuser unit assembly for proper connection.	Go to step 3.	Replace the connection. 
3	Check the connection between the LVPS card assembly P525 and the printer engine card assembly P401. Are the cards connected properly?	Replace the fuser unit assembly.	Replace the connection. 
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 922.00 Center thermistor failure

Step	Check	Yes	No
1	Check the fuser unit assembly for installation. Open the printer left door assembly and check it. Is the fuser unit assembly installed securely?	Go to step 2.	Install the fuser unit assembly securely.
2	Check the fuser unit assembly connection. Is the fuser unit assembly properly connected?	Replace the fuser unit assembly.	Replace the connection. 
3	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**923.00 Rear thermistor failure**

Step	Check	Yes	No
1	Check the fuser unit assembly for installation. Open the printer left door assembly and check it. Is the fuser unit assembly installed securely?	Go to step 2.	Install the fuser unit assembly securely.
2	Check the fuser unit assembly connection. Is the fuser unit assembly properly connected?	Replace the fuser unit assembly.	Replace the connection. 
3	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**924.00 Pressure roll thermistor failure**

Step	Check	Yes	No
1	Check the fuser unit assembly for installation. Open the printer left door assembly and check it. Is the fuser unit assembly installed securely?	Go to step 2.	Install the fuser unit assembly securely.
2	Check the fuser unit assembly connection. Is the fuser unit assembly properly connected?	Replace the fuser unit assembly.	Replace the connection. 
3	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**925.00 Fuser operating temperature failure**

Step	Check	Yes	No
1	Check the fuser unit assembly for a media jam. Open the printer left door assembly and check it. Is there a media jam in the fuser unit assembly?	Go to the step 2.	Remove the media.
2	Leave the printer powered on with the error code displayed for 10 minutes, then perform a POR. Does the error still occur?	Go to step 3.	Problem solved.

Step	Check	Yes	No
3	Check the fuser unit assembly for installation. Open the printer left door assembly and check it. Is the fuser unit assembly installed securely?	Go to step 4.	Install the fuser unit assembly securely.
4	Check the fuser unit assembly connection. Is the fuser unit assembly properly connected?	Go to step 5.	Replace the connection. 
5	Check the connection between the LVPS card assembly P525 and the printer engine card assembly P401. Are the cards connected properly?	Replace the fuser unit assembly.	Replace the connection. 
6	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 927.00 PC cartridge RFID data write failure

Step	Check	Yes	No
1	Check the PC cartridge installation. Is the PC cartridge properly installed?	Go to step 2.	Install the PC cartridge properly.
2	Check the sensor (RFID PC cartridge) installation. Is the sensor (RFID PC cartridge) properly installed?	Go to step 3.	Install the sensor (RFID PC cartridge) correctly.
3	Check the sensor (RFID PC cartridge) connection. Is the sensor (RFID PC cartridge) properly connected?	Replace the sensor (RFID PC cartridge).	Replace the connection.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 928.00 PC cartridge RFID communication failure

Step	Check	Yes	No
1	Check the PC cartridge installation. Is the PC cartridge properly installed?	Go to step 2.	Install the PC cartridge properly.

Step	Check	Yes	No
2	Check the sensor (RFID PC cartridge) installation. Is the sensor (RFID PC cartridge) properly installed?	Go to step 3.	Install the sensor (RFID PC cartridge) correctly.
3	Check the sensor (RFID PC cartridge) connection. Is the sensor (RFID PC cartridge) properly connected?	Replace the sensor (RFID PC cartridge).	Replace the connection.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 929.00 Sensor (ATC) failure

Step	Check	Yes	No
1	Check the PC cartridge installation. Is the PC cartridge properly installed?	Go to step 2.	Install the PC cartridge properly.
2	Check the PC cartridge sensor connector installation. Is the PC cartridge sensor connector properly connected?	Replace the PC cartridge sensor connector.	Replace the connection.
3	Check the switch (PC cartridge interlock) connection. Is the switch (PC cartridge interlock) properly connected?	Replace the PC cartridge.	Replace the connection.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 930.00 Laser power failure

Step	Check	Yes	No
1	Check the printhead assembly for installation. Is the printhead assembly installed securely?	Go to step 2.	Install the printhead assembly securely.
2	Check the printhead assembly connection. Is the printhead assembly properly connected?	Replace the printhead.	Replace the connection.

Step	Check	Yes	No
3	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 932.00 Toner cartridge RFID data write failure

Step	Check	Yes	No
1	Check the toner cartridge installation. Is the toner cartridge properly installed?	Go to step 2.	Install the toner cartridge properly.
2	Check the sensor (RFID toner cartridge) installation. Is the sensor (RFID toner cartridge) properly installed?	Go to step 3.	Install the sensor (RFID toner cartridge) correctly.
3	Check the sensor (RFID toner cartridge) connection. Is the sensor (RFID toner cartridge) properly connected?	Replace the sensor (RFID toner cartridge).	Replace the connection.
4	<ul style="list-style-type: none"> <li>• Perform a print test.</li> <li>• Does the error continue?</li> </ul>	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 933.00 Toner cartridge RFID communication failure

Step	Check	Yes	No
1	Check the toner cartridge installation. Is the toner cartridge properly installed?	Go to step 2.	Install the toner cartridge properly.
2	Check the sensor (RFID toner cartridge) installation. Is the sensor (RFID toner cartridge) properly installed?	Go to step 3.	Install the sensor (RFID toner cartridge) correctly.
3	Check the sensor (RFID toner cartridge) connection. Is the sensor (RFID toner cartridge) properly connected?	Replace the sensor (RFID toner cartridge).	Replace the connection.

Step	Check	Yes	No
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to " <b>Printer engine card assembly removal</b> " on page 4-120.	Problem solved.

**939.00 RIP card assembly communication failure**

Step	Check	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, 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 assembly connection. Is the RIP card assembly connection JHAB2 and the printer engine card assembly connection P402 connected properly?	Replace the RIP card assembly Go to <b>“RIP card assembly removal” on page 4-127.</b> Go to step 4.	Replace the connection.
4	Perform a print test. Does the error still occur?	Replace the printer engine card assembly Go to <b>“Printer engine card assembly removal” on page 4-120</b>	Problem solved.

**941.00 Media tray 1 lift up / no media tray failure**

Step	Check	Yes	No
1	Check the media. Pull out media tray 1 to visually check it. Is media loaded in tray 1?	Go to step 2.	Load media
2	Check the media tray. Replace media tray 1 with media tray 2 Is the replaced media tray lifted up?	Go to step 3.	Go to step 4.
3	Check the media tray. Are the tray lift sector gear 12T, of media tray 1, or surrounding parts damaged?	Replace the media tray lift sector gear 12T or other damaged components.	Go to step 4.
4	Check the tray 1 media feed lift motor for operation. Pull out the media tray then push it back in. Does the motor lift up the tray normally?	Go to step 9.	Go to step 5.
5	Is the tray 1 media feed lift motor properly connected?	Go to step 5.	Replace the connection.

Step	Check	Yes	No
6	<p>Check the tray 1 media feed lift motor for operation.</p> <p>Replace the tray 1 media feed lift motor with the motor from tray 2</p> <p>Pull out the media tray then push it back in.</p> <p>Does the motor rotate normally?</p>	<ul style="list-style-type: none"> <li>Reinstall the media feed lift motor for media tray 2 as it was.</li> <li>Replace the motor for media tray 1 with a new motor.</li> </ul>	Go to step 7.
7	<p>Check the tray 1 sensor (media level) for operation.</p> <ol style="list-style-type: none"> <li>Enter Diagnostics mode.</li> <li>Select <b>INPUT TRAY TESTS</b>.</li> <li>Select <b>Sensor test</b>.</li> <li>Select <b>Tray 1</b></li> <li>Select <b>media level</b></li> </ol> <p>Remove the media tray assembly.</p> <p>Move the pick roll, with your finger, up and down.</p> <p><b>Note:</b> Avoid touching the rubber roll surface.</p> <p>Does the display, on the operator panel, change every time the sensing area is blocked?</p>	Go to step 9.	Go to step 8.
8	<p>Check the tray 1 sensor (media level) connection.</p> <p>Is the tray 1 sensor (media level) properly connected?</p>	Replace the sensor (media level).	Replace the connection.
9	<p>Perform a print test.</p> <p>Does the error continue?</p>	<p>Replace the printer engine card assembly.</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120.</b></p>	Problem solved.

### 942.00 Media tray 2 lift up / no media tray failure

Step	Check	Yes	No
1	<p>Check the media,</p> <p>Is any media loaded in media tray 2?</p> <p>Pull out media tray 2 to visually check it.</p>	Go to step 2.	Load media.
2	<p>Check the media tray.</p> <p>Replace media tray 2 with media tray 1</p> <p>Is the replaced tray lifted up?</p>	Go to step 3.	Go to step 4.
3	<p>Check the media tray.</p> <p>Are the tray lift sector gear 12T, of media tray 2, or surrounding parts damaged?</p>	Replace the tray lift sector gear 12T or other damaged components.	Go to step 4.
4	<p>Check the tray 2 media feed lift motor for operation.</p> <p>Pull out the media tray then push it back in.</p> <p>Does the motor lift up the tray normally?</p>	Go to step 9.	Go to step 5.

Step	Check	Yes	No
5	Check the tray 2 media feed lift motor connection. Is the tray 2 media feed lift motor properly connected?	Go to step 6.	Replace the connection.
6	Check the tray 2 media feed lift motor for operation. Replace the tray 2 media feed lift motor with media tray 1. Pull out the media tray then push it back in. Does the above motor rotate normally?	<ul style="list-style-type: none"> <li>Reinstall the media feed lift motor for tray 1 as it previously was.</li> </ul> Go to <b>“Media feed lift motor removal” on page 4-31.</b> <ul style="list-style-type: none"> <li>Replace the tray 2 motor with a new one.</li> </ul> Go to <b>“Media feed lift motor removal” on page 4-31.</b>	Go to step 7.
7	Check the tray 2 sensor (media level) 2 for operation. <ol style="list-style-type: none"> <li>Enter Diagnostics mode.</li> <li>Select INPUT TRAY TESTS.</li> <li>Select Sensor test.</li> <li>Select Tray2.</li> <li>Select Media Level .</li> </ol> Remove the media tray assembly. Move the pick roll, with your finger, up and down. <b>Note:</b> Avoid touching the rubber roll surface. Does the display, on the operator panel, change every time the sensing area is blocked?	Go to step 9.	Go to step 8.
8	Check the tray 2 sensor (media level) connection. Is the tray 2 sensor (media level) properly connected?	Replace the sensor (media level). Go to <b>“Sensor (media level) removal” on page 4-37</b>	Replace the connection.
9	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**950.00 through 950.29 EPROM mismatch failure**

<p><b>Warning:</b> When replacing any of the following components:</p> <ul style="list-style-type: none"> <li>• Operator panel assembly</li> <li>• RIP card assembly</li> <li>• Interconnect card assembly</li> </ul> <p>Only replace one component at a time. Replace the required component and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one or the printer will be rendered inoperable.</p> <p><b>Warning:</b> Never install and remove components listed above as a method of troubleshooting components. Once a component has been installed in a machine, it can not be used in another machine. It must be returned to the manufacturer.</p>			
Step	Check	Yes	No
1	Check the interconnect card assembly. Was the interconnect card assembly recently replaced?	Go to step 3.	Go to step 2.
2	Check the operator panel assembly. Was the operator panel recently replaced?	Go to step 4.	Contact next level of support.
3	Replace the current interconnect card assembly with the original interconnect card assembly. Does the error remain?	Go to step 5	Problem solved.
4	Replace the current operator panel with the original panel. Go to <b>“Operator panel assembly removal” on page 4-6.</b> Does the error remain?	Go to step 6.	Problem solved.
5	If problem remains, replace the original interconnect card assembly with a new and not previously installed interconnect card assembly. Does the error remain?	Contact the next level of support.	Problem solved.
6	If problem remains, replace the original panel assembly with a new and not previously installed interconnect card assembly. Go to <b>“Interconnect card assembly removal” on page 4-128.</b> Does the error remain?	Contact the next level of support.	Problem solved.

**950.30 through 950.60 EPROM mismatch failure**

<p><b>Warning:</b> When replacing any of the following components:</p> <ul style="list-style-type: none"> <li>• Operator panel assembly</li> <li>• RIP card assembly</li> <li>• Interconnect card assembly</li> </ul> <p>Only replace one component at a time. Replace the required component and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one or the printer will be rendered inoperable.</p> <p><b>Warning:</b> Never install and remove components listed above as a method of troubleshooting components. Once a component has been installed in a machine, it can not be used in another machine. It must be returned to the manufacturer.</p>			
Step	Check	Yes	No
1	Check the interconnect card assembly. Was the interconnect card assembly recently replaced?	Go to step 3.	Go to step 2.
2	Check the RIP card assembly. Was the RIP card assembly recently replaced?	Go to step 4.	Contact next level of support.
3	Replace the current interconnect card assembly with the original interconnect card assembly. Does the error remain?	Go to step 5	Problem solved.
4	Replace the current RIP card assembly with the original RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b> Does the error remain?	Go to step 6.	Problem solved.
5	If problem remains, replace the original interconnect card assembly with a new and not previously installed interconnect card assembly. Does the error remain?	Contact the next level of support.	Problem solved.
6	If problem remains, replace the original panel assembly with a new and not previously installed interconnect card assembly. Go to <b>“Interconnect card assembly removal” on page 4-128.</b> Does the error remain?	Contact the next level of support.	Problem solved.

**951.XX RIP card assembly NVRAM failure**

Step	Check	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, 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 <b>“RIP card assembly removal” on page 4-127.</b> Go to step 3.	Problem solved.

Step	Check	Yes	No
3	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**952.XX Interconnect card assembly NVRAM CRC failure**

Step	Check	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, 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 interconnect card assembly.  Go to <b>“Interconnect card assembly removal” on page 4-128.</b> Go to step 3.	Problem solved.
3	Perform a print test. Does the error still occur?	Replace the RIP card assembly.  Go to <b>“RIP card assembly removal” on page 4-127.</b>	Problem solved.
4	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**953.XX Operator panel assembly NVRAM failure**

Step	Check	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, go to step 2.

Step	Check	Yes	No
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 <b>“Operator panel assembly removal” on page 4-6.</b> Go to step 3.	Problem solved.
3	Perform a print test. Does the error still occur?	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b> Go to step 4.	Problem solved.
4	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 954.XX Interconnect card assembly NVRAM failure

Step	Check	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, 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 inner connect card assembly. Go to <b>“Interconnect card assembly removal” on page 4-128.</b> Go to step 3.	Problem solved.
3	Perform a print test. Does the error still occur?	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b> Go to step 4.	Problem solved.

Step	Check	Yes	No
4	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 955.XX RIP card assembly NAND CRC failure

Step	Check	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, 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 <b>“RIP card assembly removal” on page 4-127.</b>  Go to step 3.	Problem solved.
3	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 956.00 RIP card assembly processor failure

Step	Check	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, 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 <b>“RIP card assembly removal” on page 4-127.</b>  Go to step 3.	Problem solved.

Step	Check	Yes	No
3	Perform a print test. Does the error still occur?	Printer engine card assembly Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### 956.01 RIP card assembly processor over temperature failure

Step	Check	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, 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 installation Is the RIP card cooling fan and heatsink installed correctly?	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b> Go to step 4.	Install the RIP card cooling fan and heatsink correctly.
4	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120</b>	Problem solved.

### 956.02 RIP card assembly cooling fan failure

Step	Check	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, 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	Checking the RIP card assembly cooling fan and heatsink attachment. Is the above fan attached properly?	Replace the RIP card assembly Go to <b>“RIP card assembly removal” on page 4-127.</b>	Reattach the RIP card assembly cooling fan and heatsink.

Step	Check	Yes	No
4	Perform a print test. Does the error still occur?	Printer engine card assembly " <b>Printer engine card assembly removal</b> " on page 4-120.	Problem solved.

### 980.03 Exit interface card assembly communication failure

Step	Check	Yes	No
1	Check the exit interface card assembly for proper connection.	Go to step 2.	Replace the connection.
2	Check the connection between the exit interface card assembly P430 and the LVPS assembly P526. Are the cards connected properly?	Go to step 3.	Replace the connection.
3	Perform a print test. Does the error continue?	Replace the exit interface card assembly.  Go to " <b>Exit interface card assembly removal</b> " on page 4-119	Problem solved.
4	Perform a print test Does the error continue?	Replace the printer engine cord assembly  Go to " <b>Printer engine card assembly removal</b> " on page 4-120.	Problem solved

### Media size mismatch in width

Step	Check	Yes	No
1	Check the media. Pull out the tray to visually check it. Is media properly loaded in the tray?	Go to step 2.	Load media properly.
2	Check the media. Pull out the tray to visually check it. Are the front media tray guide assembly, rear media tray guide, and media tray end guide of tray 1 or tray 2 set correctly?	Go to step 3.	Set the guides properly.

Step	Check	Yes	No
3	Check the switch (media size) for installation. Pull out the media tray to visually check it. Is the switch (media size) for media tray 1 and media tray 2 installed correctly?	Go to step 4.	Install the switch (media size) for each media tray correctly.
4	Check the switch (media size) connection for tray 1 and/or tray 2. Is the switch (media size) properly connected for tray 1 and/or tray 2?	Replace the required switch (media size). <b>“Toner cartridge guide assembly removal” on page 4-95</b>	Replace the connection.
5	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### ***No media in the select media tray***

Step	Check	Yes	No
1	Check the media. Is media loaded in the selected tray?	Go to step 2.	Load media.
2	Check the sensor (media out) for operation. 1. Enter Diagnostics mode 2. Select INPUT TRAY TESTS 3. Select Sensor test 4. Select Tray 1 5. Select media out  1. Enter Diagnostics mode 2. Select INPUT TRAY TESTS 3. Select Sensor test 4. Select Tray 2 5. Select media out  Remove the media tray assembly. Does the display, on the operator panel, change every time the sensing area is blocked by the media out actuator?	Go to step 4.	Go to step 3.
3	Check the sensor (media out) connection for tray 1 or tray 2. Is the sensor (media out) properly connected for tray 1 or tray 2?	Replace the sensor (media out). Go to <b>“Sensor (media out) removal” on page 4-38.</b>	Replace the connection.

Step	Check	Yes	No
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

***Paper is installed (short edge) in the media paper tray***

Step	Check	Yes	No
1	Is the media installed (short edge) orientation in the media tray assembly as opposed to long edge?	Turn media 90 degrees or enable short edge feeding which is found in the config menu (press select and right arrow at power on) and then find the menu item short edge printing.	Go to step 2.
2	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

***PC cartridge end of life***

Step	Check	Yes	No
1	Check the PC cartridge for installation. Is the PC cartridge installed securely?	Go to step 2.	Install the PC cartridge securely.
2	Is the sensor (RFID PC cartridge) installed properly?	Go to step 4.	Go to step 3.
3	Check the sensor (RFID PC cartridge) connection. Is the sensor (RFID PC cartridge) connected properly?	Replace the sensor (RFID PC cartridge)  Go to <b>“Sensor (RFID PC cartridge) and sensor (RFID toner cartridge) removal” on page 4-94.</b>	Connect P/J126 and P/J419 securely.

Step	Check	Yes	No
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### ***PC cartridge end of life***

Step	Check	Yes	No
1	Check the PC cartridge installation. Is the PC cartridge properly installed?	Go to step 2.	Install the PC cartridge properly.
2	Check the sensor (RFID PC cartridge) installation. Is the sensor (RFID PC cartridge) properly installed?	Go to step 3.	Install the sensor (RFID PC unit) correctly.
3	Check the sensor (RFID PC cartridge) for proper connection. Is the sensor (RFID PC cartridge) properly connected?	Replace the sensor (RFID PC cartridge).	Replace the connection.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### ***PC cartridge RFID failure***

Step	Check	Yes	No
1	Check the PC cartridge installation. Is the PC cartridge properly installed?	Go to step 2.	Install the PC cartridge properly.
2	Check the sensor (RFID PC cartridge) installation. Is the sensor (RFID PC cartridge) properly installed?	Go to step 3.	Install the sensor (RFID PC cartridge).
3	Check the sensor (RFID PC cartridge) connection. Is the sensor (RFID PC cartridge) properly connected.	Replace the sensor (RFID PC cartridge).	Replace the connection.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**PC cartridge set failure**

Step	Check	Yes	No
1	Check the PC cartridge installation. Is the PC cartridge properly installed?	Go to step 2.	Install the PC cartridge properly.
2	Check the PC cartridge sensor connection. Is the PC cartridge sensor properly connected?	Replace the PC cartridge connector.	Replace the connection.
3	Check the switch (PC cartridge interlock) for operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TEST</b> 3. Select <b>Devices</b> 4. Select <b>Pc unit present</b>  Open printer left door assembly and the front door assembly and check it.  Does the display, on the operator panel, change every time the PC cartridge is removed and replaced?	Go to step 5.	Go to step 4.
4	Check the switch (PC cartridge interlock) connection. Is the switch (PC cartridge interlock) properly connected?	Replace the switch (PC cartridge interlock).	Replace the connection.
5	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**Printer front door open**

Step	Check	Yes	No
1	Check the opening and closing of the printer front door assembly. Is the printer front door assembly opening and closing normally?	Go to step 2.	Check the printer front door assembly for rotation and reinstall it.
2	Check the switch (printer front door interlock) for operation.  1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS</b> 3. Select <b>Cover and Door</b> 4. Select <b>Door J printer front</b>  Open the printer front door assembly and check it.  Does the display, on the operator panel, change every time the switch actuator is operated?	Go to step 4.	Go to step 3.

Step	Check	Yes	No
3	Check the switch (printer front door interlock) connection. Is the switch (printer front door interlock) properly connected?	Replace the switch (printer front door interlock).  Go to <b>“Switch (printer front door interlock) removal” on page 4-5</b>	Replace the connection.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### **Printer left door open**

Step	Check	Yes	No
1	Is the printer left door assembly opening and closing properly?	Go to step 2.	Check the printer left door assembly for deformation and reinstall it.
2	Check the switch (printer left door interlock) for operation. 1. Enter Diagnostics mode 2. Select <b>BASE SENSOR TESTS</b> 3. Select <b>Cover and Door</b> 4. Select <b>Door A Left side</b>  Open the printer left door assembly and check it. Does the display, on the operator panel, change every time the switch actuator is operated?	Go to step 4.	Go to step 3.
3	Check the switch (printer left door interlock) connection. Is the switch (printer left door interlock) connected properly?	Replace the switch (printer left door interlock).  Go to <b>“Switch (printer left door interlock) removal” on page 4-74</b>	Replace the connection.
4	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**Printer left lower door open**

Step	Check	Yes	No
1	Is the printer left lower door assembly opening and closing properly?	Go to step 2.	Check the printer front door assembly for deformation and reinstall it.
2	Check the switch (printer front door interlock) for operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS</b> 3. Select <b>Cover and Door</b> 4. Select <b>Door B Left/Lower</b> .  Open the printer front door assembly and check it. Does the display, on the operator panel, change every time the switch actuator is operated?	Go to step 4.	Go to step 3.
3	Check the switch (printer left lower door interlock) connection.  Is the switch (printer left lower door interlock) properly connected?	Replace the switch (printer front door interlock).  Go to <b>“Switch (printer front door interlock) removal” on page 4-5</b>	Replace the connection.
4	Perform a print test.  Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120</b> .	Problem solved.

**Scheduled maintenance required**

Step	Check	Yes	No
1	Install the proper maintenance kit  Does the message still occur?	Reset the maintenance counter.  Go to <b>“Select Reset Maint Cnt from CONFIG MENU.” on page 6-2</b> .	Problem solved.

**Standard bin 1 full**

Step	Check	Yes	No
1	Check the actuator for movement. Does the standard bin 1 full actuator move up and down normally?	Go to step 2.	Reinstall the standard bin 1 full actuator.
2	Check the sensor (standard bin full exit 1) for operation. 1. Enter Diagnostics mode 2. Select <b>BASE SENSOR TESTS</b> 3. Select <b>Exit Level</b> 4. Select <b>Standard bin full 1</b>  Does the display, on the operator panel, change every time the sensing area is blocked?	Go to step 5.	Go to step 3.
3	Check the sensor (standard bin full 1) connection. Is the sensor (standard bin full 1) properly connected?	Replace the sensor (standard bin full exit 1).  Go to <b>“Sensor (exit 1 bin full) removal” on page 4-110.</b>	Replace the connection. Go to step 4.
4	Check the exit interface card assembly connection P432, P433, and P434. Is the exit interface card assembly properly connected P432, P433, and P434?	Replace the exit interface card assembly.  Go to <b>“Exit interface card assembly removal” on page 4-119.</b>	Replace the connection.
5	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**Standard bin 2 full**

Step	Check	Yes	No
1	Check the actuator for movement. Does the media weight assembly move up and down normally?	Go to step 2.	Reinstall the media weight assembly. Go to

Step	Check	Yes	No
2	<p>Check the sensor (standard bin full exit 2) for operation.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode</li> <li>2. Select <b>BASE SENSOR TESTS</b></li> <li>3. Select <b>Exit Level</b></li> <li>4. Select <b>Standard bin full 2</b></li> </ol> <p>Does the display, on the operator panel, change every time the sensing area is blocked?</p>	Go to step 5.	Go to step 3.
3	<p>Check the sensor (standard bin full exit 2) connection.</p> <p>Is the sensor (standard bin full exit 2) properly connected?</p>	<p>Replace the sensor (standard bin full exit 2).</p> <p>Refer to <i>Options Service Manual</i>.</p>	<p>Replace the connection.</p> <p>Go to step 4.</p>
4	<p>Check the exit interface card assembly connection P432, P433, and P434.</p> <p>Is the exit interface card assembly properly connected P432, P433, and P434?</p>	<p>Replace the exit interface card assembly.</p> <p>Go to <b>“Exit interface card assembly removal” on page 4-119</b></p>	Replace the connection.
5	<p>Perform a print test.</p> <p>Does the error continue?</p>	<p>Replace the printer engine card assembly.</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120.</b></p>	Problem solved.

### ***Toner cartridge empty***

Step	Check	Yes	No
1	<p>Check remaining toner.</p> <p>Does the toner cartridge contain toner?</p>	Go to step 2.	Replace the toner cartridge.
2	<p>Check the toner cartridge for installation.</p> <p>Remove the toner cartridge and reinstall it.</p> <p>Does it operate properly?</p>	Problem solved.	Go to step 3.
3	<p>Check the toner cartridge guide assembly.</p> <p>Remove the toner cartridge guide assembly.</p> <p>Does the gear, located on the lower part of the toner cartridge guide assembly, rotate smoothly?</p>	Go to step 4.	Replace toner cartridge guide assembly.
4	<p>Check the pipe, located on the lower part of the toner cartridge for debris.</p> <p>Is the pipe, located on the lower part of the toner cartridge guide assembly, clogged?</p>	Go to step 5.	Clean the pipe.
5	<p>Check the sensor (RFID toner cartridge) for proper installation.</p>	Go to step 6.	Install the sensor (RFID toner cartridge) correctly.

Step	Check	Yes	No
6	Check the sensor (RFID toner cartridge) for proper connection.	Replace the sensor (RFID toner cartridge). Go to <b>“Toner cartridge guide assembly removal” on page 4-95</b>	Replace the connection.
7	Check the toner add motor assembly for operation.  <b>Warning:</b> Only perform this test in segments of three seconds or less or toner spill will occur.  1. Enter Diagnostics mode 2. Select <b>MOTOR TESTS</b> . 3. Select <b>Toner add motor</b>  Does the motor rotate normally?	Go to step 9.	Go to step 8.
8	Check the toner add motor assembly connection. Is the toner add motor assembly properly connected?	Replace the toner add motor.  <b>“Toner cartridge guide assembly removal” on page 4-95</b>	Replace the connection.
9	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120</b> .	Problem solved.

### ***Toner cartridge near empty***

Step	Check	Yes	No
1	Does the toner cartridge contain toner?	Go to step 2.	Replace the toner cartridge.
2	Check the toner cartridge for proper installation. Remove the toner cartridge and reinstall it. Does it install properly?	Problem solved	Go to step 3.
3	Check the gear rotation in the toner cartridge guide assembly. Remove the toner cartridge guide assembly. Does the gear, located at the lower part of the toner cartridge guide assembly, rotate smoothly?	Go to step 4.	Replace the toner cartridge guide assembly.
4	Check the toner cartridge guide assembly for pipe clogging. Is the pipe, located at the lower part of the toner cartridge guide assembly, clogged?	Go to step 5.	Clean the pipe.

Step	Check	Yes	No
5	<p>Check the toner add motor assembly for operation.</p> <p><b>Warning:</b> Only perform this test in segments of three seconds or less or toner spill will occur.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode</li> <li>2. Select MOTOR TESTS.</li> <li>3. Select Toner add motor</li> </ol> <p>Does the motor rotate normally?</p>	Go to step 7.	Go to step 6.
6	<p>Check the toner add motor assembly connection.</p> <p>Is the toner add motor assembly properly connected?</p>	<p>Replace the toner add motor assembly.</p> <p>Go to <b>“Toner add motor assembly removal” on page 4-97</b></p>	Replace the connection.
7	<p>Perform a print test.</p> <p>Does the error continue?</p>	<p>Replace the printer engine card assembly.</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120.</b></p>	Problem solved.

### ***Toner cartridge failure***

Step	Check	Yes	No
1	<p>Check the toner cartridge installation.</p> <p>Is the correct toner cartridge properly installed?</p>	Go to step 2.	Install the correct toner cartridge properly.
2	<p>Checking the sensor (RFID toner cartridge) for installation.</p> <p>Is the sensor (RFID toner cartridge) installed correctly?</p>	Go to step 3.	Install the sensor (RFID toner cartridge) correctly.
3	<p>Checking the sensor (RFID toner cartridge) connection.</p> <p>Is the sensor (RFID toner cartridge) properly connected?</p>	Replace the sensor (RFID toner cartridge).	Replace the connection.
4	<ul style="list-style-type: none"> <li>• Perform a print test.</li> <li>• Does the error continue?</li> </ul>	<p>Replace the printer engine card assembly.</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120.</b></p>	Problem solved.

### Toner cartridge RFID failure

Step	Check	Yes	No
1	Check the toner cartridge installation. Is the toner cartridge properly installed?	Go to step 2.	Install the toner cartridge properly.
2	Check the sensor (RFID toner cartridge) installation. Is the sensor (RFID toner cartridge) properly installed?	Go to step 3.	Install the sensor (RFID toner cartridge) correctly.
3	Check the sensor (RFID toner cartridge) connection. Is the sensor (RFID toner cartridge) properly connected?	Replace the sensor (RFID toner cartridge).	Replace the connection.
4	<ul style="list-style-type: none"> <li>Perform a print test.</li> <li>Does the error continue?</li> </ul>	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### Toner cartridge set failure

Step	Check	Yes	No
1	Checking the toner cartridge for correct installation. Open the printer front door assembly. Is the toner cartridge installed properly?	Go to step 2.	Reinstall the toner cartridge properly.  Go to <b>“Toner cartridge guide assembly removal” on page 4-95.</b>
2	Checking the toner cartridge. Is the toner cartridge damaged?	Replace the toner cartridge.  Go to <b>“Toner cartridge guide assembly removal” on page 4-95.</b>	Go to step 3
3	Checking the toner cartridge guide assembly. Remove the top cover assembly. Is the toner cartridge guide assembly damaged?	Replace the toner cartridge  Go to <b>“Toner cartridge guide assembly removal” on page 4-95.</b>	Go to step 4
4	Checking the sensor (RFID toner cartridge). Is the above sensor attached and connected properly?	Replace the sensor (RFID toner cartridge).	Go to step 5

Step	Check	Yes	No
5	Perform a print test. Does the error still occur?	Replace the printer engine card assembly  Go to <b>“Printer engine card assembly removal” on page 4-120</b>	Problem solved.

### **Tray 1 media size failure**

Step	Check	Yes	No
1	Check the media. Pull out media tray 1 to visually check it. Is media loaded in media tray 1 properly?	Go to step 2.	Load media properly.
2	Check the media. Pull out media tray 1 to visually check it.  Are the front media tray guide assembly, rear media tray guide and media tray end guide of media tray 1 set correctly?	Go to step 3.	Set the guides properly.
3	Check the tray 1 switch (media size) for proper installation. Pull out media tray 1 to visually check it. Is the above switch installed properly?	Go to step 4.	Install switch (media size) for media tray 1 correctly.
4	Check the tray 1 switch (media size) connection. Is the tray 1 switch (media size) properly connected.	Replace the switch (media size).  Go to <b>“Switch (media size) removal” on page 4-18</b>	Replace the connection.
5	Perform a print test. Does the error continue?	Replace the printer engine card assembly.  Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### **Tray 2 media size failure**

Step	Check	Yes	No
1	Check the media. Is media loaded, in media tray 2, properly? Pull out media tray 2 to visually check it.	Go to step 2.	Load media properly.

Step	Check	Yes	No
2	Check the media. Are the front media tray guide assembly, rear media tray guide, and media tray end guide of media tray 2 set correctly? Pull out media tray 2 to visually check it.	Go to step 3.	Set the guides properly.
3	Check the tray 2 switch (media size) 2 for proper installation. Pull out media tray 2 to visually check it. Is the above switch installed properly?	Go to step 4.	Install the tray 2 switch (media size) correctly.
4	Check the tray 2 switch (media size) connection. Is the tray 2 switch (media size) properly connected?	Replace the switch (media size). <b>“Switch (media size) removal” on page 4-18</b>	Replace the connection.
5	Perform a print test. Does the error continue?	Replace the printer engine card assembly. Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

### **Tray 1 media size mismatch in length**

Step	Check	Yes	No
1	Check the media. Pull out media tray 1 to visually check it. Is media properly loaded in media tray 1?	Go to step 2.	Load media properly.
2	Check the media. Pull out media tray 1 to visually check it. Are the front media tray guide assembly, rear media tray guide, and media tray end guide of media tray 1 set correctly?	Go to step 3.	Set the guides properly.
3	Check the switch (media size) in media tray 1 for installation. Pull out media tray 1 to visually check it Is the switch (media size) in media tray 1 installed correctly?	Go to step 4.	Install the switch (media size) for media tray 1 correctly.
4	Check the switch (media size) in tray 1 connection. Is the switch (media size) in tray 1 properly connected?	Replace the switch (media size)	Replace the connection.
5	Check the roll for tray 1 Pull out tray 1 and check it Is the feed roll, separation roll, and pick roll free of excess wear and contamination?	Go to step 6.	Clean or replace the feed roll, separation roll, and pick roll.
6	Check the media position Open the printer left door assembly and visually check it Does the media touch the sensor (registration)?	Remove the media	Go to step 7.

Step	Check	Yes	No
7	Check the roll Open the printer left door assembly and check it Is the transport roll assembly free of excess wear and contamination?	Go to step 8.	Clean or replace the transport roll assembly. Go to <b>“Transfer roll guide assembly removal” on page 4-75</b>
8	Check the roll Open the printer left door assembly and check it Is the registration roll assembly free of excess wear and contamination?	Go to step 9.	Clean or replace the registration roll assembly. Go to <b>“Registration roll assembly removal” on page 4-77</b>
9	Check the sensor (registration) for operation. 1. Enter Diagnostics mode. 2. Select <b>BASE SENSOR TESTS</b> 3. Select <b>media path</b> 4. Select <b>Registration</b>  Open the printer left door assembly and check it Does the display, on the operator panel, change every time the sensor (registration) actuator is operated?	Go to step 11	Go to step 9.
10	Check the sensor (registration) connection. Is the sensor (registration) properly connected?	Replace the sensor (registration) Go to <b>“Sensor (registration) removal” on page 4-79.</b>	Replace the connection.
11	Check the registration clutch for proper operation 1. Enter Diagnostics mode. 2. Select <b>MOTOR TESTS</b> 3. Select <b>Registration clutch</b>  Does the above component operate normally?	Go to step 13	Go to step 12.
12	Check the registration clutch connection. Is the registration clutch properly connected?	Replace the registration clutch. Go to <b>“Registration clutch assembly removal” on page 4-78.</b>	Replace the connection.
13	Perform a print test Does the error continue?	Replace the printer engine card assembly Go to <b>“Printer engine card assembly removal” on page 4-120.</b>	Problem solved.

**Tray 2 media size mismatch in length**

Step	Check	Yes	No
1	Check the media. Pull out tray 2 to visually check it. Is media loaded in tray 2 properly?	Go to step 2.	Load media properly.
2	Check the media. Pull out tray 2 to visually check it. Are the front media tray guide assembly, rear media tray guide, and media tray end guide of tray 2 set correctly?	Go to step 3.	Set the guides properly.
3	Check the switch (media size) for tray 2 installation. Is the switch (media size) for tray 2 installed correctly? Pull out tray 2 to visually check it.	Go to step 4.	Install the switch (media size) for tray 2 correctly. Go to <b>“Switch (media size) removal” on page 4-18</b>
4	Check the switch (media size) for tray 2 connection. Is the switch (media size) for tray 2 properly connected?	Replace the switch (media size). <b>“Switch (media size) removal” on page 4-18</b>	Replace the connection.
5	Check the roll for tray 2. Pull out tray 2 and check it. Is the feed roll, separation roll, and pick roll free of excess wear and contamination?	Go to step 6.	Clean or replace the feed roll, separation roll, and pick roll. Go to <b>“Feed roll removal” on page 4-43, “Separation roll removal” on page 4-47, and “Pick roll removal” on page 4-49.</b>
6	Open the printer left door assembly and visually check it. Check the media position. Does the media touch the sensor (registration)?	Remove the media.	Go to step 7.
7	Check the roll. Open the printer left door assembly and check it. Is the transport roll assembly free of excess wear and contamination?	Go to step 8.	Clean or replace the transport roll assembly. Go to <b>“Transfer roll assembly removal” on page 4-71.</b>
8	Check the roll. Open the printer left door assembly and check it. Is the roll, in the registration roll assembly, free of excess wear and contamination?	Go to step 9.	Clean or replace the registration roll assembly. Go to <b>“Registration roll assembly removal” on page 4-77.</b>

Step	Check	Yes	No
9	<p>Check the sensor (registration) for operation.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode</li> <li>2. Select <b>BASE SENSOR TESTS</b></li> <li>3. Select <b>media path</b></li> <li>4. Select <b>Registration</b></li> </ol> <p>Open the printer left door assembly and check it.</p> <p>Does the display, on the operator panel, change every time the sensor actuator is operated?</p>	Go to step 11.	Go to step 10.
10	<p>Check the sensor (registration) connection.</p> <p>Is the sensor (registration) properly connected?</p>	<p>Replace the sensor (registration).</p> <p>Go to <b>“Sensor (registration) removal” on page 4-79</b></p>	Replace the connection.
11	<p>Check the registration clutch for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter Diagnostics mode</li> <li>2. Select <b>MOTOR TESTS</b>.</li> <li>3. Select <b>Registration clutch</b>.</li> </ol> <p>Does the component make an audible clicking sound when it is operated?</p>	Go to step 13.	Go to step 12.
12	<p>Check the registration clutch connection.</p> <p>Is the registration clutch properly connected?</p>	<p>Replace the registration clutch.</p> <p>Go to <b>“Registration clutch assembly removal” on page 4-78</b></p>	Replace the connection.
13	<p>Perform a print test.</p> <p>Does the error continue?</p>	<p>Replace the printer engine card assembly.</p> <p>Go to <b>“Printer engine card assembly removal” on page 4-120</b>.</p>	Problem solved.

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## Image quality trouble

### *Troubleshooting*

**Note:** First, get a printout as a base, follow the symptom table to identify the possible failing FRU's.

#### **Image quality symptoms:**

- Faint print (low contrast) **“Faint print (Low contrast) .” on page 2-82.**
- Blank print (no print) **“Blank print (no print)” on page 2-84.**
- Solid black **“Solid black” on page 2-86.**
- Vertical blank lines (White stripes in media transport direction) **“Vertical blank lines (white stripes in media transport direction)” on page 2-87.**
- Horizontal band **“Horizontal band printheads out” on page 2-89**
- Printhead out **“913.00 Printhead assembly failure” on page 2-45**
- Vertical stripes **“Vertical stripes” on page 2-91.**
- Horizontal stripes **“Horizontal stripes” on page 2-93.**
- Partial lack **“Partial lack” on page 2-95.**
- Spots **“Spots” on page 2-96.**
- Afterimage **“After image” on page 2-97.**
- Background (fog) **“Background (fog)” on page 2-98.**
- Skew **“Skew” on page 2-100.**
- Media damage **“Media damage” on page 2-101.**
- No fix **“No fuse” on page 2-102.**

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

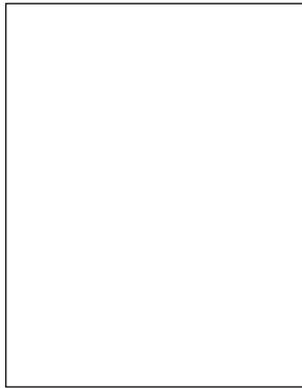
**Image Quality****Faint print (Low contrast) .**

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

<b>Step</b>	<b>Check</b>	<b>Yes</b>	<b>No</b>
1	Check the media condition. Load new, dry, recommended media, and perform print test. Is the image density normal?	Problem solved	Go to step 2.
2	Check the toner cartridge. Install a new toner cartridge. Re-print the defective image. Is the image density normal?	Problem solved	Go to step 3.
3	Check the transfer roll assembly. Remove the transfer roll assembly. Check the transfer roll assembly, for contamination and wear. Is the transfer roll assembly free of excess wear and contamination?	Go to step 4.	Replace the transfer roll assembly.
4	Check the PC cartridge installation. Remove the PC cartridge. 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 PC cartridge or connector.
5	Check the drum grounding plate. Remove the PC cartridge. Check the drum grounding plate, located behind the rear motor cover. This plate can be found behind the flywheel. Is the drum grounding plate free of excess wear and contamination?	Go to step 6.	Correct and clean the drum grounding plate or replace the PC cartridge.

Step	Check	Yes	No
6	<p>Check the image development process.</p> <p>Perform a print test. Turn off the printer power while printing.</p> <p>Carefully remove the PC cartridge, and check the developed image formed on the drum right before the transfer roll assembly.</p> <p>Is the image completely formed on the drum, and the area clear, black, and easy to read?</p>	Go to step 7.	Go to step 9.
7	<p>Check the image transfer process.</p> <p>Check the toner image formed on the drum, after the transfer roll assembly.</p> <p>Is the toner image completely transferred on the media?</p>	Go to step 9	Go to step 8.
8	<p>Check the HVPS card assembly.</p> <p>Replace the HVPS card assembly.</p> <p>Perform a print test.</p> <p>Is the trouble rectified?</p>	Problem solved	Go to step 9.
9	<p>Check the printer engine card assembly.</p> <p>Replace the printer engine card assembly.</p> <p>Perform print test.</p> <p>Does the error continue?</p>	Problem solved	<p>Replace the RIP card assembly.</p> <p>Go to <b>“RIP card assembly removal” on page 4-127</b></p>

**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 toner cartridge. Install a new toner cartridge. Re-print the defective image. Is the image density normal?	Problem solved	Go to step 2.
2	Check the transfer roll assembly. Remove the transfer roll assembly. Check the transfer roll assembly rotation. Is the transfer roll assembly free of excess wear and contamination?	Go to step 3.	Replace the transfer roll assembly.
3	Check the PC cartridge installation condition. Remove the PC cartridge. 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 PC cartridge or connector.
4	Check the PC cartridge ground. Remove the PC cartridge. Check the drum grounding plate, located behind the rear motor cover. This plate can be found behind the flywheel. Is the drum grounding plate free of excess wear and contamination?	Go to step 5.	Correct and clean the drum grounding plate or replace the PC cartridge.
5	Check the laser beam route. Check for debris between the printhead assembly and the PC drum. Check the printhead assembly window for contamination. Is the laser beam route free of debris and the glass window, in the printhead assembly, free of contamination?	Go to step 6.	Remove debris or clean the printhead assembly window.

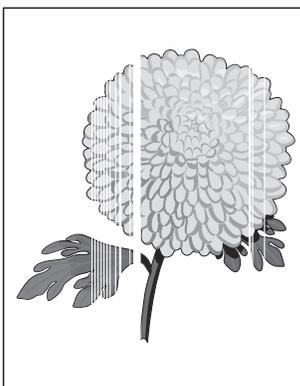
Step	Check	Yes	No
6	Check the printhead installation. Is the printhead assembly installed securely with four screws?	Go to step 8.	Go to step 7.
7	Check the printhead assembly installation. Install the printhead assembly securely and perform a print test. Does the error continue?	Problem solved.	Go to step 8.
8	Check the printhead for proper connection. <b>Warning:</b> If too much force is applied to the board when checking it, the printhead could become misaligned.	Go to step 9.	Replace the connection.
9	Check the image development process. Perform a print test. Turn off the printer power while printing. Carefully remove the PC cartridge. Check the toner image formed on the drum before the transfer roll assembly. Is the image completely formed on the drum, and the area clear, black, and easy to read?	Go to step 10.	Go to step 11.
10	Check the image transfer process. Check the toner image formed on the drum, after the transfer roll assembly. Is the toner image completely transferred on the media?	Go to step 12.	Go to step 11.
11	Check the HVPS card assembly. Replace the HVPS card assembly. Perform a print test. Does the error continue?	Problem solved.	Go to step 12.
12	Check the printer engine card assembly. Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127</b>

**Solid black**

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

Step	Check	Yes	No
1	Check the toner cartridge. Install a new toner cartridge. Re-print the defective image. Is the image density normal?	Problem solved.	Go to step 2.
2	Check connector JHAB1 on the RIP card assembly. Is the above connector connected properly?	Go to step 3	Replace the connection.
3	Check the HVPS card assembly. Replace the HVPS card assembly. Perform a print test. Does the error continue?	Problem solved.	Go to step 4
4	Check the printer engine card assembly. Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b>

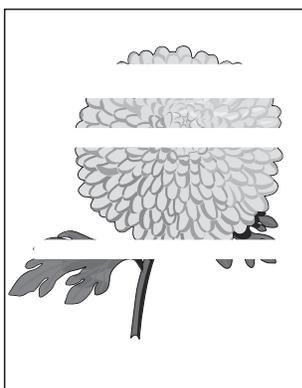
### Vertical blank lines (white stripes in media transport direction)



Step	Check	Yes	No
1	<p>Check the media condition.</p> <p>Load new, dry, recommended media.</p> <p>Re-print the defective image.</p> <p>Does the error continue?</p>	Go to step 2.	Problem solved.
2	<p>Is the media transfer route and the media path clear of debris?</p>	Go to step 3.	Remove debris or contamination.
3	<p>Check laser beam route.</p> <p>Check for debris between the transfer roll assembly and the PC drum.</p> <p>Check the printhead assembly window for contamination.</p> <p>Is there any debris in the laser beam route and is the printhead assembly window free of debris and contamination?</p>	Go to step 4.	Remove debris or clean the printhead assembly window.
4	<p>Check the printhead assembly installation.</p> <p>Is the printhead assembly installed securely with four screws?</p>	Go to step 6.	Go to step 5.
5	<p>Check the printhead assembly installation.</p> <p>Install the printhead assembly securely and perform a print test.</p> <p>Does the error continue?</p>	Problem solved.	Go to step 6.
6	<p>Check the toner cartridge.</p> <p>Install a new toner cartridge.</p> <p>Re-print the defective image.</p> <p>Is the image density normal?</p>	Problem solved.	Go to step 7.
7	<p>Check the transfer roll assembly.</p> <p>Remove the transfer roll assembly.</p> <p>Is the transfer roll assembly rotating, free of contamination and wear?</p>	Go to step 8.	Replace the transfer roll assembly.

Step	Check	Yes	No
8	Check the heat roll and pressure roll. Remove the fuser unit assembly. <b>Warning:</b> Allow the fuser unit assembly to cool down. Is there contamination or cracks on the heat roll or pressure roll?	Replace the fuser unit assembly.	Go to step 9.
9	Check the printer engine card assembly. Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Go to step 10.
10	Check the printhead for connection. <b>Warning:</b> If too much force is applied to the board when checking it, the printhead could become misaligned. Is the component connected properly?	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b>	Replace the connection.

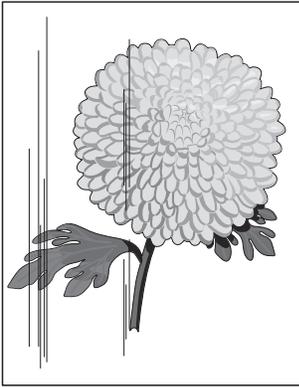
## Horizontal band printheads out



Step	Check	Yes	No
1	<p>Check the media condition. Load new, dry, and recommended media. Re-print the defective image. Does the error continue?</p>	Go to step 2.	Problem solved.
2	<p>Are the media transfer route and the media path free of contamination and debris</p>	Go to step 3.	Remove debris or contamination.
3	<p>Check the toner cartridge. Install a new toner cartridge. Re-print the defective image. Is the image density normal?</p>	Problem solved.	Go to step 4.
4	<p>Check the transfer roll assembly. Remove the transfer roll assembly. Check the transfer roll assembly for rotation, contamination and wear.</p>	Go to step 5.	Replace the transfer roll assembly.
5	<p>Check white-band pitch. Is the white-band pitch approximately 78 mm (heat roll circumference)?</p>	Go to step 6.	Go to step 9.
6	<p>Check the heat roll and pressure roll. Remove the fuser unit assembly. <b>Caution:</b> Allow the fuser unit assembly to cool down. Is there contamination or any cracks on the heat roll and/or the pressure roll?</p>	Replace the fuser unit assembly.	Go to step 7.
7	<p>Check the image development process. Perform a print test. Turn off the printer power while printing. Carefully remove the PC cartridge, and check the toner image formed on the drum before the transfer roll assembly. Is the image completely formed on the drum and is the area clear, black, and easy to read?</p>	Go to step 8.	Go to step 9.

Step	Check	Yes	No
8	Check the image transfer process. Check the toner image formed on the drum after the transfer roll assembly passed. Is the toner image completely transferred on the media?	Go to step 10.	Go to step 9.
9	Check the HVPS card assembly. Replace the HVPS card assembly. Perform a print test. Does the problem continue?	Problem solved.	Go to step 10.
10	Check the printer engine card assembly. Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b>

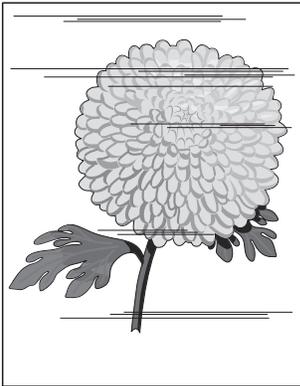
## Vertical stripes



Step	Check	Yes	No
1	<p>Check the media condition.</p> <p>Load new, dry, recommended media.</p> <p>Re-print the defective image.</p> <p>Does the error continue?</p>	Go to step 2.	Problem solved.
2	<p>Are the media transfer route and the media path free of contamination or debris?</p>	Go to step 3.	Remove debris or contamination.
3	<p>Check the toner cartridge.</p> <p>Install a new toner cartridge.</p> <p>Re-print the defective image.</p> <p>Is the image density normal?</p>	Problem solved.	Go to step 4.
4	<p>Check the transfer roll assembly.</p> <p>Remove the transfer roll assembly.</p> <p>Is the transfer roll assembly rotating, free of contamination and wear?</p>	Go to step 5.	Replace the transfer roll assembly.
5	<p>Check the PC cartridge installation condition.</p> <p>Remove the PC cartridge.</p> <p>Check the PC cartridge connections.</p> <p>Are the PC cartridge connections free of excess wear and contamination?</p>	Go to step 6.	Correct and clean contaminated pins or replace the PC cartridge or connector.
6	<p>Check the PC cartridge ground.</p> <p>Remove the PC cartridge.</p> <p>Check the drum grounding plate located behind rear motor cover. This plate can be found behind the flywheel.</p> <p>Is the drum grounding plate free of excess wear and contamination?</p>	Go to step 7.	Correct and clean the drum grounding plate or replace the PC cartridge.

Step	Check	Yes	No
7	Check the laser beam route. Check for debris between the transfer roll assembly and the PC drum. Check the printhead assembly window for contamination. Is there any debris in the laser beam route or the printhead assembly window?	Go to step 8.	Remove debris or clean the transfer roll assembly window.
8	Check the heat roll and pressure roll. Remove the fuser unit assembly. <b>Warning:</b> Allow the fuser unit assembly to cool down. Is there contamination or cracks on the heat roll and/or pressure roll?	Replace the fuser unit assembly.	Go to step 9.
9	Check the printer engine card assembly Replace the printer engine card assembly Perform print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal”</b> on page 4-127.

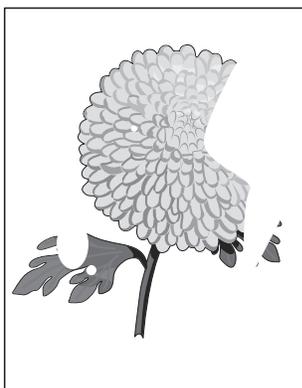
## Horizontal stripes



Step	Check	Yes	No
1	<p>Check the media condition. Load new, dry, recommended media. Re-print the defective image. Does the error continue?</p>	Go to step 2.	Problem solved.
2	<p>Check the media transfer route. Check the media route for contamination or obstacles.</p>	Go to step 3.	Remove obstacles or contamination.
3	<p>Check the toner cartridge. Install a new toner cartridge. Re-print the defective image. Is the image density normal?</p>	Problem solved.	Go to step 4.
4	<p>Check the transfer roll assembly. Remove the transfer roll assembly. Is the transfer roll assembly free of contamination and wear?</p>	Go to step 5.	Replace the transfer roll assembly.
5	<p>Check white-band pitch. Is the white-band pitch approximately 78 mm (heat roll circumference)?</p>	Go to step 9	Go to step 6.
6	<p>Check the heat roll and pressure roll. Remove the fuser unit assembly. <b>Caution:</b> Allow the fuser unit assembly to cool down. Is there any contamination or crack on the heat roll and/or pressure roll?</p>	Replace the fuser unit assembly.	Go to step 7.
7	<p>Check the image development process. Perform a print test. Turn off the printer power while printing. Carefully remove the toner cartridge, and check the toner image formed on the drum before the transfer roll assembly. Is the image completely formed on the drum, and is the area clear, black, and easily read?</p>	Go to step 8.	Go to step 9.

Step	Check	Yes	No
8	Check the image transfer process. Check the toner image formed on the drum after the transfer roll assembly passed. Is the toner image completely transferred on the media?	Go to step 9.	Go to step 10.
9	Check the HVPS. Replace the HVPS. Perform a print test. Does the error continue?	Problem solved.	Go to step 10.
10	Check the printer engine card assembly Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Go to step 11.
11	Check the printhead assembly for connection. <b>Warning:</b> If too much force is applied to the board when checking it, the printhead could become misaligned. Are P/J130, P/J620 and P/J406 connected properly?	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b>	Replace the connections.

## Partial lack



Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Re-print the defective image. Does the error continue?	Go to step 2.	Problem solved.
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 toner cartridge. Install a new toner cartridge. Re-print the defective image. Is the image density normal?	Problem solved.	Go to step 4.
4	Check the transfer roll assembly. Remove the transfer roll assembly. Is the transfer roll assembly rotating, and free of contamination, and wear?	Go to step 5.	Replace the transfer roll assembly.
5	Check the heat roll and the pressure roll. Remove the fuser unit assembly. <b>Warning:</b> Allow the fuser unit assembly to cool down. Is there contamination or cracks on the heat roll and/or the pressure roll?	Replace the fuser unit assembly.	Go to step 6.
6	Check the printer engine card assembly. Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b>

**Spots**



Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Re-print the defective image. Does the error continue?	Go to step 2.	Problem solved.
2	Check the media transfer route. Is the media route free of contamination or debris?	Go to step 3.	Remove debris or contamination.
3	Check the toner cartridge. Install a new toner cartridge. Re-print the defective image. Is the image density normal?	Problem solved.	Go to step 4.
4	Check the transfer roll assembly. Remove the transfer roll assembly. Is the transfer roll assembly rotating, and free of contamination, and wear?	Go to step 5.	Replace the transfer roll assembly.
5	Check the heat roll and the pressure roll. Remove the fuser unit assembly. <b>Warning:</b> Allow the fuser unit assembly to cool down. Is there contamination or cracks on the heat roll and/or the pressure roll?	Replace the fuser unit assembly.	Go to step 6.
6	Check the printer engine card assembly. Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal”</b> on page 4-127

**After image**

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

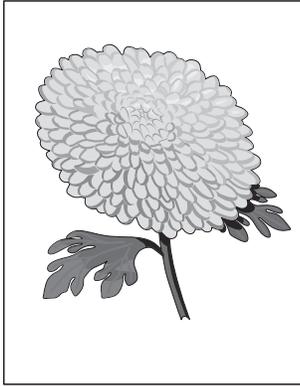
Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Re-print the defective image. Does the error continue?	Go to step 2.	Problem solved.
2	Check the toner cartridge. Install a new toner cartridge. Re-print the defective image. Is the image density normal?	Problem solved.	Go to step 3.
3	Check the heat roll and the pressure roll. Remove the fuser unit assembly. <b>Warning:</b> Allow the fuser unit assembly to cool down. Is there contamination or cracks on the heat roll and/or pressure roll?	Replace the fuser unit assembly.	Go to step 4.
4	Check the printer engine card assembly. Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b>

**Background (fog)**

Step	Check	Yes	No
1	Check the media condition. Load new, dry, recommended media. Re-print the defective image. Does the error continue?	Go to step 2.	Problem solved.
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 toner cartridge. Install a new toner cartridge. Re-print the defective image. Is the image density normal?	Problem solved.	Go to step 4.
4	Check the transfer roll assembly. Remove the transfer roll assembly. Is the transfer roll assembly rotating, and free of contamination, and wear?	Go to step 5.	Replace the transfer roll assembly.
5	Check the image development process. Perform a print test. Turn off the printer power while printing. Carefully remove the PC cartridge, and check the toner image formed on the drum before the transfer roll assembly. Is the image completely formed on the drum and the area clear, black, and easily read?	Go to step 6.	Go to step 7.
6	Check the image transfer process. Check the toner image formed on the drum after the transfer roll assembly passed. Is the toner image completely transferred on the media?	Go to step 8.	Go to step 7.
7	Check the HVPS card assembly. Replace the HVPS card assembly. Perform a print test. Does the error continue?	Problem solved.	Go to step 8.

Step	Check	Yes	No
8	Check the printer engine card assembly. Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal”</b> on page 4-127.

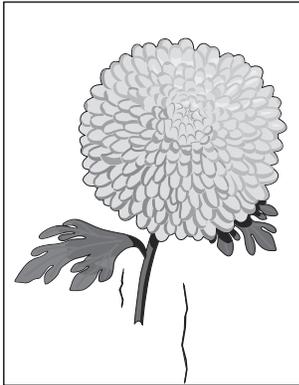
## Skew



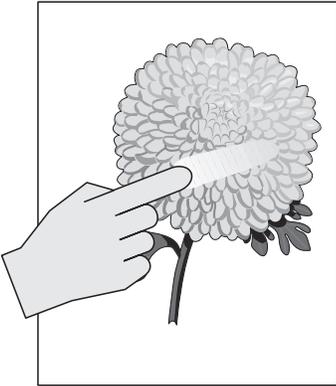
The printed image is not paralleled with both sides of the media.

Step	Check	Yes	No
1	Check printer installation placement. Check the installation surface for irregularities. Check for missing printer foot. Is the setup surface normal?	Go to step 2.	Correct the installation placement.
2	Properly load media into the media tray assembly. Properly install the media tray assembly into the printer. Re-print the defective image. Does the error continue?	Go to step 3.	Problem solved.
3	Is the media transfer route and the media route free of contamination or debris?	Go to step 4.	Remove debris or contamination.
4	Check the drive rolls on the media transfer route. Check all rolls on the transfer route for contamination, wear or damage. Check whether the pinch rolls rotate freely and spring pressure is applied evenly. Are all drive rolls free of contamination, wear or damage?	Go to step 5.	Replace defective rolls. (Go to applicable repair procedures for replacement.)
5	Check the printer engine card assembly. Replace the printer engine card assembly Perform a print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal” on page 4-127.</b>

## 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. Re-print the defective image. Does the error continue?	Go to step 3.	Problem solved.
3	Check the media condition. Load new, dry, recommended media. Re-print the defective image. Does the error continue?	Go to step 4.	Problem solved.
4	Check the media transfer route. Is the media path free of contamination or debris?	Go to step 5.	Remove debris or contamination.
5	Check the drive rolls on the media transfer route. Check all rolls on the transfer route for contamination, wear or damage. Are the pinch rolls rotating freely and spring pressure applied evenly?	Go to step 6.	Replace defective rolls (applicable repair procedures for replacement).
6	Check the heat roll and the pressure roll. Remove the fuser unit assembly. <b>Warning:</b> Allow the fuser unit assembly to cool down. Is there contamination or cracks on the heat roll and/or the pressure roll?	Replace the fuser unit assembly.	Contact the technical engineer.

**No fuse**

Step	Check	Yes	No
1	<p>Check the fuser unit assembly installation. Check that the levers, on both sides of the fuser unit assembly, are pushed down. Re-print the defective image. Does the error continue?</p>	Go to step 2.	Problem solved.
2	<p>Check the media condition. Load new, dry, recommended media. Re-print the defective image. Does the error continue?</p>	Go to step 3.	Problem solved.
3	<p>Check the heat roll and the pressure roll. Remove the fuser unit assembly. <b>Warning:</b> Allow the fuser unit assembly to cool down. Is there contamination or cracks on the heat roll and/or the pressure roll?</p>	Replace the fuser unit assembly.	Go to step 4.
4	<p>Check the image development process. Perform a print test. Turn off the printer power while printing. Carefully remove the PC cartridge, and check the toner image formed on the drum before the transfer roll assembly. Is the image completely formed on the drum and the area clear, black, and easily read?</p>	Go to step 5.	Go to step 7.
5	<p>Check the image transfer process. Check the toner image formed on the drum after the transfer roll assembly is passed. Is the toner image completely transferred on the media?</p>	Go to step 7.	Go to step 6.
6	<p>Check the HVPS card assembly. Replace the HVPS card assembly. Perform a print test. Does the error continue?</p>	Problem solved.	Go to step 7.

Step	Check	Yes	No
7	Check the printer engine card assembly. Replace the printer engine card assembly. Perform a print test. Does the error continue?	Problem solved.	Replace the RIP card assembly. Go to <b>“RIP card assembly removal”</b> on page 4-127.



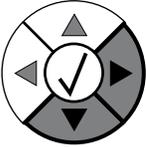
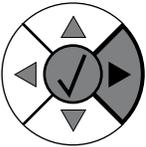
## 3. Diagnostic aids

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

Diagnostics are built into the printer RIP card assembly and can be accessed from the printer operator panel.

### Accessing service menus

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

Diagnostics Mode	<ol style="list-style-type: none"> <li>1. Turn off the printer</li> <li>2. Press and hold  and .</li> </ol>  <ol style="list-style-type: none"> <li>3. Turn on the printer.</li> <li>4. Release the buttons when Performing Self Test displays.</li> </ol>	<p>The Diagnostics Mode group contains the settings and operations used while manufacturing and servicing the printer.</p> <p>See <b>“Diagnostics mode”</b> on page 3-2 for more information.</p>
Configuration Menu	<ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Press and hold  and .</li> </ol>  <ol style="list-style-type: none"> <li>3. Turn on the printer.</li> <li>4. Release the buttons when Performing Self Test displays.</li> </ol>	<p>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.</p> <p>See <b>“Configuration menu (CONFIG MENU)”</b> on page 3-20 for more information.</p>
Flash system code mode	<ol style="list-style-type: none"> <li>1. Turn off the printer.</li> <li>2. Press and hold , , and .</li> </ol>  <ol style="list-style-type: none"> <li>3. Turn on the printer.</li> <li>4. Release the buttons when Performing Self Test displays.</li> </ol>	

To run the printer diagnostic tests described in this chapter, you must put the printer in Diagnostic Mode.

## Diagnostics mode

### Entering Diagnostics mode:

1. Press and hold ▼ and ►.
2. Turn on the printer.
3. Release the buttons when Performing Self Test displays.

### Available tests

The tests display on the operator panel in the order shown:

#### Diagnostics mode tests

<b>MOTOR TESTS</b>	See <b>"MOTOR TESTS" on page 3-5</b>
Transport mtr	
Fuser cooling fan	
PC unit cooling fan	
Toner add mtr	
Drum unit mtr	
Registrar clutch	
Tray 1 feed mtr	
Tray 2 feed mtr	
Tray 3 feed mtr	
Tray 4 feed mtr	
Tray 5 feed mtr	
MPF pick solenoid	
Transport clutch	
Duplex drv mtr	
Diverter solenoid	
Exit2 cooling fan	
Exit1 shift mtr	
Exit2 shift mtr	
Exit2 drive mtr	
<b>PRINT TESTS</b>	
Tray 1	See <b>"Input source tests" on page 3-5</b>
Tray 2	
Tray 3 (if installed)	
Tray 4 (if installed)	
Tray 5 (if installed)	
MP Feeder	
Prt Quality Pgs	See <b>"Print quality pages (Prt Quality Pgs)" on page 3-6</b>

**Diagnostics mode tests (continued)**

<b>HARDWARE TESTS</b>	
Panel Test	See <b>“Panel Test” on page 3-6</b>
Button Test	See <b>“Button Test” on page 3-6</b>
DRAM Test	See <b>“DRAM Test” on page 3-7</b>
CACHE Test	
Parallel Wrap	See <b>“Parallel Wrap tests” on page 3-8</b>
Parallel 1 Wrap (if installed)	
Parallel 2 Wrap (if installed)	
Serial 1 Wrap (if installed)	See <b>“Serial Wrap tests” on page 3-8</b>
Serial 2 Wrap (if installed)	
<b>DUPLEX TESTS (if installed)</b>	
Quick Test	See <b>“Quick Test (duplex)” on page 3-9</b>
Sensor Test	See <b>“Sensor Test (duplex)” on page 3-9</b>
<b>INPUT TRAY TESTS</b>	
Feed Tests	See <b>“Feed Tests (input tray)” on page 3-10</b>
Sensor Test	See <b>“Sensor Test (input tray)” on page 3-10</b>
<b>OUTPUT BIN TESTS</b>	
Feed Tests	See <b>“Feed Tests (output bins)” on page 3-11</b>
Feed To All Bins	See <b>“Feed To All Bins” on page 3-11</b>
Sensor Test	See <b>“Sensor Test (output bin)” on page 3-11</b>
<b>FINISHER TESTS (if installed)</b>	
Staple Test	See <b>“Staple Test” on page 3-12</b>
Feed Tests	See <b>“Feed Tests” on page 3-12</b>
Sensor Test	See <b>“Sensor Test (finisher)” on page 3-13</b>
<b>BASE SENSOR TEST</b>	
Toner	
Input	
Output	
<b>DEVICE TESTS</b>	
Quick Disk Test (if installed)	See <b>“Quick Disk Test” on page 3-15</b>
Disk Test/Clean (if installed)	See <b>“Disk Test/Clean” on page 3-15</b>
Flash Test (if installed)	See <b>“Flash Test” on page 3-16</b>
<b>PRINTER SETUP</b>	
Defaults	See <b>“Defaults” on page 3-16</b>
Page Count	See <b>“Page Count” on page 3-16</b>
Perm Page Count	See <b>“Perm Page Count (permanent page count)” on page 3-16</b>
Serial Number	See <b>“Serial Number” on page 3-17</b>
Engine Setting 1 through 4	See <b>“Engine Setting 1 through 4” on page 3-17</b>
Model Name	See <b>“Model Name” on page 3-17</b>
Configuration ID	See <b>“Configuration ID” on page 3-17</b>
Edge to Edge	See <b>“Edge to Edge” on page 3-17</b>

**Diagnostics mode tests (continued)**

Par S Strobe Adj	See <b>“Parallel strobe adjustment (Par x Strobe Adj)” on page 3-18</b>
Par x Strobe Adj (if additional parallel options are installed)	
<b>EVENT LOG</b>	
Display Log	See <b>“Display Log” on page 3-18</b>
Print Log	See <b>“Print Log” on page 3-18</b>
Clear Log	See <b>“Clear Log” on page 3-19</b>
<b>EXIT DIAGNOSTICS</b>	

**Exiting Diagnostics mode**

Select **Exit Diagnostics** to exit the Diagnostics mode. Resetting the Printer displays, the printer performs a POR, and returns to normal mode.

## MOTOR TESTS

The tests in this group allow you to test specific motors, and on some motors run them forward or reverse.

To run the MOTOR TESTS:

1. Select **MOTOR TESTS** from DIAGNOSTICS.
2. Select the test to run. The following tests are available:
  - Transport mtr
  - Fuser cooling fan
  - PC unit cooling fan
  - Toner add mtr
  - Drum unit mtr
  - Registrat clutch
  - Tray 1 feed mtr
  - Tray 2 feed mtr
  - Tray 3 feed mtr
  - Tray 4 feed mtr
  - Tray 5 feed mtr
  - MPF pick solenoid
  - Transport clutch
  - Duplex drv mtr
  - Diverter solenoid
  - Exit2 cooling fan
  - Exit1 shift mtr
  - Exit2 shift mtr
  - Exit2 drive mtr

Once selected the name of the selected test appears on the operator panel.

3. If available, **Forward** and **Reverse** appear for selected tests.

To stop the test, press **Back** (↶) or **Stop** (⊗).

## PRINT TESTS

### Input source tests

The purpose of the diagnostic Print Tests is to verify that the printer can print on media from each of the installed input options. The content of the Print Test Page varies depending on the media installed in the selected input source.

Check each Test Page from each source to assist in print quality and paper feed problems.

To run the Print Test Page:

1. Select **PRINT TESTS** from DIAGNOSTICS.
2. Select the media source.
  - Tray 1
  - Tray 2
  - Tray 3 (if installed)
  - Tray 4 (if installed)
  - Tray 5 (if installed)
  - Multipurpose Feeder
3. Select **Single** or **Continuous**.
  - If **Single** is selected, a single page is printed.
  - If **Continuous** is selected, printing continues until **Stop** (⊗) is pressed to cancel the test. If a source is selected that contains envelopes, an envelope test pattern is printed. If Continuous is selected, the test pattern is printed only on the first envelope.

**Note:** The Print Test Page always prints on one side of the paper, regardless of the duplex setting or the presence of a duplex option.

Press **Back** (↶) to return to PRINT TESTS.

## Print quality pages (Prt Quality Pgs)

The purpose of this diagnostic function is to allow printing of the print quality test pages with the toner cartridge lockout function disabled. The print quality pages consists of four pages. Page one contains a mixture of graphics and text. Page two is gray with black boxes. Page three is solid black. The last page is blank. If duplex is turned on, the pages are duplexed. The Print Quality Test pages are printed in English and print on the media available in Tray 1.

To run the Print Quality Test Pages:

1. Select **PRINT TESTS** from DIAGNOSTICS.
2. Select **Prt Quality Pgs** from PRINT TESTS. The message `Printng Qual ity Test Pages` is displayed.

**Note:** The print quality test pages can also be printed from the Configuration menu (CONFIG MENU), however a cartridge must be installed with a machine class ID matching the machine class ID stored in NVRAM. Additional diagnostic information may be printed on the pages when printing from DIAGNOSTICS.

The following is included in the DIAGNOSTICS version of the print quality pages:

- Values from EP SETUP in DIAGNOSTICS, including:  
Fuser temperature, warm up time, transfer, print contrast, and charge roll settings.
- Contents of the EVENT LOG from DIAGNOSTICS.
- Configuration information, including printer serial number, controller code level, engine code level, operator panel code level, font versions, and cartridge information.
- Default values for the QUALITY MENU settings used to print the pages.

## HARDWARE TESTS

Select the following Hardware Tests from this menu:

- Panel Test
- Button Test
- DRAM Test
- CACHE Test
- Parallel Wrap (if available)
- Serial Wrap (if available)

### Panel Test

This test automatically toggles all pixels of the operator panel through every contrast level beginning with the darkest and on to the brightest. This test continues until you press **Stop** (⊗).

### Button Test

The Button Test verifies the operation of the buttons on the operator panel. When you select Button Test, a diagram of the operator panel appears on the panel. When you press a button on the operator panel, the "X" appears on the corresponding diagram. When you release the button, the "X" disappears. Pressing **Back** (↶) or **Stop** (⊗) cancels the test.

## DRAM Test

The purpose of this test is to check the validity of DRAM memory, both standard and optional. The test writes patterns of data to DRAM to verify that each bit in memory can be set and read correctly.

To run the DRAM Test:

1. Select **HARDWARE TESTS** from DIAGNOSTICS.
2. Select **DRAM Test** from HARDWARE TESTS.  
The message DRAM Test Testi ng... displays. Then the message Resetti ng Pri nter appears, and the power indicator light *blinks* red.
3. The printer automatically performs a Power On Reset (POR). While the DRAM test executes, the power indicator *blinks* green.

The following type of message appears:

DRAM Test	xxx MB
P: #####	F: ####

- xxx represents the installed DRAM size.
- 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.

Each time a test is completed, the number of passes and failures is incremented. If the test fails, the message Fai lure displays for approximately three seconds, and the failure count increases by one.

The test continues until all standard and optional DRAM is tested. Once the maximum pass count or fail count is reached, the test is stopped, the power indicator is turned on solid, and the final results display. To stop the test before completion, turn the printer off.

## CACHE Test

This test is used to verify the printer processor cache.

To run the CACHE Test:

1. Select **HARDWARE TESTS** from DIAGNOSTICS.
2. Select **CACHE TEST** from HARDWARE TESTS.  
The message CACHE Test Testi ng... displays. Then the message Resetti ng Pri nter appears.
3. The printer automatically performs a Power On Reset (POR). While the CACHE test executes, the power indicator *blinks* green.

The following type of message appears:

CACHE Test x100
P: ##### F: ####

- P:##### represents the number of times the cache has passed and finished successfully. Initially 000000 displays with the maximum pass count being 999,999.
- F:##### represents the number of times the cache 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.

Each time a test is completed, the number of passes and failures is incremented. If the test fails, the message Fai lure displays for approximately three seconds, and the failure count increases by one.

The test continues until all of the printer processor's cache has been tested. Once the maximum pass count or fail count is reached, the test is stopped, the power indicator is turned on solid, and the final results display.

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

## Parallel Wrap tests

This test is used with a wrap plug to check operation of the parallel port hardware. Each parallel signal is tested. Use **Parallel Wrap** for the standard parallel port or **Parallel 1 Wrap** if a parallel port is available by PCI slot 1.

To run the Parallel Wrap tests:

1. Disconnect the parallel interface cable, and install the wrap plug (P/N 1319128).
2. Select **HARDWARE TESTS** from DIAGNOSTICS.
3. Select **Parallel Wrap** or **Parallel 1 Wrap**, from the HARDWARE TESTS menu.

The power indicator *blinks* green indicating the test is in progress. The test runs continuously until a maximum number of tests is reached.

Parallel Wrap 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 999,999. Initially only four digits appear, but additional digits appear as needed.

Each time the test finishes, the screen updates. If the test passes, the pass counter increases by 1, however if the test fails, a message displays for approximately three seconds. Once the maximum count is reached, the test stops. The power indicator goes on solid, and the final results display.

To stop the test before completion, press **Stop** (⊗).

## Serial Wrap tests

The serial wrap tests are used to check the operation of the serial port hardware using a wrap plug.

To perform the Serial Wrap tests:

1. Disconnect the serial interface cable, and install the serial wrap plug
2. Select **HARDWARE TESTS** from DIAGNOSTICS.
3. Select **Serial 1 Wrap** or **Serial 2 Wrap** from HARDWARE TESTS.

The power indicator *blinks* green indicating the test is in progress. The test runs continuously until a maximum number of tests is reached.

Serial Wrap... 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 999,999. Initially only four digits appear, but additional digits appear as needed.

Each time the test finishes, the screen updates. If the test passes, the pass counter increases by 1, however if the test fails, a message displays for approximately three seconds. Once the maximum count is reached, the test stops. The power indicator goes on solid, and the final results display.

To stop the test before completion, press **Stop** (⊗). The message Serial Wrap x Test Cancel ed, and the display returns to the HARDWARE TESTS menu.

## DUPLEX TESTS

Only displayed if a duplex option is installed.

### Quick Test (duplex)

This test prints a duplex version of the Quick Test that can be used to verify that the correct placement of the top margin on the back side of a duplex page. You can run one duplexed page (**Single**), or continue printing duplexed pages (**Continuous**) until **Stop** (⊗) is pressed.

Make sure either Letter or A4 is loaded in the default paper source. If the default source only supports envelopes, then the Quick Test will be printed from Tray 1.

To run the Quick Test (duplex):

1. Select **DUPLEX TESTS** from DIAGNOSTICS.
2. Select **Quick Test** from DUPLEX TESTS.
3. Select **Single** or **Continuous**.
  - 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 offset 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** (⊗).

### Sensor Test (duplex)

This test is used to determine whether or not the duplex sensors and switches are working correctly. The test allows you to actuate the duplex input sensor located in the back part of the duplex unit and the duplex exit sensor located in the return paper path.

1. Select **DUPLEX TESTS** from DIAGNOSTICS.
2. Select **Sensor Test** from DUPLEX TESTS.  
The message **Sensor Test Testing** displays.
3. Select **Duplex wait** from the Sensor Test menu.
4. Manually actuate each of the duplex wait sensors. When the sensor is closed, **Closed** displays; when the sensor is open, **Open** displays.

Press **Back** (↶) or **Stop** (⊗) to exit the test.

## INPUT TRAY TESTS

### Feed Tests (input tray)

This test lets the servicer observe the paper path as media is feeding through the printer. A blank sheet of paper feeds through the printer as the laser turns off during this test. The only way to observe the paper path is to open the lower front door that is used to access the envelope or multipurpose feeder. The paper is placed in the output bin.

To run the Input Tray Feed Tests:

1. Select **INPUT TRAY TESTS** from DIAGNOSTICS.
2. Select **Feed Tests** from INPUT TRAY TESTS.
3. Select the input source from the sources displayed on the Feed Tests menu. All installed sources are listed.
  - Tray 1
  - Tray 2
  - Tray 3
  - Tray 4
  - Tray 5
  - MP Feeder
4. Select 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.

### Sensor Test (input tray)

This test is used to determine if the input tray sensors are working correctly. To run the Input Tray Sensor Test:

1. Select **INPUT TRAY TESTS** from DIAGNOSTICS.
1. Select the **Sensor Test** from INPUT TRAY TESTS.
2. Select the input source from the sources displayed on the Sensor Test menu. All installed sources are listed.
3. Select the sensor to test. Various menus have different listings of sensors, depending on the input source or tray selected. See the table below:

**Tray sensors support by source**

Input source	Sensor							
	Pre-feed	Feed-out	Media out	Media level	HCF unit docking	HCF tray set	Media size L	Media size R
Tray 1	✓		✓	✓				
Tray 2	✓	✓	✓	✓				
Tray 3	✓	✓	✓	✓				
Tray 4	✓	✓	✓	✓				
Tray 5	✓	✓	✓	✓	✓	✓	✓	✓
Multipurpose tray			✓					

4. The servicer can manually actuate the selected sensor, and Open or Closed displays.

Press **Back** (⏪) or **Stop** (⊗) to exit the test.

## OUTPUT BIN TESTS

### Feed Tests (output bins)

Use these tests to verify that media can be fed to a specific output bin. Media is fed from the default input source to the selected output bin. No information is printed on the media fed to the output bin because the printhead is not engaged during this test. These tests can use any media size or envelope supported by the printer.

To run the Feed Tests for the output bins:

1. Select **OUTPUT BIN TESTS** from DIAGNOSTICS.
2. Select **Feed Tests** from the OUTPUT BIN TESTS.
3. Select 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. (The output bins are displayed in the order installed on the printer.)
  - Standard Bin
  - Output Bin 1
  - Output Bin 2
4. Select 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 **Back** (↶) to return to OUTPUT BIN TESTS.

### Feed To All Bins

This test can be used to verify that the printer can feed media to the standard bin or any installed output options. No information will be printed on the test pages, as the printhead is not engaged during the feed test. The media feeds from the default paper source.

To run the Feed To All Bins Test:

1. Select **OUTPUT BIN TESTS** from DIAGNOSTICS.
2. Select **Feed To All Bins** from OUTPUT BIN TESTS.  
The printer feeds a separate piece of media to the standard bin first, then it feeds a separate piece of media to each output bin installed.

The test is continuous until **Stop** (⊗) is pressed. Press **Back** (↶) to return to OUTPUT BIN TESTS.

### Sensor Test (output bin)

These tests are used to determine if the output tray sensors are working correctly.

To run the Output Bin Sensor Test

1. Select **OUTPUT BIN TESTS** from DIAGNOSTICS.
2. Select the **Sensor Test** from OUTPUT BIN TESTS.
3. Select the output bin from the bins displayed on the Sensor Test menu. All installed bins are listed.
  - **Standard Bin**
  - **Output Bin 1**
  - **Output Bin 2**

4. Each of the tests categories includes the individual sensors that can be manually actuated, and the display shows Open or Closed.
  - **Standard Bin**
    - Std bin full exit1
    - Std bin full exit2
  - **Output Bin 1**
    - Fin upper bin full
  - **Output Bin 2**
    - Stacker bin level1
    - Stacker bin level2
5. Manually actuate the selected sensor, and Open or Closed displays.

Press **Back** (↶) or **Stop** (⊗) to exit the test.

## FINISHER TESTS

### Staple Test

This test verifies the staple mechanism by sending eight sheets of media from the printer's default paper source and stapling the sheets.

To run the Staple Test:

1. Select **FINISHER TESTS** from DIAGNOSTICS.
2. Select **Staple Test** from FINISHER TESTS.
3. Select the output bin, and press (✓).

While the test runs the power indicator *blinks* and the message Staple Test Running... displays. Select **Stop** (⊗) to exit the test before it completes.

### Hole Punch Test

This test is used to verify whether or not media can be fed to a finisher output bin and punched. Eight sheets of blank paper are fed from the default paper source and fed to the finisher output bins. Letter size paper is used for the 3 hole test, and A4 media is used for the 4 hole test. Media is selected from the default tray.

To run the Feed Test:

1. Select **FINISHER TESTS** from DIAGNOSTICS.
2. Select **Feed Tests** from FINISHER TESTS.

While the feed test runs, the power indicator *blinks*, and the message Feed Test Running... displays.

During the test, no buttons are active, and the test cannot be stopped until the test is completed.

### Feed Tests

This test is used to verify whether or not media can be fed to a finisher output bin. Eight sheets of blank paper are fed from the default paper source and fed to the finisher output bins.

**Note:** This test can be run using any of the paper sizes supported by the printer.

To run the Feed Test:

1. Select FINISHER TESTS from DIAGNOSTICS.
2. Select **Feed Tests** from FINISHER TESTS.

While the feed test runs the power indicator *blinks* and the message Feed Test Running... displays.

During the test, no buttons are active and the test cannot be stopped until the test is completed.

## Sensor Test (finisher)

This test can be used to verify whether or not the finisher sensors are working correctly.

To run the finisher Sensor Test:

1. Select **FINISHER TESTS** from DIAGNOSTICS.
2. Select **Sensor Test** from FINISHER TESTS.
3. Select one of the test categories:
  - **Cover and Door**
  - **Bin Level**
  - **Media Path1**
  - **Media Path2**
  - **Punch and Staple**
4. Select the actual test to perform.  
Each of the tests categories includes the individual sensors that can be manually actuated, and the display shows Open or Closed.
  - **Cover and Door**
    - Cover F bridge top
    - Door G fin front
    - Surface H fin eject
  - **Bin Level**
    - Fin upper bin full
    - Stacker bin level1
    - Stacker bin level2
    - Stacker bin upper limit
    - Stacker bin no media
    - Stacker bin level encod
  - **Media Path1**
    - Fuser exit
    - Bridge media ent
    - Bridge media exit
    - Fin media enter
    - Buffer path
    - Upper media exit
    - Lower media exit
    - Compiler media in
  - **Media Path2**
    - Diverter gate
    - Front tamper hp
    - Rear tamper hp
    - Eject clamp hp
    - Media eject shaft hp

- **Punch and Staple**
  - Punch side reg1
  - Punch side reg2
  - Punch box set
  - Punch waste full
  - Low staple
  - Punch carriage shift hp
  - Punch unit hp
  - Stapler carriage shift hp
  - Punch cam front
  - Punch hole select

Press **Back** (↩) or **Stop** (⊗) to exit the test.

## **BASE SENSOR TEST**

This test is used to determine if the sensors located inside the printer are working correctly.

To run the Base Sensor Test:

1. Select **BASE SENSOR TEST** from DIAGNOSTICS.
2. Select one of the test categories:
  - **Cover and Door**
  - **Devices**
  - **Exit level**
  - **Media Path**
3. Select the actual test to perform.
 

Each of the tests categories includes the individual sensors that can be manually actuated, and the display shows Open or Closed.

