# T650, T652, T654, and T656 Printers

## 4062-xxxx

### Service Manual


- Start diagnostics
- Maintenance
- Safety and notices
- Trademarks
- Index



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www.lexmark.com

P/N 12G9824

## Product information

Product name:
Lexmark T650, T652, T654, and T656

Machine type:
4062

Model(s):
01A, 21A, 23A, 41A, 43A, 630

## Edition notice

November 18, 2020

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**P/N 12G9824**

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# Notices and safety information

## Laser notices

### Laser notice

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

Class I laser products are not considered to be hazardous. The printer contains internally a Class IIIb (3b) laser that is nominally a 5 milliwatt gallium arsenide laser operating in the wavelength 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-Hinweis

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

Laserprodukte der Klasse I werden nicht als gefährlich eingestuft. Der Drucker enthält im Inneren einen Laser der Klasse IIIb (3b), und zwar einen 5-Milliwatt-Gallium-Arsenid-Laser, der im Wellenlängenbereich von 770 bis 795 Nanometern arbeitet. Das Lasersystem und der Drucker sind so konstruiert, dass unter normalen Betriebsbedingungen, bei der Wartung durch den Benutzer oder bei den vorgeschriebenen Wartungsbedingungen Menschen keiner Laserstrahlung ausgesetzt sind, die die Werte für Klasse I überschreitet.

### Avis relatif à l'utilisation du laser

L'imprimante est certifiée conforme aux exigences de la réglementation des Etats-Unis relative aux produits laser (DHHS 21 CFR, Chapter I, Subchapter J for Class I (1)). Pour les autres pays, elle est certifiée conforme aux exigences des normes IEC 60825-1 relatives aux produits laser de classe I.

Les produits laser de Classe I ne sont pas considérés comme dangereux. L'imprimante contient un laser de classe IIIb (3b), laser arséniure de gallium 7 milliwatts opérant sur une longueur d'onde de l'ordre de 770 à 795 nanomètres. Le système laser ainsi que l'imprimante ont été conçus de manière à ce que personne ne soit exposé à des rayonnements laser dépassant le niveau de classe I dans le cadre d'un fonctionnement normal, de l'entretien par l'utilisateur ou de la maintenance.

### Avvertenze sui prodotti laser

La stampante è certificata negli Stati Uniti come stampante conforme ai requisiti DHHS 21 CFR, Capitolo I, Sottocapitolo J per i prodotti laser di Classe I (1), mentre in altri paesi è certificata come prodotto laser di Classe I conforme ai requisiti IEC 60825-1.

I prodotti laser di Classe I non sono considerati pericolosi. La stampante contiene un laser di Classe IIIb (3b), che è nominalmente un laser ad arseniuro di gallio a 5 milliwatt funzionante a una lunghezza d'onda di 770-795 nanometri. Il sistema laser e la stampante sono stati progettati in modo da impedire l'esposizione a radiazioni laser superiori al livello previsto dalla Classe I durante le normali operazioni di stampa, manutenzione o assistenza.

## Aviso de láser

Esta impresora se ha certificado en EE. UU. de conformidad con los requisitos de DHHS 21 CFR, capítulo I, subcapítulo J, para los productos láser de Clase I (1), y en otros países está certificada como un producto láser de Clase I de acuerdo con los requisitos de IEC 60825-1.

Los productos láser de Clase I no se consideran peligrosos. La impresora contiene un láser interno de Clase IIIb (3b) que nominalmente es un láser de arseniuro de galio de 5 milivatios que funciona en una longitud de onda de 770-795 nanómetros. El sistema láser y la impresora se han diseñado para que ningún individuo acceda nunca a las radiaciones láser por encima del nivel de Clase I durante su uso normal, ni en tareas de mantenimiento o intervenciones de servicio técnico prescritas.

## Aviso sobre laser

A impressora foi certificada nos EUA por estar em conformidade com os requisitos do DHHS 21 CFR, capítulo I, subcapítulo J, para produtos a laser de Classe I (1) e, nos demais países, foi certificada como produto a laser de Classe I em conformidade com os requisitos da IEC 60825-1.

Os produtos a laser de Classe I não são considerados perigosos. A impressora contém, internamente, um laser de Classe IIIb (3b) que é um laser de arsenieto de gálio de 5 miliwatts operando no comprimento de onda de 770-795 nanômetros. O sistema do laser e a impressora foram projetados para que jamais haja acesso humano à radiação do laser acima do nível da Classe I durante a operação normal ou a manutenção pelo usuário ou sob as condições de manutenção prescritas.

## Laserinformatie

Deze printer is in de Verenigde Staten gecertificeerd als een product dat voldoet aan de vereisten van DHHS 21 CFR, hoofdstuk 1, paragraaf J voor laserproducten van klasse I (1). Elders is de printer gecertificeerd als een laserproduct van klasse I dat voldoet aan de vereisten van IEC 60825-1.

Laserproducten van klasse I worden geacht geen gevaar op te leveren. De printer bevat intern een laser van klasse IIIb (3b), een galliumarsenide laser met een nominaal vermogen van 5 milliwatt en een golflengtebereik van 770-795 nanometer. Het lasersysteem en de printer zijn zodanig ontworpen dat gebruikers nooit blootstaan aan laserstraling die hoger is dan het toegestane niveau voor klasse I-apparaten, tijdens normaal gebruik, onderhoudswerkzaamheden door de gebruiker of voorgeschreven servicewerkzaamheden.

## Lasererklæring

Denne printer er certificeret i USA i henhold til kravene i DHHS 21 CFR, afsnit I, underafsnit J, for Klasse I-laserprodukter (1) og certificeret andetsteds som et Klasse I-laserprodukt i henhold til kravene i IEC 60825-1.

Klasse I-laserprodukter anses ikke for at være farlige. Printeren indeholder internt en klasse IIIb (3b)-laser, der nominelt er en 5 milliwatt galliumarsenid-laser, som fungerer i bølgelængdeområdet 770-795 nanometer. Lasersystemet og printeren er udviklet på en sådan måde, at der ikke er en direkte laserstråling, der overskrider Klasse I-niveauet under normal brug, brugers vedligeholdelse eller de foreskrevne servicebetingelser.

## Laserilmoitus

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

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

## Lasermeddelande

Skrivaren är certifierad i USA enligt kraven i DHHS 21 CFR, avsnitt I, underavsnitt J för laserprodukter av klass I (1) och i andra länder är den certifierad som en laserprodukt av klass I som uppfyller kraven i IEC 60825-1.

Laserprodukter av klass I anses inte vara skadliga. Skrivaren innehåller en klass IIIb (3b)-laser, vilket är en 5 mW galliumarseniklaser som arbetar inom en våglängd på 770–795 nm. Lasersystemet och skrivaren är utformade så att människor aldrig utsätts för laserstrålning över klass I-nivå under normala förhållanden vid användning, underhåll eller service.

## Lasermerknad

Skriveren er sertifisert i USA for samsvar med kravene i DHHS 21 CFR, kapittel I, underkapittel J for laserprodukter av klasse I (1), og er andre steder sertifisert som et laserprodukt av klasse I som samsvarer med kravene i IEC 60825-1.

Laserprodukter av klasse I anses ikke som helseskadelige. Skriveren inneholder en intern laser av klasse IIIb (3b) som nominelt er en 5 milliwatt galliumarsenid-laser, og som opererer i bølgelengder på 770-795 nanometer. Lasersystemet og skriveren er utformet slik at mennesker ikke utsettes for laserstråling utover nivået i klasse I under normal drift, vedlikehold eller foreskrevet service.

## Avís sobre el làser

Als EUA, la impressora està certificada de conformitat amb els requisits del capítol I, apartat J del CFR 21 del Departament de Salut i Serveis Humans per a productes làser de classe I (1) i a la resta de països està certificada com a producte làser de classe I d'acord amb els requisits de la norma IEC 60825-1.

Els productes làser de classe I no es consideren perillosos. A l'interior de la impressora hi ha un làser de classe IIIb (3b) que nominalment es un arsenur de galió de 5 mil·liwatts que funciona a una longitud d'ona de 770-795 nanòmetres. El sistema làser y la impressora s'han dissenyat amb l'objectiu d'impedir l'accés humà de la radiació làser superior al nivell de classe I durant un funcionament normal, el manteniment per part de l'usuari o les condicions de servei prescrites.

## レーザーに関する通知

本機は、米国においてクラス I（1）レーザー製品に対する DHHS 21 CFR、Chapter I、Subchapter J の要件に準拠し、その他の国では IEC 60825-1 の要件に準拠するクラス I レーザー製品として認可されています。

クラス I レーザー製品は、危険性がないとみなされています。 本機には、クラス IIIb（3b）レーザーが内蔵されています。これは、770 ～ 775 ナノメートルの波長で動作する定格 5 ミリワットのガリウムヒ素レーザーです。 レーザーシステムとプリンタは、通常の操作、ユーザーによるメンテナンス、または所定のサービス条件の下で、ユーザーがクラス I レベルを超えるレーザー放射に絶対にさらされないように設計されています。

## 레이저 관련 공지

이 프린터는 미국에서 DHHS 21 CFR, Chapter I, Subchapter J의 요구 사항을 준수하는 클래스 I(1) 레이저 제품으로 승인되었으며 이외 지역에서 IEC 60825-1의 요구 사항을 준수하는 클래스 I 레이저 제품으로 승인되었습니다.

Class I 레이저 제품은 위험한 제품으로 간주되지 않습니다. 프린터에는 770-795 나노미터의 파장 영역에서 작동하는 공칭 5밀리와트 갈륨 비소 레이저인 클래스 IIIb(3b) 레이저가 내부에 포함되어 있습니다. 레이저 시스템과 프린터는 정상적인 작동, 사용자 유지 관리 또는 사전 설명된 서비스 조건에는 사람에게 클래스 I 수준 이상의 레이저 방사가 노출되지 않도록 설계되었습니다.

## 激光注意事项

本打印机在美国**认证**合乎 DHHS 21 CFR Chapter I，Subchapter J **对**分**类** I（1）激光**产**品的**标**准，而在其他地区**则**被**认证**是合乎 IEC 60825-1 的分**类** I 激光**产**品。

一般**认为**分**类** I 激光**产**品不具有危**险**性。本打印机内部含有分**类** IIIb（3b）的激光，在操作**过**程中会**产**生**额**定 5 毫瓦的砷化**镓**激光，其波**长**范**围**在 770-795nm 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。

## 雷射聲明

本印表機係經過美國核可，符合 DHHS 21 CFR，Chapter I，Subchapter J 規定的 I (1) 級雷射**產**品激光注意事**項**；在美國以外的地區，為符合 IEC 60825-1 規定的 I 級雷射**產**品。

根據 I 級雷射**產**品的規定，這類**產**品不會對人體造成傷害。本機所採用之 IIIb (3b) 級雷射只會**產**生 5 百萬分之一瓦特 (milliwatt)、波長 770 至 795 億分之一米 (nanometer) 的鎵砷放射線 (gallium arsenide laser)。使用者只要以正確的方法操作及維護保養，並依照先前所述之維修方式進行修護，此印表機與其雷射系統**絕**不會**產**生 I 級以上的放射線，而對人體造成傷害。

# Safety information

## 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—POTENTIAL INJURY**

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

## Consignes de sécurité

- La sécurité de ce produit repose sur des tests et des agréations portant sur sa conception d'origine et sur des composants particuliers. Le fabricant n'assume aucune responsabilité concernant la sécurité en cas d'utilisation de pièces de rechange non agréées.
- Les consignes d'entretien et de réparation de ce produit s'adressent uniquement à un personnel de maintenance qualifié.
- Le démontage et l'entretien de ce produit pouvant présenter certains risques électriques, le personnel d'entretien qualifié devra prendre toutes les précautions nécessaires.



**AVERTISSEMENT—RISQUE DE BLESSURE**

La batterie lithium de ce produit n'est pas destinée à être remplacée. Il existe un risque d'explosion si une batterie lithium est placée de façon incorrecte. Ne rechargez pas, ne démontez pas et n'incinérez pas une batterie lithium. Mettez les batteries lithium usagées au rebut selon les instructions du fabricant et les réglementations locales.

## 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 — PERICOLO DI LESIONI**

La batteria al litio presente del prodotto non deve essere sostituita. In caso di sostituzione errata della batteria al litio, potrebbe verificarsi un'esplosione. Non ricaricare, smontare o bruciare batterie al litio. Smaltire le batterie al litio usate seguendo le istruzioni del produttore e le norme locali.

## 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.



**VORSICHT - VERLETZUNGSGEFAHR**

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

## 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: POSIBLES DAÑOS PERSONALES**

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

## Informações de Segurança

- A segurança deste produto baseia-se em testes e aprovações do modelo original e de componentes específicos. O fabricante não é responsável pela segunrança, no caso de uso de peças de substituição não autorizadas.
- As informações de segurança relativas a este produto destinam-se a profissionais destes serviços e não devem ser utilizadas por outras pessoas.
- Risco de choques eléctricos e ferimentos graves durante a desmontagem e manutenção deste produto. Os profissionais destes serviços devem estar avisados deste facto e tomar os cuidados necessários.



**ATENÇÃO — RISCO DE FERIMENTO**

A bateria de lítio neste produto não deve ser substituída. Existe o risco de explosão se uma bateria de lítio for substituída incorretamente. Não recarregue, desmonte ou incinere uma bateria de lítio. Descarte as baterias de lítio usadas de acordo com as instruções do fabricante e regulamentos locais.

## 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.



**ATENCIÓ**

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

## 안전 사항

- 본 제품은 원래 설계및특정 구성에 대한 테스트 결과로 안정 성이 입증된 것입니다. 따라서 무허가 교체부품을 사용하는 경 우 에는 제조업체에서 안전에 대한 책임을 지지 않습니다.
- 본 제품에 관한 유지 보수 설명 서는 전문 서비스 기술자 용으로 작성된 것이므로, 비 전문가는 사용할 수 없습니다.
- 본 제품을 해체하거나 정비할 경우, 전 기전 인 충 경 을 받거나 상 처를 입을 위험이 커집니다. 전문 서비스 기술자는 이 사실을 숙지하고, 필요한 예방조치를 취하도록 하십시오.



**주의—부상 위험**

이 제품에 들어 있는 리튬 배터리는 교체할 수 없습니다. 리튬 배터리를 잘못 교체하면 폭발할 위험이 있습니다. 리튬 배터리를 재충전하거나, 분해하거나, 태우지 마십시오. 제조업체의 지침과 지역 규정에 따라 다 쓴 리튬 배터리를 폐기하십시오.

# 安全信息

- 本产品的安全性以原来设计和特定产品的测试结果和认证为基础。万一使用来经许可的替换部件，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，并不打算证其他人使用。
- 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触，并采取必要的预防措施。



**当心—可能的伤害：**

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

# Service conventions and change history

This manual contains maintenance procedures for service personnel.

It is divided into the following chapters:

- **General information** contains a general description of the printer. Special tools and test equipment are discussed.
- **Diagnostic information** contains diagnostic aids you can use to isolate failing FRUs. These diagnostic aids include error code tables, symptom tables, and service checks.
- **Service menus** contains descriptions of the printer interface, the user and service menus.
- **Repair information** provides instructions for making printer adjustments and removing and installing FRUs.
- **Component locations** uses illustrations to identify the basic printer parts.
- **Maintenance** contains the lubrication specifications and recommendations to prevent problems.
- **Parts catalog** contains illustrations and part numbers for individual FRUs.
- **Appendix A: Printer specifications** contains detailed specifications about the product.
- **Appendix B: Options and features** contains the available options and other features of the product.
- **Appendix C: Theory of operation** contains the theory of operation.
- **Appendix D: Acronyms** contains the list of acronyms in the manual and their meanings.

## Service manual conventions

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

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

This service manual uses several different types of caution statements:


**CAUTION—POTENTIAL INJURY:** A *caution* identifies something that may cause harm to the service technician.


**CAUTION—SHOCK HAZARD:** This type of caution indicates a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you start working, or use caution if the product must receive power to perform the task.


**CAUTION—HOT SURFACE:** This type of caution indicates a hot surface.


**CAUTION—TIPPING HAZARD:** This type of caution indicates a tipping hazard.


**CAUTION—PINCH HAZARD:** This type of caution indicates a risk of being caught between moving parts.

## Change history

### November 18, 2020

- Added the Entering the Configuration menu topic in the Service menus chapter.

### June 15, 2020

- Added a note for obsoletion in the following parts in the Parts catalog chapter:
  - US RFID UHF option assembly (40X1483)
  - 512MB DIMM, DDR1, for T650 and T652 (40X5939)
  - T656 Card for PRESCRIBE Emulation (40X2863)

### July 8, 2018

- A note for checking damage to the fuser entrance was added to the Sensor (fuser output) late jam service check.

### April 2, 2018

- Updated the action column for errors 230.01 and 230.05 under the Diagnostics and troubleshooting chapter.

### January 4, 2018

- Updated the graphic for PN 40X4464, 40X7040, and 40X4463 to remove the printhead cable from the parts under the Printhead, charge, and transfer assembly in the Parts catalog section.
- . Updated corresponding descriptions for these PNs to remove the printhead cable.:

### July 11, 2016

- Removed 41X0792 from the topic “T650, T652, and T654 operator panel” in the “Parts catalog” chapter.
- Updated the description of 40X4462 from the topic “T650, T652, and T654 operator panel” in the “Parts catalog” chapter.

### June 28, 2016

- Updated the ”LES Applications” topic in the “Service menus” chapter.

### June 20, 2016

- Removed 40X7003 in the “Universal trays and accessories” topic in the “Parts catalog” chapter.

### January 8, 2016

- Changed the part number of the input sensor from 40X4368 to 40X8673.

### December 16, 2015

- Corrected graphic in the “Oscillating printhead assembly electronic adjustment” topic of the ”Adjustments” group of the “Repair information” chapter.

### November 9, 2015

- Changed 40X4417 to 41X4417 in the “Covers” topic in the “Parts catalog” chapter.

### October 20, 2015

- Created this new intervention-required message, **“81 Routine Maintenance” on page 182**.
- Updated **“User attendance messages (0-99)” on page 183** to include an entry for **`81 Routine Maintenance`**.

- Created **“Replace fuser service check” on page 197**.
- Updated **“Individual maintenance part expected life” on page 459** to change the part number for the charge roll assembly with tool from 40X5852 to 40X0127.

### August 21, 2015

- Updated a number of service check topic for 201 and 202 error messages in the Diagnostic information chapter.

### March 31, 2015

- Updated assembly 2 in the Parts catalog chapter—Added 41X0792.

### January 27, 2015

- Updated the Solid black service check in the Diagnostic information chapter.

### January 9, 2015

- Removed the 202.30 error code entry from the Error code table in the Diagnostic information chapter.
- Updated the Solid black service check in the Diagnostic information chapter.

### December 5, 2014

- Parts catalog Assembly 11—Replaced part number 40X4469 with 40X5786.

### November 26, 2014

- Updated the graphic in the Assembly 7 parts catalog in the Parts catalog chapter.

### September 29, 2014

- Updated the Assembly 7 parts catalog art in the Parts catalog chapter.

### July 2, 2014

- Added staple cartridge holder (40X7466) to parts catalog assembly 14.

### November 11, 2013

- Deleted all instances of 40X5057.

### July 30, 2013

- Updated description of 40X5954.
- Added 40X2859.

### March 21, 2013

- Corrected the description of PN 40X1889.

### December 5, 2012

- Added PN 40X5976 to the Printhead, charge, and transfer parts catalog assembly (Assembly 6).

### September 27, 2012

Corrected the cross references in the following removal procedures:

- Step 1 of **"Alignment assembly removal" on page 273**.
- Step 1 of **"T650 rear connection bezel assembly removal" on page 326**.
- Step 1 of **"T650 rear lower cover assembly removal" on page 328**.
- Step 3 of **"Laser cover removal" on page 291**.

### June 6, 2012

- Changed 40X4356 description to Duplex cooling fan, two wire.
- Changed 40X4359 description to Print cartridge cooling fan, three wire.

### February 2, 2012

- Added PN 40X6932 for the tray size sensing actuators in the following assemblies:
  - **"Pick arm assembly, trays, and MPF" on page 480**
  - **"250-sheet option tray assembly" on page 487**
  - **"550-sheet option tray assembly" on page 489**
- Added United Kingdom in the description for PN 40X0271 under **"Power cords" on page 515**.

  .

### January 13, 2012

- Corrected all cross-references when removing or replacing the pick arm assembly.

### December 5, 2011

- Updated the description for PN 40X4384 to go to **"Media path and ducts" on page 475**.

### October 25, 2011

- Replaced PN 40X4310 with PN 40X8310 for the HCIT media out actuator in **"HCIT Sheet option tray assembly" on page 491**.

### September 1, 2011

- Replaced PN 40X4365 with PN 40X6994 for the MPF pick solenoid assembly in **"Pick arm assembly, trays, and MPF" on page 480**.

### July 18, 2011

- Replaced PN 40X3449 with PN 40X6391 for the 250 sheet media tray assembly in **"250-sheet option tray assembly" on page 487**.

### July 14, 2011

- Replaced PN 40X4473 with PN 99A0447 for the 550 option draft shaft in **"550-sheet option tray assembly" on page 489**.
- Added PN 99A0275 for the spring in **"550-sheet option tray assembly" on page 489**.
- Updated the art for **"550-sheet option tray assembly" on page 489**.

### July 11, 2011

- Replaced PN 40X4309 with PN 40X1384 for the 250 sheet media out actuator (T650) in **"Pick arm assembly, trays, and MPF" on page 480**.

### July 8, 2011

- Replaced PN 40X4309 with PN 40X5840 in **"250-sheet option tray assembly" on page 487**.

# General information

The Lexmark™ laser printers are letter-quality page printers designed to attach to personal computers and to most computer networks..

The printers are available in the following models:

| Model | Configurations | Machine type / model |
|---|---|---|
| T650n | Network | 4062-01A |
| T652n | Network | 4062-21A |
| T652dn | Network | 4062-23A |
| T654n | Network | 4062-41A |
| T654dn | Network | 4062-43A |
| T656dne | Network | 4062-630 |

## Media guidelines

Additional information for printing on specialty media may be found in the *Cardstock and Label Guide* available at **http://support.lexmark.com**.

### Supported paper sizes, types, and weights

The following tables provide information on standard and optional paper sources and the types of paper they support.

**Note:** For an unlisted paper size, select the closest *larger* listed size.

For information on card stock and labels, see the *Card Stock & Label Guide* on the Lexmark Web site.

#### Paper sizes supported by the printer

**Note:** An optional 250-sheet Universally Adjustable Tray is available for sizes smaller than A5, such as index cards.

| Paper size | Dimensions | 250- or 550-sheet trays (standard or optional) | Optional 2000-sheet tray | Multipurpose feeder | Duplex unit |
|---|---|---|---|---|---|
| **A4** | 210 x 297 mm (8.3 x 11.7 in.) | ✓ | ✓ | ✓ | ✓ |
| **A5** | 148 x 210 mm (5.8 x 8.3 in.) | ✓ | **X** | ✓ | ✓ |
| **A6**[1,2] | 105 x 148 mm (4.1 x 5.8 in.) | **X** | **X** | ✓ | **X** |
| **JIS B5** | 182 x 257 mm (7.2 x 10.1 in.) | ✓ | **X** | ✓ | ✓ |
| **Letter** | 216 x 279 mm (8.5 x 11 in.) | ✓ | ✓ | ✓ | ✓ |
| **Legal** | 216 x 356 mm (8.5 x 14 in.) | ✓ | ✓ | ✓ | ✓ |
| **Executive** | 184 x 267 mm (7.3 x 10.5 in.) | ✓ | **X** | ✓ | ✓ |
| **Oficio**[1] | 216 x 340 mm (8.5 x 13.4 in.) | ✓ | **X** | ✓ | ✓ |
| **Folio**[1] | 216 x 330 mm (8.5 x 13 in.) | ✓ | **X** | ✓ | ✓ |
| **Statement**[1] | 140 x 216 mm (5.5 x 8.5 in.) | ✓ | **X** | ✓ | **X** |
| **Universal**[3,4] | 138 x 210 mm (5.5 x 8.3 in.) up to 216 x 356 mm (8.5 x 14 in.) | ✓ | **X** | ✓ | **X** |
| | 70 x 127 mm (2.8 x 5 in.) up to 216 x 356 mm (8.5 x 14 in.) | **X** | **X** | ✓ | **X** |
| | 148 x 182 mm (5.8 x 7.7 in.) up to 216 x 356 mm (8.5 x 14 in.) | ✓ | **X** | ✓ | ✓ |

[1] This size appears in the Paper Size menu only when Tray Size Sensing is turned off. For more information, contact Customer Support.

[2] Only the standard exit bin supports this size.

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

[4] To support duplexing, the Universal width must be between 148 mm (5.8 in) and 216 mm (8.5 in); Universal length must be between 182 mm (7.2 in) and 356 mm (14 in).

| Paper size | Dimensions | 250- or 550-sheet trays (standard or optional) | Optional 2000-sheet tray | Multipurpose feeder | Duplex unit |
|---|---|---|---|---|---|
| **7 3/4 Envelope (Monarch)** | 98 x 191 mm (3.9 x 7.5 in.) | **X** | **X** | ✓ | **X** |
| **9 Envelope** | 98 x 225 mm (3.9 x 8.9 in.) | **X** | **X** | ✓ | **X** |
| **10 Envelope** | 105 x 241 mm (4.1 x 9.5 in.) | **X** | **X** | ✓ | **X** |
| **DL Envelope** | 110 x 220 mm (4.3 x 8.7 in.) | **X** | **X** | ✓ | **X** |
| **Other Envelope** | 98 x 162 mm (3.9 x 6.4 in.) to 176 x 250 mm (6.9 x 9.8 in.) | **X** | **X** | ✓ | **X** |

[1] This size appears in the Paper Size menu only when Tray Size Sensing is turned off. For more information, contact Customer Support.

[2] Only the standard exit bin supports this size.

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

[4] To support duplexing, the Universal width must be between 148 mm (5.8 in) and 216 mm (8.5 in); Universal length must be between 182 mm (7.2 in) and 356 mm (14 in).

## Paper types and weights supported by the printer

The printer engine supports 60–176 g/m$^2$ (16–47 lb) paper weights. The duplex unit supports 63–170 g/m$^2$ (17–45 lb) paper weights.

| Paper type | 250- or 550-sheet trays (standard or optional) | Optional 2000-sheet tray | Multipurpose feeder | Duplex unit |
|---|---|---|---|---|
| **Paper**<br>• Plain<br>• Bond<br>• Colored<br>• Custom<br>• Letterhead<br>• Light<br>• Heavy<br>• Preprinted<br>• Rough/Cotton<br>• Recycled | ✓ | ✓ | ✓ | ✓ |

[1] Printing labels requires a special label fuser cleaner which is included with the special cartridge required for label applications.

| Paper type | 250- or 550-sheet trays (standard or optional) | Optional 2000-sheet tray | Multipurpose feeder | Duplex unit |
|---|---|---|---|---|
| **Card stock** | ✓ | ✓ | ✓ | ✓ |
| **Envelopes** | X | X | ✓ | X |
| **Labels** [1]<br>• Paper<br>• Vinyl | ✓ | ✓ | ✓ | ✓ |
| **Transparencies** | ✓ | ✓ | ✓ | ✓ |

[1] Printing labels requires a special label fuser cleaner which is included with the special cartridge required for label applications.

## Paper types and weights supported by the output bins

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

The finisher supports 60–176 g/m$^2$ (16–47 lb) paper weights.

| Paper type | Standard exit bin (350 or 550 sheets) | Optional hardware | | |
|---|---|---|---|---|
| | | Output Expander (550 sheets) or High Capacity Output Stacker (1850 sheets) | 5-Bin Mailbox (500 sheets)[1] | StapleSmart™ II Finisher (500 sheets)[2] |
| **Paper**<br>• Plain<br>• Bond<br>• Colored<br>• Custom<br>• Letterhead<br>• Light<br>• Heavy<br>• Preprinted<br>• Rough/Cotton<br>• Recycled | ✓ | ✓ | ✓ | ✓ |
| **Card stock** | ✓ | ✓ | X | X |
| **Envelopes** | ✓ | ✓ | X | X |

[1] Supports 60-90 g/m$^2$ (16-24 lb) paper weights.

[2] Maximum of 50 sheets of 75 g/m$^2$ (20 lb) paper per stapled packet. Results may vary with heavier paper.

[3] Printing labels requires a special label fuser cleaner which is included with the special cartridge required for label applications.

| Paper type | Standard exit bin (350 or 550 sheets) | Optional hardware | | |
|---|---|---|---|---|
| | | Output Expander (550 sheets) or High Capacity Output Stacker (1850 sheets) | 5-Bin Mailbox (500 sheets)[1] | StapleSmart™ II Finisher (500 sheets)[2] |
| **Labels** [3]<br>• Paper<br>• Vinyl | ✓ | ✓ | X | X |
| **Transparencies** | ✓ | ✓ | X | X |

[1] Supports 60-90 g/m$^2$ (16-24 lb) paper weights.

[2] Maximum of 50 sheets of 75 g/m$^2$ (20 lb) paper per stapled packet. Results may vary with heavier paper.

[3] Printing labels requires a special label fuser cleaner which is included with the special cartridge required for label applications.

# Tools required for service

- Flat-blade screwdrivers, various sizes
- #1 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic short-blade
- Needle-nose pliers
- Diagonal side cutters
- Spring hook
- Feeler gauges
- Analog or digital multimeter
- Flashlight (optional)

# Diagnostics and troubleshooting


- **“Troubleshooting overview” on page 37**
- **“Fixing print quality issues” on page 39**
- **“Paper jams” on page 57**
- **“Understanding the printer messages” on page 161**
- **“User attendance messages” on page 183**
- **“Printer hardware errors” on page 197**


**CAUTION—SHOCK HAZARD:** Remove the power cord from the electrical outlet before you connect or disconnect any cable or electronic card or assembly for personal safety and to prevent damage to the printer. Disconnect any connections between the printer and PCs/peripherals.

**CAUTION—SHOCK HAZARD:** If the printer is kept on, never touch the conductive parts if 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.

**CAUTION—POTENTIAL INJURY:** The printer weight is greater than 18 kg (40 lb) and requires two or more trained personnel to lift it safely. Use the hand holds on the side of the printer. Make sure your fingers are not under the printer when you lift or set the printer on the floor or another stable surface.

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

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

**Warning—Potential Damage:** 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.

**Warning—Potential Damage:** 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 265**.

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

## Troubleshooting overview


- **“Performing the initial troubleshooting check” on page 37**
- **“Power-on Reset (POR) sequence” on page 38**
- **“Using Safe Mode” on page 38**


### Performing the initial troubleshooting check

Before you start the troubleshooting procedures, perform the following checks:

- With the power cord unplugged from the electrical outlet, check that the cord is free from the breakage, short circuits, disconnected wires, or incorrect connections.

- Make sure the printer is properly grounded. Check the power cord ground terminal.
- Make sure the power supply line voltage is within 10% of the rated line voltage.
- Make sure the machine is securely installed on a level surface in a well-ventilated area.
- Make sure the room temperature is between 16 and 32°C (60 and 90°F) and that the relative humidity is between 20 and 80%.
- Avoid sites generating ammonia gas, high temperature, high humidity (near water faucets, kettles, humidifiers), cold spaces, near open flames, and dusty areas.
- Avoid sites exposed to direct sunlight.
- Make sure the paper is the recommended paper for this printer.
- Make a trial print with paper from a newly opened package, and check the result.

## Power-on Reset (POR) sequence

When you turn on the printer, it performs a POR sequence.

Check for correct POR functioning of the base printer by observing the following:

1. The control panel indicator light turns on.
2. The control panel display turns on.
3. A splash screen appears on the display.
4. The cooling fan turns on.
5. The fuser heater turns on.

   **Note:** The fuser takes longer to warm up from a cold start than from a warm start.
6. The main drive motor turns on.
7. The EP drive assembly drives the developer shaft located in the imaging unit.
8. The exit rollers turn.
9. The control panel indicator light blinks.
10. **`Ready`** appears on the display.

## Using Safe Mode

Safe Mode lets the printer continue to operate in a special limited mode in which it attempts to continue offering as much functionality as possible despite known issues.

**Warning—Potential Damage:** Safe Mode is intended as a short-term workaround and should be used only in the case of a non-critical error when a print job must be completed before service can be arranged to repair the printer. The printer must be returned to standard operating mode before diagnostics can be run or full-function printing can continue.

You can enter Safe Mode in one of the following ways:

- Enable Safe Mode from the Configuration menu, and then POR the printer.
- Press the **Stop** and **Back** keys, and then POR the printer.

Return the printer to standard operating mode to service the printer and return to full-function printing.

### Safe mode print behavior

The following table outlines the behavior for this printer model while in Safe Mode:

| Safe Mode engine features | Engine behavior | Control panel behavior |
|---|---|---|
| Simplex printing only | Will report that no duplexer is installed. | Duplex print option will not be selectable. |
| Ignore duplex sensor | | |
| Ignore bin full sensor | Bin full messages will not be reported. | Bin full messages will not occur. |
| Print at narrow media operating point | Pages will be printed slower. | N/A |
| Ignore narrow media sensor | Narrow media will print without restrictions. | N/A |
| Ignore all input options | Will report that only Tray 1 is installed. | Only Tray 1 and the MPF will be selectable. |
| Ignore all output options | Will not report any installed finishing options. | Finishing options will not be selectable. |
| Use large interpage gaps | Pages will have large interpage gaps. | N/A |

# Fixing print quality issues


- **“Initial print quality check” on page 40**
- **“Faint print (low contrast) check” on page 40**
- **“Repeating defects check” on page 42**
- **“Blank pages check” on page 42**
- **“Solid black pages check” on page 44**
- **“Vertical lines and bands (process direction) check” on page 46**
- **“Horizontal white stripes and bands (side to side direction) check” on page 47**
- **“Vertical stripes (process direction) check” on page 48**
- **“Horizontal stripes (side to side direction) check” on page 49**
- **“Partial lack check” on page 50**
- **“Spots check” on page 51**
- **“Background (fog) check” on page 53**
- **“Skew check” on page 54**
- **“Media damage check” on page 55**
- **“No fuse check” on page 56**

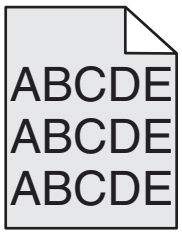
The symptoms described in this chapter might require replacement of one or more CRUs (Customer Replaceable Units) designated as supplies or maintenance items, which are the responsibility of the customer. With the customer's permission, you might need to install a toner cartridge.

## Initial print quality check

Before troubleshooting specific print problems, complete the following initial print quality check:

- The printer must be in a location that follows the recommended operating environment specifications.
- Check the life status of all supplies. Any supply that is low should be replaced.
- Load 20-lb plain letter or A4 paper. Make sure the paper guides are properly set and locked. From the control panel, set the paper size and type to match the paper loaded in the tray.
- Print a menu settings page. Be sure to keep the original menu settings page to restore the customer's custom settings if needed.
- Verify on the menu settings page if the following are set to their default values:
  - Print resolution: 600 dpi
  - Toner darkness: 8
- Check the transfer roll for damage. Replace if damaged.
- Check the toner cartridge and imaging unit for damage. Replace if damaged.
- Print the print quality pages to see if the problem remains. Use Tray 1 to test print quality problems.
- Print a print quality test page, and then look for variations in the print from what is expected. Verify if the settings under EP Setup are set to their default values. See **"EP Defaults" on page 254**.
- Check to ensure the correct printer driver for the installed software is being used. An incorrect printer driver for the installed software can cause problems. Incorrect characters could print, and the copy may not fit the page correctly.