  - **Cover and Door**
    - Door A left side
    - Door B left/lower
    - Door C 2TM/TTM
    - Door D duplex left
    - Door E exit2 left
    - Door J front
    - Door K hcf top
  - **Devices**
    - PC unit present
    - Exit2 present
  - **Exit level**
    - Std bin full exit1
    - Std bin full exit2
  - **Media Path**
    - Registration
    - Fuser exit
    - Exit1 shift hp
    - Exit2
    - Exit2 shift hp

Manually actuate the sensors to verify that each sensor switches from Open to Closed.

Press **Back** (↩) or **Stop** (⊗) to exit the test.

## DEVICE TESTS

### Quick Disk Test

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

To run the Quick Disk Test:

1. Select **DEVICE TESTS** from DIAGNOSTICS.
2. Select **Quick Disk Test** from DEVICE TESTS.

The power indicator blinks while the test is in progress and quick Di sk Test Testi ng... displays.

- Qui ck Di sk Test/Test Passed displays if the test passes and the power indicator turns on solid.
- Qui ck Di sk Test/Test Fai led displays if the test failed and the power indicator turns on solid.

Press **Back** (↶) or **Stop** (✖) to return to the Device Tests menu.

### Disk Test/Clean

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

To run the Disk Test/Clean Test:

1. Select **DEVICE TESTS** from DIAGNOSTICS.
2. Select **Disk Test/Clean** from DEVICE TESTS.

Files will be Lost/Go or Stop? displays to warn the user that all contents on the disk will be lost.

3. To exit the test immediately and return to the Device Tests menu, press **Back** (↶) or **Stop** (✖). To continue with the test, press (✓).

If (✓) is selected, the following screen displays and updates periodically indicating the percentage of test completed.

```

Formatti ng Di sk
1/1          0%

```



DO NOT POWER OFF

The power indicator blinks during the test.

**Note:** The test can NOT be canceled.

4. Once the test is complete, the power indicator turns on solid, and either the message Di sk Test/CI ean Test Passed or Di sk Test/CI ean Fai led appears. If the message indicates failure, the disk is unusable.

## Flash Test

This test verifies the functioning of the flash device by writing and reading data on the flash to test the flash.

**Warning:** This test destroys all data on the flash, because the flash is unformatted at the end of the test. To reformat the flash, the servicer or the user must use **FORMAT FLASH** from the **UTILITIES MENU**.

To run the Flash Test:

1. Select **DEVICE TESTS** from **DIAGNOSTICS**.
2. Select **Flash Test** from **DEVICE TESTS**.  
The message **Files will be lost/Go or Stop?** displays to warn the user that all contents on the flash device will be lost.
3. To exit the test immediately and return to the Device Tests menu, press **Back** (↶) or **Stop** (✖). To continue with the test, press (✓).  
The power indicator blinks while the test is running, and the message **Flash Test Testing...** displays. Once the test is complete, the power indicator turns on solid, and either the message **Flash Test Test Passed** or **Flash Test Test Failed** displays.

Press **Back** (↶) or **Stop** (✖) to return to **DEVICE TESTS**.

## PRINTER SETUP

### Defaults

US/Non-US defaults changes whether the printer uses the US factory defaults or the non-US factory defaults. The settings affected include paper size, envelope size, PCL symbol set, code pages, and units of measure.

**Warning:** Changing this setting resets the printer to factory defaults, and data may be lost. It cannot be undone.

### Page Count

The page count can only be viewed and cannot be changed

To view the page count:

1. Select **PRINTER SETUP** from **DIAGNOSTICS**.
2. Select **Page Count** from **PRINTER SETUP**.
3. Press **Back** (↶) to return to **PRINTER SETUP**.

### Perm Page Count (permanent page count)

The permanent page count can only be viewed and cannot be changed.

To view the permanent page count:

1. Select **PRINTER SETUP** from **DIAGNOSTICS**.
2. Select **Perm Page Count** from **PRINTER SETUP**.
3. Press **Back** (↶) to return to **PRINTER SETUP**.

## Serial Number

The serial number can only be viewed and cannot be changed.

To view the serial number:

1. Select **PRINTER SETUP** from DIAGNOSTICS.
2. Select **Serial number** from PRINTER SETUP.
3. Press **Back** (↩) to return to PRINTER SETUP.

## Engine Setting 1 through 4

**Warning:** Do not change these settings unless requested to do so by your next level of support.

## Model Name

The model name can only be viewed and cannot be changed.

## Configuration ID

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

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

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

To set the configuration ID:

1. Select **PRINTER SETUP** from DIAGNOSTICS.
2. Select **Configuration ID** from PRINTER SETUP.  
Submi tti ng Sel ecti on displays, followed by the value for Configuration ID 1.
3. Enter the Configuration ID 1.
  - To select a digit or character to change, press ◀ or ▶ until the digit or character is underlined.
  - To change a digit or character, press ▲ to increase or ▼ to decrease the value.
  - When the last digit is changed, press ✓ to validate the Configuration ID 1.  
If I nval i d ID appears, the entry is discarded and the previous Configuration ID 1 is displayed on the screen.  
If the process is successful, Submi tti ng Sel ecti on appears on the display, followed by the current value for Configuration ID 2.
4. Repeat the steps for entering the Configuration ID, and press ✓.  
If the Configuration ID 2 is validated, Submi tti ng Sel ecti on appears, and a check (✓) appears next to **Printer Setup**.
5. Restart the printer.

## Edge to Edge

When this setting is On, the text and graphics are shifted to the physical edges of the paper for all margins. When the setting is Off, the normal margins are restored.

### Parallel strobe adjustment (Par x Strobe Adj)

This setting adjusts the amount of time the strobe is sampled in order to determine if the valid data is available on the parallel port. The range of values are from -4 to 6, and the default is 0 for **Par S Strobe Adj**, **Par 1 Strobe Adj**, and **Par 2 Strobe Adj**. After adjustment of 1 increment, the strobe samples 50 ns longer.

## EVENT LOG

### Display Log

The event log provides a history of printer errors. It contains the 12 most recent errors that have occurred on the printer. The most recent error displays in position 1 and the oldest error displays in position 12 (if 12 errors have occurred). If an error occurs after the log is full, the oldest error is discarded. Identical errors in consecutive positions in the log are entered, so there may be repetitions. All 2xx and 9xx error messages are stored in the event log.

To view the event log:

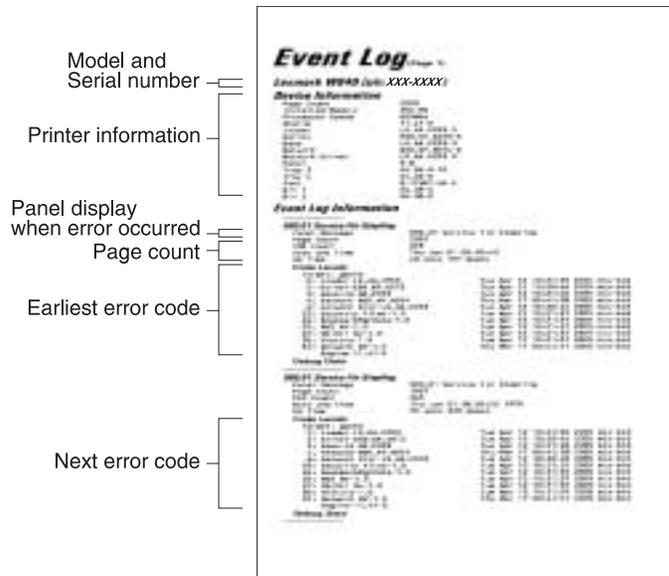
1. Select **EVENT LOG** from DIAGNOSTICS.
2. Select **Display Log** from EVENT LOG.  
Up to three error codes display at a time. Press ▲ or ▼ to view additional error codes.
3. Press **Back** (⏪) to return to the EVENT LOG menu.

### Print Log

Additional diagnostic information is available when you print the event log from DIAGNOSTICS rather than CONFIG MENU.

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 Lexmark or your next level of support for verification or diagnosis.

To print the event log:

1. Select **EVENT LOG** from DIAGNOSTICS.
2. Select **Print Log** from EVENT LOG.

Press **Back** (↩) to return to EVENT LOG.

### **Clear Log**

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

1. Select **EVENT LOG** from DIAGNOSTICS.
1. Select **Clear Log** from EVENT LOG.
2. Select **YES** to clear the Event Log or **NO** to exit the Clear Log menu. If **YES** is selected, **Deleting EVENT LOG** displays on the screen.

Press **Back** (↩) to return to EVENT LOG.

### ***EXIT DIAGNOSTICS***

This selection exits Diagnostics mode, and Resetting the Printer displays. The printer performs a POR, and the printer returns to normal mode.

## Configuration menu (CONFIG MENU)

### Entering Configuration Menu

1. Turn off the printer.
2. Press and hold  and .
3. Turn on the printer.
4. Release the buttons when Performing Self Test displays.  
The message CONFIG MENU displays on the top line of the operator panel.

### Available menus

#### Configuration Menu

Maint Cnt Value	See <b>“Maintenance page count (Maint Cnt Value)”</b> on page 3-21
Reset Maint Cnt	See <b>“Maintenance page counter reset (Reset Maint Cnt)”</b> on page 3-21
<b>REGISTRATION</b>	<b>“REGISTRATION”</b> on page 3-22
Top Margin	See <b>“Top Margin”</b> on page 3-22
Tray 1 Left Mar	See <b>“Tray 1–5 Left Margin”</b> on page 3-22
Tray 2 Left Mar	
Tray 3 Left Mar (if installed)	
Tray 4 Left Mar (if installed)	
Tray 5 Left Mar (if installed)	
Quick Test	See <b>“Quick Test”</b> on page 3-23
<b>Prt Quality Pgs</b>	See <b>“Print quality pages (Prt Quality Pgs)”</b> on page 3-23
<b>SIZE SENSING</b>	See <b>“SIZE SENSING”</b> on page 3-24
Tray 1 Sensing	
Tray 2 Sensing	
Tray 3 Sensing (if installed)	
Tray 4 Sensing (if installed)	
Tray 5 Sensing (if installed)	
Statement/A5	See <b>“Statement/A5”</b> on page 3-24
Executive/B5	See <b>“Executive/B5”</b> on page 3-24
<b>Panel Menus</b>	See <b>“Panel Menus”</b> on page 3-24
<b>PPDS Emulation</b>	See <b>“PPDS Emulation”</b> on page 3-25
<b>Demo Mode</b>	See <b>“Demo Mode”</b> on page 3-25
<b>Factory Defaults</b>	See <b>“Factory Defaults”</b> on page 3-25
<b>Energy Conserve</b>	See <b>“Energy Conserve”</b> on page 3-25
<b>EVENT LOG</b> (print log only)	See <b>“EVENT LOG”</b> on page 3-25
<b>Paper Prompts</b>	See <b>“Paper Prompts”</b> on page 3-25
<b>Env Prompts</b>	See <b>“Env Prompts”</b> on page 3-26
<b>Jobs On Disk</b> (if hard disk is installed)	See <b>“Jobs On Disk”</b> on page 3-26
<b>Disk Encryption</b> (only if hard disk is installed and feature is set up)	See <b>“Disk Encryption”</b> on page 3-26
<b>Font Sharpening</b>	See <b>“Font Sharpening”</b> on page 3-26
<b>Short-edge Printing</b>	See <b>“Short Edge Printing”</b> on page 3-26

**Configuration Menu (continued)**

<b>Tray Low Message</b>	See <b>“Tray Low Message” on page 3-26</b>
<b>Exit Config Menu</b>	See <b>“Exit Config Menu” on page 3-26</b>

Some menus are not available, depending on the configuration of the printer.

**Maintenance page count (Maint Cnt Value)**

The current value for the maintenance page counter is displayed. This counter tracks printer usage. A print job containing a single page increments the counter by one and a duplex page by two. At 300,000, the customer is reminded that the printer requires scheduled maintenance. This counter is reset by the servicer after a 80 Scheduled Maintenance message displays and a maintenance kit is installed. See **“Scheduled maintenance” on page 6-2** for maintenance kit part number.

To view the maintenance page count:

1. Select **Maint Cnt Value** from CONFIG MENU.
2. Press  to view the value.

Press **Back** () to return to the main Configuration menu.

**Maintenance page counter reset (Reset Maint Cnt)**

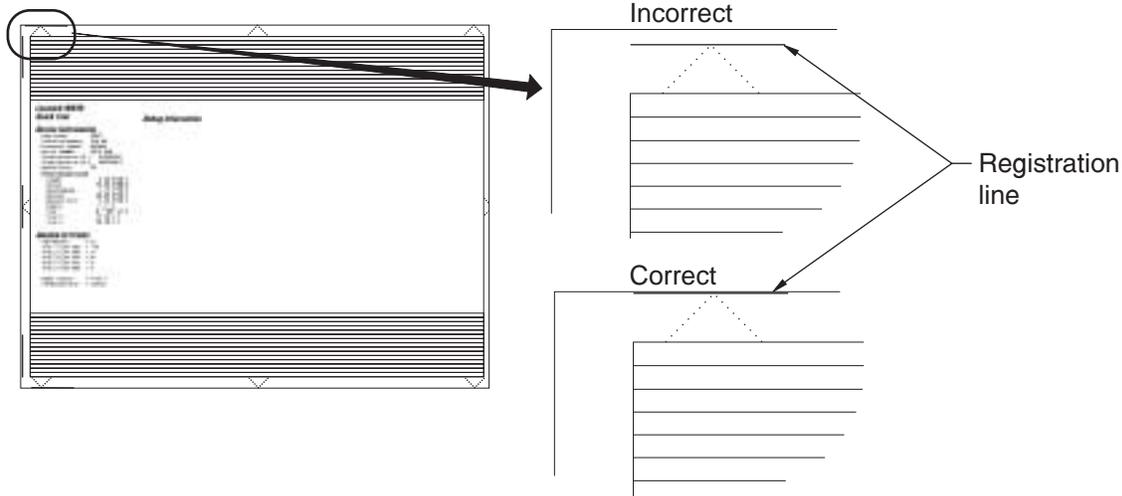
After scheduled maintenance, the servicer needs to reset the page counter.

To reset the maintenance page count to zero:

1. Select **Reset Maint Cnt** from CONFIG MENU.  
The message  Reset displays.
2. Press  to confirm the selection.  
Press **Back** () to return to the main Configuration menu without resetting the page counter.  
When the reset operation is complete, the menu returns to the Printer Setup Reset Maintenance Count screen.

## REGISTRATION

Print registration makes sure the printing is properly aligned on the page. This setting allows separate Left Margin settings for each media tray. (The Top Margin setting is the same for all trays.)



### Top Margin

To set the top margin for all trays:

1. Select **REGISTRATION** from CONFIG MENU.
2. Select **Top Margin** from REGISTRATION. The current setting is displayed.
3. Check the Quick Test, and adjust the value. The range of valid settings for the top margin is 0 to +50. Increasing the value by one increment moves the image on the page down by one pixel (1/300 inch) and widens the top margin. Decreasing the value by one increment moves the image up the page by one pixel (1/300 inch) and narrows the top margin. When you select a value, the Quick Test prints so you can verify the value is correct.
4. Continue until the top margin is adjusted.

### Tray 1–5 Left Margin

To set the left margin for an individual tray:

1. Select **REGISTRATION** from CONFIG MENU.
2. Select one of the following from the REGISTRATION menu. The current setting is displayed.
  - Tray 1 Left Margin
  - Tray 2 Left Margin
  - Tray 3 Left Margin (if installed)
  - Tray 4 Left Margin (if installed)
  - Tray 5 Left Margin (if installed)
3. Check the Quick Test, and adjust the value. The range of valid settings for each Left margin is -50 to +50. Each unit represents 1/300 of an inch. Increasing the value by one moves the image on the page to the right by one pixel (1/300 inch) widens the left margin, and narrows the right margin. Decreasing the value by one moves the image on the page to the left by one pixel (1/300 inch), narrows the left margin, and widens the right margin. When you select a value, the Quick Test prints so you can verify the value is correct.
4. Continue until the Left Margin value is properly adjusted.
5. If you need to adjust the Left Margin on another tray, select that tray.

**Note:** The printer attempts to print the Quick Test page from the media source for which the registration adjustments are currently being made.

## Quick Test

The Quick Test contains the following information:

- Print registration settings
- Alignment diamonds at the top and bottom
- Horizontal lines to check for skew
- General printer information, including current page count, installed memory, serial number, and code level.

To print the Quick Test page:

**Note:** Print the Quick Test Page on letter or A4 paper.

1. Select **REGISTRATION** from CONFIG MENU.
2. Select **Quick Test** from REGISTRATION.  
The message *Quick Test Printing...* appears on the display.  
Once the Quick Test Page completes printing, the Registration screen displays again.

## *Print quality pages (Prt Quality Pgs)*

The print quality test pages can be printed from either the Diagnostics mode or Configuration Menu (CONFIG MENU). When printed from the Diagnostic mode, additional information is included, and the print cartridge lockout is bypassed. See **“Print quality pages (Prt Quality Pgs)” on page 3-6**. Additional configuration information may be included on the print quality pages which is not included on the print menu page.

To print the Print Quality Test Page, select **Prt Quality Pgs** from CONFIG MENU. The message *Printing Quality Test Pages* is displayed.

The following is printed:

- Settings from EP SETUP from DIAGNOSTICS:  
Fuser temperature, warm up time, transfer, print contrast, and charge roll settings.
- Contents of the EVENT LOG from DIAGNOSTICS.
- Printer configuration information:  
Printer serial number, controller code level, engine code level, operator panel code level, smart option code levels, font versions, and so on.  
Values for the QUALITY MENU settings used to print the pages.

The print quality test consists of four pages. Page one contains a mixture of graphics and text. Pages two and three only contain graphics. Page four is blank. If duplex is turned on, the pages are duplexed. The Print Quality Test pages are printed in English and must always be printed on letter, legal, or A4 paper.

The value of the <media width> field is displayed once the printer narrow media sensor has determined whether the media used for the Quick Test is narrow or wide. An **N** indicates the media sensed is narrow, and a **W** indicates the media sensed is wide.

## SIZE SENSING

This setting controls whether the printer automatically registers the size of paper installed in an input source with size sensing.

Paper source	Size sensing	
	Length	Width
Multipurpose feeder (integrated MPF)		✓
Tray 1 (integrated 500-sheet drawer)	✓	✓
Tray 2 (integrated 500-sheet drawer)	✓	✓
Tray 3 (optional 2TM 500-sheet drawer)	✓	✓
Tray 4 (optional 2TM 500-sheet drawer)	✓	✓
Tray 3 (optional TTM 850-sheet drawer)		✓
Tray 4 (optional TTM 1150-sheet drawer)		✓
Tray 5 (optional HCF 2000-sheet drawer)		✓

When the setting is Auto, every input option equipped with size sensing hardware automatically registers what size media it contains. When the setting is off, the media size detected by hardware is ignored. The media size can be set by the operator panel or the data stream.

To change the size sensing setting:

1. Select **SIZE SENSING** from CONFIG MENU.
2. Select which tray to set.
  - Tray 1 Sensing
  - Tray 2 Sensing
  - Tray 3 Sensing
  - Tray 4 Sensing
  - Tray 5 Sensing
3. Select **Auto** or **Off**, and press .

Press **Back** () to exit.

### Statement/A5

Trays 1 through 4 cannot simultaneously sense A5 and Statement-sized paper. Select either **Sense Statement** (default) or **Sense A5** to determine which of the two paper sizes these trays sense automatically. The MP Feeder can support these paper sizes regardless of the value of this setting.

### Executive/B5

Trays 1 through 4 cannot simultaneously sense Executive- and JIS-B5-sized paper. Select either **Sense Executive** (default) or **Sense JIS-B5** to determine which of the two paper sizes these trays sense automatically. The MP Feeder can support these paper sizes regardless of the value of this setting.

## Panel Menus

Selections are to **Disable** or **Enable** (default) operator panel menus.

## PPDS Emulation

This menu item allows the user to enable or disable PPDS emulation datastream. When this setting is enabled, the following settings are also changed:

- SmartSwitch settings for each port are turned off.
- The printer language is changed to PPDS Emulation.

Users can still switch languages on the operator panel and through the PJI datastream.

## Demo Mode

There is a built-in demonstration mode. The settings allow you to **Deactivate** to turn off the demo mode and **Activate** to turn it on. While Demo Mode is set, the printer will start in Demo Mode until you change the setting.

**Warning:** While Demo Mode is set to **Activate**, only demonstration files can print and files received across the network or from the host computer are ignored.

## Factory Defaults

This setting enables a user to restore all the printer settings to the original factory settings. Selections are **Restore Base** and **Restore Network**. Network does not appear unless you have a network printer. The following settings are not changed:

- Display language
- Settings in the NETWORK/PORTS MENU group

**Warning:** Selecting to restore factory defaults may change personalized settings, and some saved data may be lost.

## Energy Conserve

This menu controls what values appear on the Power Saver menu. If **Off** is selected in Energy Conserve menu, then Disabled appears in the Power Saver menu, and Power Saver can be turned off. If **On** is set in Energy Conserve, the Power Saver feature cannot be disabled.

## EVENT LOG

The event log provides a history of printer errors. The event log can only be printed in CONFIG MENU. Additional options are available in DIAGNOSTICS. See **“EVENT LOG” on page 3-18**.

To print the event log:

1. Select **EVENT LOG** from CONFIG MENU.
2. Select **Print Log** from EVENT LOG.

Press **Back** (↶) or **Stop** (⊗) to return to EVENT LOG.

**Note:** An event log printed from the CONFIG MENU will not contain debug information or secondary codes for 900 service errors. However, the event log printed from DIAGNOSTICS mode does include this information.

## Paper Prompts

When a tray is out of the indicated paper size, a prompt is sent to the user to load paper in a tray. This setting controls the tray the user is directed to fill. Selections are **Auto** (default), **MP Feeder**, and **Manual Paper**.

## ***Env Prompts***

This setting controls the tray the user is directed to refill when specific envelope size is out. The selections are **Auto** (default), **MP Feeder**, and **Manual Env**.

## ***Jobs On Disk***

If the hard disk is installed, Jobs On Disk allows the user to delete buffered jobs saved on the disk. The values are **Delete** and **Do Not Delete**.

## ***Disk Encryption***

If a hard disk is installed, Disk Encryption selects whether the data on the disk is encrypted or not. The values are **Disable** and **Enable**.

**Warning:** Whenever this value is changed, data on the hard disk is erased.

## ***Font Sharpening***

This setting allows a user to set a text point size below which the high frequency screens are used when printing font data. For example, at the default 24, all text in font sizes 24 and less will use the high frequency screens. The values for this setting range from 0 to 150, and the default value is 24. This setting affects PostScript, PDF, PCL, and XL emulations.

To change the value:

1. Select **Font Sharpening** from the CONFIG MENU.
2. Use ◀ to decrease the value and ▶ to increase the value.
3. Select  to accept the value.

## ***Short Edge Printing***

The default printing orientation is long edge. This setting allows a user to enable or prohibit short-edge fed paper. 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 the user to use the correct paper size. When the setting is **Enabled**, the user can feed paper either long edge or short edge.

## ***Tray Low Message***

Selecting **Disabled** turns off the tray low prompts. The default is **Enabled**.

## ***Exit Config Menu***

Press  to exit the CONFIG MENU. The message Resetting the Printer displays, and the printer performs a POR and restarts in normal mode.

---

## Analyzing the Print Test

Print Tests provide several uses in troubleshooting the printer problems.

- Isolating problems to either the print engine (printer engine card assembly) or to the RIP card assembly and host software.
- Locating feed and media transport problems.
- Detecting print quality and image registration problems.

### Using print test to locate a feed or media transport problem

Use Print Tests to locate a problem with media feed or with media transportation along the media path.

1. Enter Printer Diagnostics and generate a Print Test.
2. Follow the media along the media path until the problem occurs.

### Using print test to analyze a print quality problem

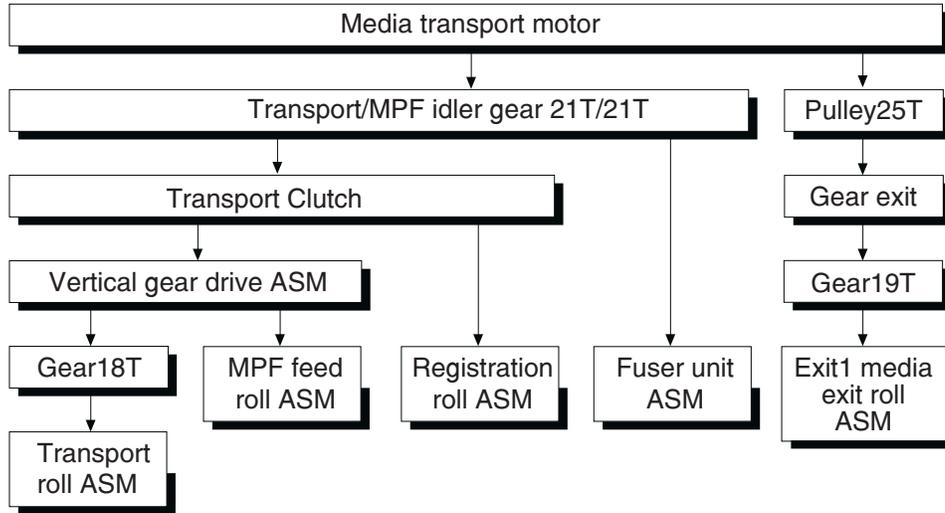
Due to the method used to generate Print Tests, grid lines may display a noticeable amount of jitter or unevenness. This is normal for Print Tests.

1. Print a sample image from the host computer.
2. Enter Printer Diagnostics and generate a Print Test.
3. If the print quality problem occurs when you print from the host computer but does not occur when you print from Diagnostics, the problem may be in the RIP card assembly, in the print driver software, or in the application software on the host computer.
4. If the print quality problem occurs on the Print Test, then the problem is caused by the print engine.
5. If the print quality problem is an image registration problem, go to "Setting Printer Registration" on page 3-31.

## Driving force transmission path

### Transport motor

The rotating force of the transport motor is transmitted through the gear and the pulley (25 tooth) to components that need mechanical driving force as shown in the following diagram.



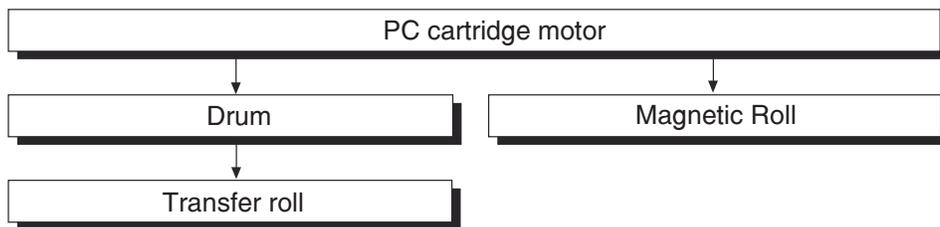
The driving force transmitted to the gear drives the transport roll assembly, multipurpose feeder (MPF) feed roll, registration roll assembly, fuser assembly, and exit 1 media exit roll assembly through the clutch and gears.

The driving force transmitted to the pulley (25 tooth) drives the exit 1 media exit roll assembly through the gears.

The driving force transmitted to the fuser assembly drives the heat roll.

### PC cartridge motor

The rotating force of the PC cartridge motor is transmitted through the gears to components that need a mechanical driving force as shown in the following diagram.

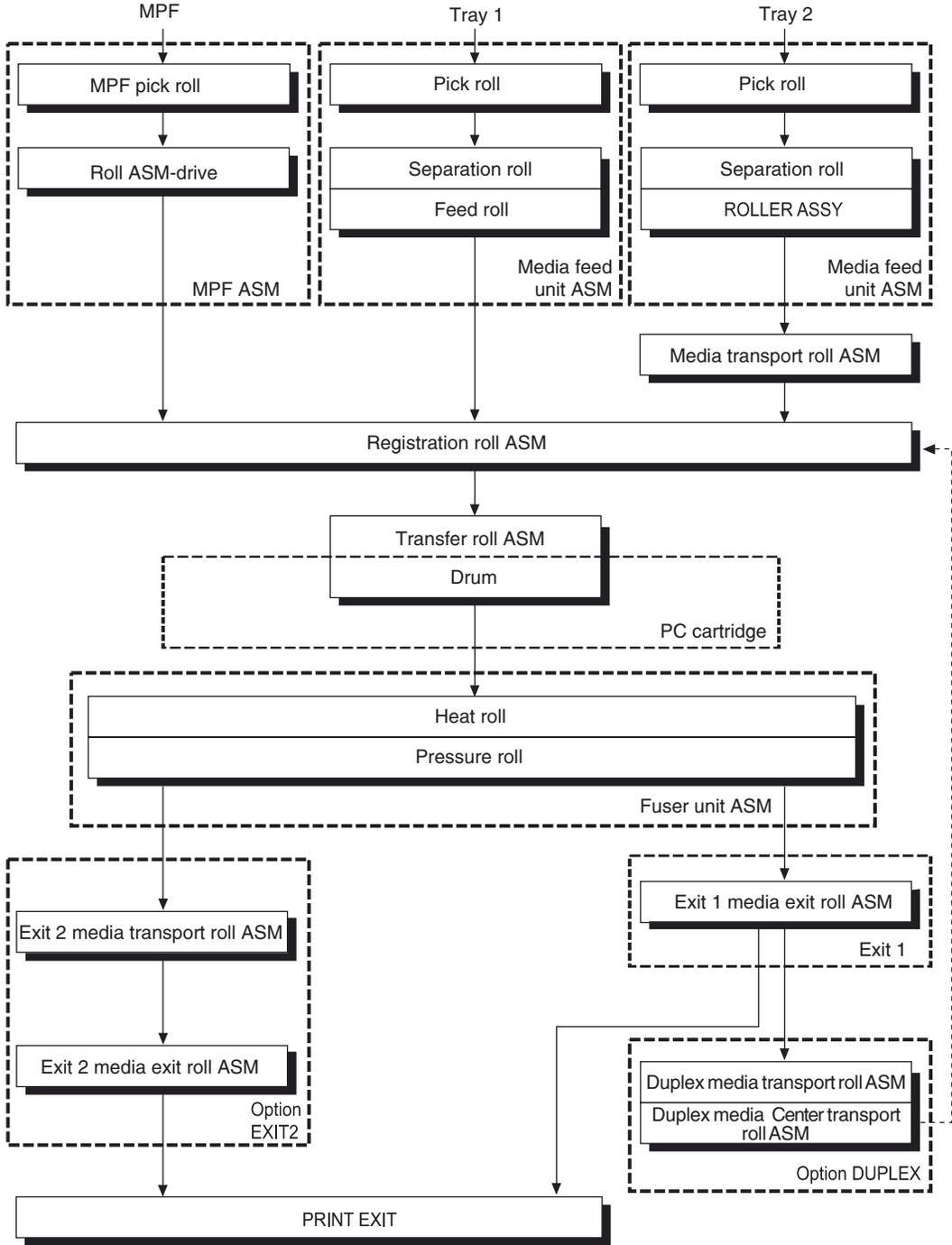


The driving force transmitted to the PC cartridge drives the drum. The driving force is then transmitted to the transfer roll assembly by direct contact with the drum.

**Media transport**

**Media transport path**

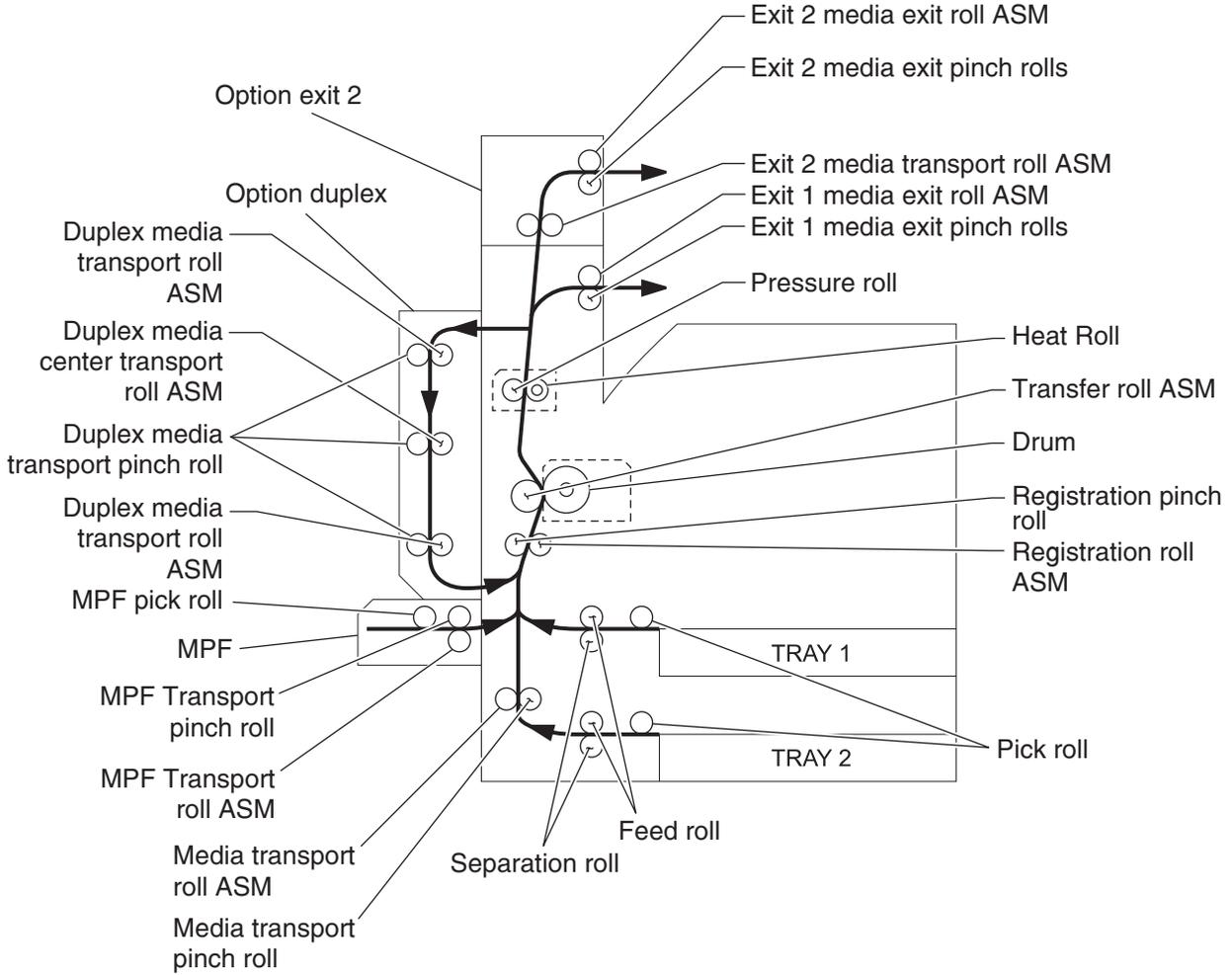
Media is supplied from the MPF, tray 1 or tray 2, and is transported to the printer along the media transport path shown below.



### Media transport path layout

The following is a cross section of the laser printer, showing main components directly associated with the media path and transport.

### Main components associated with transport of media



## ***Functions of main components***

- Media tray assembly
- Media feed unit assembly
- MPF
- Xerographics
- Fuser
- Drive
- Electrical components and rolls

### **Media tray assembly**

It is necessary to adjust the front media tray guide assembly, rear media tray guide and media tray end guide of the media tray assembly to match the media size.

### **Front media tray guide assembly and rear media guide**

The front media tray guide assembly can be adjusted to different media sizes by moving the guides to the front or rear. These guides come into contact with the media and hold it in position.

The rear media tray guide moves together with the front media tray guide assembly.

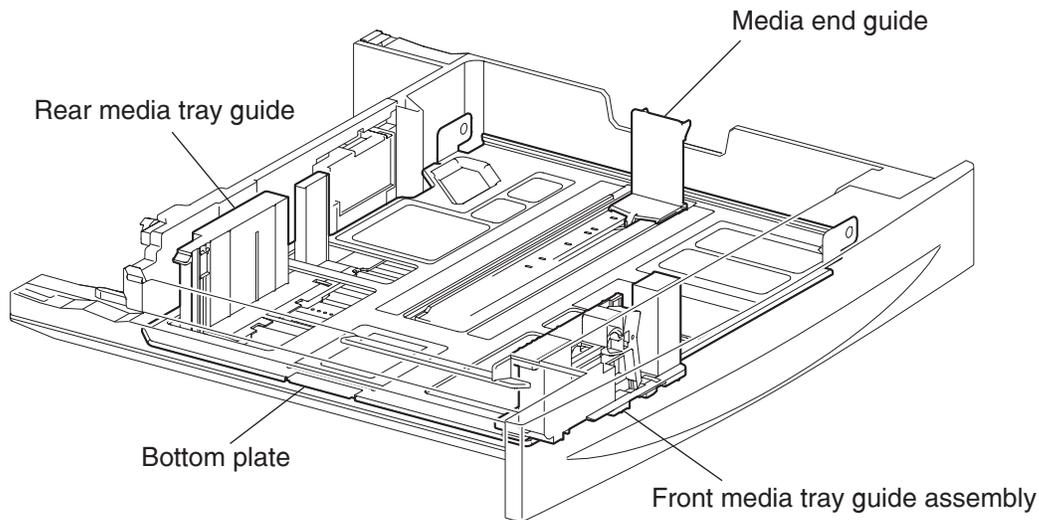
### **Media tray end guide**

The media tray assembly is designed so it can adapt to the media length in the media feed direction by moving the media tray end guide to the left or right.

### **Bottom plate**

The force pushing up the bottom plate is transmitted by the driving force of the motor on the media feed unit assembly to the lift up shaft through the gear (13/60 tooth) and sector gear (12 tooth). 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 roll.

## Media tray assembly



### Detection of media size

The media size set for the media tray assembly is transmitted to the switch (media size) by moving these guides. The media size is detected by the on/off information of these switches.

### Media feed unit assembly

Since tray 1 and tray 2 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 media feed rolls to feed media.

When the pick roll picks up media, the remaining media decreases, and the actuator of the sensor (media level) lowers accordingly. When the sensor (media level) detects the lowering, the media feed lift motor is activated to lift the lift up shaft and the bottom plate accordingly. Thus, the remaining media is ready to be fed.

### Media feed lift motor

This motor is activated to feed media and to lift the bottom plate. When feeding media, it rotates forward to drive the pick roll. When lifting the bottom plate, it rotates reversely to drive the tray module gears to lift 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.

### Sensor (media out)

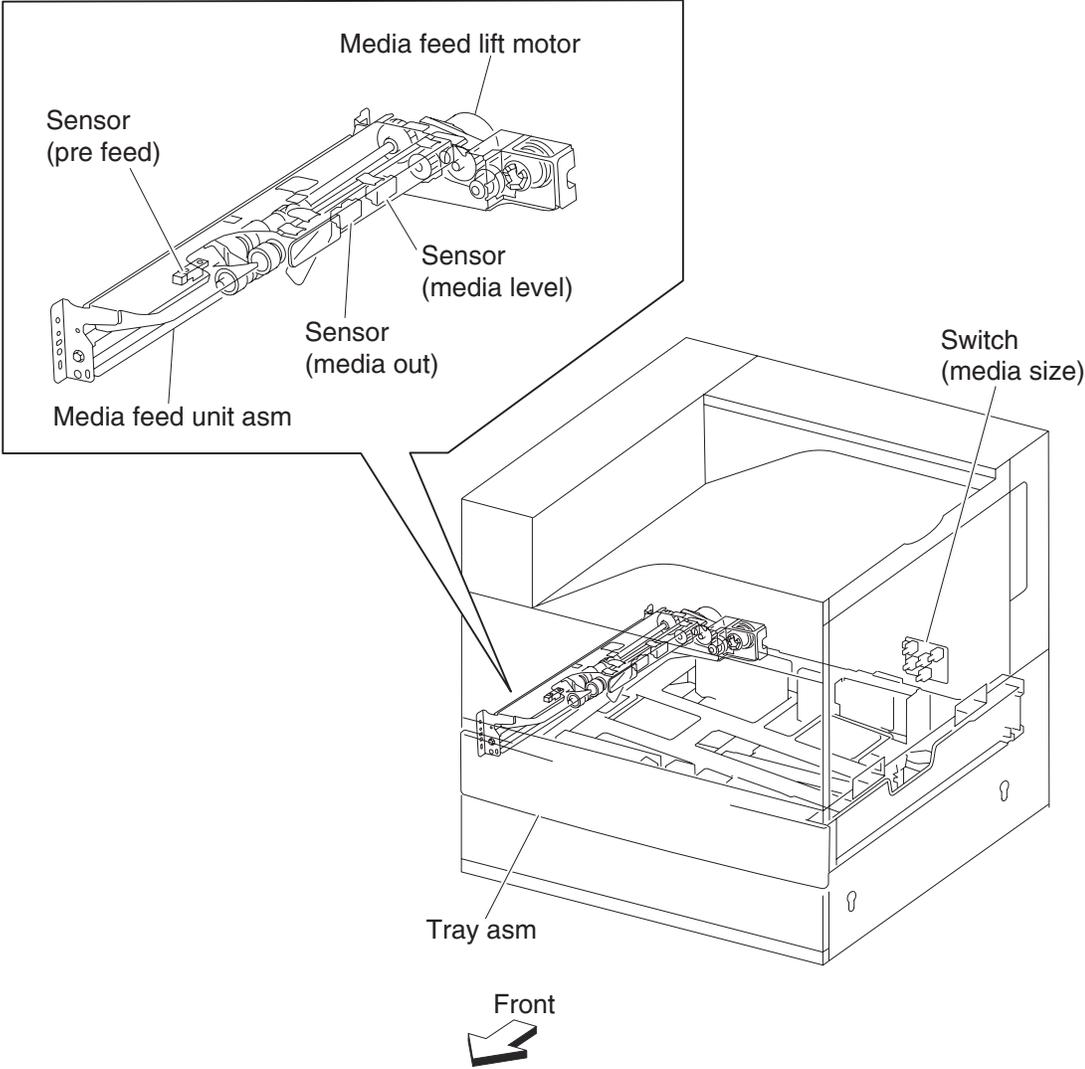
If media runs out in a media tray assembly, the actuator lowers and the actuator flag, unlocks the sensing area of the sensor (media out). The sensor light is transmitted. When the sensing area is blocked (media is present), the signal is off.

**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 unblocks the sensing area of the sensor (media level), the sensor detects that the media has been lifted.

**Sensor (pre-feed)**

This sensor detects a media jam in the media tray assembly by the media position and sensor on/off time. The sensor on/off states can be monitored by media passing through the sensor (pre-feed) sensing area.



## Multi-purpose feeder (MPF)

The MPF is a mechanical unit supplying media to the printer. The driving force from the transport motor of the dual drive motor assembly is transmitted to the MPF feed roll to feed media.

### MPF pick roll

The MPF pick roll feeds media set on the MPF.

### MPF pick roll

The MPF pick roll feeds media into the printer.

### MPF pick solenoid

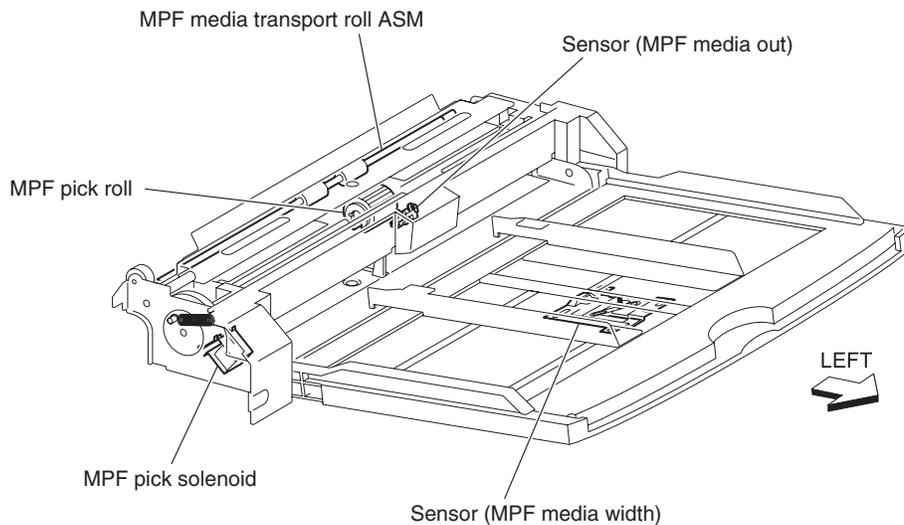
The MPF pick solenoid transmits the driving force from the main motor to the MPF pick roll.

### Sensor (MPF media out)

The sensor (MPF media out) detects whether media is present on the MPF.

### Sensor (MPF media width)

The MPF side guides detects the width (length in the main scanning direction) of media on the MPF.



## Detecting media size

The size of media on the MPF is transmitted by moving the MPF side guide, and is determined by the printer engine card assembly.

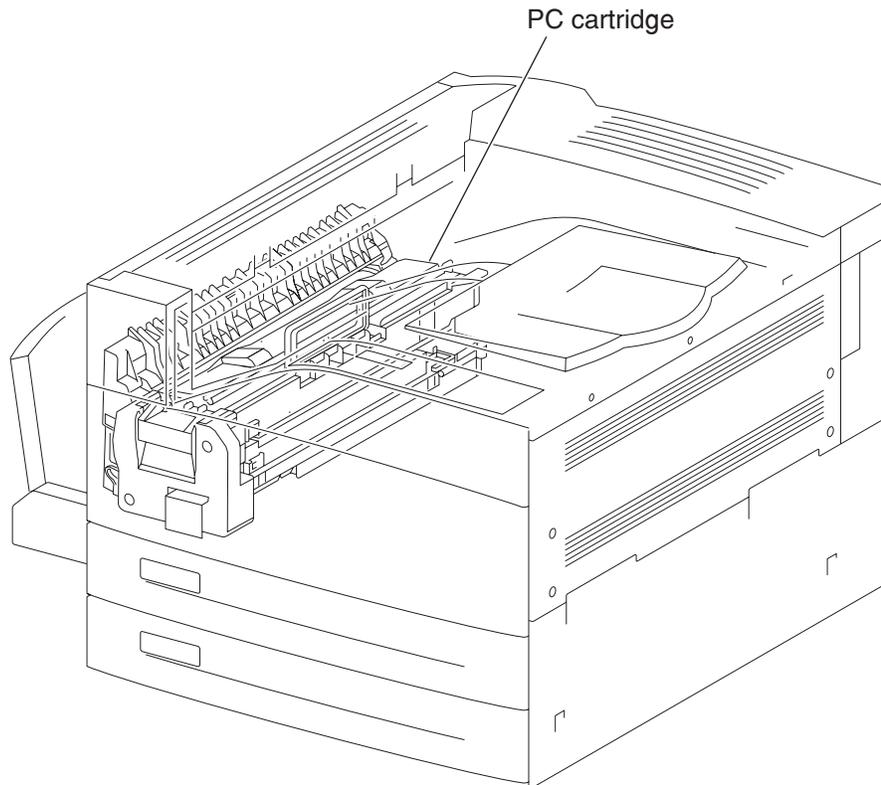
Media sizes that can be automatically detected are as follows:

Media size	Width (mm)	Feed length (mm)
Side-guide stopper (min.)	84	-
Media detection area (min.)	88.2	-
3.5" x 8.5"SEF	88.9	215.9
Postcard SEF	101.6	152.4
5.5" x 8.5" SEF	139.7	215.9
Postcard LEF	148	100
A6 LEF	148	105
A5 SEF	148	210
Postcard LEF	152.4	101.6
B6 LEF	182	128.5
B5 SEF	182	257
Monarch LEF	190.5	98.4
A5 LEF	210	148
A4 SEF	210	297
5.5" x 8.5" LEF	215.9	139.7
5.5" x 11" SEF(Letter)	215.9	279.4
5.5" x 13" SEF(Legal)	215.9	330.2
5.5" x 14" SEF(Legal)	215.9	355.6
DL LEF	220	110
C5 LEF	229	162
C4 SEF	229	324
Rectangular LEF	235	120
Com10 LEF	241.3	104.8
B5 LEF	257	182
B4 SEF	257	364
Executive LEF	266.7	184.2
16K LEF TFX(PRC)	267(270)	194(195)
8K SEF TFX(PRC)	267(270)	389(390)
8.5" x 11" SEF(Letter)	279.4	215.9
11" x 17" LEF	279.4	431.8
A4 LEF	297	210
A3 SEF	297	420
Stopper (max.)	303	-

## Transfer roll assembly

The transfer roll assembly is driven by direct contact with the drum of the PC cartridge.

The transfer roll assembly applies positive charges to the rear surface of the media when the media passes between the transfer roll assembly and the drum. The negatively charged toner image is attracted by positive charges on the rear surface of the media. Thus, the toner image is transferred from the drum surface to the media surface.



## Printhead assembly

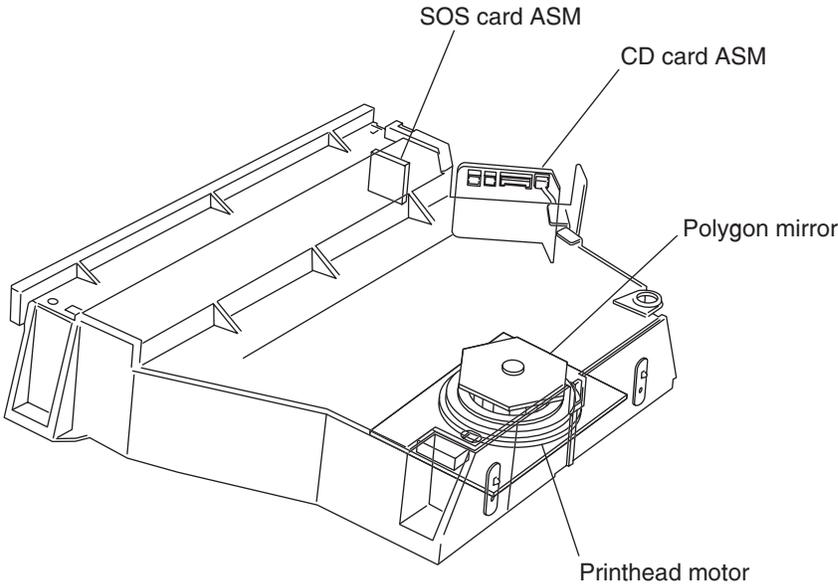
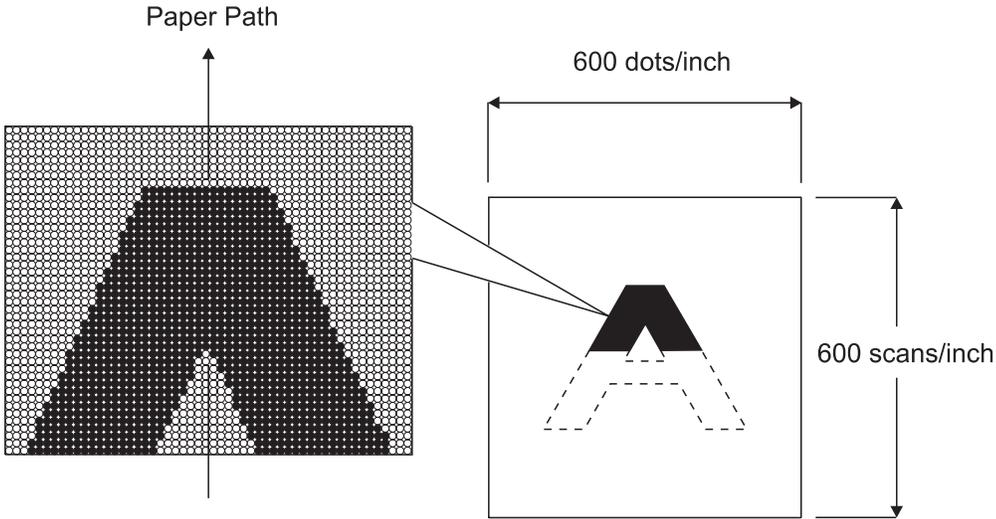
The printhead scans the drum surface with a laser beam. It consists of four components: laser diode (LD) card assembly, printhead motor, polygon mirror, and start of scan card assembly.

1. LD card assembly – generates a laser beam with the two LDs of LD1 and LD2. The beam is turned on or off according to a print data signal.
2. Printhead motor/polygon mirror – the polygon mirror is mounted to the shaft of the printhead motor, and is rotated at a high speed by the printhead motor. The mirror rotation shifts the incidence and reflection angles of a laser beam to scan the laser beam in the drum axial direction. The laser beam reaches the polygon mirror as it passes through the lens (L1), lens (L2), and window. The laser beam then arrives at the drum surface.
3. SOS card assembly – when a laser beam hits the SOS sensor on the SOS card assembly, the beam is converted to an electrical signal (SOS signal), and detects the initial position where a scan starts on each line.

When a laser beam is scanned across the drum surface from one end to the other while turning on and off the beam, one line of latent image is created. If the scanning by the laser beam is repeated while rotating the drum, a two-dimensional image is created. The resolution in the scanning direction (from right to left) is determined by the rotational speed of the printhead motor, depending on how quickly the laser is adjusted. The resolution in the

process direction (from top to bottom) is determined by the rotational speed of the printhead motor. (The higher the scanning speed becomes, the sooner the scanning of the next row can be started.)

Conceptual diagram of an image created by scanning



## **Fuser**

### **Heat roll**

The heat roll is a hollow metal tube with a coated surface. This tube is heated by the inner heater rod. The heat is applied to the media passing between the heat roll and pressure roll, fusing the toner on the media.

### **Pressure roll**

The pressure roll is a metal shaft coated with sponge rubber. Pressure is applied to the media between the pressure roll and heat roll, pressing the melted toner against the media.

### **Heater lamp**

The heater rod of the lamp is compressed of a quartz glass tube containing a heater coil. A terminal is mounted to the end of the heater rod via a harness. Three heater lamps are provided: the main heater rod to heat entire heat roll, and the sub heater lamp 1 and 2 to heat the central portion of the heat roll.

### **Thermostat**

If the heat roll temperature exceeds the preset temperature, the thermostat cuts off the circuits of the main heater rod and sub heater rods 1 and 2.

### **Center thermistor**

The center thermistor monitors the surface temperature of the media-feed portion of the heat roll to control on/off of the main heater rod and sub heater rods 1 and 2.

### **Rear thermistor**

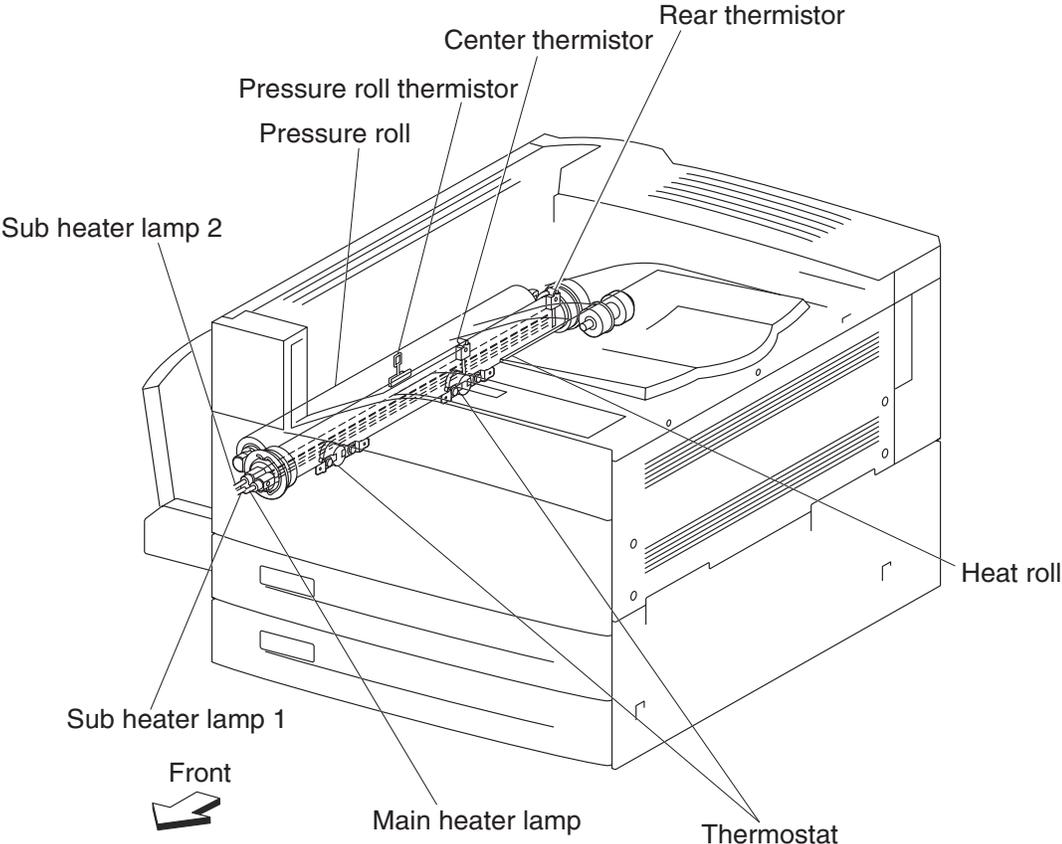
The rear thermistor monitors the surface temperature at the rear side of the heat roll to switch the heater rod to use.

### **Pressure roll thermistor**

The pressure roll thermistor monitors the temperature of the pressure roll to control the idling time for fuser warm-up before printing.

**Fuser exit sensor**

The fuser exit sensor detects the arrival of media at the detection point in the exit area of the fuser, and also detects the ejection of media from this point.



## Exit

Exit 1 ejects printed media from the printer to the standard bin 1. With the optional exit 2 installed, it is also possible to eject media to the standard bin 2 by changing the orientation of the diverter gate on the exit 1.

### Dual drive motor assembly

Drives the exit 1 media exit roll assembly that feeds media to each bin. With the optional duplex installed, this motor also functions to reversely feed media to the duplex.

### Exit 1 media exit roll assembly

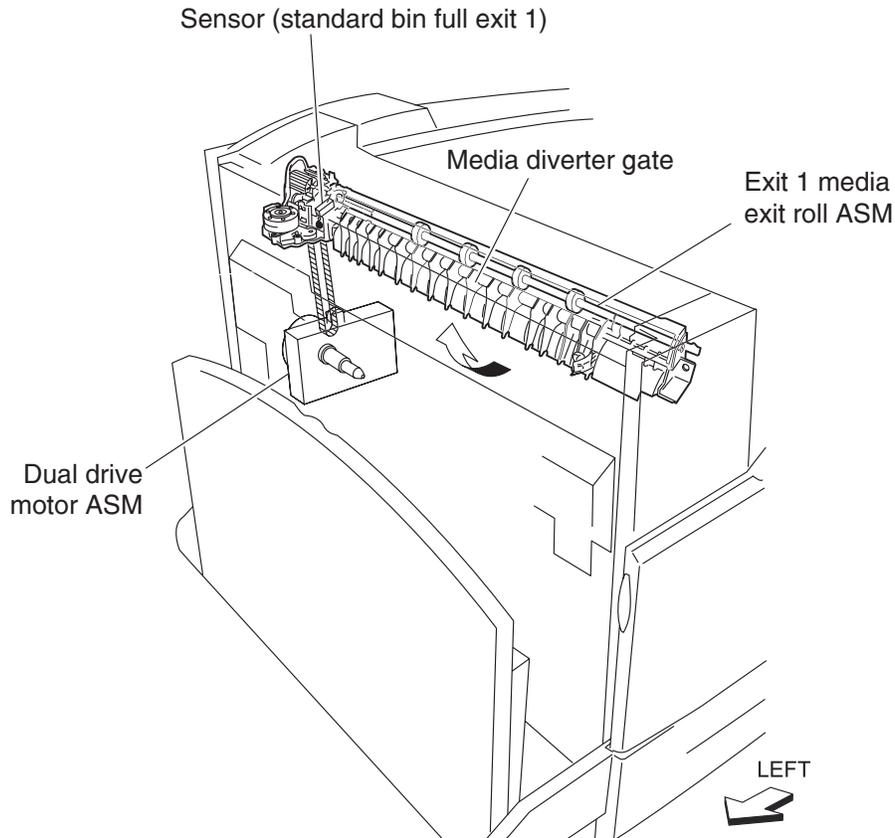
The exit 1 media exit roll assembly feeds printed media from the fuser to the standard bins.

### Sensor (standard bin full exit 1)

The sensor (standard bin 1 full) detects whether the exit 1 face down tray is full by moving the actuator up and down.

### Media diverter gate

The media diverter gate switches the media transport path. When the media diverter gate is lifted, media is fed to the standard bin exit 1. When it is lowered, media is fed to the standard bin exit 2.



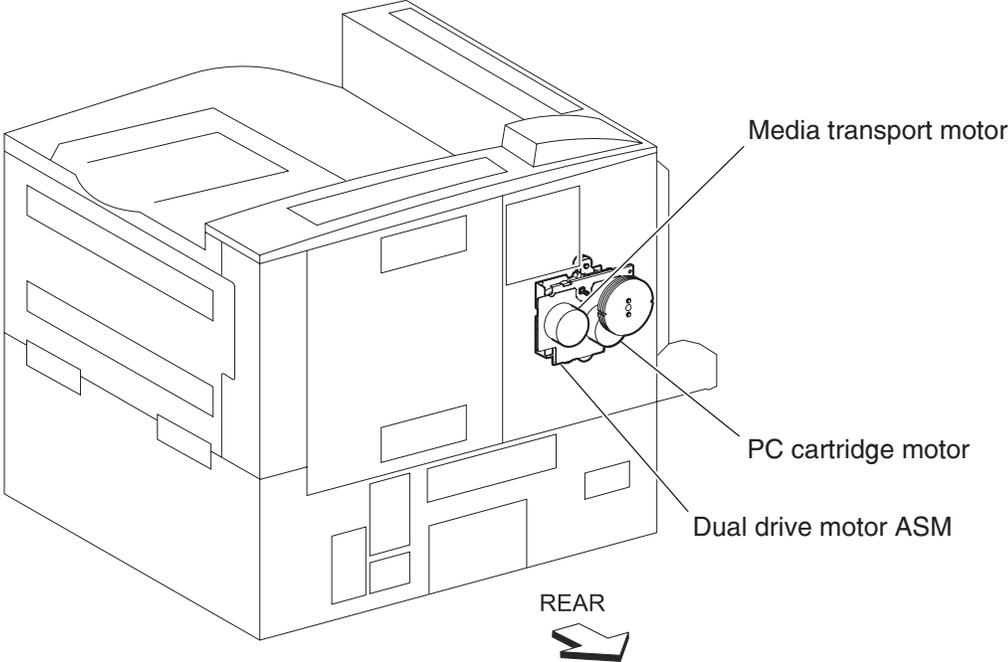
**Drive**

**Media transport motor**

The media transport motor is a DC brushless motor that drives the exit 1 media exit shaft assembly, fuser assembly, registration roll assembly, and transport roll assembly.

**PC cartridge motor**

The drum cartridge motor is a DC brushless motor that drives the drum cartridge, mag roll and transfer roll assembly.



## ***Electrical components and controller***

### **Switch (main power)**

Turning on/off the switch, power supplies/cuts off the main power of the printer.

### **Finisher AC output**

Supplies power to the finisher from the main LVPS (low voltage power supply) card assembly.

### **Switch (printer front door interlock) and switch (printer left door interlock)**

The switch is a safety switch to cut off a 24 VDC power supply from the LVPS card assembly to the high volt power supply (HVPS) card assembly, printer engine card assembly and to the dual motor assembly, while the printer front door assembly and the printer left door assembly are open.

### **Switch (PC Cartridge interlock)**

The switch (PC interlock) 5 V interlock is a safety switch to cut off a 5 VDC power supply from the LVPS card assembly to the printhead while the PC cartridge is removed.

### **Switch (printer left lower door interlock)**

The switch (left lower door interlock) detects open or close of the printer left lower door assembly.

### **Fuser cooling fan**

The fuser cooling fan discharges air from the printer to prevent excessive temperature increase.

### **LVPS card assembly**

The LVPS card assembly generates low voltages (5 V and 3.3 V for logic circuits, 5 V for laser diodes, and 24 V for motors/clutches) from AC power. It also contains the fuser relay to feed/cut off AC power to the heater rod of the fuser assembly.

### **HVPS card assembly**

The HVPS card assembly generates AC power, a high DC voltage, and feeds them to the charge roll, development (magnet roll), transfer roll assembly.

### **Printer engine card assembly**

The printer engine card assembly controls printing operation based on the communication with the RIP card assembly and on sensor/switch information. It also controls optional module boards.

### **RIP card assembly**

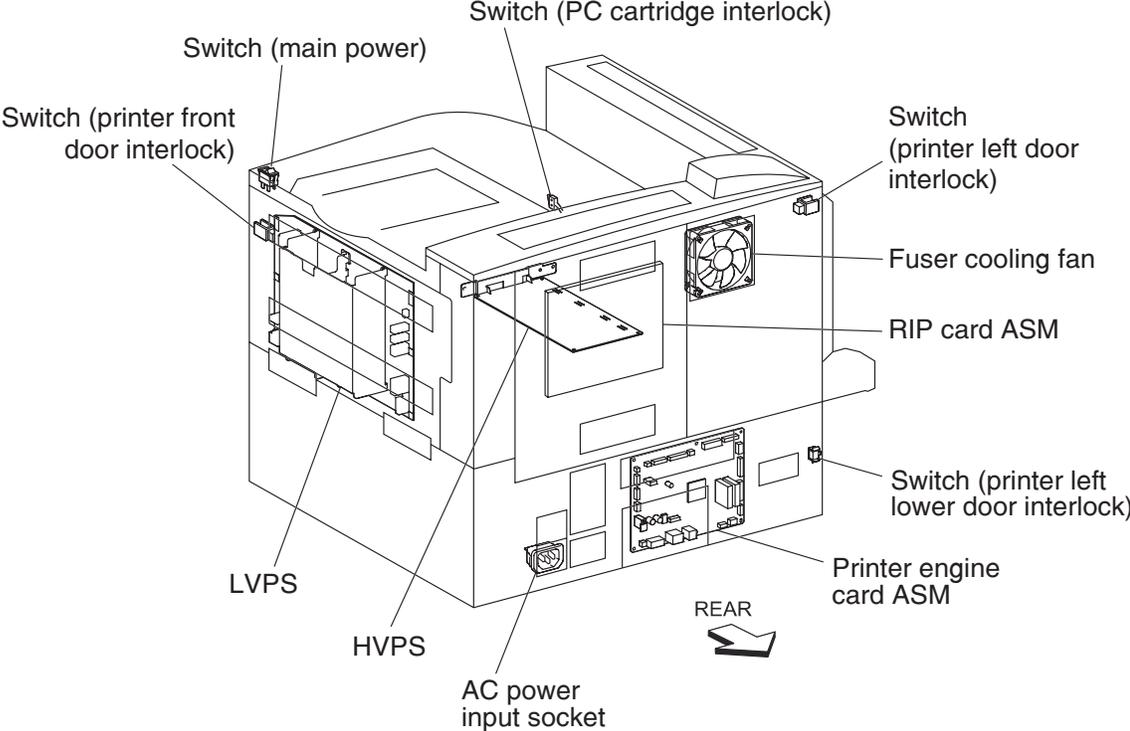
The RIP card assembly connected to the printer engine card assembly controls the entire system.

### **Transport roll assembly**

The transport roll assembly feeds media from tray 2 or an optional tray to the registration roll assembly.

### Registration roll assembly

The registration roll assembly feeds media from all trays to the PC cartridge or fuser.



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## Control

### **Media size control**

Media tray assembly feeding

The following table gives the states (on/off) of the switches on the switch (media size), corresponding to the media sizes of the media tray assembly.

**Note:** The switches on the switch (media size) are denoted by “S/W2”, “S/W4”, “S/W3”, “S/W5”, and “S/W1” respectively from the left side.

Media size	Analog switch				Digital switch
	S/W1	S/W2	S/W3	S/W4	S/W5
No media tray assembly	off	off	off	off	off
5.5" x 8.5"SEF/A5 SEF	off	off	on	off	off
B5 SEF	off	off	on	on	on
8.5" x 13"SEF	off	on	off	on	off
8.5" x 14"SEF	off	on	off	on	on
A4 SEF	off	on	on	off	off
8.5" x 11"SEF	off	on	on	off	on
A4 LEF	on	off	on	off	off
A3 SEF	on	off	on	on	off
B5 LEF/executive LEF	on	on	off	off	on
8K SEF(TFX/GCO)	on	on	off	on	off
B4 SEF	on	on	off	on	on
8.5" x 11"LEF	on	on	on	off	off
16K LEF(TFX/GCO)	on	on	on	off	on
11" x 17"LEF	on	on	on	on	on

## Printhead control

### Rotation of printhead motor

The on/off control of the printhead motor is performed according to the mode of operation as shown below.

Operation mode	PRINTHEAD motor on/off
Standby mode	Always off
Print mode	Turns on upon receiving the signal from the controller, and turns off after a preset time has passed from the end of printing. Also turns off if a print command is not received within 30 seconds from the reception of the signal.
Sleep mode	Always off

### Determination of printhead ready

The printhead goes into ready state after the specified period passes since the reception of the printhead MPA start signal and the SOS cycle exceeds the reference value.

### Printhead reference value

Printhead reference value	Description
Ready reference value	SOS signal interval (equivalent to 98% or more of the rated RPM of the printhead motor)
Fail reference value	SOS signal interval (less than 98% of the rated rpm of the printhead motor)

## Fuser control

### Fuser control method

The on/off control of the main/sub heater lamps is performed based on the fuser control temperature. The fuser transmits between the five states (warm up, ready, standby, print, and low power) depending on the heat roll surface temperature or printer conditions.

The fuser temperature control starts when the fuser ready in the LVPS card assembly is turned on after a preset time period has passed from power on. If a failure occurs, the heater lamps are turned off, the fuser ready is turned off, and then the fuser temperature control is stopped.

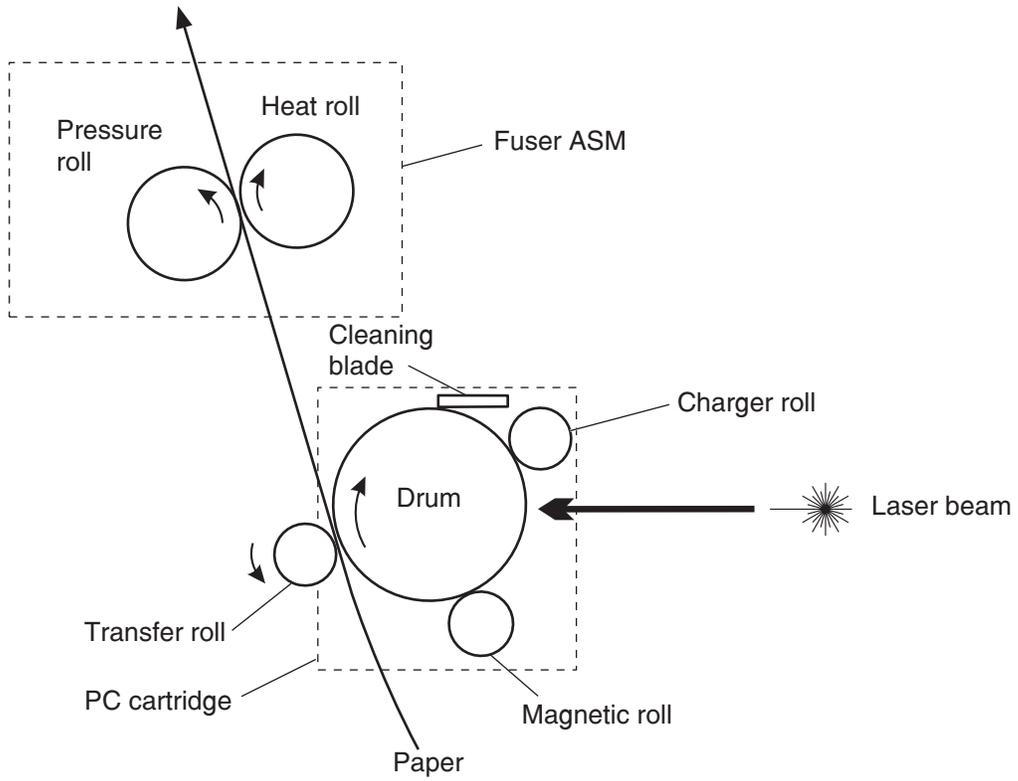
### Main/sub heater lamps on/off control

The center and rear thermistors detect the heat roll surface temperature (fuser temperature) to regulate the temperature at the target control temperature by turning on or off the main/sub heater lamps.

### Fuser warm-up

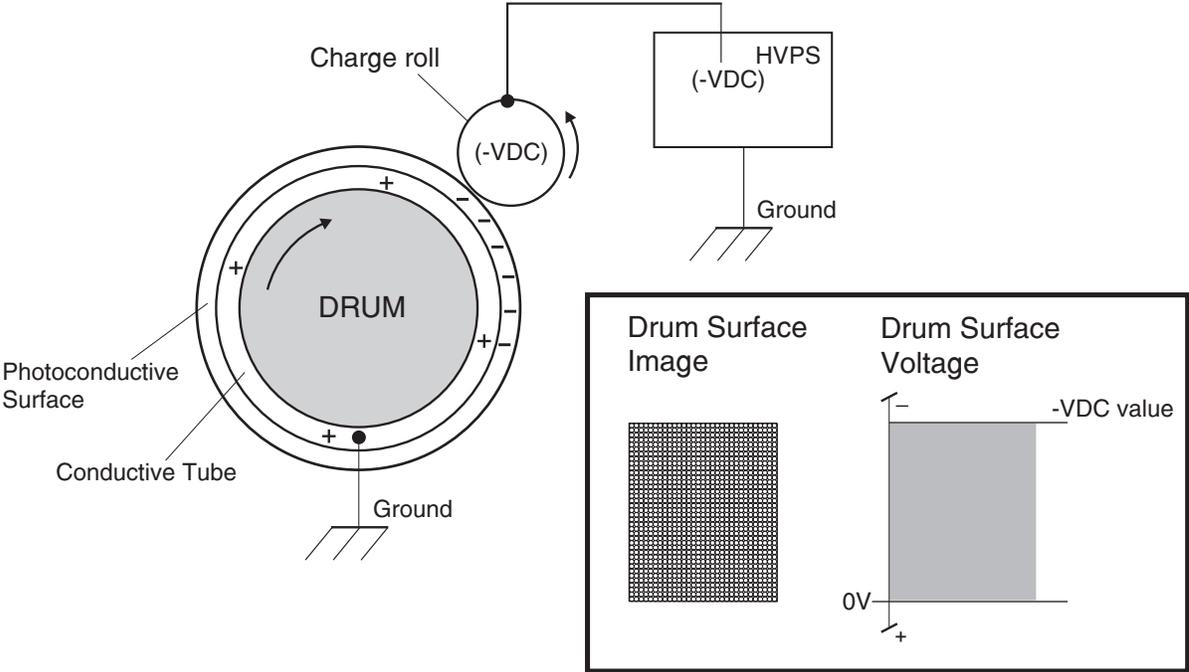
The fuser warm-up starts at the time of power on, interlock open or close, jam reset, or return from the low power mode, and ends when the ready temperature is attained, when a failure occurs, or when executing diagnosis.

### Xerographic Process During a Print Cycle

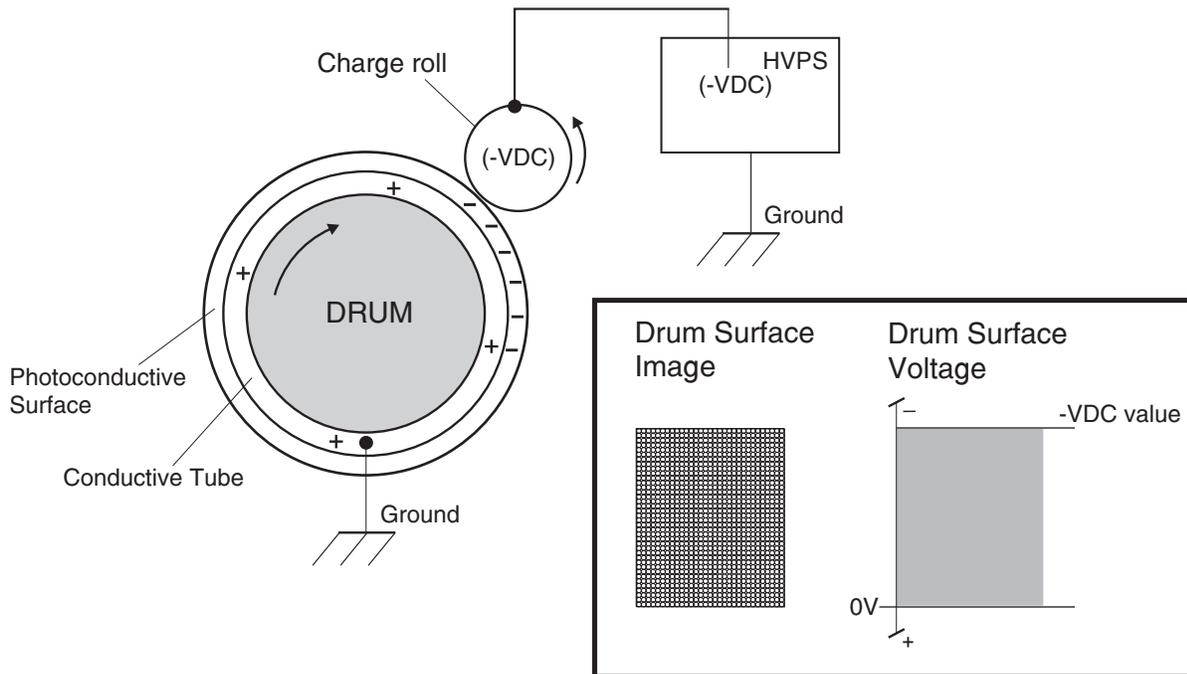


**Charge**

The Charge Roll 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 remains in darkness. Light striking the drum discharges the surface charge.



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 (discussed in *Step 6. Clean*).

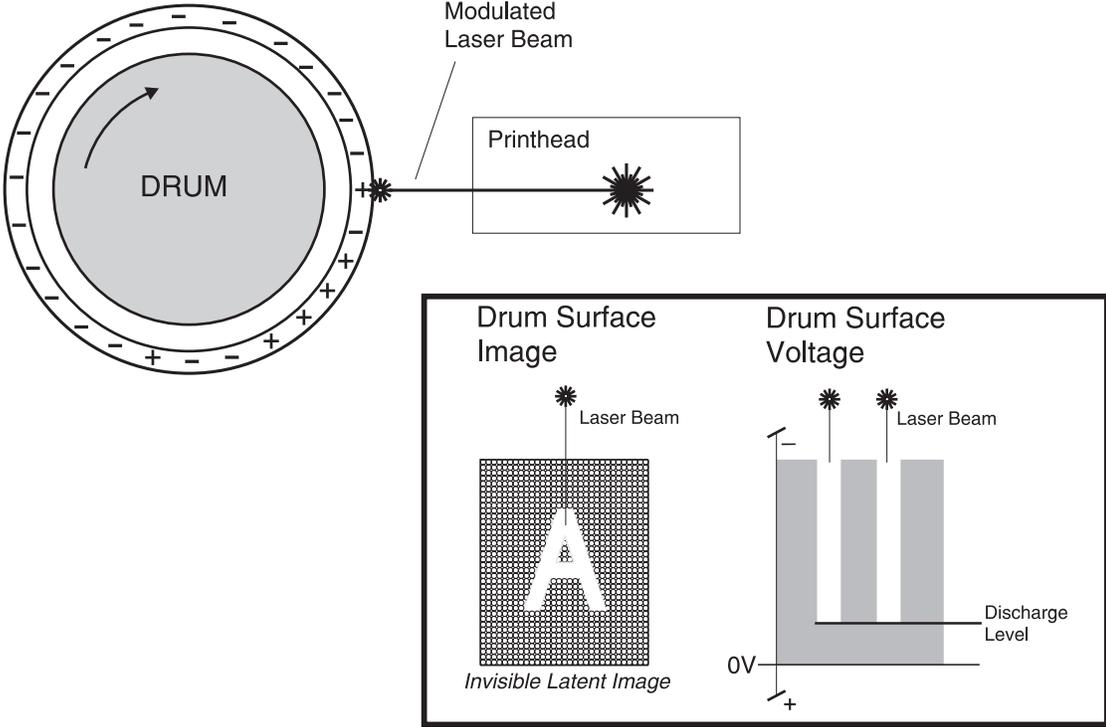


## Exposure

The Printhead generates a beam of laser light. Image data received from the RIP card assembly modulates this beam, 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 beam scans the negative charged drum surface. Whenever the print controller sends a command to print a black pixel, the laser 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.

The Printhead also helps to clean and prepare the drum by scanning the surface of the drum at the beginning of each individual printer cycle. This action discharges a residual DC charge that may still remain on the Drum from the last print cycle.



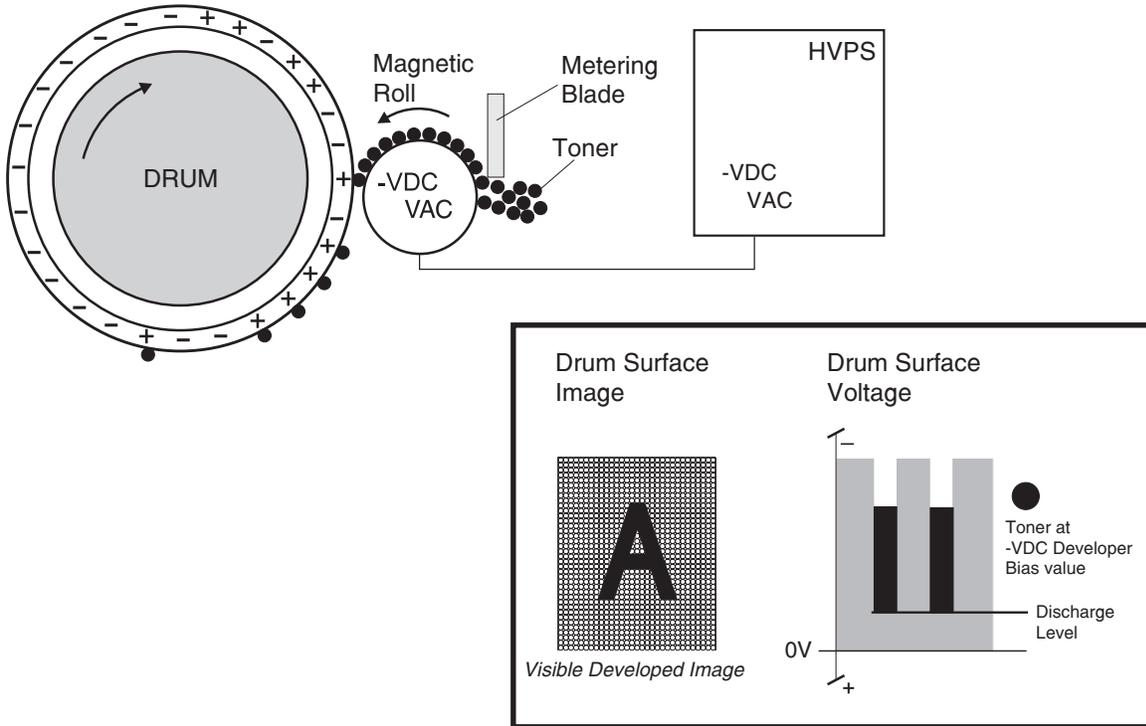
**Development**

The toner contained within the PC Cartridge has a magnetic property that causes it to adhere to the Magnetic Roll. The Metering Blade spreads the toner into a very thin layer on the Magnetic Roll. Friction between the Magnetic Roll and the CM Blade generates a small electrical charge that is transferred to the toner.

The surface of the Magnetic Roll is made up of a thin sheet of conductive material. The HVPS supplies the Magnetic Roll with two voltages; a DC voltage and an AC voltage. The DC voltage is used to transfer toner from the Magnetic Roll to the surface of the drum. The AC voltage agitates the toner on the Magnetic Roll, making toner transfer easier.