## Faint print (low contrast) check



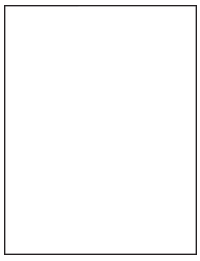



| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media condition. If necessary, load new, dry, recommended media, and then perform a print test.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the toner level, and replace the print cartridge if necessary.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the transfer roll assembly for contamination and wear. If necessary, replace the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the print cartridge. If necessary, clean and reinstall the print cartridge.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the laser beam route. If necessary, remove debris between the printhead assembly and the PC drum or clean the printhead assembly window.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check the HVPS card assembly for proper connection. If necessary, replace the connections or the HVPS card assembly. Go to **"HVPS card assembly removal" on page 290**.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check the printhead assembly for proper connection. If necessary, replace the connections or the printhead assembly. Go to **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Repeating defects check

| Actions | Yes | No |
|---|---|---|
| **Step 1**<br>If the distance between defects is equal to 1.11 inch (28.3 mm), then replace the charge rollers.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |
| **Step 2**<br>If the distance between defects is equal to 2.04 inches (80 mm), then replace the transfer roller.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |
| **Step 3**<br>If the distance between defects is equal to one of the following, then replace the print cartridge.<br>• 1.88 in. (47.8 mm)<br>• 3.81 in. (96.8 mm)<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |
| **Step 4**<br>If the distance between defects is equal to one of the following, then replace the fuser.<br>• 3.46 in. (88.0 mm)<br>• 3.75 in. (95.2 mm)<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

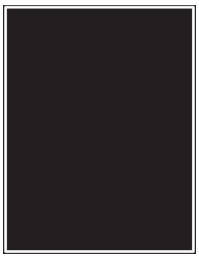
## Blank pages check



| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media condition. If necessary, load new, dry, recommended media, and then perform a print test.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the toner level, and replace the print cartridge if necessary.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the transfer roll assembly for proper installation. If necessary, reinstall the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the left and right transfer roll bracket for damage. If necessary, replace the left or right transfer roll brackets. Go to **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the transfer roll assembly for contamination and wear. If necessary, reinstall the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check the print cartridge for proper installation. If necessary, clean and reinstall the print cartridge.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check the laser beam route. If necessary, remove debris between the printhead assembly and the PC drum or clean the printhead assembly window.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 8**<br>Check the HVPS card assembly for proper connection. If necessary, replace the connections or the HVPS card assembly. Go to **"HVPS card assembly removal" on page 290**.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Check the printhead assembly for proper connection. If necessary, replace the connections or the printhead assembly. Go to **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Go to step 10. | Problem is solved. |
| **Step 10**<br>Check the system card assembly for proper connection. If necessary, replace the connections or the printhead assembly. Go to **"System card assembly removal" on page 285** .<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Solid black pages check

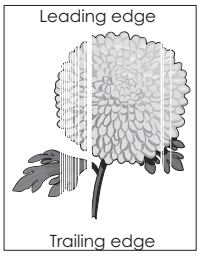


| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Inspect, clean, and reinstall the print cartridge.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the charge roll assembly for proper installation, and if necessary, reinstall the charge roll assembly properly.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Check the charge roll electrical contact for damage, and if necessary, replace the charge roll assembly. Go to **"Charge roll assembly removal" on page 299**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the HVPS for proper installation, and if necessary, reinstall the HVPS properly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the high voltage metal contacts between the imaging unit and the HVPS for damage. If necessary, repair or replace the contacts.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check with a voltmeter if the electrical resistance of the high voltage metal contacts between the imaging unit and the HVPS is less than 1 ohm?<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check the high voltage metal contacts between the imaging unit and the HVPS for contamination by toner or dust. If necessary, clean or replace the contacts.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Check the high voltage contacts on the imaging unit for damage, and if necessary, replace the imaging unit.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Check the cable connections between the HVPS and the system card, and if necessary, reconnect or replace the cables.<br><br>Does the problem remain? | Go to step 10. | Problem is solved. |
| **Step 10**<br>Check the HVPS for damage, and if necessary, replace the HVPS. Go to **"HVPS card assembly removal" on page 290**.<br><br>Does the problem remain? | Go to step 11. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 11**<br>Check the system card for damage, and if necessary, replace the HVPS. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact your next level of support. | Problem is solved. |

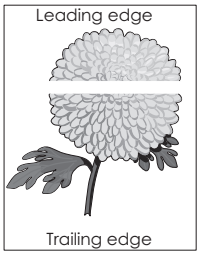
## Vertical lines and bands (process direction) check




| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media condition. If necessary, load new, dry, recommended media, and then reprint the defective image.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove debris or contamination from the media transfer route and the media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the laser beam route. If necessary, remove debris between the printhead assembly and the PC drum, or clean the printhead assembly window.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the print cartridge for proper installation. If necessary, clean and reinstall the print cartridge.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the transfer roll assembly for contamination and wear. If necessary, replace the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 6**<br>Check the printhead assembly for proper connection. If necessary, replace the connections or the printhead assembly. Go to **"T650 printhead assembly removal" on page 336** and **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

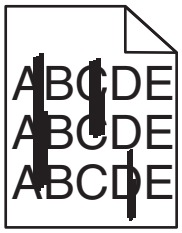
## Horizontal white stripes and bands (side to side direction) check

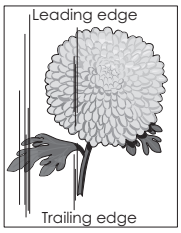



| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media condition. If necessary, load new, dry, recommended media, and then reprint the defective image.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove debris or contamination from the media transfer route and the media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the toner level, and replace the print cartridge if necessary.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the transfer roll assembly for contamination and wear. If necessary, replace the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 5**<br>Check the printhead assembly for proper connection. If necessary, replace the connections or the printhead assembly. Go to **"T650 printhead assembly removal" on page 336** and **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Vertical stripes (process direction) check

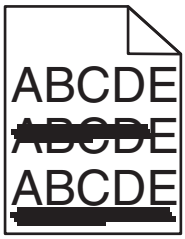


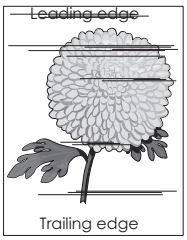




| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media condition. If necessary, load new, dry, recommended media, and then reprint the defective image.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove contamination and debris from the media transfer route and the media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the charge roll assembly for contamination and wear, and if necessary, replace the charge roll assembly. Go to **"Charge roll assembly removal" on page 299**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the transfer roll assembly for contamination and wear, and if necessary, replace the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 5**<br>Check the print cartridge for proper installation, and if necessary, clean and reinstall the print cartridge.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check the heat roll and pressure roll. If necessary, remove and then reinstall the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>**CAUTION—HOT SURFACE:** Allow the fuser unit assembly to cool down.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Horizontal stripes (side to side direction) check

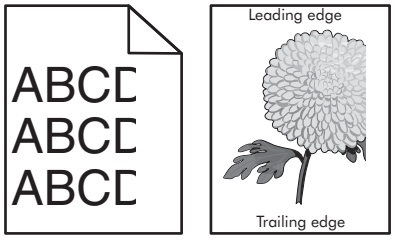



| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media condition. If necessary, load new, dry, recommended media, and then reprint the defective image.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove contamination or obstacles from the media transfer route.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the print cartridge for proper installation, and if necessary, clean and reinstall the print cartridge.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |

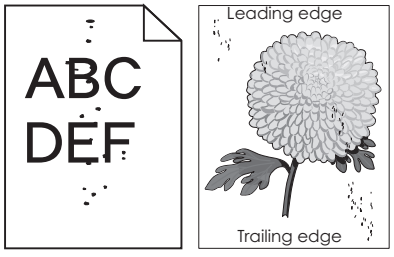
| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Check the charge roll assembly for contamination and wear, and if necessary replace the charge roll assembly. Go to **"Access door removal" on page 272**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the transfer roll assembly for contamination and wear, and if necessary, replace the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check the heat roll and pressure roll. If necessary, remove and then reinstall the fuser unit assembly.<br><br>**CAUTION—HOT SURFACE:** Allow the fuser unit assembly to cool.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Check the HVPS card assembly for proper connection, and if necessary, replace the connection.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Replace the HVPS card assembly. Go to **"HVPS card assembly removal" on page 290**.<br><br>Does the problem remain? | Contact the next level of support. | Problem is solved. |

## Partial lack check



| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media condition. If necessary, load new, dry, recommended media, and then reprint the defective image.<br><br>Does the error remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the toner level, and replace the print cartridge if necessary.<br><br>Does the error remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check for debris between the printhead assembly and the PC drum. If necessary, remove debris or clean the printhead assembly window.<br><br>Does the error remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the transfer roll assembly for contamination and wear. If necessary, replace the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the error remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the printhead installation. If necessary, reinstall and adjust the printhead assembly. Go to **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the error remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

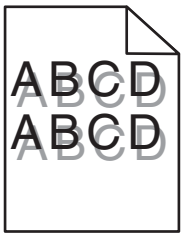
## Spots check



| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media condition. If necessary, load new, dry, recommended media, and then reprint the defective image.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the media transfer route, and remove debris or contamination if necessary.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the print cartridge for spots or other damage on the drum surfaces, and replace the print cartridge if necessary.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the charge roll assembly for contamination and wear. If necessary, replace the charge roll assembly. Go to **"Access door removal" on page 272**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the transfer roll assembly for contamination and wear. If necessary, replace the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check the heat roll and pressure roll for contamination or cracks. If necessary, remove the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>**CAUTION—HOT SURFACE:** Allow the fuser unit assembly to cool down.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check the printhead installation. If necessary, reinstall and adjust the printhead assembly. Go to **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 8**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Background (fog) check



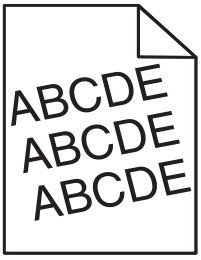




| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media condition. If necessary, load new, dry, recommended media, and then reprint the defective image.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the media transfer route, and then remove debris or contamination if necessary.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the print cartridge for proper installation. If necessary, inspect, clean, and reinstall replace the print cartridge.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the transfer roll assembly for contamination and wear. If necessary, replace the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the HVPS card assembly for proper connection, and replace the connections if necessary.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 6**<br>Check the printhead installation, and reinstall and adjust the printhead assembly if necessary. Go to **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**. .<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

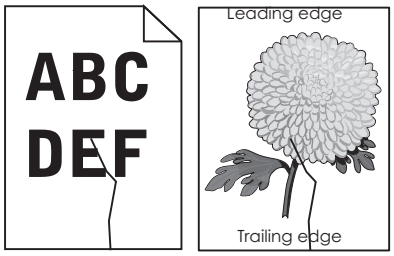
## Skew check




| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the printer installation placement for installation surface irregularities. Check the printer caster for any damage. If necessary, correct the installation placement.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Properly load media into the media tray assembly and set all guides correctly. Properly reinstall the media tray assembly into the printer.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the area of the media feed units for obstructions, and remove them if necessary.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the transfer roll assembly for contamination and wear, and replace the transfer roll assembly if necessary. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 5**<br>Check the alignment assembly for proper adjustment. Go to **"Alignment assembly adjustment" on page 270**. If necessary, replace the alignment assembly. Go to **"Output cover assembly removal" on page 335**<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Perform a print test.<br><br>Does the problem remain? | Contact the next level of support. | Problem is solved. |

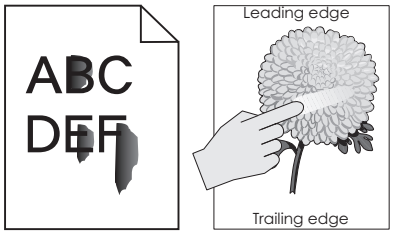
## Media damage check




| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the printer installation placement for installation surface irregularities. Check the printer caster for any damage. If necessary, correct the installation placement.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Properly load media into the media tray assembly and set all guides correctly. Properly reinstall the media tray assembly into the printer.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the media condition, and load new, dry, recommended media if necessary.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the transfer roll assembly for contamination and wear, and replace the transfer roll assembly if necessary. Go to **"Transfer roll assembly removal" on page 316**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 5**<br>Check the alignment assembly for proper adjustment. Go to **"Alignment assembly adjustment" on page 270**. If necessary, replace the aligner assembly. Go to **"Alignment assembly removal" on page 273**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Remove the fuser unit assembly, and then check the heat roll and pressure roll for contamination or cracks. If necessary, replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>**CAUTION—HOT SURFACE:** Allow the fuser unit assembly to cool down.<br><br>Does the problem remain? | Contact the next level of support. | Problem is solved. |

## No fuse check




| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the media type and printer media settings, and adjust them if necessary.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the fuser unit assembly for proper installation, and reinstall the assembly if necessary.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the media condition. If necessary, load new, dry, recommended media, and then reprint the defective image.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Remove the fuser unit assembly, and check the heat roll and pressure roll for contamination or cracks. If necessary, replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br>**CAUTION—HOT SURFACE:** Allow the fuser unit assembly to cool down<br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the LVPS card assembly for proper connection. If necessary, remove and then reinsert the assembly, or replace it. Go to **"System card assembly removal" on page 285** or **"T650 LVPS card assembly removal" on page 292**.<br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Perform a print test.<br>Does the problem remain? | Contact customer support. | Problem is solved. |

# Paper jams

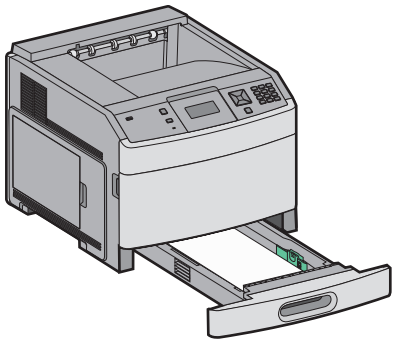

- **"Avoiding jams" on page 57**
- **"Understanding jam numbers and locations" on page 58**
- **"How to clear 200-201 paper jams" on page 59**
- **"How to clear 202-203 paper jams" on page 83**
- **"How to clear 230 paper jams" on page 96**
- **"How to clear 231-239 paper jams" on page 107**
- **"How to clear 241-245 paper jams" on page 118**
- **"How to clear 250 paper jams" on page 134**
- **"How to clear 260 paper jams" on page 135**
- **"How to clear 270 paper jams" on page 140**
- **"How to clear 280 paper jams" on page 147**


## Avoiding jams

### Load paper properly

- Make sure that the paper lies flat in the tray.
- Do not remove a tray while the printer is printing.
- Do not load a tray while the printer is printing. Load it before printing, or wait for a prompt to load it.
- Do not load too much paper. Make sure that the stack height is below the maximum paper fill indicator.

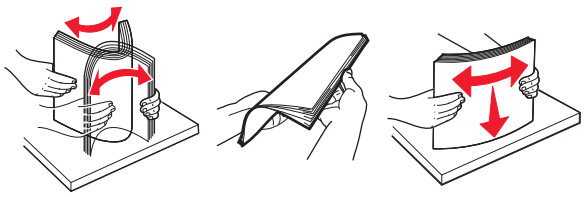
- Do not slide paper into the tray. Load paper as shown in the illustration.



- Make sure that the paper guides are properly positioned.
- Push the tray firmly into the printer after loading paper.

### Use recommended paper

- Use only recommended paper or specialty media.
- Do not load wrinkled, creased, damp, bent, or curled paper.
- Flex, fan, and straighten paper before loading it.



- Do not use paper that has been cut or trimmed by hand.
- Do not mix paper sizes, weights, or types in the same tray.
- Make sure that the paper size and type are set correctly on the Embedded Web Server or the computer.

  **Note:** Depending on your operating system, access the Paper menu using Local Printer Settings Utility or Printer Settings.
- Store paper according to manufacturer recommendations.

## Understanding jam numbers and locations

When a jam occurs, a message indicating the jam location appears on the display. Open doors and covers and remove trays to access jam locations. To resolve any paper jam message, you must clear all jammed paper from the paper path and then press .

| Jam numbers | Area |
|---|---|
| 200–203, 230 | Printer |
| 231–239 | Optional external duplex unit |
| 241–245 | Paper trays |
| 250 | Multipurpose feeder |
| 260 | Envelope feeder |

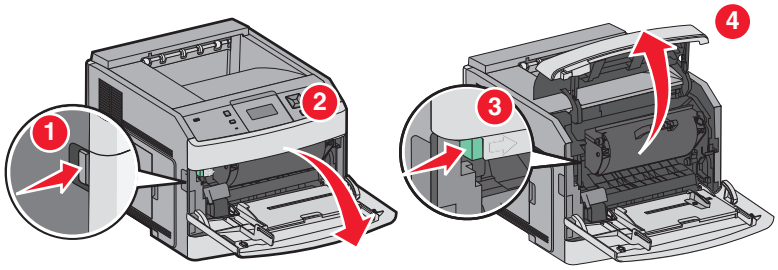
| Jam numbers | Area |
|---|---|
| 271–279 | Optional output bins |
| 280–282 | StapleSmart II Finisher |
| 283 | Staple cartridge |

# How to clear 200-201 paper jams

## 200 and 201 paper jams

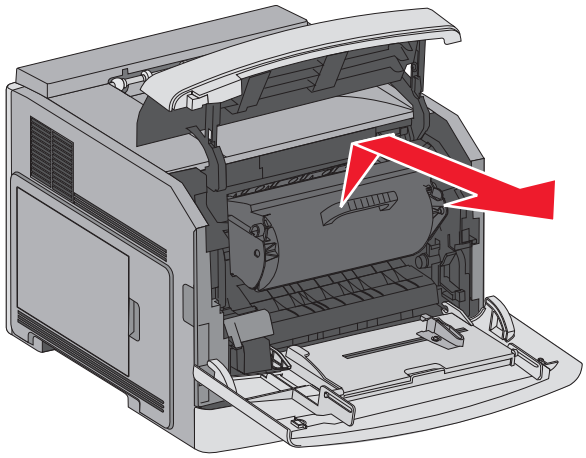
1 Push the release latch, and then lower the multipurpose feeder door.

2 Push the release latch, and then open the front cover.




3 Lift and pull the print cartridge out of the printer.

**Warning—Potential Damage:** Do not touch the photoconductor drum on the underside of the cartridge. Use the cartridge handle whenever you are holding the cartridge.



4 Place the print cartridge aside on a flat, smooth surface.

**Warning—Potential Damage:** Do not leave the cartridge exposed to light for extended periods.

**Warning—Potential Damage:** The jammed paper may be covered with unfused toner which can stain garments and skin.

5 Remove the jammed paper.

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

**Note:** If the paper is not easy to remove, then open the rear door and remove the paper from there.

6 Align and reinstall the print cartridge.

7 Close the front cover.

8 Close the multipurpose feeder door.

9 Press .

## 200 error messages

| Error code | Description | Action |
|---|---|---|
| 200.00 | Sensor (input) area jam<br>The media is jammed in the sensor (input) area. | Go to **"Sensor (input) service check" on page 67**. |
| 200.01 | Sensor (input) lingering jam (MPF, duplex, or envelope feeder)<br>The media reached the sensor (input) but did not clear it within the specified time. | Go to **"Sensor (input) lingering jam service check" on page 67**. |
| 200.02 | Sensor (input) lingering jam<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.04 | Sensor (input) early jam<br>The media reached the sensor (input) sooner than the specified time. Wrong config ID causes engine to assume 500 paper path on 250 model. | Go to **"Sensor (input) early jam service check" on page 69**. |
| 200.06 | Sensor (input) early jam<br>The sensor (input) rebounded once the trailing edge of the media passed. | Go to **"Sensor (input) service check" on page 67**. |
| 200.07 | Sensor (input) late area jam (input option tray)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (input) late jam service check" on page 70**. |
| 200.08 | Sensor (input) early jam<br>The media reaches the sensor (input) sooner than the specified time. | Go to **"Sensor (input) early jam service check" on page 69**. |

| Error code | Description | Action |
|---|---|---|
| 200.09 | Printhead laser start failure<br>The printhead laser start process failed because it did not receive proper feedback signal from the printhead motor. | Go to **“Printhead laser start failure service check” on page 74**. |
| 200.10 | Printhead motor synchronization error<br>The printhead motor is not synchronized when media reaches the sensor (input). | |
| 200.11 | Printhead polygon mirror synchronization error<br>The printhead polygon mirror motor becomes unsynchronized when the media reaches the sensor (input). | |
| 200.12 | Laser power signal error<br>The printhead laser power signal has failed. | |
| 200.13 | Sensor (input) static jam<br>Media remains on the sensor (input) during the warm up sequence. | Go to **“Sensor (input) static jam service check” on page 74**. |
| 200.14 | Sensor (input) early jam<br>The media reaches the sensor (input) sooner than the specified time. | Go to **“Sensor (input) early jam service check” on page 69**. |
| 200.15 | Laser power did not settle.<br>Laser circuit failure on printhead or system card assembly. | Go to **“Printhead laser start failure service check” on page 74**. |
| 200.16 | Main drive motor assembly load error<br>The main drive motor assembly has failed or caused high mechanical load due to paper jam or bind. | Go to **“Main drive motor assembly load error service check” on page 77**. |

| Error code | Description | Action |
|---|---|---|
| 200.17 | Sensor (input) lingering jam (tray 1 and tray level not low)<br>The media reached the sensor (input) but did not clear it within the specified time. | Go to **"Sensor (input) lingering jam service check" on page 67**. |
| 200.18 | Sensor (input) lingering jam (tray 1 and tray level low)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.19 | Sensor (input) lingering jam (tray 1 and tray level empty)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.27 | Sensor (input) lingering jam (tray 2 and tray level not low)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.28 | Sensor (input) lingering jam (tray 2 and tray level low)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.29 | Sensor (input) lingering jam (tray 2 and tray level empty)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.32 | Operator panel door assembly switch failure<br>Operator panel door assembly not fully closed. Interlock switch not functioning correctly. | Go to **"Operator panel door assembly switch failure service check" on page 78**. |
| 200.34 | Sensor (toner empty) failure<br>The sensor (toner empty) has failed or is not sensing the pulse wheel on the print cartridge. | Go to **"Sensor (toner empty) service check" on page 79**. |

| Error code | Description | Action |
|---|---|---|
| 200.37 | Sensor (input) lingering jam (tray 3 and tray level not low)<br>The media reached the sensor (input) but did not clear it within the specified time. | Go to **"Sensor (input) lingering jam service check" on page 67**. |
| 200.38 | Sensor (input) lingering jam (tray 3 and tray level low)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.39 | Sensor (input) lingering jam (tray 3 and tray level empty)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.47 | Sensor (input) lingering jam (tray 4 and tray level not low)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.48 | Sensor (input) lingering jam (tray 4 and tray level low)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.49 | Sensor (input) lingering jam (tray 4 and tray level empty)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.57 | Sensor (input) lingering jam (tray 5 and tray level not low)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.58 | Sensor (input) lingering jam (tray 5 and tray level low)<br>The media reached the sensor (input) but did not clear it within the specified time. | |
| 200.59 | Sensor (input) lingering jam (tray 5 and tray level empty)<br>The media reached the sensor (input) but did not clear it within the specified time. | |

## 201 error messages

| Error code | Description | Action |
|---|---|---|
| 201.00 | Sensor (fuser output) area jam (type 1 fuser)<br>The media is jammed in the sensor (fuser output) area. | Go to **"Sensor (fuser output) service check" on page 79**. |
| 201.01 | Main drive motor assembly load error (type 1 fuser)<br>The main drive motor assembly has failed or caused high mechanical load due to paper jam or bind. | Go to **"Main drive motor assembly load error service check" on page 77**. |
| 201.02 | Sensor (fuser output) late jam (type 1 fuser)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (fuser output) late jam service check" on page 80**. |
| 201.03 | Image data did not start in time (type 1 fuser)<br>Printhead write failure | Go to **"Printhead write failure service check" on page 82**. |
| 201.04 | Sensor (narrow media) late jam (type 1 fuser)<br>The expected wide media is late reaching the sensor (narrow media) within the specified time. | Go to **"Sensor (narrow media) late jam service check" on page 75**. |
| 201.06 | Sensor (narrow media) late jam (type 1 fuser)<br>The expected wide media is late reaching the sensor (narrow media) within the specified time. | |
| 201.07 | Sensor (fuser output) late jam (type 1 fuser)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (fuser output) late jam service check" on page 80**. |
| 201.25 | Sensor (fuser output) late jam (type 2 fuser)<br>The media is jammed in the sensor (fuser output) area. | |
| 201.26 | Main drive motor assembly load error (type 2 fuser)<br>The main drive motor assembly has failed or caused high mechanical load due to paper jam or bind. | Go to **"Main drive motor assembly load error service check" on page 77**. |
| 201.27 | Sensor (fuser output) late jam (type 1 fuser)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (fuser output) late jam service check" on page 80**. |
| 201.28 | Image data did not start in time (type 2 fuser)<br>Printhead write failure | Go to **"Printhead write failure service check" on page 82**. |
| 201.29 | Sensor (narrow media) late jam (type 2 fuser)<br>The expected wide media is late reaching the sensor (narrow media) within the specified time. | Go to **"Sensor (narrow media) late jam service check" on page 75**. |

| Error code | Description | Action |
|---|---|---|
| 201.30 | Operator panel door assembly interlock switch failure (type 2 fuser)<br>The printer detected that the switch (operator panel door interlock) did not cycle prior to printer restart. | Go to **"Operator panel door assembly switch failure service check" on page 78**. |
| 201.31 | Sensor (narrow media) late jam (type 2 fuser)<br>The expected wide media is late reaching the sensor (narrow media) within the specified time. | Go to **"Sensor (narrow media) late jam service check" on page 75**. |
| 201.32 | Sensor (fuser output) late jam (type 2 fuser)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (fuser output) late jam service check" on page 80**. |
| 201.50 | Sensor (fuser output) late jam (type 2 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | |
| 201.51 | Main drive motor assembly load error (type 1 fuser and fuser page count exceeds life)<br>The main drive motor assembly has failed or caused high mechanical load due to paper jam or bind. | Go to **"Main drive motor assembly load error service check" on page 77**. |
| 201.52 | Sensor (fuser output) late jam (type 1 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (fuser output) late jam service check" on page 80**. |
| 201.53 | Image data did not start in time (type 1 fuser and fuser page count exceeds life)<br>Printhead write failure | Go to **"Printhead write failure service check" on page 82**. |
| 201.54 | Sensor (narrow media) late jam (type 1 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (narrow media) late jam service check" on page 75**. |
| 201.55 | Operator panel door assembly interlock switch failure (type 1 fuser and fuser page count exceeds life)<br>The printer detected that the switch (operator panel door interlock) did not cycle prior to printer restart. | Go to **"Operator panel door assembly switch failure service check" on page 78**. |
| 201.56 | Sensor (narrow media) late jam (type 1 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (narrow media) late jam service check" on page 75**. |

| Error code | Description | Action |
|---|---|---|
| 201.57 | Sensor (fuser output) late jam (type 1 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (fuser output) late jam service check" on page 80**. |
| 201.75 | Sensor (fuser output) late jam (type 1 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | |
| 201.76 | Main drive motor assembly load error (type 2 fuser and fuser page count exceeds life)<br>The main drive motor assembly has failed or caused high mechanical load due to paper jam or bind. | Go to **"Main drive motor assembly load error service check" on page 77**. |
| 201.77 | Sensor (fuser output) late jam (type 2 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (fuser output) late jam service check" on page 80**. |
| 201.78 | Image data did not start in time (type 2 fuser and fuser page count exceeds life)<br>Printhead write failure | Go to **"Printhead write failure service check" on page 82**. |
| 201.79 | Sensor (narrow media) late jam (type 2 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (narrow media) late jam service check" on page 75**. |
| 201.80 | Operator panel door assembly interlock switch failure (type 2 fuser and fuser page count exceeds life)<br>The printer detected that the switch (operator panel door interlock) did not cycle prior to printer restart. | Go to **"Operator panel door assembly switch failure service check" on page 78**. |
| 201.81 | Sensor (narrow media) late jam (type 2 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (narrow media) late jam service check" on page 75**. |
| 201.82 | Sensor (narrow media) late jam (type 2 fuser and fuser page count exceeds life)<br>The media is late reaching the sensor (fuser output) within the specified time. | Go to **"Sensor (narrow media) late jam service check" on page 75**. |

## Sensor (input) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Fan the media, ensure the media is properly installed and check the paperpath for obstructions.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the sensor (input) for damage, and if necessary, replace the sensor (input). See **“Sensor (input) removal ” on page 298**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item “input.”<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Problem is solved. | Go to step 4. |
| **Step 4**<br>Check the above sensor for proper connection, and if necessary, replace the connection or the sensor. See **“Sensor (input) removal ” on page 298**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (input) lingering jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Fan the media, ensure the media is properly installed, and check the paper path for obstructions.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Replace the media, or change the media size setup in all the trays.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove obstructions in the fuser unit assembly.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Check the fuser unit assembly for excess wear and damage. If necessary, replace the fuser unit assembly. See **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the sensor (input) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item "input."<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 7. | Go to step 6. |
| **Step 6**<br>Check the above sensor for proper connection, and if necessary, replace the connection. See **"Sensor (input) removal " on page 298**.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check the sensor (fuser output) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item "input."<br><br>**CAUTION—HOT SURFACE:** The area around the actuator is very hot. Allow the fuser area to cool before proceeding.<br><br>Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 9. | Go to step 8. |
| **Step 8**<br>Check the above sensor for proper connection, and if necessary, replace the connection or the fuser unit assembly. See **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Perform a print test and check the main motor assembly. If necessary, replace the main drive motor assembly. See **"Output cover assembly removal" on page 335**.<br><br>Does the problem remain? | Go to step 10. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 10**<br>Remove obstructions in the aligner assembly.<br><br>Does the problem remain? | Go to step 11. | Problem is solved. |
| **Step 11**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (input) early jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Fan the media, ensure the media is properly installed, and check the paper path for obstructions.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Make sure that media originated from the MPF. | Go to step 3. | Problem is solved. |
| **Step 3**<br>Clean or replace the MPF pick roll assembly. See **"MPF pick roll assembly removal" on page 303**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Perform a MPF print test and check the MPF pick solenoid for proper operation. If necessary, replace the MPF pick solenoid. See **"MPF pick solenoid assembly removal" on page 277**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the MPF lift plate assembly for damage. If necessary, replace the MPF lift plate assembly. See **"MPF lift plate assembly removal" on page 302**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Remove and properly reinstall the media.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 7**<br>Remove any prestaged or jammed media in all the trays.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Check the sensor (input) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item “input.”<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 10. | Go to step 9. |
| **Step 9**<br>Check the above sensor for proper connection, and if necessary, replace the connection or the sensor. See **“Sensor (input) removal ” on page 298**.<br><br>Does the problem remain? | Go to step 10. | Problem is solved. |
| **Step 10**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (input) late jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Fan the media, ensure the media is properly installed, and check the paper path for obstructions.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Replace the media, or change the media size setup for all the trays.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove excess media from all the trays.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Replace damaged media in all the trays.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 5**<br>Remove obstructions in the pass-thru areas of the tray.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Make sure that the media originate from the MPF.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Clean or replace the MPF pick roll assembly. See **"MPF pick roll assembly removal" on page 303**.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Perform a MPF print test, and then check the MPF pick solenoid for proper operation. If necessary, replace the MPF pick solenoid. See **"MPF pick solenoid assembly removal" on page 277**.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Make sure that the media originate from the internal duplex.<br><br>Does the problem remain? | Go to step 10. | Problem is solved. |
| **Step 10**<br>Remove obstruction in the internal duplex media path.<br><br>Does the problem remain? | Go to step 11. | Problem is solved. |
| **Step 11**<br>Check the sensor (duplex input) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex tests.<br>**c** Select sensor test.<br>**d** Observe the line item "input."<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 13. | Go to step 12. |
| **Step 12**<br>Check the above sensor for proper connection, and if necessary, replace the connection or sensor (duplex input). See **"Sensor (duplex input) removal (T652, T654, T656)" on page 342**.<br><br>Does the problem remain? | Go to step 13. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 13**<br>Perform a print test and check the duplex drive motor assembly for proper operation. If necessary, replace the duplex drive motor assembly. See **"T652, T654, and T656 duplex drive motor assembly removal" on page 330**.<br><br>Does the problem remain? | Go to step 18. | Problem is solved. |
| **Step 14**<br>Make sure the media originate from the external duplex.<br><br>Does the problem remain? | Go to step 15. | Problem is solved. |
| **Step 15**<br>Make sure that the display on the operator panel changes every time the sensing area of the sensor (duplex input) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex tests.<br>**c** Select sensor test.<br>**d** Observe the line item "input."<br>If necessary, replace the external duplex assembly.<br><br>Does the problem remain? | Go to step 16. | Problem is solved. |
| **Step 16**<br>Make sure that the display on the operator panel changes every time the sensing area of the sensor (duplex exit) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex tests.<br>**c** Select sensor test.<br>**d** Observe the line item "exit."<br>If necessary, replace the external duplex assembly.<br><br>Does the problem remain? | Go to step 18. | Problem is solved. |
| **Step 17**<br>Check the two pick roll assemblies in the media tray being picked from. If necessary, clean or replace the pick roll assembly. See **"Pick roll assembly removal" on page 324**.<br><br>Does the problem remain? | Go to step 18. | Problem is solved. |
| **Step 18**<br>Remove obstructions in the aligner assembly.<br><br>Does the problem remain? | Go to step 19. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 19**<br>Check the sensor (input) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item “input.”<br><br>Does the problem remain? | Go to step 20. | Problem is solved. |
| **Step 20**<br>Check the above sensor for proper connection. If necessary, replace the connection or sensor (input). See **“Sensor (input) removal ” on page 298**.<br><br>Does the problem remain? | Go to step 21. | Problem is solved. |
| **Step 21**<br>Perform a print test and check the pick arm assembly. If necessary, replace the pick arm assembly. See **“Pick arm assembly removal” on page 322**.<br><br>Does the problem remain? | Go to step 22. | Problem is solved. |
| **Step 22**<br>Perform a print test and check the main motor assembly. If necessary, replace the main drive motor assembly. See **“Output cover assembly removal” on page 335**<br><br>Does the problem remain? | Go to step 23. | Problem is solved. |
| **Step 23**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem solved. |

## Sensor (input) static jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove any prestaged or jammed media.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the sensor (input) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item “input.”<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 4. | Go to step 3. |
| **Step 3**<br>Check the above sensor for proper connection. If necessary, replace the connection or the sensor. See **“Sensor (input) removal ” on page 298**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Printhead laser start failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Connect the cables on the printhead properly.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Connect the cables on the system card.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Replace the printhead. See **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Replace the system card. See **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (narrow media) late jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **"Fuser wiper cover assembly removal" on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Replace the media in all trays or change the media size setup.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove and properly reinstall the media in all trays.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the fuser unit assembly for damage and life expiration. If necessary, replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Remove obstructions in the fuser unit assembly.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Remove any prestaged or jammed media.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 7**<br>Check if the display on the operator panel changes every time the sensing area of the sensor (narrow media) is interrupted or blocked?<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor tests.<br>**c** Observe the line item “input.”<br>If necessary, replace the sensor.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Check the above sensor for proper connection, and if necessary, replace the connection.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Remove obstructions in the aligner assembly.<br><br>Does the problem remain? | Go to step 10. | Problem is solved. |
| **Step 10**<br>Check the transfer roll assembly for damage, and if necessary, replace the transfer roll assembly. Go to **“Transfer roll assembly removal” on page 316**.<br><br>Does the problem remain? | Go to step 11. | Problem is solved. |
| **Step 11**<br>Perform a print test and check if the media is transported and able to reach the sensor (fuser output). If necessary, replace the main drive motor assembly. Go to **“Output cover assembly removal” on page 335**.<br><br>Does the problem remain? | Go to step 12. | Problem is solved. |
| **Step 12**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Main drive motor assembly load error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **"Fuser wiper cover assembly removal" on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Connect the cables on the main drive motor assembly.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Connect the cables on the system card.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Replace the main drive motor assembly. See **"Main drive motor assembly removal" on page 276**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Replace the system card. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Operator panel door assembly switch failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **"Fuser wiper cover assembly removal" on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Close the operator panel assembly door.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the operator panel assembly door for damage. If necessary, replace the operator panel assembly door. See **"T650, T652, and T654 operator panel door assembly removal" on page 307** or **"T656 operator panel door assembly removal" on page 312**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the interlock switch (left operator panel hinge) for damage. If necessary, replace the interlock switch.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Connect all the cables on the system card properly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (toner empty) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Inspect the print cartridge pulse wheel for damage, and if necessary, replace the print cartridge pulse wheel.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Reinstall the sensor (toner empty) properly.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the sensor (toner empty) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item “toner.”<br><br>Does the display on the operator panel, change every time the sensing area of the above sensor is interrupted or blocked? | Problem is solved. | Go to step 4. |
| **Step 4**<br>Check the above sensor for proper connection. If necessary, replace the connection or sensor. See **“Sensor (toner empty) removal” on page 298**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