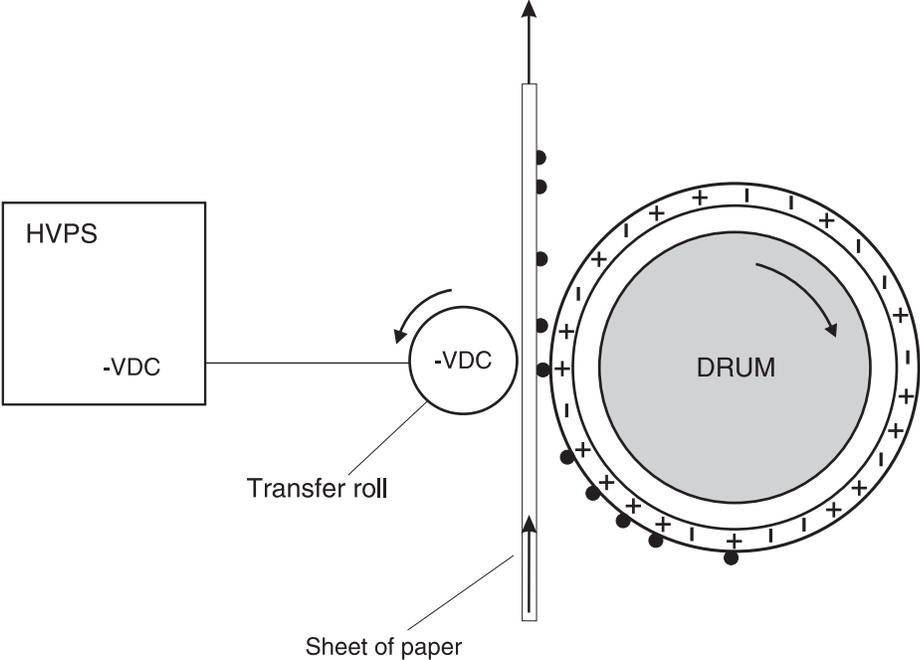
The Magnetic Roll maintains a negative DC electrical potential. Negative charged areas of the drum have a lower electrical potential, or higher relative negative value than the Magnetic Roll. Discharged areas of the drum have a higher electrical potential, or lower relative negative value, than the Magnetic Roll. A discharged point on the surface of the drum now appears less negative in relation to the negative charge on the Magnetic 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. There is now a visible toner image on the drum surface. The image is called a *developed* image.



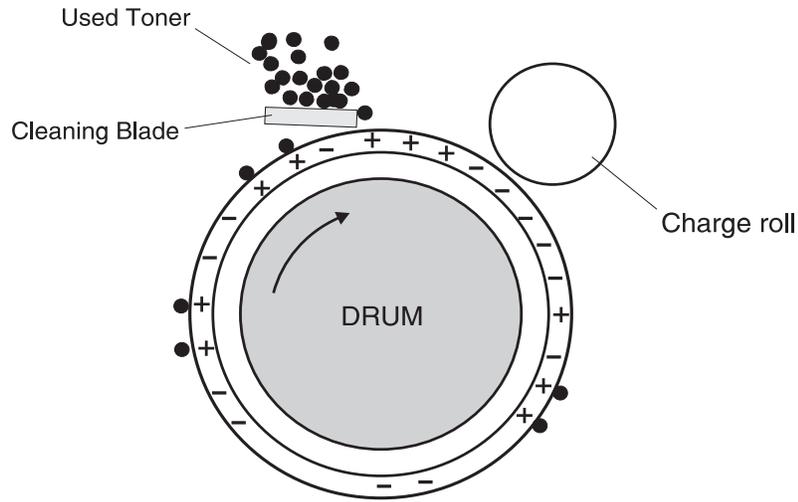
**Transfer**

As the paper travels between the Transfer Roll and the drum surface, the Transfer Roll applies a positive charge to the back of the printing paper. This positive charge transfers the negative charged toner image from the drum surface to the top surface of the paper. The toner image is now on the paper and the paper is now stuck to the drum surface due to the relative electrical differences between the negative electrical charge of the inner conductive layer of the drum and the positive electrical charge of the paper.



### Cleaning

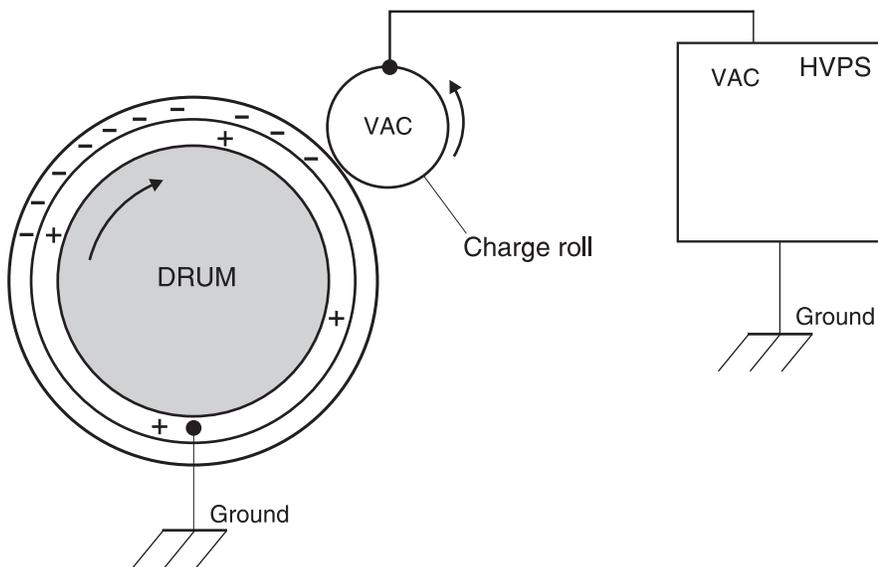
The Cleaning Blade removes any toner that remains on the drum after the transfer process. The toner that the Cleaning Blade removes is collected inside the sealed PC Cartridge and reused.



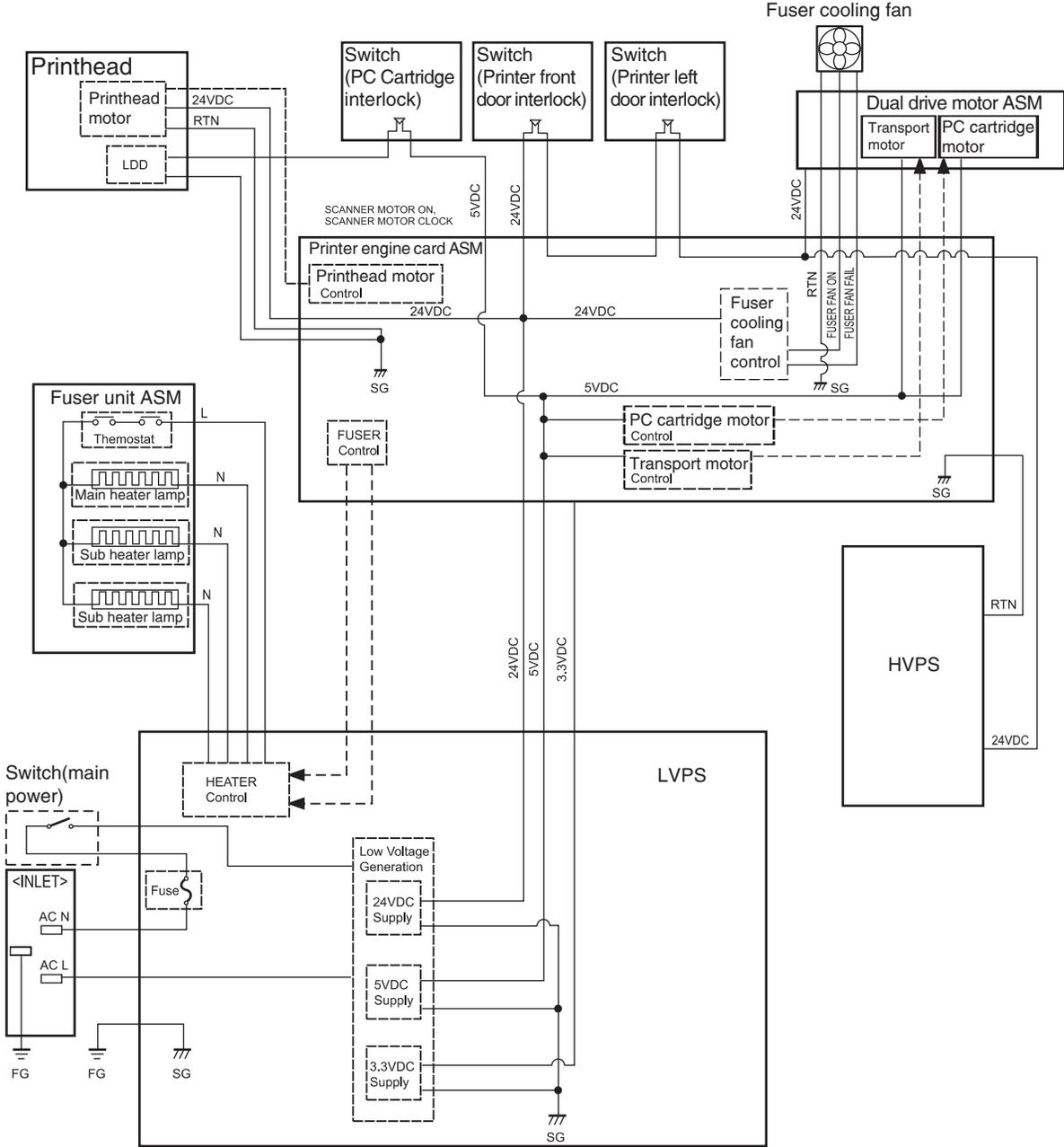
### Discharge

At both the start and the end of each individual printer cycle, the HVPS supplies the charge roll with an AC voltage that is used to electrically clean the drum. The AC voltage removes any residual DC charge that was left from the previous print cycle.

At the beginning of each individual printer cycle, the Printhead scans the surface of the drum, further discharging any residual DC charge that may be left on the drum.



# Safety system diagram





## 4. Repair information

**Warning:** Read the following before handling electronic parts.

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### 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.

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## Removal procedures



**CAUTION:** Remove the power cord from the printer or electrical outlet before connecting or disconnecting 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. The printer weighs approximately 41 kg (90.2 lbs) and requires at least two people to lift it safely. Make sure your fingers are not under the printer when you lift or set the printer down.

Parts removal and replacement procedures are described in this chapter.

**Note:** Parts are controlled as spare parts. When servicing parts for which no procedure is described, observe the assembly before starting the service.

**Note:** Though the optional parts are assumed to be removed, they may not be removed if not required for the purpose of service.

### ***Before starting service work***

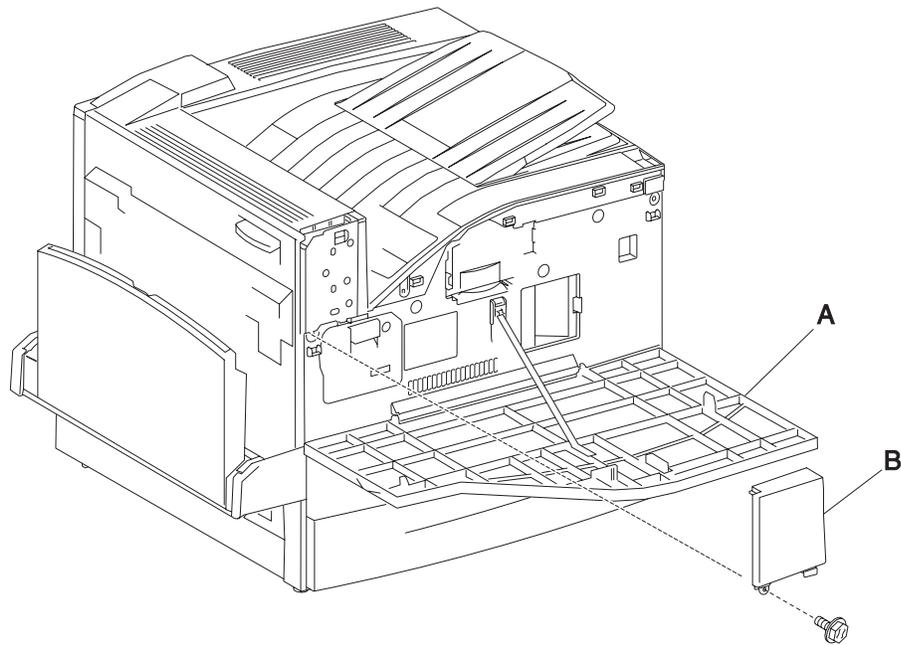
**CAUTION:** While performing service around the fuser assembly, ensure the fuser area has cooled down.

**Note:** A wide variety of screws are used, make note of their positions during service.

## Printer front left cover removal

**Note:** First remove the exit 2 unit assembly, if equipped. Refer to the *Options Service Manual*.

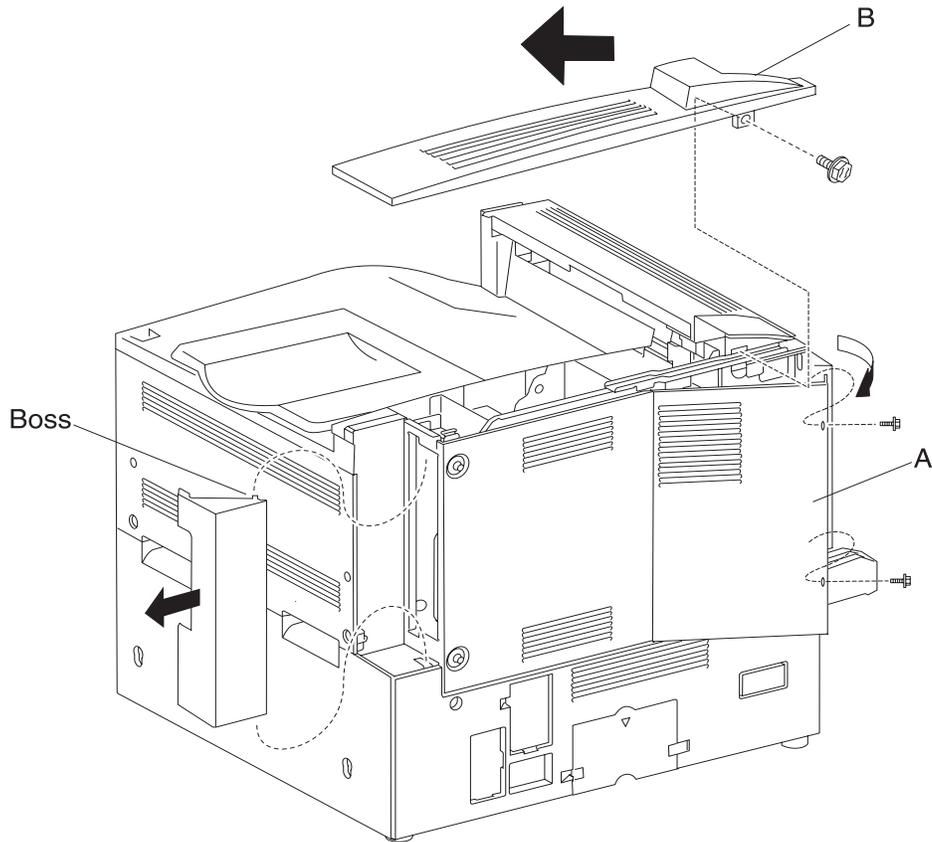
1. Open the printer front door assembly (A).
2. Remove the one screw securing the front left cover (B) to the machine.
3. Remove the front left cover (B).



### Top rear cover removal

1. Remove the cable hookup cover. **“Cable hookup door removal” on page 4-14**
2. Remove two screws securing the rear motor cover (A).
3. Open and remove the rear motor cover (A).
4. Remove one screw securing the top rear cover (B).
5. Remove the top rear cover (B) by sliding it left in the direction of the arrow, then lift up.

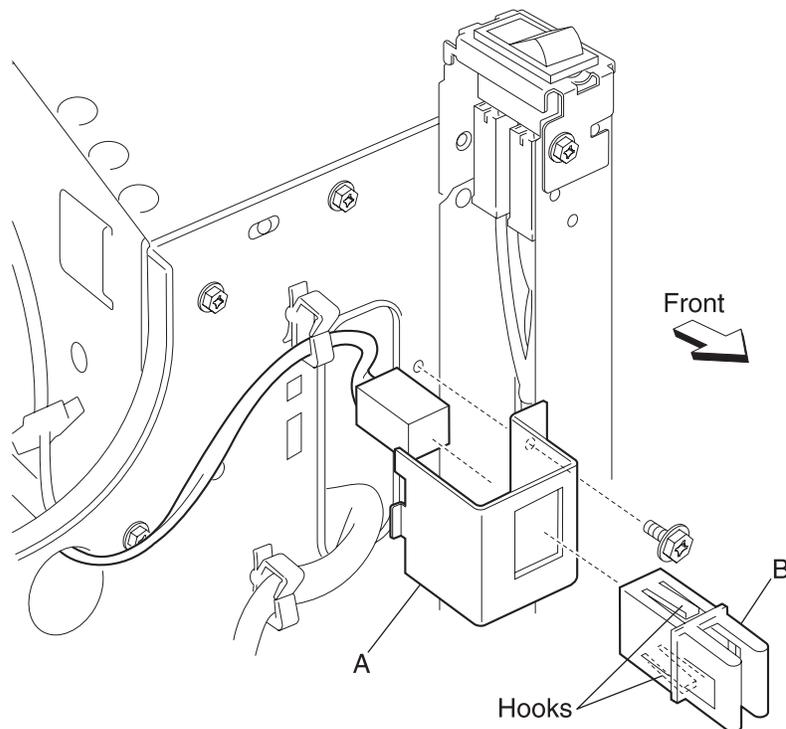
**Note:** The cable hookup door, if still installed, becomes detached.



## Switch (printer front door interlock) removal

**Note:** First remove the bridge unit and finisher, if equipped. Refer to the *Finisher Service Manual*.

1. Remove the top cover assembly. Go to **“Top cover assembly removal” on page 4-8.**
2. Remove the printer front door assembly. Go to **“Printer front door assembly removal” on page 4-9.**
3. Remove the front left cover. See **“Printer front door assembly removal” on page 4-9.**
4. Remove the front inner cover. See **“Front inner cover removal” on page 4-11.**
5. Remove one screw securing the bracket (A).
6. Disconnect the connector from the switch (printer front door interlock) (B).
7. Release the hooks securing the switch (printer front door interlock) (B) to the bracket (A).
8. Remove the switch (printer front door interlock) (B).



## Operator panel assembly removal

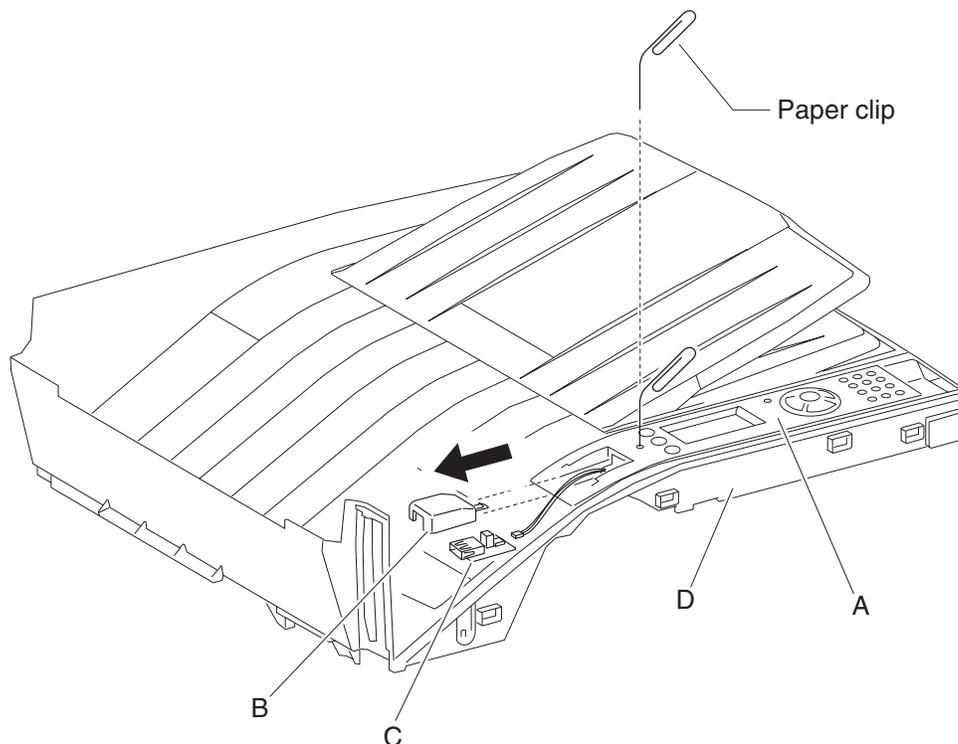
**Warning:** In the event of replacement of any one of the following components:

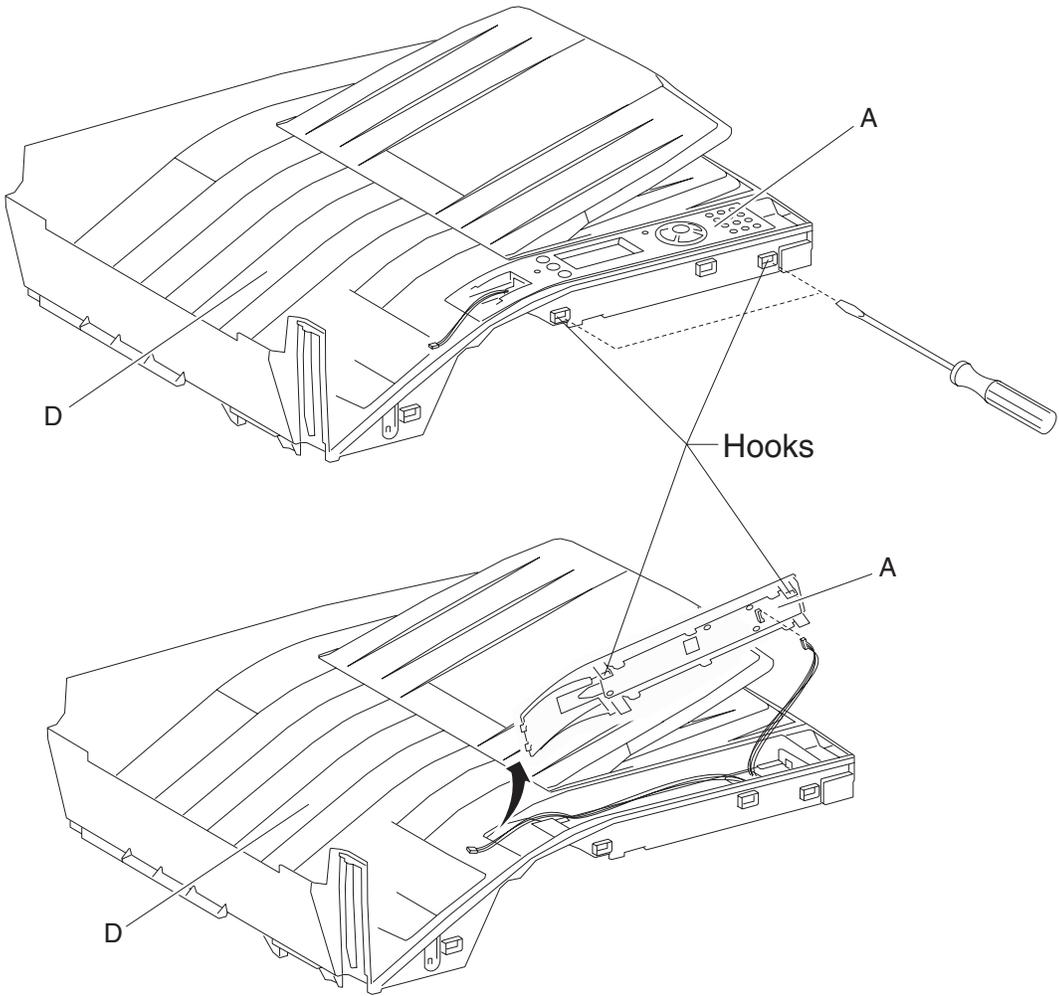
- Operator panel assembly
- RIP card assembly
- Interconnect card assembly

Only replace one component at a time. Replace the required component and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one or the printer will be rendered inoperable.

**Warning:** Never install and remove components listed above as a method of troubleshooting components. Once a component has been installed in a machine, it can not be used in another machine. It must be returned to the manufacturer.

1. Insert the end of a paper clip into the hole on the operator panel (A) to release the USB connector cover (B).
2. Move the USB connector cover (B) to the left in the direction of the arrow.
3. Remove the USB connector cover (B).
4. Remove the USB connector (C).
5. Disconnect the harness from the USB connector (C).
6. Release the two front hooks by inserting a flat tipped screwdriver into the two slots on the top cover assembly (D).
7. While releasing the hooks, lift the operator panel (A) upward in the direction of the arrow.
8. Remove the operator panel (A).
9. Disconnect the harness from the operator panel (A).

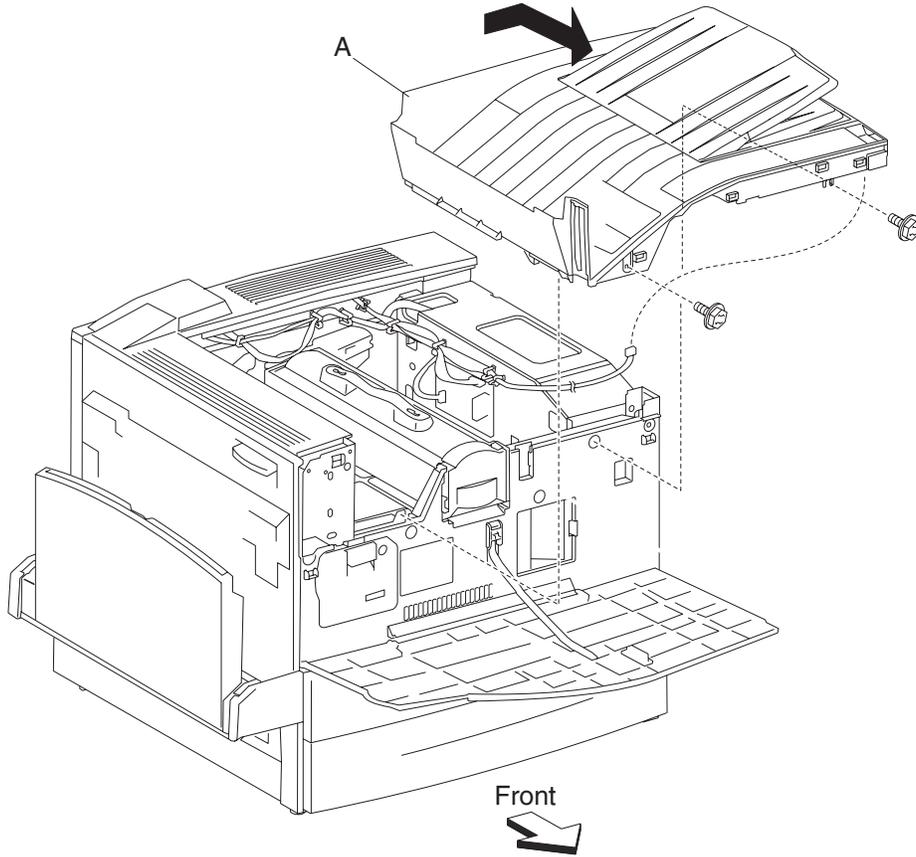




## Top cover assembly removal

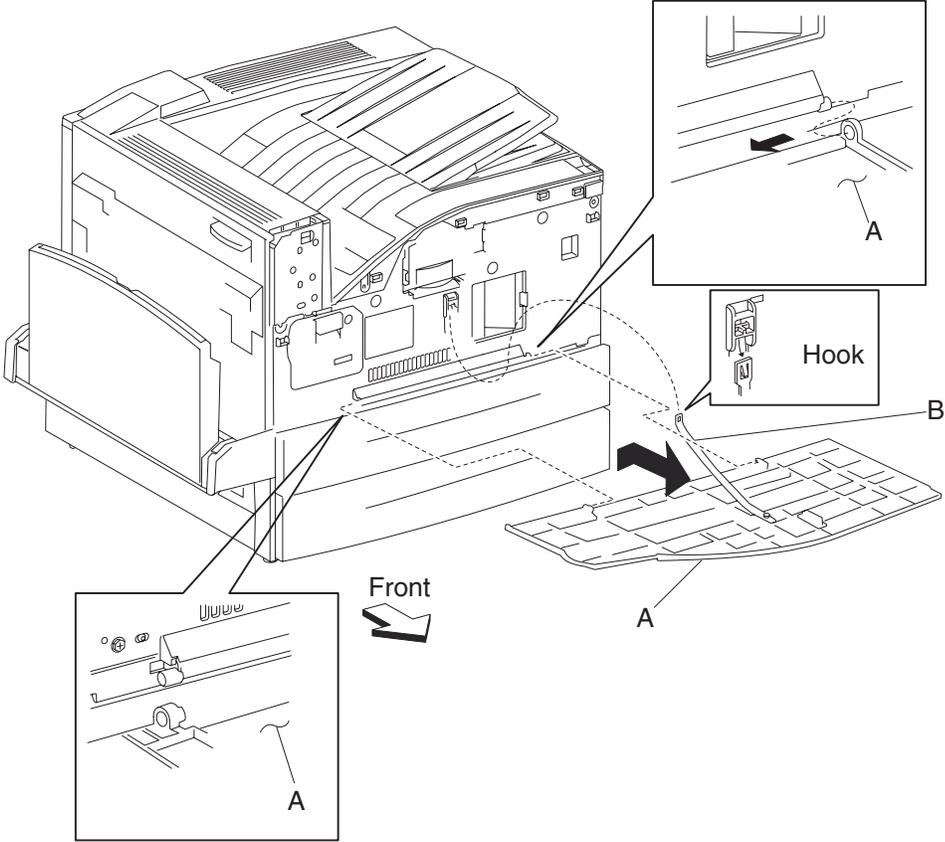
**Note:** First remove the bridge unit and finisher, if equipped.

1. Remove the operator panel assembly. See **“Operator panel assembly removal”** on page 4-6.
2. Remove the printer front door assembly. See **“Printer front door assembly removal”** on page 4-9.
3. Remove the front left cover. See **“Printer front door assembly removal”** on page 4-9.
4. Remove two screws securing the top cover assembly (A).
5. Remove the top cover assembly (A) by sliding it to the right and then forward in the direction of the arrow.



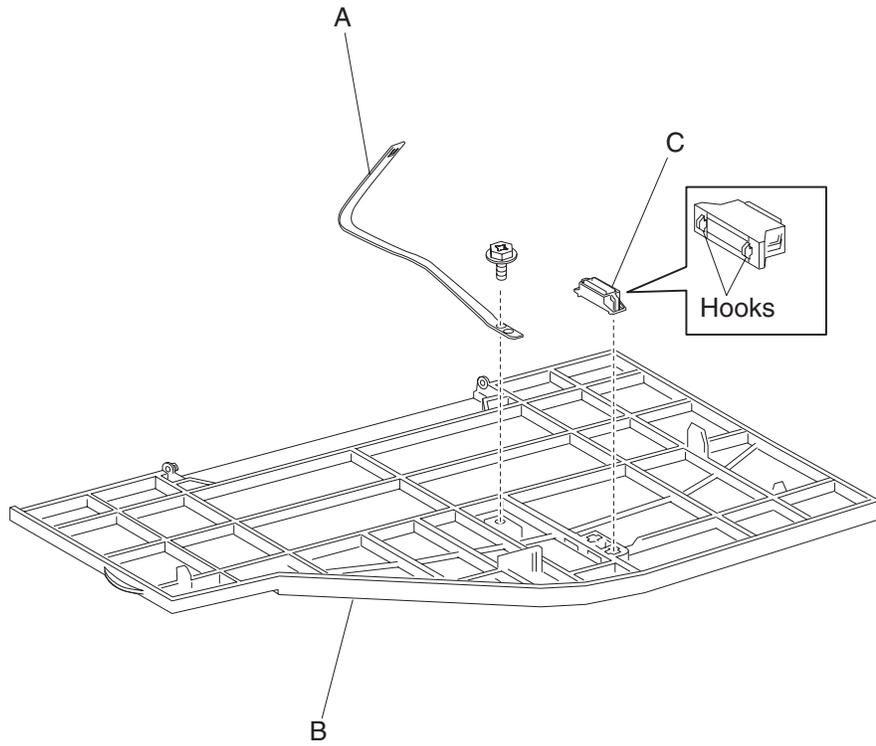
**Printer front door assembly removal**

- 1. Open printer front door assembly (A).
- 2. Remove the front door support strap (B) securing the printer front door assembly (A) to the printer by releasing the plastic hook.
- 3. With the front door support strap (B) disconnected, place the printer front door assembly (A) in the lower most position.
- 4. Slide the printer front door assembly (A) first to the right (as shown by arrow #1) to remove the printer front door assembly (A) from the right hinge point.
- 5. Slide the printer front door assembly (A) to the left (as shown by arrow #2) to remove the printer front door assembly (A) from the left hinge point.
- 6. Raise the printer front door assembly to it's upright position, and remove it.



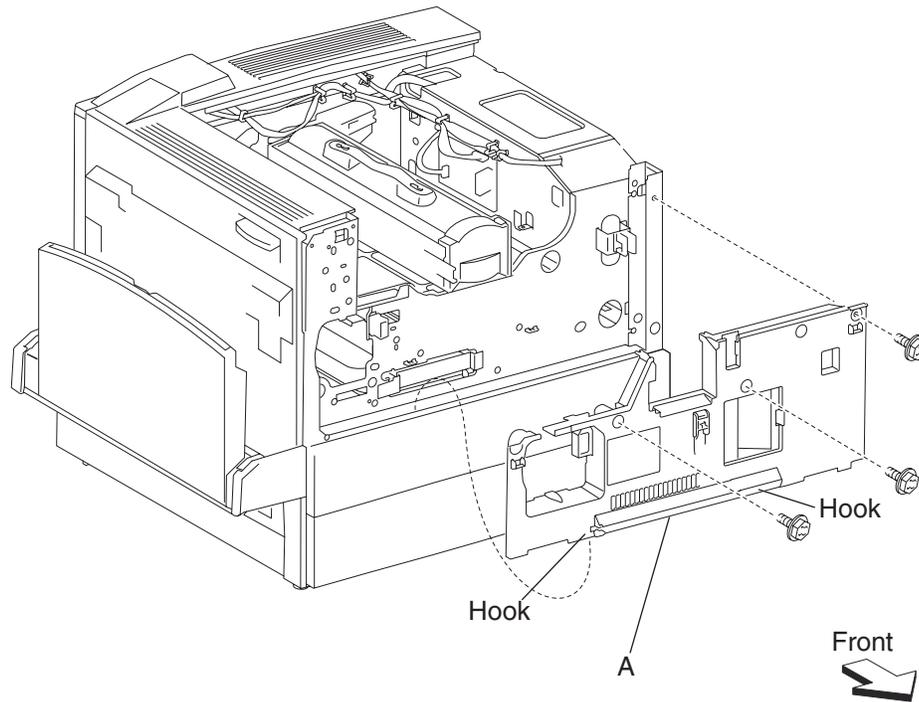
### **Front door support strap and front door magnetic catch removal**

1. Remove the printer front door assembly. See **“Printer front door assembly removal”** on page 4-9.
2. Remove one screw securing the front door support strap (A) to the printer front door assembly (B).
3. Remove the front door support strap (A).
4. Release two hooks on the printer front door assembly securing the front door magnetic catch (C).
5. Remove the front door magnetic catch (C).



## Front inner cover removal

1. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
2. Remove the printer front door assembly. See **“Printer front door assembly removal”** on page 4-9.
3. Remove the front left cover. See **“Printer front left cover removal”** on page 4-3.
4. Remove the PC cartridge.
5. Remove the three screws securing the front inner cover (A).
6. Remove the front inner cover.



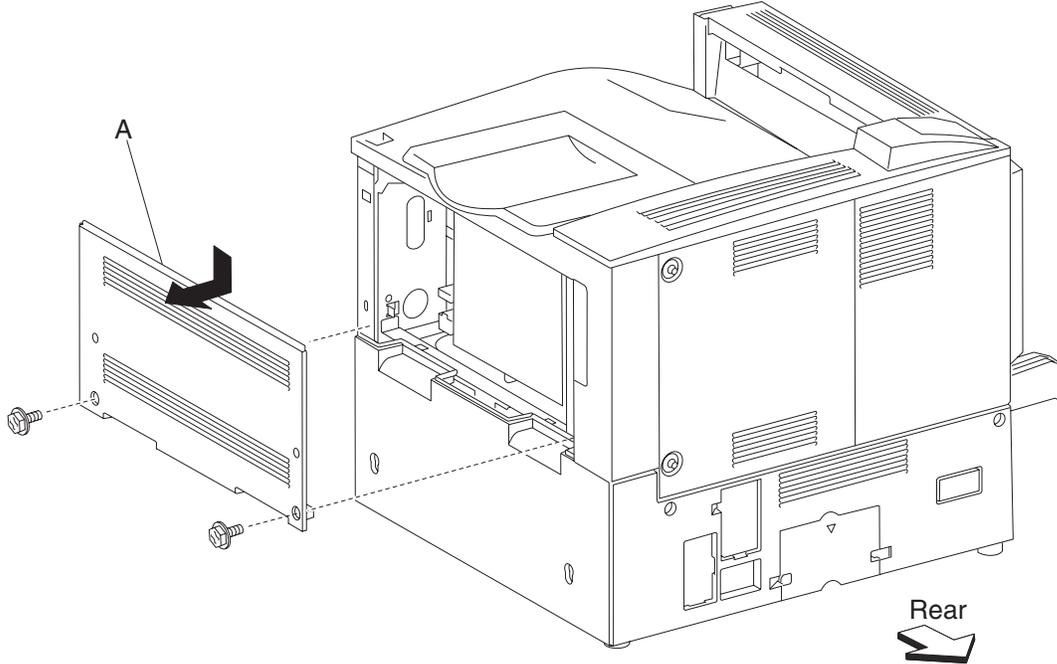
**Note:** To reinstall the front inner cover (A), start with the four plastic hooks on the bottom of the front inner cover.

## ***Right upper cover removal***

**Note:** First, remove the bridge unit, finisher and finisher docking bracket, if equipped.

1. Remove two screws securing the right upper cover (A).
2. Move the upper edge of the right upper cover (A) downward and outward as shown by the arrow.
3. Move the lower edge of the right upper cover (A) downward to release the right upper cover (A).
4. Remove the right upper cover (A).

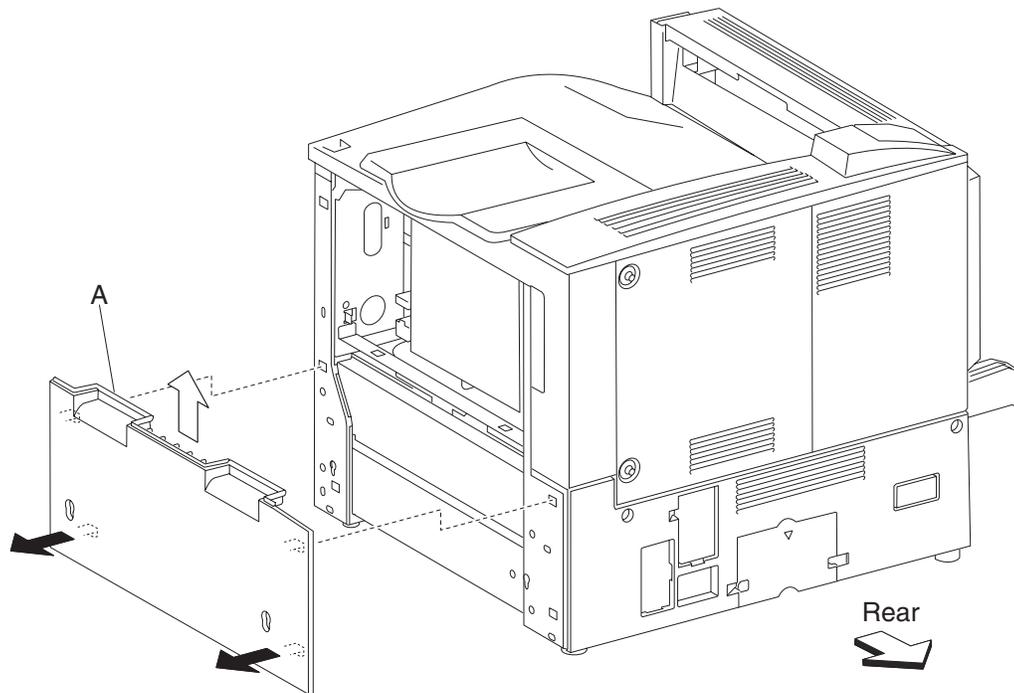
**Note:** The right upper cover (A) may take some extra force to remove.



## Right lower cover removal

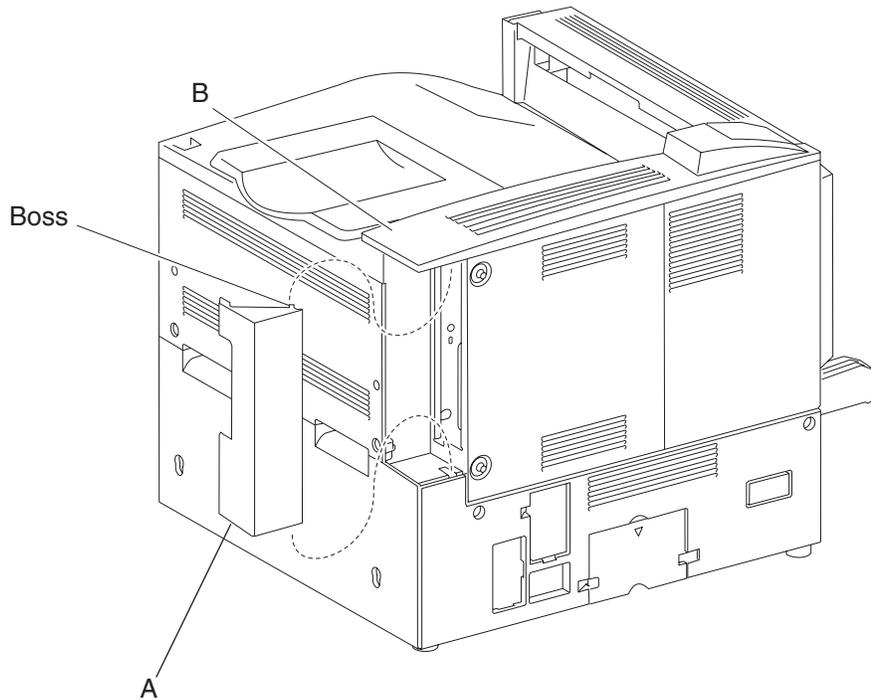
1. Remove the right upper cover. See **“Right upper cover removal”** on page 4-12
2. Pull out media Tray 1 and media Tray 2.
3. Remove the right lower cover (A) by lifting it upward then outward.

**Note:** The right lower cover may take some force to remove.



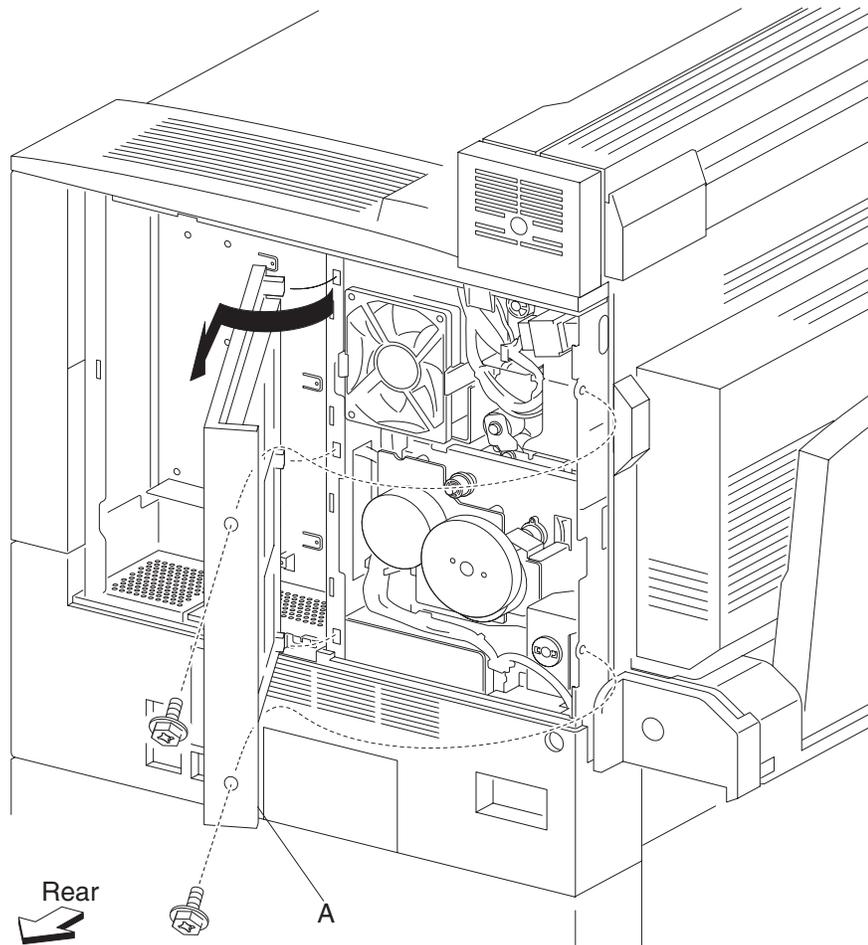
### ***Cable hookup door removal***

1. Open the cable hookup door (A).
2. Slightly lift the top rear cover (B) upward in the direction of the arrow on its outer edge to release the upper boss on the cable hookup door (A).
3. Release the lower boss from the option hookup door (A).
4. Remove the cable hookup door (A).



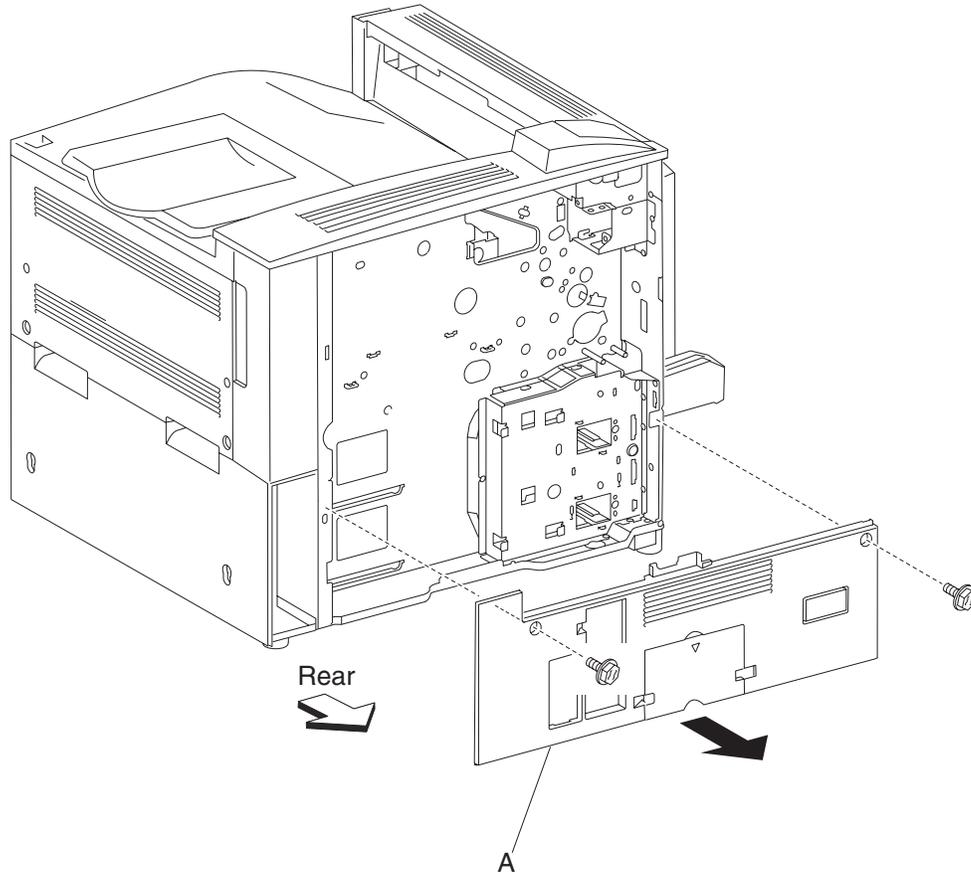
## Rear motor cover removal

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the two screws securing the rear motor cover (A).
3. Open the rear motor cover (A) by swinging it outward in the direction of the arrow.
4. Remove the rear motor cover (A).



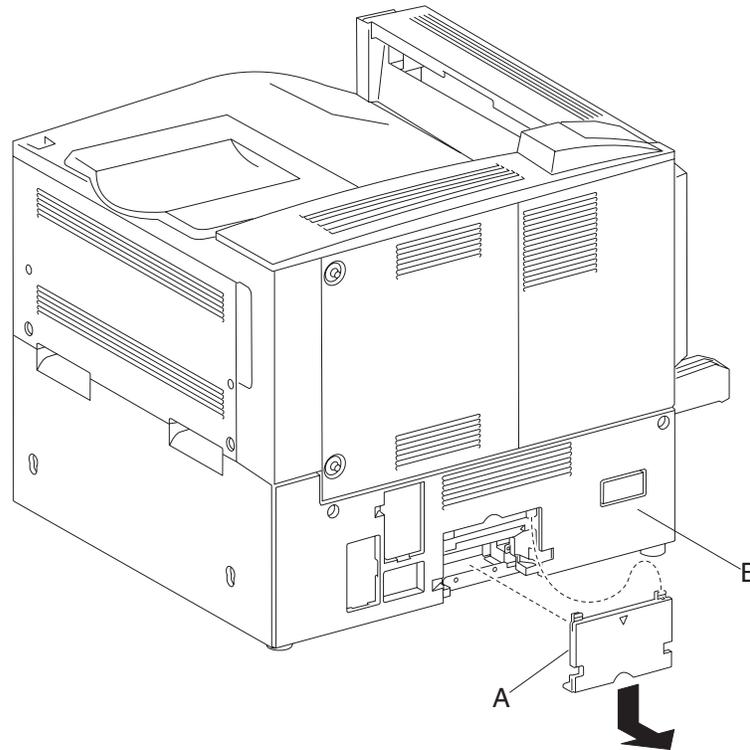
### ***Rear lower cover removal***

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Remove the two screws securing the rear lower cover (A).
4. Remove the rear lower cover (A).



### ***Option hookup cover removal***

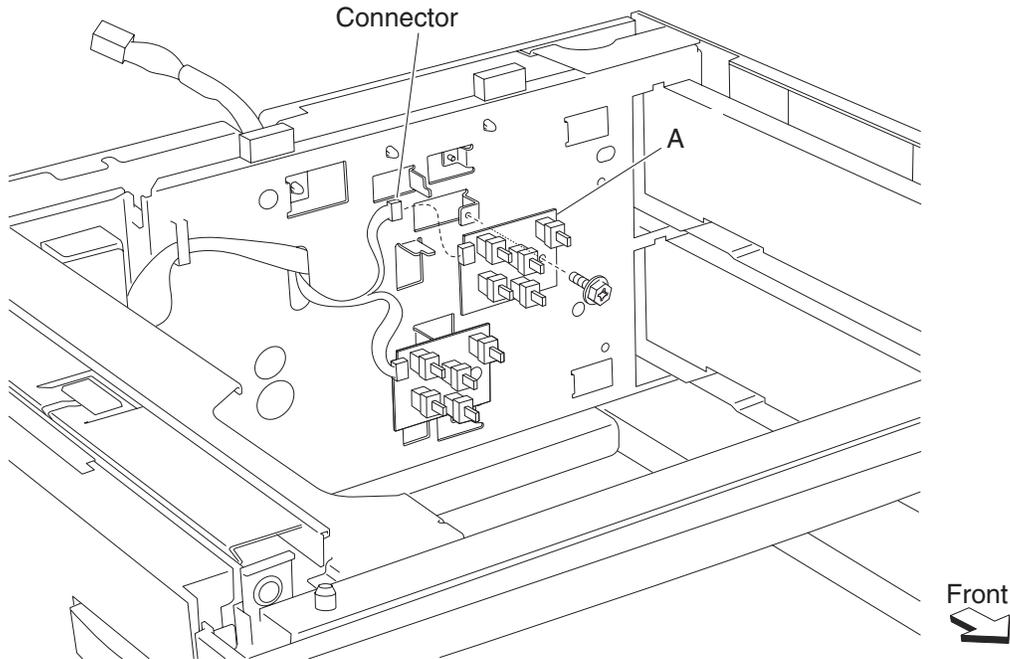
1. Remove the option hookup cover (A) from the rear lower cover (B) by moving it outward in the direction of the arrow.



## Switch (media size) removal

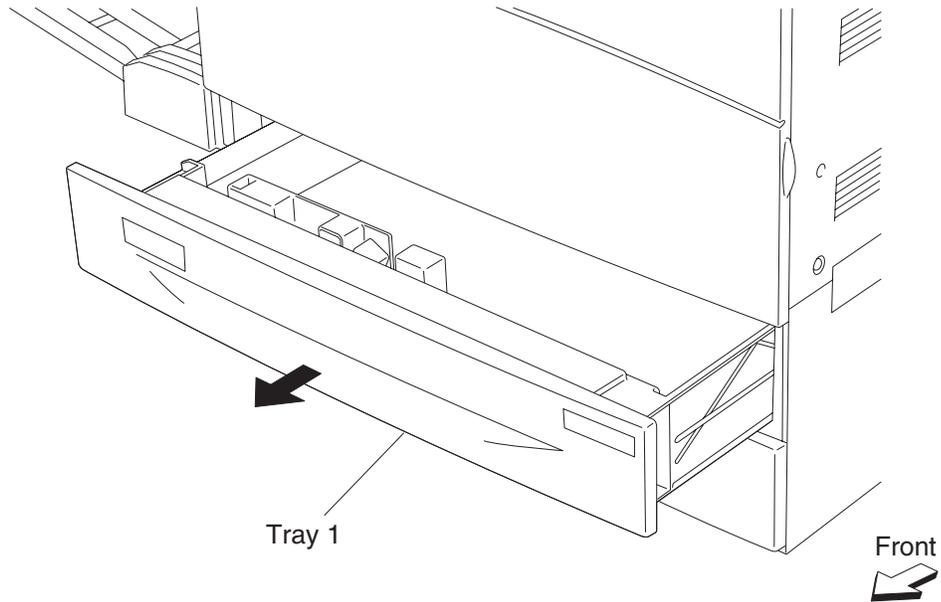
**Note:** This procedure can be applied to tray 1 or tray 2 switch (media size).

1. Remove media Tray 1 and media Tray 2.
2. Remove one screw securing the switch (media size) (A) to the bracket (B) inside the machine.
3. Remove the connector from switch (media size) (A).
4. Remove the switch (media size) (A).

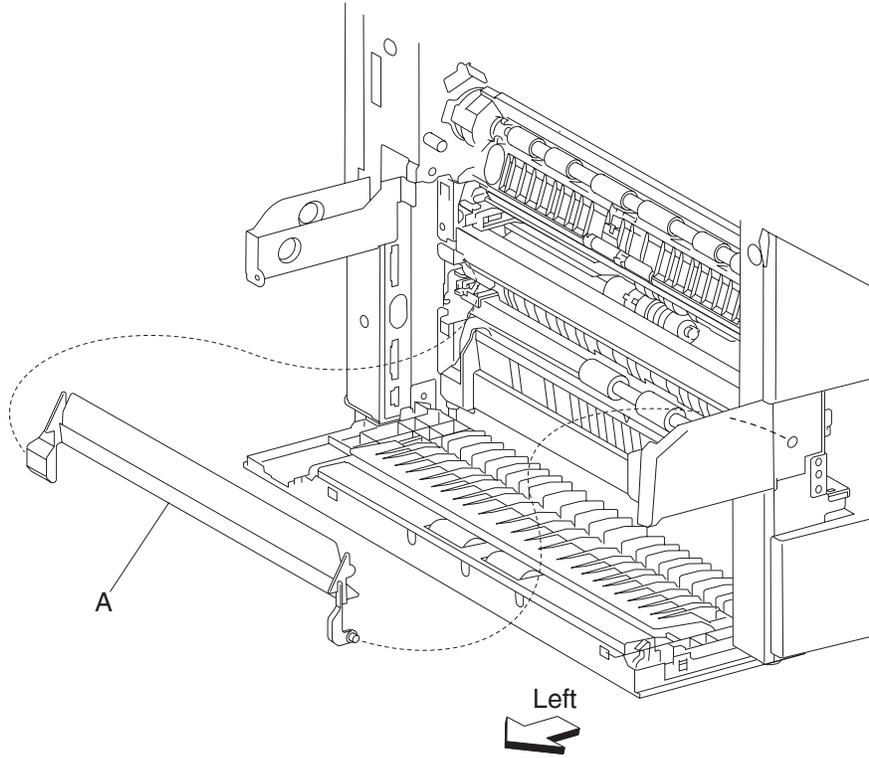


### **Media feed unit assembly 1 removal**

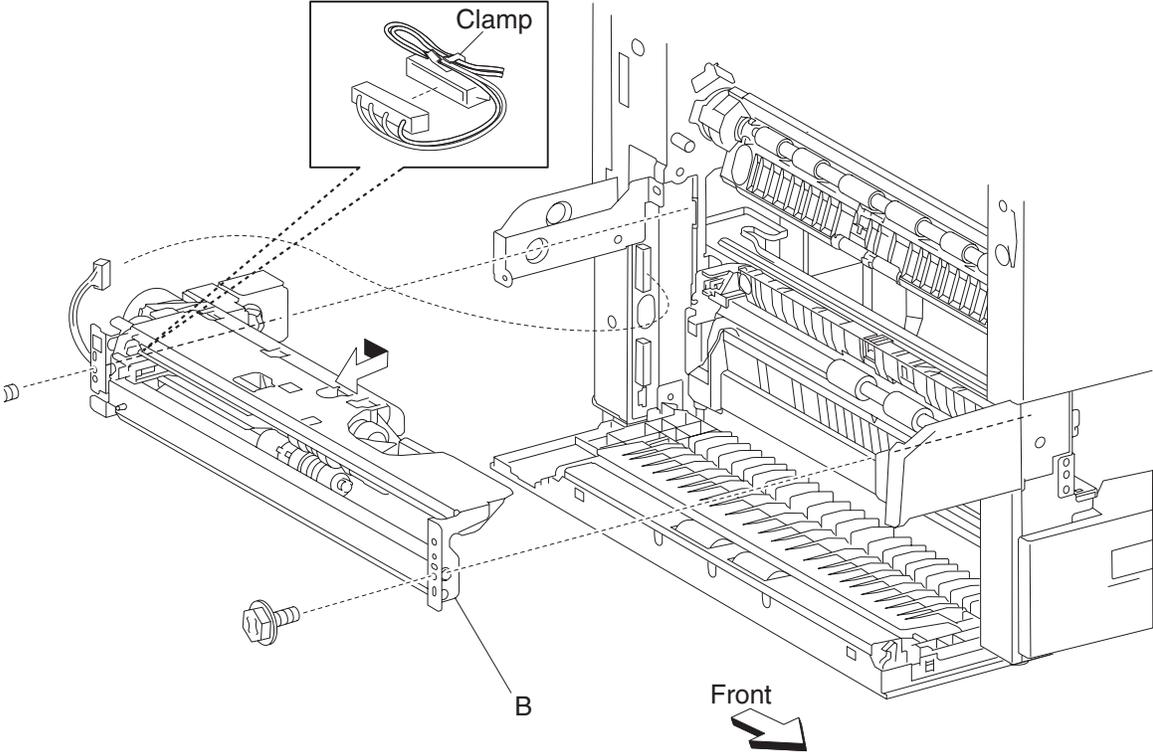
1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
4. Remove the vertical drive gear assembly. See **“Vertical drive gear assembly”** on page 4-65.
5. Pull out media Tray 1.



6. Release the plastic bosses on both ends of the vertical turn mylar guide (A).
7. Remove the vertical turn mylar guide (A).  
**Warning:** The vertical turn mylar guide will take extra force to remove. Be careful not to damage it.
8. Release the harness from the plastic clamps on the machine.
9. Disconnect the connector.

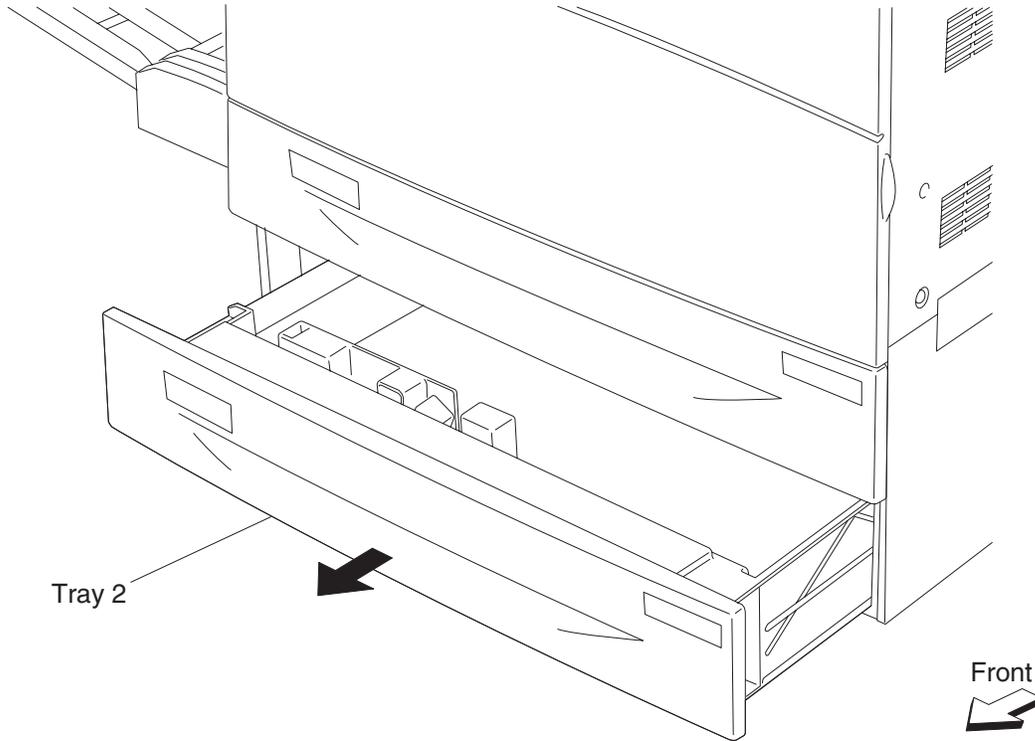


- 10. Remove the two screws securing the media feed unit assembly (B).
- 11. Remove the media feed unit assembly (B) in the direction of the arrow.

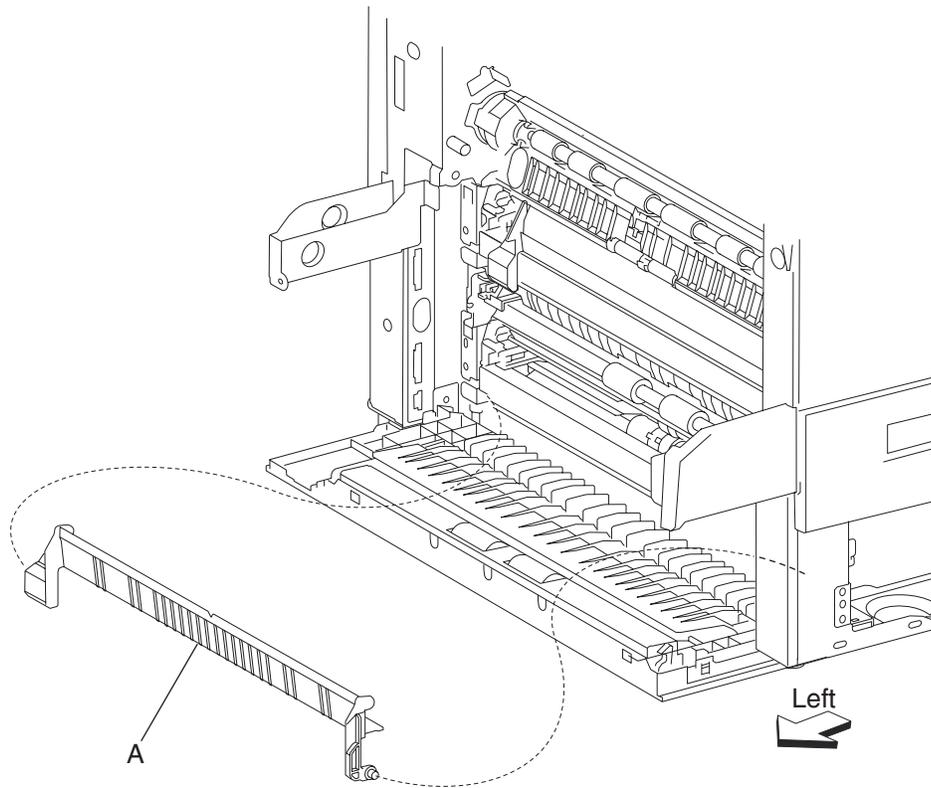


## Media feed unit assembly 2 removal

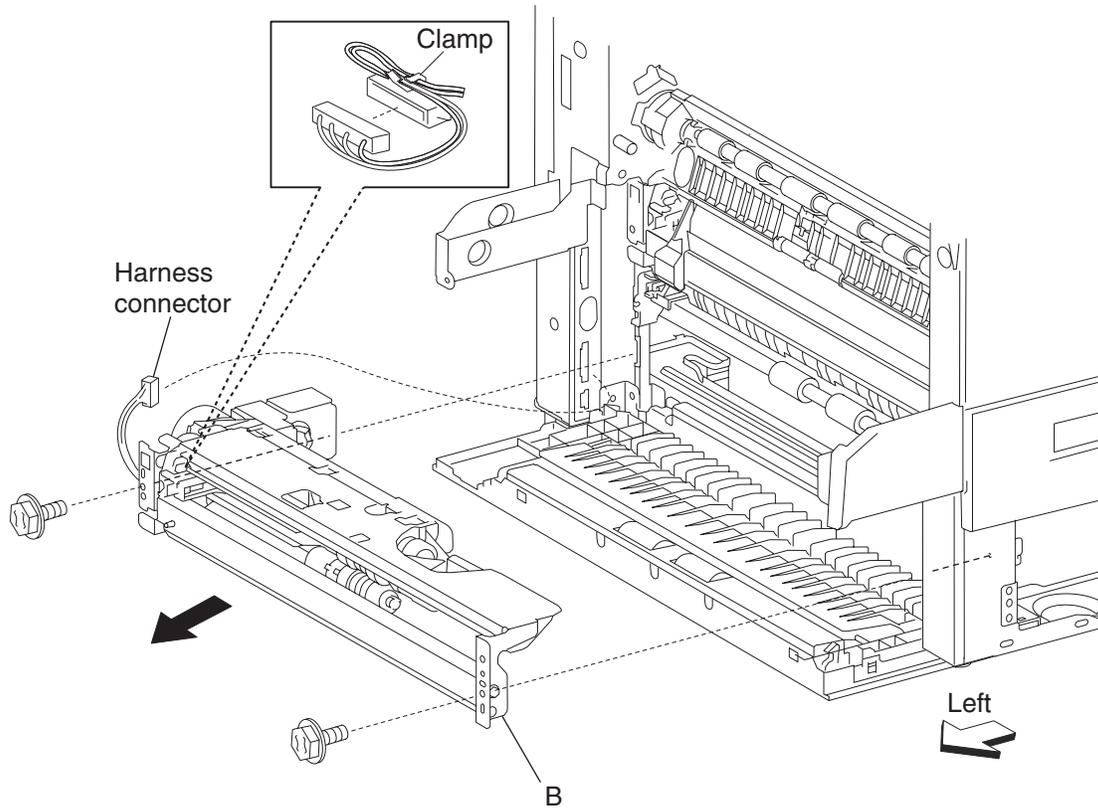
1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
4. Open the printer left lower door assembly. See **“Printer left lower door assembly removal”** on page 4-68.
5. Remove the vertical drive gear assembly. See **“Vertical drive gear assembly”** on page 4-65.
6. Pull out media Tray 2.



7. Release the plastic bosses on both ends of the vertical turn guide (A).
8. Remove the vertical turn guide (A).

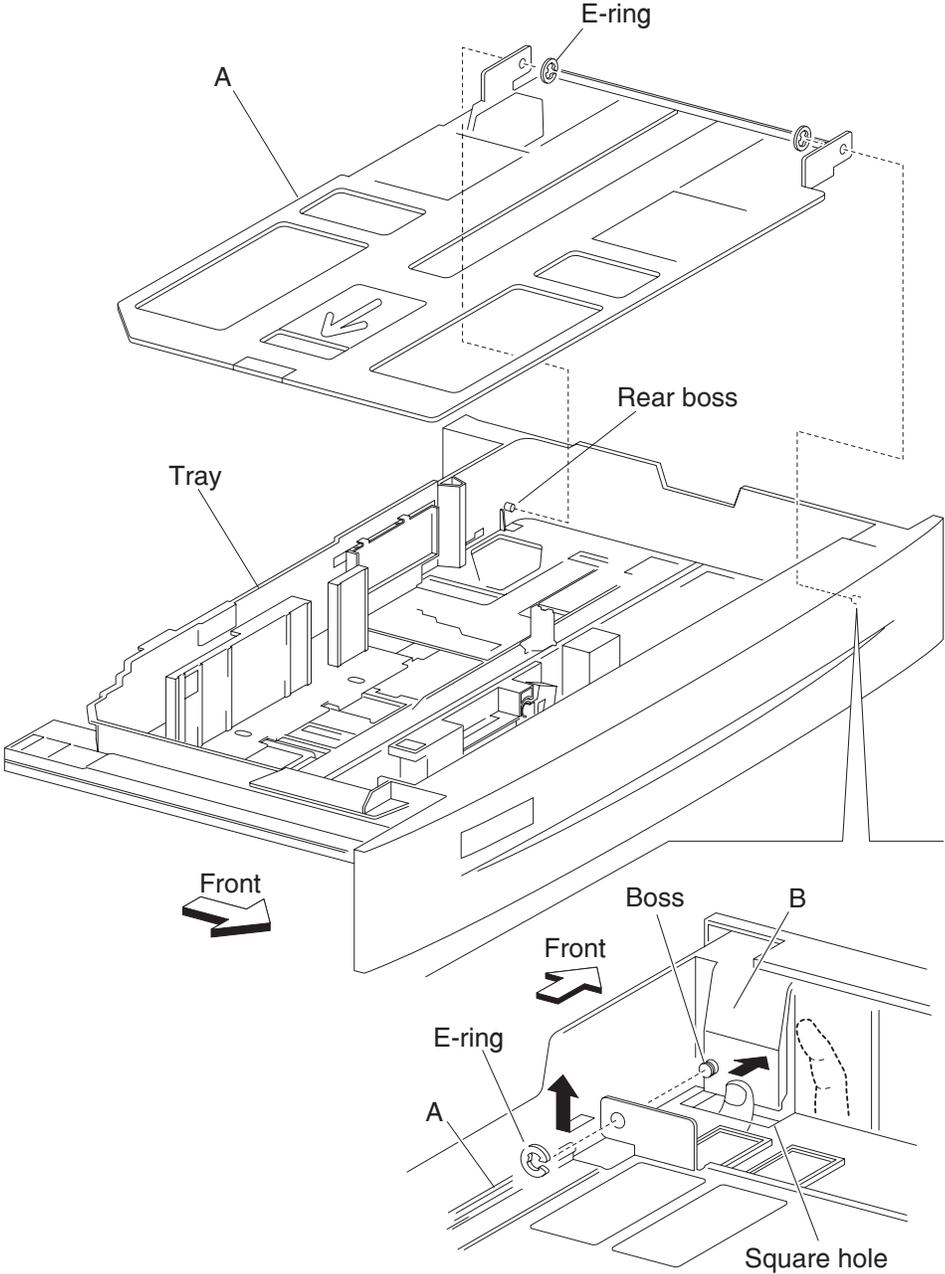


9. Release the harness from the plastic clamps on the machine.
10. Disconnect the harness connector from the machine.
11. Remove the two screws securing the media feed assembly (B).
12. Remove the media feed assembly (B) in the direction of the arrow.

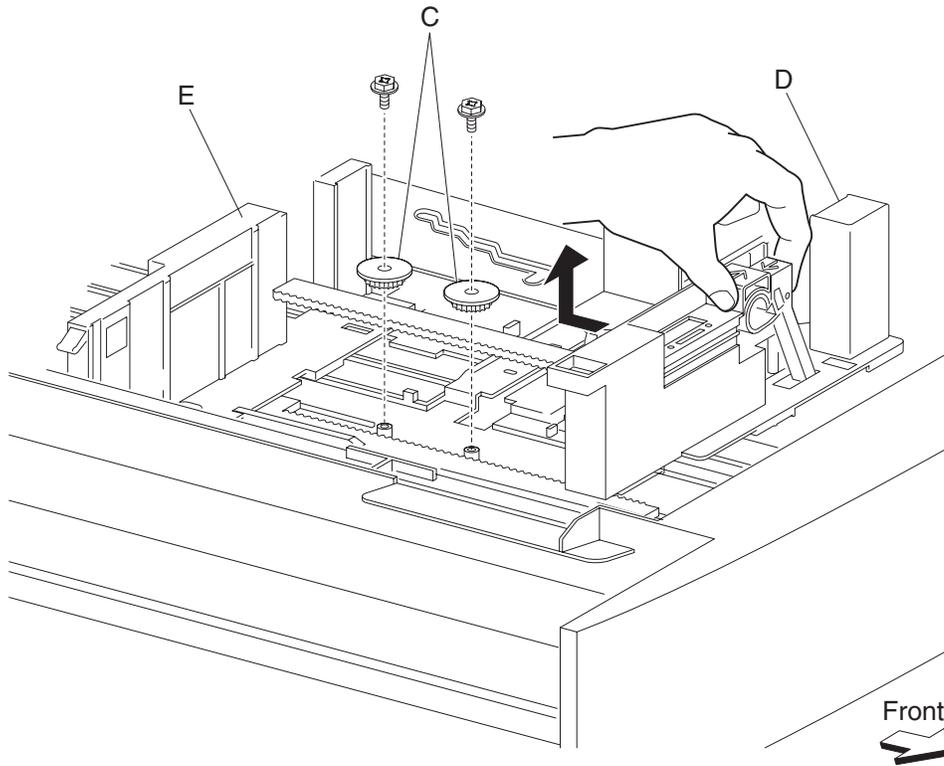


**Media tray side guides removal**

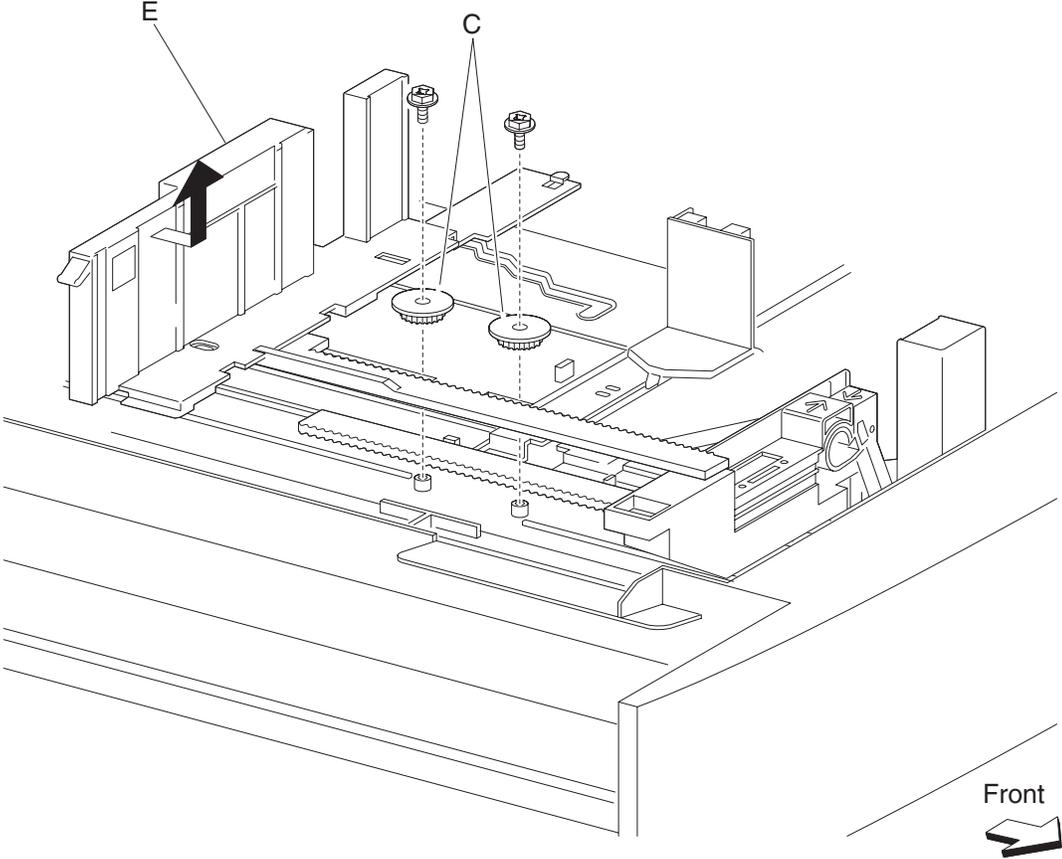
- 1. Remove the media tray.
- 2. Remove the two e-rings securing the metal bottom plate (A) to the media tray using a small prying tool.
- 3. Push the front hinge point (B) in the direction of the arrow to release the front boss from the metal bottom plate (A).
- 4. Remove the metal bottom plate (A) by sliding it off the rear boss.



5. Remove the two screws securing the two pinion gears (C) to the media tray.
6. Remove the pinion gears (C).
7. Remove the front media guide assembly (D) and the rear media guide (E) by sliding them toward the center of the media tray assembly and lifting up.

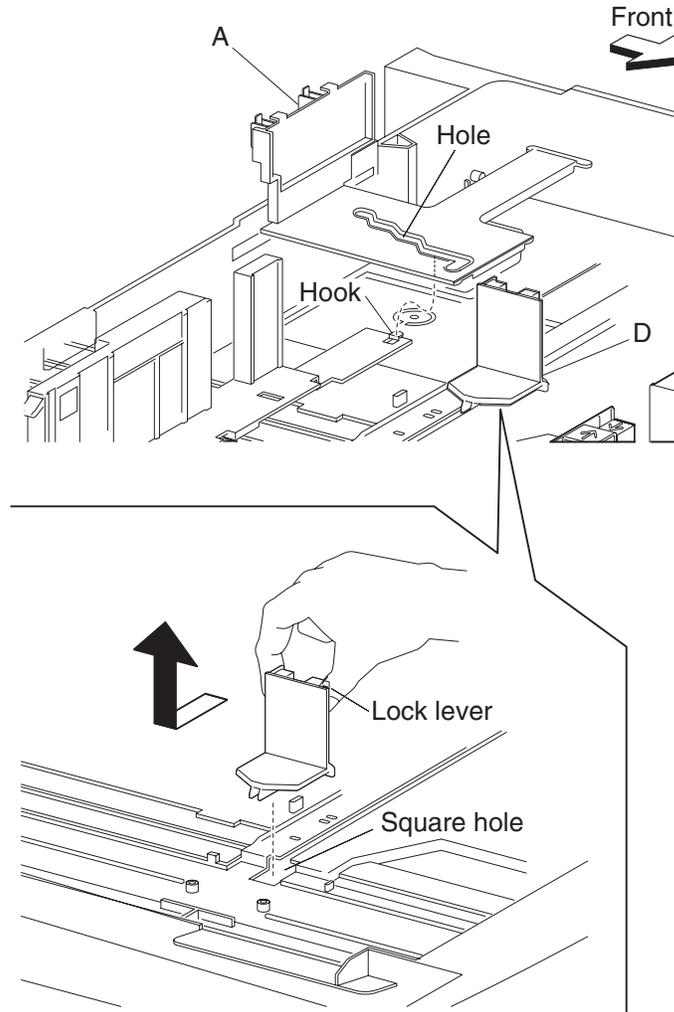


**Note:** Before reinstalling the pinion gears (C), slide the front media tray guide assembly (D) and the rear media guide (E) to their outward most positions. Ensure the media side guides slide smoothly.

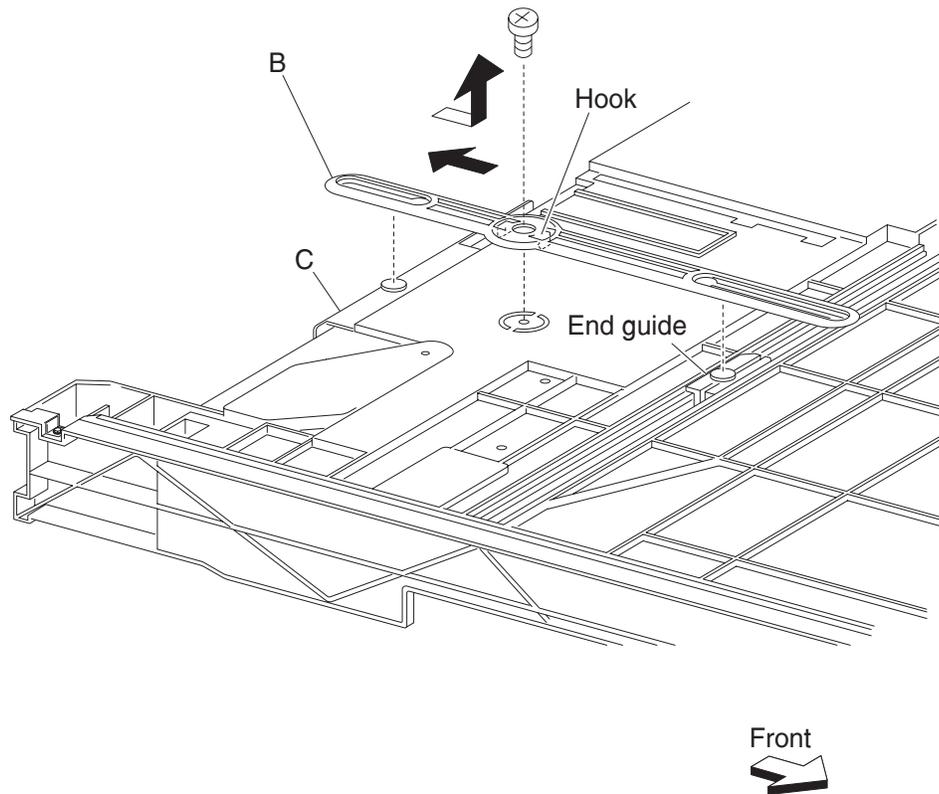


### Media tray end guide removal

1. Remove the media tray.
2. Remove the media tray side guides. See **“Media tray side guides removal”** on page 4-25.
3. Remove the media side guide actuator (A).

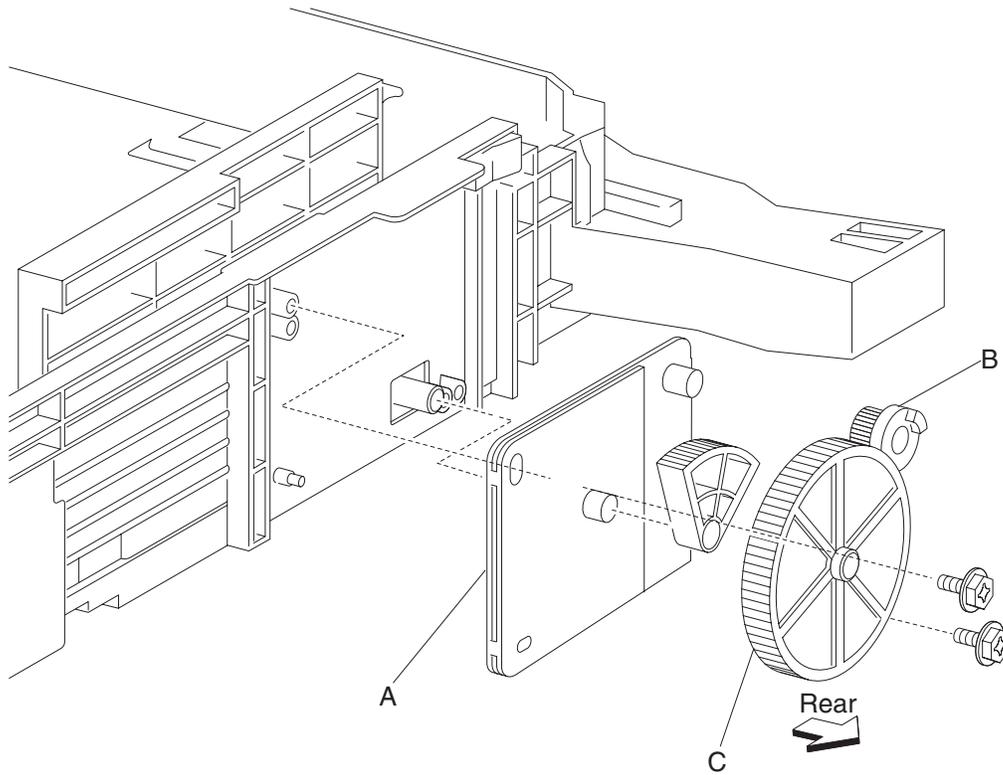


4. Turn the media tray assembly upside down, and remove the screw and two hooks securing the actuator link (B) to the media tray.
5. Release the boss on the media end guide actuator (C) from the hole in the actuator link (B) by moving the link in the direction of the arrow.
6. Remove the media end guide actuator (C).
7. Turn the media tray assembly right side up, and slide the media tray end guide (D) toward the center of the media tray assembly to remove.