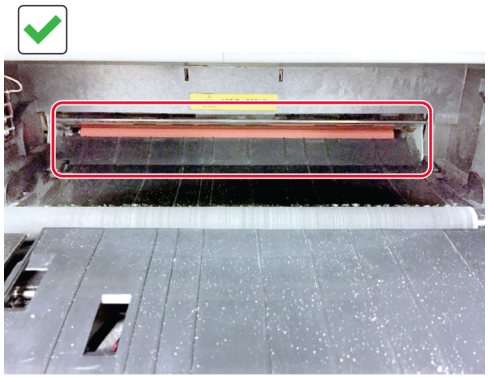
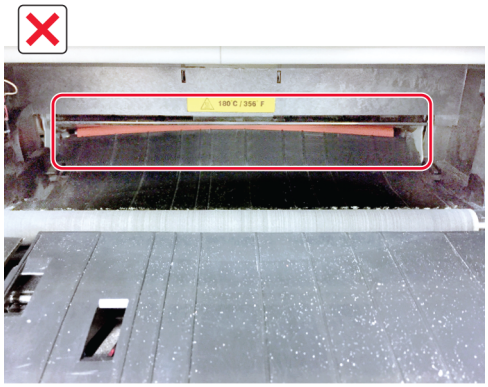
## Sensor (fuser output) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **“Fuser wiper cover assembly removal” on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the sensor (fuser output) for damage. If necessary, replace the fuser unit assembly. See **“Fuser unit assembly removal” on page 333**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item “exit.”<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Problem is solved. | Go to step 4. |
| **Step 4**<br>Check the above sensor for proper connection, and if necessary, replace the connection.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (fuser output) late jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **“Fuser wiper cover assembly removal” on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Replace the media, or change the media size setup in all the trays.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Remove and properly reinstall the media.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>**a** Check the fuser unit assembly for damage.<br>**Note:** Check if the fuser entrance guide is bent.<br><br><br>**b** Check the fuser unit for life expiration.<br>If necessary, replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |
| **Step 5**<br>Remove obstructions in the fuser unit assembly.<br><br>Does the problem remain? | Go to step 6. | The problem is solved. |
| **Step 6**<br>Check the sensor (fuser output) for proper operation.<br>**a** Enter the Diagnostic mode<br>**b** Select **Base sensor test**.<br>**c** Observe the line item, "output."<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 7. | |

| Action | Yes | No |
|---|---|---|
| **Step 7**<br>Check the above sensor for proper connection, and if necessary, replace the connection.<br><br>Does the problem remain? | Go to step 8. | The problem is solved. |
| **Step 8**<br>Remove obstructions in the aligner assembly.<br><br>Does the problem remain? | Go to step 9. | The problem is solved. |
| **Step 9**<br>Check the transfer roll assembly for damage, and if necessary, replace the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**..<br><br>Does the problem remain? | Go to step 10. | The problem is solved. |
| **Step 10**<br>Perform a print test and check the main motor assembly. If necessary, replace the main drive motor assembly. Go to **"Main drive motor assembly removal" on page 276**.<br><br>Does the problem remain? | Go to step 11. | The problem is solved. |
| **Step 11**<br>Perform a print test.<br><br>Does the problem remain? | Go to step 12. | The problem is solved. |
| **Step 12**<br>Install a type 2 fuser.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Printhead write failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **"Fuser wiper cover assembly removal" on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Connect the cables on the printhead properly.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Connect the cables on the system card properly.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Replace the printhead. See **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Replace the system card. See **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

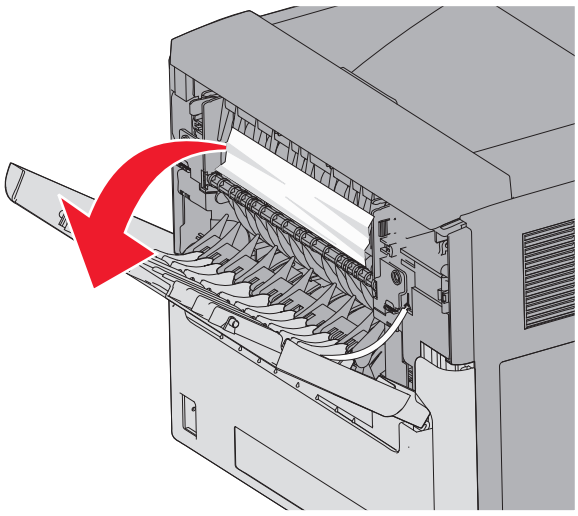
# How to clear 202-203 paper jams

## 202 and 203 paper jams

If the paper is exiting the printer, then pull the paper out, and then press ✓.

If the paper is not exiting the printer:

1. Pull down the top rear door.



2. Slowly remove the jammed paper to avoid tearing it.
3. Close the top rear door.
4. Press ✓.

## 202 error messages

| Error code | Description | Action |
|---|---|---|
| 202.00 | Paper jam around fuser exit or redrive area (type 1 fuser)<br>Page may be jammed in fuser exit or redrive area. | Go to **"Paper jam around fuser exit or redrive area service check" on page 90** |
| 202.01 | Sensor (fuser output) lingering jam (type 1 fuser and destination is standard bin)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and did not reach the sensor (narrow media). | Go to **"Sensor (fuser output) lingering jam service check" on page 92** |
| 202.02 | Sensor (fuser output) lingering jam (type 1 fuser)<br>Media reached the sensor (fuser output), but did not clear it in the specified time | |
| 202.03 | Sensor (narrow media) static jam (type 1 fuser)<br>Media remains on the sensor (narrow media) during the warm-up sequence. | Go to **"Sensor (narrow media) static jam service check" on page 94** |
| 202.04 | Sensor (fuser output) bounce (type 1 fuser)<br>The sensor (fuser output) rebounded once the trailing edge of the media passed. | Go to **"Sensor (fuser output) service check" on page 79** |
| 202.06 | Sensor (fuser output) static jam (type 1 fuser)<br>Media remains on the sensor (fuser output) during the warm-up sequence. | Go to **"Sensor (fuser output) static jam service check" on page 93** |
| 202.07 | Sensor (fuser output) lingering jam (type 1 fuser)<br>Media reached the sensor (fuser output), but did not clear it in the specified time | Go to **"Sensor (fuser output) lingering jam service check" on page 92** |
| 202.09 | Sensor (fuser output) lingering jam (type 1 fuser)<br>Media reached the sensor (fuser output), but did not clear it in the specified time | |
| 202.10 | Sensor (fuser output) lingering jam (type 1 fuser and destination is output option)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and did not reach the sensor (narrow media). | |
| 202.11 | Sensor (fuser output) lingering jam (type 1 fuser and destination is standard bin)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and also reached the sensor (narrow media). | |
| 202.12 | Sensor (fuser output) lingering jam (type 1 fuser and destination is output option)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and also reached the sensor (narrow media). | |

| Error code | Description | Action |
|---|---|---|
| 202.13 | Sensor (fuser output) static jam and sensor (narrow media) static jam (type 1 fuser)<br>Media remains on the sensor (fuser output) and the sensor (narrow media) during the warm-up sequence. | Go to **"Paper jam around fuser exit or redrive area service check" on page 90** |
| 202.25 | Paper jam around fuser exit or redrive area (type 2 fuser)<br>Page may be jammed in fuser exit or redrive area. | |
| 202.26 | Sensor (fuser output) lingering jam (type 2 fuser and destination is standard bin)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and did not reach the sensor (narrow media). | Go to **"Sensor (fuser output) lingering jam service check" on page 92** |
| 202.27 | Sensor (fuser output) lingering jam (type 2 fuser)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | |
| 202.28 | Sensor (narrow media) static jam (type 2 fuser)<br>Media remains on the sensor (narrow media) during the warm-up sequence. | Go to **"Sensor (narrow media) static jam service check" on page 94** |
| 202.29 | Sensor (fuser output) bounce (type 2 fuser)<br>The sensor (fuser output) rebounded once the trailing edge of the media passed. | Go to **"Sensor (fuser output) service check" on page 79** |
| 202.31 | Sensor (fuser output) static jam (type 2 fuser)<br>Media remains on the sensor (fuser output) during the warm-up sequence. | Go to **"Sensor (fuser output) static jam service check" on page 93** |

| Error code | Description | Action |
|---|---|---|
| 202.32 | Sensor (fuser output) lingering jam (type 2 fuser)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | Go to **"Sensor (fuser output) lingering jam service check" on page 92** |
| 202.34 | Sensor (fuser output) lingering jam (type 2 fuser)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | |
| 202.35 | Sensor (fuser output) lingering jam (type 2 fuser and destination is output option)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and did not reach the sensor (narrow media). | |
| 202.36 | Sensor (fuser output) lingering jam (type 2 fuser and destination is standard bin)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and also reached the sensor (narrow media). | |
| 202.37 | Sensor (fuser output) lingering jam (type 2 fuser and destination is output option)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and also reached the sensor (narrow media). | |
| 202.38 | Sensor (fuser output) static jam and sensor (narrow media) static jam (type 2 fuser)<br>Media remains on the sensor (fuser output) and the sensor (narrow media) during the warm-up sequence. | Go to **"Paper jam around fuser exit or redrive area service check" on page 90** |
| 202.50 | Paper jam around fuser exit or redrive area (type 1 fuser and fuser page count exceeded life)<br>Page may be jammed in fuser exit or redrive area. | |
| 202.51 | Sensor (fuser output) lingering jam (type 1 fuser, destination is standard bin, and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | Go to **"Sensor (fuser output) lingering jam service check" on page 92** |
| 202.52 | Sensor (fuser output) lingering jam (type 1 fuser, destination is standard bin, and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | |
| 202.53 | Sensor (narrow media) static jam (type 1 fuser and fuser page count exceeded life)<br>Media remains on the sensor (narrow media) during the warm-up sequence. | Go to **"Sensor (narrow media) static jam service check" on page 94** |

| Error code | Description | Action |
|---|---|---|
| 202.54 | Sensor (fuser output) bounce (type 1 fuser and fuser page count exceeded life)<br>The sensor (fuser output) rebounded once the trailing edge of the media passed. | Go to **"Sensor (fuser output) service check" on page 79** |
| 202.56 | Sensor (fuser output) static jam (type 1 fuser and fuser page count exceeded life)<br>Media remains on the sensor (fuser output) during the warm-up sequence. | Go to **"Sensor (fuser output) static jam service check" on page 93** |
| 202.57 | Sensor (fuser output) lingering jam (type 1 fuser and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | Go to **"Sensor (fuser output) lingering jam service check" on page 92** |
| 202.59 | Sensor (fuser output) lingering jam (type 1 fuser and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | |
| 202.60 | Sensor (fuser output) lingering jam (type 1 fuser, destination is output option, and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and did not reach the sensor (narrow media). | |
| 202.61 | Sensor (fuser output) lingering jam (type 1 fuser, destination is standard bin, and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and also reached the sensor (narrow media). | |
| 202.62 | Sensor (fuser output) lingering jam (type 1 fuser, destination is output option, and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and also reached the sensor (narrow media). | |
| 202.63 | Sensor (fuser output) static jam and sensor (narrow media) static jam (type 1 fuser and fuser page count exceeded life)<br>Media remains on the sensor (fuser output) and the sensor (narrow media) during the warm-up sequence. | Go to **"Paper jam around fuser exit or redrive area service check" on page 90** |
| 202.75 | Paper jam around fuser exit or redrive area (type 2 fuser and fuser page count exceeded life)<br>Page may be jammed in fuser exit or redrive area. | |

| Error code | Description | Action |
|---|---|---|
| 202.76 | Sensor (fuser output) lingering jam (type 2 fuser, destination is standard bin, and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and did not reach the sensor (narrow media). | Go to **"Sensor (fuser output) lingering jam service check" on page 92** |
| 202.77 | Sensor (fuser output) lingering jam (type 2 fuser and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | |
| 202.78 | Sensor (narrow media) static jam (type 2 fuser and fuser page count exceeded life)<br>Media remains on the sensor (fuser output) and the sensor (narrow media) during the warm-up sequence. | Go to **"Paper jam around fuser exit or redrive area service check" on page 90** |
| 202.79 | Sensor (fuser output) bounce (type 2 fuser and fuser page count exceeded life)<br>The sensor (fuser output) rebounded once the trailing edge of the media passed. | Go to **"Sensor (fuser output) service check" on page 79** |
| 202.81 | Sensor (fuser output) static jam (type 2 fuser and fuser page count exceeded life)<br>Media remains on the sensor (fuser output) during the warm-up sequence. | Go to **"Sensor (fuser output) static jam service check" on page 93** |

| Error code | Description | Action |
|---|---|---|
| 202.82 | Sensor (fuser output) lingering jam (type 2 fuser and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | Go to **"Sensor (fuser output) lingering jam service check" on page 92** |
| 202.84 | Sensor (fuser output) lingering jam (type 2 fuser and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time. | |
| 202.85 | Sensor (fuser output) lingering jam (type 2 fuser, destination is output option, and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and did not reach the sensor (narrow media). | |
| 202.86 | Sensor (fuser output) lingering jam (type 2 fuser, destination is standard bin, and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and also reached the sensor (narrow media). | |
| 202.87 | Sensor (fuser output) lingering jam (type 2 fuser, destination is output option, and fuser page count exceeded life)<br>Media reached the sensor (fuser output), but did not clear it in the specified time, and also reached the sensor (narrow media). | |
| 202.88 | Sensor (fuser output) static jam and sensor (narrow media) static jam (type 2 fuser and fuser page count exceeded life)<br>Media remains on the sensor (fuser output) and the sensor (narrow media) during the warm-up sequence. | Go to **"Paper jam around fuser exit or redrive area service check" on page 90** |
| 202.99 | Fuser ID chip failure<br>The system does not recognize the ID chip on the fuser unit. | Go to **"Fuser unit assembly removal" on page 333** |

## 203 error messages

| Error code | Description | Action |
|---|---|---|
| 203.00 | Paper jam around redrive area<br>Page may be jammed in redrive area. | Go to **"Paper jam around fuser exit or redrive area service check" on page 90**. |
| 203.01 | Internal duplex drive motor control failure (internal duplex)<br>The internal duplex drive motor motor does not reach the proper operating speed at the specified time. | Go to **"Internal duplex drive motor control failure service check" on page 95**. |
| 203.08 | Redrive motor load error<br>The redrive motor assembly has failed or caused high mechanical load during the warm up sequence. | Go to **"Redrive motor load error service check" on page 95**. |
| 203.10 | Redrive motor control failure (media tray 1)<br>The redrive motor does not reach the proper operating speed at the specified time. | |
| 203.18 | Redrive motor assembly underspeed error<br>The redrive motor assembly does not rotate at the specified speed. | |
| 203.20 | Redrive motor lost encoder failure<br>The redrive motor is not reporting pulses back to the engine. | |

## Paper jam around fuser exit or redrive area service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **"Fuser wiper cover assembly removal" on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Install media properly.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove obstructions in media path.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Check the sensor (fuser output) for damage. If necessary, replace the fuser unit assembly. See **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item "exit."<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 6 | Go to step 6. |
| **Step 6**<br>Check the above sensor for proper connection, and replace if necessary.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Perform a print test.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Check the sensor (narrow media) for damage. If necessary, replace the fuser unit assembly. See **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item "narrow media."<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 10. | Go to step 10. |
| **Step 10**<br>Check the above sensor for proper connection, and replace if necessary.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 11**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (fuser output) lingering jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **"Fuser wiper cover assembly removal" on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the media size setup and tray guides for all media trays. If necessary, replace the media, or change the media size setup.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove and properly reinstall the media in all the trays.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Open, then properly close the door assembly, rear.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the fuser unit assembly for damage and life expiration. If necessary, replace the fuser unit assembly. See **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check the sensor (fuser output) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor tests.<br>**c** Observe the line item "output."<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 7. | Go to step 7. |
| **Step 7**<br>Check the above sensor for proper connection. If necessary, replace the connection.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 8**<br>Check the redrive assembly for damage. If necessary, replace the redrive assembly. See **"Redrive assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Perform a print test and check the redrive motor assembly for proper operation. If necessary, replace the redrive motor assembly. See **"T652, T654, and T656 redrive motor assembly removal" on page 340**.<br><br>Does the above component operate properly? | Go to step 10. | Problem is solved. |
| **Step 10**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (fuser output) static jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **"Fuser wiper cover assembly removal" on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove any prestaged or jammed media.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the sensor (fuser output) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor tests.<br>**c** Observe the line item "input."<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 4. | Go to step 4. |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Check the above sensor for proper connection, and if necessary, replace the connection.<br><br>Does the problem remain? | Replace the fuser unit assembly. See **"Fuser unit assembly removal" on page 333**. | Problem is solved. |
| **Step 5**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (narrow media) static jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the fuser wiper cover assembly for missing parts or damage, such as cracks. If necessary, replace the fuser wiper cover assembly. See **"Fuser wiper cover assembly removal" on page 334**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove any prestaged or jammed media.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the sensor (fuser output) for proper operation.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor tests.<br>**c** Observe the line item "input."<br><br>Does the display on the operator panel change every time the sensing area of the above sensor is interrupted or blocked? | Go to step 4. | Go to step 4. |
| **Step 4**<br>Check the above sensor for proper connection, and if necessary, replace the connection.<br><br>Does the problem remain? | Replace the fuser unit assembly. See **"Fuser unit assembly removal" on page 333**. | Problem is solved. |
| **Step 5**<br>Perform a print test.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Internal duplex drive motor control failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check all connections on the duplex media entrance drive motor assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check all connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Replace the duplex media entrance drive motor assembly if problem remains. See **"T652, T654, and T656 duplex drive motor assembly removal" on page 330**.<br><br>Does the problem remain? | Contact next level of tech support. | Problem is solved. |

## Redrive motor load error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check if the upper redrive assembly is properly installed. If necessary, reinstall the upper redrive assembly.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check all connections on the redrive motor assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |

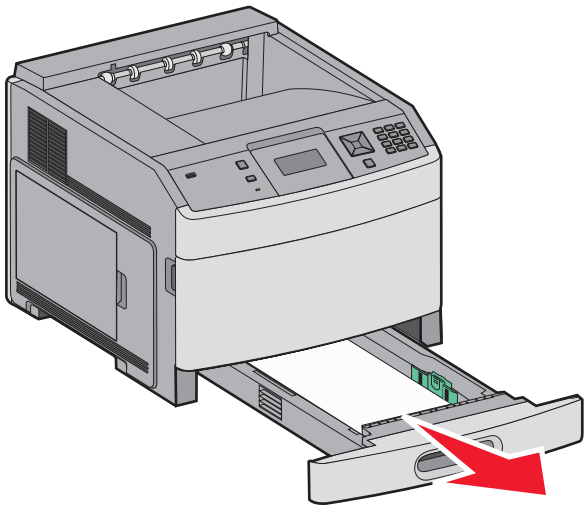
| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Check all connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 5**<br>Replace the redrive motor assembly if problem remains. See **"Redrive assembly removal" on page 333**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

# How to clear 230 paper jams

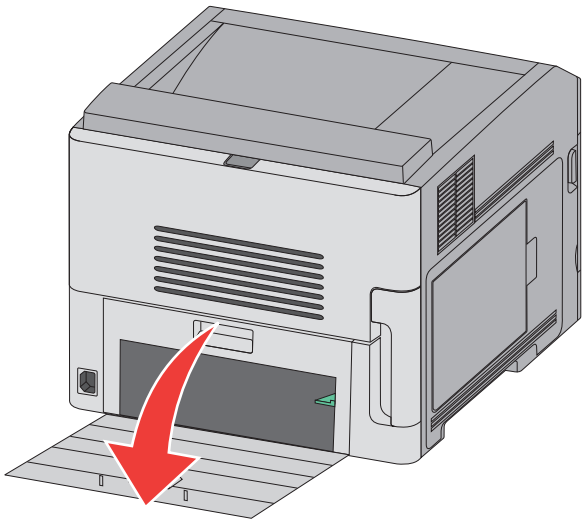
## 230 paper jam

### Rear paper jams

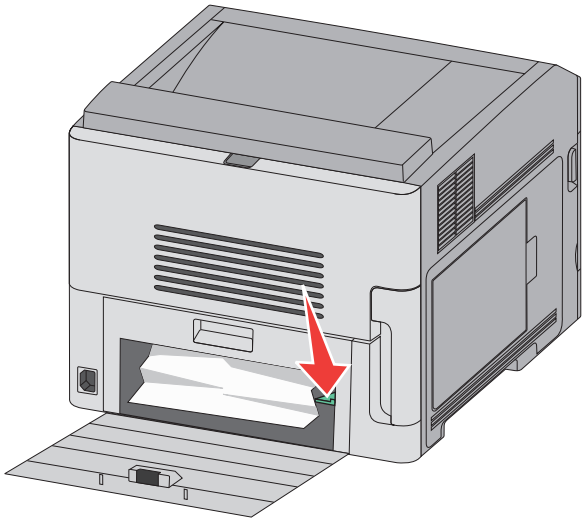
**1** Remove the standard tray from the printer.



**2** Pull down the bottom rear door.



**3** Push the tab down.



**4** Remove the jammed paper.

**5** Close the bottom rear door.

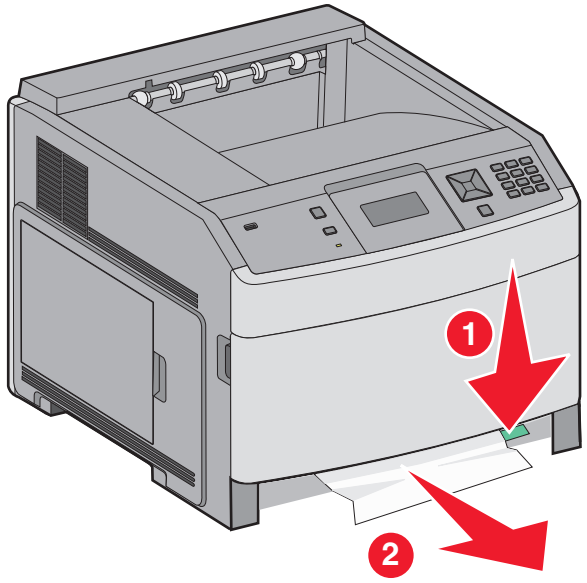
**6** Insert the standard tray.

**7** Press ✓.

**Front paper jams**

1 Remove the standard tray from the printer.

2 Push the tab down.




3 Remove the jammed paper.

4 Insert the standard tray.

5 Press ✓.

## 230 error messages

| Error code | Description | Action |
|---|---|---|
| 230.00 | Paper jam around internal duplex (internal duplex)<br>Page may be jammed in internal duplex area. | Go to **"Paper jam around internal duplex service check" on page 100**. |
| 230.01 | Sensor (duplex input) lingering jam (internal duplex)<br>Media reached the sensor (duplex input) but did not clear it in the specified time. | Go to **"Sensor (duplex input) lingering jam service check" on page 105**. |
| 230.02 | Sensor (duplex input) late jam (internal duplex)<br>Media is late reaching the sensor (duplex input) within the specified time. | Go to **"Sensor (duplex input) late jam service check" on page 102**. |
| 230.03 | Sensor (duplex input) bounce (internal duplex)<br>The sensor (duplex input) rebounded once the trailing edge of the media passed. | Go to **"Sensor (duplex input) service check" on page 104**. |
| 230.04 | Sensor (input) late jam from duplex (internal duplex)<br>Media is late reaching the sensor (input) within the specified time during the second side printing using the internal duplex. | Go to **"Sensor (input) late jam service check" on page 70**. |

| Error code | Description | Action |
|---|---|---|
| 230.05 | Sensor (duplex input) lingering jam (internal duplex)<br>Media reached the sensor (duplex input) but did not clear it in the specified time. | Go to **“Sensor (duplex input) lingering jam service check” on page 105**. |
| 230.06 | Sensor (input) late jam from duplex (internal duplex)<br>Media is late reaching the sensor (input) within the specified time during the second side printing using the internal duplex. | Go to **“Sensor (input) late jam service check” on page 70**. |
| 230.07 | Sensor (input) late jam from duplex (internal duplex)<br>Media is late reaching the sensor (input) within the specified time during the second side printing using the internal duplex. | |
| 230.08 | Internal duplex drive motor load error (internal duplex)<br>The internal duplex drive motor assembly has failed or caused high mechanical load during warm-up sequence. | Go to **“Internal duplex drive motor load error service check” on page 105**. |
| 230.10 | Internal duplex drive motor control failure (internal duplex)<br>The internal duplex drive motor does not reach the proper operating speed at the specified time. | Go to **“Internal duplex drive motor control failure service check” on page 95**. |
| 230.13 | Sensor (duplex input) static jam (internal duplex)<br>Media remains on the sensor (duplex input) during the warm-up sequence. | Go to **“Sensor (duplex input) lingering jam service check” on page 105**. |
| 230.14 | Paper jam around internal duplex (internal duplex)<br>Page may be jammed in internal duplex area. | Go to **“Paper jam around internal duplex service check” on page 100**. |
| 230.18 | Internal duplex drive motor assembly underspeed error (internal duplex)<br>The internal duplex drive motor does not rotate at the specified speed. | Go to **“Internal duplex drive motor control failure service check” on page 95**. |
| 230.20 | Internal duplex drive motor lost encoder failure (internal duplex)<br>The internal duplex drive motor is not reporting pulses back to the engine. | Go to **“Internal duplex drive motor load error service check” on page 105**. |

## Paper jam around internal duplex service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check for obstructions in media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the sensor (fuser output) for damage. If necessary, replace the fuser unit assembly. See **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check if the display on the operator panel changes every time the sensing area of the above sensor is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item "exit."<br>If necessary, replace the connection or the fuser unit assembly. See **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the sensor (duplex input) for damage, and if necessary, replace the sensor (duplex input). See **"Sensor (duplex input) removal (T652, T654, T656)" on page 342**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check if the display on the operator panel changes every time the sensing area of the above sensor is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex sensor test.<br>**c** Select Sensor test.<br>**d** Observe the line item "input."<br>If necessary, replace the connection, the external duplex unit assembly (external duplex only), or the duplex input sensor assembly (internal duplex only). See **"T652, T654, and T656 duplex input sensor assembly removal" on page 319**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (pass through) late jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Replace the media, or change the media size setup in all the trays.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove any excess media from the trays.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the damaged media with new media.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Remove obstructions in the media tray pass-thru areas.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the two pick roll assemblies in the media tray being picked from. If necessary, clean or replace the pick roll assemblies. See **"Pick roll assembly removal" on page 324**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check if the display on the operator panel changes every time the sensing area of the media tray sensor (pass through) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Input tray tests.<br>**c** Select Sensor test.<br>**d** Select the appropriate tray number.<br>**e** Observe the line item "pass through" for the appropriate media tray.<br>If necessary, replace the connection or the sensor (pass-thru). See **"250-sheet tray controller card assembly removal" on page 364**.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 7**<br>Perform a print test and check the pick arm assembly for the appropriate media tray if media is properly picked and advanced out of the tray. If necessary, replace the appropriate pick arm assembly. See **"T656 operator panel door assembly removal" on page 312**.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Perform a print test and check the main motor assembly if media is properly transported through the pass-thru areas of the media trays. If necessary, replace the main drive motor assembly. See **"Output cover assembly removal" on page 335**.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Perform a print test using the appropriate input tray, and if necessary, replace the input option.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (duplex input) late jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Open and then properly close the rear door assembly.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Open and then properly close the fuser access door.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove obstructions in the internal duplex media path.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the redrive assembly for damage, and if necessary, replace the redrive assembly. See **"5-bin mailbox rear door assembly removal" on page 345**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 5**<br>Perform a print test and check the redrive motor assembly for proper operation. If necessary, replace the redrive motor assembly. See **"Redrive assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Perform a print test and check the duplex drive motor assembly for proper operation. If necessary, replace the duplex drive motor assembly. See **"T652, T654, and T656 duplex drive motor assembly removal" on page 330**.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check if the display on the operator panel changes every time the sensing area of the media tray sensor (duplex input) is interrupted.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex tests.<br>**c** Select Sensor test.<br>**d** Observe the line item "input."<br>If necessary, replace the connection or the sensor (duplex input). See **"Sensor (duplex input) removal (T652, T654, T656)" on page 342**.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Remove obstructions in the external duplex media path.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Remove, and then properly reinstall the external duplex unit assembly.<br><br>Does the problem remain? | Go to step 10. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 10**<br>Check if the display on the operator panel changes every time the sensing area of the media tray sensor (duplex input) is interrupted.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex tests.<br>**c** Select Sensor test.<br>**d** Observe the line item “input.”<br>If necessary, replace the connection or the external duplex assembly.<br><br>Does the problem remain? | Go to step 11. | Problem is solved. |
| **Step 11**<br>Perform a print test using the duplex.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (duplex input) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the sensor (duplex input) for damage, and if necessary, replace the sensor (duplex input). See **“Sensor (duplex input) removal (T652, T654, T656)” on page 342**. | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check if the display on the operator panel changes every time the sensing area of the media tray sensor (duplex input) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex sensor tests.<br>**c** Select Sensor test.<br>**d** Observe the line item “input.”<br>If necessary, replace the connection, the external duplex unit assembly (external duplex only), or the duplex input sensor assembly (internal duplex only). See **“T652, T654, and T656 duplex input sensor assembly removal” on page 319**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Internal duplex drive motor load error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check all cable connections on the duplex media entrance drive motor assembly. If necessary, reconnect the cables.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check all cable connections on the system card assembly. If necessary, replace the duplex drive motor assembly. See **"T652, T654, and T656 duplex drive motor assembly removal" on page 330**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (duplex input) lingering jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove obstructions in the internal duplex media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the front duplex guide assembly for damage, and if necessary, replace the front duplex guide assembly. See **"T652, T654, and T656 front duplex guide assembly removal" on page 319**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

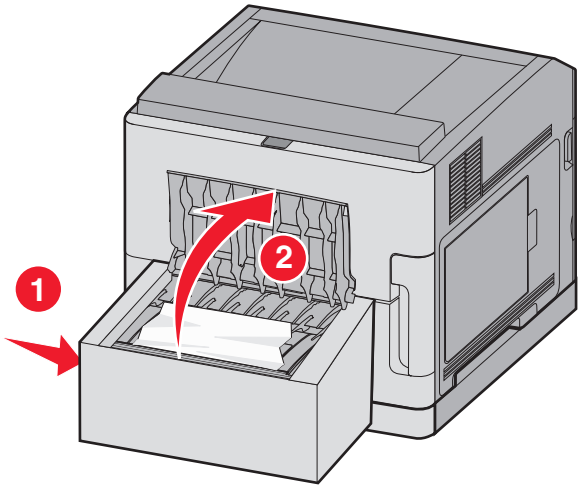
| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Check if the display on the operator panel changes every time the sensing area of the media tray sensor (duplex input) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex tests.<br>**c** Select Sensor test.<br>**d** Observe the line item “input.”<br>If necessary, replace the connection or the sensor (duplex input). See **“Sensor (duplex input) removal (T652, T654, T656)” on page 342**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Remove obstructions in the aligner assembly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Remove obstructions in the external duplex media path.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Remove, then properly reinstall the external duplex unit assembly.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check if the display on the operator panel changes every time the sensing area of the media tray sensor (duplex input) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex tests.<br>**c** Select Sensor test.<br>**d** Observe the line item “input.”<br>If necessary, replace the connection or the external duplex assembly.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Perform a print test using the duplex.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

# How to clear 231-239 paper jams

## 231–239 paper jams (optional external duplex unit)

### Rear paper jams

1 Push in and hold the latch while pulling up the rear duplex door.




2 Remove the jammed paper.

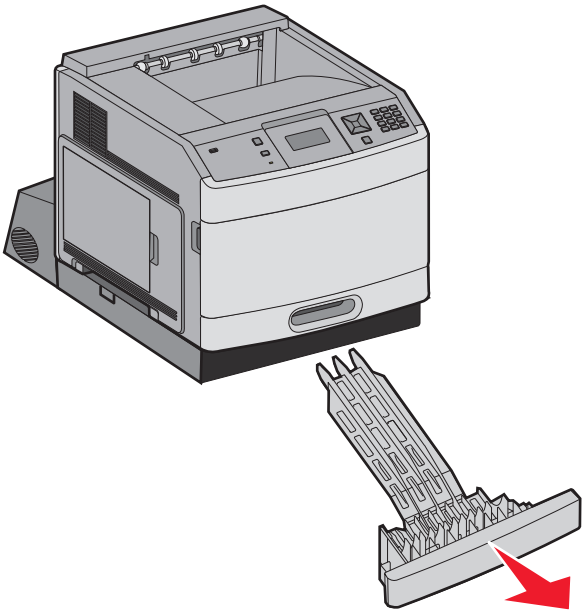
3 Close the rear duplex door.

4 Press ✓.

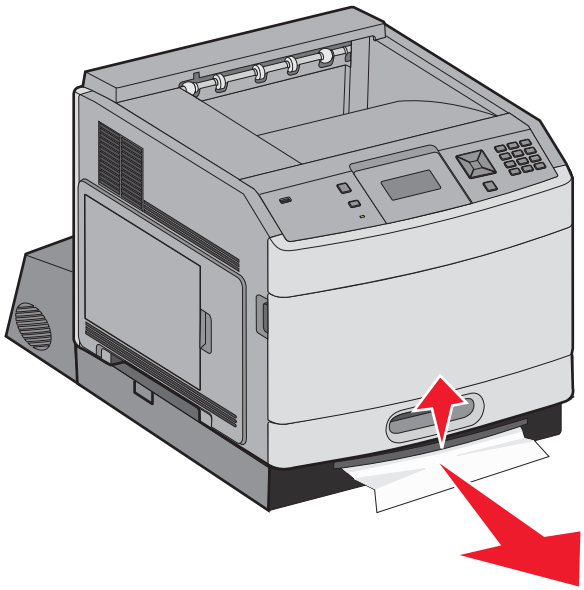
### Front paper jams

1 Remove the standard tray from the printer.

2 Remove the duplex jam access tray.



**3** Raise the recessed duplex bar.



**4** Remove the jammed paper.

**5** Replace the duplex jam access tray.

**6** Insert the standard tray.

**7** Press ✓.

## 231-237 error messages

| Error code | Description | Action |
|---|---|---|
| 231.00 | Sensor (duplex input) late jam (external duplex)<br>Media is late reaching the sensor (duplex input) within the specified time. | Go to **"Sensor (duplex input) late jam service check" on page 102**. |
| 232.00 | Sensor (duplex input) lingering jam (external duplex)<br>Media reached the sensor (duplex input) but did not clear it in the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 233.00 | Sensor (duplex double-feed) late jam (external duplex)<br>Media is late reaching the sensor (duplex double-feed) within the specified time. | Go to **"Sensor (duplex double-feed) late jam service check" on page 111**. |
| 234.00 | Sensor (duplex exit) late jam (external duplex)<br>Media is late reaching the sensor (duplex exit) within the specified time. | Go to **"Sensor (duplex exit) late jam (external duplex only) service check" on page 111**. |

| Error code | Description | Action |
|---|---|---|
| 235.00 | Sensor (duplex double-feed) lingering jam (external duplex)<br>Media reached the sensor (duplex double-feed) within the specified time but did not clear it within the specified time. | Go to **"Sensor (duplex double-feed) lingering jam service check" on page 113**. |
| 236.00 | Sensor (duplex input) lingering jam (internal duplex)<br>Media reached the sensor (duplex exit) within the specified time but did not clear it within the specified time. | Go to **"Sensor (duplex exit) lingering jam service check" on page 114**. |
| 237.00 | Sensor (input) late jam from duplex (external duplex)<br>Media is late reaching the sensor (input) within the specified time during the second side printing using the external duplex. | Go to **"Sensor (input) late jam service check" on page 70**. |
| 237.07 | Paper jam around external duplex (external duplex)<br>Page may be jammed in external duplex area. | Go to **"Paper jam around external duplex service check" on page 114**. |

## 238 error messages

| Error code | Description | Action |
|---|---|---|
| 238.00 | External duplex sensor static jam (external duplex)<br>Media remains on a sensor within the external duplex assembly during the warm-up sequence. | Go to **"External duplex sensor static jam service check (external duplex)" on page 115**. |
| 238.01 | Sensor (duplex input) static jam (external duplex)<br>Media remains on the sensor (duplex input) during the warm-up sequence. | Go to **"Sensor (duplex input) lingering jam service check" on page 105**. |
| 238.02 | Sensor (duplex exit) static jam (external duplex)<br>Media remains on the sensor (duplex exit) during the warm-up sequence. | Go to **"Sensor (duplex exit) static jam service check (external duplex)" on page 116**. |
| 238.03 | Sensor (duplex input) static jam and sensor (duplex exit) static jam (external duplex)<br>Media remains on the sensor (duplex input) and the sensor (duplex exit) during the warm-up sequence. | Go to **"Sensor (duplex input) lingering jam service check" on page 105**. |
| 238.04 | Sensor (duplex double-feed) static jam (external duplex)<br>Media remains on the sensor (duplex double-feed) during the warm-up sequence. | Go to **"External duplex sensor static jam service check (external duplex)" on page 115**. |

| Error code | Description | Action |
|---|---|---|
| 238.05 | Sensor (duplex input) static jam and sensor (double-feed) static jam (external duplex)<br>Media remains on the sensor (duplex input) and the sensor (double-feed) during the warm-up sequence. | Go to **"Sensor (duplex input) lingering jam service check" on page 105**. |
| 238.06 | Sensor (duplex exit) static jam and sensor (double-feed) static jam (external duplex)<br>Media remains on the sensor (duplex exit) and the sensor (double-feed) during the warm-up sequence. | Go to **"Sensor (duplex exit) static jam service check (external duplex)" on page 116**. |
| 238.07 | Sensor (duplex input) static jam, sensor (double-feed) static jam, and sensor (duplex exit) (external duplex)<br>Media remains on the sensor (duplex input), sensor (double-feed), and the sensor (duplex exit) during the warm-up sequence. | Go to **"Sensor (duplex input) lingering jam service check" on page 105**. |

## 239 error messages

| Error code | Description | Action |
|---|---|---|
| 239.00 | Mechanical feed error or timing error (external duplex)<br>Mechanical feed error or timing error. | Go to **"Mechanical feed error or timing error (external duplex) service check" on page 116**. |
| 239.01 | External duplex assembly error (external duplex)<br>Mechanical feed error or timing error. | Go to **"External duplex assembly error (external duplex) service check" on page 117**. |
| 239.02 | External duplex assembly error (external duplex)<br>Mechanical feed error or timing error. | |
| 239.03 | Device controls response error (external duplex)<br>Mechanical feed error or timing error. | |
| 239.04 | Input device ready response error (external duplex)<br>Mechanical feed error or timing error. | |
| 239.05 | Output device response error (external duplex)<br>Mechanical feed error or timing error. | |
| 239.06 | Failed the last page of a staple job (external duplex)<br>Mechanical feed error or timing error. | |
| 239.07 | Select output device error (external duplex)<br>Mechanical feed error or timing error. | |
| 239.08 | Input source ready error (external duplex)<br>Mechanical feed error or timing error. | |

| Error code | Description | Action |
|---|---|---|
| 239.11 | Sensor (input) late jam from duplex (external duplex)<br>Media is late reaching the sensor (input) within the specified time during the second side printing using the external duplex. | Go to **"Sensor (input) late jam service check" on page 70**. |

## Sensor (duplex double-feed) late jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove, and then properly reinstall the external duplex assembly.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Open and then properly close the rear door of the external duplex.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check all cable connections on the external duplex assembly. If necessary, reconnect the cables.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (duplex exit) late jam (external duplex only) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Properly reinstall media.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Remove, and then properly reinstall the external duplex assembly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Open and then properly close the rear door of the external duplex.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check sensor (duplex exit) for proper operation, and if necessary replace the sensor. See **"Sensor (duplex exit) service check (external duplex only)" on page 113**.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check all cable connections on the external duplex assembly. If necessary, reconnect the cables or replace the external duplex assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (duplex exit) service check (external duplex only)

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the sensor (duplex exit) for damage, and if necessary, replace the external duplex unit assembly.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check if the display on the operator panel changes every time the sensing area of the media tray sensor (duplex exit) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex tests.<br>**c** Select Sensor test.<br>**d** Observe the line item “exit.”<br>If necessary, replace the connection or the external duplex unit assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (duplex double-feed) lingering jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Reinstall all media properly.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Remove, and then properly reinstall the external duplex assembly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the external duplex assembly, and if necessary, replace the external duplex assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (duplex exit) lingering jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Reinstall all media properly.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Remove, and then properly reinstall the external duplex assembly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check sensor (duplex exit) for proper operation, and if necessary replace the sensor. See **"Sensor (duplex exit) service check (external duplex only)" on page 113**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check the external duplex assembly, and if necessary, replace the external duplex assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Paper jam around external duplex service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Properly reinstall media.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Remove, and then properly reinstall the external duplex assembly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Open and then properly close the rear door of the external duplex.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Open and then properly close the external duplex tray.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Open and then properly close media tray 1.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Check the lower option drive (PTO) assembly for damage, and if necessary the lower option drive assembly.<br><br>Does the problem remain? | Go to step 9. | Problem is solved. |
| **Step 9**<br>Check all cable connections on the external duplex assembly. If necessary, reconnect the cables or replace the external duplex assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## External duplex sensor static jam service check (external duplex)

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Replace the external duplex assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (duplex exit) static jam service check (external duplex)

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check if the display on the operator panel changes every time the sensing area of the sensor (duplex exit) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex sensor tests.<br>**c** Select Sensor test.<br>**d** Observe the line item “exit.”<br>If necessary, replace the connection or replace the external duplex unit assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Mechanical feed error or timing error (external duplex) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the sensor (duplex input) for damage, and if necessary, replace the sensor (duplex input). See **“Sensor (duplex input) removal (T652, T654, T656)” on page 342**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check if the display on the operator panel changes every time the sensing area of the sensor (duplex input) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex sensor tests.<br>**c** Select Sensor test.<br>**d** Observe the line item “input.”<br>If necessary, replace the external duplex unit assembly (external duplex only) or the duplex input sensor assembly (internal duplex only). See **“T652, T654, and T656 duplex input sensor assembly removal” on page 319**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Check the sensor (duplex exit) for damage, and if necessary, replace the external duplex unit assembly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check if the display on the operator panel changes every time the sensing area of the sensor (duplex exit) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Duplex sensor tests.<br>**c** Select Sensor test.<br>**d** Observe the line item “exit.”<br>If necessary, replace the connection, the external duplex unit assembly, or the external duplex assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## External duplex assembly error (external duplex) service check

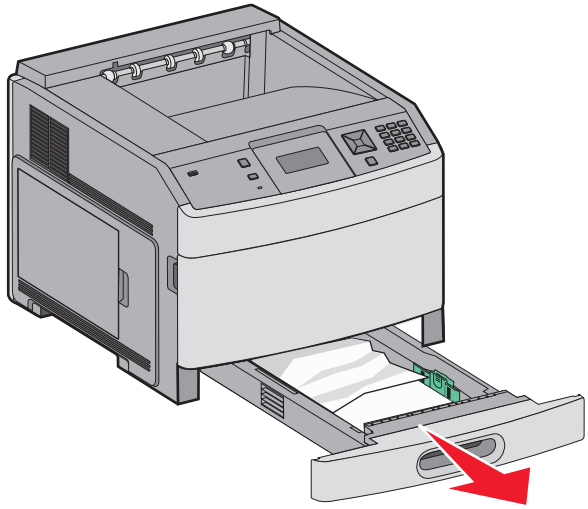
| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Reinstall all media properly.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Reinstall the external duplex assembly properly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Open and then close the rear door of the external duplex.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 6**<br>Check all cable connections on the external duplex assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check the external duplex assembly for damage, and if necessary, replace the external duplex assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

# How to clear 241-245 paper jams

## 241–245 paper jams

1 Pull out the tray indicated on the display.



2 Remove any jammed paper, and then insert the tray.

3 Press ✓.

4 If the jam message persists for a 250-sheet or 550-sheet tray, then remove the tray from the printer.

5 Remove the jammed paper, and then insert the tray.

6 Press ✓.

## 241 error messages

| Error code | Description | Action |
|---|---|---|
| 241.00 | Media tray 1 area jam<br>The media is jammed in the media tray 1 area. | Go to **"Tray area jam service check" on page 128**. |
| 241.01 | Pick motor control failure (media tray 1)<br>The pick motor does not reach the proper operating speed at the specified time. | Go to **"Tray pick motor load error service check" on page 130** |
| 241.06 | Sensor (input) late jam (tray 1 or MPF)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (input) late jam service check" on page 70**. |
| 241.07<br>241.08 | Pick motor load error (media tray 1)<br>The pick motor has failed or caused high mechanical load due to paper jam or bind. | Go to **"Tray pick motor load error service check" on page 130** |
| 241.10<br>241.11 | Sensor (input) late jam (tray 1)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (input) late jam service check" on page 70**. |
| 241.12<br>241.14<br>241.15 | Sensor (input) late jam (tray 1 or envelope feeder)<br>The media is late reaching the sensor (input) within the specified time. | |
| 241.16<br>241.18 | Sensor (input) late jam (tray 1)<br>The media is late reaching the sensor (input) within the specified time. | |
| 241.19 | Pick motor control failure (tray 1)<br>The pick motor does not reach the proper operating speed at the specified time. | Go to **"Tray pick motor load error service check" on page 130**. |
| 241.20 | Tray 1 pick motor lost encoder failure (tray 1)<br>The pick motor is not reporting pulses back to the engine. | Go to **"Tray pick motor lost encoder failure service check" on page 132**. |

## 242 error messages

| Error code | Description | Action |
|---|---|---|
| 242.00 | Media tray 2 area jam<br>The media is jammed in the media tray 2 area. | Go to **"Tray area jam service check" on page 128**. |
| 242.02 | Sensor (pass through) late jam (tray 2)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 242.03 | Sensor (pass through) late jam (tray 2)<br>The media is late reaching the sensor (pass through) within the specified time. | |
| 242.04 | Sensor (pass through) late jam (tray 2)<br>The media is late reaching the sensor (pass through) within the specified time. | |
| 242.05 | Sensor (pass through) late jam (tray 2)<br>The media is late reaching the sensor (pass through) within the specified time. | |
| 242.06 | Sensor (pass through) late jam (tray 2)<br>The media is late reaching the sensor (pass through) within the specified time. | |
| 242.08 | Sensor (pass through) lingering jam (tray 2)<br>Media reached the sensor (pass through) within the specified time, but did not clear it within the specified time. | Go to **"Sensor (pass through) lingering jam service check" on page 128**. |
| 242.09 | Sensor (input) late jam (tray 2)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 242.10 | Sensor (pass through) late jam (tray 2)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 242.13 | Sensor (pass through) static jam (tray 2)<br>Media remains on the sensor (input) during the warm-up sequence. | Go to **"Sensor (pass through) static jam service check" on page 130**. |
| 242.16 | Sensor (pass through) late jam (tray 2)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 242.17 | Media tray pulled jam (tray 2)<br>A media tray above the source tray was pulled during the printing process. | Go to **"Media tray pulled jam service check" on page 132**. |
| 242.18 | Pick retry timeout (tray 2)<br>Restart the printer. | N/A |
| 242.19 | Pick retry timeout (tray 2)<br>Restart the printer. | |

| Error code | Description | Action |
|---|---|---|
| 242.32 | Tray 2 pick motor overrun failure (tray 2)<br>The pick motor encoder continues to detect pulses after the motor was turned off. | Go to **"Tray pick motor lost encoder failure service check" on page 132**. |
| 242.33 | Tray 2 not ready (tray 2)<br>Tray was not properly pushed into the machine. | Go to **"Tray not ready service check" on page 133**. |
| 242.34 | Empty tray pick attempted (tray 2)<br>The pick arm attempted to pick with no media in the tray. | Go to **"Empty tray pick attempted service check" on page 133**. |
| 242.35 | Pick page received while POR not yet done (tray 2)<br>Media remains on the sensor (input) during the warm-up sequence. | Go to **"Sensor (pass through) static jam service check" on page 130**. |
| 242.36 | Sensor (pass through) static jam (tray 2)<br>Media remains on the sensor (input) during the warm-up sequence. | |
| 242.37 | Sensor (pass through) late jam (tray 2)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 242.39 | Media tray pulled jam<br>A media tray above the source tray was pulled during the printing process. | Go to **"Media tray pulled jam service check" on page 132**. |
| 242.40 | Sensor (pass through) lingering jam (tray 2)<br>Media reached the sensor (pass through) within the specified time, but did not clear it within the specified time. | Go to **"Sensor (pass through) lingering jam service check" on page 128**. |
| 242.49 | HCIT tray lift motor stalled failure (tray 2)<br>The HCIT tray lift motor has stalled or has become obstructed. | Go to **"HCIT tray lift motor stalled failure service check" on page 133**. |
| 242.50 | HCIT tray lift motor underspeed failure (tray 2)<br>The HCIT tray lift motor does not rotate at the specified speed. | |
| 242.52 | HCIT tray lift motor overrun failure (tray 2)<br>The HCIT tray lift motor continues to detect pulses after the motor has turned off. | |
| 242.65 | Pick motor load error (tray 2)<br>The pick motor has failed or caused high mechanical load due to paper jam or bind. | Go to **"Tray pick motor load error service check" on page 130**. |

| Error code | Description | Action |
|---|---|---|
| 242.66 | Pick motor underspeed error (tray 2)<br>The pick motor does not rotate at the specified speed. | Go to **"Tray pick motor control failure service check" on page 131**. |
| 242.67 | Pick motor overspeed error (tray 2)<br>The pick motor does not rotate at the specified speed. | |
| 242.68 | Pick motor stop error (tray 2)<br>Pick motor stop error detected by options tray x. | |
| 242.69 | Pick motor control failure (tray 2)<br>The pick motor does not reach the proper operating speed at the specified time. | |

## 243 error messages

| Error code | Description | Action |
|---|---|---|
| 243.00 | Media tray 3 area jam<br>The media is jammed in the media tray 3 area. | Go to **"Tray area jam service check" on page 128**. |
| 243.02 | Sensor (pass through) late jam (tray 3)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 243.03 | | |
| 243.04 | | |
| 243.05 | | |
| 243.06 | | |
| 243.08 | Sensor (pass through) lingering jam (tray 3)<br>Media reached the sensor (pass through) within the specified time, but did not clear it within the specified time. | Go to **"Sensor (pass through) lingering jam service check" on page 128**. |
| 243.09 | Sensor (input) late jam (tray 3)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 243.10 | Sensor (pass through) late jam (tray 3)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 243.13 | Sensor (pass through) static jam (tray 3)<br>Media remains on the sensor (input) during the warm-up sequence. | Go to **"Sensor (pass through) static jam service check" on page 130**. |
| 243.16 | Sensor (pass through) late jam (tray 3)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 243.17 | Media tray pulled jam (tray 3)<br>A media tray above the source tray was pulled during the printing process. | Go to **"Media tray pulled jam service check" on page 132**. |

| Error code | Description | Action |
|---|---|---|
| 243.18 | Pick retry timeout (tray 3) | N/A |
| 243.19 | The engine timed out waiting for the tray 3 to report ready before the first pick attempt. Thus, turn the machine off, and then turn it on. | |
| 243.33 | Tray 3 not ready (tray 3)<br>Tray was not properly pushed into the machine. | Go to **"Tray not ready service check" on page 133**. |
| 243.34 | Empty tray pick attempted (tray 3)<br>The pick arm attempted to pick with no media in the tray. | Go to **"Empty tray pick attempted service check" on page 133**. |
| 243.35 | Pick page received while POR not yet done (tray 3)<br>Media remains on the sensor (input) during the warm-up sequence. | Go to **"Sensor (pass through) static jam service check" on page 130**. |
| 243.36 | Sensor (pass through) static jam (tray 3)<br>Media remains on the sensor (input) during the warm-up sequence. | |
| 243.37 | Sensor (pass through) late jam (tray 3)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 243.39 | Media tray pulled jam<br>A media tray above the source tray was pulled during the printing process. | Go to **"Media tray pulled jam service check" on page 132**. |
| 243.40 | Sensor (pass through) lingering jam (tray 3)<br>Media reached the sensor (pass through) within the specified time, but did not clear it within the specified time. | Go to **"Sensor (pass through) lingering jam service check" on page 128**. |
| 243.49 | HCIT tray lift motor stalled failure (tray 3)<br>The HCIT tray lift motor has stalled or has become obstructed. | Go to **"HCIT tray lift motor stalled failure service check" on page 133**. |
| 243.50 | HCIT tray lift motor underspeed failure (tray 3)<br>The HCIT tray lift motor does not rotate at the specified speed. | |
| 243.52 | HCIT tray lift motor overrun failure (tray 3)<br>The HCIT tray lift motor continues to detect pulses after the motor has turned off. | |
| 243.65 | Pick motor load error (tray 3)<br>The pick motor has failed or caused high mechanical load due to paper jam or bind. | Go to **"Tray pick motor load error service check" on page 130**. |

| Error code | Description | Action |
|---|---|---|
| 243.66 | Pick motor underspeed error (tray 3)<br>The pick motor does not rotate at the specified speed. | Go to **"Tray pick motor control failure service check" on page 131**. |
| 243.67 | Pick motor overspeed error (tray 3)<br>The pick motor does not rotate at the specified speed. | |
| 243.68 | Pick motor stop error (tray 3)<br>Pick motor stop error detected by options tray x. | |
| 243.69 | Pick motor control failure (tray 3)<br>The pick motor does not reach the proper operating speed at the specified time. | |