### Media tray lift gear group removal

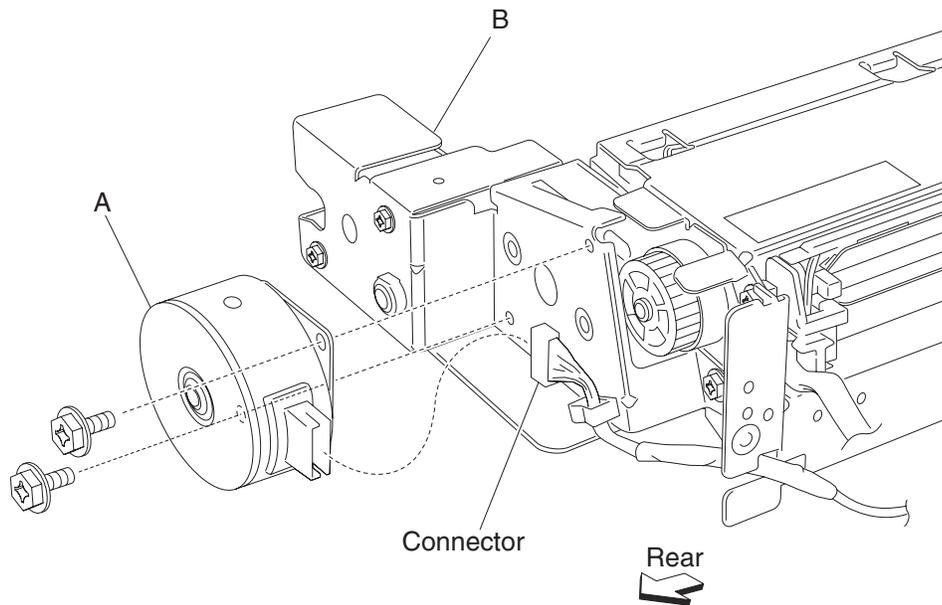
1. Remove the media tray from the machine.
2. Remove the two screws securing bracket (A).
3. Remove the bracket (A).
4. Remove the tray lift coupling gear 13 tooth (B) from bracket (A).
5. Remove the tray lift gear 13/60 tooth (C) from bracket (A).



**Note:** Extra force is required to pull the tray lift coupling gear 13 tooth (B) and the tray lift gear 13/60 tooth (C) from bracket (A).

### Media feed lift motor removal

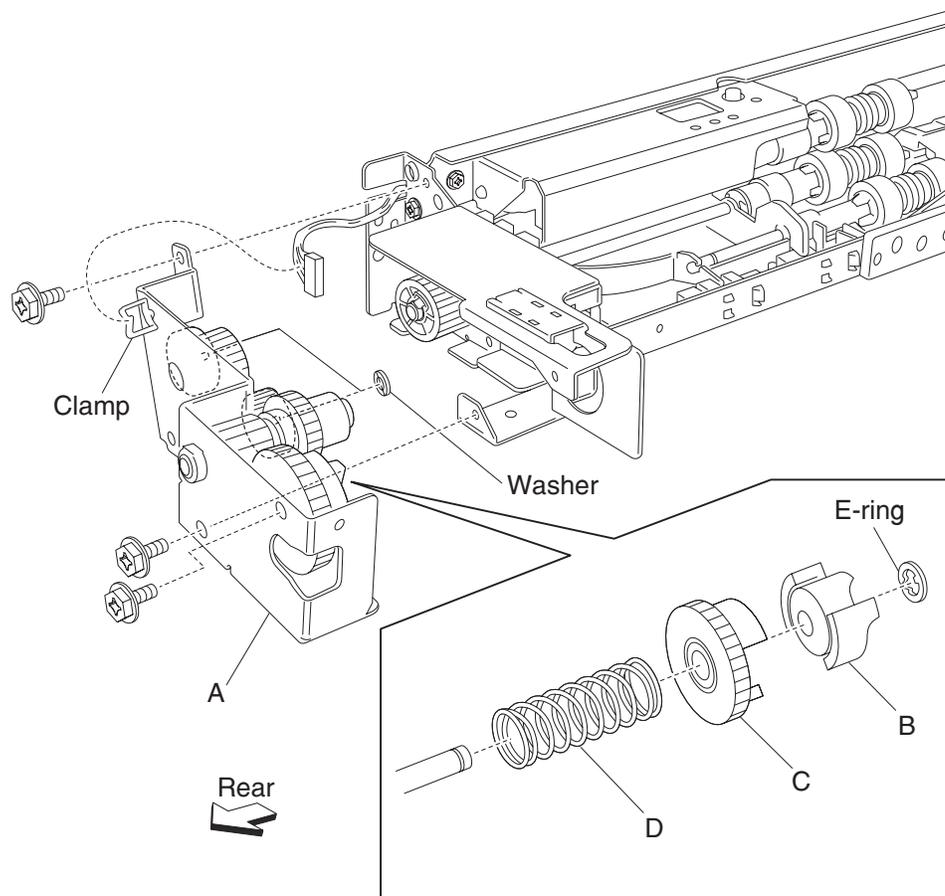
1. Remove the media feed unit. See **“Media feed unit assembly 1 removal” on page 4-19** or **“Media feed unit assembly 2 removal” on page 4-22**.
2. Disconnect the harness from the media feed lift motor (A).
3. Remove the two screws securing the media feed lift motor (A) to the media feed unit assembly (B).
4. Remove the media feed lift motor (A).



## Tray lift coupling assembly removal

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the printer left door. See **“Printer left door support strap removal”** on page 4-72.
4. Remove the vertical drive gear assembly. See **“Vertical drive gear assembly”** on page 4-65.
5. Remove the media feed unit assembly. See **“Media feed unit assembly 1 removal”** on page 4-19 or **“Media feed unit assembly 2 removal”** on page 4-22.
6. Remove the harness from bracket (A).
7. Remove three screws securing bracket (A) to the media feed unit.
8. Remove bracket (A).
 

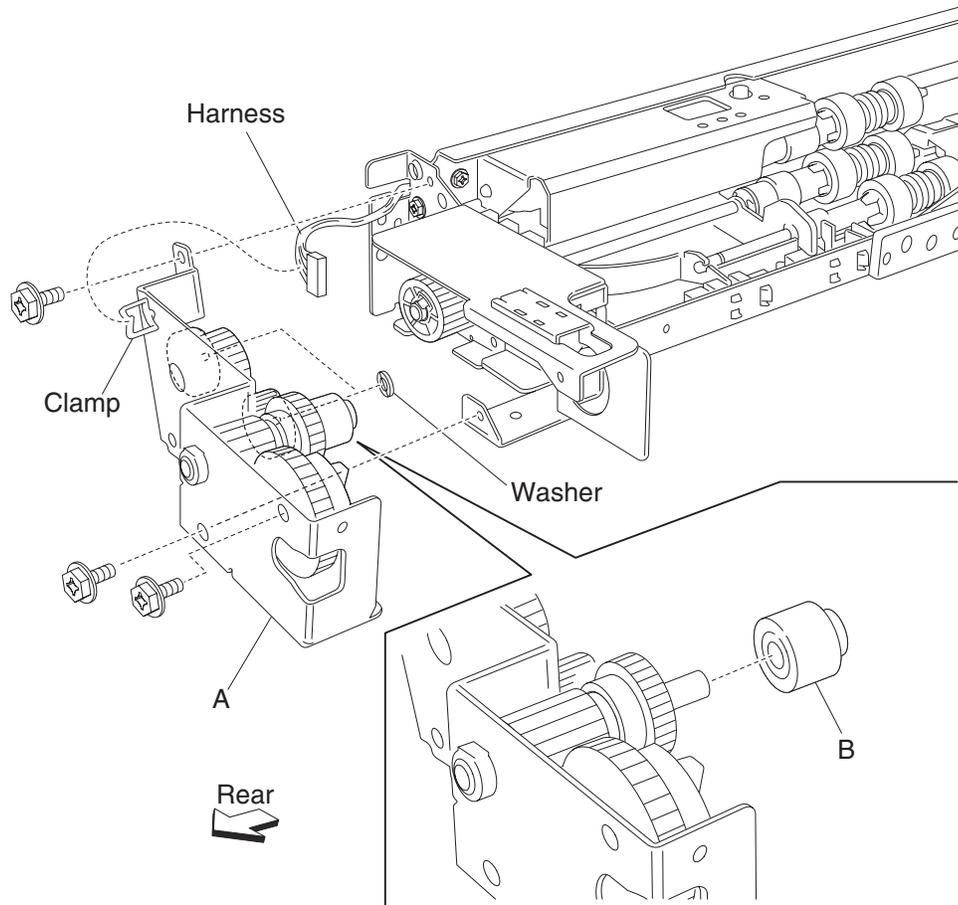
**Note:** The gears may become detached from bracket (A).
9. Remove the e-ring with a prying tool securing the tray lift coupling (B) to bracket (A).
10. Remove the tray lift coupling gear 31 tooth (C).
11. Remove the spring (D).



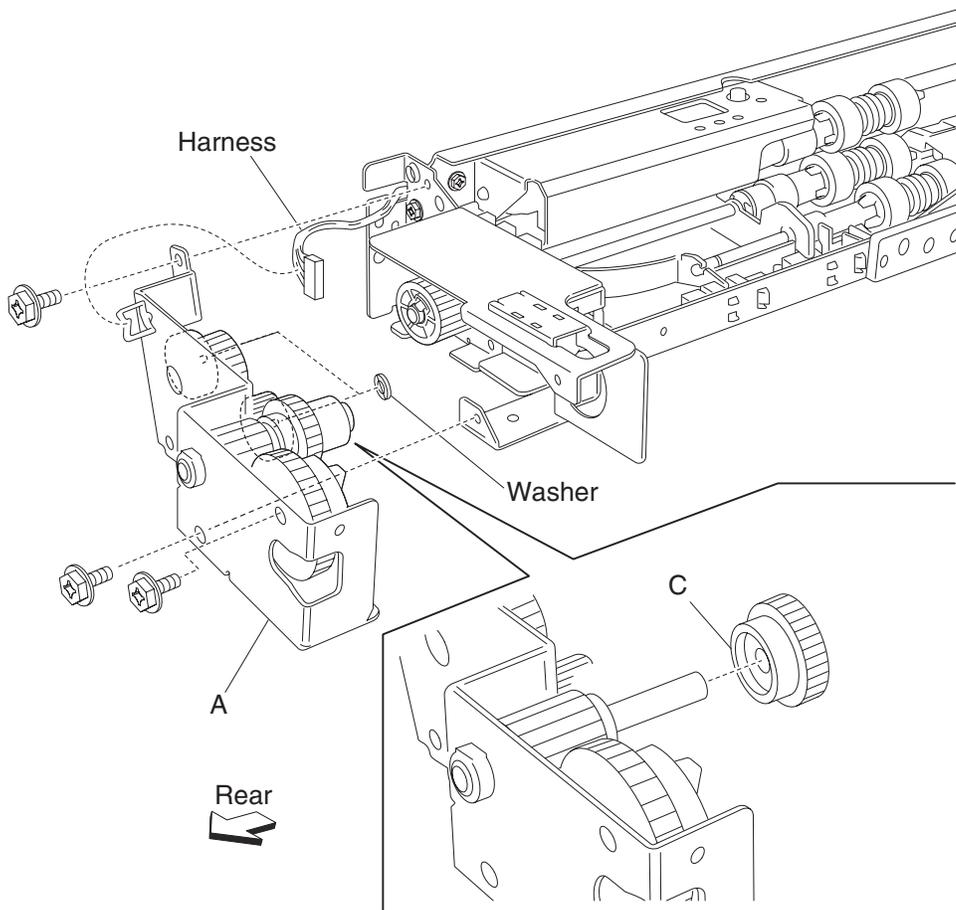
**Note:** Before reinstalling, ensure all gears and washers attached to bracket (A) are securely installed.

## Tray lift one way clutch / gear assembly removal

1. Remove the media feed unit assembly. Go to **“Media feed unit assembly 1 removal”** on page 4-19 or **“Media feed unit assembly 2 removal”** on page 4-22.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).  
**Note:** The gears may become detached from the bracket (A).
5. Remove the tray lift one-way clutch (B).



6. Remove the tray lift one-way gear 24 tooth (C).

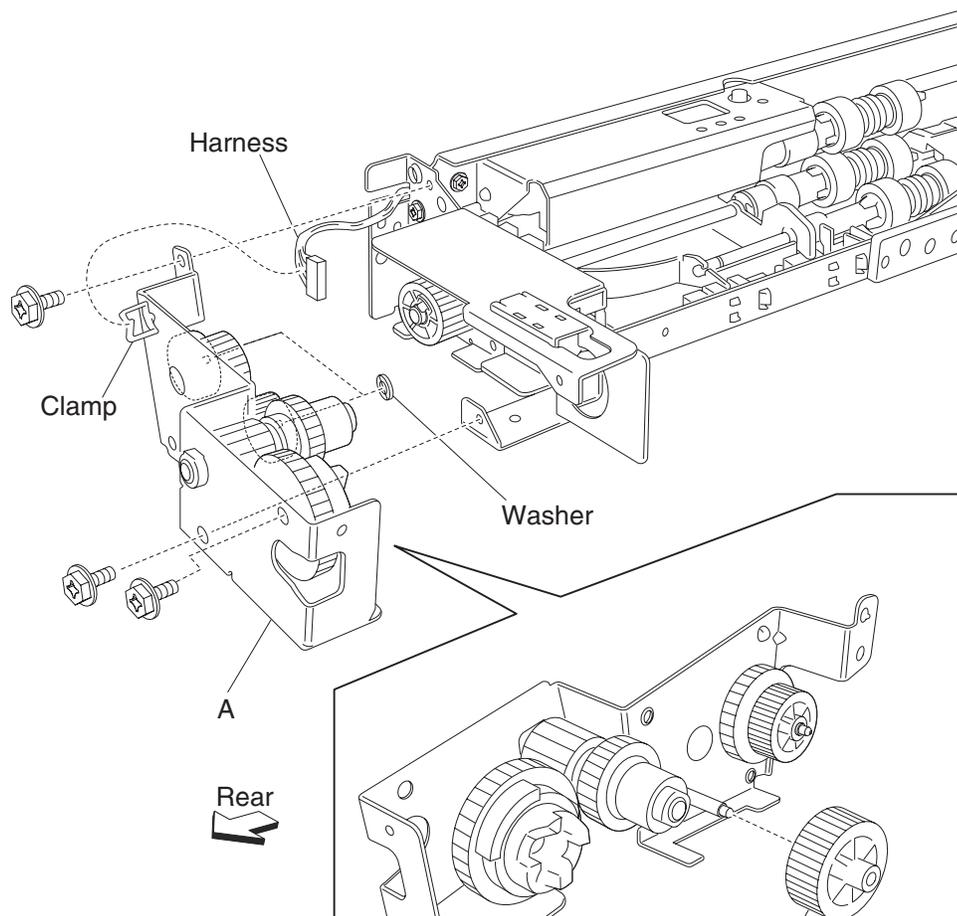


**Note:** Before reinstalling, ensure all gears and washers are securely attached to the bracket (A).

## Media feed unit drive gear - 13 tooth removal

1. Remove the appropriate media feed unit assembly. See **“Media feed unit assembly 1 removal” on page 4-19** or **“Media feed unit assembly 2 removal” on page 4-22**.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).
 

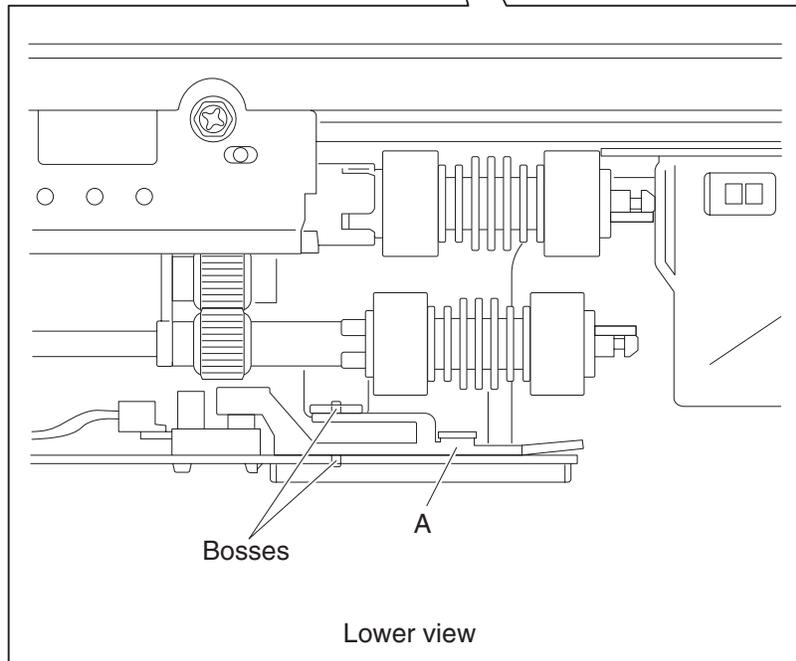
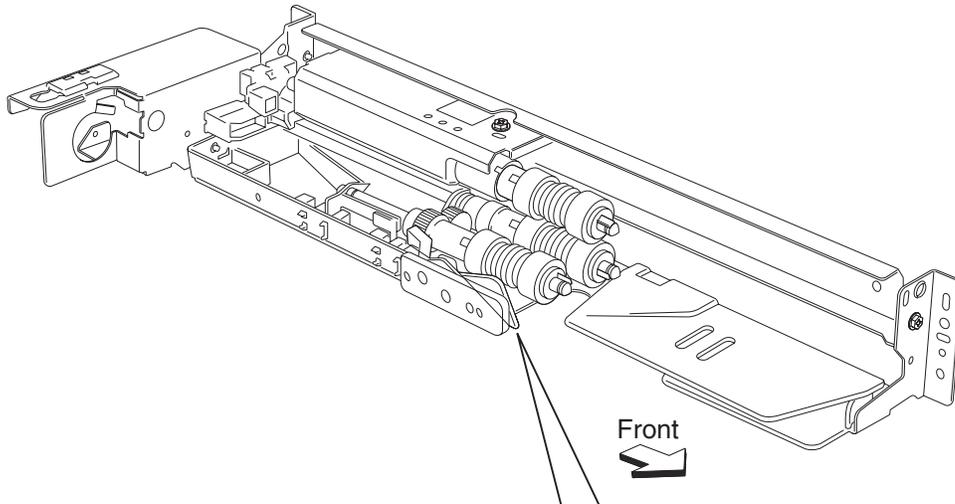
**Note:** Gears may become detached from the bracket (A).
5. Remove the tray lift one-way clutch. See **“Tray lift one way clutch / gear assembly removal” on page 4-33**.
6. Remove the tray lift one-way gear 24 tooth. See **“Tray lift one way clutch / gear assembly removal” on page 4-33**.
7. Remove the media feed unit drive gear - 13 tooth (B).



**Note:** Before reinstalling, ensure all gears and washers are securely attached to the bracket (A).

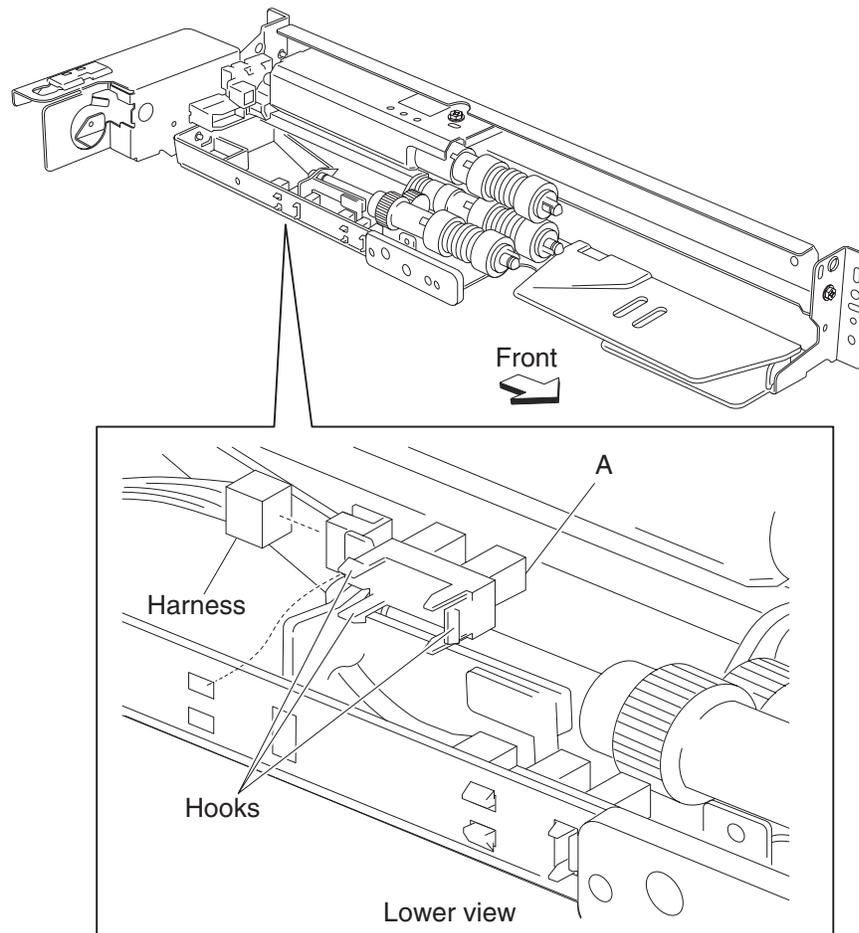
### Media out actuator removal

1. Remove the appropriate media feed unit assembly. See **“Media feed unit assembly 1 removal” on page 4-19** or **“Media feed unit assembly 2 removal” on page 4-22**.
2. Remove the two bosses on the media out actuator (A) to the media feed unit assembly.
3. Remove the media out actuator (A).



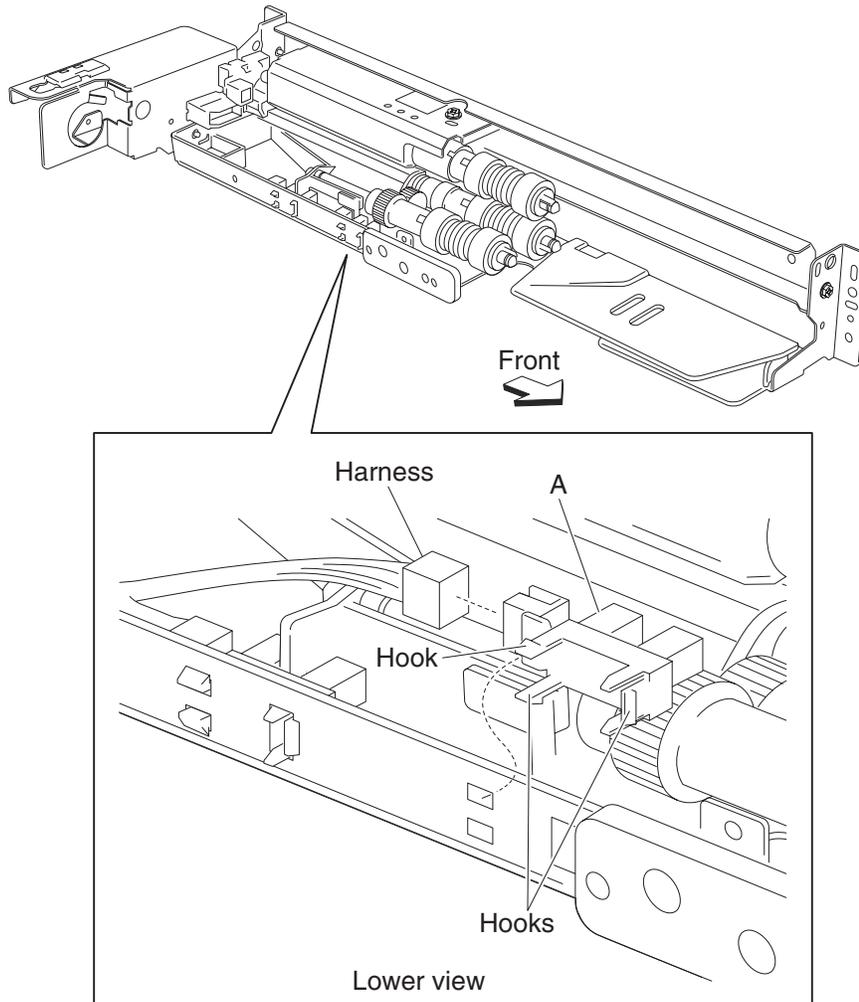
## Sensor (media level) removal

1. Remove the appropriate media feed unit assembly. See **“Media feed unit assembly 1 removal”** on page 4-19 or **“Media feed unit assembly 2 removal”** on page 4-22.
2. Disconnect the connector from the sensor (media level) (A).
3. Release the hooks securing the sensor (media level) (A) to the media feed unit.
4. Remove the sensor (media level) (A).



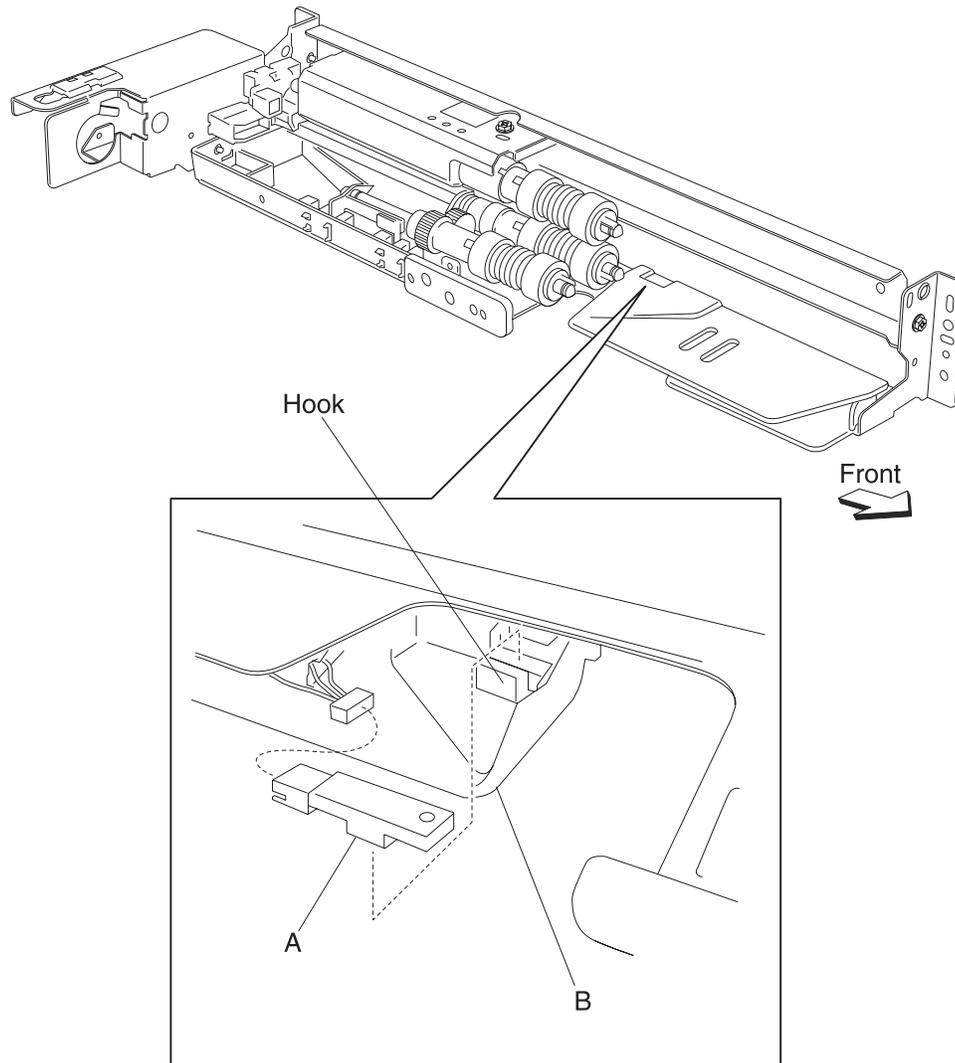
## Sensor (media out) removal

1. Remove the appropriate media feed unit assembly. See **“Media feed unit assembly 1 removal” on page 4-19** or **“Media feed unit assembly 2 removal” on page 4-22**.
2. Remove the media out actuator. See **“Media out actuator removal” on page 4-36**.
3. Disconnect the connector from the sensor (media out) (A).
4. Release the hooks securing the sensor (media out) (A) to the media feed unit.
5. Remove the sensor (media out) (A).



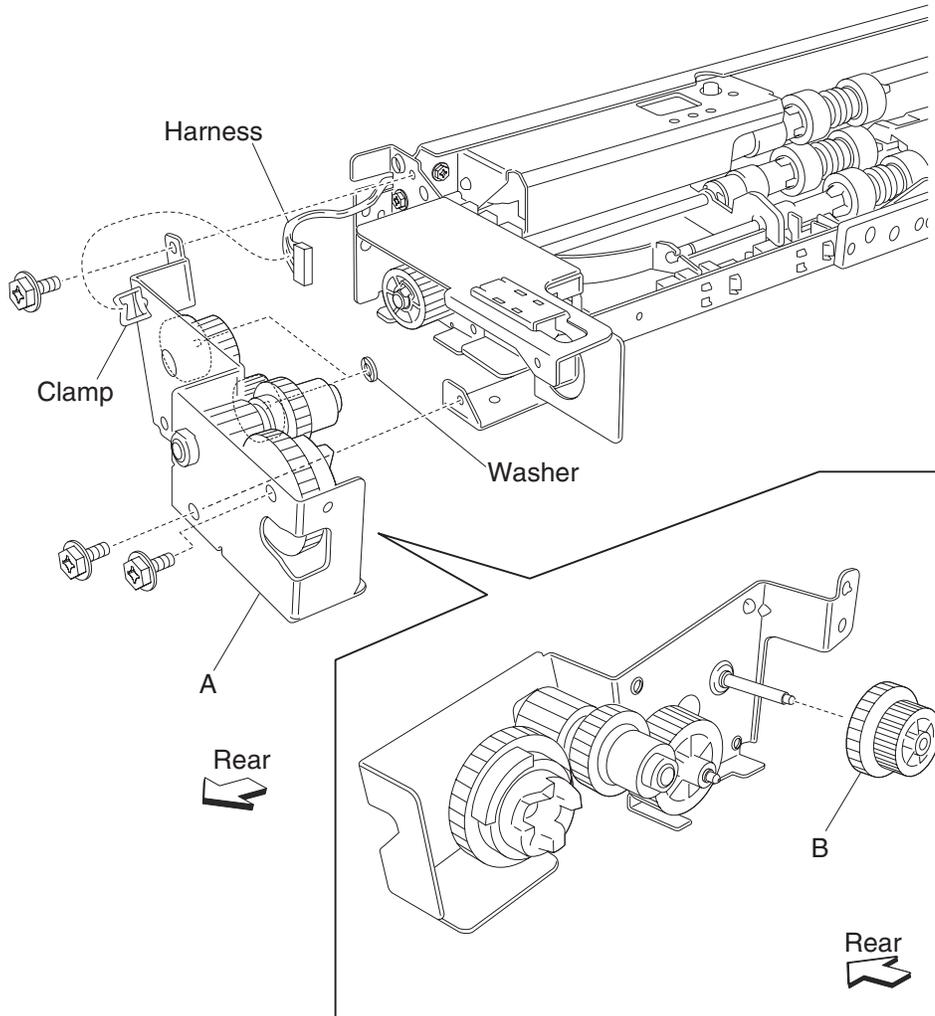
## Sensor (pre-feed) removal

1. Remove the appropriate media feed unit assembly. See **“Media feed unit assembly 1 removal”** on **page 4-19** or **“Media feed unit assembly 2 removal”** on **page 4-22**.
2. Release the hook securing the sensor (pre-feed) (A).
3. Remove the sensor (pre-feed) (A) from the feed unit front guide (B).
4. Disconnect the connector from the sensor (pre-feed) (A).
5. Remove the sensor (pre-feed) (A).



### Media feed unit drive gear - 28 / 21 tooth removal

1. Remove the appropriate media feed unit assembly. See **“Media feed unit assembly 1 removal”** on page 4-19 or **“Media feed unit assembly 2 removal”** on page 4-22.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).  
**Note:** The gears may become detached from the bracket (A).
5. Remove the media feed unit drive gear - 28 / 21 tooth (B).



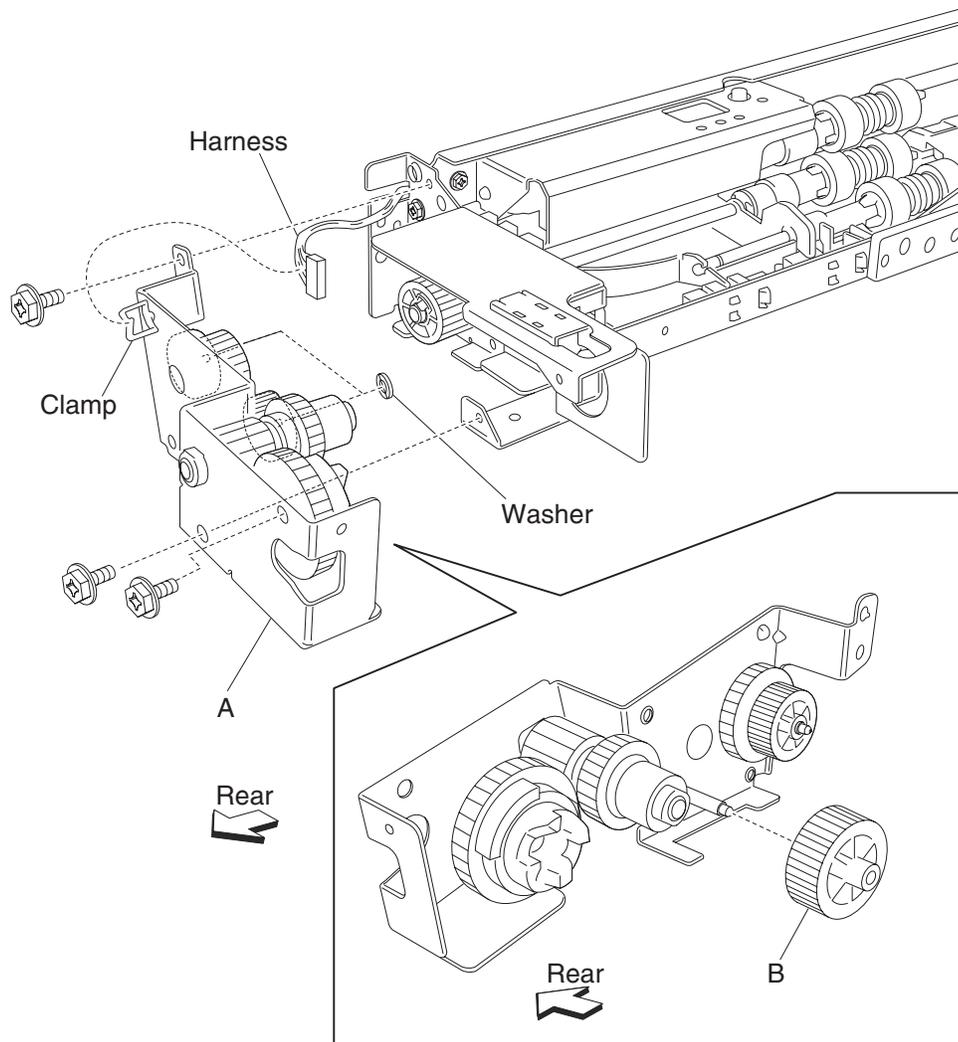
**Note:** Before reinstalling, ensure all gears and washers are securely attached to the bracket (A).

## Media feed unit drive gear - 29 tooth removal

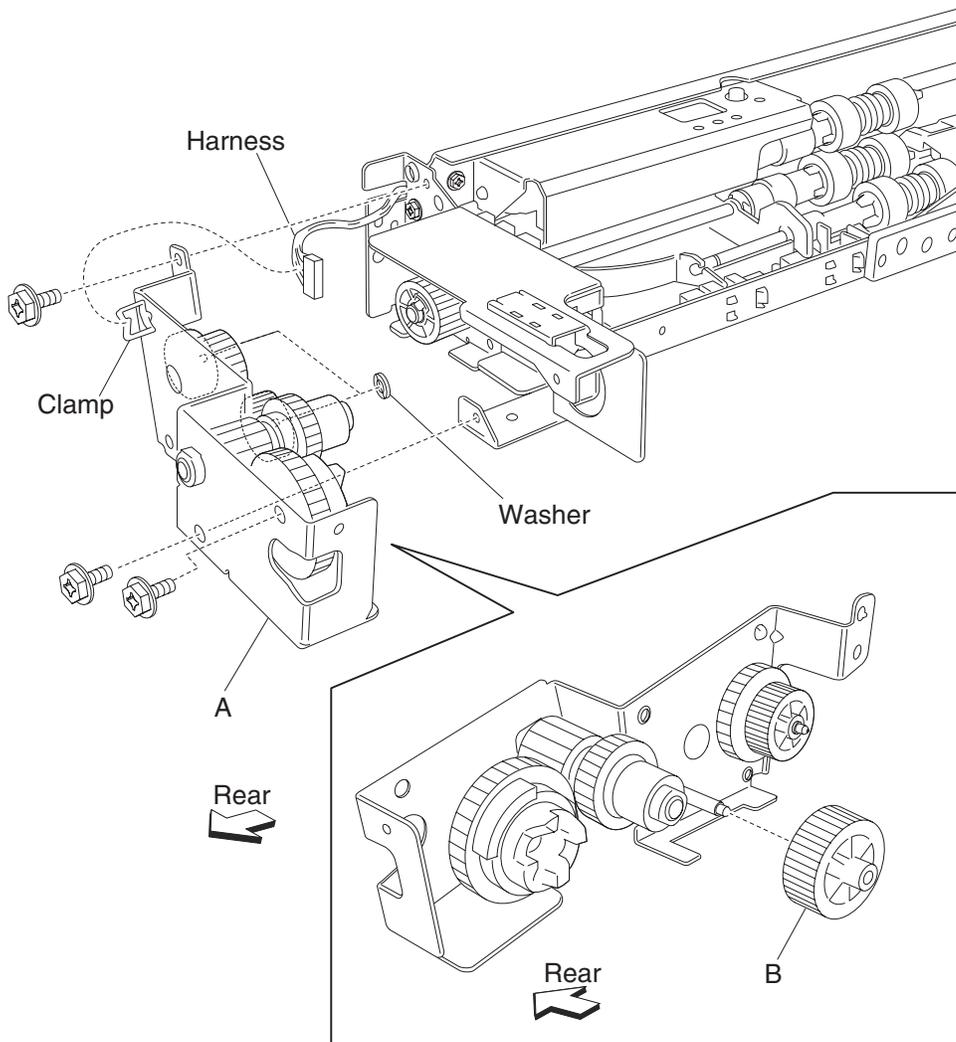
1. Remove the appropriate media feed unit assembly. See **“Media feed unit assembly 1 removal”** on page 4-19 or **“Media feed unit assembly 2 removal”** on page 4-22.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).

**Note:** The gears may become detached from the bracket (A).

5. Remove the media feed unit drive gear - 29 tooth (B).



6. Remove the media feed unit drive gear - 29 tooth (B).

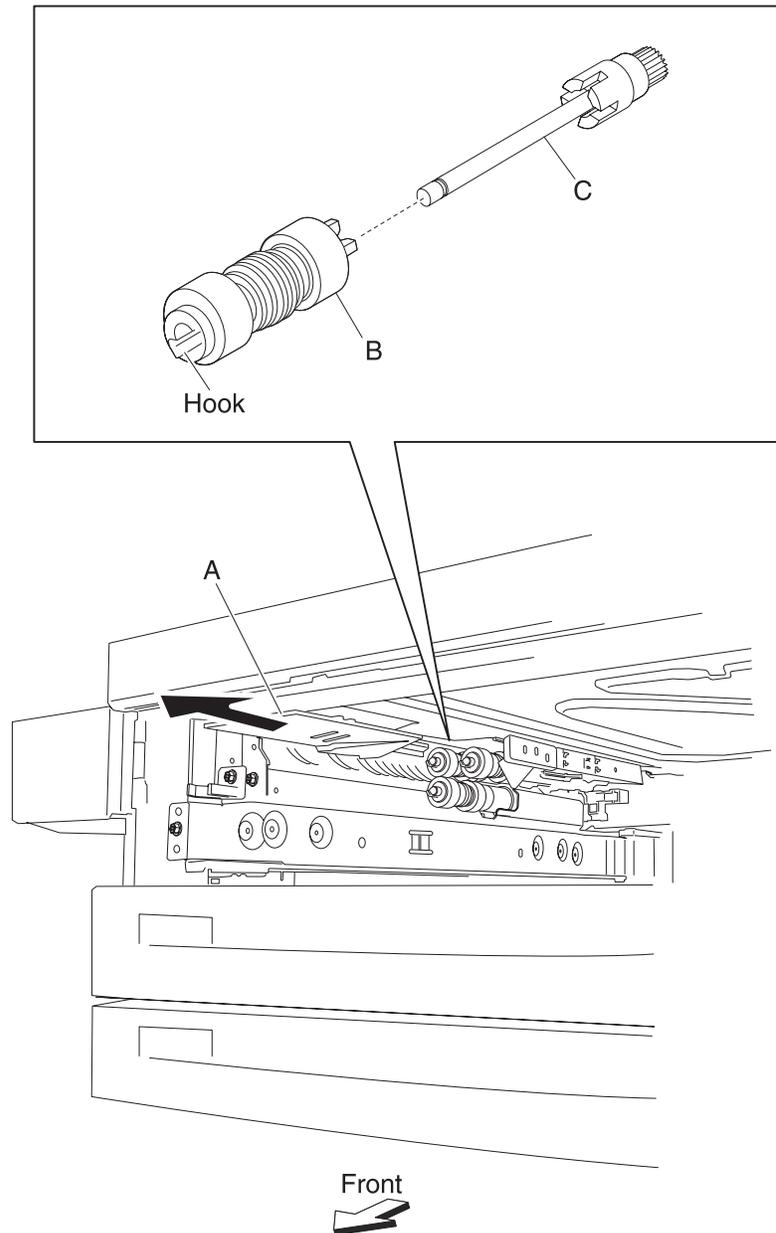


**Note:** Before reinstalling, ensure all gears and washers are securely attached to the bracket (A).

## Feed roll removal

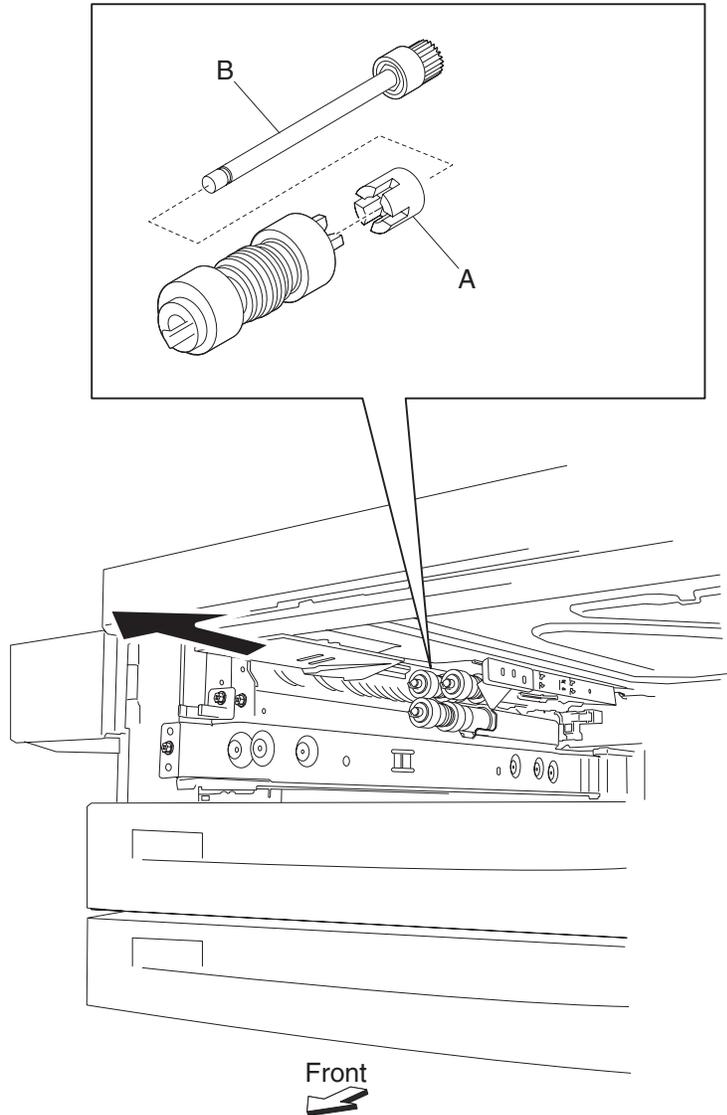
1. Remove the media tray.
2. Move the feed unit front guide (A) in the direction of the arrow.
3. Release the hook securing the feed roll (B) to the shaft (C).
4. Remove the feed roll (B).

**Note:** Do not touch the rubber surface of the feed roll (B).



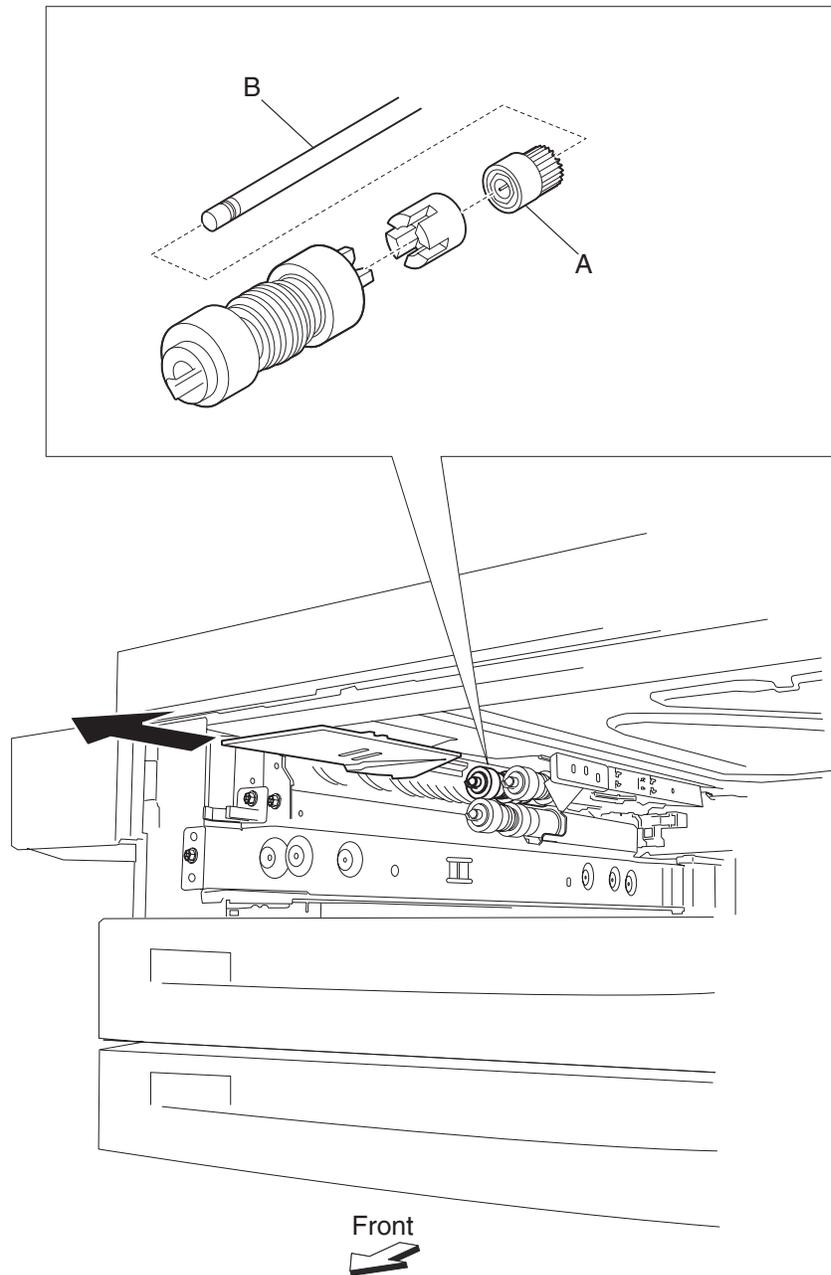
### ***Feed roll one way clutch removal***

1. Remove the media tray.
2. Remove the feed roll. See **“Feed roll removal”** on page 4-43.
3. Remove the feed roll one way clutch (A) from the shaft (B).



### Feed roll one way gear 22 tooth removal

1. Remove the media tray.
2. Remove the feed roll. See **“Feed roll removal” on page 4-43.**
3. Remove the feed roll one way clutch. See **“Feed roll one way clutch removal” on page 4-44.**
4. Remove the feed roll one-way gear 22 tooth (A) from the shaft (B).

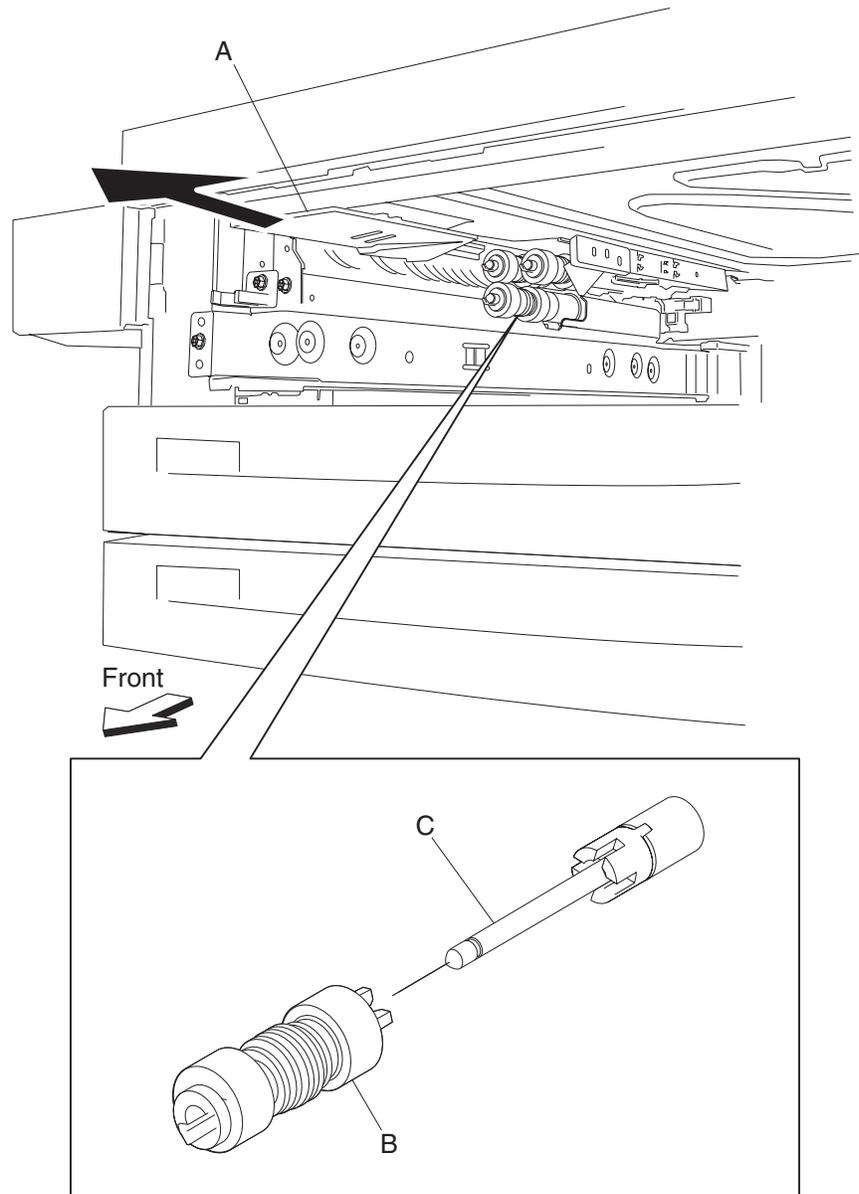




## Separation roll removal

1. Remove the media tray.
2. Move the feed unit front guide (A) in the direction of the arrow.
3. Release the hook securing the separation roll (B) to the shaft (C).
4. Remove the separation roll (B).

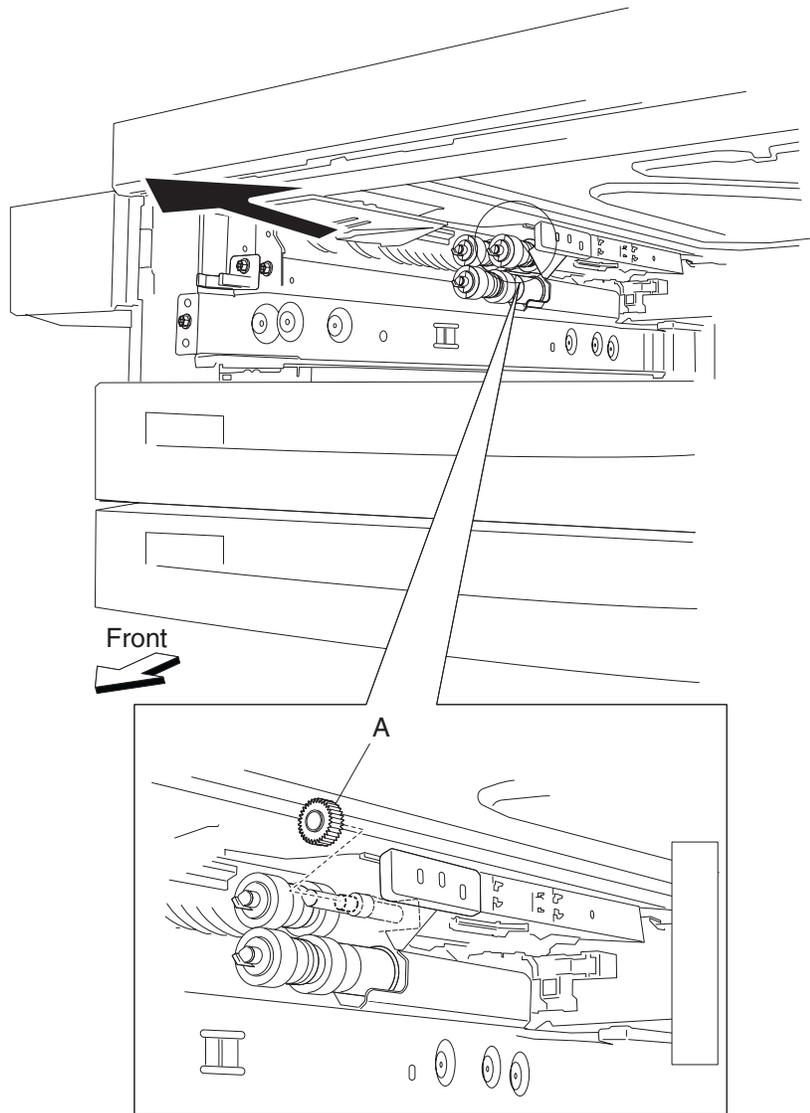
**Note:** Do not touch the rubber surface of the feed roll (B).



**Note:** Before reinstalling, do not touch the rubber surface of the separation roll (B).

### Pick roll idler gear 33 tooth removal

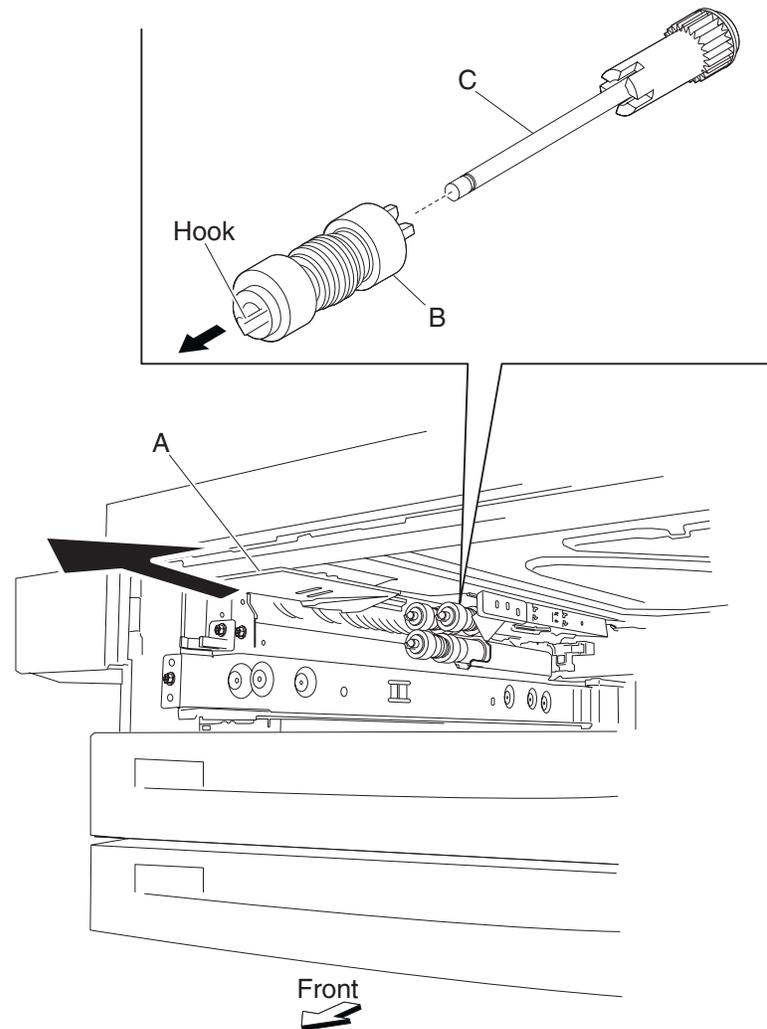
1. Remove the media tray.
2. Release the pick roll. See **"Pick roll removal"** on page 4-49.
3. Remove the pick roll drive gear - 25 tooth. See **"Pick roll drive gear 25 tooth removal"** on page 4-50.
4. Remove the pick roll idler gear - 33 tooth (A).



## Pick roll removal

1. Remove the media tray.
2. Move the media feed unit front guide (A) in the direction of the arrow.
3. Release the hook securing the pick roll (B) to the shaft (C).
4. Remove the pick roll (B).

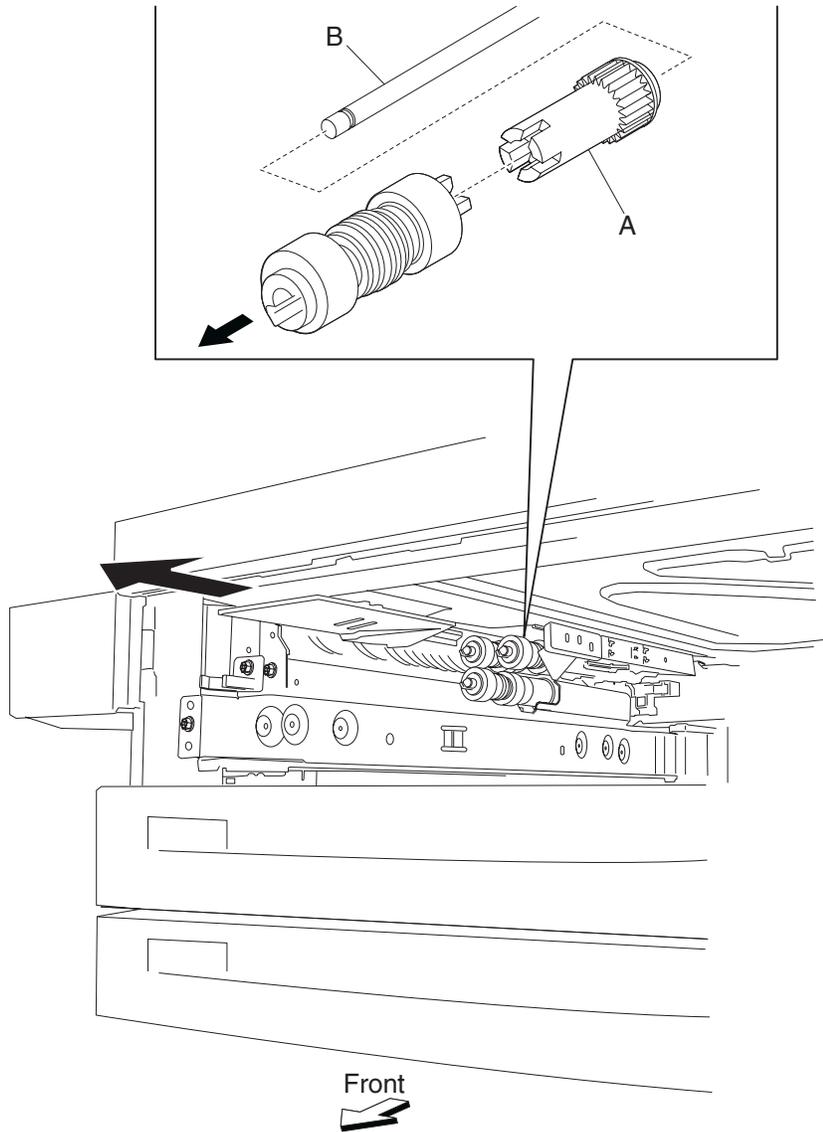
**Note:** Do not touch the rubber surface of the feed roll (B).



**Note:** Before reinstalling, do not touch the rubber surface of the pick roll (B).

### Pick roll drive gear 25 tooth removal

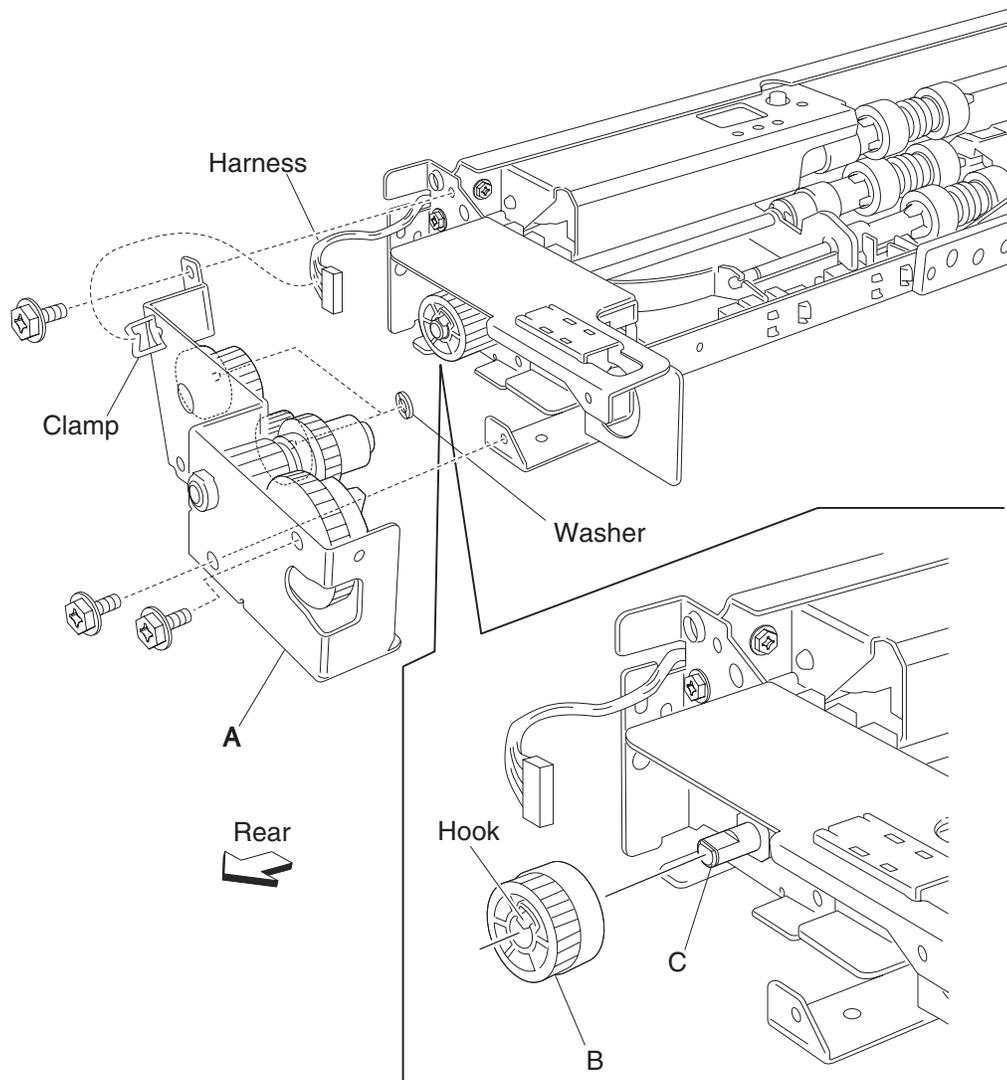
1. Remove the media tray.
2. Remove the pick roll. See **"Pick roll removal" on page 4-49.**
3. Remove the pick roll drive gear 25 tooth (A) from the shaft (B).



## Feed unit drive gear 27 tooth removal

1. Remove the media feed unit assembly. See **“Media feed unit assembly 1 removal”** on page 4-19 or **“Media feed unit assembly 2 removal”** on page 4-22.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).
 

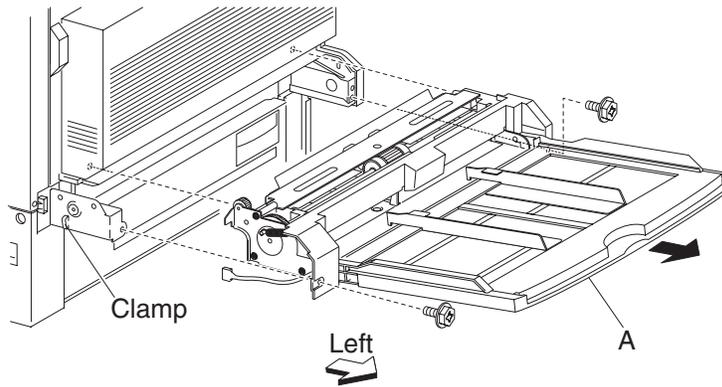
**Note:** The gears may become detached from the bracket (A).
5. Remove the hook securing the feed unit drive gear 27 tooth (B) to the shaft (C).
6. Remove the feed unit drive gear 27 tooth (B).



**Note:** Before reinstalling, ensure all gears and washers are securely attached to the bracket (A).

### ***MPF feed unit assembly removal***

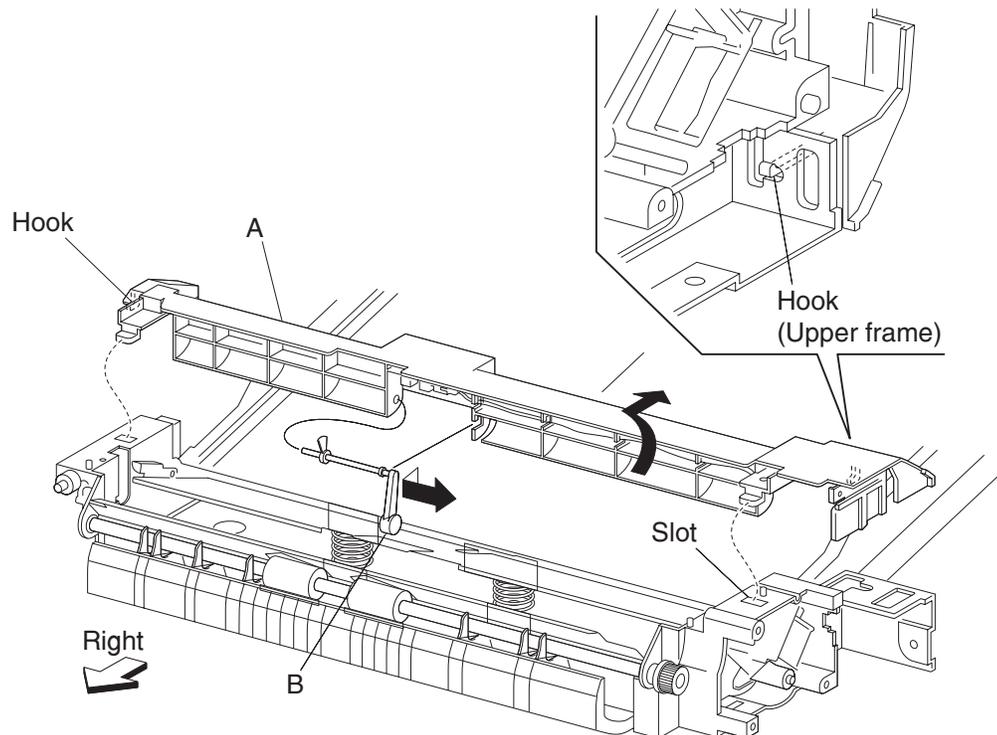
1. Remove the MPF rear cover. **“MPF rear cover removal” on page 4-56.**
2. Disconnect the connector.
3. Release the harness from the clamp.
4. Remove the two screws securing the MPF feed unit assembly (A).
5. Remove the MPF feed unit assembly (A).



**Note:** Before reinstalling, place the harness along the slot on the left of the MPF feed unit assembly (A) so it does not pinch the harness between the feed unit.

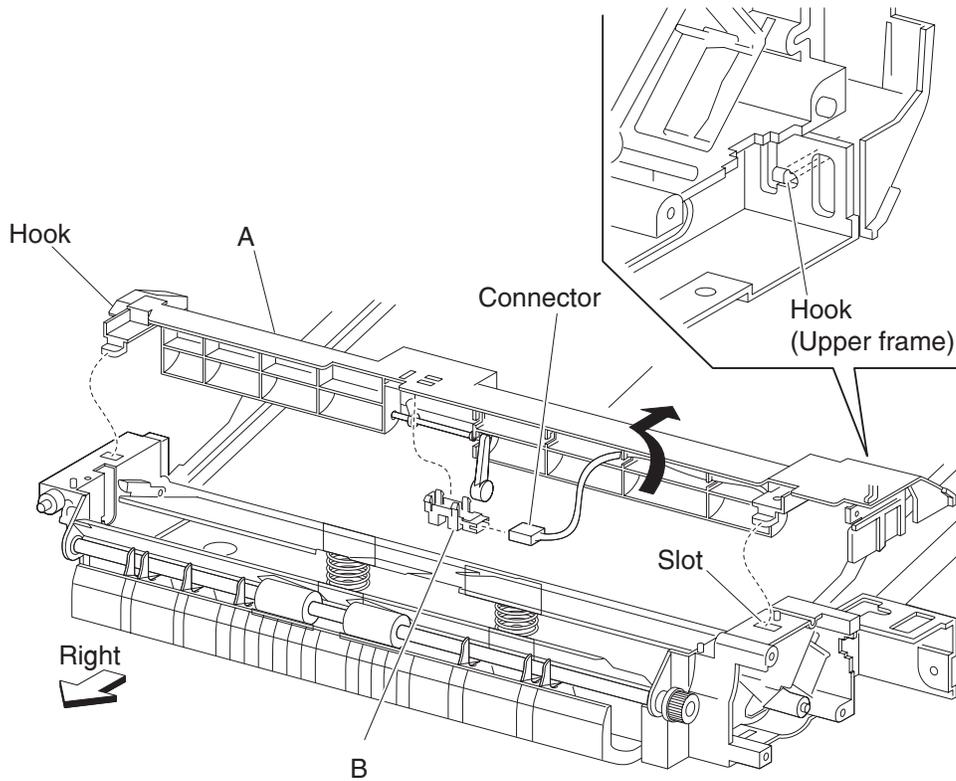
## MPF media out actuator and upper frame removal

1. Remove the MPF rear cover. See **"MPF rear cover removal"** on page 4-56.
2. Remove the MPF feed unit assembly. **"MPF feed unit assembly removal"** on page 4-52.
3. Remove the two hooks securing the upper frame (A).
4. Remove the upper frame (A) by moving it up and out in the direction of the arrow.
5. Remove the MPF media out actuator (B) by prying it outward with a flat tip screwdriver, then slide it out in the direction of the arrow.



## Sensor (MPF media out) removal

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the two hooks securing the upper frame (A) to the MPF feed unit assembly.
4. Remove the upper frame (A) by moving it up and out in the direction of the arrow.
5. Disconnect the connector from the sensor (MPF media out) (B).
6. Release the hooks securing the sensor (MPF media out) (B) in the upper frame (A).
7. Remove the sensor (MPF media out) (B).

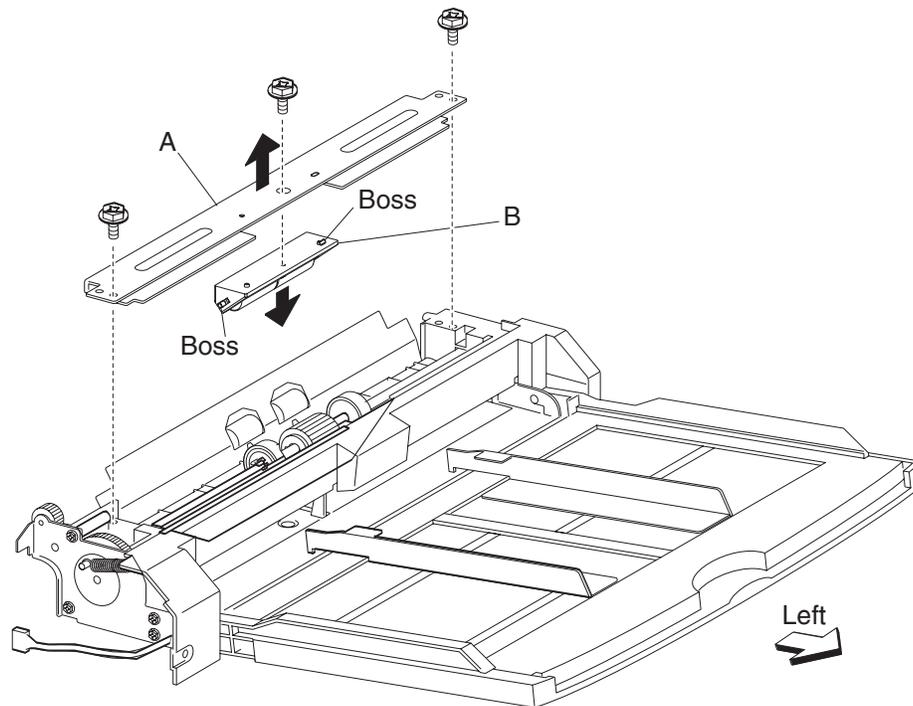


## MPF transport pinch roll assembly removal

1. Remove the MPF rear cover. Go to **“MPF rear cover removal” on page 4-56.**
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal” on page 4-52.**
3. Remove the two end screws securing the upper bracket (A) to the MPF feed unit assembly.
4. Remove the upper bracket (A).
5. Remove the one center screw securing the MPF transport pinch roll assembly (B) to the upper bracket (A).
6. Release the bosses securing the MPF transport pinch roll assembly (B) to the upper bracket.
7. Remove the MPF transport pinch roll assembly (B) by moving it in the direction of the arrow.

**Note:** Do not touch the plastic surface of the MPF pinch roll.

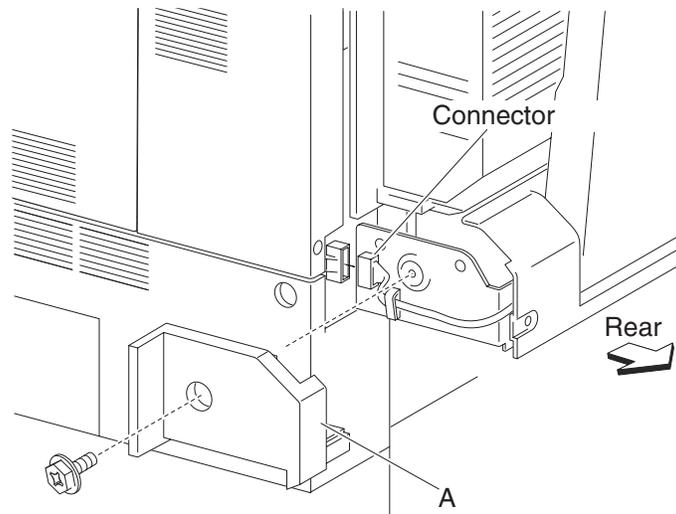
**Note:** Bushings and springs may become detached.



**Note:** Before reinstalling, ensure you do not touch the plastic roll surface.

### ***MPF rear cover removal***

1. Remove the one screw securing the MPF rear cover (A).
2. Remove the MPF rear cover (A).

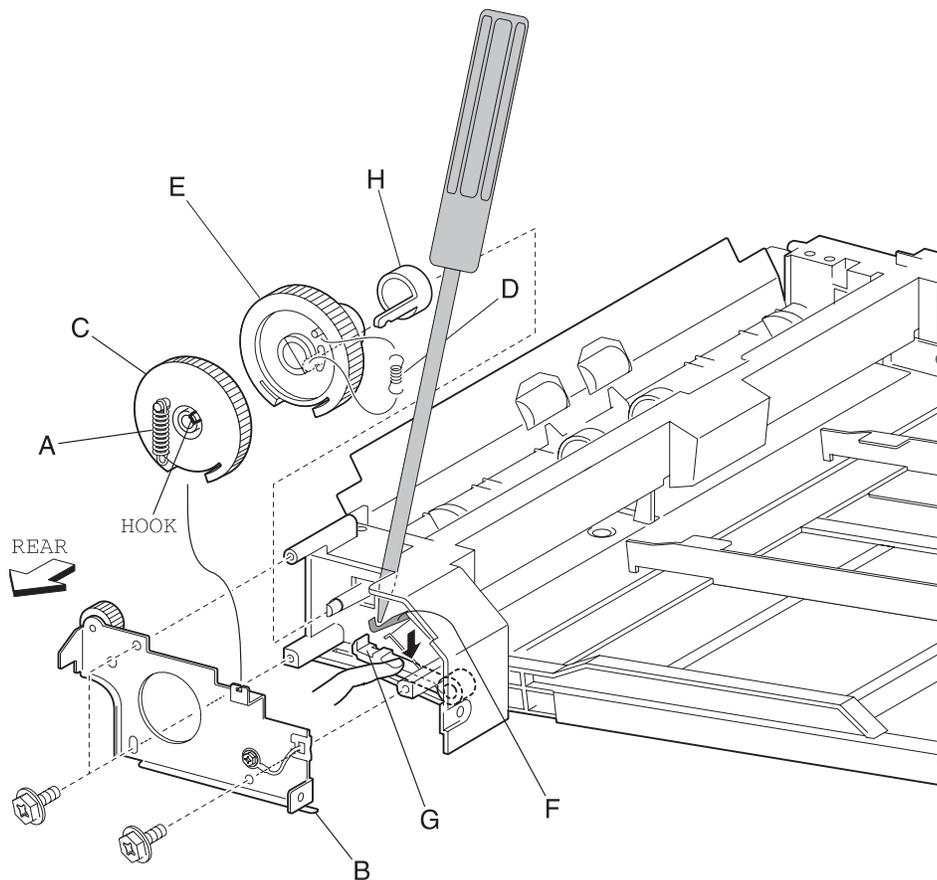


## MPF feed drive gear group removal

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the pickup spring (A) from the idler gear bracket assembly (B).  
**Note:** Leave the pickup spring (A) attached to the MPF feed drive gear pickup (C).
4. Remove the three screws securing the idler gear bracket assembly (B) to the MPF feed unit assembly.
5. Remove the idler gear bracket assembly (B).
6. Release the hooks securing the MPF feed drive gear pickup (C) to the shaft.
7. Remove the MPF feed drive gear pickup and pickup spring (A and C).

**Warning:** Depress the pick solenoid lever (F) and the pick lever (G) while performing step 8, or damage may occur.

8. Remove the small spring (D) from the drive cam gear (E).

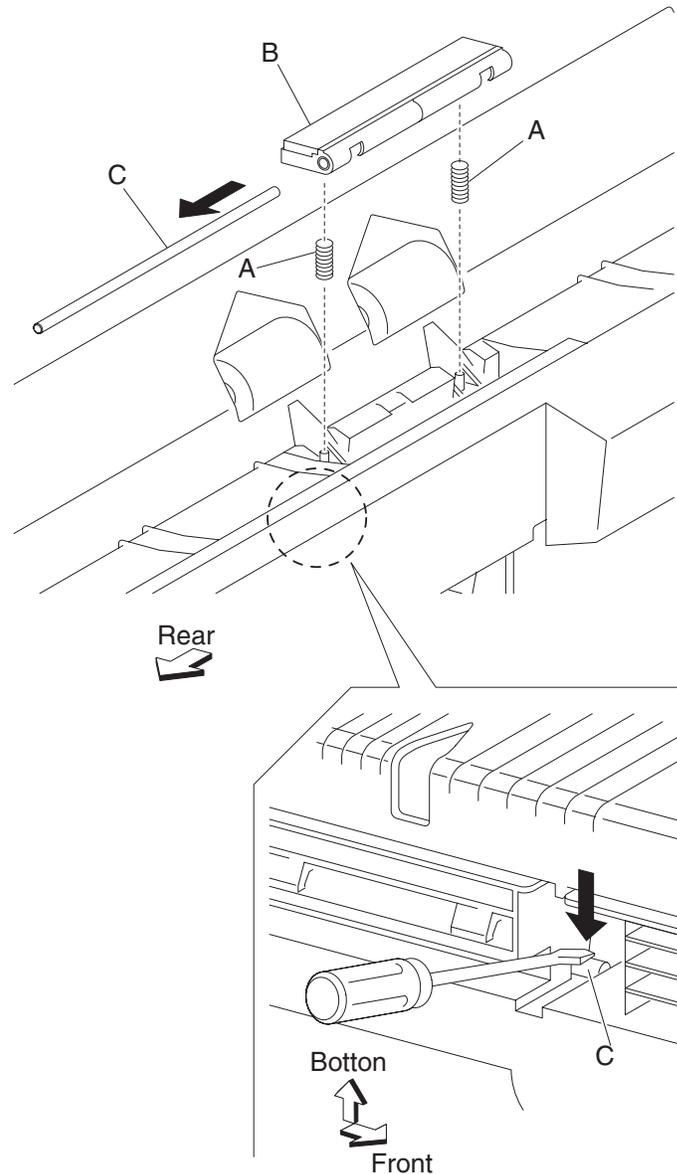


9. Remove the drive gear cam (E) and the drive stopper (H).

**Warning:** Before reinstalling, depress the pick solenoid lever and the pick lever while replacing the drive gear cam (E) and the drive stopper (H), or damage may occur.

## MPF pressure pad removal

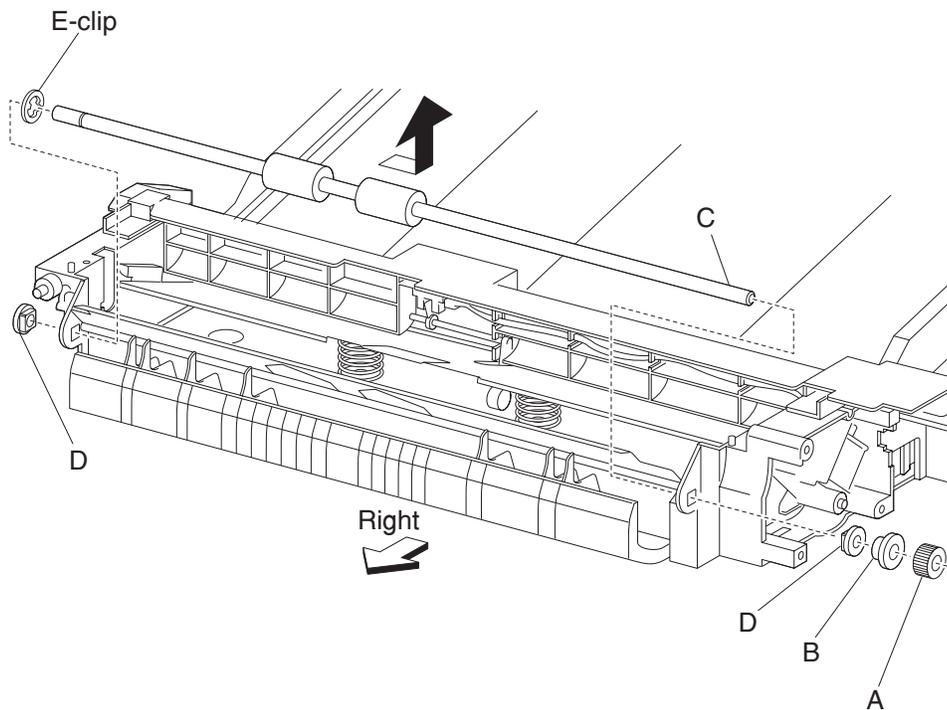
1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the MPF pick roll. See **“MPF pick roll removal”** on page 4-62.
4. Remove the MPF feed shaft assembly. See **“MPF feed shaft assembly removal”** on page 4-61.
5. Remove the two springs (A) under the pressure pad (B).
6. Turn the MPF upside down, and pry the shaft out with a flat blade screwdriver.
7. Remove the separation pad (B) and the shaft (C) by moving it in the direction of the arrow from the backside.



**Note:** Before reinstalling, ensure the two springs (A) remain in the proper position during reassembly of the feed shaft assembly and MPF feed roll.

## MPF transport roll assembly removal

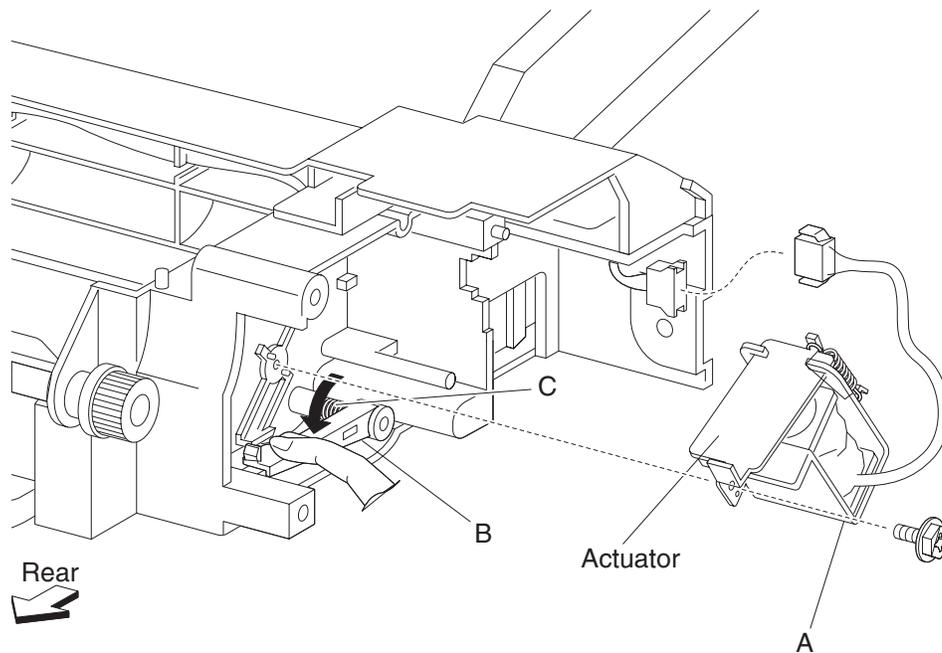
1. Remove the MPF rear cover. See **“MPF rear cover removal” on page 4-56.**
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal” on page 4-52.**
3. Remove the two end screws securing the upper bracket to the MPF feed unit assembly.
4. Remove the upper bracket.
5. Remove the MPF transport gear - 18 tooth (A).  
**Note:** The MPF transport gear - 18 tooth will be tight and requires extra force to remove.
6. Remove the transport shaft collar (B).
7. Remove the e-clip with a prying tool securing the MPF transport roll assembly (C) to the MPF feed unit assembly.
8. Remove the two bushings (8mm) (D).
9. Remove the MPF transport roll assembly by moving it rightward then upward in the direction of the arrow.  
**Note:** When removing the MPF transport roll assembly (C), do not touch the rubber surface.



**Note:** Before reinstalling the MPF transport roll assembly (C), do not touch the rubber surface.

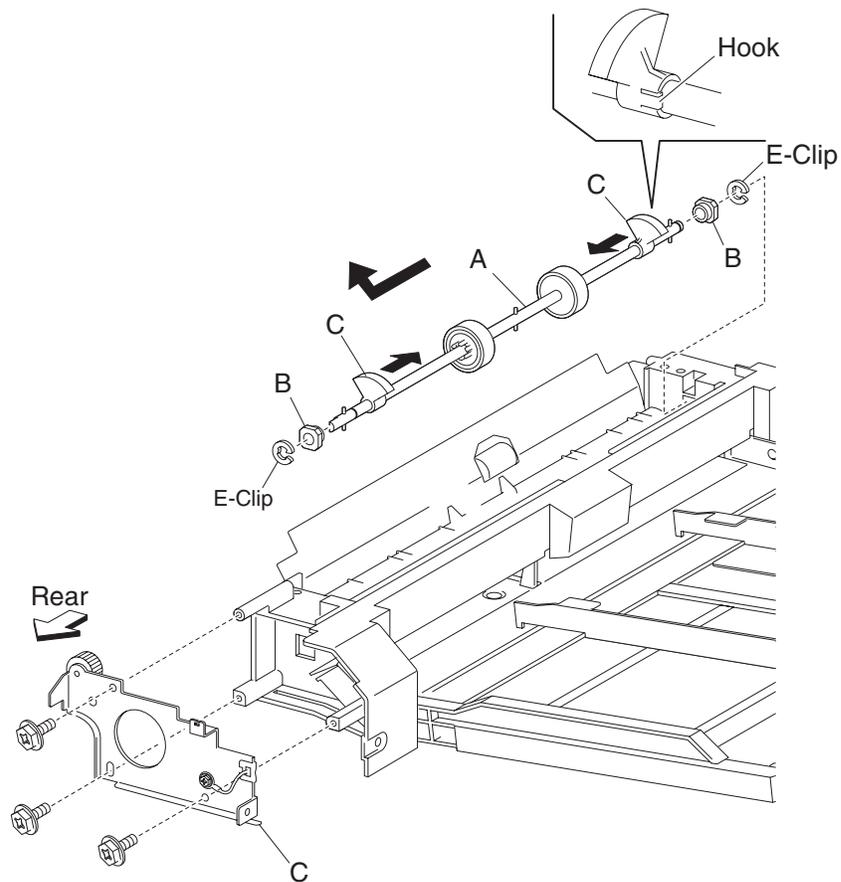
### ***MPF pick solenoid / pick lever removal***

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the MPF feed drive gear group. See **“MPF feed drive gear group removal”** on page 4-57.
4. Remove one screw securing the pick solenoid (A).
5. Disconnect the connector from the pick solenoid (A).
6. Remove the MPF pick solenoid (A).  
**Note:** When removing the pick solenoid (A), lower the actuator (B).
7. Remove the pick lever (B).
8. Remove the spring (C).



## MPF feed shaft assembly removal

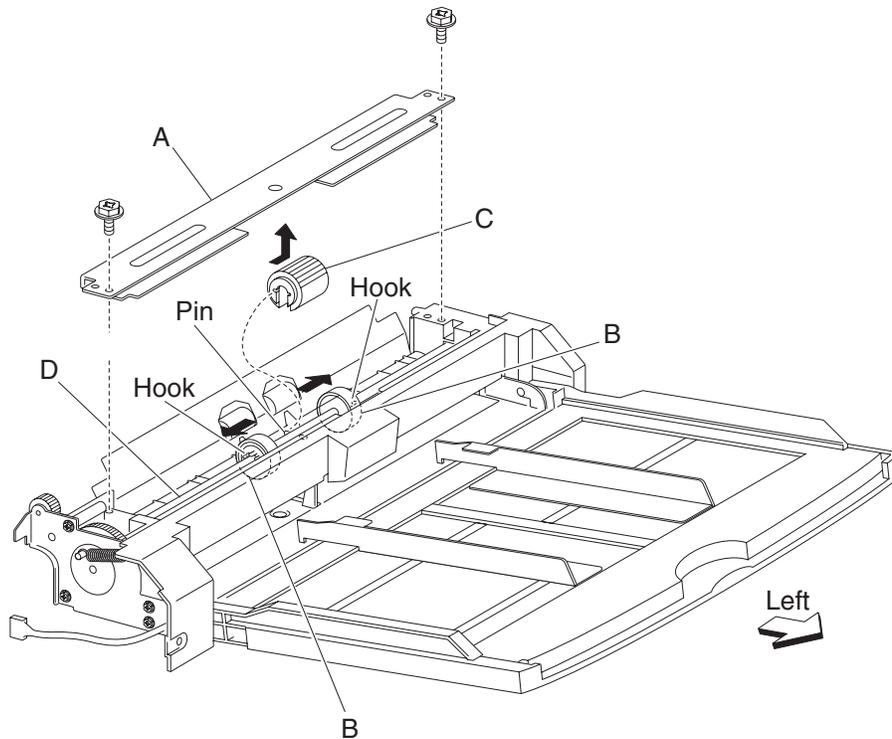
1. Remove the MPF rear cover. See **"MPF rear cover removal"** on page 4-56.
2. Remove the MPF feed unit assembly. See **"MPF feed unit assembly removal"** on page 4-52.
3. Remove the MPF pick roll. See **"MPF pick roll removal"** on page 4-62.
4. Remove the MPF feed drive gear group. See **"MPF feed drive gear group removal"** on page 4-57.
5. Remove the two e-rings with a prying tool that secures the feed shaft assembly (A) to the MPF feed unit assembly.
6. Remove the two bushings (B).
7. Release the hooks securing the two feed shaft cams (C), and slide them inward towards the center of the MPF feed shaft assembly (A).
8. Remove the feed shaft assembly (A) by moving it to the side then upwards in the direction of the arrow.



## MPF pick roll removal

1. Remove the MPF rear cover. See **“MPF rear cover removal” on page 4-56.**
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal” on page 4-52.**
3. Remove the two end screws securing the upper bracket (A) to the MPF feed unit assembly.
4. Remove the upper bracket (A).
5. Release the two hooks securing the two feed shaft cores (B), and slide them both outward.
6. Remove the MPF pick roll (C) from the feed shaft assembly (D) by sliding it to the right in the direction of the arrow and lifting upward.

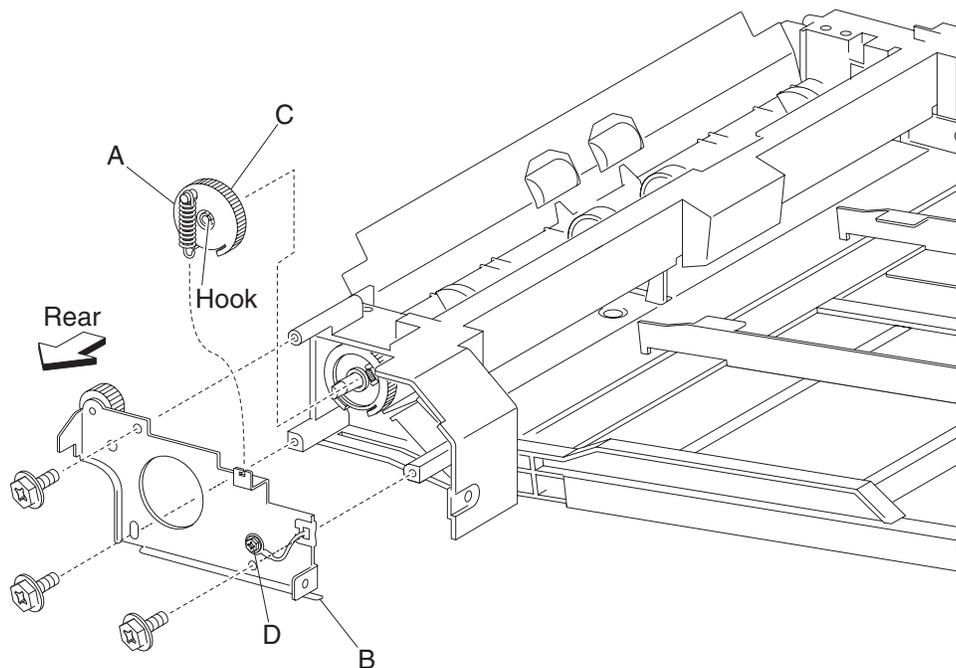
**Note:** When removing the MPF pick roll (C), do not touch the rubber surface.



**Note:** Before reinstalling the MPF pick roll assembly (C), do not touch the rubber surface.

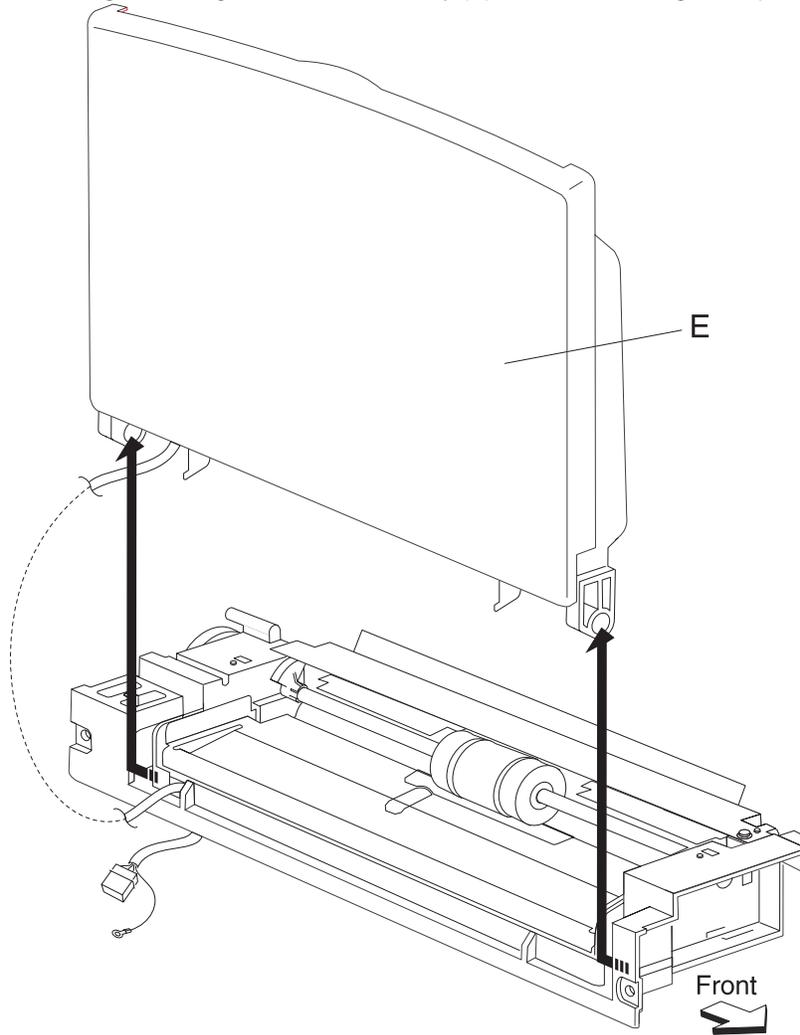
## MPF fold down tray assembly removal

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the MPF upper frame. See **“MPF media out actuator and upper frame removal”** on page 4-53.
4. Remove the pickup spring (A) from the idler gear bracket assembly (B).  
**Note:** Leave the pickup spring (A) attached to the MPF feed drive gear pickup (C).
5. Remove three screws securing the idler gear bracket assembly (B) to the MPF feed unit assembly.
6. Remove the idler gear bracket assembly (B).
7. Remove the green ground wire (D) from the idler gear bracket assembly (B).
8. Remove the green (D) ground wire from the clamp.



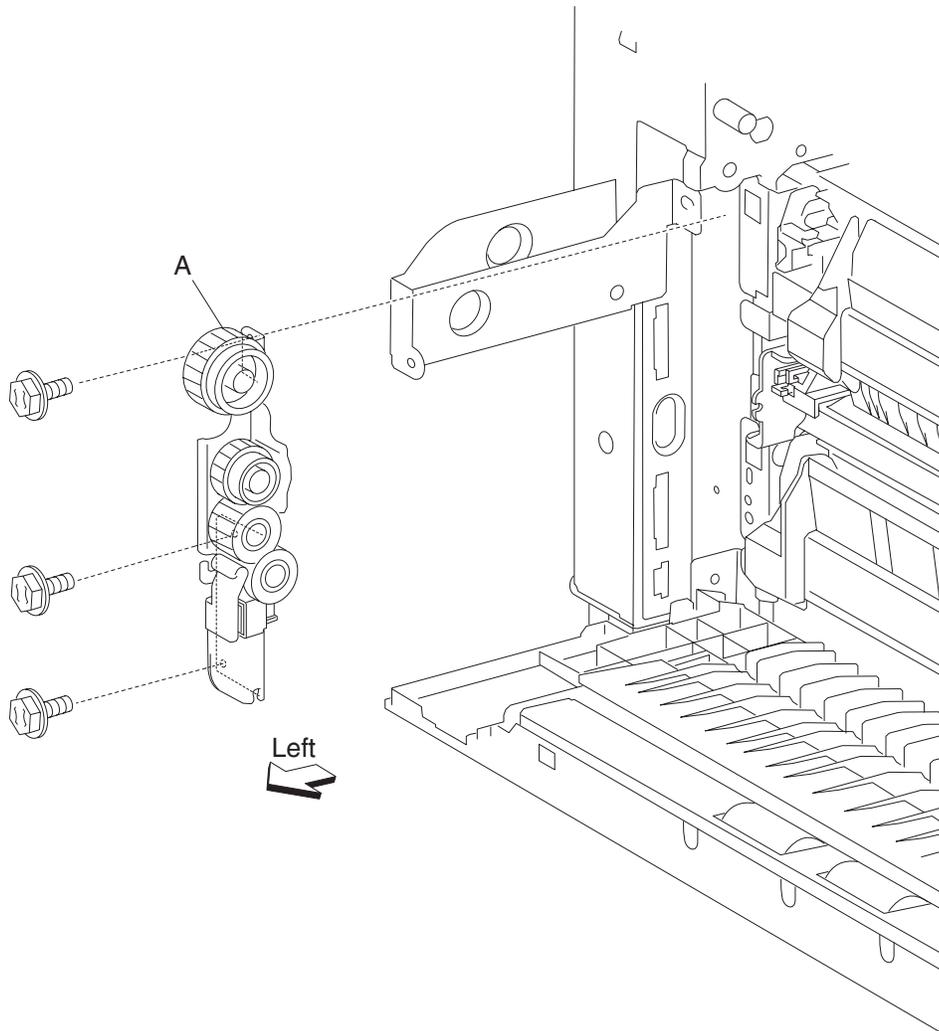
9. Disconnect the connector leading to the MPF fold down tray assembly (E).
10. Raise the MPF fold down tray assembly (E) to its upright position, and slide it to the side.
11. Remove the MPF fold down tray assembly (E).

**Note:** Before reinstalling the idler gear bracket assembly (B), ensure the wiring is not pinched.



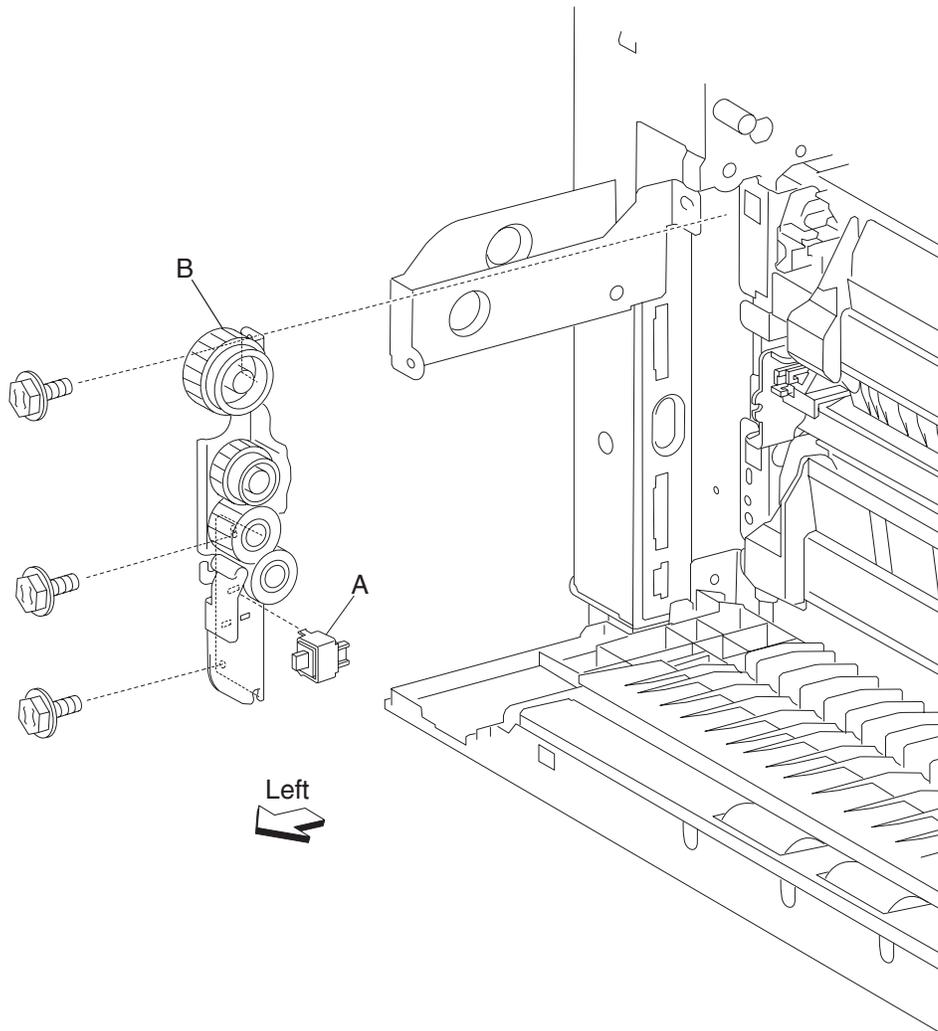
## Vertical drive gear assembly

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
4. Open the printer left lower door assembly.
5. Remove the three screws securing the vertical drive gear assembly (A).
6. Release the harness from the clamp on the vertical drive gear assembly (A).
7. Remove the vertical drive gear assembly (A).



### Switch (left lower door interlock)

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
4. Remove the vertical drive gear assembly. See **“Vertical drive gear assembly”** on page 4-65.
5. Disconnect the harness from the switch (left lower door interlock) (A).
6. Release the hooks securing the switch (left lower door interlock) (A) to the vertical drive gear assembly (B).
7. Remove the lower switch (left lower door interlock) (A).

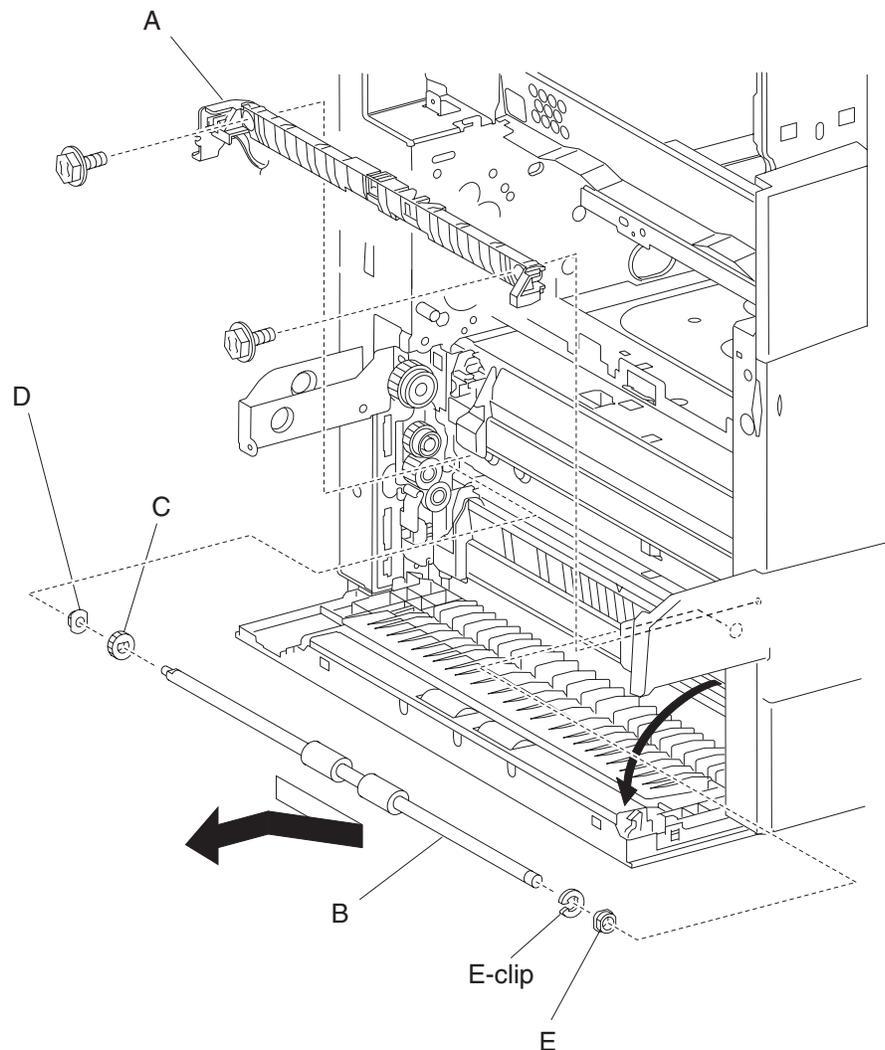


## Media transport roll assembly / gear removal

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
4. Open the printer left lower door assembly.
5. Remove the two screws securing the tray 2 feed-out sensor guide (A).
6. Remove the tray 2 feed-out sensor guide (A) while pulling on its center most point.
7. Remove the e-clip with needle nose pliers on the front side securing the media transport roll (B).
8. Remove the media transport roll assembly (B) by sliding it in the direction of the arrow and pulling out.  
**Note:** When removing the media transport roll assembly (B), do not touch the rubber surface.

**Note:** When removing the media transport roll (B), the bushings and gear may become detached.

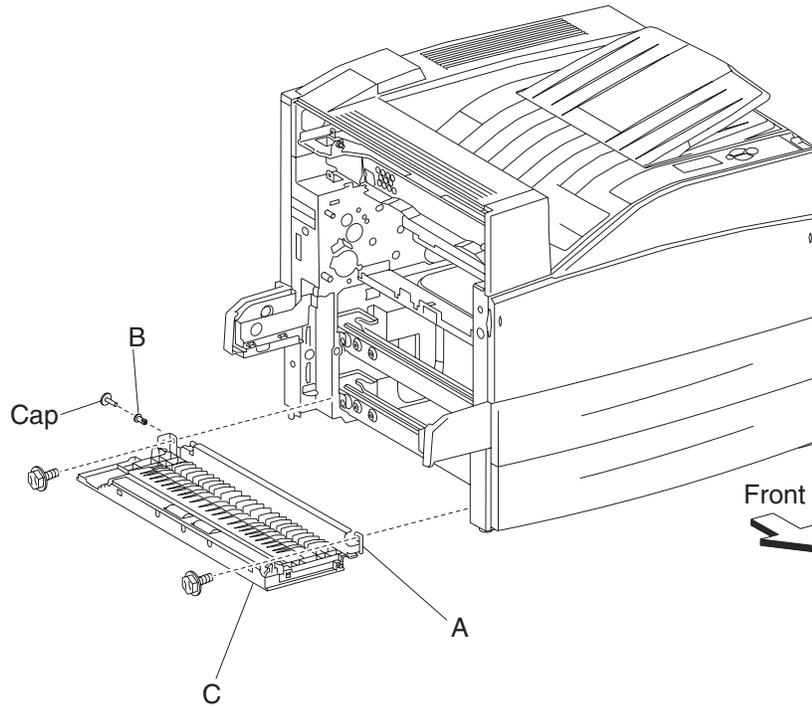
9. Remove the media transport roll gear 18 tooth (C).
10. Remove the transport roll rear bushing (D).
11. Remove the transport roll front bushing (E).



**Note:** Before reinstalling the media transport roll assembly (B), do not touch the rubber surface.

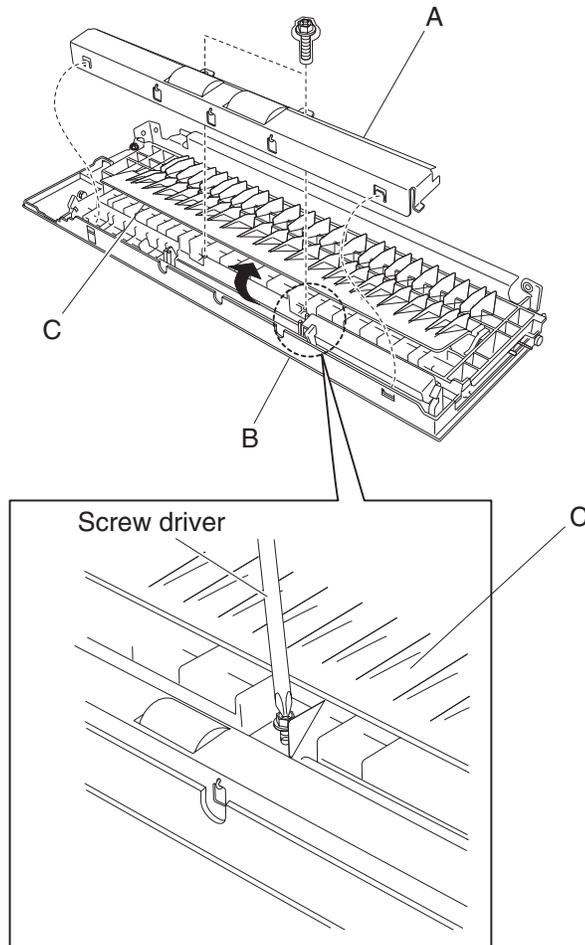
### ***Printer left lower door assembly removal***

1. Open the printer left lower door assembly.
2. Remove the two screws securing the bracket (A).
3. Remove the bracket (A).
4. Pull the cap of the hinge pin (B) out with a prying tool to remove the hinge pin (B) from the bracket (A).
5. Remove the hinge pin (B).
6. Remove the printer left lower door assembly (C) from the bracket (A).



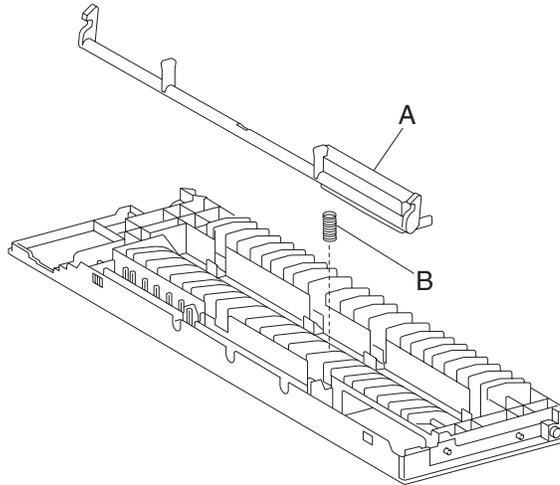
### Printer left lower pinch roll assembly removal

1. Open the printer left lower door assembly.
2. Remove the two screws securing the left lower pinch roll assembly (A) to the printer left lower door assembly (B).  
**Note:** The media guide (C) can be slightly lifted to gain better access to the attaching screws.
3. Release two hooks securing the left lower pinch roll assembly (A) to the printer left lower door assembly (B).
4. Remove the left lower pinch roll assembly (A).



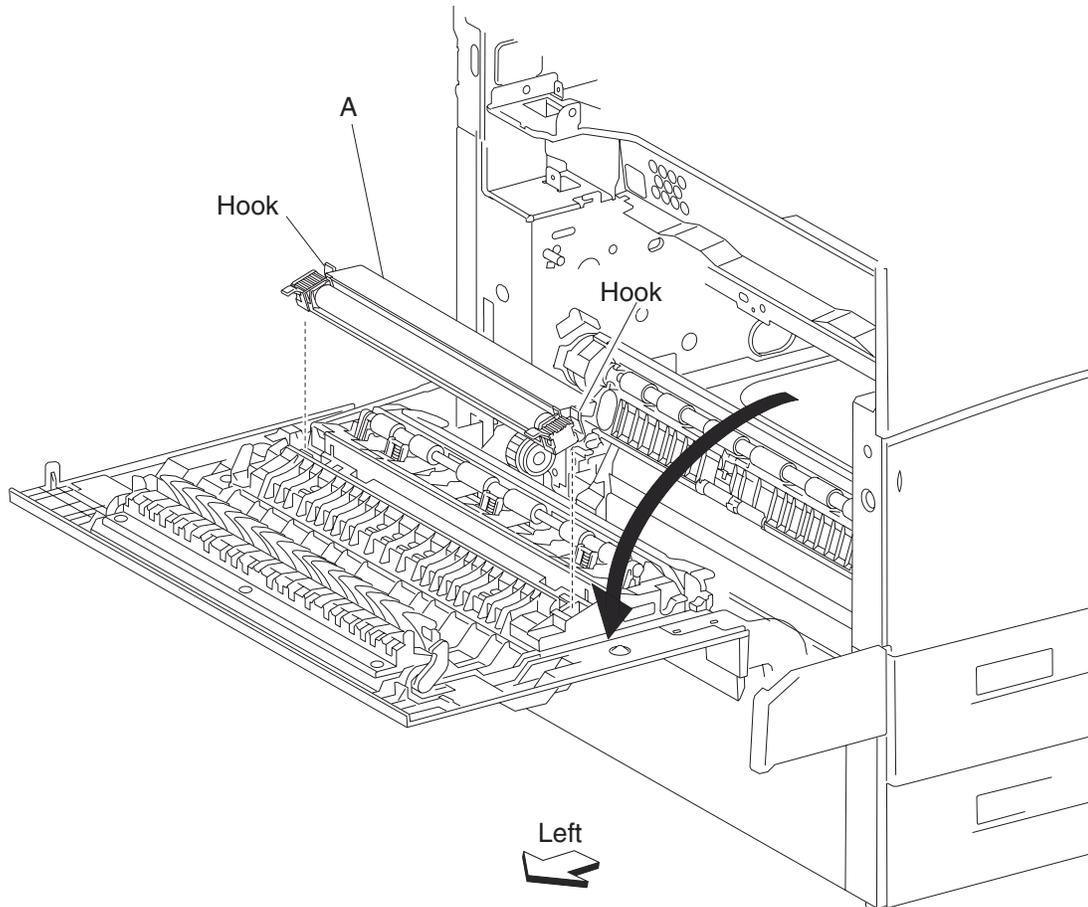
### ***Left lower door handle assembly removal***

1. Open the printer left lower door assembly.
2. Remove the left lower pinch roll assembly. See **“Printer left door support strap removal”** on page 4-72.
3. Remove the left lower door handle (A).
4. Remove the spring (B).



### ***Transfer roll assembly removal***

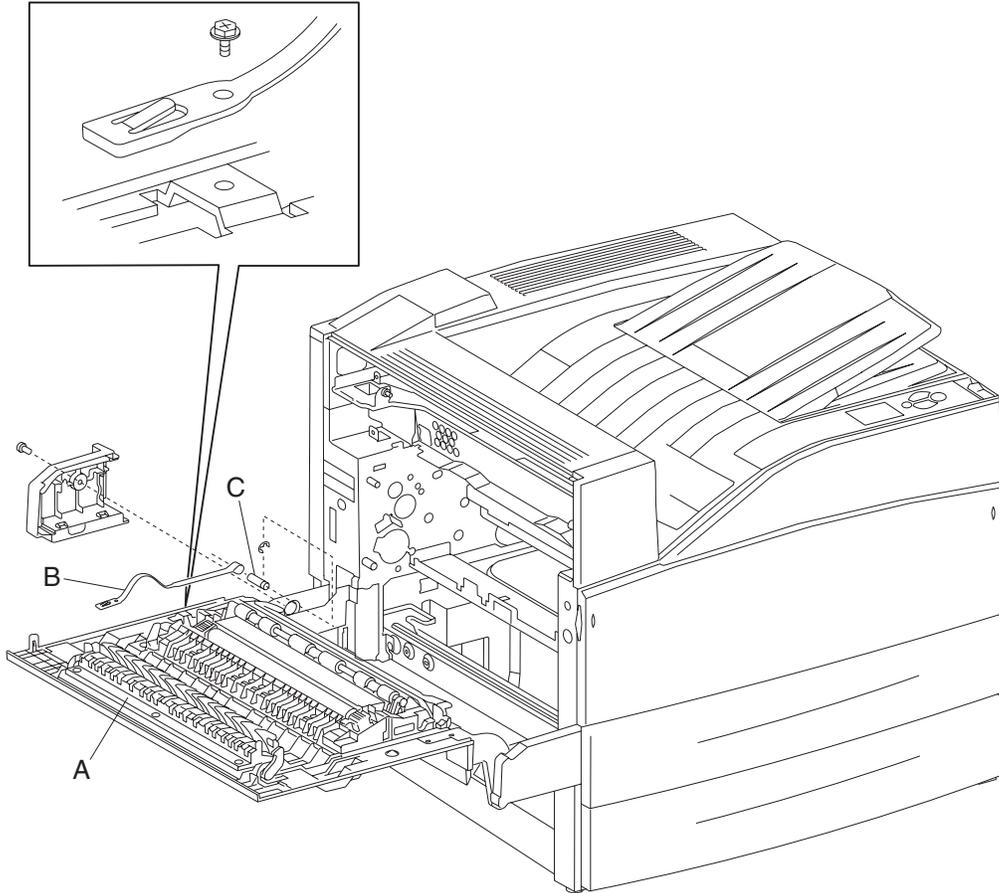
1. Open the printer left door assembly.
2. Release the two plastic hooks on the transfer roll assembly (A).
3. Remove the transfer roll assembly (A) by lifting it upward.  
**Note:** When removing the transfer roll assembly (A), do not touch the roll surface.



**Note:** Before reinstalling the transfer roll assembly (A), do not touch the roll surface.

### Printer left door support strap removal

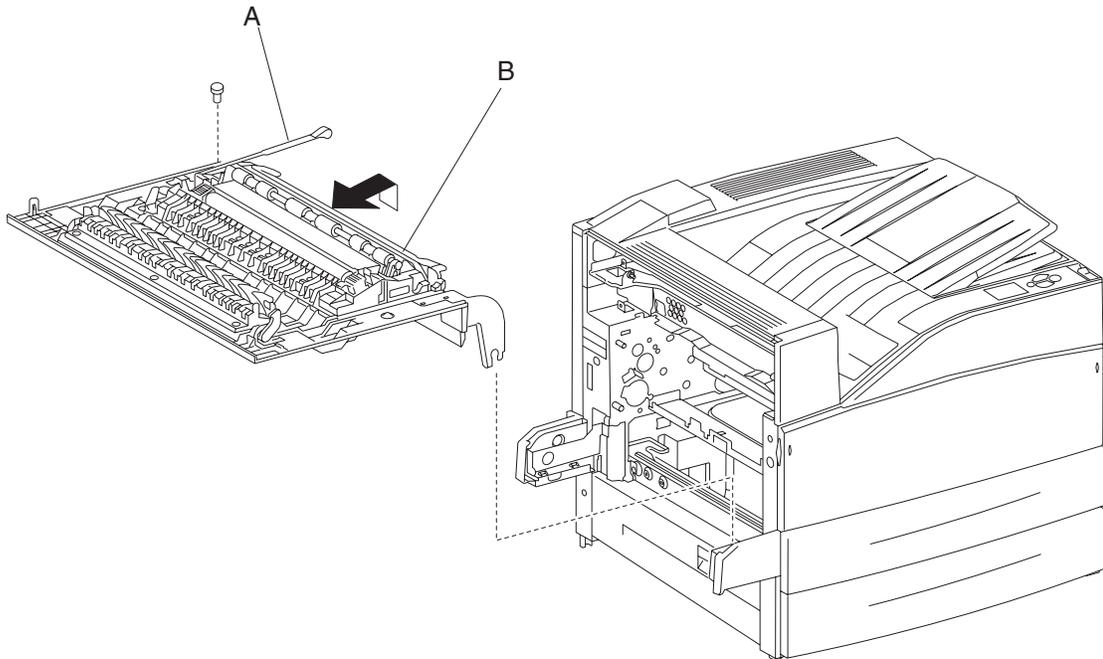
1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Open the printer left door assembly (A).
3. Remove the screw securing the printer left door support strap (B) to the printer left door (A).
4. Remove the e-clip securing the shaft (C) to the printer.
5. Remove the shaft (C).
6. Remove the printer left door support strap (B).



## Printer left door assembly removal

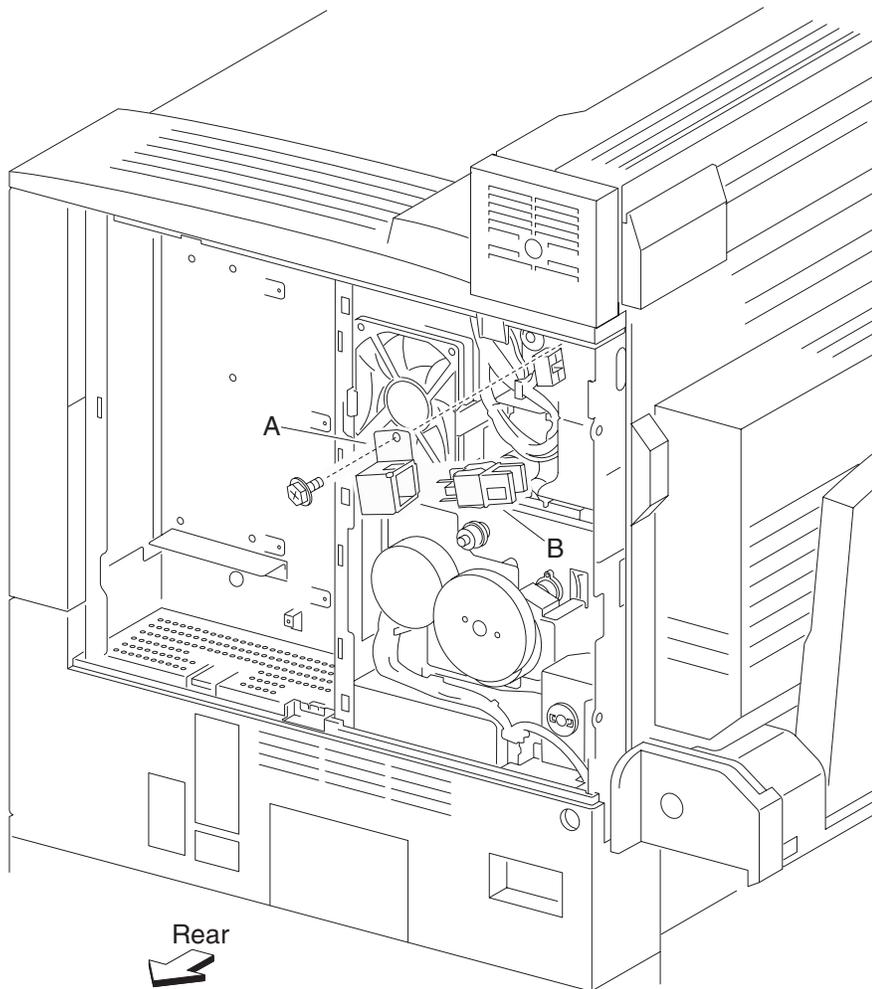
**Note:** First, remove the duplex unit assembly if equipped.

1. Open the printer left door assembly.
2. Remove the screw securing the left door support strap (A) to the printer left door assembly (B).
3. Remove the printer left door assembly (B) by lowering it then lifting upward.



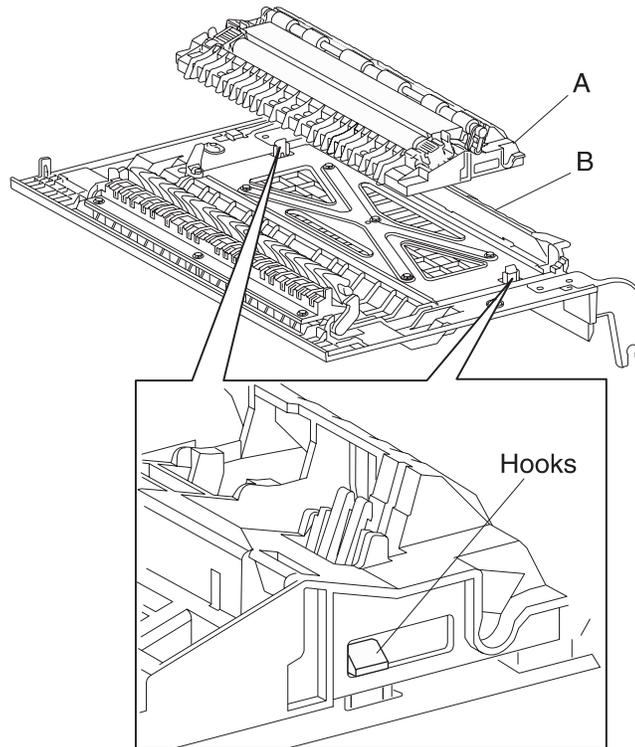
### Switch (printer left door interlock) removal

1. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
2. Open the printer left door assembly.
3. Remove the one screw securing the bracket (A) to the printer.
4. Remove the bracket (A).
5. Disconnect the connector from the switch (printer left door interlock) (B).
6. Release the hooks securing the switch (printer left door interlock) (B) to the bracket (A).
7. Remove the switch (printer left door interlock) (B).



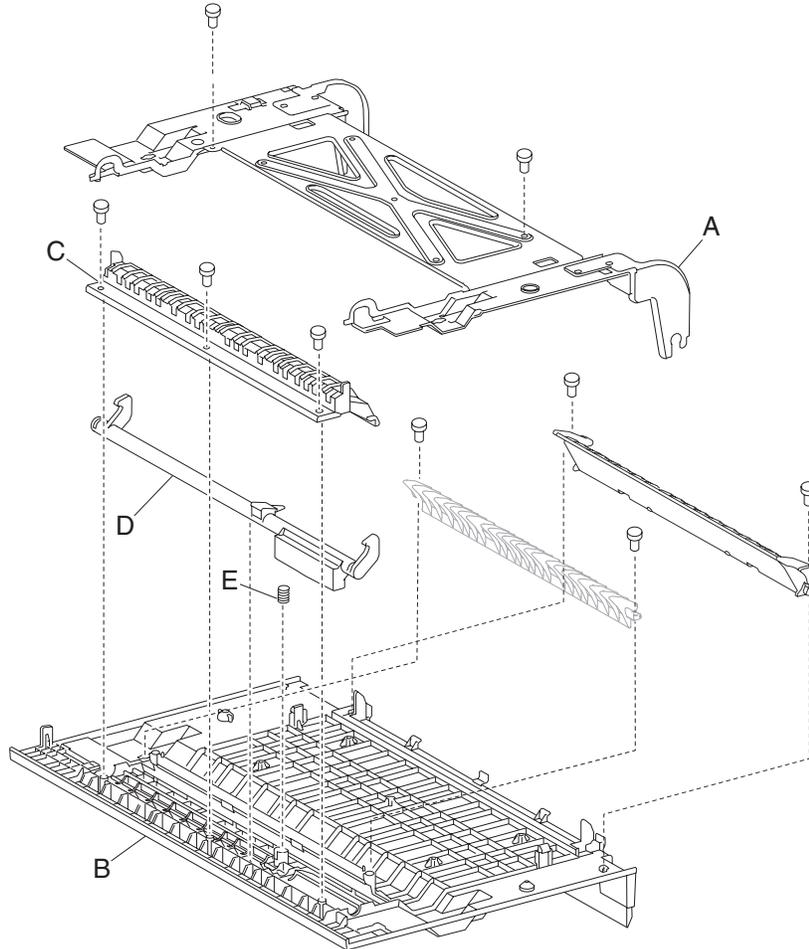
### **Transfer roll guide assembly removal**

1. Open the printer left door assembly.
2. Remove the printer left door assembly. See **“Printer left door support strap removal” on page 4-72.**
3. Remove the transfer roll assembly. See **“Transfer roll assembly removal” on page 4-71.**
4. Release the two hooks securing the transfer roll guide assembly (A) to the printer left door assembly (B).
5. Remove the transfer roll guide assembly (A).



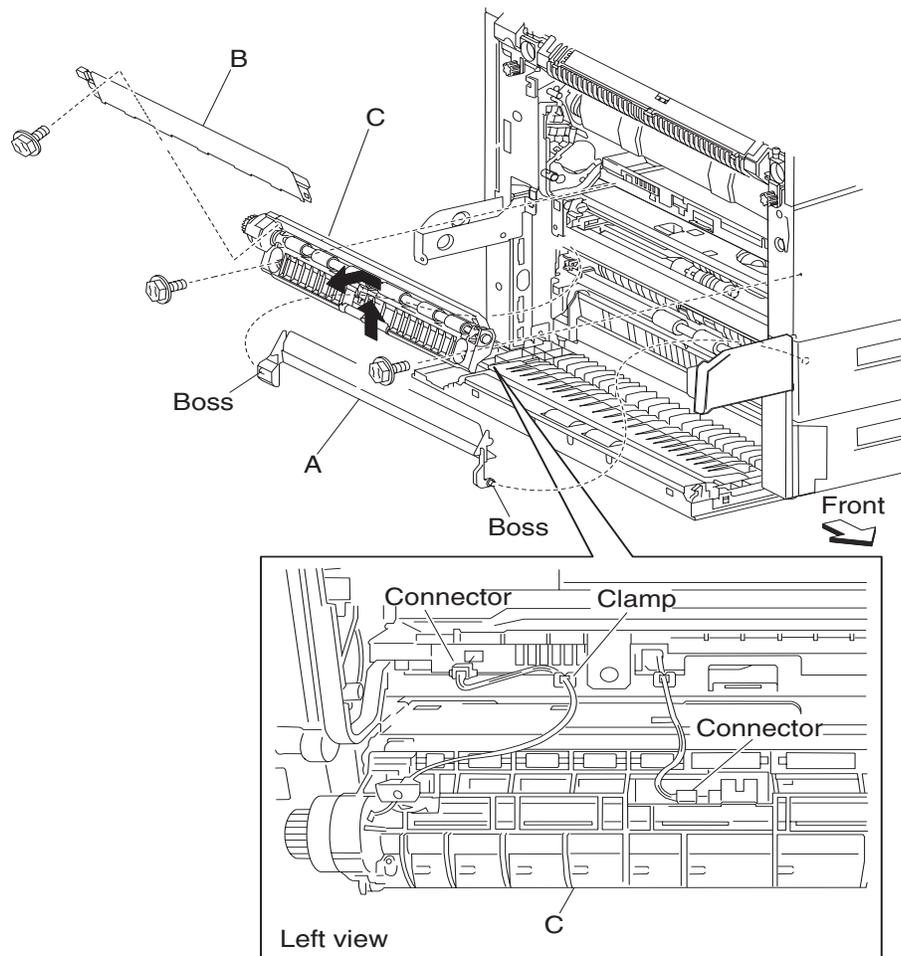
## Printer left door assembly handle removal

1. Open the printer left door assembly.
2. Remove the printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
3. Remove the transfer roll guide assembly. See **“Transfer roll guide assembly removal”** on page 4-75.
4. Remove five screws securing the metal frame (A) to the plastic cover (B).
5. Remove the metal frame (A) by lifting it upward and sliding outward.
6. Remove the three screws securing the handle cover (C).
7. Remove the handle cover (C).
8. Remove the printer left door assembly handle (D).
9. Remove the spring (E).



## Registration roll assembly removal

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
4. Remove the bosses on both ends of the vertical turn mylar guide (A).
5. Remove the vertical turn mylar guide (A).  
**Warning:** The vertical turn mylar guide (A) requires moderate force to remove. Be careful not to damage it.
6. Remove the two screws securing the registration mylar guide assembly (B) to the registration roll assembly (C).
7. Remove the registration mylar guide assembly (B).
8. Remove the two screws securing registration roll assembly (C).
9. Remove the registration roll assembly (C) by lifting it upward and outward in the direction of the arrow.  
**Note:** When removing the registration roll assembly (C), use care not to damage the two harnesses located on the backside of the assembly.
10. Release the harness from the clamp.
11. Disconnect the two connectors from the registration roll assembly (C).

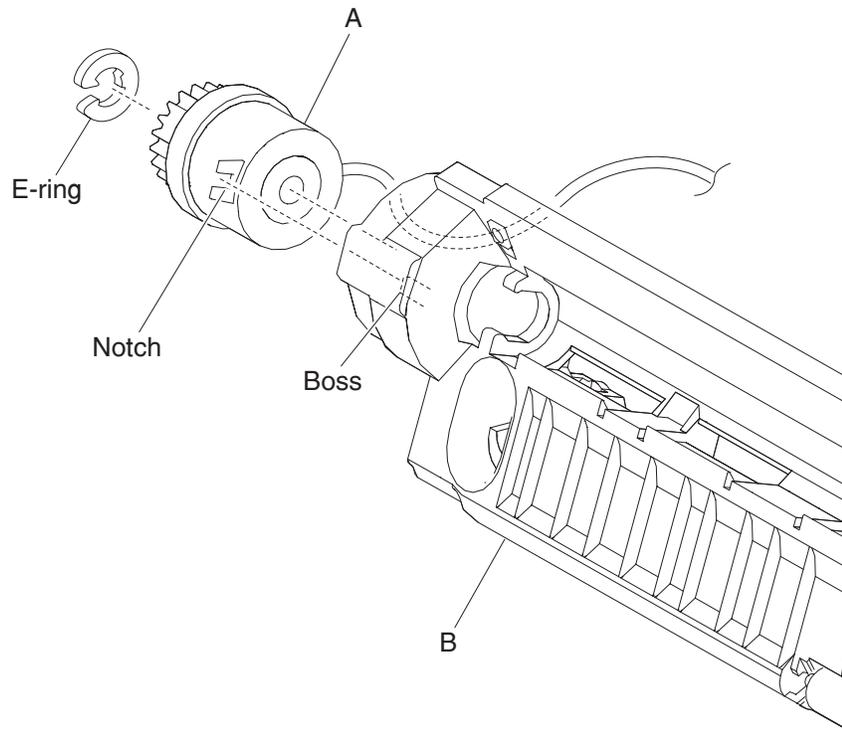


### Note:

- Before reinstalling the registration roll assembly (C), fit the bosses on the rear center of the assembly into the holes.
- Before reinstalling the two harness connectors, ensure they are plugged in properly.

## Registration clutch assembly removal

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
4. Remove the registration roll assembly. See **“Registration roll assembly removal”** on page 4-77.
5. Remove the e-ring with a prying tool securing the registration clutch assembly (A) to the registration roll assembly (B).
6. Remove the registration clutch assembly (A) along with the harness.

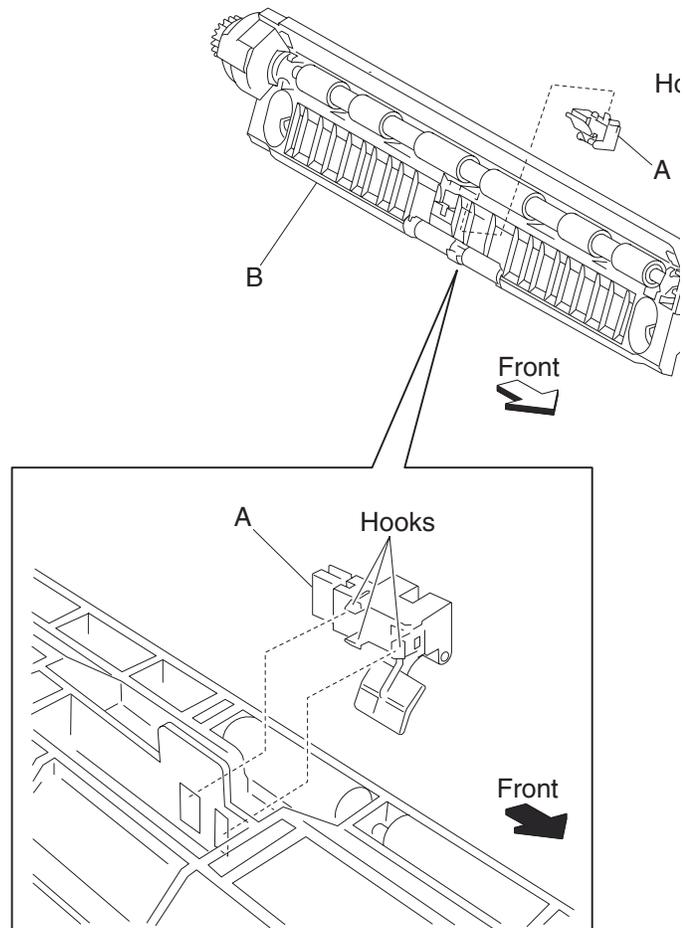


### Note:

- Before reinstalling, the harness for the clutch must be placed through the hole on the registration roll assembly (B).
- Before reinstalling, the notch on the registration clutch assembly (A) must be placed over the boss of the registration roll assembly (B).

## Sensor (registration) removal

1. Remove the MPF rear cover. See **"MPF rear cover removal"** on page 4-56.
2. Remove the MPF feed unit assembly. See **"MPF feed unit assembly removal"** on page 4-52.
3. Remove the printer left door assembly. See **"Printer left door support strap removal"** on page 4-72.
4. Remove the registration roll assembly. See **"Registration roll assembly removal"** on page 4-77.
5. Release the hooks securing the sensor (registration) (A) to the registration roll assembly (B).
6. Remove the sensor (registration) (A).
7. Disconnect the connector from the sensor (registration).

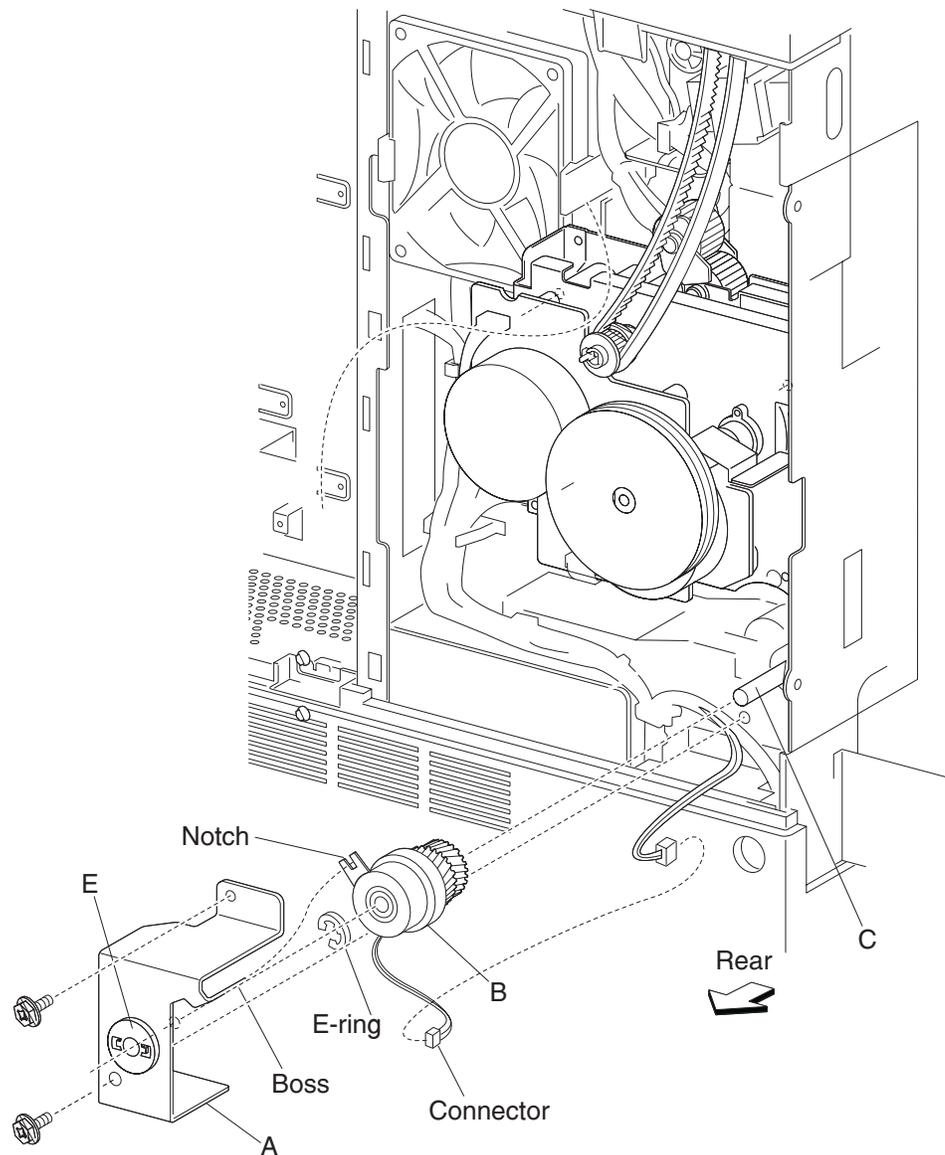


## Transport clutch assembly removal

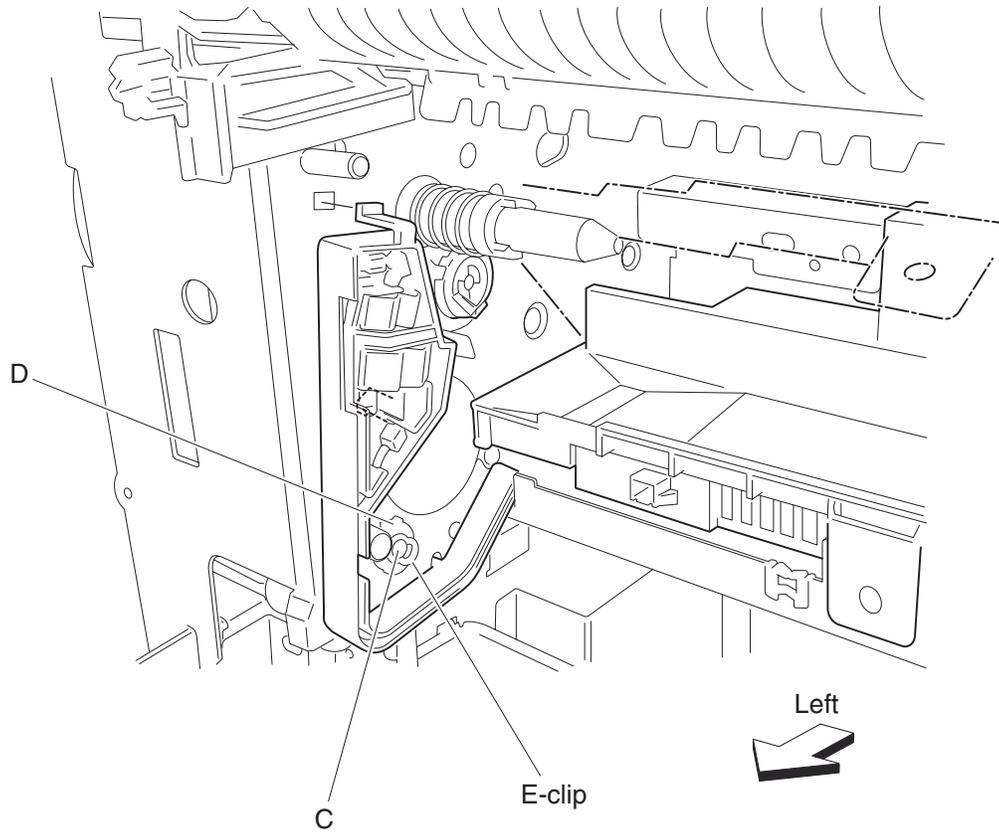
1. Remove the rear RIP card cover. See **“RIP card assembly removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Remove the two screws securing the bracket (A).
4. Disconnect the connector leading to the transport clutch assembly (B).
5. Remove the e-ring with a prying tool securing the transport clutch assembly (B).
6. Open the printer left door assembly.
7. Remove the transport clutch assembly (B).
 

**Warning:** When removing the transport clutch assembly (B), some gears will remain on the shaft (C).
8. Remove any gears that remain on the shaft (C).
 

**Warning:** When removing the gears make sure not to drop them into the framework of the machine.
9. Remove the e-clip with needle nose pliers on the front of the shaft (C) directly behind the printer left door assembly.
10. Remove the shaft (C).



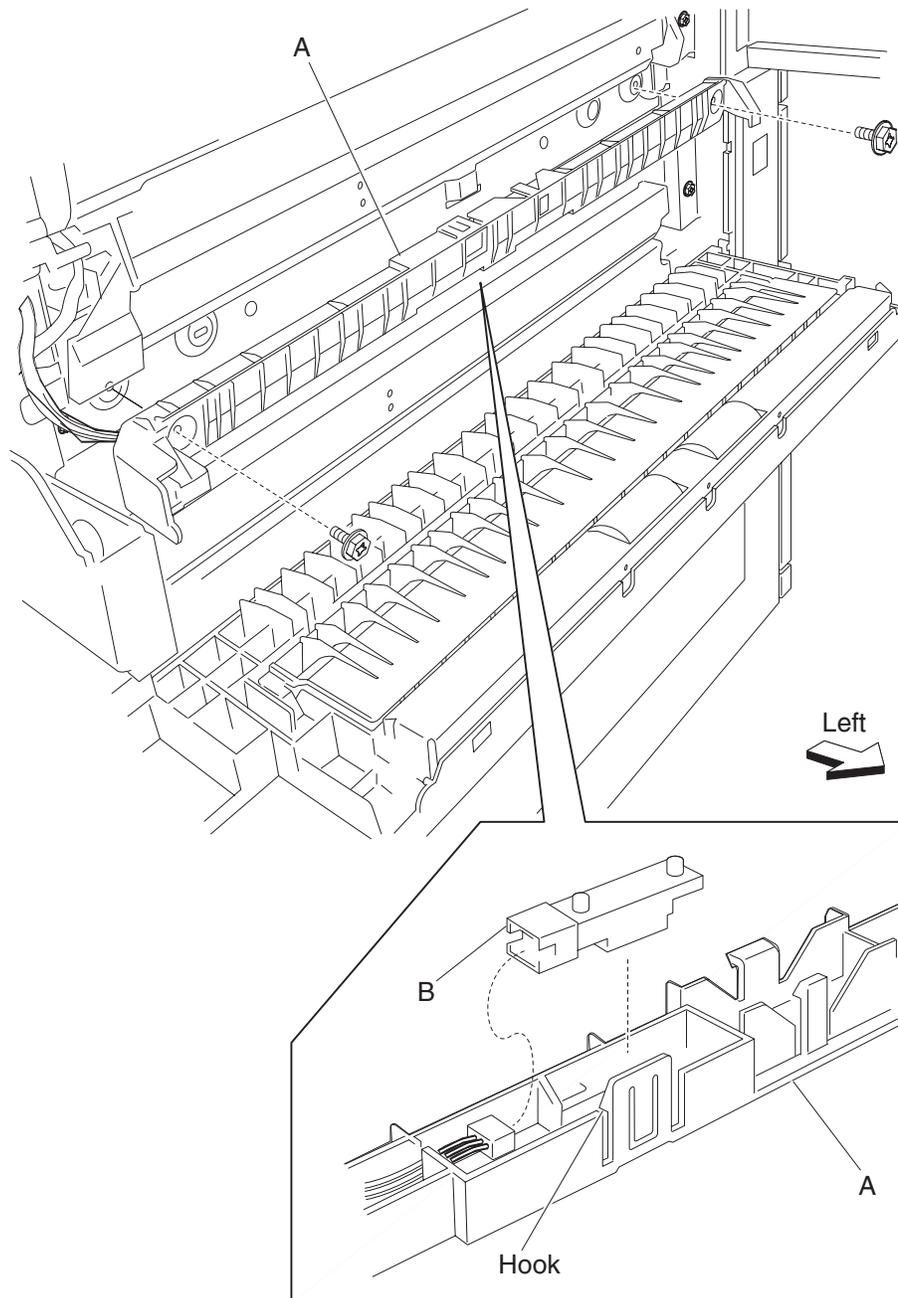
11. Release the hooks securing the front bushing (D) to the frame.
12. Remove the front bushing (D).
13. Release the hooks securing the rear bushing (E) from the bracket (A).
14. Remove the rear bushing (E).



**Note:** Before reinstalling, the notch of the transport clutch assembly (B) must be placed over the boss of the bracket (A).

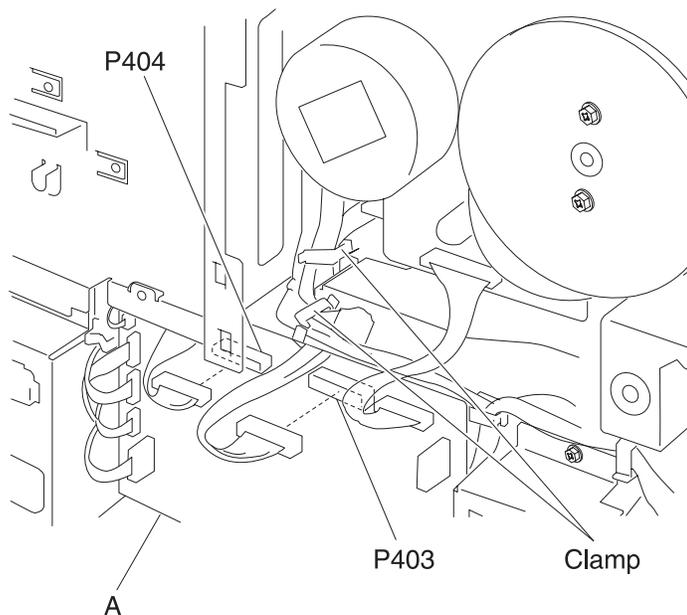
## Sensor (tray 2 feed-out) removal

1. Remove the MPF rear cover. See **“MPF rear cover removal”** on page 4-56.
2. Remove the MPF feed unit assembly. See **“MPF feed unit assembly removal”** on page 4-52.
3. Remove the printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
4. Open the printer left lower door assembly. See **“Printer left lower door assembly removal”** on page 4-68.
5. Remove the two screws securing the tray 2 feed-out sensor guide (A).
6. Remove the tray 2 feed-out sensor guide (A) while pulling on its center most point.
7. Disconnect the connector from the sensor (tray 2 feed-out) (B).
8. Release the hook securing the sensor (tray 2 feed-out) (B).
9. Remove the sensor (tray 2 feed-out) (B).



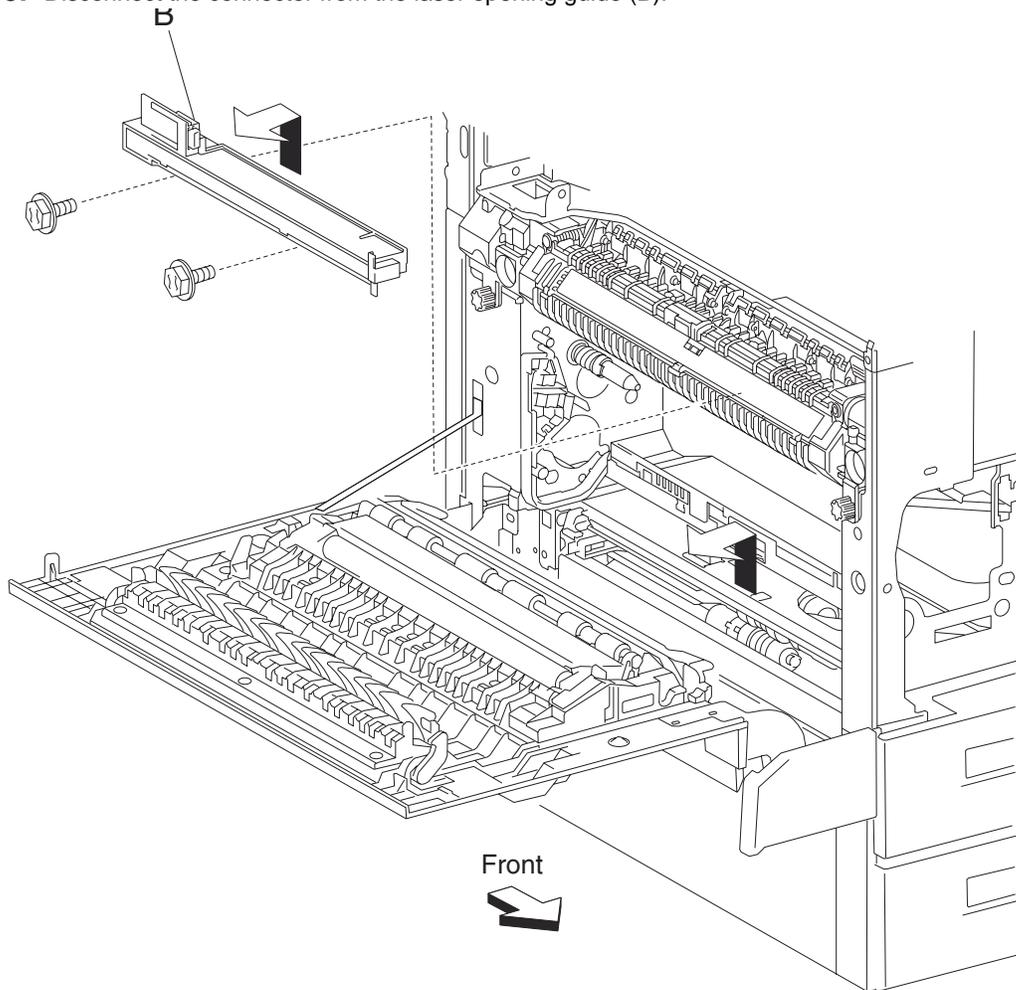
## Switch (PC cartridge interlock) removal

1. Remove the front left cover. See **“Printer front left cover removal”** on page 4-3.
2. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
3. Remove the PC cartridge.
4. Remove the toner cartridge.
5. Remove the printer front door assembly. See **“Printer front door assembly removal”** on page 4-9.
6. Remove the front inner cover. See **“Front inner cover removal”** on page 4-11.
7. Remove the HVPS card assembly. See **“High voltage power supply (HVPS) card removal”** on page 4-117.
8. Remove the toner cartridge guide assembly. See **“Toner cartridge guide assembly removal”** on page 4-95.
9. Remove the rear lower cover. See **“Rear lower cover removal”** on page 4-16.
10. Disconnect the two connectors P403 and P404 from the printer engine card assembly (A).

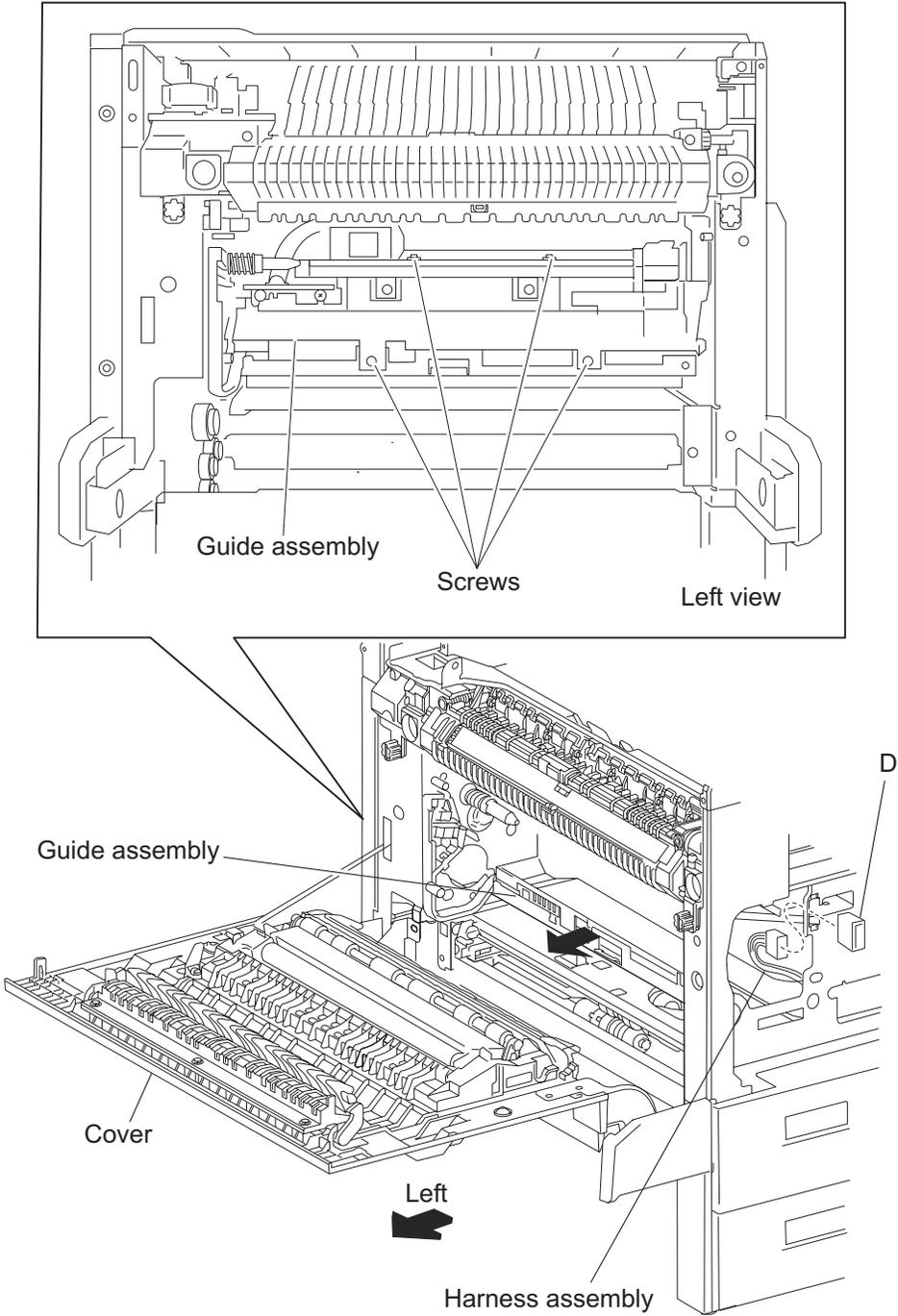


11. Open the printer left door assembly.
12. Remove the registration roll assembly. See **“Registration roll assembly removal”** on page 4-77.

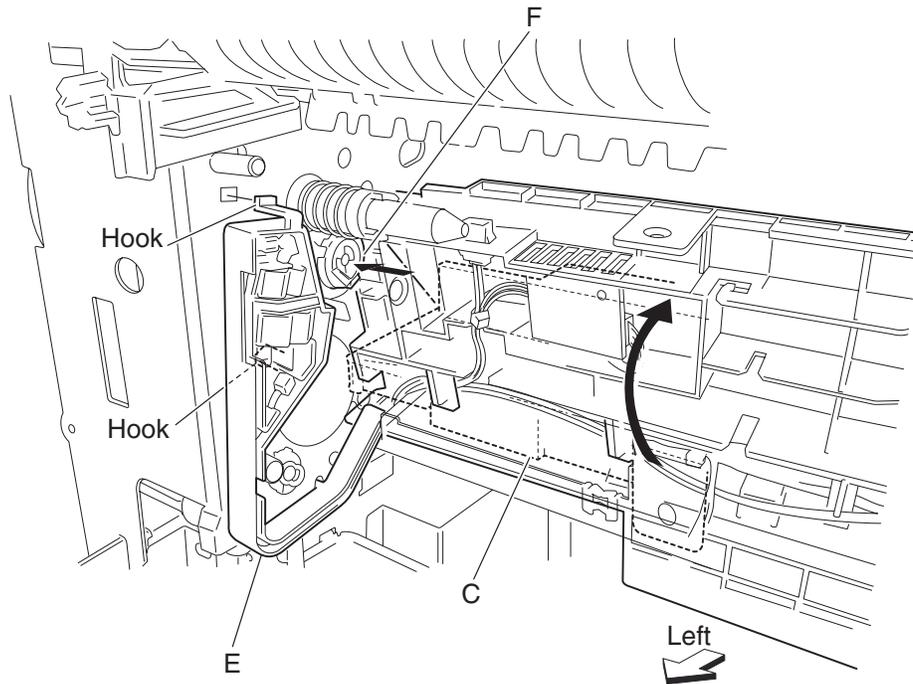
13. Remove the two screws securing the laser opening guide (B).
14. Release the harness from the clamp on the laser opening guide (B).
15. Disconnect the connector from the laser opening guide (B).

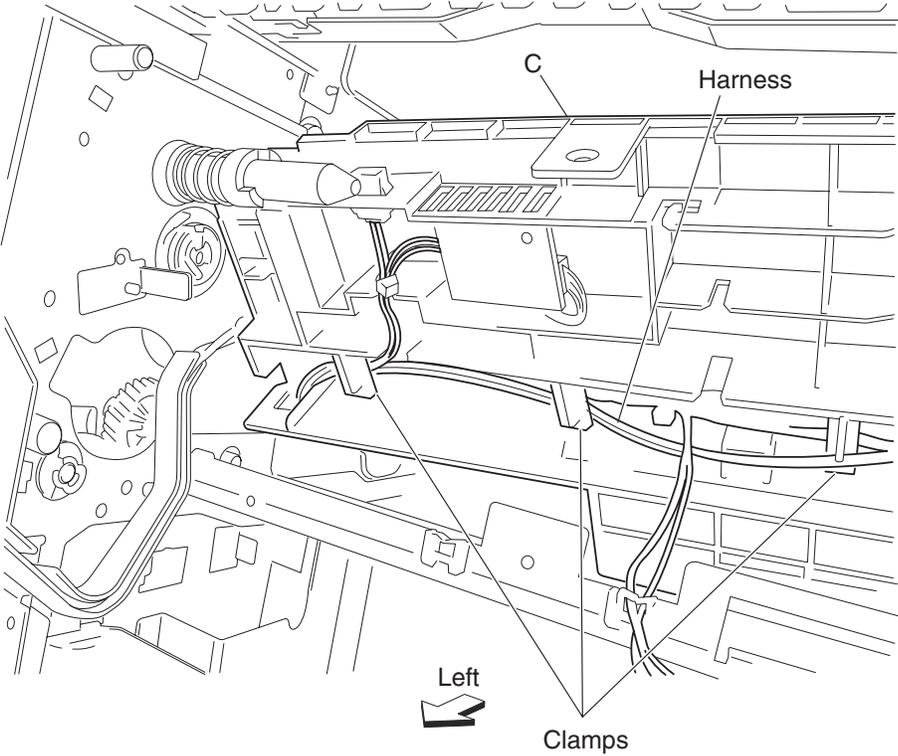


- 16. Remove the laser opening guide (B) by lifting it upward then outward in the direction of the arrow.
- 17. Remove the four screws securing the PC cartridge guide (C).

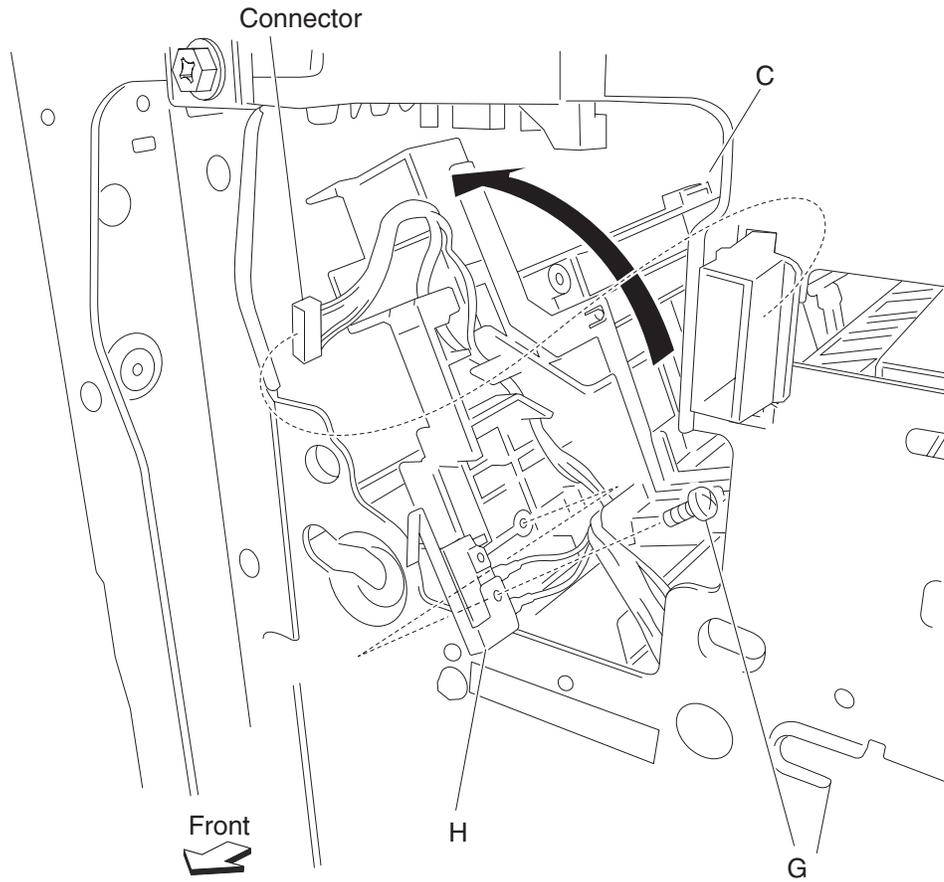


18. Slide the PC cartridge guide (C) toward the left side and disconnect the connector from the PC cartridge sensor connector.
19. Remove the two hooks securing the transfer roll power contact (E).
20. While pressing the PC cartridge drive coupler (F), lift the front side of the PC cartridge guide assembly (C) upward.
21. Release the harness from the clamp on the rear side of the PC cartridge guide assembly (C).
22. While pressing the PC cartridge drive coupler (F), lower the left side of the PC cartridge guide assembly (C).





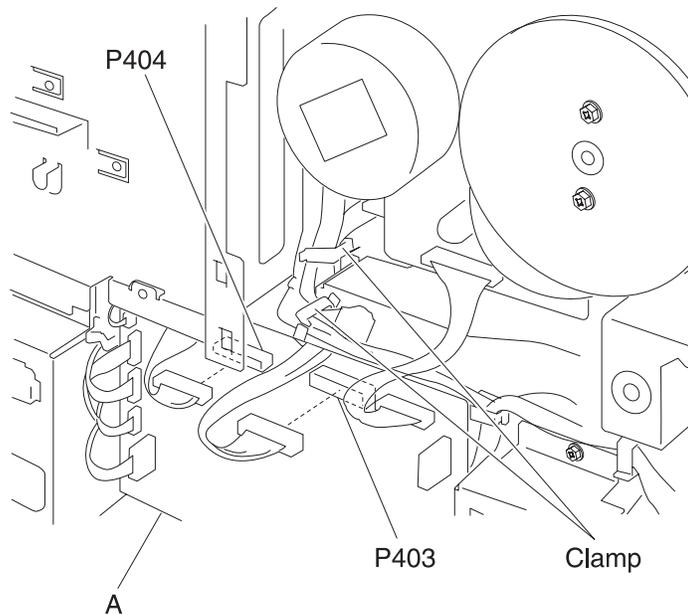
23. Lift the right side of the PC cartridge guide assembly (C). Remove the screw (G) securing the switch (PC cartridge interlock) (H) to the PC cartridge guide assembly (C). Remove the switch (PC cartridge interlock) (H).



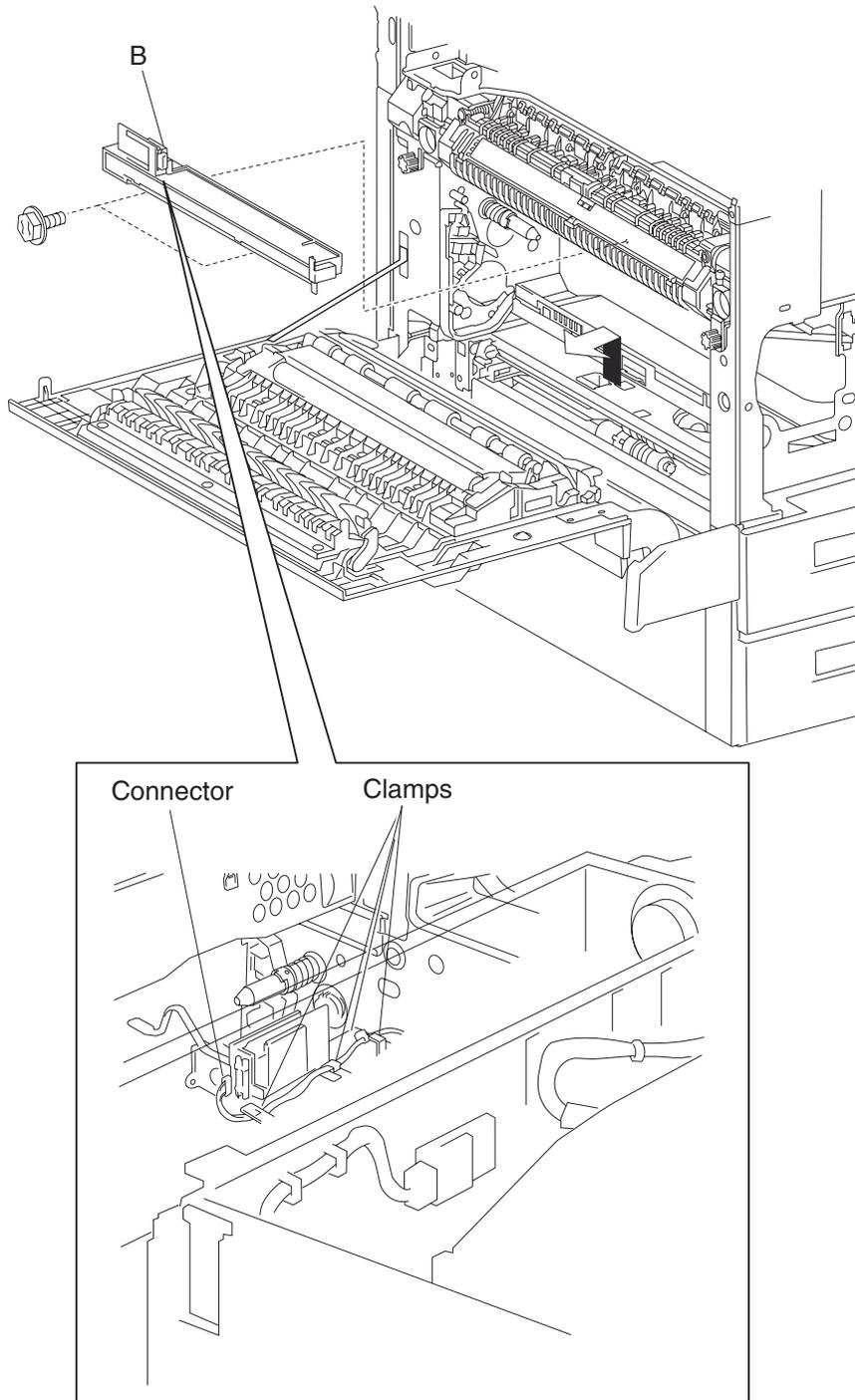
24. Remove the PC cartridge guide assembly (C) from the printer.

## Sensor (humidity and temperature) removal

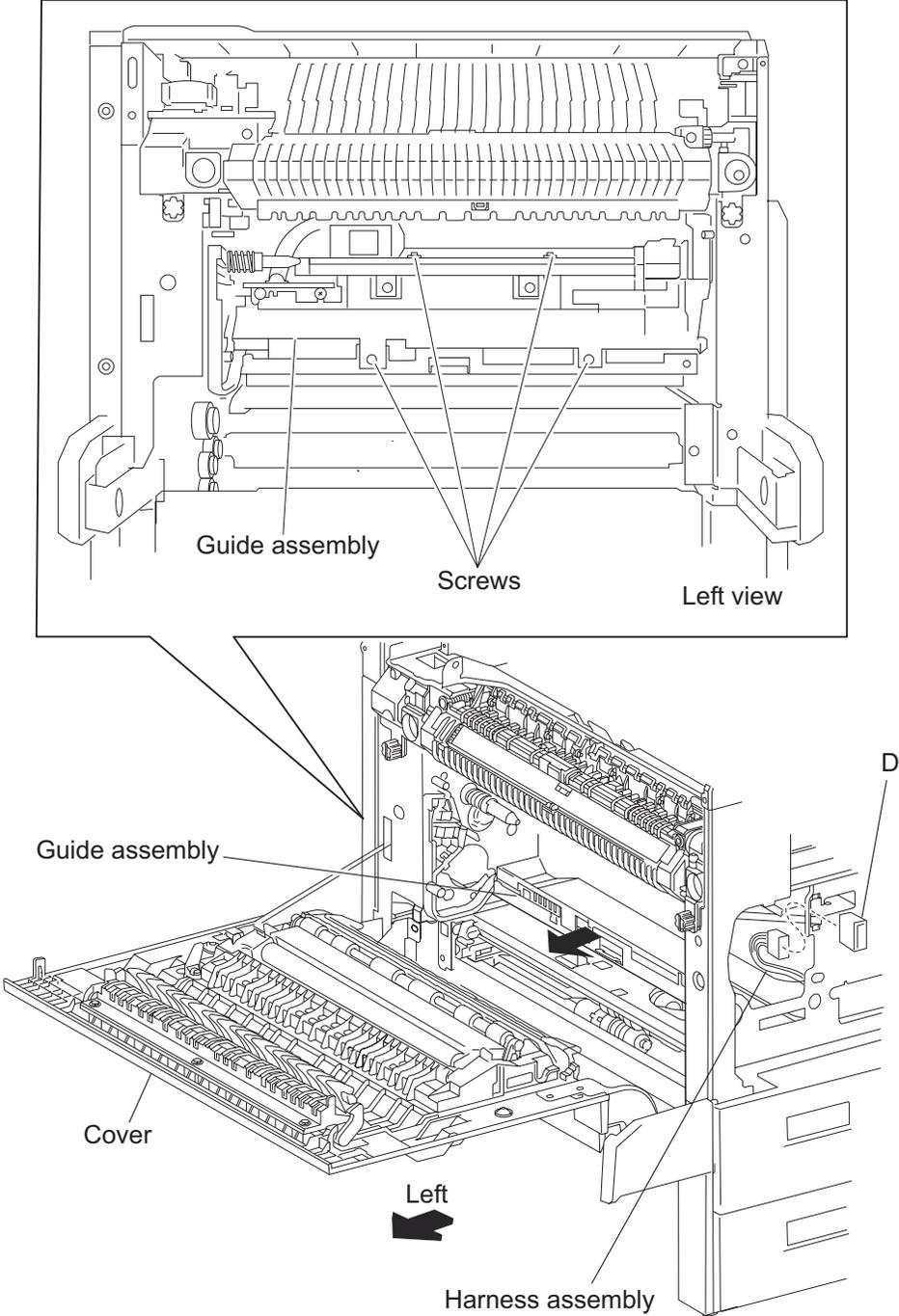
1. Remove the front left cover. See **“Printer front left cover removal”** on page 4-3.
2. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
3. Remove the PC cartridge.
4. Remove the toner cartridge.
5. Remove the printer front door assembly. See **“Printer front door assembly removal”** on page 4-9.
6. Remove the front inner cover. See **“Front inner cover removal”** on page 4-11.
7. Remove the HVPS card. See **“High voltage power supply (HVPS) card removal”** on page 4-117.
8. Remove the toner cartridge guide assembly. See **“Toner cartridge guide assembly removal”** on page 4-95.
9. Remove the rear lower cover. See **“Rear lower cover removal”** on page 4-16.
10. Disconnect the two connectors P403 and P404 from the printer engine card assembly (A).
11. Release the harnesses from the two clamps.
12. Remove the registration roll assembly. See **“Registration roll assembly removal”** on page 4-77.



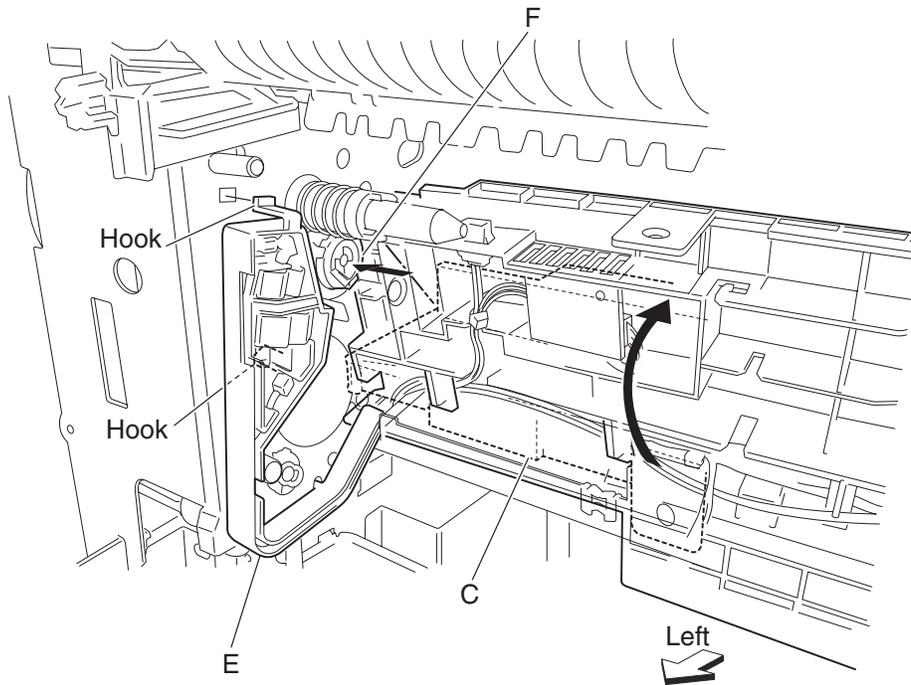
13. Remove the two screws securing the laser opening guide (B).
14. Release the harness from the clamp on the laser opening guide (B).
15. Disconnect the connector from the laser opening guide (B).



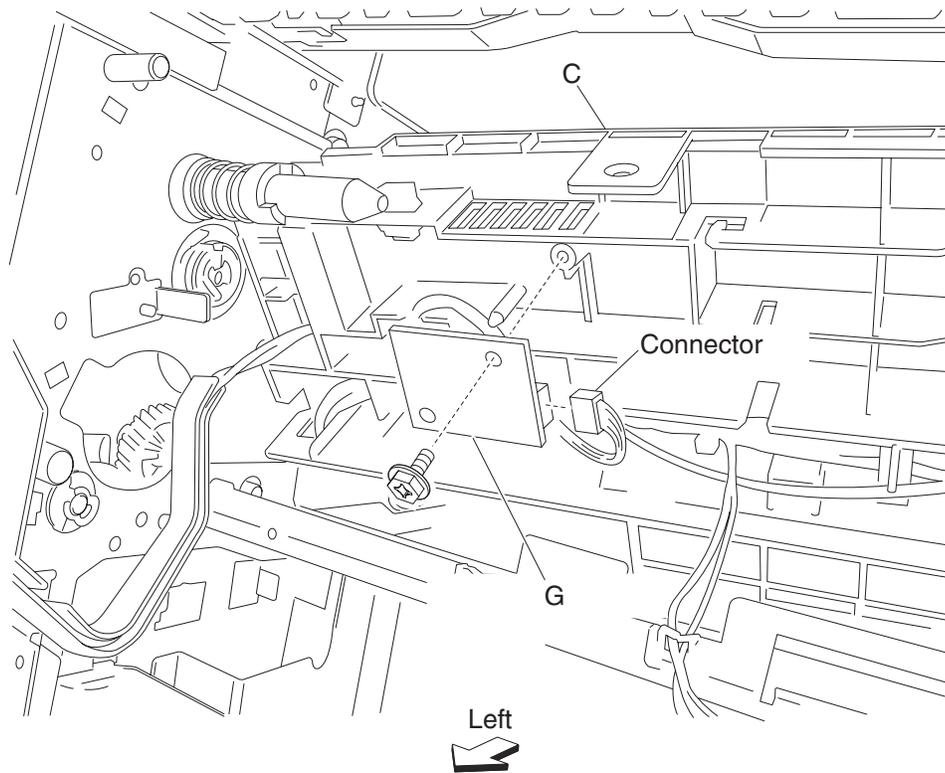
16. Remove the laser opening guide (B) by lifting it upward then outward in the direction of the arrow.



17. Remove the four screws securing the PC cartridge guide (D).
18. Slide the PC cartridge guide (D) toward the left side, and disconnect the connector from the PC cartridge sensor connector (E).
19. Remove the two hooks securing the transfer roll power contact (F).
20. While pressing the PC cartridge drive coupler (G), lift the front side of the PC cartridge guide (C) upward.



21. Disconnect the connector from the sensor (humidity and temperature) (H).
22. Remove the screw securing the sensor (humidity and temperature) (H) to the PC cartridge guide (C).
23. Remove the sensor (humidity and temperature) (H).

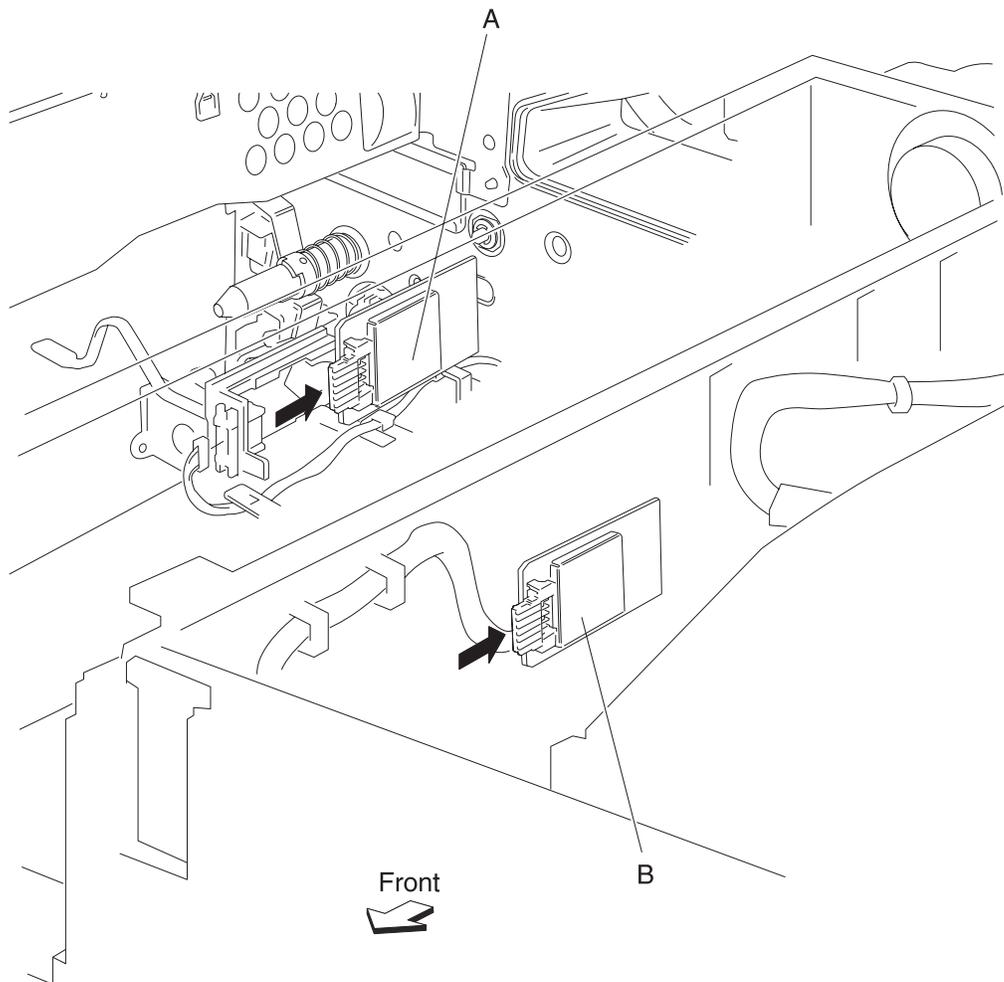


## Sensor (RFID PC cartridge) and sensor (RFID toner cartridge) removal

**Note:** This removal applies to the sensor (RFID PC cartridge) (A) and the sensor (RFID toner cartridge) (B).

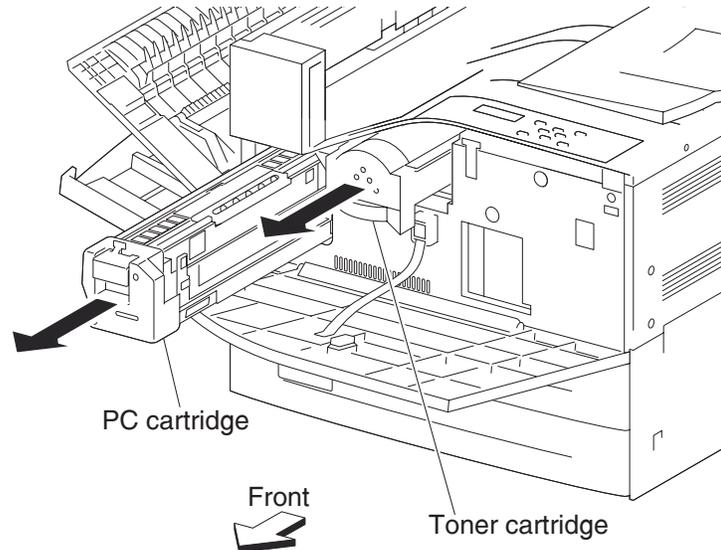
1. Remove the top cover assembly. See **“Top cover assembly removal” on page 4-8.**
2. Remove the toner cartridge guide assembly. See **“Toner cartridge guide assembly removal” on page 4-95.**
3. Disconnect the connector from the sensor (RFID PC cartridge) (A) or the sensor (RFID toner cartridge) (B).
4. Release the hooks securing the sensor (RFID PC cartridge) (A) or the sensor (RFID toner cartridge) (B).
5. Remove the sensor (RFID PC cartridge) (A) or sensor (RFID toner cartridge) (B) by sliding it out in the direction of the arrow.

**Note:** the sensor (RFID PC cartridge) (A) and sensor (RFID toner cartridge) (B) require moderate force to remove.



## Toner cartridge guide assembly removal

1. Remove the front left cover. See **“Printer front left cover removal”** on page 4-3.
2. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
3. Remove the PC cartridge.
4. Remove the toner cartridge.

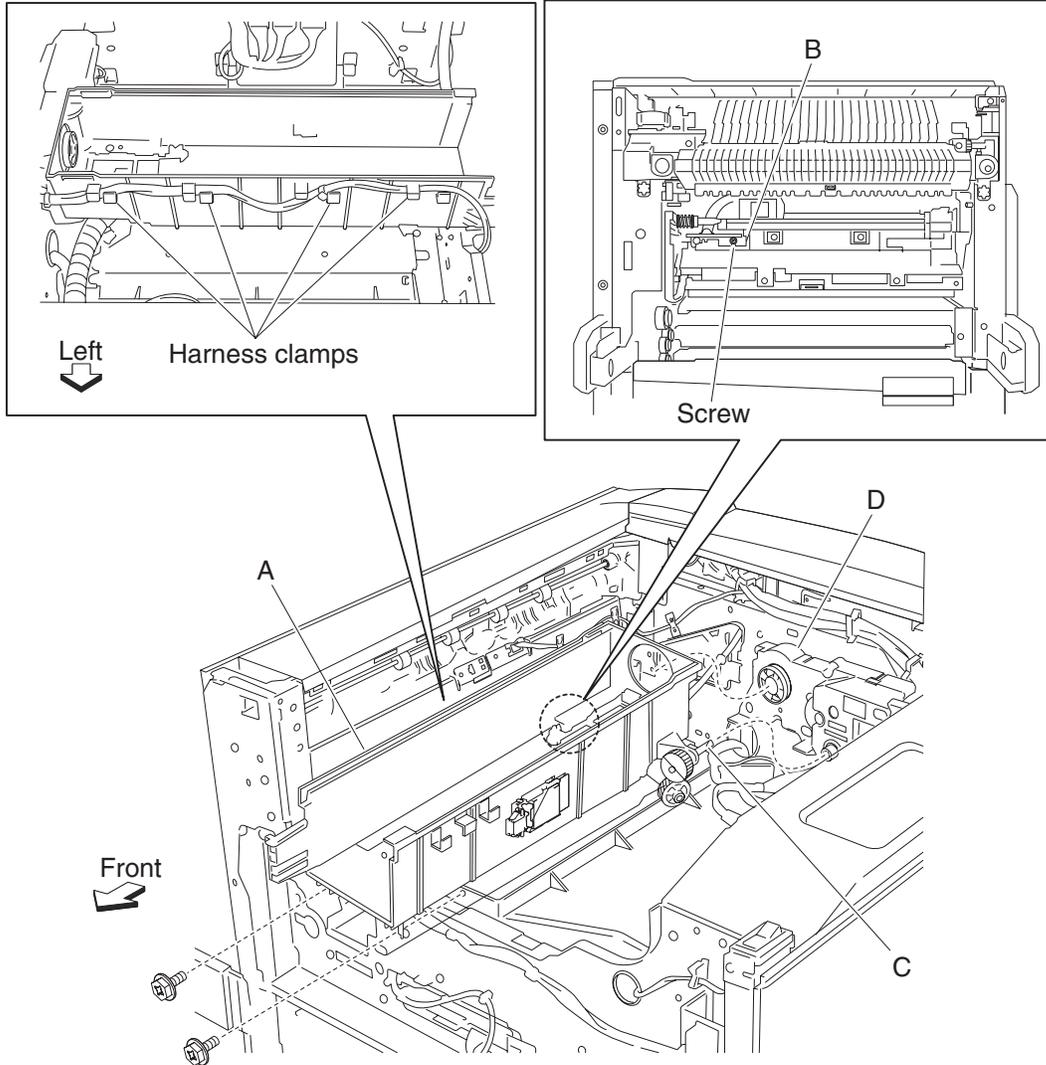


5. Remove the printer front door assembly. See **“Printer front door assembly removal”** on page 4-9.
6. Remove the front inner cover. See **“Front inner cover removal”** on page 4-11.
7. Disconnect the two harnesses from the toner cartridge guide assembly (A), one on the right and one on the left.
8. Remove the harnesses from the clamps.
9. Remove the two screws on the front of the printer securing the toner cartridge guide assembly (A).
10. Open the printer left door assembly. See **“Printer left door support strap removal”** on page 4-72.
11. Remove the printer left door support strap. See **“Printer left door support strap removal”** on page 4-72.
12. Remove the screw securing the toner add chute (B) to the frame.

**13.** While moving the toner cartridge guide assembly (A) to the left, release the toner add chute (B) from the frame. Remove the toner cartridge guide assembly from the printer.

**Note:** Remove all spilled toner from the printer.

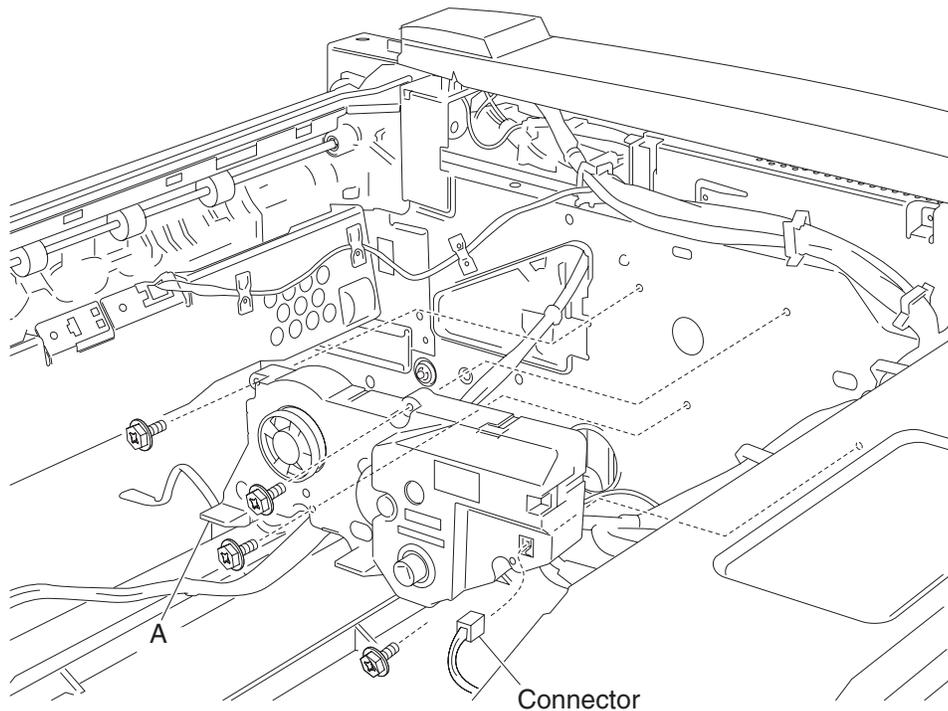
**Note:** Before reinstalling, ensure the shaft (C) on the toner cartridge guide assembly is inserted into the toner add motor assembly (D).



**Note:** Before reinstalling, ensure the shaft (C) on the toner cartridge guide assembly (A) is inserted into the toner add motor assembly (D).

## Toner add motor assembly removal

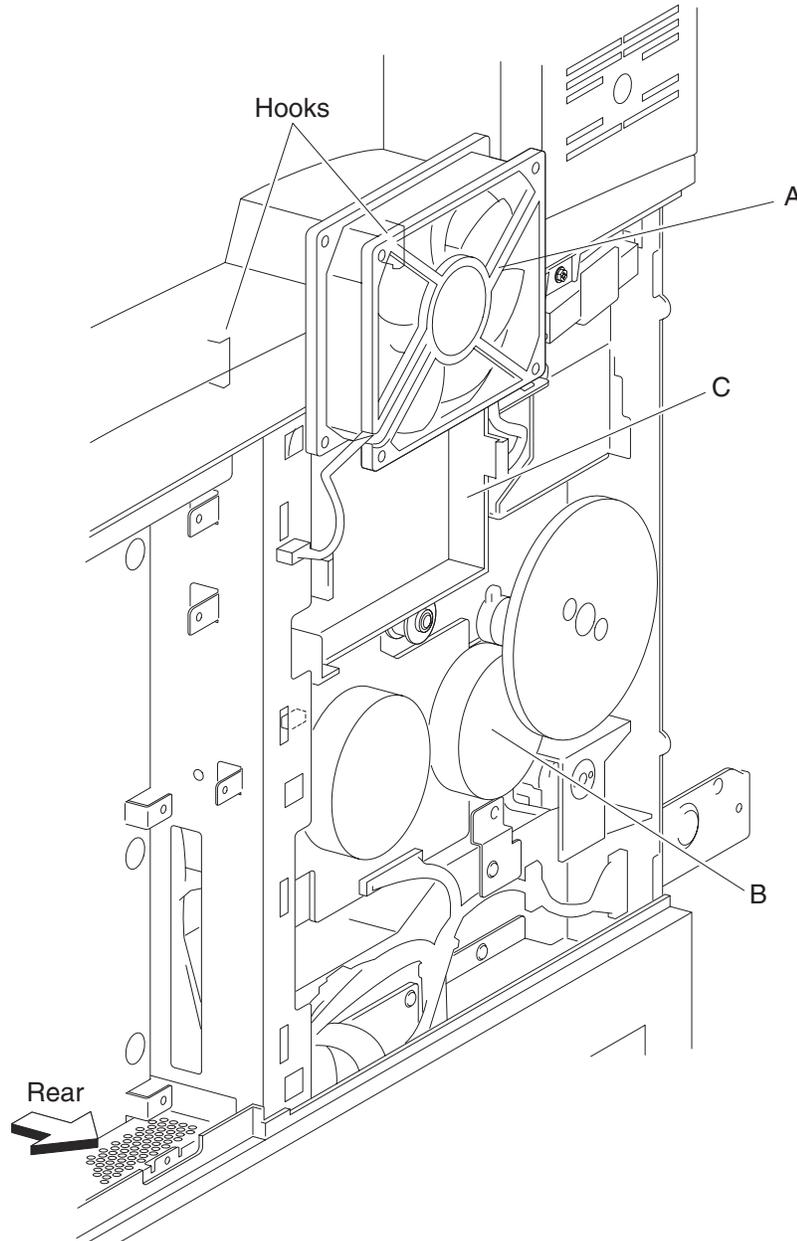
1. Remove the front left cover. See **"Printer front left cover removal"** on page 4-3.
2. Remove the top cover assembly. See **"Top cover assembly removal"** on page 4-8.
3. Remove the PC cartridge.
4. Remove the toner cartridge.
5. Remove the printer front door assembly. See **"Printer front door assembly removal"** on page 4-9.
6. Remove the front inner cover. See **"Front inner cover removal"** on page 4-11.
7. Remove the toner cartridge guide assembly. See **"Toner cartridge guide assembly removal"** on page 4-95.
8. Disconnect the connector from the toner add motor assembly (A).
9. Remove the four screws securing the toner add motor assembly (A).
10. Remove the toner add motor assembly (A).



**Note:** Before reinstalling, ensure the shaft on the toner cartridge guide assembly is inserted into the toner add motor assembly (A).

## Fuser cooling fan removal

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Disconnect the connector from the fuser cooling fan (A) from the dual drive motor assembly (B).
4. Release the two hooks securing the fuser cooling fan (A) to the fan duct (C).
5. Remove the fuser cooling fan (A).

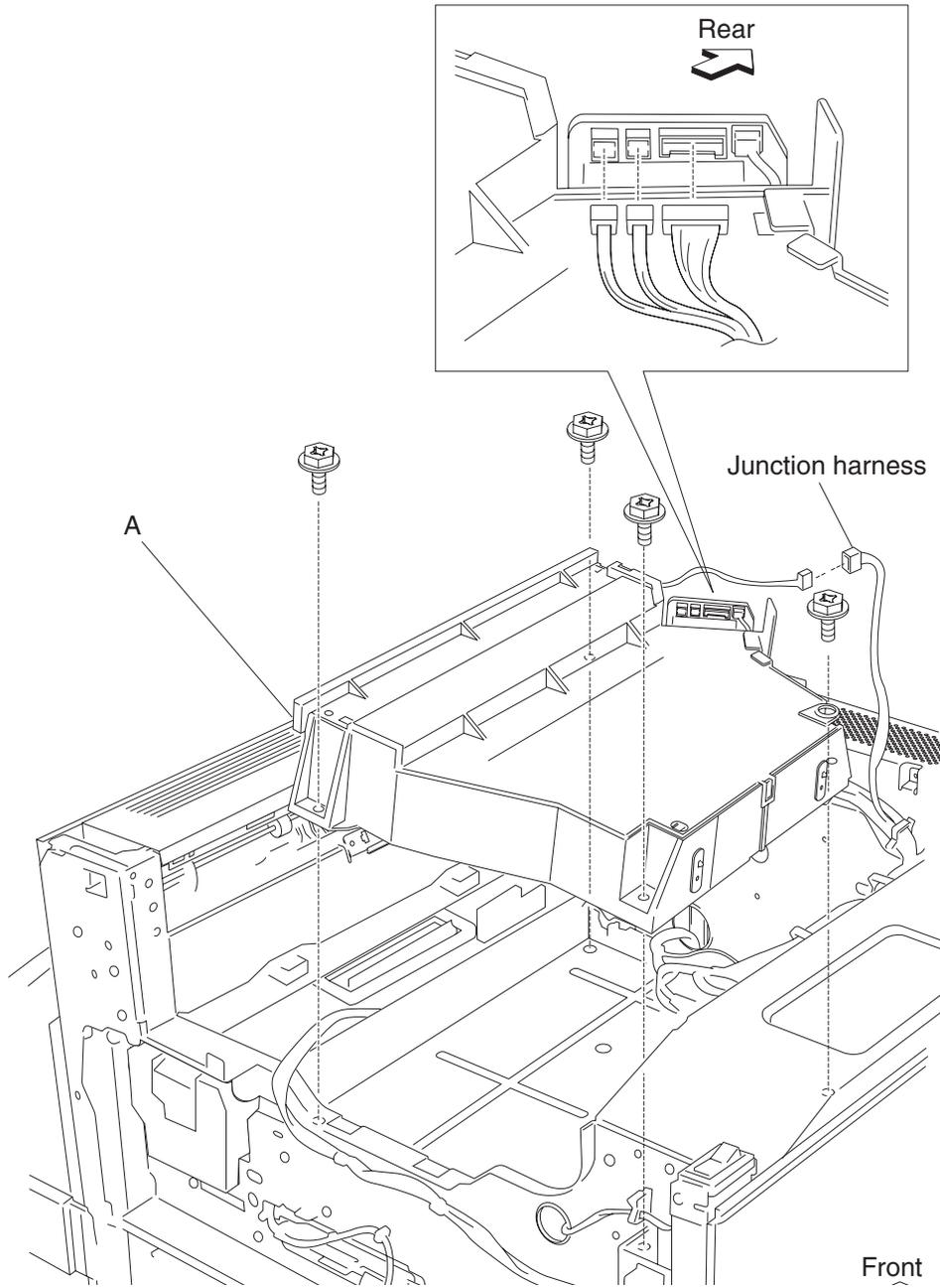


**Note:** Before reinstalling, the fuser cooling fan (A) must be installed with the center label facing outward.

### ***Printhead assembly removal***

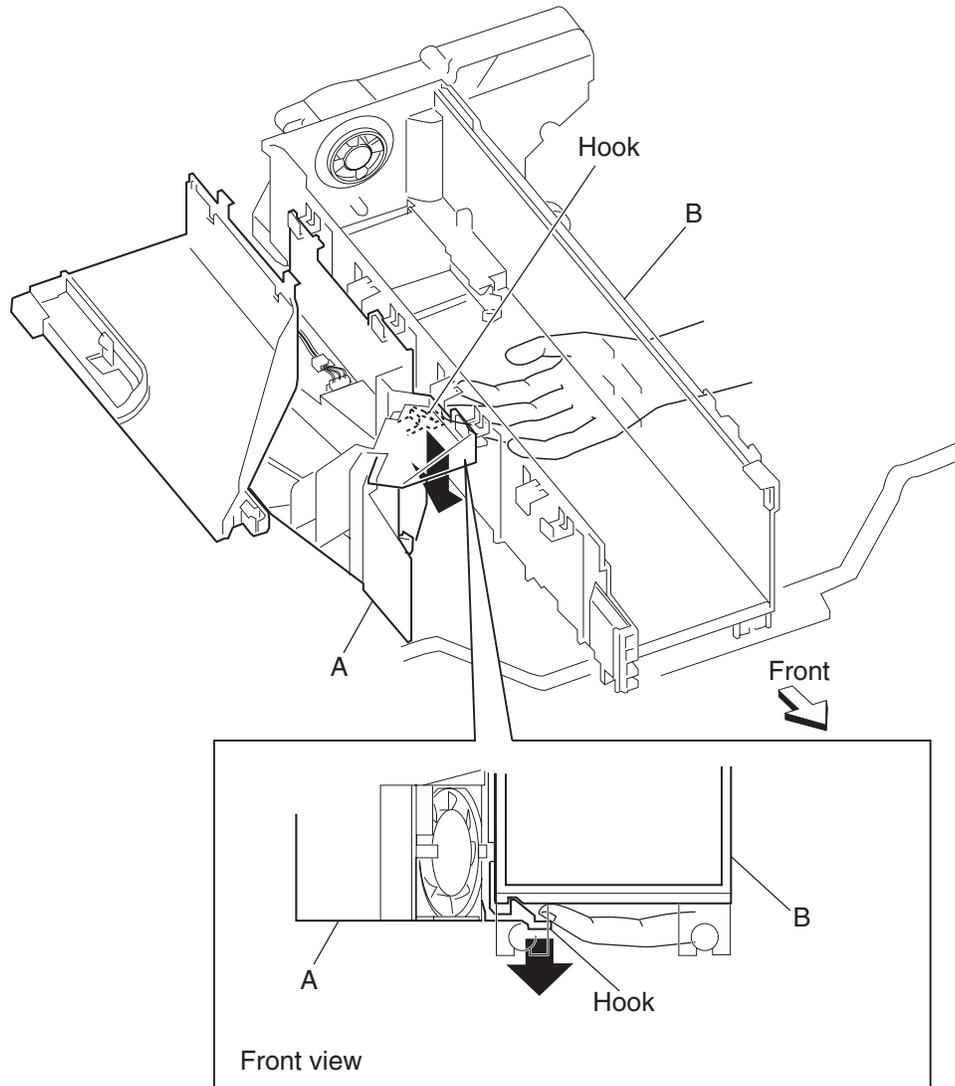
1. Remove the top cover assembly. See **“Top cover assembly removal” on page 4-8.**
2. Open the printer front door assembly. See **“Printer front door assembly removal” on page 4-9.**
3. Remove the PC cartridge.
4. Remove the toner cartridge.
5. Remove the printer front door assembly. See **“Printer front door assembly removal” on page 4-9.**
6. Remove the front inner cover. See **“Front inner cover removal” on page 4-11.**
7. Remove the toner cartridge guide assembly. See **“Toner cartridge guide assembly removal” on page 4-95.**
8. Disconnect the three connectors from the printhead assembly (A).
9. Disconnect the connector from the junction harness.
10. Remove the four screws securing the printhead assembly (A).

11. Remove the printhead assembly (A) by lifting it upward.

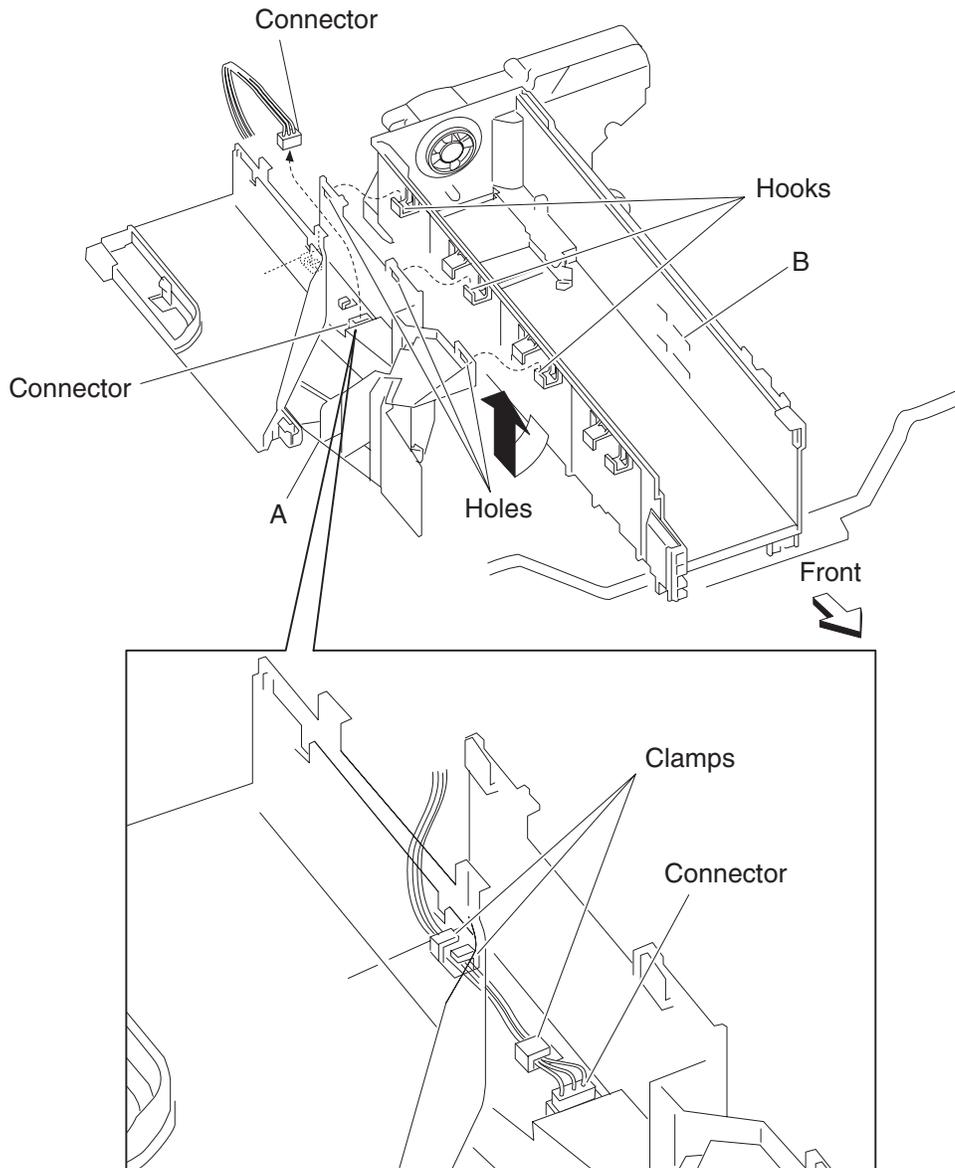


## PC cartridge cooling fan duct removal

1. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
2. Disconnect the harness from the duct connector.
3. Release the connector harness from the clamp on the PC cartridge cooling fan duct (A).
4. Release the hook securing the PC cartridge cooling fan duct (A) to the toner cartridge guide assembly (B).

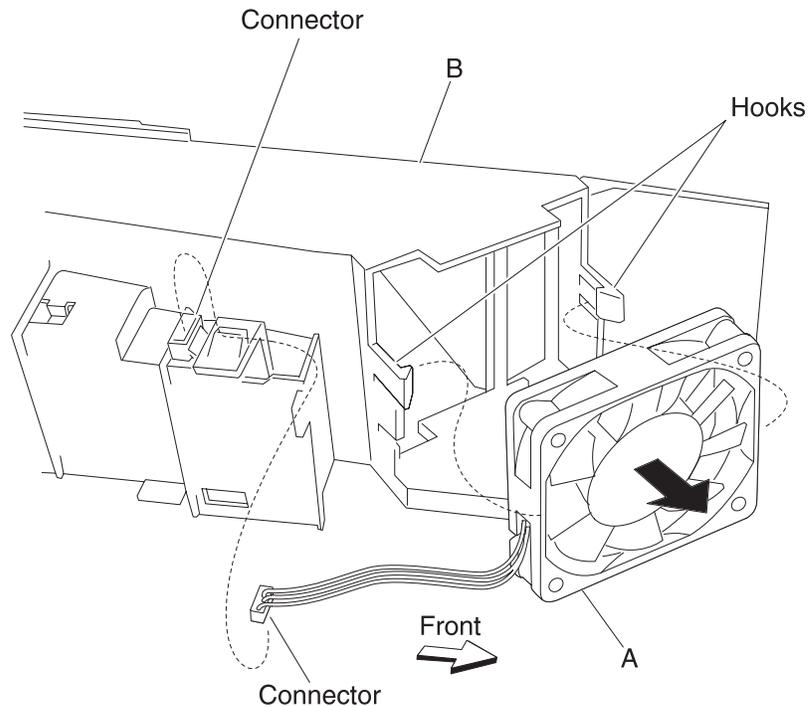


5. Move the PC cartridge cooling fan duct (A) in the direction of the arrow while lifting the left side, to release the hook securing it to the toner cartridge guide assembly (B).
6. Remove the PC cartridge cooling fan duct (A).



## PC cartridge cooling fan removal

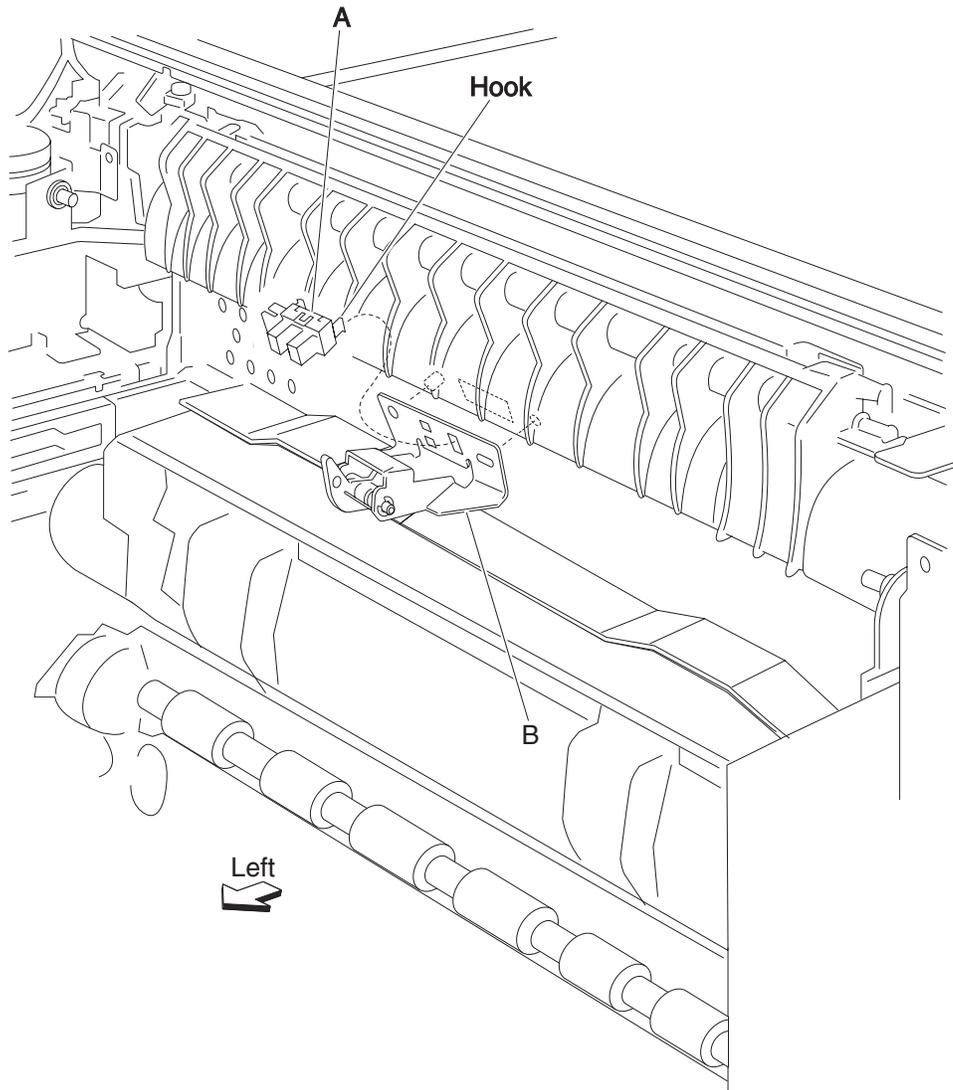
1. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
2. Remove the PC cartridge cooling fan duct. See **“PC cartridge cooling fan duct removal”** on page 4-101.
3. Disconnect the harness of the PC cartridge cooling fan (A) to the PC cartridge cooling fan duct (B).
4. Release two hooks securing the PC cartridge cooling fan (A) to the PC cartridge cooling fan duct (B).  
**Note:** Use care in handling the PC cartridge cooling fan duct hooks, as they easily break.
5. Release the harness of the PC cartridge cooling fan (A) from the slot in the PC cartridge cooling fan duct (B).
6. Remove the PC cartridge cooling fan (A).



**Note:** Before reinstalling the PC cartridge cooling fan (A), ensure the fan blade is facing toward the front of the machine.

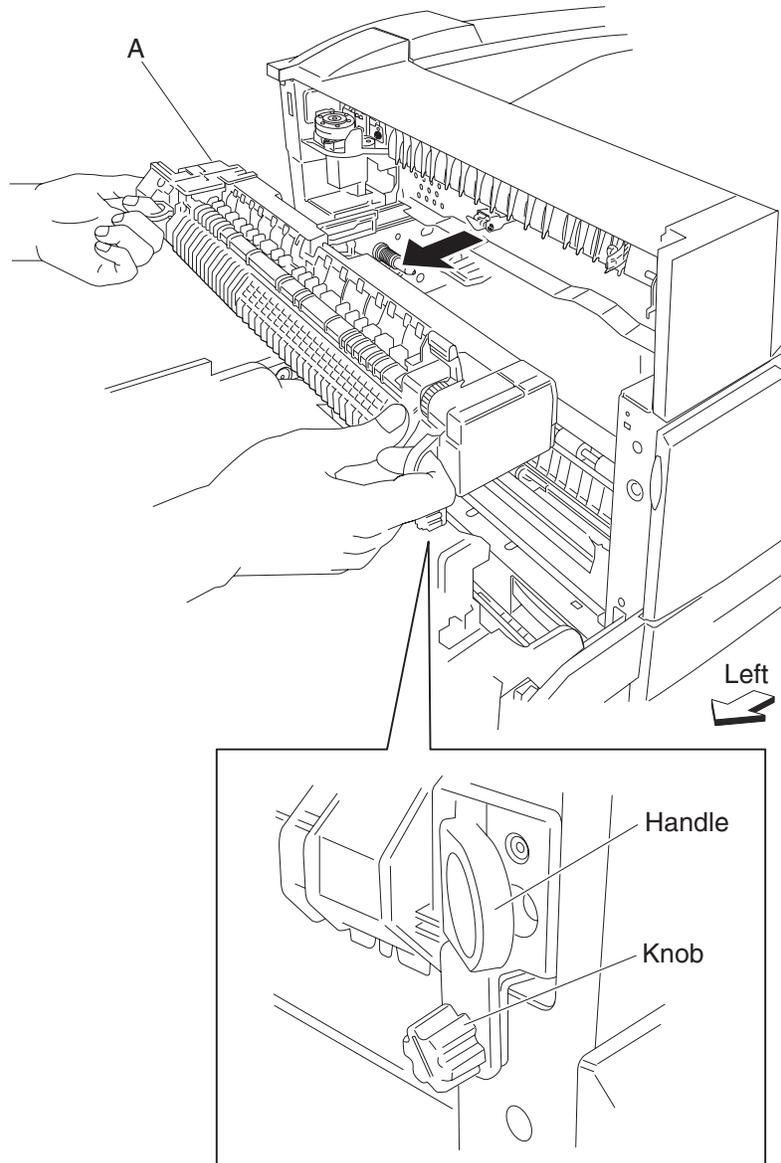
### Sensor (fuser exit) removal

1. Open the printer left door assembly.
2. Remove the fuser unit. See **"Fuser unit assembly removal"** on page 4-105.
3. Disconnect the connector from the sensor (fuser exit) (A).
4. Remove the screw securing the bracket (B).
5. Remove the three hooks securing the sensor (fuser exit) (A) to the bracket (B).
6. Remove the sensor (fuser exit) (A).



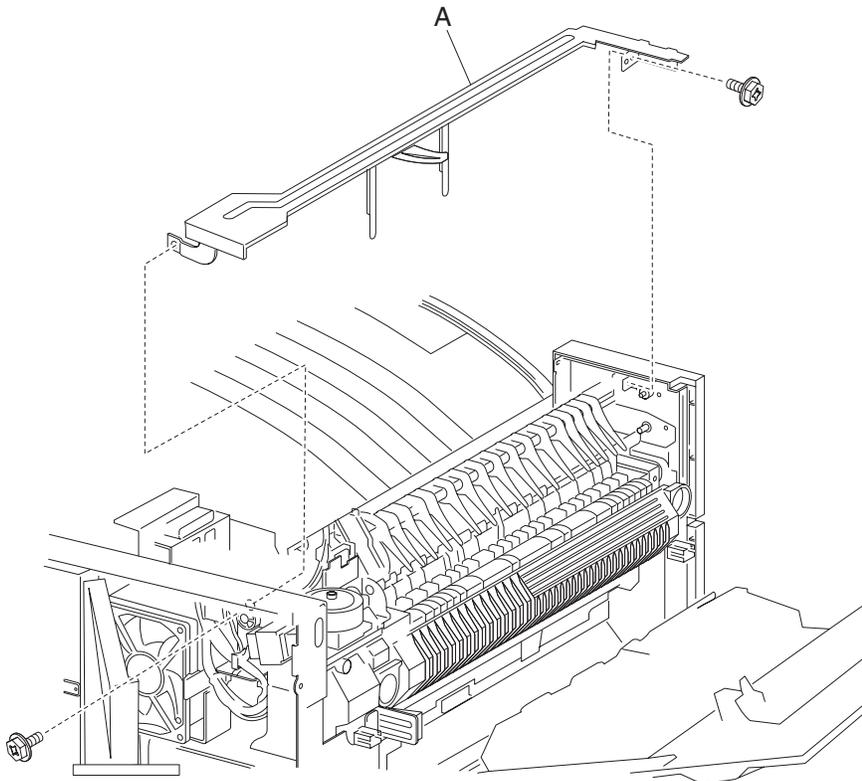
## Fuser unit assembly removal

1. Open the printer left cover assembly.
2. Loosen the two colored knobs securing the fuser unit (A).
3. Pull on the two colored handles to remove the fuser unit (A).



## Exit 1 media shift assembly removal

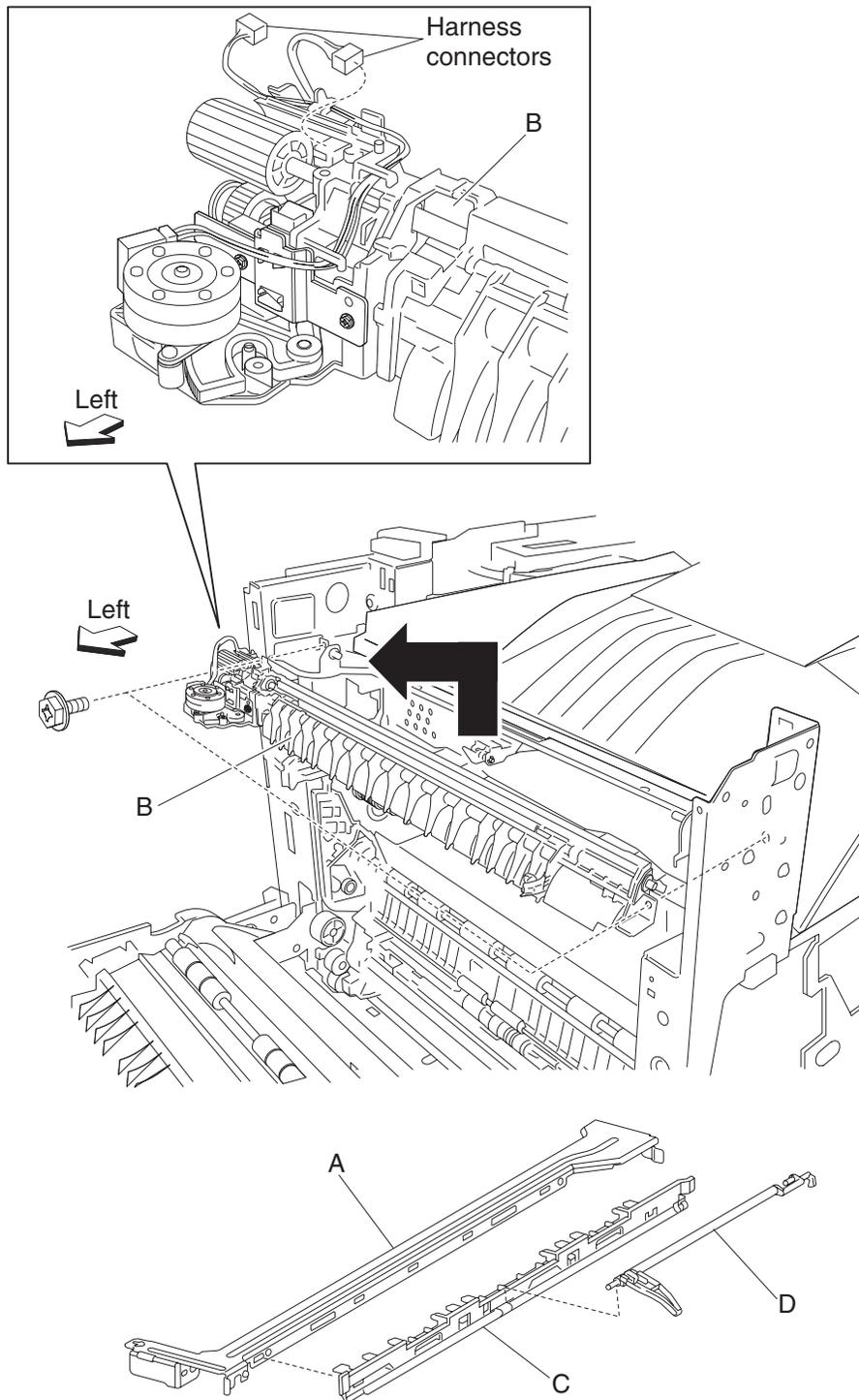
1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Remove the top rear cover. See **“Top cover assembly removal”** on page 4-8.
4. Open the printer left door assembly.
5. Remove the standard exit top cover. See **“Standard exit 1 top cover removal”** on page 4-114.
6. Open the printer front door assembly. See **“Printer front door assembly removal”** on page 4-9.
7. Remove the front left cover. See **“Printer front left cover removal”** on page 4-3.
8. Remove the two screws securing the bracket (A).
9. Remove the bracket (A) by lifting it upward.
10. Remove the exit 1 drive belt. See **“Exit 1 media shift assembly removal”** on page 4-106.
11. Disconnect the two connectors from the exit 1 media shift assembly (B).
12. Remove the two screws securing the exit 1 media shift assembly (B) to the printer.
13. Remove the exit 1 media shift assembly (B) by lifting it upward and outward in the direction of the arrow.



**Note:** Disconnect the two connectors from the sensor (exit 1 media shift) and the sensor (exit 1 bin full).

14. Remove the two screws securing the exit 1 media shift assembly (B).

15. Remove the exit 1 media shift assembly (B) by lifting it upward and outward in the direction of the arrow.



**Note:** When reinstalling the bracket (A), first release the hooks securing the plastic guide (C) that is attached to the bracket (A).

**Note:** Remove the plastic guide (C) from the bracket (A).

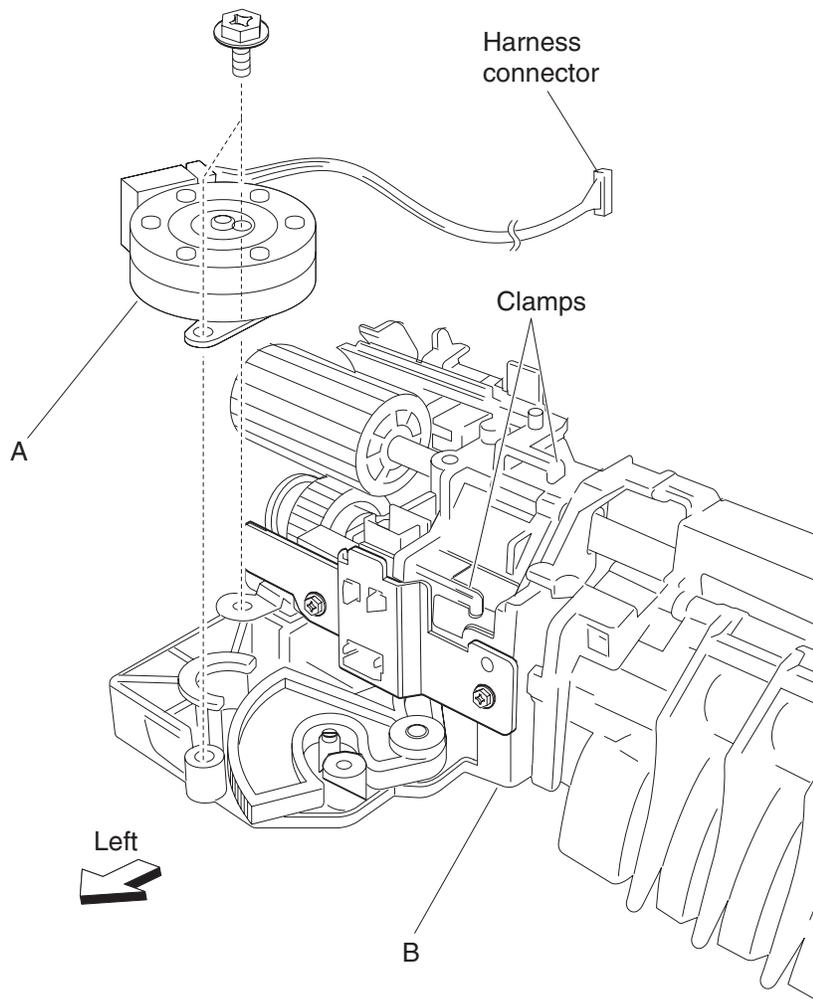
**Note:** Install the bracket (A).

**Note:** Install the plastic guide (C) and the standard bin 1 full shaft (D) at the same time.

**Note:** Make sure the standard bin 1 full shaft (E) operates smoothly without binding.

### **Media shift motor removal**

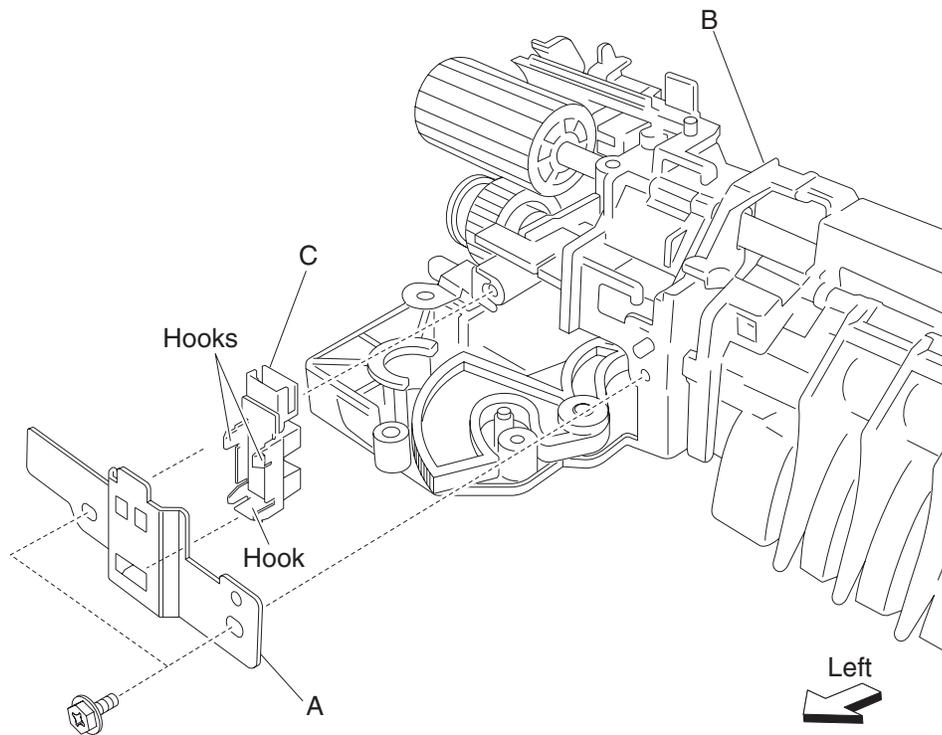
1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Remove the top rear cover. See **“Top rear cover removal”** on page 4-4.
4. Open the printer left door assembly.
5. Remove the standard exit top cover. See **“Standard exit 1 top cover removal”** on page 4-114.
6. Open the printer front door assembly.
7. Remove the front left cover. See **“Printer front left cover removal”** on page 4-3.
8. Remove the exit 1 media shift assembly. See **“Exit 1 media shift assembly removal”** on page 4-106.
9. Disconnect the connector from the media shift motor (A).
10. Remove the two screws securing the media shift motor (A) to the exit 1 media shift assembly (B).
11. Remove the media shift motor (A).



**Note:** Before reinstalling, secure the media shift motor (A) harness to the clamps on the exit 1 media shift assembly (B) to prevent damage.

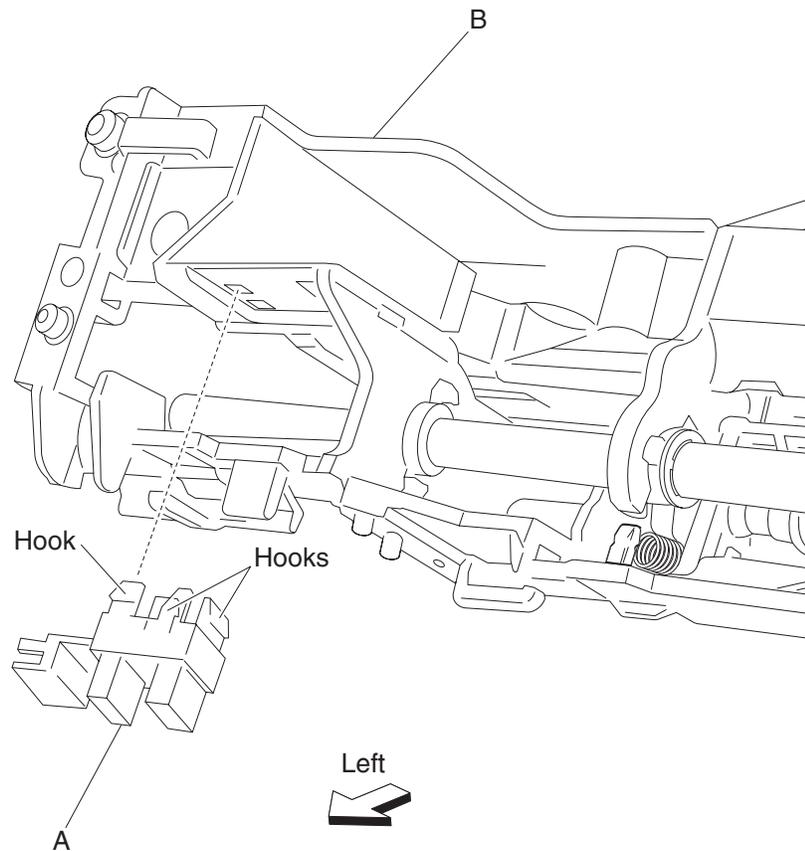
## Sensor (exit 1 media shift) removal

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover.
3. Remove the top rear cover. See **“Top rear cover removal”** on page 4-4.
4. Open the printer left door assembly.
5. Remove the standard exit top cover. See **“Standard exit 1 top cover removal”** on page 4-114.
6. Open the printer front door assembly.
7. Remove the front left cover. See **“Printer front left cover removal”** on page 4-3.
8. Remove the exit 1 media shift assembly. See **“Exit 1 media shift assembly removal”** on page 4-106.
9. Remove the media shift motor. See **“Media shift motor removal”** on page 4-108.
10. Remove the two screws securing the bracket (A) to the exit 1 media shift assembly (B).
11. Remove the bracket (A).
12. Release the hooks securing the sensor (exit 1 media shift) (C) to the bracket (A).
13. Remove the sensor (exit 1 media shift) (C).



## Sensor (exit 1 bin full) removal

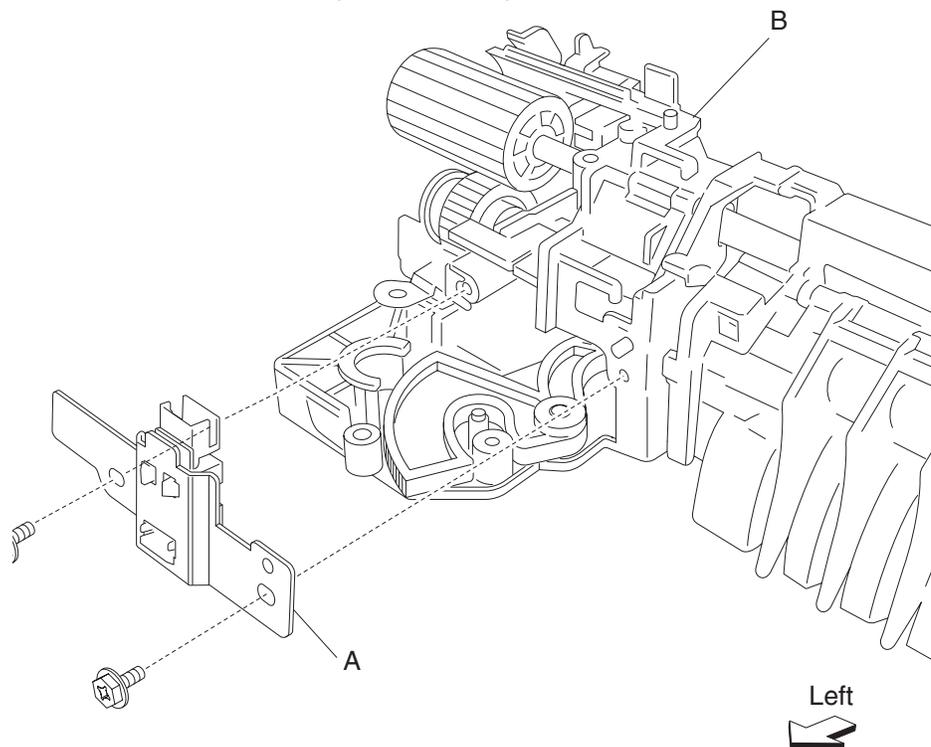
1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Remove the top rear cover. See **“Top rear cover removal”** on page 4-4.
4. Open the printer left door assembly.
5. Remove the standard exit top cover. See **“Standard exit 1 top cover removal”** on page 4-114.
6. Open the printer front door assembly.
7. Remove the front left cover. See **“Printer front left cover removal”** on page 4-3.
8. Remove the exit 1 media shift assembly. See **“Exit 1 media shift gear removal”** on page 4-111.
9. Release the hooks securing the sensor (exit 1 bin full) (A) to the exit 1 media shift assembly (B).
10. Remove the sensor (exit 1 bin full) (A).

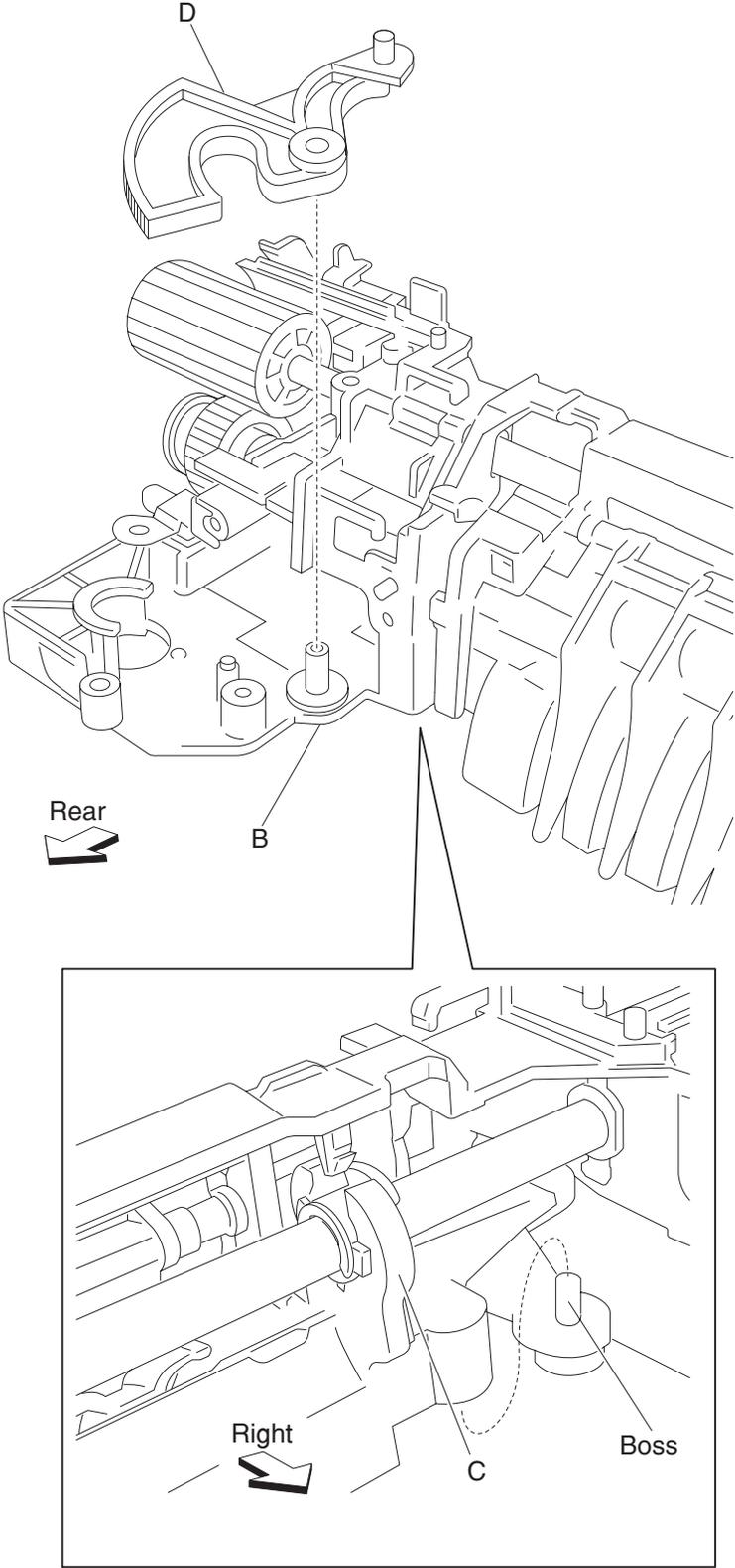


### ***Exit 1 media shift gear removal***

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal” on page 4-127.**
2. Remove the rear motor cover. See **“Rear motor cover removal” on page 4-15.**
3. Remove the top rear cover. See **“Top rear cover removal” on page 4-4.**
4. Open the printer left door assembly.
5. Remove the exit 1 top cover. See **“Standard exit 1 top cover removal” on page 4-114.**
6. Open the printer front door assembly.
7. Remove the front left cover. See **“Printer front left cover removal” on page 4-3.**
8. Remove the exit 1 media shift assembly. See **“Exit 1 media shift assembly removal” on page 4-106.**
9. Remove the exit 1 media shift motor. See **“Media shift motor removal” on page 4-108.**
10. Remove the 2 screws securing the bracket (A) to the exit 1 media shift assembly (B).
11. Remove the bracket (A) from the exit 1 media shift assembly (B).
12. Slide the shift assembly (C) in order to release the shift assembly boss from the exit 1 media shift gear (D).

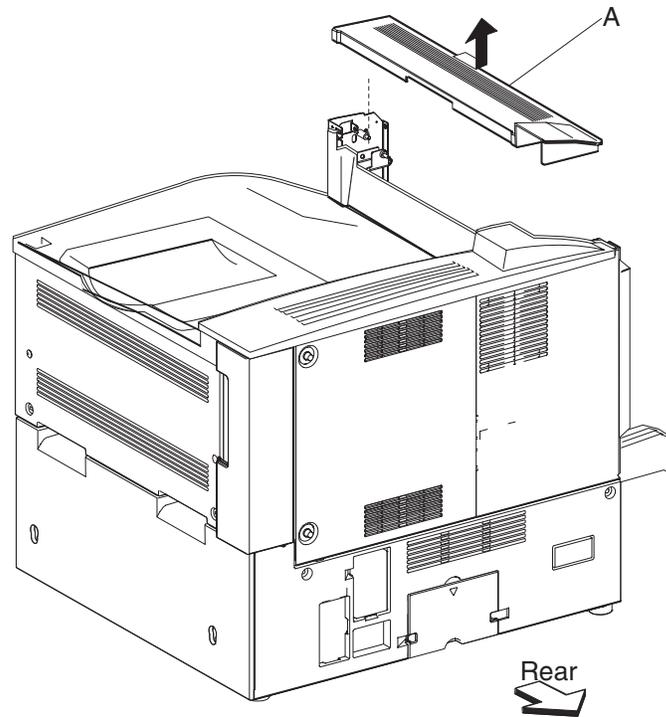
13. Remove the exit 1 media shift gear (D) by lifting it upward.





### Standard exit 1 top cover removal

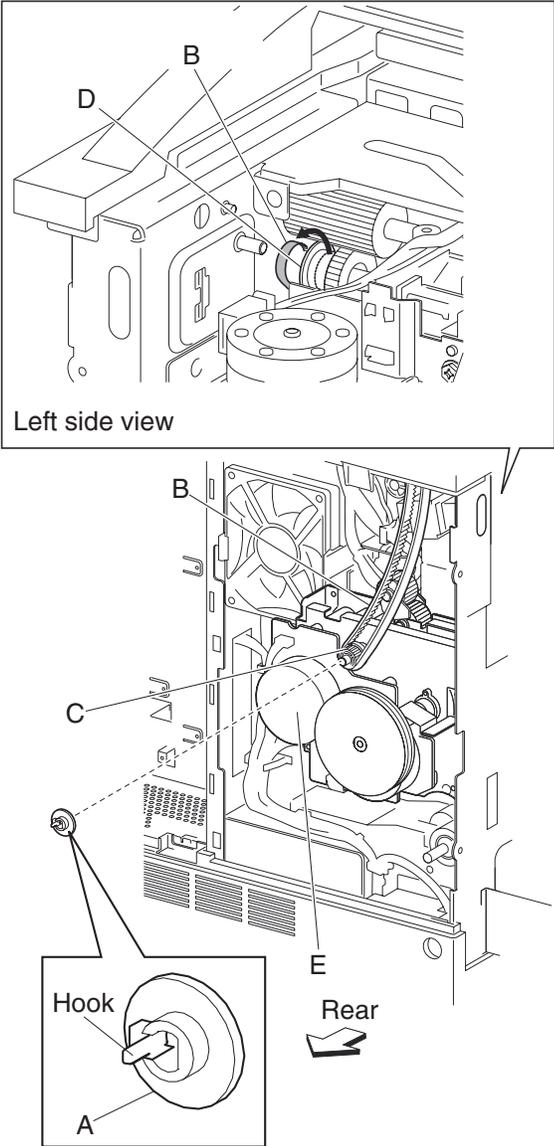
1. Remove the standard exit 1 top cover (A) by moving it toward the rear then lifting it upward in the direction of the arrow.



### Exit 1 drive belt removal

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal” on page 4-127.**
  2. Remove the rear motor cover. See **“Rear motor cover removal” on page 4-15.**
  3. Remove the standard exit top cover. See **“Standard exit 1 top cover removal” on page 4-114.**
  4. Release the hook on the drive belt flange (A).
  5. Remove the drive belt flange (A).
  6. Remove the exit 1 drive belt (B) from the drive pulley - 25 tooth (C).
- Note:** The drive pulley -25 tooth (C) may become detached.

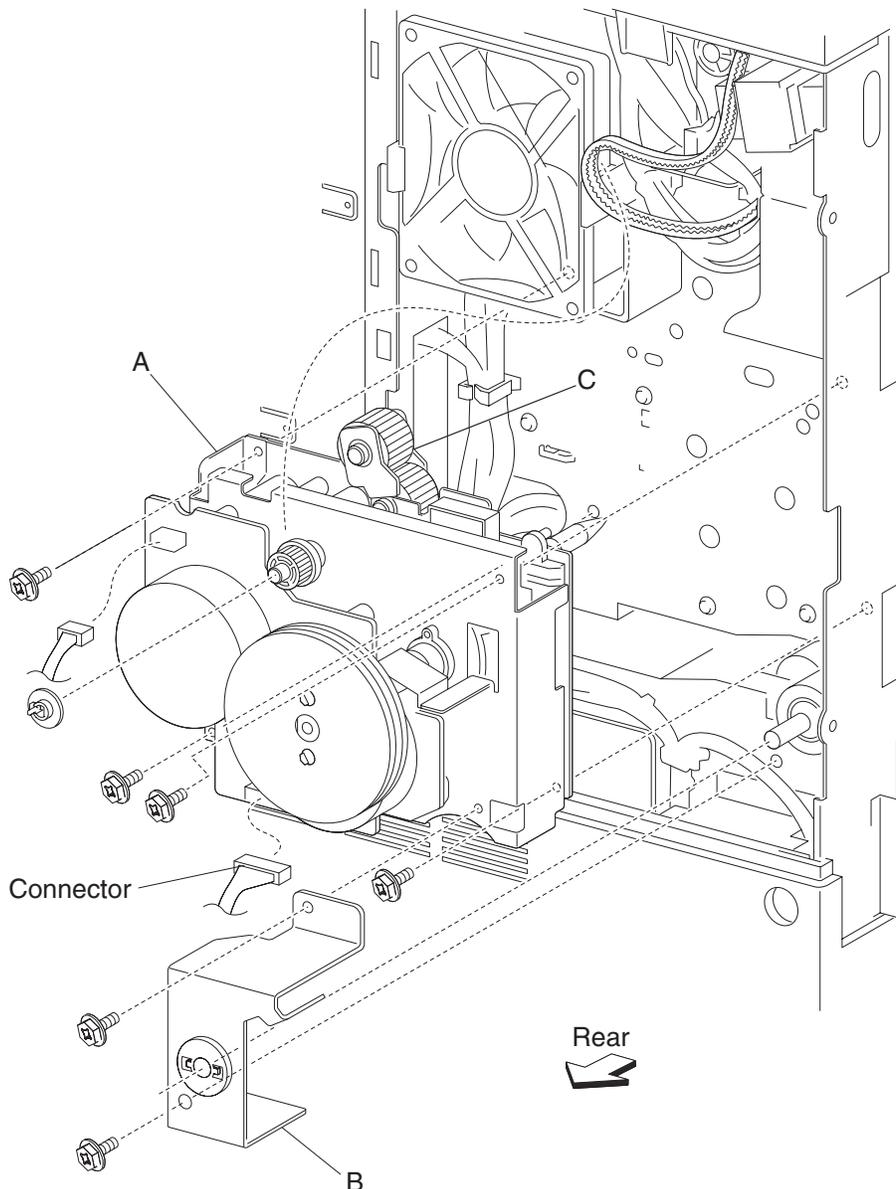
7. Remove the exit 1 drive belt (B) from the exit 1 media shift assembly (D).



**Note:** Press on the exit 1 drive belt (B) while slowly turning the motor (E) by hand.

## Dual drive motor assembly removal

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Remove the exit 1 top cover. See **“Standard exit 1 top cover removal”** on page 4-114.
4. Open the printer left door assembly.
5. Remove the PC cartridge.
6. Remove the exit 1 drive belt. See **“Exit 1 drive belt removal”** on page 4-114.
7. Disconnect the two harness connectors from the dual drive motor assembly (A).
8. Remove the two screws securing the bracket (B).

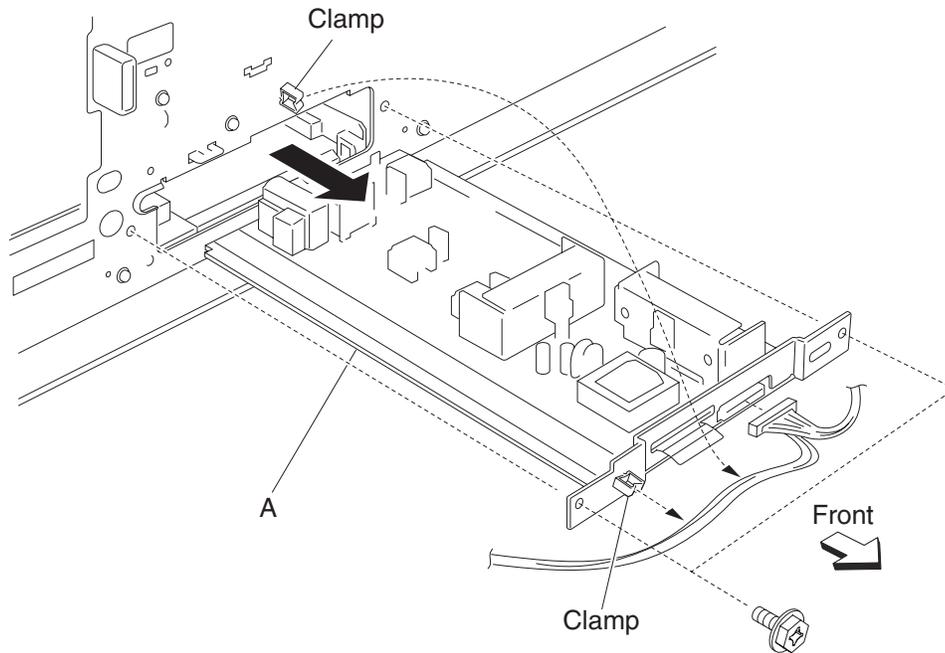


9. Remove the four screws securing the dual drive motor assembly (A) to the printer.
10. Remove the dual drive motor assembly (A).  
**Note:** Depress the spring loaded gear (C) while removing the dual drive motor assembly (A) to prevent damage.

**Warning:** Before reinstalling, depress the spring loaded gear (C) while replacing the dual drive motor assembly (A) to prevent damage.

## High voltage power supply (HVPS) card removal

1. Remove the front left cover. See **“Printer front left cover removal”** on page 4-3.
2. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
3. Remove the PC cartridge.
4. Remove the printer front door assembly. See **“Printer front door assembly removal”** on page 4-9.
5. Remove the front inner cover. See **“Front inner cover removal”** on page 4-11.
6. Disconnect the connector from the HVPS card assembly (A).
7. Release the harness from the clamps.
8. Remove the two screws securing the HVPS card assembly (A).
9. Remove the HVPS card assembly (A) by sliding it outward in the direction of the arrow.

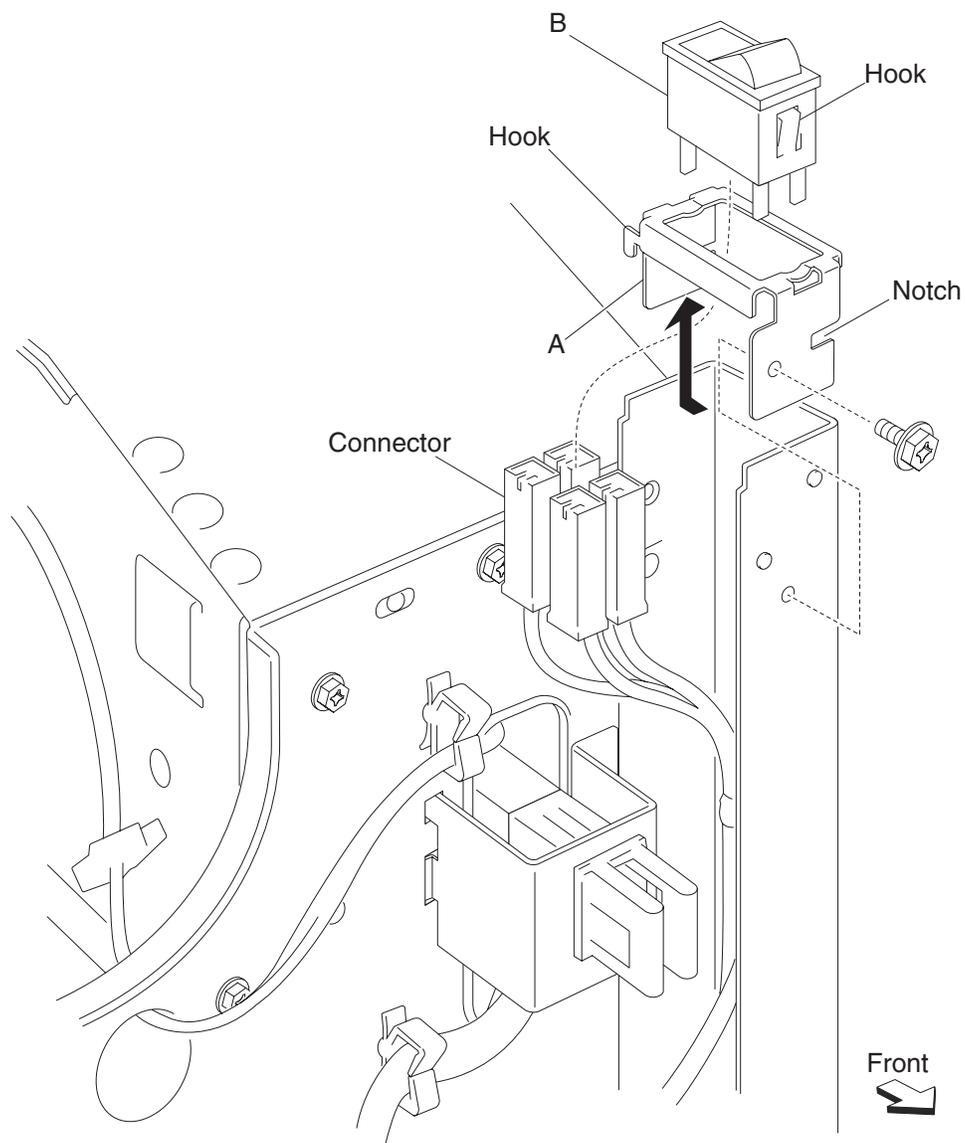


**Note:** Before reinstalling, ensure the HVPS (A) is inserted into the side slots properly.

## Switch (main power) removal



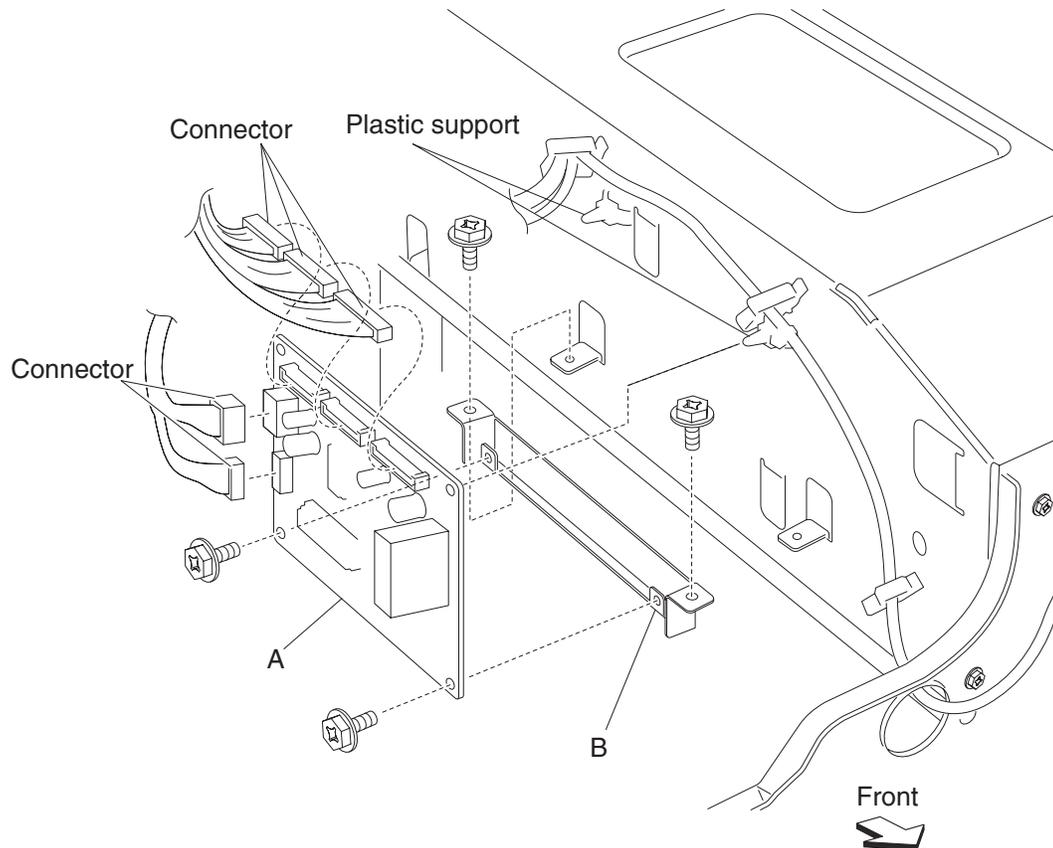
1. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
2. Open the printer front door assembly.
3. Remove the right upper cover. See **“Right upper cover removal”** on page 4-12.
4. Remove the screw securing the bracket (A).
5. Slide the bracket (A) to the side and then upward in the direction of the arrow.
6. Remove the bracket (A).
7. Disconnect the four connectors from the switch (main power) (B).  
**Note:** Make note of the proper location of the four connectors.
8. Release the hooks securing the switch (main power) (B) to the bracket (A).
9. Remove the switch (main power) (B).



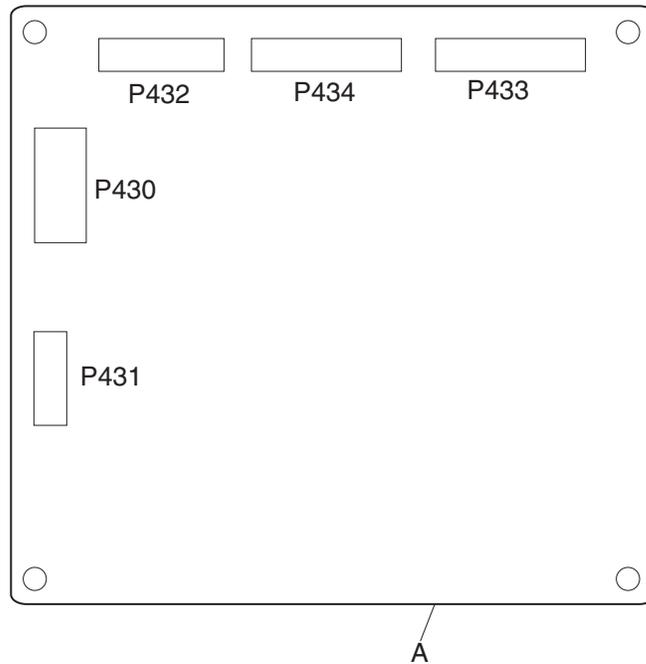
**Note:** Before reinstalling, ensure the four connectors are plugged into their proper location to prevent damage.

## Exit interface card assembly removal

1. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
2. Disconnect all the connectors from the exit interface card assembly (A).  
**Note:** Connector P430 has a hook that must first be released.
3. Remove the two screws securing the exit interface card assembly (A).
4. Release the plastic supports securing the exit interface card assembly (A).
5. Remove the exit interface card assembly (A) along with the bracket (B).
6. Remove the two screws securing the exit interface card assembly (A) to the bracket (B).



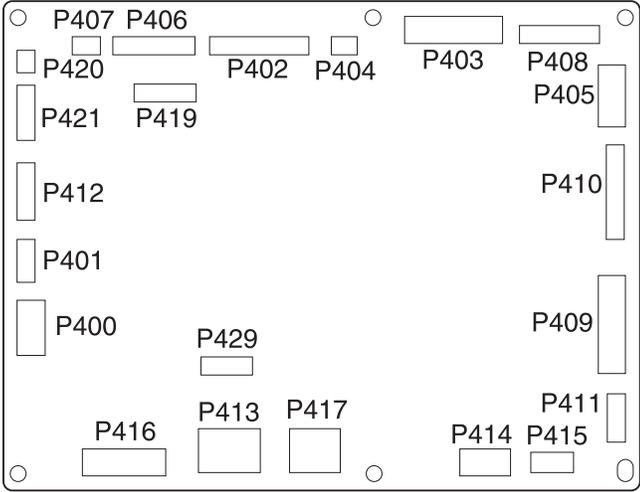
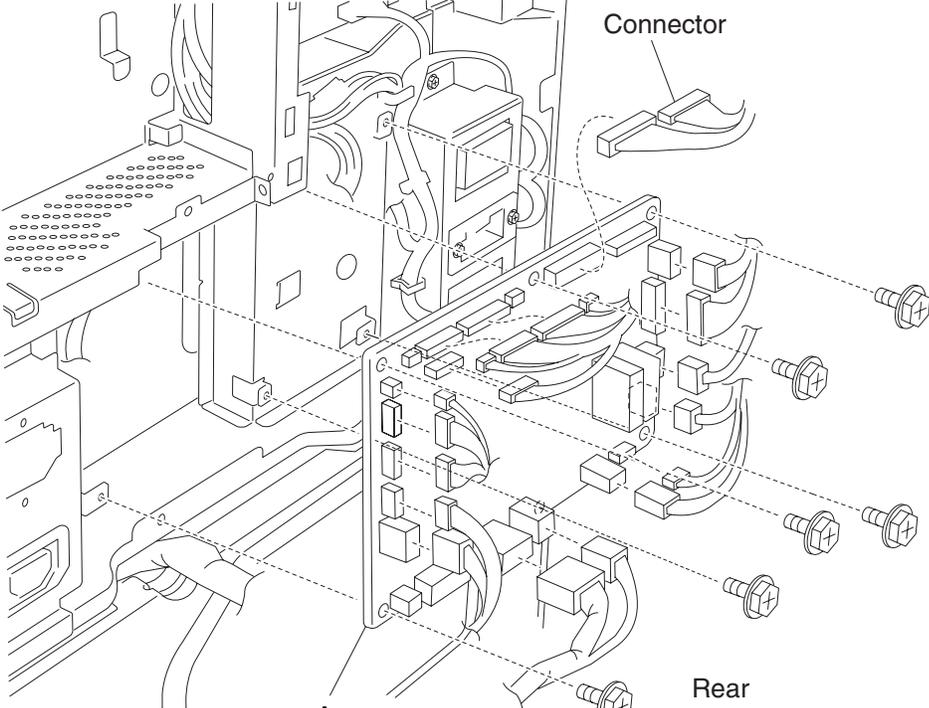
7. Remove the exit 2 card assembly (A).



### ***Printer engine card assembly removal***

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal” on page 4-127.**
2. Remove the rear motor cover. See **“Rear motor cover removal” on page 4-15.**
3. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-16.**
4. Disconnect all the connectors from the engine controller card assembly (A).  
**Note:** Connectors P405, P414, P416, and P400 have a hook that must be released.
5. Remove the six screws securing the printer engine card assembly (A).

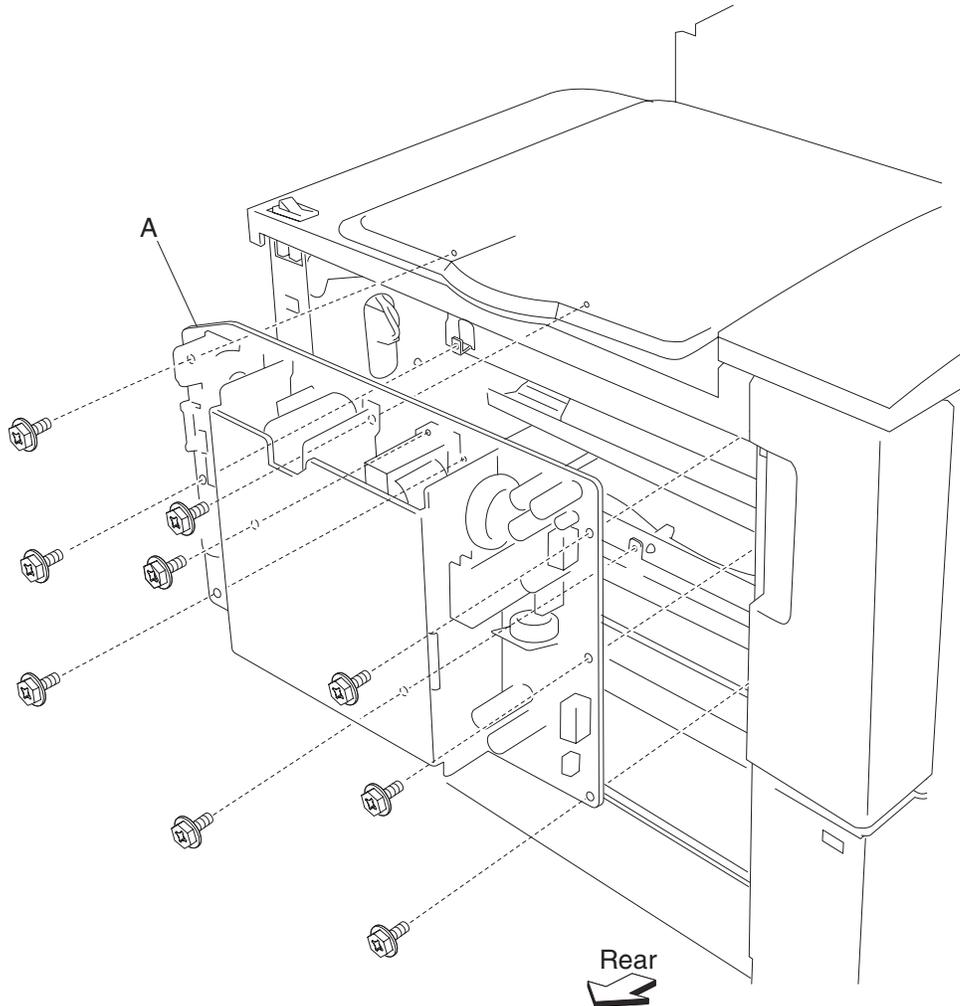
6. Remove the printer engine card assembly (A).



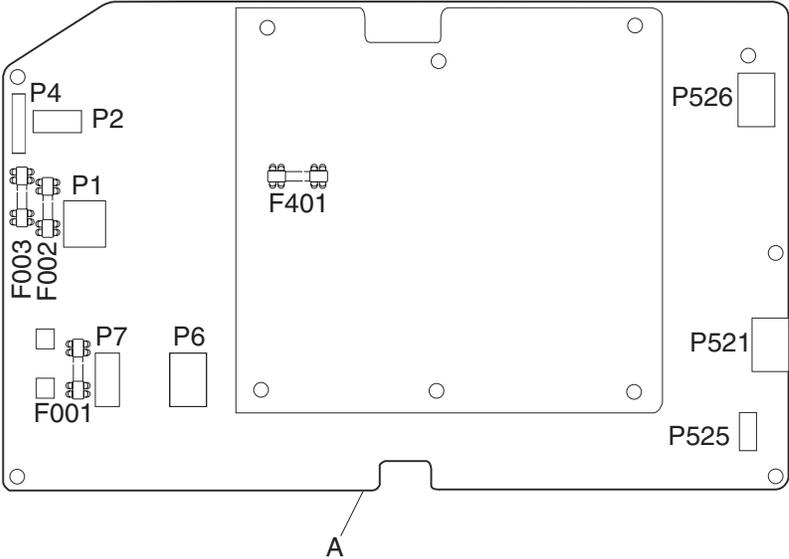
## Low voltage power supply (LVPS) card assembly removal



1. Remove the right upper cover. See **“Right upper cover removal”** on page 4-12.
2. Disconnect the connectors from the LVPS card assembly (A).  
**Note:** The connectors P1, P2, P4, P6, P521, and P526 have hooks that must first be released.
3. Remove the nine screws securing the LVPS card assembly (A) to the printer.



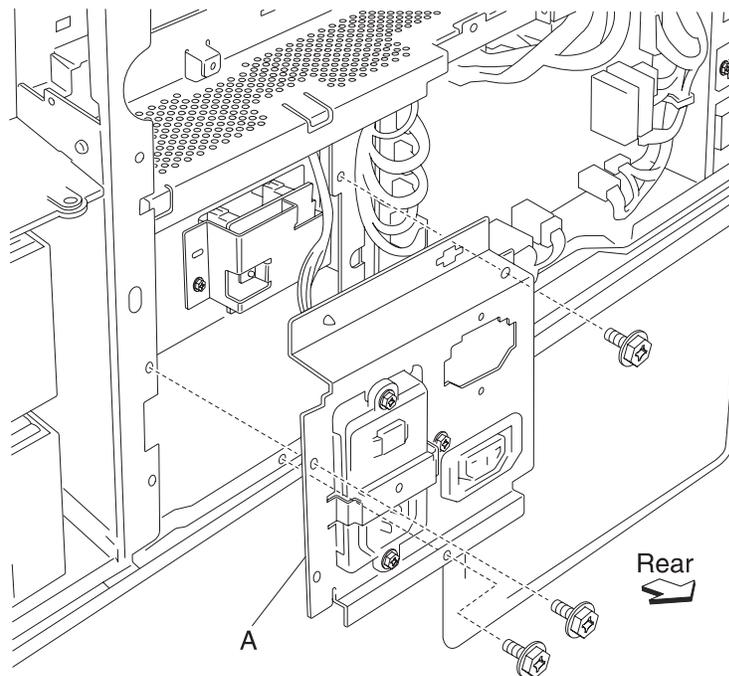
- 4. Remove the LVPS card assembly (A).  
**Note:** Grasp the card by the edge; avoid touching the bottom of the LVPS assembly (A).



## AC power input socket assembly removal



1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Remove the rear lower cover. See **“Rear lower cover removal”** on page 4-16.
4. Remove the top cover assembly. See **“Top cover assembly removal”** on page 4-8.
5. Remove the right upper cover. See **“Right upper cover removal”** on page 4-12.
6. Remove the three screws securing the AC power input socket assembly (A).
7. Release the harness from the clamp.
8. Remove the AC power bracket assembly (A).

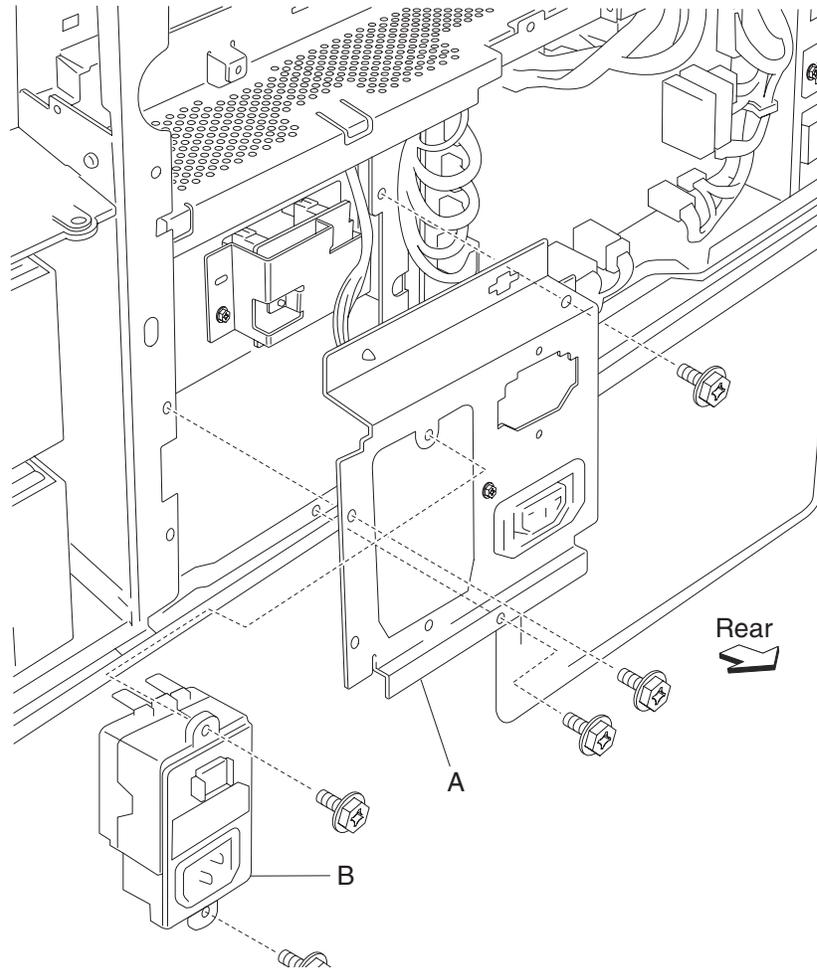


**Warning:** Before reinstalling, ensure all connectors are plugged into their proper location to prevent damage.

## AC power input socket removal



1. Remove the rear RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Remove the rear lower cover. See **“Rear lower cover removal”** on page 4-16.
4. Remove the three screws securing the bracket (A).
5. Disconnect the two connectors to the AC power input socket (B).
6. Remove the two screws securing the AC power input socket (B) to the bracket (A).
7. Remove the AC GFI breaker (B).

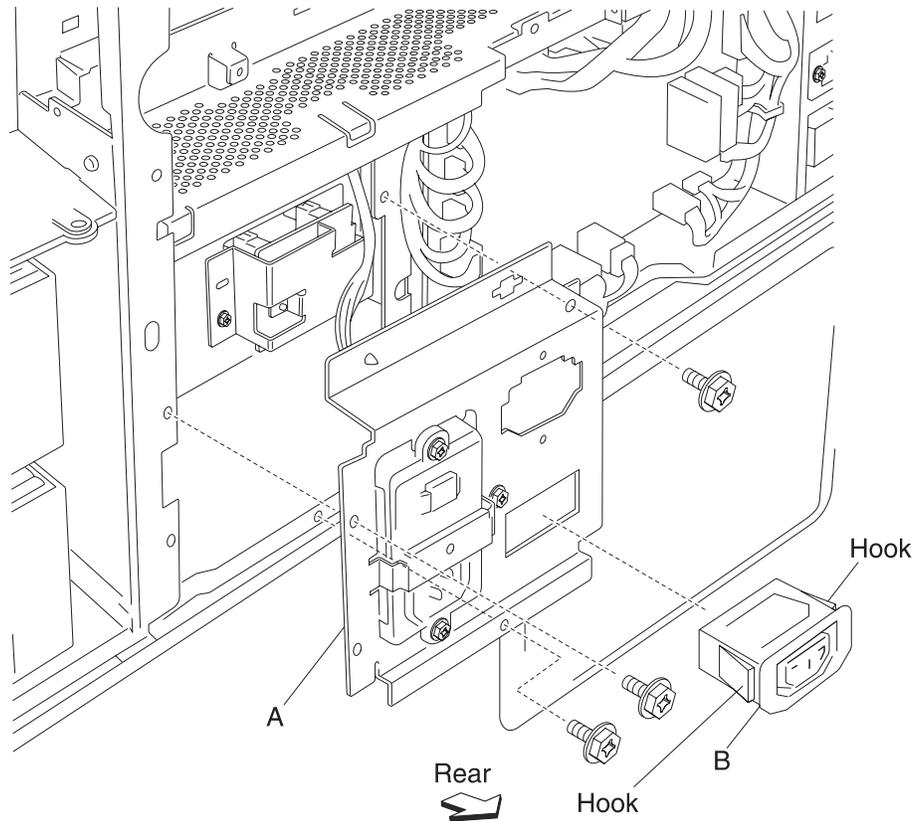


**Warning:** Before reinstalling, ensure all connectors are plugged into their proper location to prevent damage.

## Finisher AC output removal



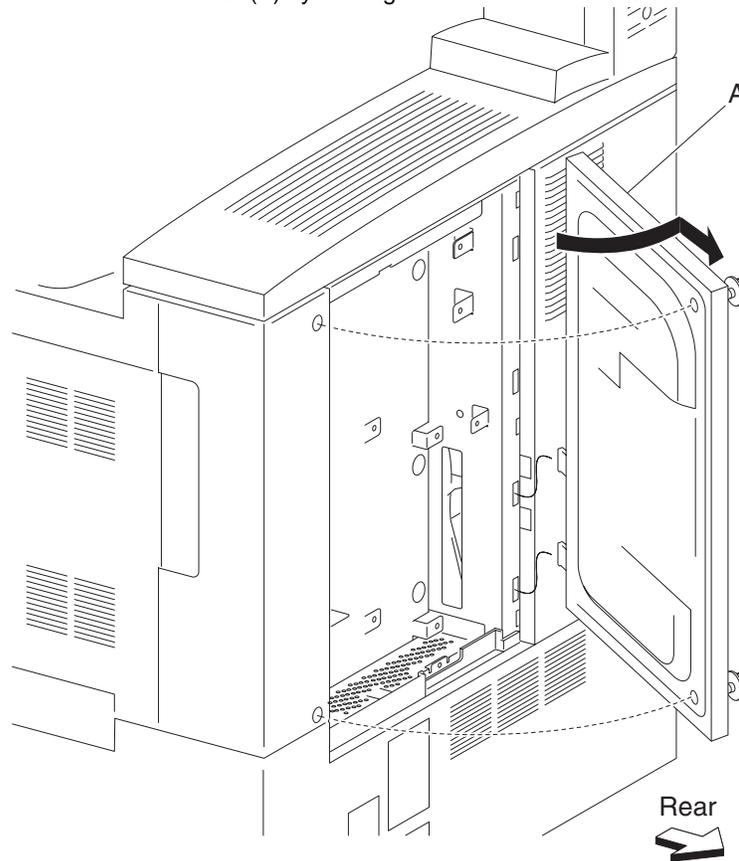
1. Remove the RIP card cover. See **“Rear RIP card cover removal”** on page 4-127.
2. Remove the rear motor cover. See **“Rear motor cover removal”** on page 4-15.
3. Remove the rear lower cover. See **“Rear lower cover removal”** on page 4-16.
4. Remove the three screws securing the bracket (A).
5. Disconnect the three connectors to the finisher AC output (B).
6. Release the two hooks securing the finisher AC output (B) to the bracket (A).
7. Remove the finisher AC output (B).



**Warning:** Before reinstalling, ensure all connectors are plugged into their proper location to prevent damage.

## Rear RIP card cover removal

1. Loosen the two screws securing the rear RIP card cover (A).
2. Remove the rear RIP card cover (A) by moving it in the direction of the arrow.



## RIP card assembly removal

**Warning:** In the event of replacement of any one of the following components:

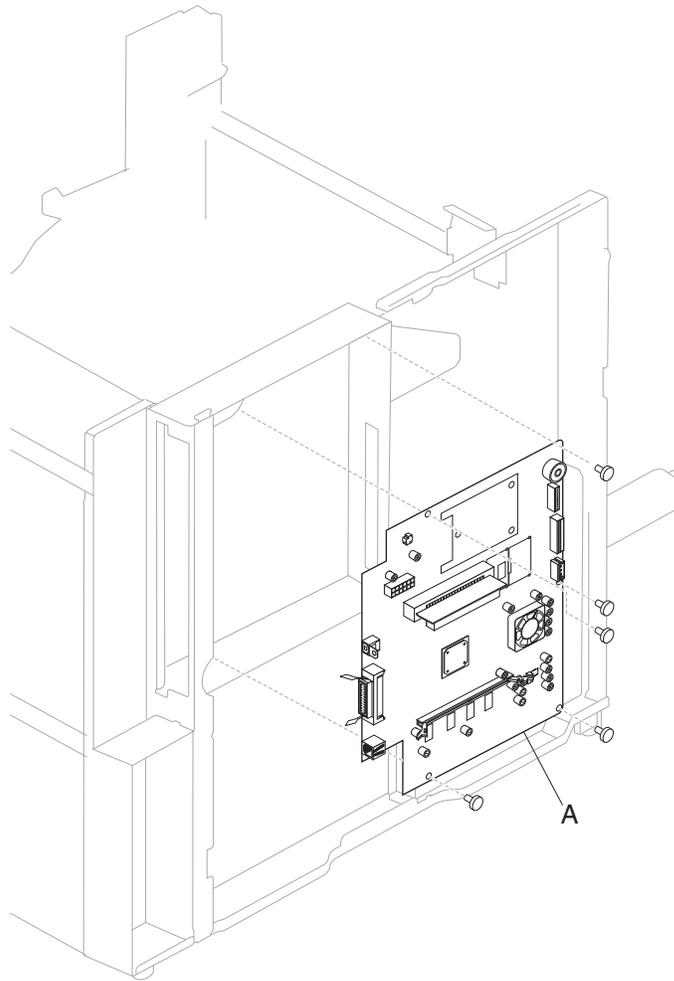
- Operator panel assembly
- RIP card assembly
- Interconnect card assembly

Only replace one component at a time. Replace the required component and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one or the printer will be rendered inoperable.

**Warning:** Never install and remove components listed above as a method of troubleshooting components. Once a component has been installed in a machine, it can not be used in another machine. It must be returned to the manufacturer.

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal” on page 4-127.**
2. Remove the rear motor cover. See **“Rear motor cover removal” on page 4-15.**
3. Remove the top rear cover. See **“Top rear cover removal” on page 4-4.**
4. Remove all connections excluding the cooling fan connection from the RIP card assembly (A).
5. Remove the six screws securing the RIP card assembly (A) to the printer.

6. Remove any screws securing the side of the RIP card assembly to the printer.
7. Remove the RIP card assembly gently from the rear of the printer (A).



### ***Interconnect card assembly removal***

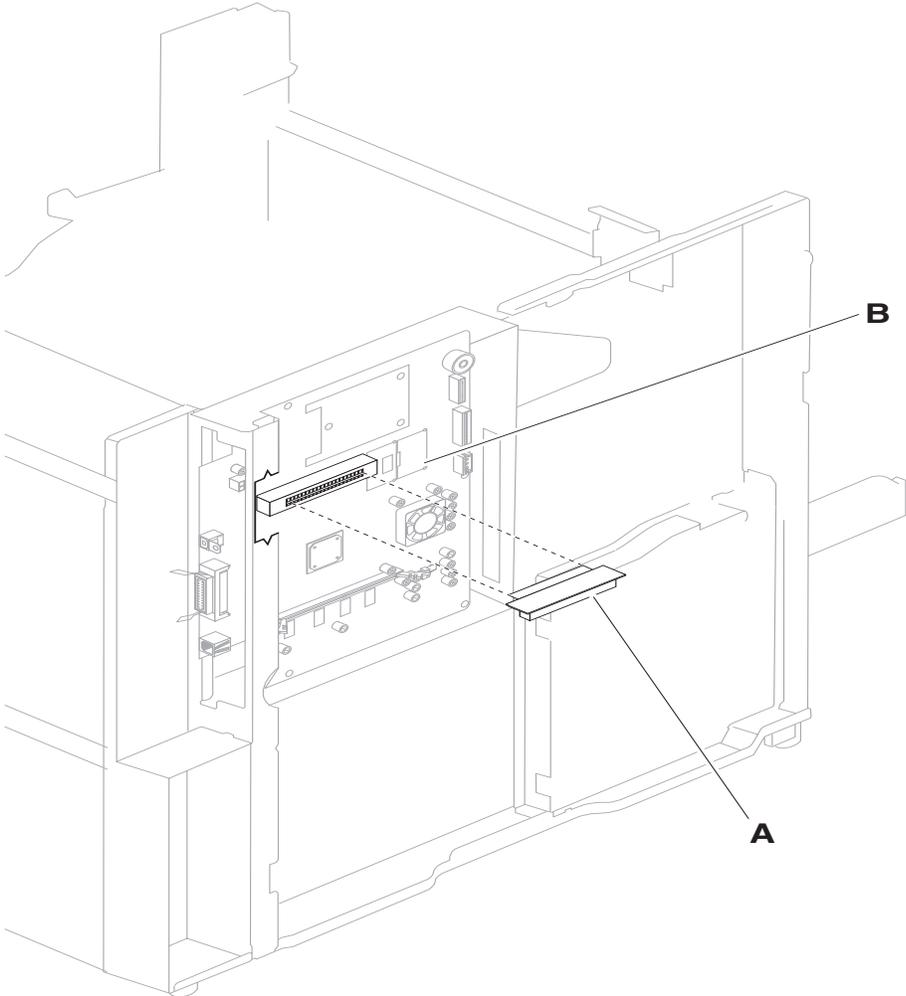
**Warning:** In the event of replacement of any one of the following components:

- Operator panel assembly
- RIP card assembly
- Interconnect card assembly

Only replace one component at a time. Replace the required component and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one or the printer will be rendered inoperable.

**Warning:** Never install and remove components listed above as a method of troubleshooting components. Once a component has been installed in a machine, it can not be used in another machine. It must be returned to the manufacturer.

1. Remove the rear RIP card cover. See **“Rear RIP card cover removal” on page 4-127.**
2. Gently pull the interconnect card assembly (A) from the RIP card assembly (B).
3. Remove the interconnect card assembly (A).





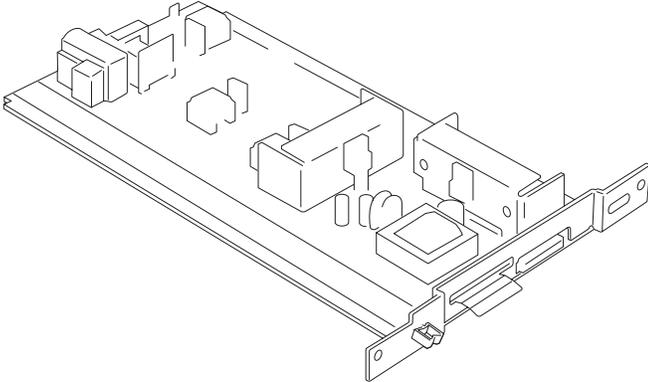
# 5. Component locations

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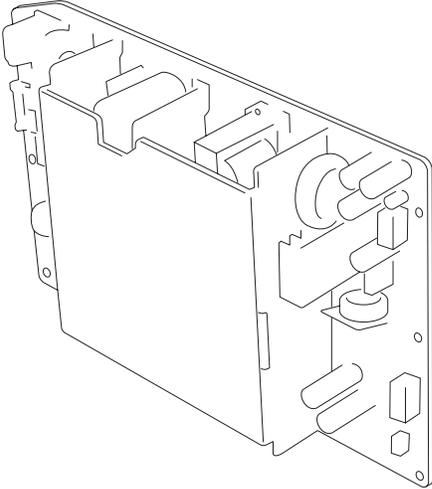
## Locations

*Printer boards*

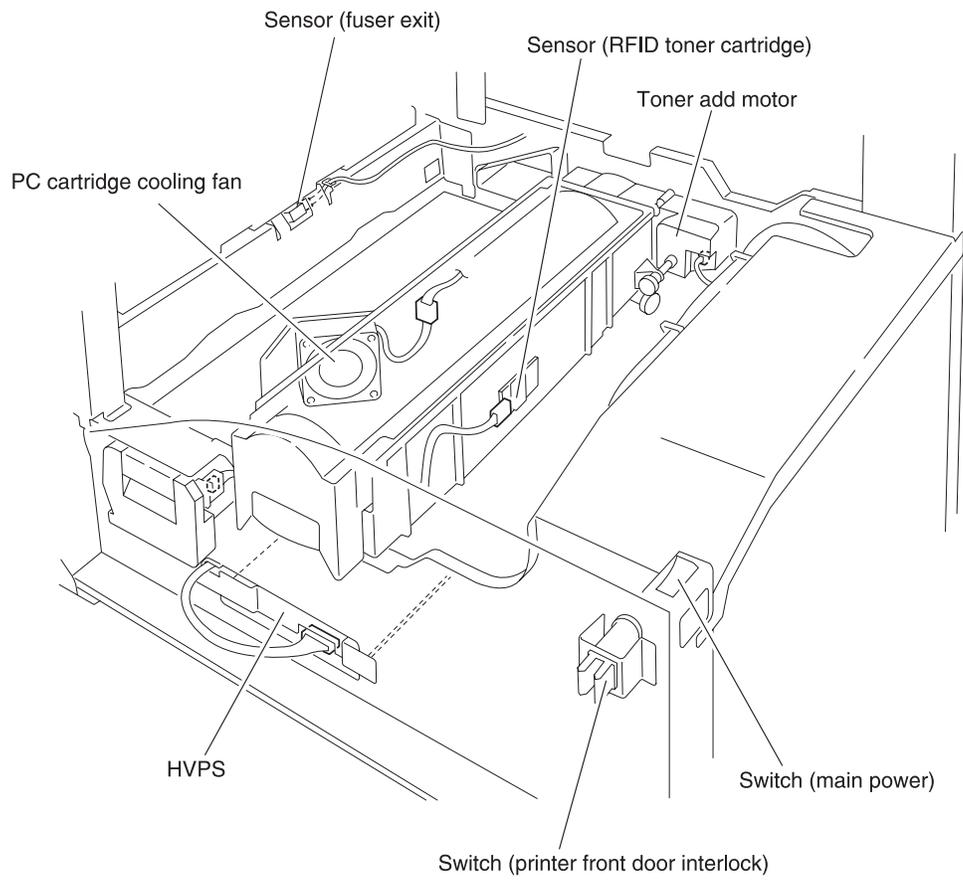
*HVPS*

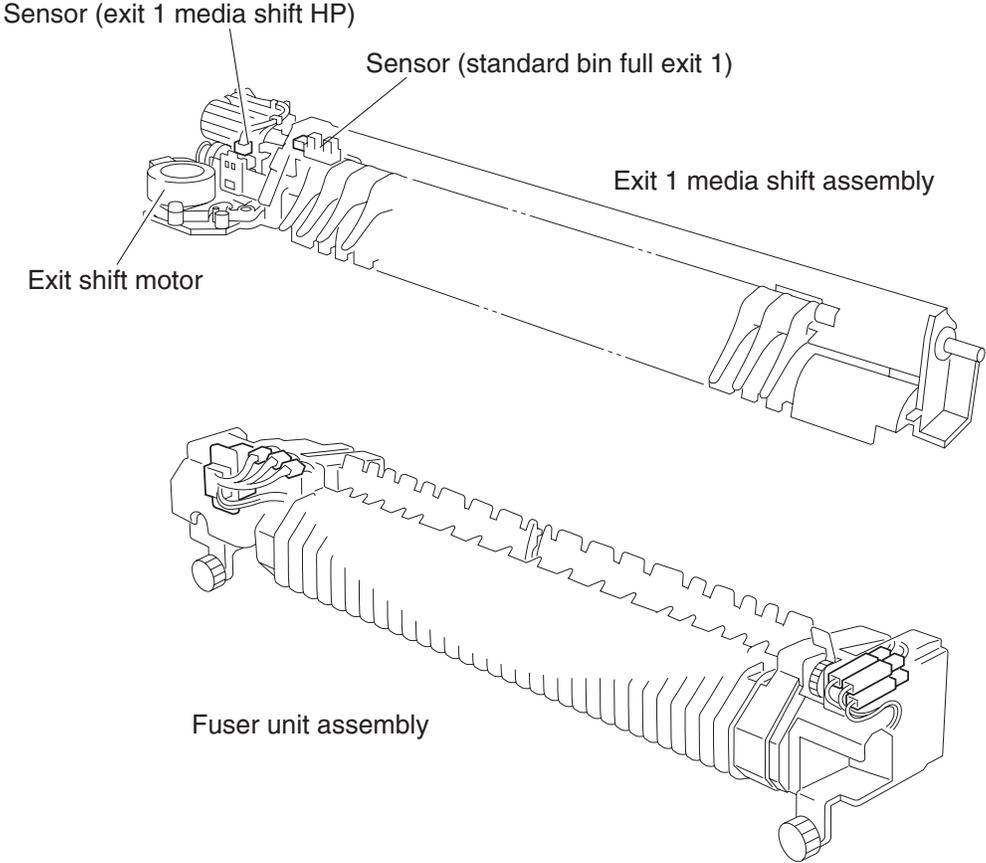


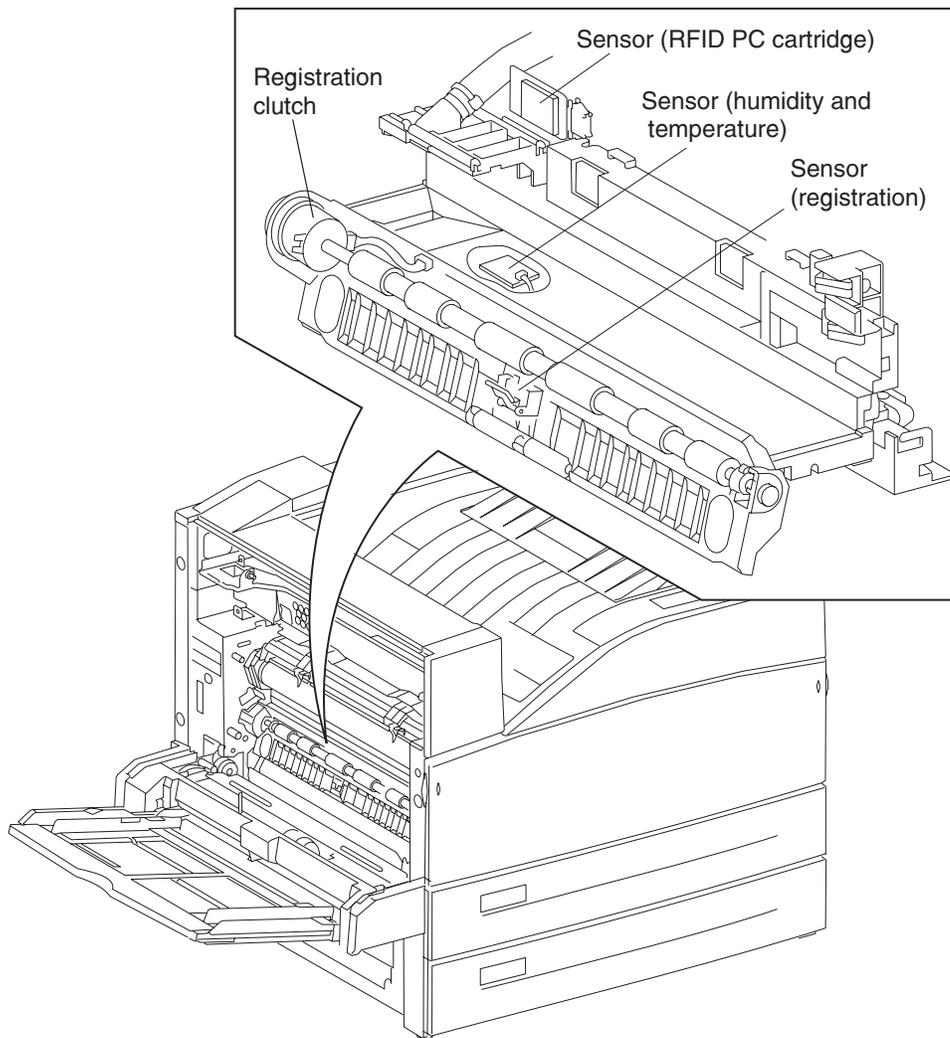
*LVPS*

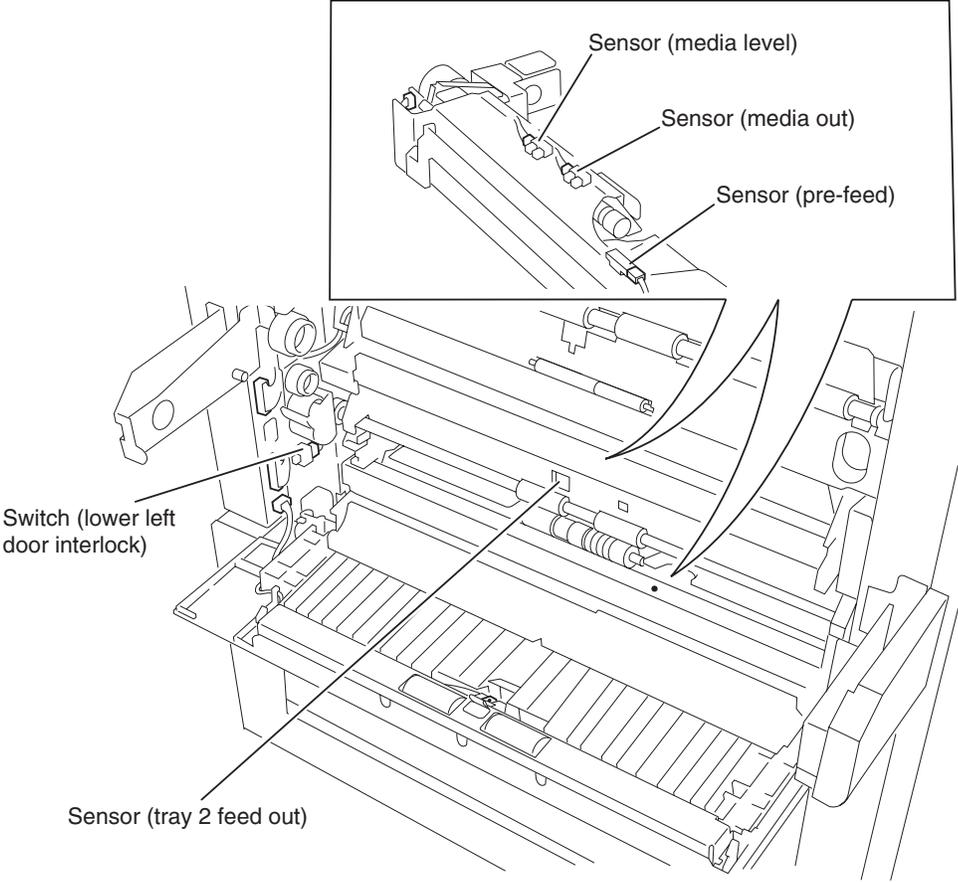


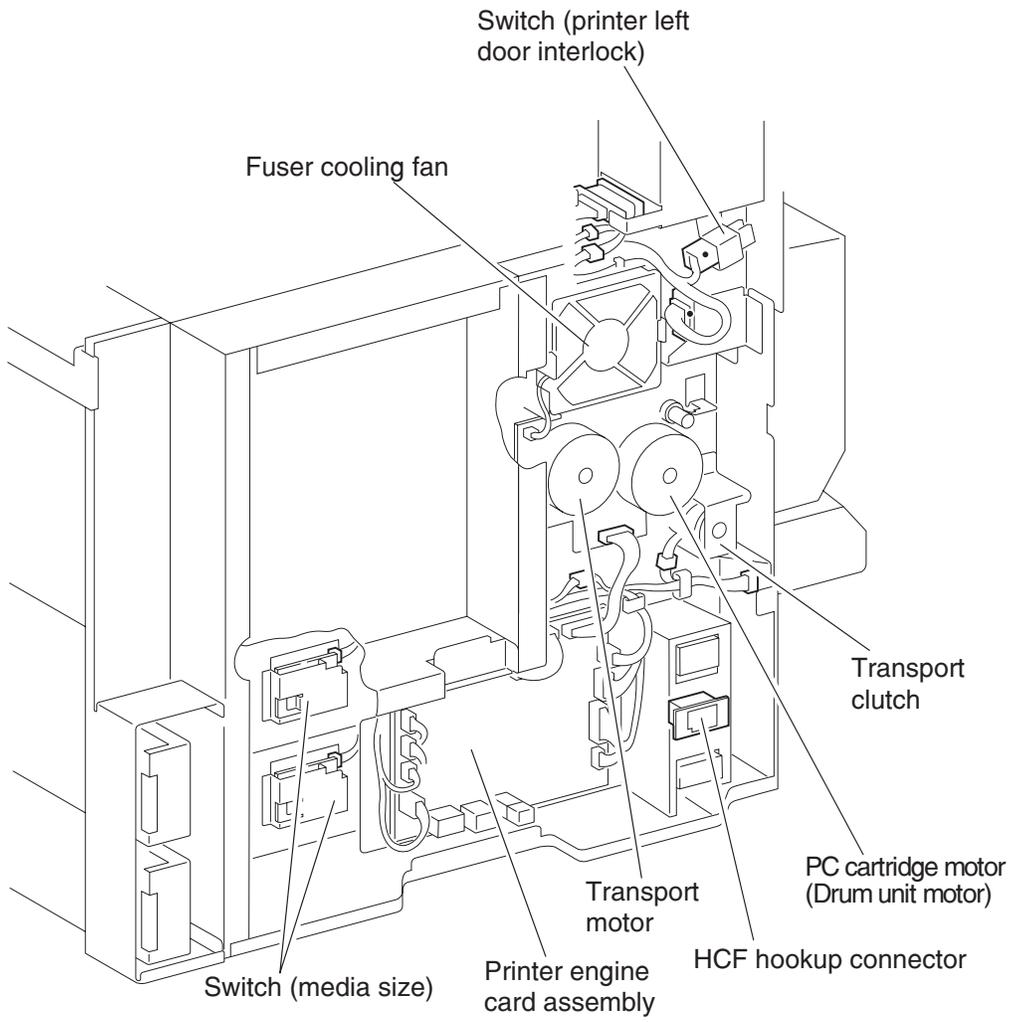
### Printer motors and sensors



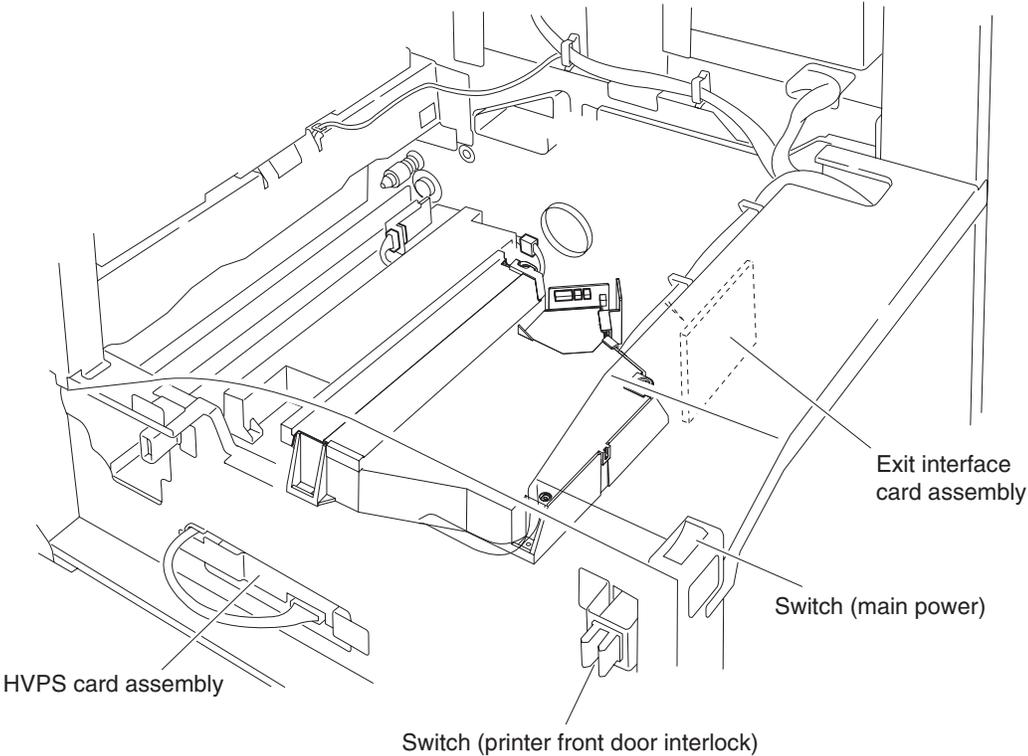




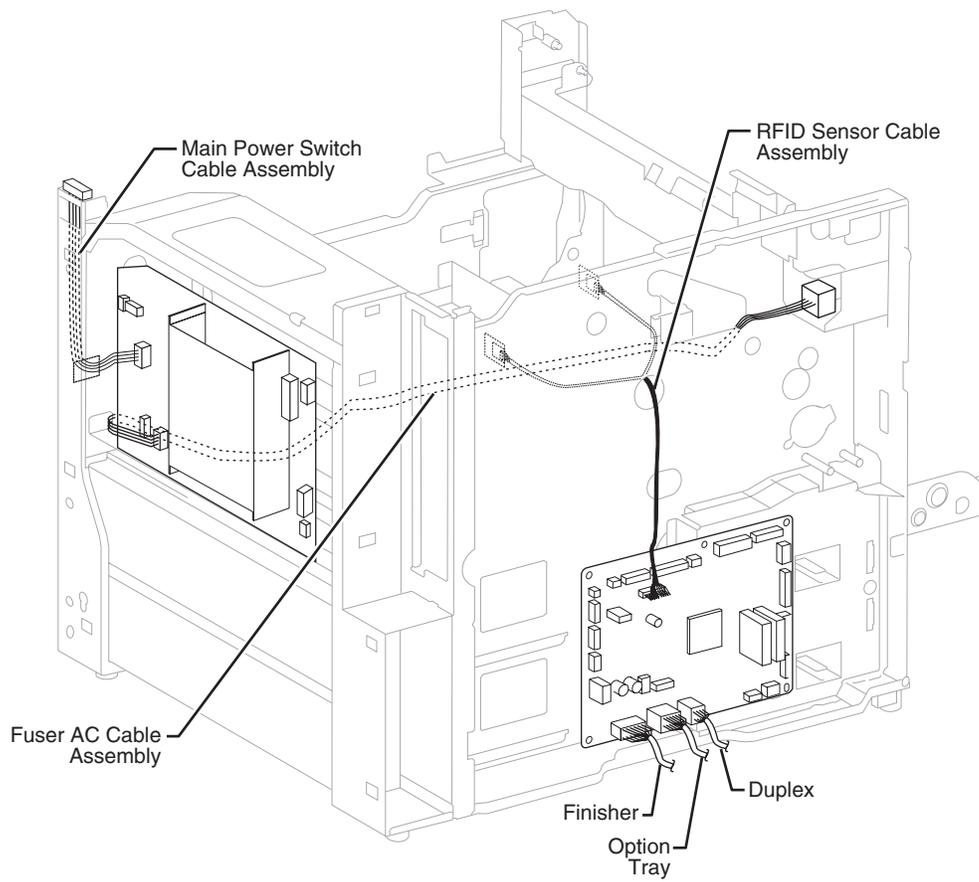


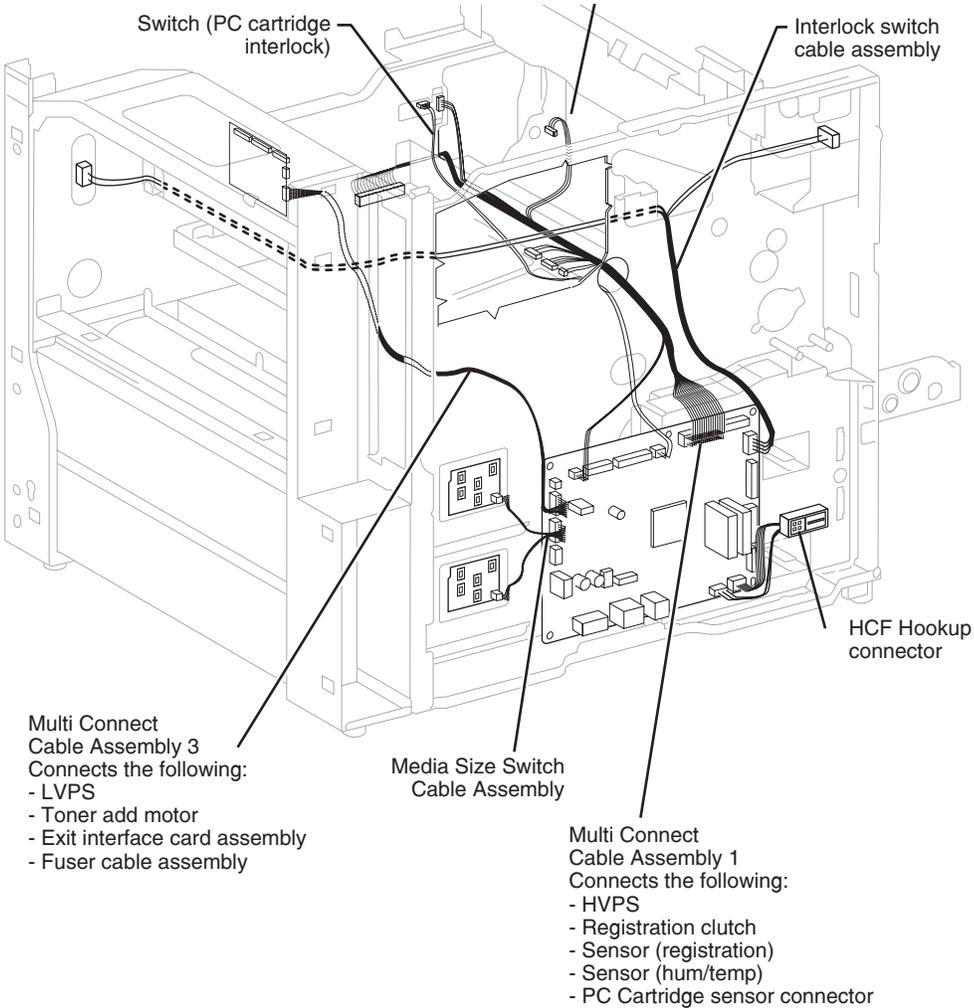


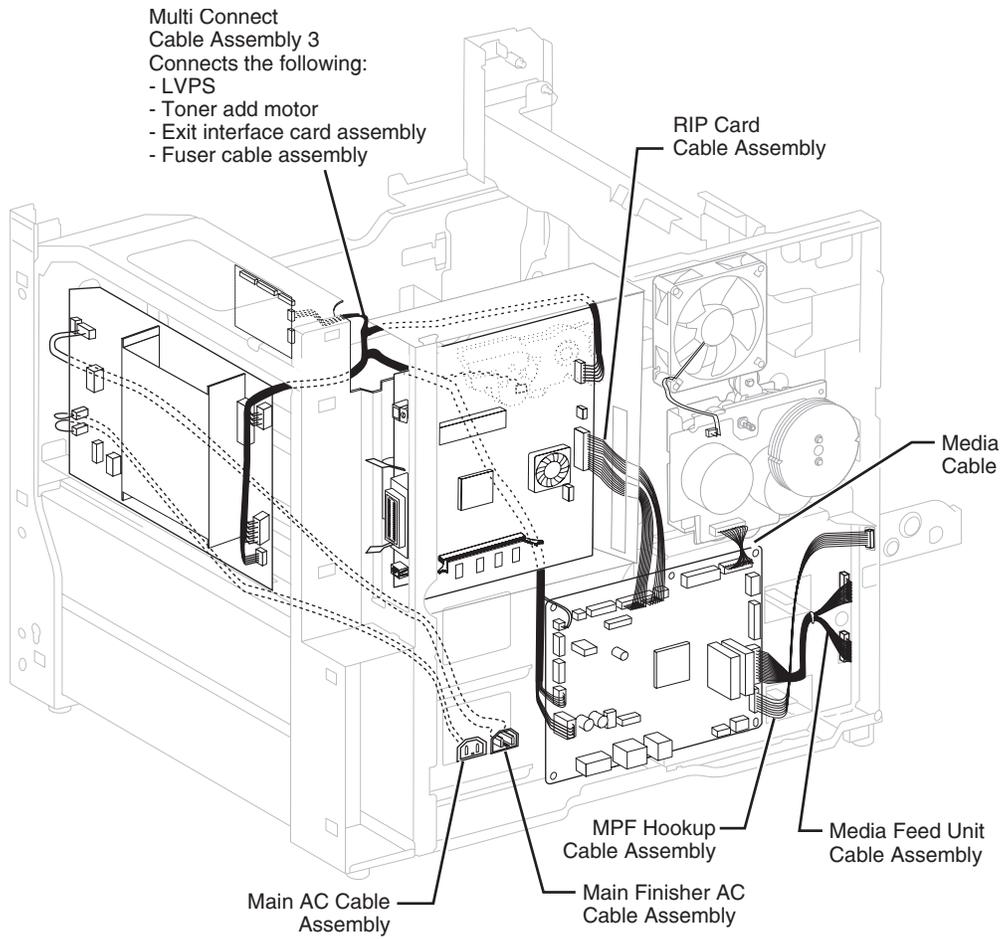
**Printer switches**

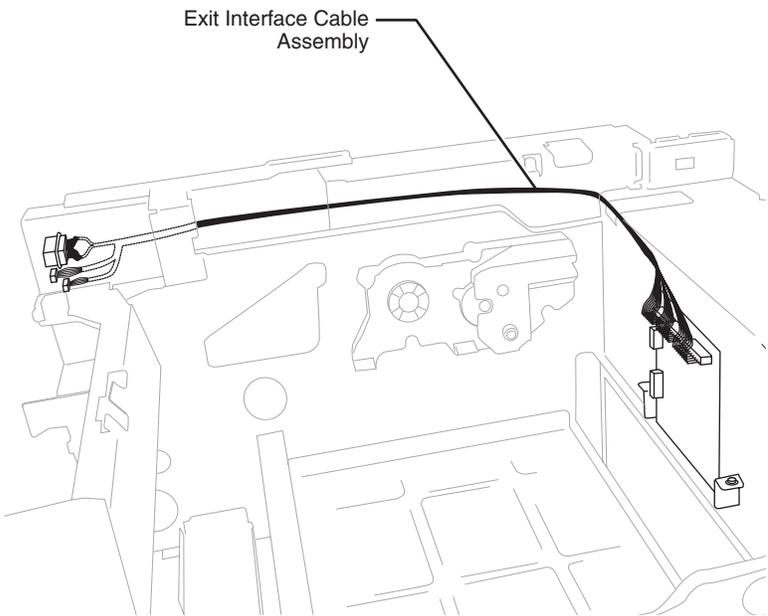
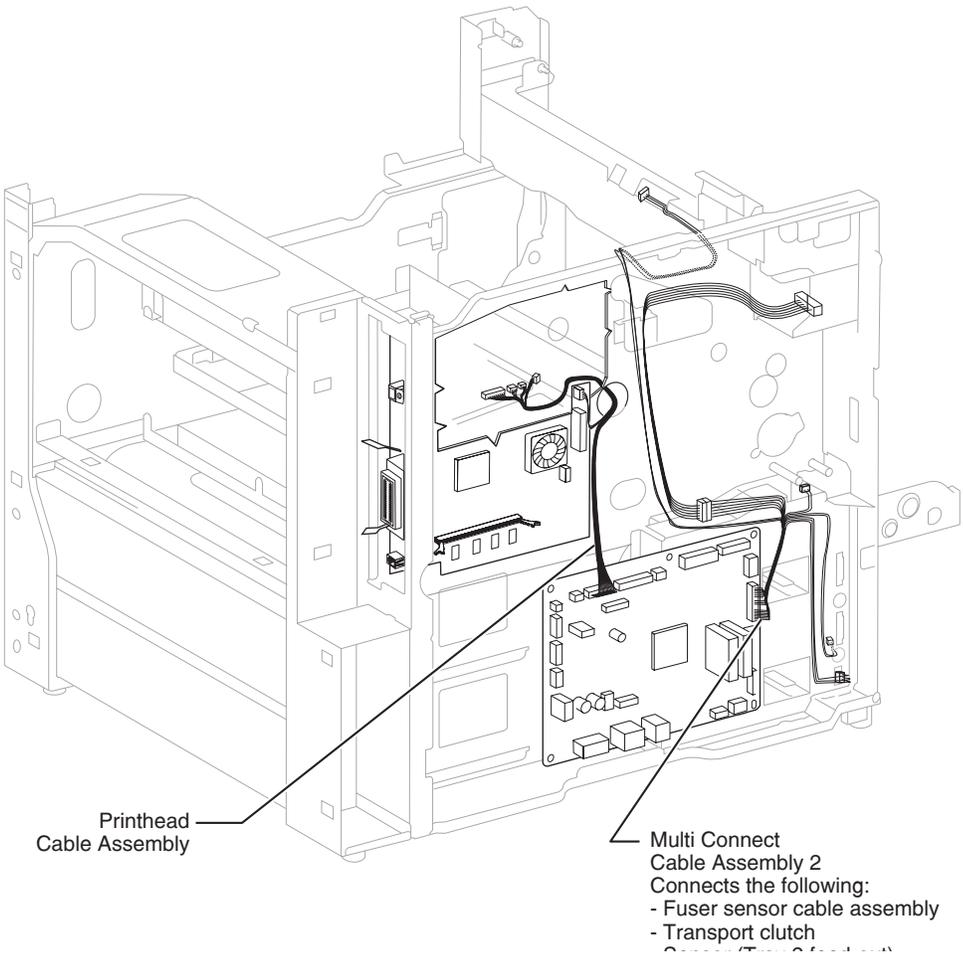


## Cables

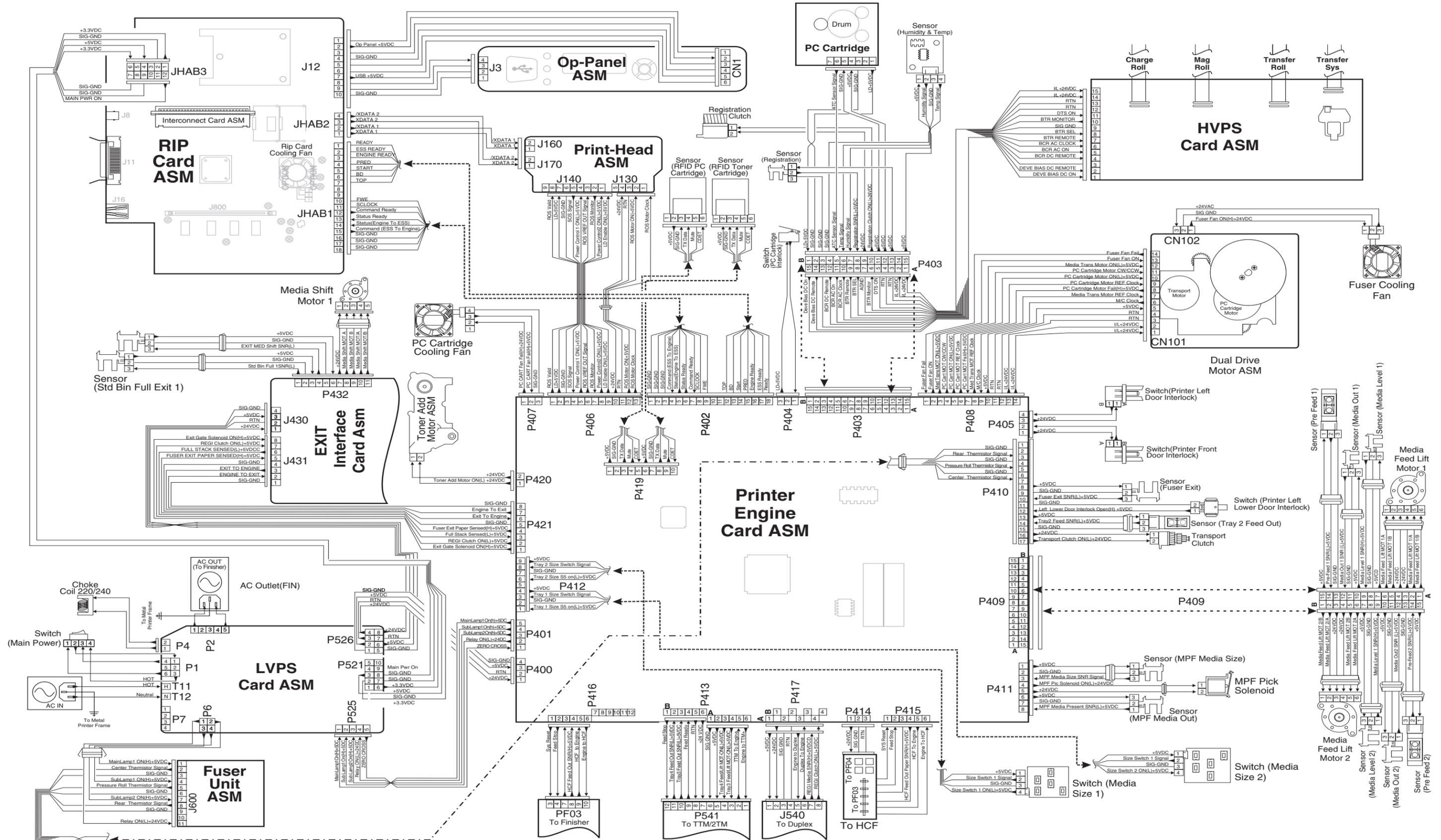








# Electronic component diagram



## 6. Preventive maintenance

This chapter describes procedures for printer preventive maintenance. Follow these recommendations to help prevent problems and maintain optimum performance.



### Safety inspection guide

The purpose of this inspection guide is to aid you in identifying unsafe conditions.

If any unsafe conditions exist, find out how serious the hazard could be and if you can continue before you correct the hazard.

Check the following items:

- Damaged, missing, or altered parts, especially in the area of the on/off switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top cover and the power supply cover
- Possible safety exposure from any non-Lexmark attachments

LEXMARK W8XX	EVERY SERVICE CALL	EVERY 300K	NOTE:
<b>MEDIA TRAY- PRINTER 2TM/TTM (if equipped)</b>			
Media Side Guides	Inspect	Inspect	Check for correct positioning
Media End Guide	Inspect	Inspect	Check for correct positioning
Separation Pad	Inspect	Clean	Damp cloth
Tray Lift Gear Group		Inspect	
<b>MEDIA FEED UNIT- PRINTER 2TM/TTM (if equipped)</b>			
Feed Roll	Inspect	Replace	Verify page count before replacing
Pick Roll	Inspect	Replace	Verify page count before replacing
Separation Roll	Inspect	Replace	Verify page count before replacing
MPF feed roll	Inspect	Clean	Water or alcohol
Transport Roll Assembly		Clean	Water or alcohol
Sensor (registration)		Clean	Brush or blower brush
Sensor (tray 2 feed-out)		Clean	Brush or blower brush
<b>MEDIA FEED UNIT HCF (if equipped)</b>			
Feed Roll	Inspect	Replace	Verify page count before replacing
Pick Roll	Inspect	Replace	Verify page count before replacing
Separation Roll	Inspect	Replace	Verify page count before replacing
HCF Transport Roll Assembly		Clean	Water or alcohol
Front Edge Guide	Inspect		Check for correct positioning
Rear Edge Guide	Inspect		Check for correct positioning
Long Edge Guide	Inspect		Check for correct positioning
Separation Pad	Inspect	Clean	Damp cloth
<b>TRANSFER ROLL</b>			
Transfer Roll	Inspect	Replace	
<b>FUSER UNIT</b>			
Fuser Unit	Inspect	Replace	
Sensor (fuser exit)		Clean	Blower brush
<b>DUPLEX (if equipped)</b>			
Duplex Transport Roll (2)		Clean	Water or alcohol
Duplex Transport Roll Middle		Clean	Water or alcohol

<b>EXIT 2 (if equipped)</b>			
Exit 2 Transport Roll		Clean	Water or alcohol
Exit 2 Media Exit Roll		Clean	Water or alcohol
<b>FINISHER (if equipped)</b>			
Bridge Unit Transport Belts		Clean	Water or alcohol
Main Paddles (3)		Inspect	
Sub Paddles (2)		Inspect	
Clamp Paddles (3)		Inspect	
Punch Waste Box		Clean	
Stapler Cartridge	Inspect	Inspect	Check for correct operation

## 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 operator panel displays the message “80 scheduled maintenance” at each 300K page count interval. It is necessary to replace the fuser assembly, transfer roller, and feed, pick and separation rollers at this interval to maintain the print quality and reliability of the printer. The parts are available as a maintenance kit with the following part numbers:

40X0956– Maintenance Kit, 110 V  
 40X0957– Maintenance Kit, 220 V  
 40X0958– Maintenance Kit, 100 V

After replacing the kit, the maintenance count must be reset to zero to clear the “80 scheduled maintenance” message.

1. Select **Reset Maint Cnt** from CONFIG MENU.  
The message  Reset displays.
2. Press  to confirm the selection.  
Press **Back** () to return to the main Configuration menu without resetting the page counter.  
When the reset operation is complete, the menu returns to the Printer Setup Reset Maintenance Count screen.

When performing the 300K scheduled maintenance procedure, the following areas should be cleaned of media dust and toner contamination:

- Media trays
- PC cartridge area
- Transfer roll area
- Duplex area (if equipped)
- Exit 2 area (if equipped)
- Standard bins
- Bridge unit area (if equipped)
- Finisher media bins

# 7. Parts catalog

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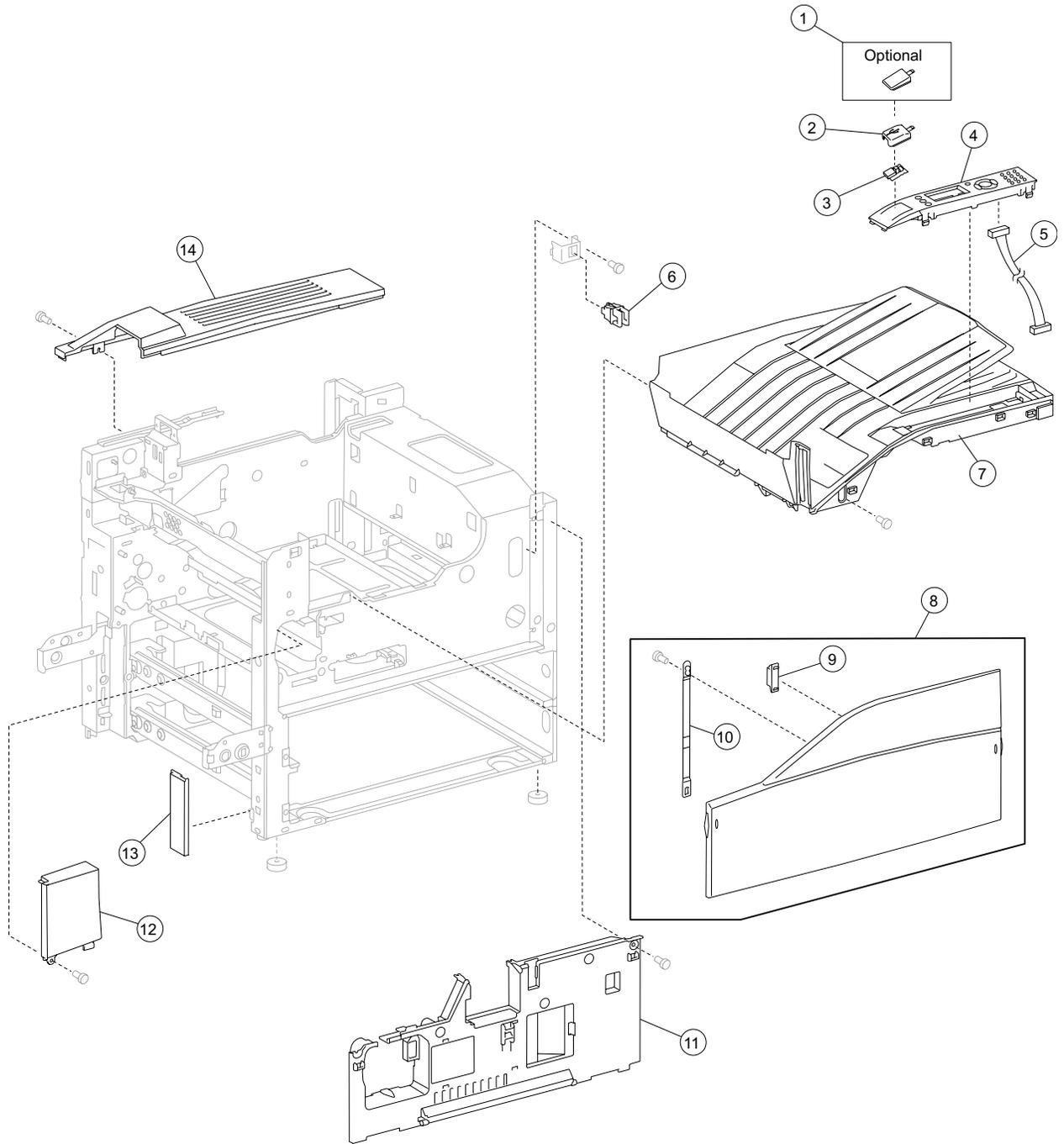
## How to use this parts catalog

The following legend is used in the parts catalog:

Assem bly- Index	Part number	Units/mach	Units/ kit or pkg	Description
------------------------	----------------	------------	-------------------------	-------------

- **Assembly-index:** Identifies the assembly and the item in the diagram. For example 3-1 indicates Assembly 3 and the item number 1 in the table.
- **Part number:** Identifies the unique number that identifies this FRU.
- **Units/mach:** Refers to the number of units actually used in the base machine or product.
- **Units/kit or pkg:** Refers to the number of units packaged together and identified by the part number.
- **NS:** (Not shown) in the assembly-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.

### Assembly 1: Covers and operator panel (1 of 2)



## Assembly 1: Covers and operator panel (1 of 2)

Assembly - Index	Part number	Units/mach	Units/kit or pkg	Description
1-4	40X2395	1	1	USB function removal cover
1	40X0972	1	25	USB function removal cover
2	40X0557	1	1	USB connector cover
3	40X0556	1	1	USB connector
4	40X0554	1	1	Operator panel assembly
5	40X0555	1	1	Operator panel cable assembly
6	40X0553	1	1	Switch (printer front door interlock)
7	40X0558	1	1	Top cover assembly
8	40X0559	1	1	Printer front door assembly
9	40X0560	1	1	Front door magnetic catch
10	40X0561	1	1	Front door support strap
11	40X0562	1	1	Front inner cover
12	40X0551	1	1	Front left cover
13	40X0550	1	1	Left lower cover
14	40X0552	1	1	Top rear cover

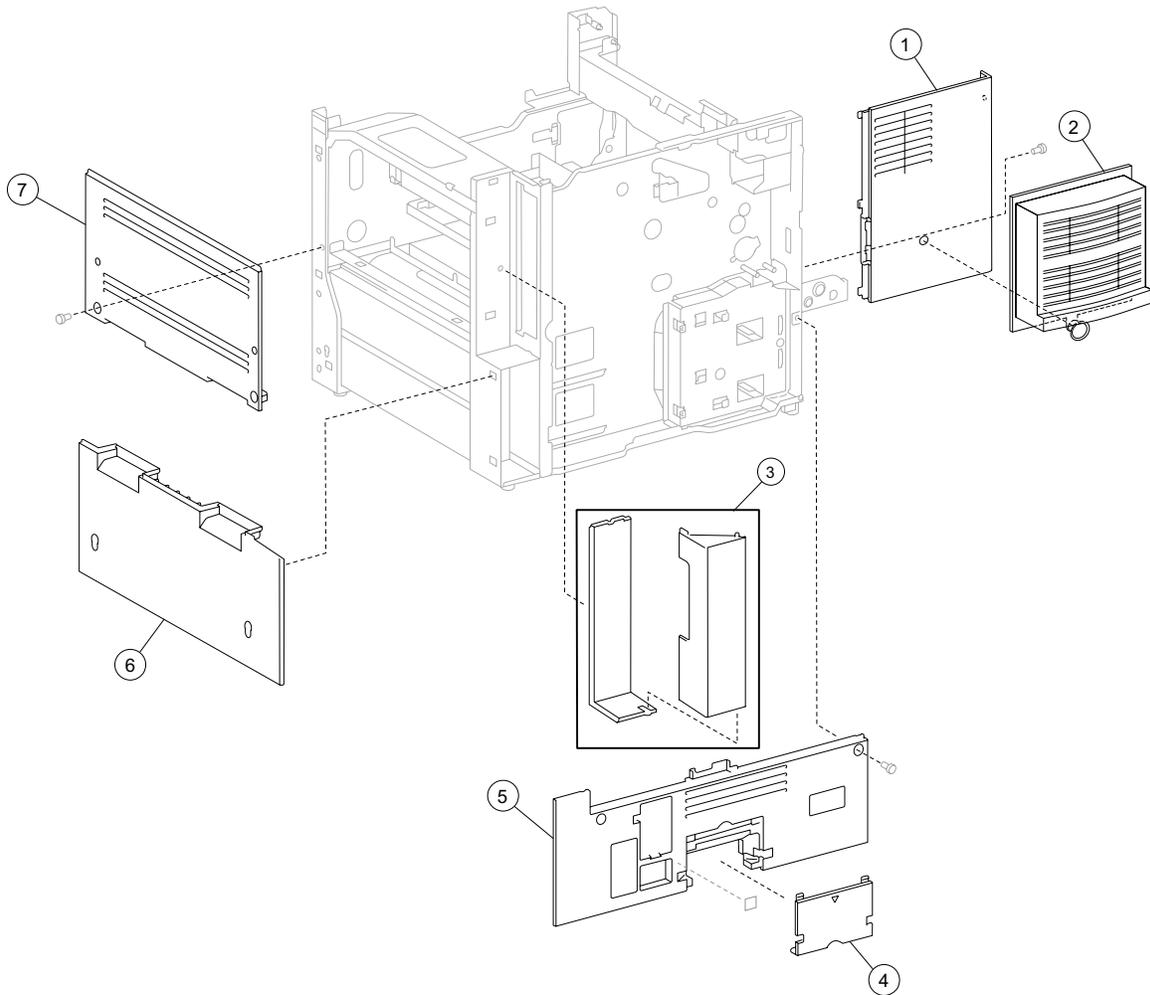
**Warning:** In the event of replacement of any one of the following components:

- Operator panel assembly
- RIP card assembly
- Interconnect card assembly

Only replace one component at a time. Replace the required component and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one or the printer will be rendered inoperable.

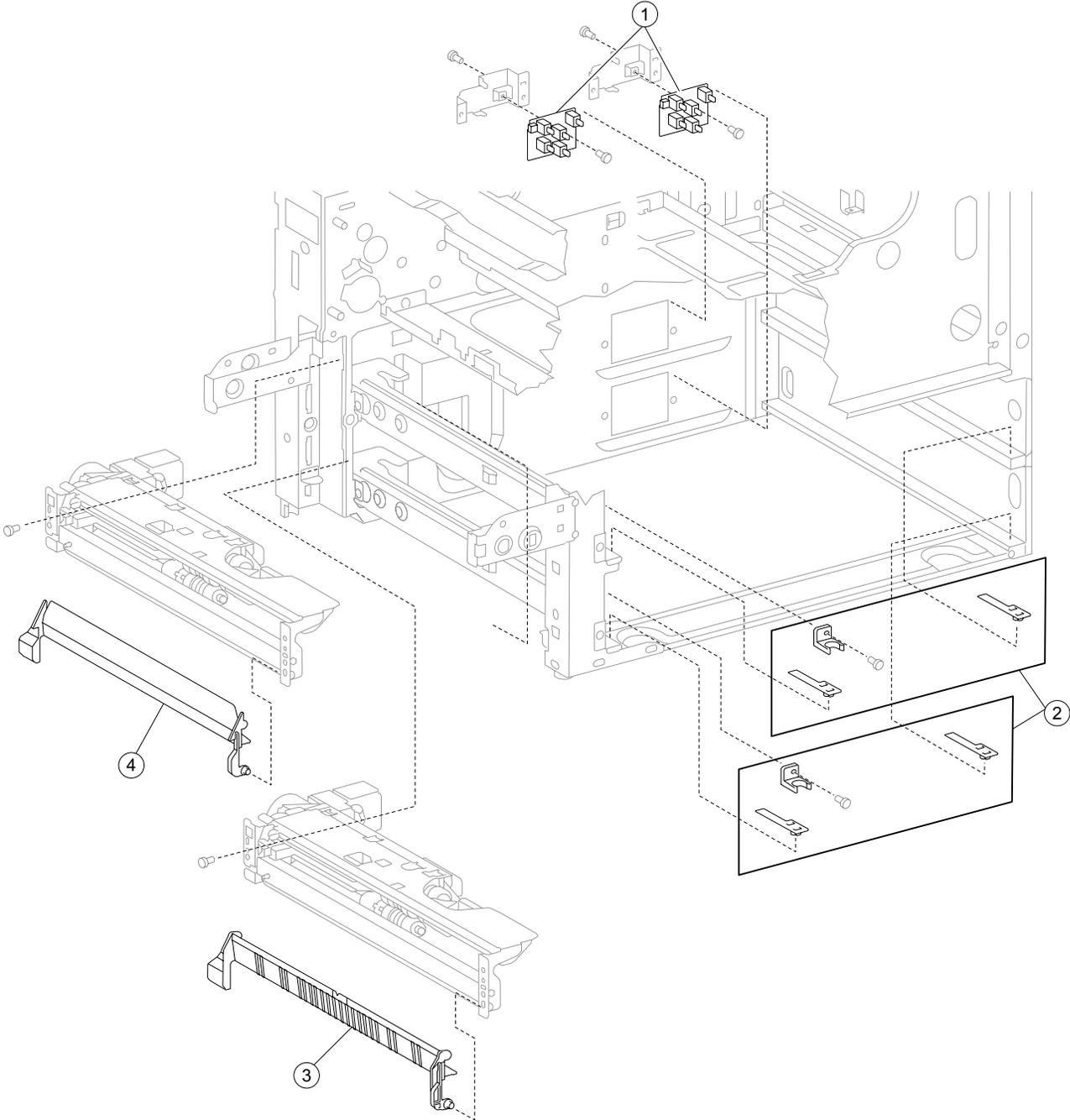
**Warning:** Never install and remove components listed above as a method of troubleshooting components. Once a component has been installed in a machine, it can not be used in another machine. It must be returned to the manufacturer.

## Assembly 2: Covers



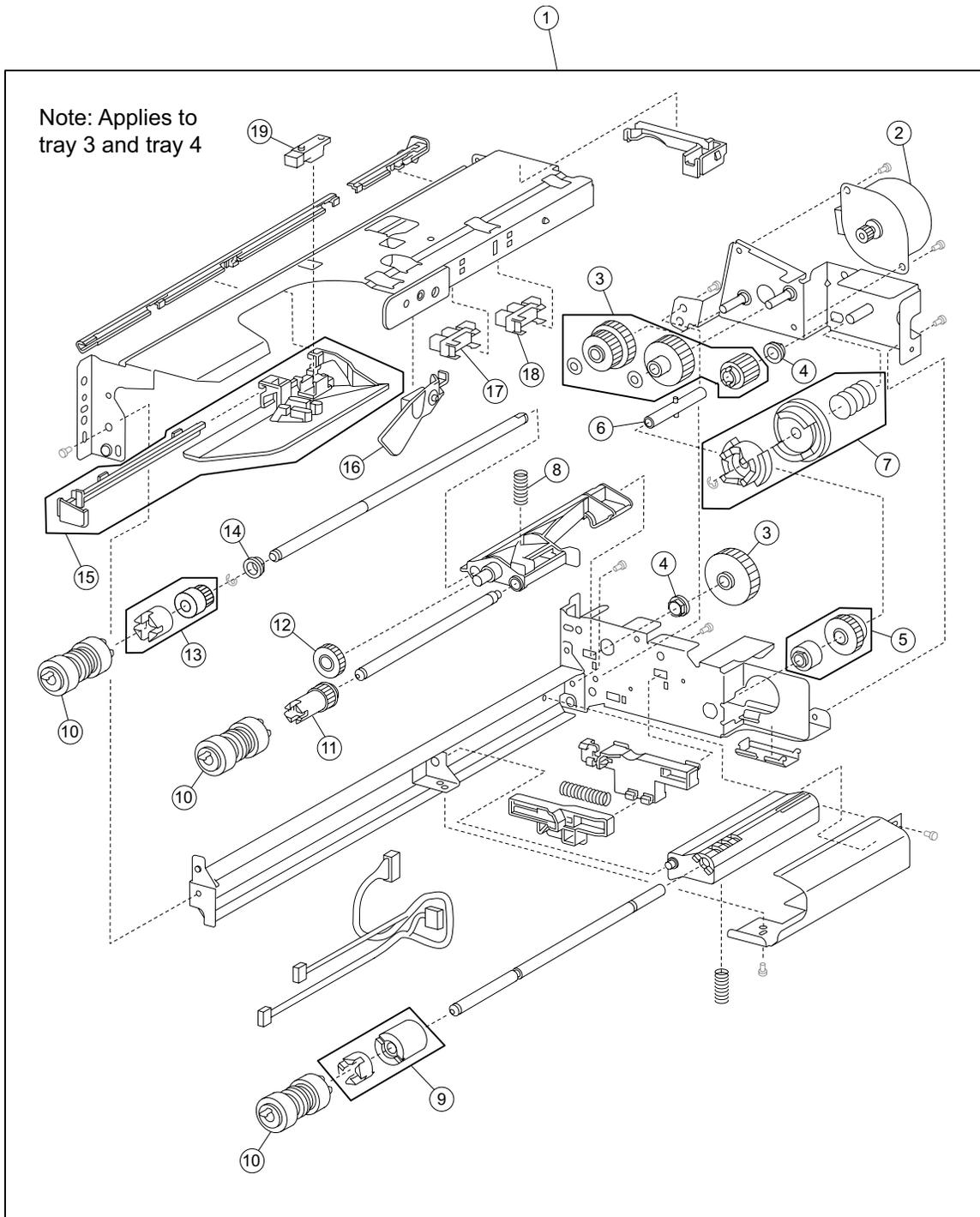
Assembly - Index	Part number	Units/mach	Units/kit or pkg	Description
2-4	40X0566	1	1	Rear motor cover
2	40X2382	1	1	TVOC filter assembly
3	40X0565	1	2	Cable hookup door kit includes: <ul style="list-style-type: none"> <li>• Cable hookup cover</li> <li>• Cable hookup door</li> </ul>
4	40X0568	1	1	Option hookup cover
5	40X0567	1	1	Rear lower cover (110V)
5	40X0955	1	1	Rear lower cover (220V)
6	40X0564	1	1	Right lower cover
7	40X0563	1	1	Right upper cover

**Assembly 3: Media feed unit**



Assembly - Index	Part number	Units/mach	Units/kit or pkg	Description
3-1	40X0570	2	1	Switch (media size)
2	40X0569	2	3	Media tray catch kit includes: <ul style="list-style-type: none"> <li>• Media tray catch</li> <li>• Media tray slide (2)</li> </ul>
3	40X0572	1	1	Vertical turn guide
4	40X0571	1	1	Vertical turn mylar guide

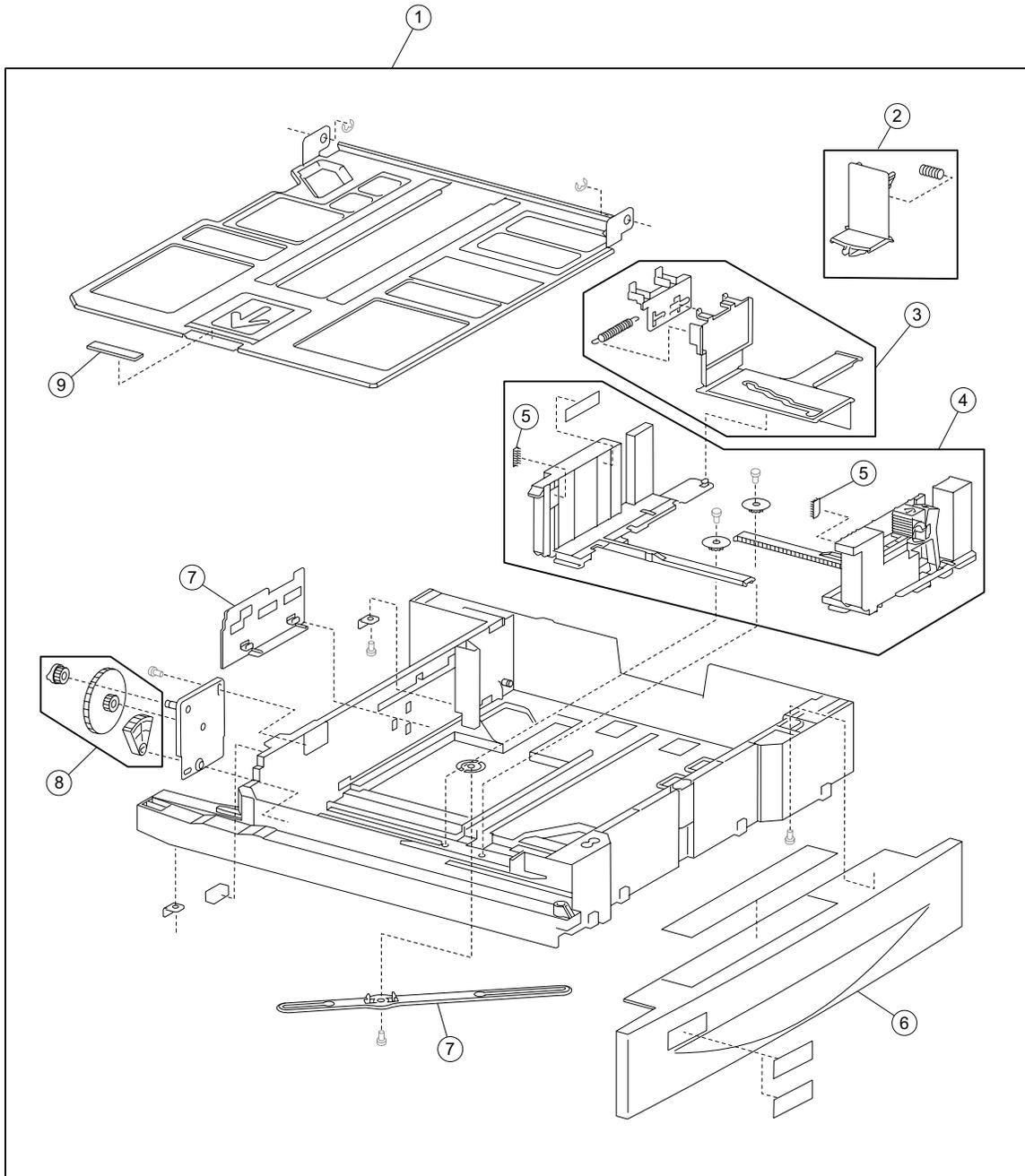
### Assembly 4: Media feed unit exploded (tray 1 and tray 2)



### Assembly 4: Media feed unit exploded (tray 1 and tray 2)

Assembly - Index	Part number	Units/mach	Units/kit or pkg	Description
4-4	40X0581	2	1	Media feed unit assembly
2	40X0582	2	1	Media feed lift motor
3	40X0585	2	6	Media feed drive gear kit includes: <ul style="list-style-type: none"> <li>• Media feed unit drive gear 13T</li> <li>• Media feed unit drive gear 28/21T</li> <li>• Media feed unit drive gear 29T</li> <li>• Media feed unit drive gear 27T</li> <li>• 2 mm washer (2)</li> </ul>
4	40X0880	2	1	6 mm bushing
5	40X0967	2	2	Media tray lift one-way clutch/gear includes: <ul style="list-style-type: none"> <li>• Media tray lift one-way clutch</li> <li>• Media tray lift one-way gear</li> </ul>
6	40X0968	2	1	Media tray lift one-way shaft
7	40X0583	2	3	Tray lift coupling kit includes: <ul style="list-style-type: none"> <li>• Tray lift coupling</li> <li>• Tray lift coupling gear 31T</li> <li>• Spring</li> </ul>
8	40X0590	2	1	Pick roll assembly spring
9	40X0593	2	2	Separation roll friction clutch kit includes: <ul style="list-style-type: none"> <li>• Separation roll one-way friction clutch</li> <li>• Separation roll spacer</li> </ul>
10	40X0594	2	3	Feed unit roll kit includes: <ul style="list-style-type: none"> <li>• Feed roll</li> <li>• Pick roll</li> <li>• Separation roll</li> </ul>
11	40X0970	2	1	Pick roll drive gear
12	40X0969	2	1	Pick roll idler gear
13	40X0591	2	2	Feed roll one-way clutch kit includes: <ul style="list-style-type: none"> <li>• Feed roll one-way clutch</li> <li>• Feed roll one-way gear 22T</li> </ul>
14	40X0952	2	1	6 mm bushing
15	40X0586	2	2	Media feed unit front guide kit includes: <ul style="list-style-type: none"> <li>• Media feed unit front guide</li> <li>• Media feed unit front guide rail</li> </ul>
16	40X0587	2	1	Media out actuator
17	40X0588	2	1	Sensor (media out)
18	40X0588	2	1	Sensor (media level)
19	40X0589	2	1	Sensor (pre-feed)

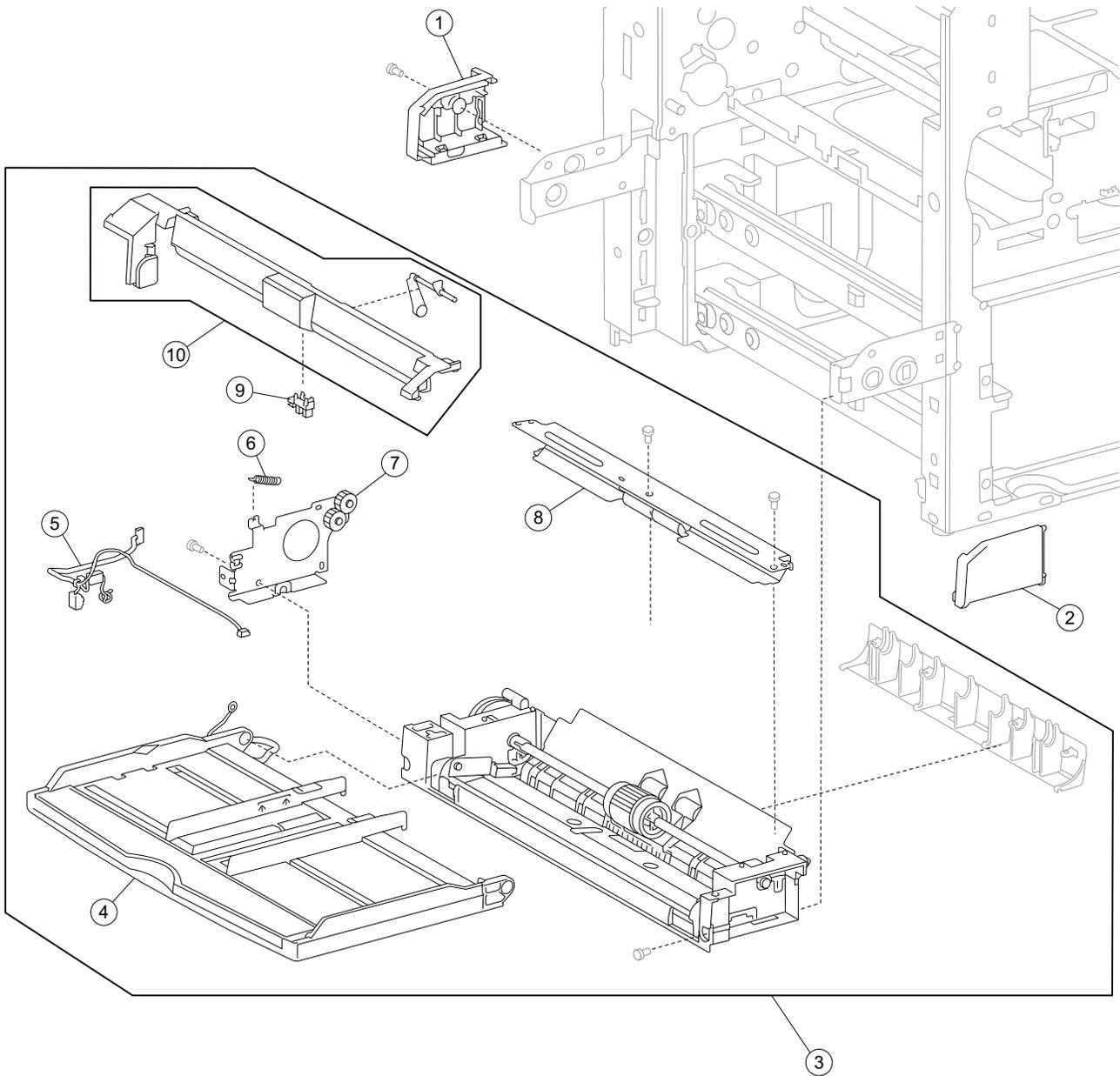
### Assembly 5: Media tray



## Assembly 5: Media tray

Assembly - Index	Part number	Units/mach	Units/kit or pkg	Description
5-4	40X0573	2	3	Media tray assembly includes: (this comes assembled) <ul style="list-style-type: none"> <li>• Media tray assembly</li> <li>• Labels (2)</li> </ul>
2	40X0578	2	2	Media tray end guide kit includes: <ul style="list-style-type: none"> <li>• Media tray end guide</li> <li>• Spring</li> </ul>
3	40X0577	2	3	Media tray side guide actuator kit includes: <ul style="list-style-type: none"> <li>• Media side guide actuator</li> <li>• Media side guide slide</li> <li>• Spring</li> </ul>
4	40X0576	2	5	Media tray side guide kit includes: <ul style="list-style-type: none"> <li>• Media max label</li> <li>• Front media tray guide assembly</li> <li>• Rear media tray guide</li> <li>• Pinion gear (2)</li> </ul>
5	40X0966	4	1	Media tray separation brush
6	40X0574	2	1	Media tray front cover includes: <ul style="list-style-type: none"> <li>• Media tray front cover</li> <li>• Labels (2)</li> </ul>
7	40X0579	2	2	Media tray end guide actuator kit includes: <ul style="list-style-type: none"> <li>• Media end guide actuator</li> <li>• Actuator link</li> </ul>
8	40X0580	2	3	Media tray lift gear kit includes: <ul style="list-style-type: none"> <li>• Tray lift coupling gear 13T</li> <li>• Tray lift gear 13/60T</li> <li>• Tray lift sector gear 12T</li> </ul>
9	40X0965	2	1	Media tray separation pad

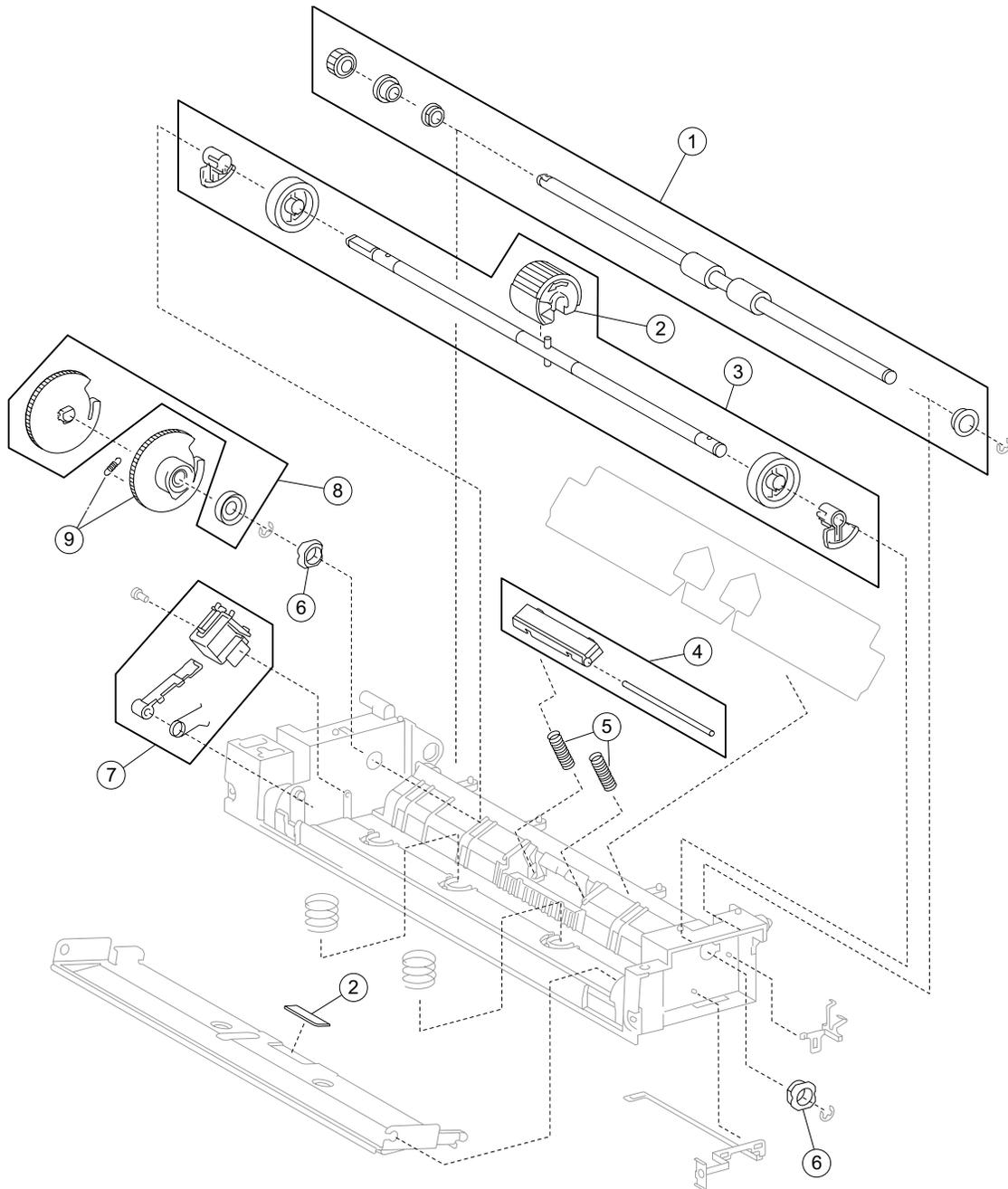
### Assembly 6: MPF unit



**Assembly 6: MPF unit**

Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
6-4	40X0600	1	1	MPF rear cover
2	40X0599	1	1	MPF front cover
3	40X0595	1	1	MPF feed unit assembly
4	40X0608	1	1	Fold down tray assembly
5	40X0597	1	1	MPF unit cable assembly
6	40X0755	1	1	MPF pickup spring
7	40X0598	1	1	Idler gear bracket assembly
8	40X0601	1	1	MPF transport pinch roll assembly
9	40X0588	1	1	Sensor (MPF media out)
10	40X0596	1	2	MPF media out actuator kit includes: <ul style="list-style-type: none"> <li>• MPF media out actuator</li> <li>• Upper frame</li> </ul>

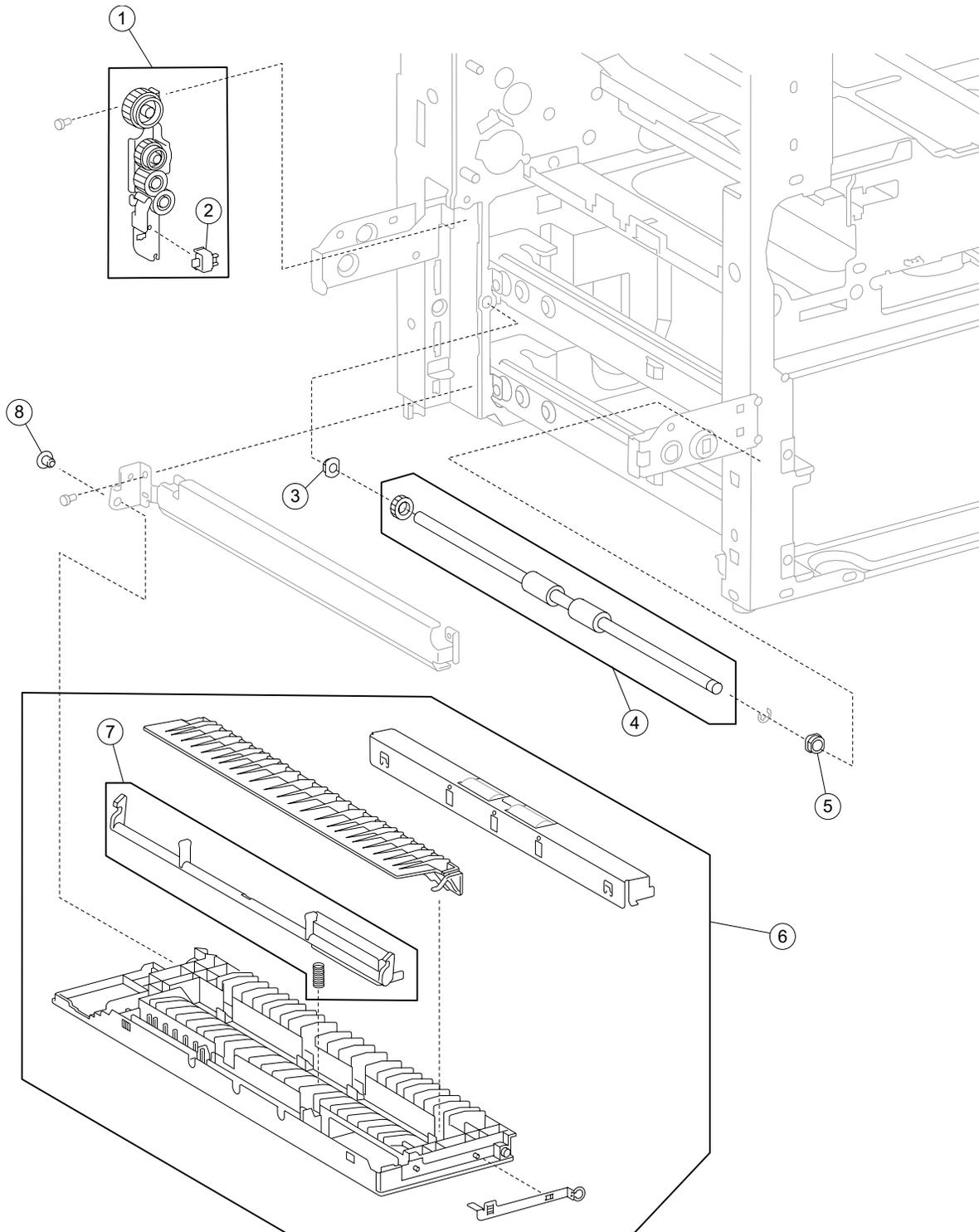
### Assembly 7: MPF unit feed



## Assembly 7: MPF unit feed

Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
7-4	40X0605	1	5	MPF transport roll kit includes: <ul style="list-style-type: none"> <li>• MPF transport shaft collar</li> <li>• MPF transport gear 18T</li> <li>• MPF transport roll assembly</li> <li>• Bushing 8 mm (2)</li> </ul>
2	40X0603	1	2	MPF pick roll kit includes: <ul style="list-style-type: none"> <li>• Pressure pad</li> <li>• MPF pick roll assembly</li> </ul>
3	40X1382	1	6	MPF feed shaft kit includes: <ul style="list-style-type: none"> <li>• MPF feed shaft</li> <li>• MPF feed shaft cam rear</li> <li>• MPF feed shaft cam front</li> <li>• MPF feed shaft roll core (2)</li> <li>• MPF feed roll assembly</li> </ul>
4	40X0974	1	2	MPF pressure pad kit includes: <ul style="list-style-type: none"> <li>• Shaft</li> <li>• MPF pressure pad</li> </ul>
5	40X1380	2	1	MPF pressure pad spring
6	40X1381	2	1	MPF feed shaft bushing
7	40X0606	1	3	MFP pick solenoid kit includes: <ul style="list-style-type: none"> <li>• Pick lever</li> <li>• Pick solenoid</li> <li>• Spring</li> </ul>
8	40X0971	1	2	MPF feed drive gear kit includes: <ul style="list-style-type: none"> <li>• MPF feed gear</li> <li>• MPF feed gear stopper</li> </ul>
9	40X0973	1	2	MPF feed cam gear kit includes: <ul style="list-style-type: none"> <li>• MPF feed cam gear</li> <li>• Spring</li> </ul>

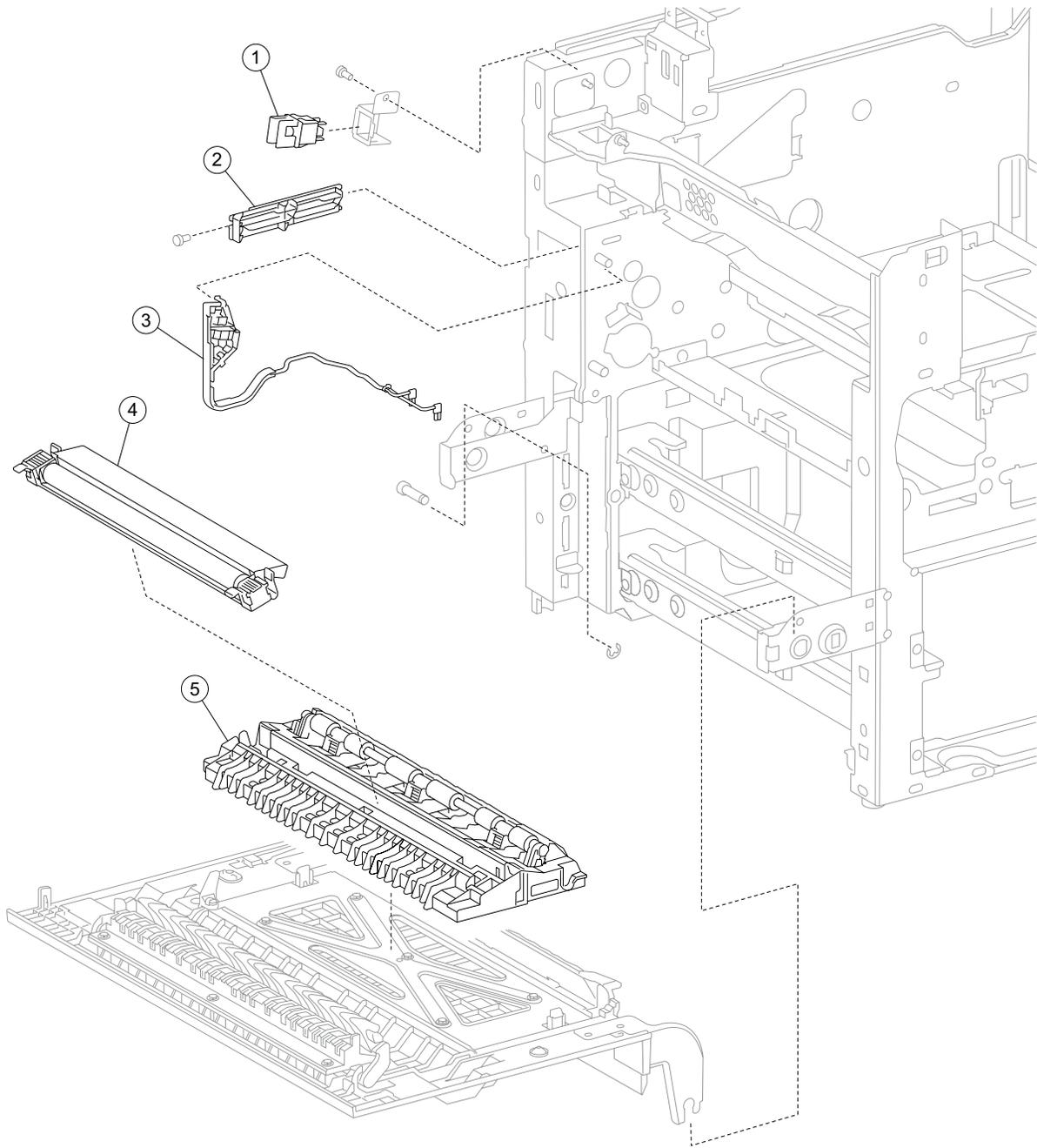
### Assembly 8: Left lower door and transport



## Assembly 8: Left lower door and transport

Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
8-4	40X0609	1	1	Vertical drive gear assembly
2	40X0610	1	1	Switch (left lower door interlock)
3	40X1386	1	1	6 mm bushing (transport roll rear)
4	40X1387	1	2	Transport roll kit includes: <ul style="list-style-type: none"> <li>• Transport roll assembly</li> <li>• Transport roll gear 18T</li> </ul>
5	40X0878	1	1	8 mm bushing
6	40X0612	1	1	Printer left lower door assembly (this comes assembled)
7	40X0614	1	2	Left lower door handle kit includes: <ul style="list-style-type: none"> <li>• Left lower door handle</li> <li>• Spring</li> </ul>
8	40X0613	1	1	Hinge pin

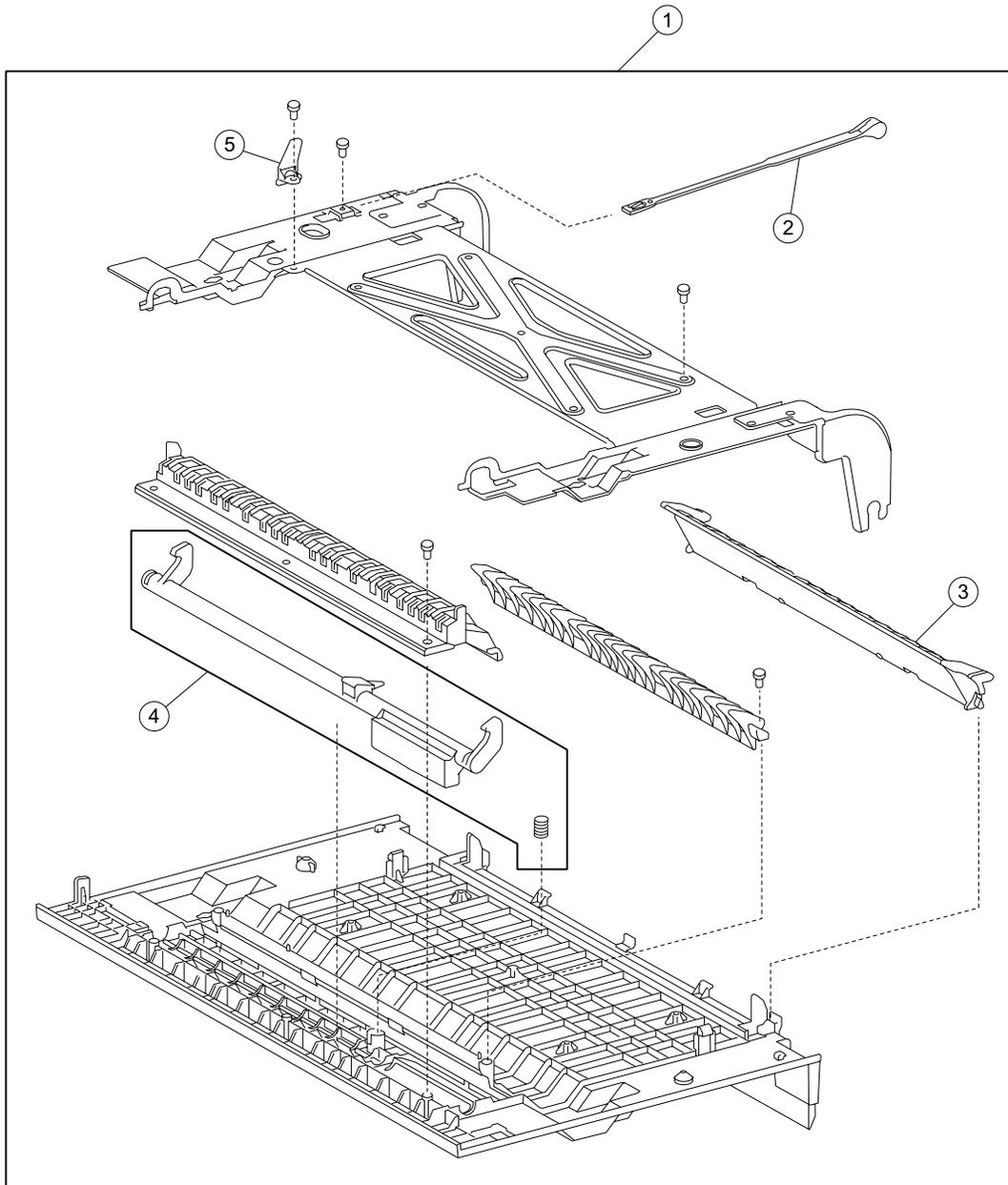
### Assembly 9: Left door and transfer roll



**Assembly 9: Left door and transfer roll**

<b>Assembly-Index</b>	<b>Part number</b>	<b>Units/mach</b>	<b>Units/kit or pkg</b>	<b>Description</b>
9-4	40X0553	1	1	Switch (printer left door interlock)
2	40X0618	1	1	PC cartridge shutter link
3	40X0617	1	1	Transfer roll power contact
4	40X0616	1	1	Transfer roll assembly
5	40X0619	1	1	Transfer roll guide assembly

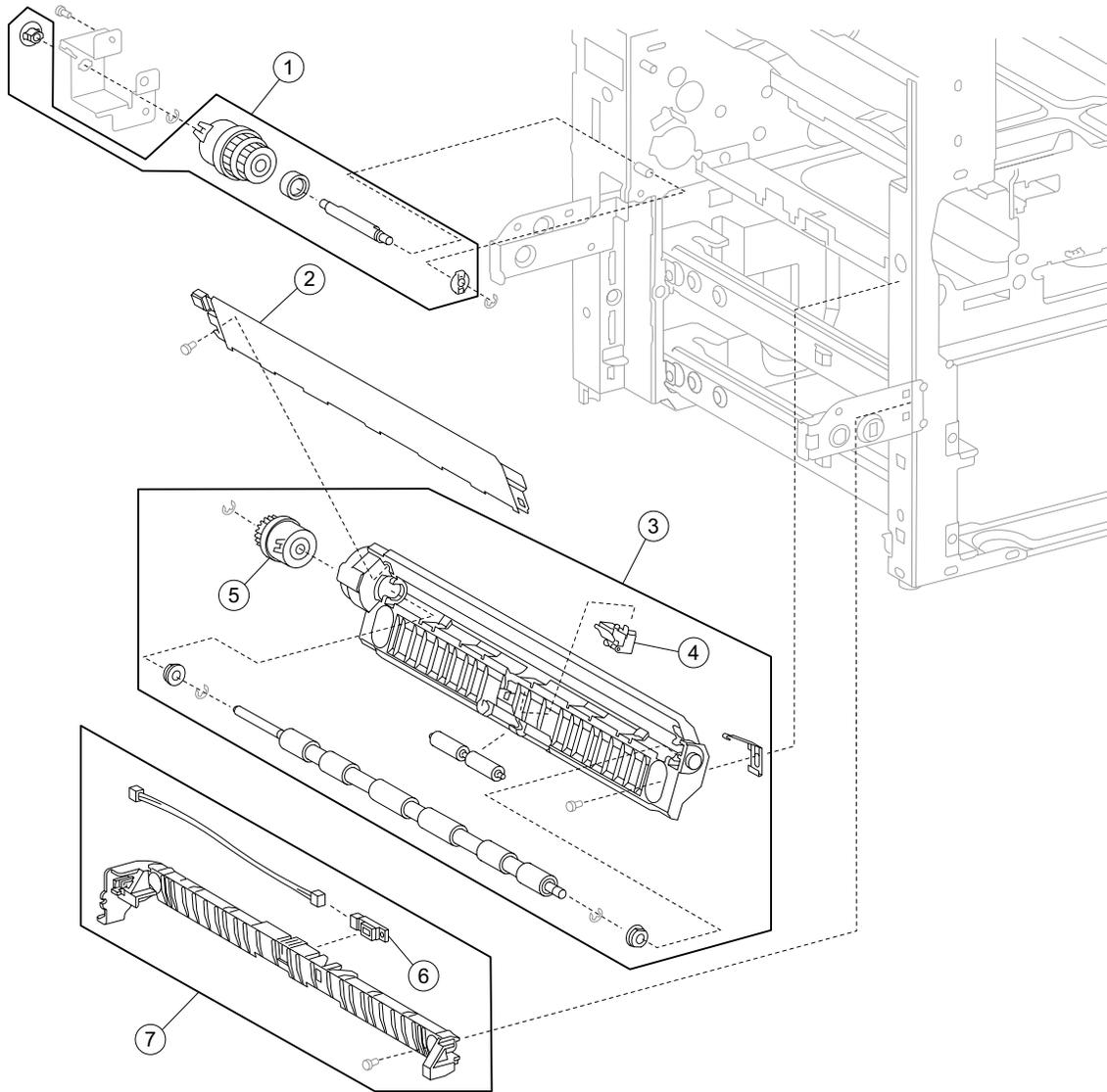
### Assembly 10: Printer left door



**Assembly 10: Printer left door**

Assem bly- Index	Part number	Units/ mach	Units/kit or pkg	Description
10-4	40X0620	1	1	Printer left door assembly (this comes assembled)
2	40X0624	1	1	Left door support strap
3	40X0623	1	1	Left door duplex entrance guide
4	40X0621	1	2	Printer left door assembly handle kit includes: <ul style="list-style-type: none"> <li>• Printer left door assembly handle</li> <li>• Spring</li> </ul>
5	40X0622	1	1	PC cartridge shutter actuator

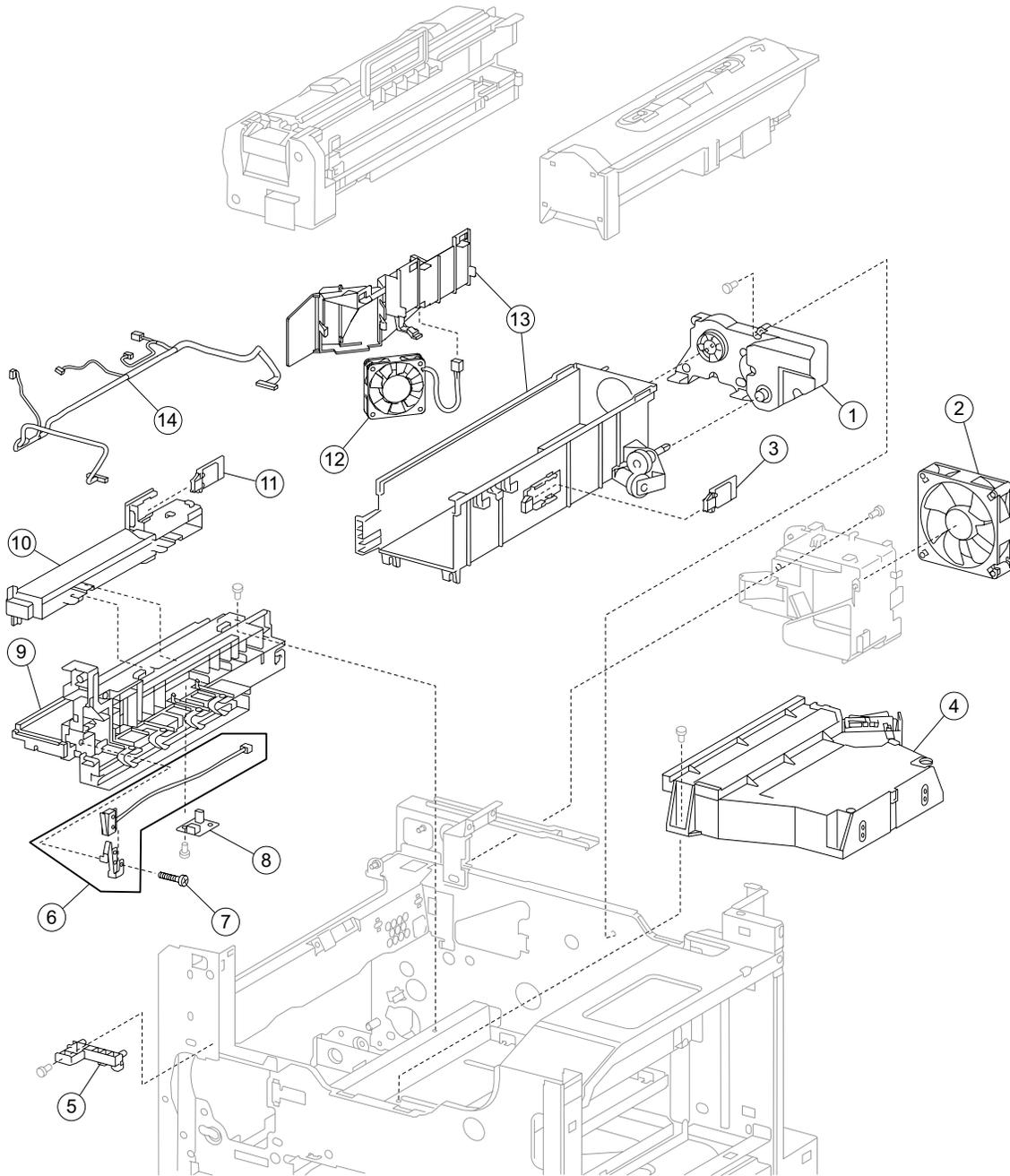
### Assembly 11: Registration



## Assembly 11: Registration

Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
11-4	40X0629	1	5	Transport clutch assembly includes: <ul style="list-style-type: none"> <li>• Bushing 4.5 mm front</li> <li>• Bushing 4.5 mm rear</li> <li>• Shaft</li> <li>• Transport clutch gear 19T</li> <li>• Transport clutch</li> </ul>
2	40X0628	1	1	Registration mylar guide assembly
3	40X0625	1	1	Registration roll assembly
4	40X0627	1	1	Sensor (registration)
5	40X0626	1	1	Registration clutch
6	40X0589	1	1	Sensor (tray 2 feed-out)
7	40X0630	1	1	Tray 2 feed-out sensor guide

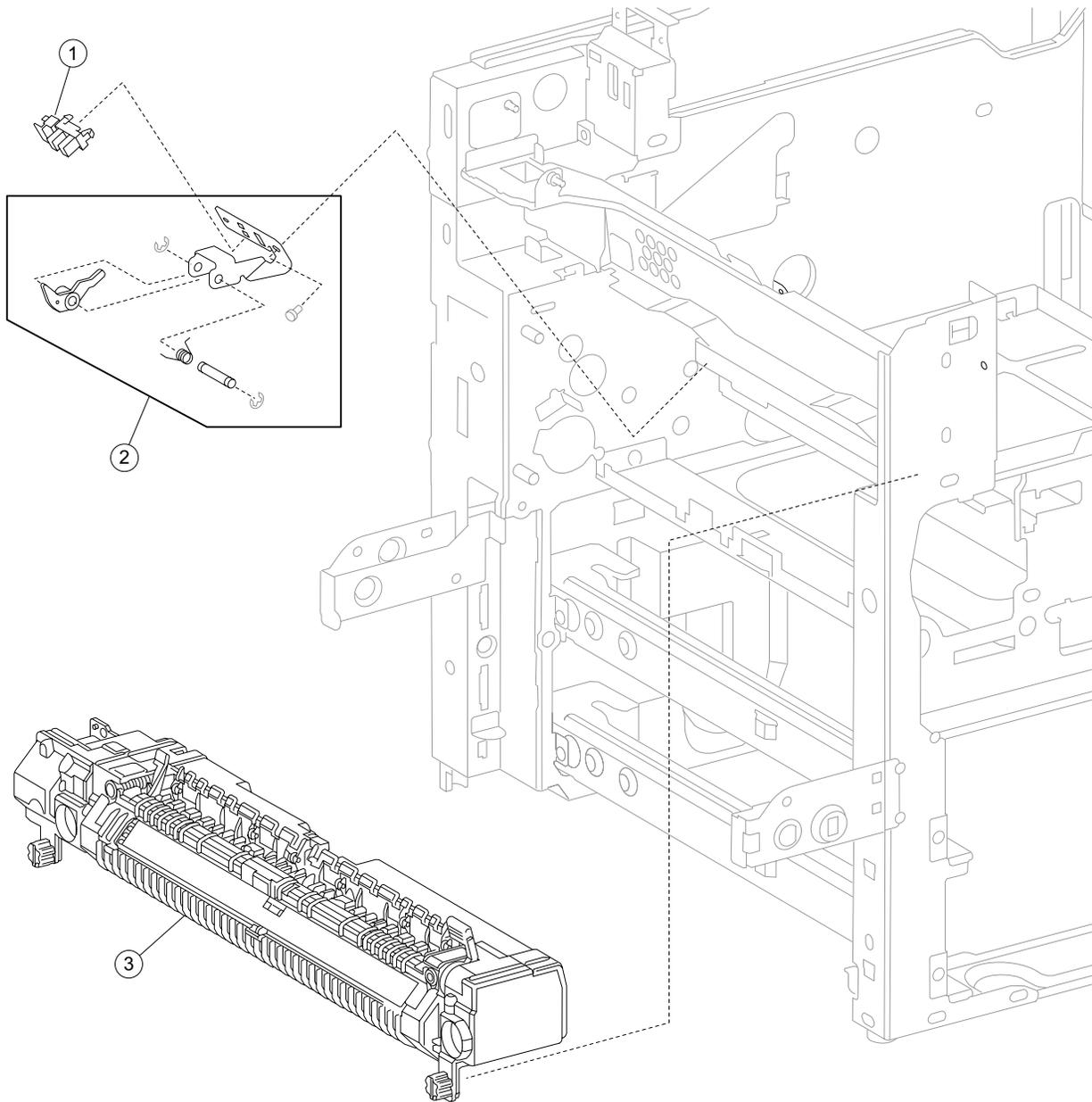
## Assembly 12: Printhead, cartridge guides, and fans



## Assembly 12: Printhead, cartridge guide and fans

Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
12-1	40X0639	1	1	Toner add motor assembly
2	40X0640	1	1	Fuser cooling fan
3	40X0636	1	1	Sensor (RFID toner cartridge)
4	40X0641	1	1	Printhead assembly
5	40X0631	1	1	PC cartridge stop
6	40X1390	1	2	Switch (PC cartridge interlock) kit includes: <ul style="list-style-type: none"> <li>• Backup spring</li> <li>• Switch (PC cartridge interlock)</li> </ul>
7	40X1389	1	1	PC cartridge interlock switch screw
8	40X0633	1	1	Sensor (hum & temp)
9	40X0634	1	1	PC cartridge guide assembly
10	40X0635	1	1	Laser opening guide
11	40X0636	1	1	Sensor (RFID PC cartridge)
12	40X0643	1	1	PC cartridge cooling fan
13	40X0638	1	2	Toner cartridge guide assembly includes: <ul style="list-style-type: none"> <li>• Toner cartridge guide assembly</li> <li>• PC cartridge cooling fan duct</li> </ul>
14	40X0637	1	1	Multi connector cable assembly 1

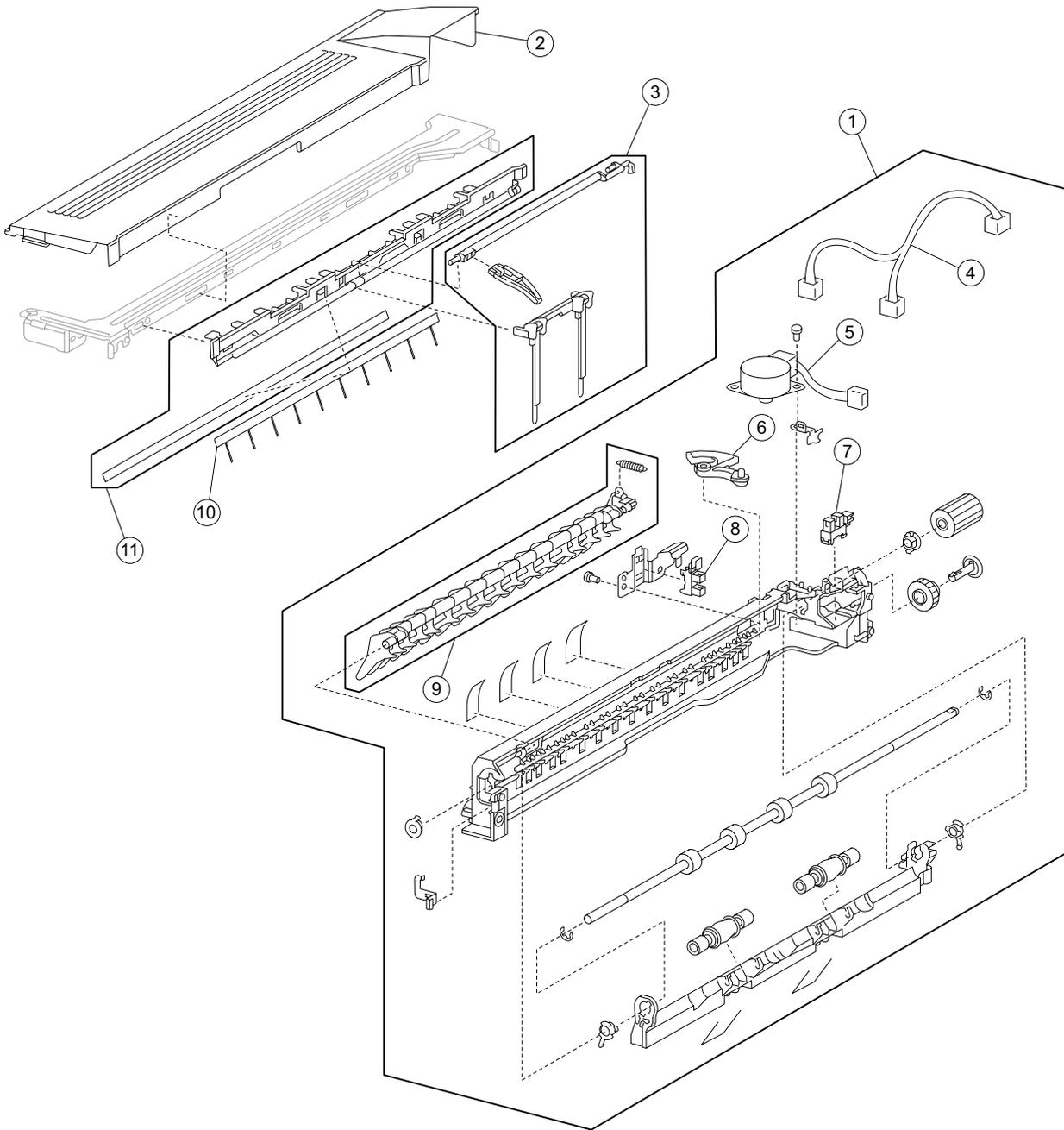
### Assembly 13: Fuser



**Assembly 13: Fuser**

Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
13-1	40X0588	1	1	Sensor (fuser exit)
2	40X0645	1	4	Fuser exit actuator kit includes: <ul style="list-style-type: none"> <li>• Shaft</li> <li>• Fuser exit actuator</li> <li>• Spring</li> <li>• Bracket</li> </ul>
3	40X0647	1	1	Fuser assembly 110V (this comes assembled)
3	40X0648	1	1	Fuser assembly 220V (this comes assembled)
3	40X0646	1	1	Fuser assembly 100V (this comes assembled)

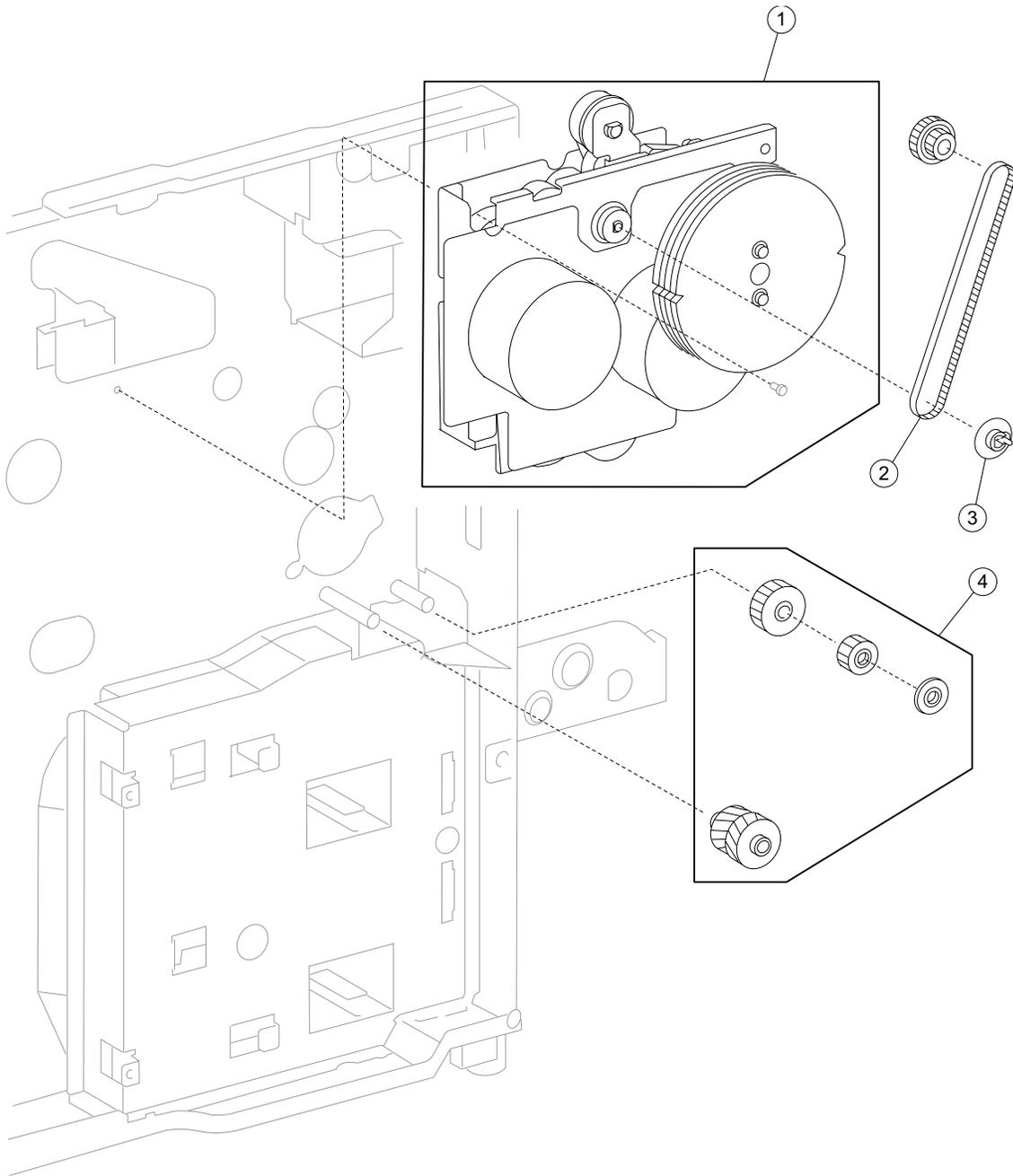
### Assembly 14: Standard Exit 1



## Assembly 14: Standard Exit 1

Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
14-1	40X0649	1	1	Exit 1 media shift assembly (this comes assembled)
2	40X0655	1	1	Standard exit 1 top cover
3	40X0657	1	3	Bin full actuator kit includes: <ul style="list-style-type: none"> <li>• Standard bin 1 full shaft</li> <li>• Standard bin 1 full actuator</li> <li>• Output guide</li> </ul>
4	40X0650	1	1	Exit 1 sensor cable assembly
5	40X0651	1	1	Media shift motor
6	40X0653	1	1	Exit 1 media shift gear
7	40X0588	1	1	Sensor (standard bin full exit 1)
8	40X0588	1	1	Sensor (exit 1 media shift HP)
9	40X0654	1	2	Media diverter gate kit includes: <ul style="list-style-type: none"> <li>• Media diverter gate</li> <li>• Spring</li> </ul>
10	40X1391	1	1	Exit 1 static eliminator
11	40X1392	1	2	Exit 1 media exit guide kit includes: <ul style="list-style-type: none"> <li>• Exit 1 media guide</li> <li>• Exit 1 media guide pad</li> </ul>

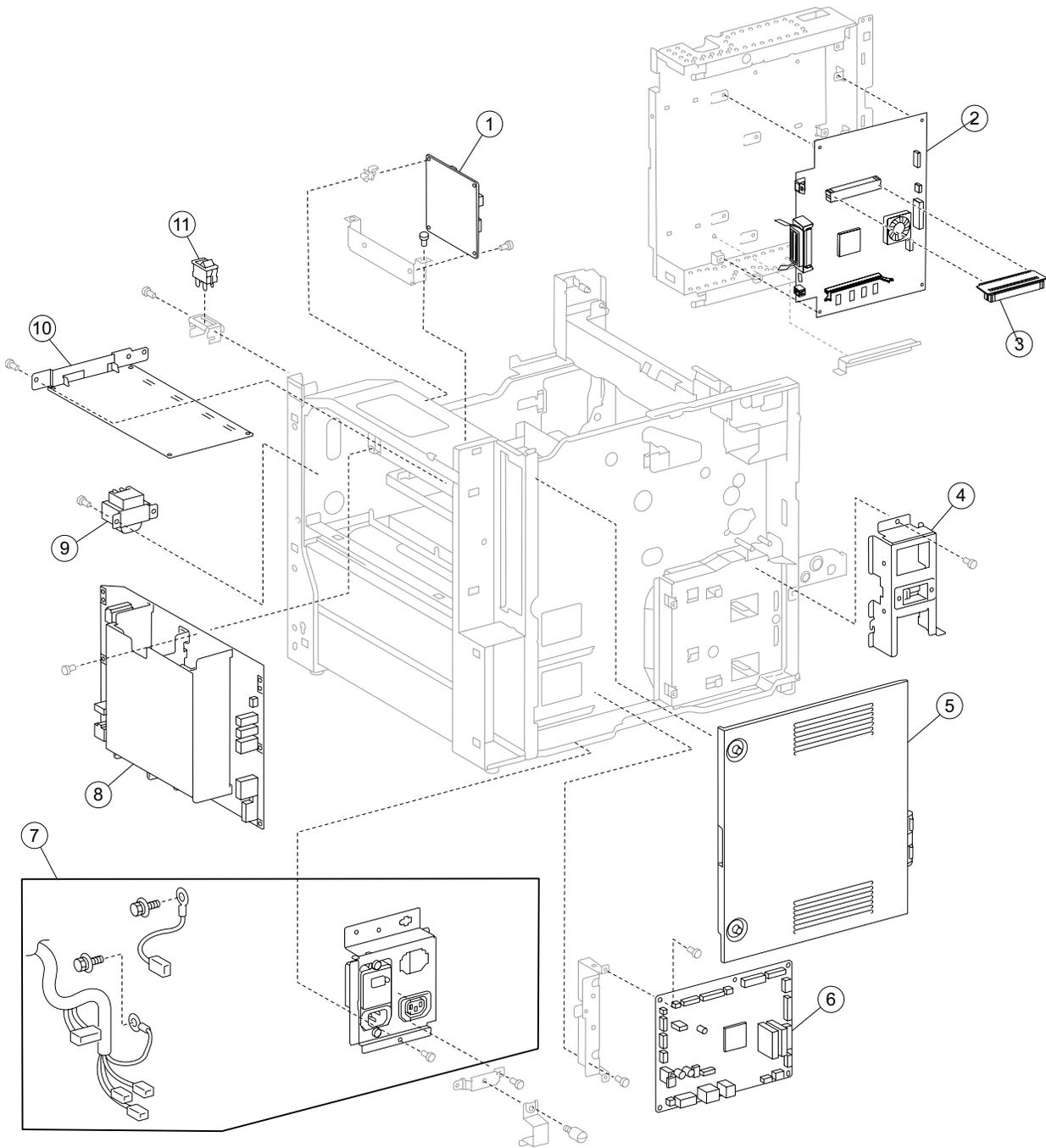
### Assembly 15: Dual unit drive motor



## Assembly 15: Dual unit drive motor

Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
15-1	40X0660	1	1	Dual drive motor assembly
2	40X0659	1	1	Exit 1 drive belt
3	40X0661	1	1	Drive belt flange
4	40X0658	1	4	MPF & transport roll idler gear kit includes: <ul style="list-style-type: none"> <li>• Transport roll idler gear 28T</li> <li>• MPF idler gear 18T</li> <li>• Flange</li> <li>• Transport/MPF idler gear 21/21T</li> </ul>

# Assembly 16: Electrical



## Assembly 16: Electrical

Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
16-4	40X0664	1	1	Exit interface card assembly
2	40X0642	1	1	RIP card assembly
3	40X0964	1	1	Interconnect card assembly
4	40X0673	1	1	HCF hookup connector assembly
5	40X0672	1	1	Rear RIP card cover
6	40X0665	1	1	Printer engine card assembly
7	40X0670	1	7	AC power input socket kit includes: <ul style="list-style-type: none"> <li>• Screws 4 mm (2)</li> <li>• Bracket</li> <li>• AC power input socket</li> <li>• Ground wire</li> <li>• Main AC cable assembly</li> <li>• Finisher AC output</li> </ul>
8	40X0666	1	1	LVPS 100/110V
8	40X0667	1	1	LVPS 220V
9	40X0668	1	1	Choke coil 220V (220V model only)
10	40X0662	1	1	HVPS
11	40X0663	1	1	Switch (main power)

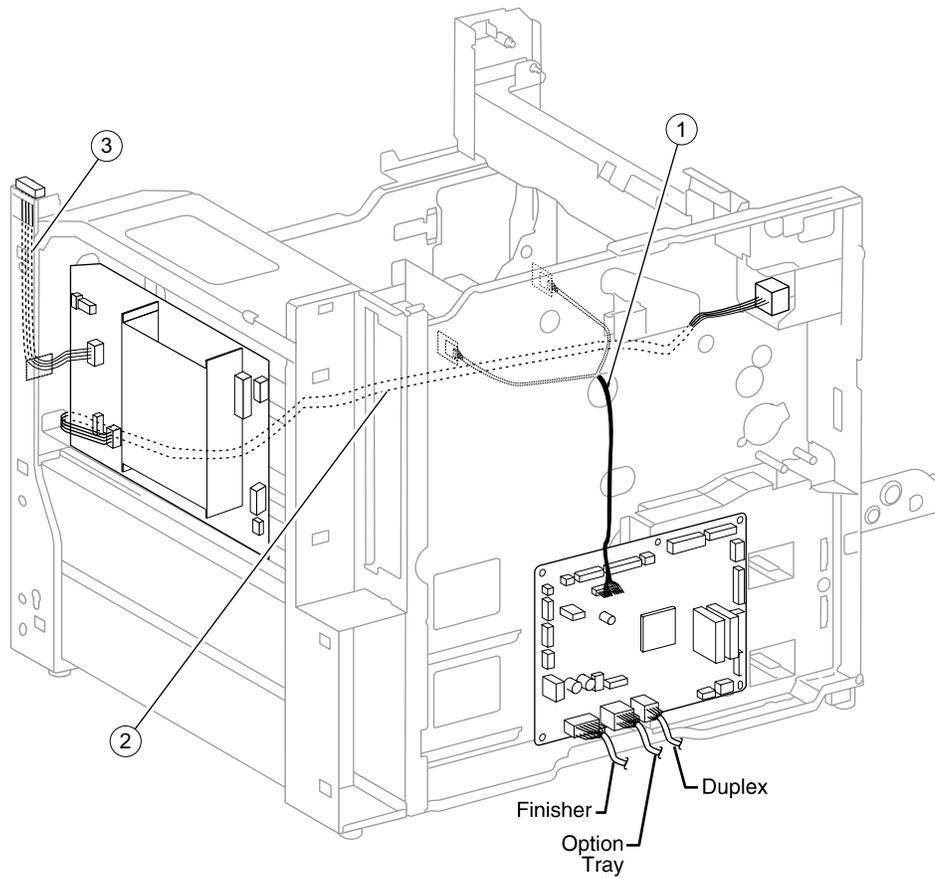
**Warning:** In the event of replacement of any one of the following components:

- Operator panel assembly
- RIP card assembly
- Interconnect card assembly

Only replace one component at a time. Replace the required component and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more of the components listed above without a POR after installing each one or the printer will be rendered inoperable.

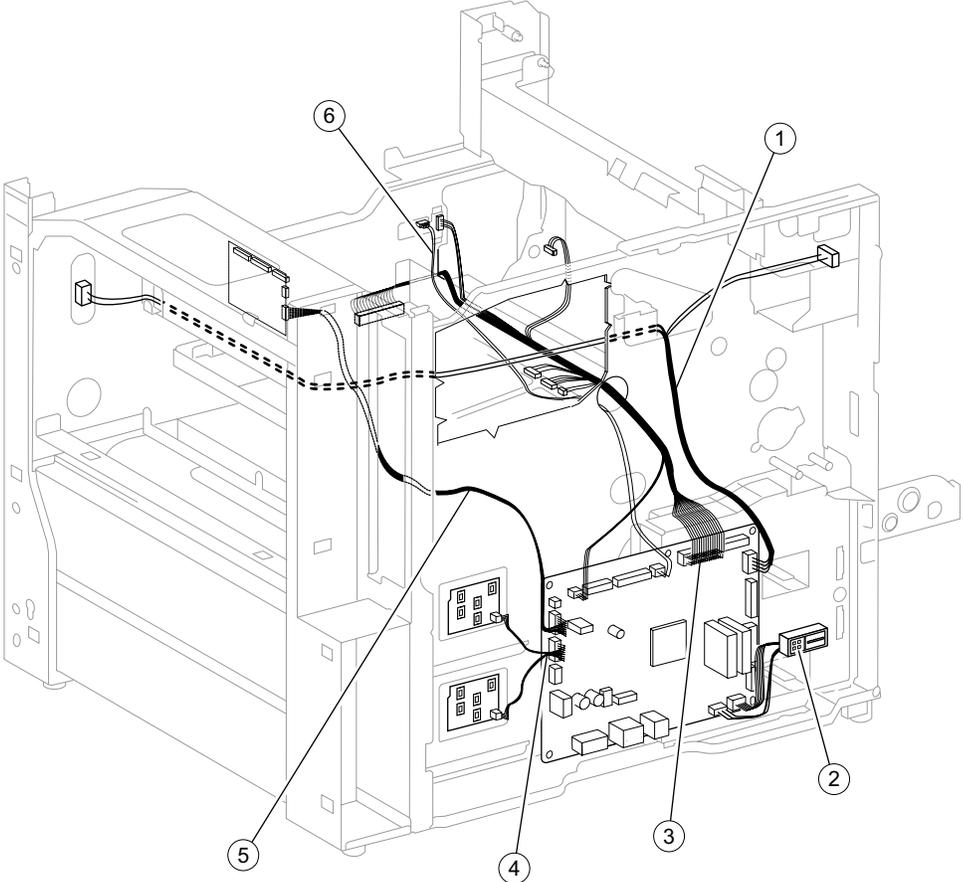
**Warning:** Never install and remove components listed above as a method of troubleshooting components. Once a component has been installed in a machine, it can not be used in another machine. It must be returned to the manufacturer.

## Assembly 17: Electrical cables



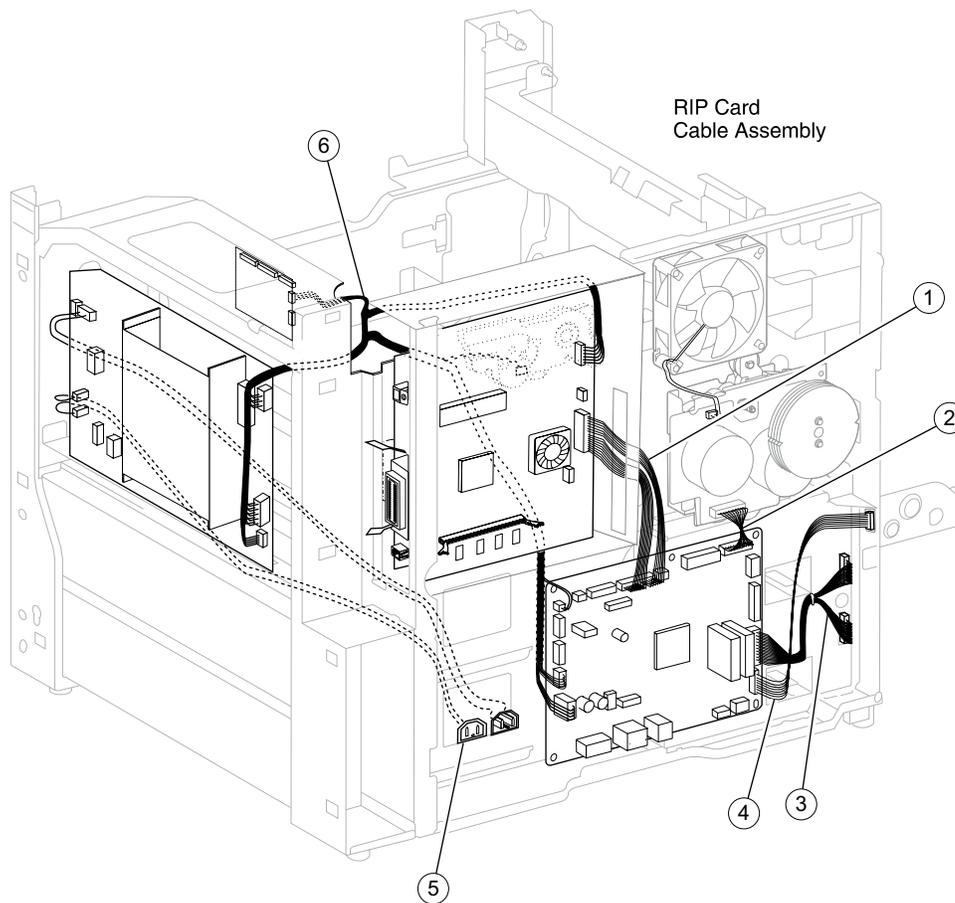
assem bly- Index	Part number	Units/ mach	Units/kit or pkg	Description
17-4	40X0686	1	1	RFID sensor cable assembly
2	40X0681	1	1	Fuser AC cable assembly
3	40X0684	1	1	Main switch cable assembly

**Assembly 18: Electrical cables**



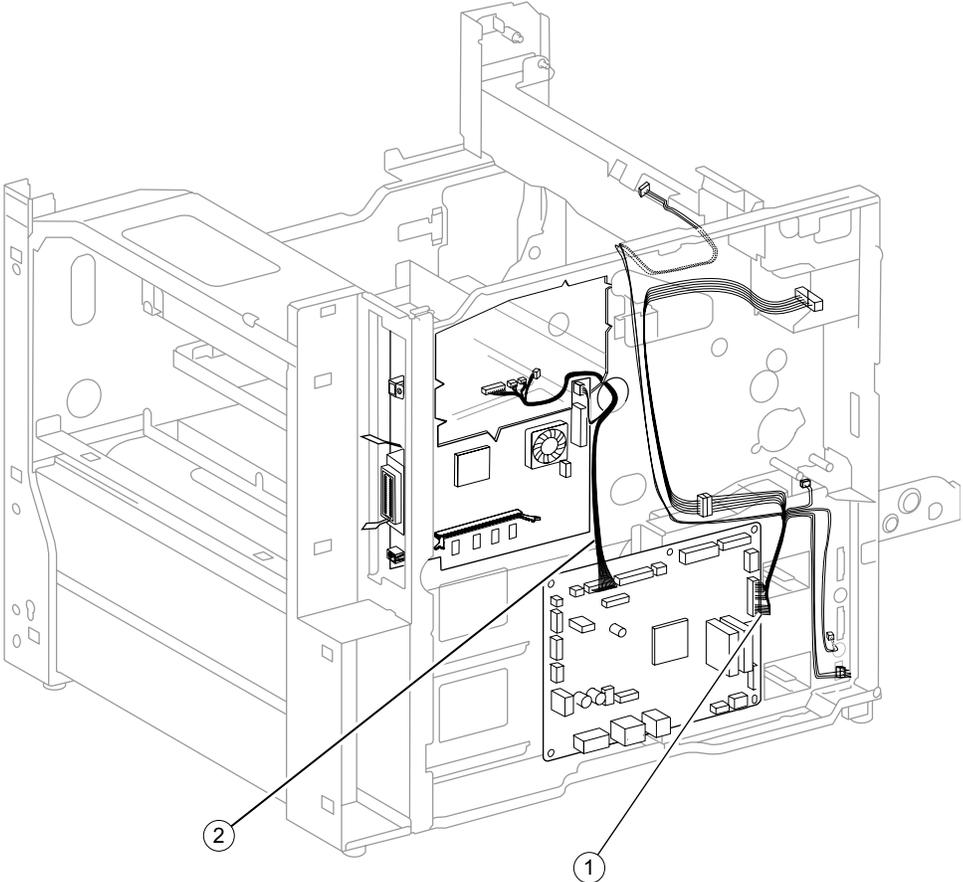
Assem bly- Index	Part number	Units/ mach	Units/kit or pkg	Description
18-4	40X0683	1	1	Interlock switch cable assembly
2	40X0673	1	1	HCF hookup connector assembly
3	40X0637	1	1	Multi connector cable assembly 1
4	40X0676	1	1	Media size switch cable assembly
5	40X0682	1	1	Multi connector cable assembly 3
6	40X1390	1	2	Switch (PC cartridge interlock) kit includes: <ul style="list-style-type: none"> <li>• Backup spring</li> <li>• Switch (PC cartridge interlock)</li> </ul>

## Assembly 19: Electrical cables



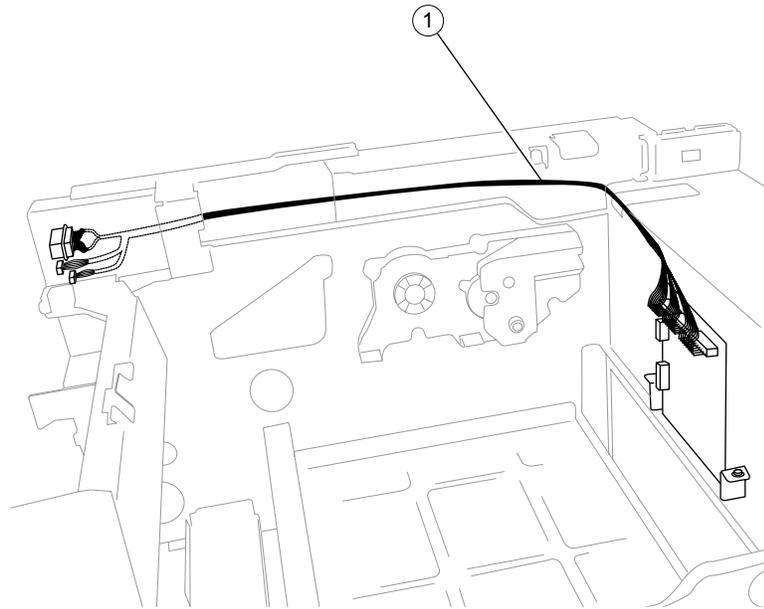
Assem- bly- Index	Part number	Units/ mach	Units/kit or pkg	Description
19-4	40X0677	1	1	RIP card cable assembly
2	40X0685	1	1	Dual drive motor cable assembly
3	40X0674	1	1	Media feed unit cable assembly
4	40X0675	1	1	MPF hookup cable assembly
5	40X0670	1	7	AC power input socket kit includes: <ul style="list-style-type: none"> <li>• Screws 4 mm (2)</li> <li>• Bracket</li> <li>• AC power input socket</li> <li>• Ground wire</li> <li>• Main AC cable assembly</li> <li>• Finisher AC output</li> </ul>
6	40X0682	1	1	Multi connector cable assembly 3

### Assembly 20: Electrical cables



Assem bly- Index	Part number	Units/ mach	Units/kit or pkg	Description
20-4	40X0680	1	1	Multi connector cable assembly 2
2	40X0678	1	1	Printhead cable assembly

## Assembly 21: Electrical cable



Assembly-Index	Part number	Units/mach	Units/kit or pkg	Description
21-4	40X0679	1	1	Exit interface cable assembly

## Assembly 22: Power cords

Assem bly- Index	Part number	Units/ mach	Units/kit or pkg	Description
22-NS	40X0269	1	1	Power cord- USA ET AL 8ft right angle
NS	40X0270	1	1	Power cord- Japan 8ft 15A straight
NS	40X0274	1	1	Power cord- Switzerland 6ft straight
NS	40X0275	1	1	Power cord- Israel 6ft straight
NS	40X0276	1	1	Power cord- South Africa 6ft straight
NS	40X0277	1	1	Power cord- Brazil 6ft high amp straight
NS	40X0278	1	1	Power cord- Austria HV 6ft straight
NS	40X0279	1	1	Power cord- Danish 6ft straight
NS	40X0280	1	1	Power cord- Korea 10A3 cond. 6ft straight
NS	40X0281	1	1	Power cord- Taiwan 13A cond. 6ft straight
NS	40X0282	1	1	Power cord- Peoples Republic of China straight 1.77m
NS	40X0286	1	1	Power cord- United Kingdom 6ft straight
NS	40X0287	1	1	Power cord- Italy 6ft straight
NS	40x0288	1	1	Power cord- Argentina 8ft straight
NS	40X0296	1	1	Power cord- Australia 6ft straight
NS	40X0297	1	1	Power cord- USA ET AL 6ft straight

## Assembly 23: Miscellaneous

Asm-Index	Part number	Units/mach	Units/kit or pkg	Description
23-NS	7374474	1	1	W840 Repacking kit
NS	40X0179	1	1	Nyogel 744 grease packet
NS	40X0248	1	1	Cx/Tx card assembly
NS	40X0250	1	1	9-pin to Twinax cable
NS	40X0251	1	1	9-pin to Coax (BNC) cable
NS	40X0252	1	1	9-pin to 9-pin cable assembly
NS	40X0290	1	1	RS232C serial interface card
NS	40X0291	1	1	Parallel 1284-B interface card
NS	40X0956	1	14	Maintenance kit (110 V) <ul style="list-style-type: none"> <li>• Fuser unit assembly</li> <li>• Transfer roll assembly</li> <li>• Feed rolls (4)</li> <li>• Pick rolls (4)</li> <li>• Separation rolls (4)</li> </ul>
NS	40X0957	1	14	Maintenance kit (220 V) <ul style="list-style-type: none"> <li>• Fuser unit assembly</li> <li>• Transfer roll assembly</li> <li>• Feed rolls (4)</li> <li>• Pick rolls (4)</li> <li>• Separation rolls (4)</li> </ul>
NS	40X0958	1	14	Maintenance kit (100 V) <ul style="list-style-type: none"> <li>• Fuser unit assembly</li> <li>• Transfer roll assembly</li> <li>• Feed rolls (4)</li> <li>• Pick rolls (4)</li> <li>• Separation rolls (4)</li> </ul>
NS	40X1375	1	1	MarkNet 8000 Fast Ethernet
NS	40X1376	1	1	MarkNet 8020 Gigabit Ethernet
NS	40X1377	1	1	MarkNet 8030 Fiber Ethernet
NS	40X1378	1	1	MarkNet 8050 wireless, US
NS	40X1562	1	1	MarkNet 8050 wireless, non-US
NS	40X1393	1	1	Bar code card assembly
NS	40X1394	1	1	PRESCRIBE card assembly
NS	40X1395	1	1	PrintCryption card assembly
NS	40X1396	1	1	Single-byte forms card assembly
NS	40X1397	1	1	Double-byte forms card assembly
NS	40X1508	1	1	128MB memory option
NS	40X1509	1	1	256MB memory option
NS	40X1510	1	1	512MB memory option
NS	40X1512	1	1	Japanese font card
NS	40X1513	1	1	Simplified Chinese font card
NS	40X1514	1	1	Traditional Chinese font card
NS	40X1515	1	1	Korean font card

**Assembly 23 (continued): Miscellaneous**

<b>Asm-Index</b>	<b>Part number</b>	<b>Units/option</b>	<b>Units/kit or pkg</b>	<b>Description</b>
NS	40X1564	1	1	32MB Flash card
NS	40X1565	1	1	64MB Flash card
NS	56P9982	1	1	Hard disk with adapter– 20+GB



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