## 244 error messages

| Error code | Description | Action |
|---|---|---|
| 244.00 | Media tray 4 area jam<br>The media is jammed in the media tray 4 area. | Go to **"Tray area jam service check" on page 128**. |
| 244.02 | Sensor (pass through) late jam (tray 4)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 244.03 | | |
| 244.04 | | |
| 244.05 | | |
| 244.06 | | |
| 244.08 | Sensor (pass through) lingering jam (tray 4)<br>Media reached the sensor (pass through) within the specified time, but did not clear it within the specified time. | Go to **"Sensor (pass through) lingering jam service check" on page 128**. |
| 244.09 | Sensor (input) late jam (tray 4)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 244.10 | Sensor (pass through) late jam (tray 4)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 244.13 | Sensor (pass through) static jam (tray 4)<br>Media remains on the sensor (input) during the warm-up sequence. | Go to **"Sensor (pass through) static jam service check" on page 130**. |
| 244.16 | Sensor (pass through) late jam (tray 4)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 244.17 | Media tray pulled jam (tray 4)<br>A media tray above the source tray was pulled during the printing process. | Go to **"Media tray pulled jam service check" on page 132**. |

| Error code | Description | Action |
|---|---|---|
| 244.18<br>244.19 | Pick retry timeout (tray 4)<br>The engine timed out waiting for the tray 4 to report ready before the first pick attempt. Thus, turn the machine off, and then turn it on. | N/A |
| 244.33 | Tray 4 not ready (tray 4)<br>Tray was not properly pushed into the machine. | Go to **"Tray not ready service check" on page 133**. |
| 244.34 | Empty tray pick attempted (tray 4)<br>The pick arm attempted to pick with no media in the tray. | Go to **"Empty tray pick attempted service check" on page 133**. |
| 244.35 | Pick page received while POR not yet done (tray 4)<br>Media remains on the sensor (input) during the warm-up sequence. | Go to **"Sensor (pass through) static jam service check" on page 130**. |
| 244.36 | Sensor (pass through) static jam (tray 4)<br>Media remains on the sensor (input) during the warm-up sequence. | |
| 244.37 | Sensor (pass through) late jam (tray 4)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 244.39 | Media tray pulled jam<br>A media tray above the source tray was pulled during the printing process. | Go to **"Media tray pulled jam service check" on page 132**. |
| 244.40 | Sensor (pass through) lingering jam (tray 4)<br>Media reached the sensor (pass through) within the specified time, but did not clear it within the specified time. | Go to **"Sensor (pass through) lingering jam service check" on page 128**. |
| 244.49 | HCIT tray lift motor stalled failure (tray 4)<br>The HCIT tray lift motor has stalled or has become obstructed. | Go to **"HCIT tray lift motor stalled failure service check" on page 133**. |
| 244.50 | HCIT tray lift motor underspeed failure (tray 4)<br>The HCIT tray lift motor does not rotate at the specified speed. | |
| 244.52 | HCIT tray lift motor overrun failure (tray 4)<br>The HCIT tray lift motor continues to detect pulses after the motor has turned off. | |
| 244.65 | Pick motor load error (tray 4)<br>The pick motor has failed or caused high mechanical load due to paper jam or bind. | Go to **"Tray pick motor load error service check" on page 130**. |

| Error code | Description | Action |
|---|---|---|
| 244.66 | Pick motor underspeed error (tray 4)<br>The pick motor does not rotate at the specified speed. | Go to **"Tray pick motor control failure service check" on page 131**. |
| 244.67 | Pick motor overspeed error (tray 4)<br>The pick motor does not rotate at the specified speed. | |
| 244.68 | Pick motor stop error (tray 4)<br>Pick motor stop error detected by options tray x. | |
| 244.69 | Pick motor control failure (tray 4)<br>The pick motor does not reach the proper operating speed at the specified time. | |

## 245 error messages

| Error code | Description | Action |
|---|---|---|
| 245.00 | Media tray 5 area jam<br>The media is jammed in the media tray 5 area. | Go to **"Tray area jam service check" on page 128**. |
| 245.02 | Sensor (pass through) late jam (tray 5)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 245.03 | | |
| 245.04 | | |
| 245.05 | | |
| 245.06 | | |
| 245.08 | Sensor (pass through) lingering jam (tray 5)<br>Media reached the sensor (pass through) within the specified time, but did not clear it within the specified time. | Go to **"Sensor (pass through) lingering jam service check" on page 128**. |
| 245.09 | Sensor (input) late jam (tray 5)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 245.10 | Sensor (pass through) late jam (tray 5)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 245.13 | Sensor (pass through) static jam (tray 5)<br>Media remains on the sensor (input) during the warm-up sequence. | Go to **"Sensor (pass through) static jam service check" on page 130**. |
| 245.16 | Sensor (pass through) late jam (tray 5)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 245.17 | Media tray pulled jam (tray 5)<br>A media tray above the source tray was pulled during the printing process. | Go to **"Media tray pulled jam service check" on page 132**. |

| Error code | Description | Action |
|---|---|---|
| 245.18 | Pick retry timeout (tray 5) | N/A |
| 245.19 | The engine timed out waiting for the tray 5 to report ready before the first pick attempt. Thus, turn the machine off, and then turn it on. | |
| 245.33 | Tray 5 not ready (tray 5)<br>Tray was not properly pushed into the machine. | Go to **"Tray not ready service check" on page 133**. |
| 245.34 | Empty tray pick attempted (tray 5)<br>The pick arm attempted to pick with no media in the tray. | Go to **"Empty tray pick attempted service check" on page 133**. |
| 245.35 | Pick page received while POR not yet done (tray 5)<br>Media remains on the sensor (input) during the warm-up sequence. | Go to **"Sensor (pass through) static jam service check" on page 130**. |
| 245.36 | Sensor (pass through) static jam (tray 5)<br>Media remains on the sensor (input) during the warm-up sequence. | |
| 245.37 | Sensor (pass through) late jam (tray 5)<br>The media is late reaching the sensor (pass through) within the specified time. | Go to **"Sensor (pass through) late jam service check" on page 101**. |
| 245.39 | Media tray pulled jam<br>A media tray above the source tray was pulled during the printing process. | Go to **"Media tray pulled jam service check" on page 132**. |
| 245.40 | Sensor (pass through) lingering jam (tray 5)<br>Media reached the sensor (pass through) within the specified time, but did not clear it within the specified time. | Go to **"Sensor (pass through) lingering jam service check" on page 128**. |
| 245.49 | HCIT tray lift motor stalled failure (tray 5)<br>The HCIT tray lift motor has stalled or has become obstructed. | Go to **"HCIT tray lift motor stalled failure service check" on page 133**. |
| 245.50 | HCIT tray lift motor underspeed failure (tray 5)<br>The HCIT tray lift motor does not rotate at the specified speed. | |
| 245.52 | HCIT tray lift motor overrun failure (tray 5)<br>The HCIT tray lift motor continues to detect pulses after the motor has turned off. | |
| 245.65 | Pick motor load error (tray 5)<br>The pick motor has failed or caused high mechanical load due to paper jam or bind. | Go to **"Tray pick motor load error service check" on page 130**. |

| Error code | Description | Action |
|---|---|---|
| 245.66 | Pick motor underspeed error (tray 5)<br>The pick motor does not rotate at the specified speed. | Go to **"Tray pick motor control failure service check" on page 131**. |
| 245.67 | Pick motor overspeed error (tray 5)<br>The pick motor does not rotate at the specified speed. | |
| 245.68 | Pick motor stop error (tray 5)<br>Pick motor stop error detected by options tray x. | |
| 245.69 | Pick motor control failure (tray 5)<br>The pick motor does not reach the proper operating speed at the specified time. | |

## Tray area jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Properly reinstall media.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (pass through) lingering jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Replace the media or change the media size setup in all the trays.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Remove obstructions in the media tray pass through areas.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Check if the display on the operator panel changes every time the sensing area of the media tray sensor (pass through) is interrupted or blocked.<br>**a** Enter the Diagnostic mode.<br>**b** Select **Input tray tests**.<br>**c** Select **Sensor test**.<br>**d** Select the appropriate tray number.<br>**e** Observe the line item, “pass through,” for the appropriate media tray.<br>If necessary, replace the connection or the sensor. Go to **“250-sheet tray controller card assembly removal” on page 364**.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Perform a print test and check the main motor assembly if media is properly transported through the pass through areas of the media trays. If necessary, replace the main drive motor assembly. Go to **“Main drive motor assembly removal” on page 276**.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |
| **Step 5**<br>Perform a print test using the appropriate input tray, and if necessary, replace the input option.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Sensor (pass through) static jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove any prestaged or jammed media in the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check if the display on the operator panel changes every time the sensing area of the media tray sensor (pass through) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Input tray tests.<br>**c** Select Sensor test.<br>**d** Select the appropriate tray number.<br>**e** Observe the line item "pass through" for the appropriate media tray.<br>If necessary, replace the connection or the sensor. See **"250-sheet tray controller card assembly removal" on page 364**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Perform a print test using the appropriate input tray, and if necessary, replace the input option.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Tray pick motor load error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove excess media from tray 1.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check, clean or replace the pick rolls for wear and excess contamination. See **"Pick arm assembly removal" on page 322**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Check all connections on the pick arm assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check all connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Replace the pick arm assembly. See **"Pick arm assembly removal" on page 322**.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Replace the system card assembly. See **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Tray pick motor control failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove excess media from tray 1.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check all connections on the pick arm assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check all connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 5**<br>Replace the pick arm assembly. See **"Pick arm assembly removal" on page 322**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Replace the system card assembly. See **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Tray pick motor lost encoder failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all connections on the pick arm assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check all connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the pick arm assembly. See **"Pick arm assembly removal" on page 322**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Media tray pulled jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove all media present in the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Close all media trays.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Tray not ready service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the size sensing fingers on the media tray for damage, and if necessary, replace the media tray assembly.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the switch (media size) for proper connection, and if necessary, replace the switch (media size). See **"Switch (media size) assembly removal " on page 284**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Empty tray pick attempted service check

| Action | Yes | No |
|---|---|---|
| Check the media out actuator for damage, and if necessary, replace the media out actuator. See **"Tray roller catch assembly removal" on page 344**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

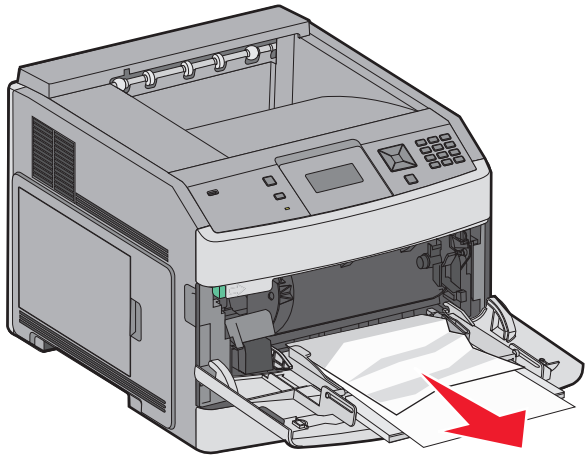
## HCIT tray lift motor stalled failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Properly insert the HCIT media tray assembly into the machine.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the HCIT tray lift motor assembly for binding or damage, and if necessary, replace the HCIT tray lift drive motor assembly. Go to **"High capacity input tray (HCIT) tray lift drive motor assembly removal" on page 384**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

# How to clear 250 paper jams

## 250 paper jam

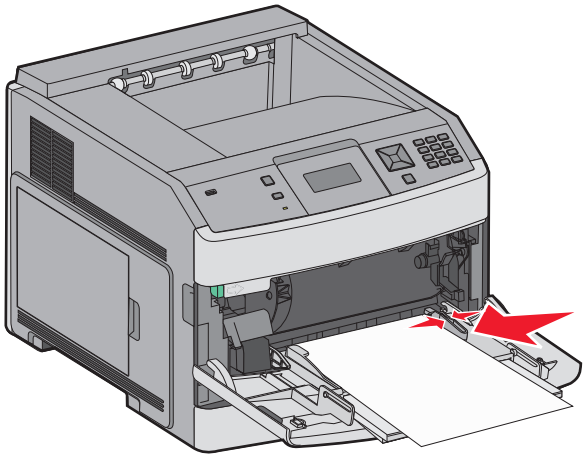
1 Remove the paper from the multipurpose feeder.



2 Flex the sheets of paper back and forth to loosen them, and then fan them. Do not fold or crease the paper. Straighten the edges on a level surface.

3 Load the paper into the multipurpose feeder.

4 Slide the paper guide toward the inside of the tray until it lightly rests against the edge of the paper.



5 Press ✓.

### 250 error messages

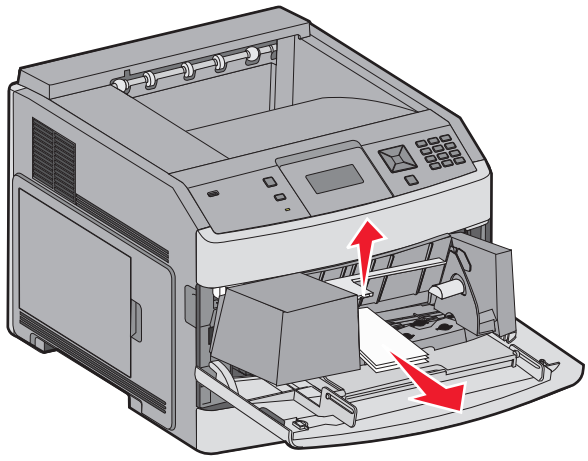
| Error code | Description | Action |
|---|---|---|
| 250.00 | MPF area jam<br>The media is jammed in the media tray 5 area. | Go to **"Sensor (input) service check" on page 67**. |
| 250.03<br>250.06<br>250.07<br>250.08<br>250.09<br>250.10<br>250.11 | Sensor (input) late jam (MPF)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (input) late jam service check" on page 70**. |

## How to clear 260 paper jams

### 260 paper jam

The envelope feeder feeds envelopes from the bottom of the stack; the bottom envelope will be the one that is jammed.

1. Lift the envelope weight, and then remove all the envelopes.



2. If the jammed envelope has entered the printer and cannot be pulled out, then lift the envelope feeder up and then out of the printer, and then set it aside.
3. Remove the envelope from the printer.

   **Note:** If you cannot remove the envelope, then the print cartridge will have to be removed. For more information, see **"200 and 201 paper jams" on page 59**.
4. Reinstall the envelope feeder. Make sure it *snaps* into place.
5. Flex and stack the envelopes.
6. Load the envelopes in the envelope feeder.

7 Adjust the paper guide.

8 Lower the envelope weight.

9 Press ✓.

## 260 error messages

| Error code | Description | Action |
|---|---|---|
| 260.00 | Envelope feeder area jam<br>The media is jammed in the envelope feeder area. | Go to **"Envelope feeder area jam service check" on page 137**. |
| 260.01<br>260.02 | Envelope feeder assembly error<br>Mechanical feed error or timing error. | Go to **"Envelope feeder assembly error service check" on page 138**. |
| 260.05 | Sensor (envelope feeder pass through) lingering jam (envelope feeder)<br>The media reached the sensor (envelope feeder pass through), but did not clear it in the specified time. | Go to **"Sensor (envelope feeder pass through) lingering jam (envelope feeder) service check" on page 138**. |
| 260.06 | Sensor (envelope feeder pass through) late jam (envelope feeder)<br>The media is late reaching the sensor (envelope feeder pass through) within the specified time. | Go to **"Sensor (envelope feeder pass through) late jam (envelope feeder) service check" on page 139**. |
| 260.07<br>260.10<br>260.11<br>260.12 | Sensor (input) late jam (envelope feeder)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (input) late jam service check" on page 70**. |
| 260.13 | sensor (envelope feeder pass through) static jam<br>Media remains on the sensor (envelope feeder pass through) during the warm-up sequence. | Go to **"Sensor (envelope feeder pass through) static jam service check" on page 140**. |
| 260.14<br>260.15<br>260.16 | Sensor (input) late jam (envelope feeder)<br>The media is late reaching the sensor (input) within the specified time. | Go to **"Sensor (input) late jam service check" on page 70**. |

## Envelope feeder area jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove the envelope feeder.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Properly reinstall media.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the sensor (input) for damage, and if necessary, replace the sensor (input). See **“Sensor (input) removal ” on page 298**.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check if the display on the operator panel changes every time the sensing area of the above sensor is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Base sensor test.<br>**c** Observe the line item “input.”<br>If necessary, then replace the sensor (input).<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Check the above sensor for proper connection, and if necessary, replace the connection.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Envelope feeder assembly error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove the envelope feeder.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Properly reinstall media.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Properly install the envelope feeder assembly.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check all connections on the envelope feeder assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Replace the envelope feeder assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (envelope feeder pass through) lingering jam (envelope feeder) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove the envelope feeder.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Remove obstructions in the media path.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Properly install the envelope feeder assembly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check all connections on the envelope feeder assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Replace the envelope feeder assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (envelope feeder pass through) late jam (envelope feeder) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove the envelope feeder.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Remove excess media from the envelope feeder.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the envelope feeder pick roll for wear and excess contamination. If necessary, clean or replace the pick roll.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check all connections on the envelope feeder assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 6**<br>Check all connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 7. | Problem is solved. |
| **Step 7**<br>Replace the envelope feeder assembly.<br><br>Does the problem remain? | Go to step 8. | Problem is solved. |
| **Step 8**<br>Replace the system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

### Sensor (envelope feeder pass through) static jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove the envelope feeder.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove all media present in media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the envelope feeder assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## How to clear 270 paper jams

### 271–279 paper jams

To clear a jam in the output expander, high-capacity output stacker, the 5-bin mailbox, or the StapleSmart II Finisher:

1. If the paper is exiting into a bin, then pull the paper straight out, and then press .

   If not, then continue with step 2.
2. Pull down the output bin door or doors.
3. Remove the jammed paper.

4 Close the output bin door or doors.

5 Press ✓.

## 270 error messages

| Error code | Description | Action |
|---|---|---|
| 271.03 | Sensor (output pass through) lingering jam (high capacity output and output expander)<br>The media reached the sensor (output pass through) but did not clear it in the specified time. | Go to **"Sensor (output pass through) lingering jam service check" on page 142**. |
| 271.04 | Sensor (output pass through) late jam (high capacity output and output expander)<br>The media is late reaching the sensor (output pass through) within the specified time. | Go to **"Sensor (output pass through) late jam service check" on page 160**. |
| 271.05 | Sensor (output pass through) lingering jam (high capacity output and output expander)<br>The media reached the sensor (output pass through) but did not clear it in the specified time. | Go to **"Sensor (output pass through) lingering jam service check" on page 142**. |
| 27x.14 | Sensor (output pass through) static jam (high capacity stacker, mailbox, offset stacker, and output expander)<br>Media remains on the sensor (output pass through) during the warmup sequence. | Go to **"Sensor (output pass through and mailbox empty) static jam service check" on page 144**. |
| 27x.14 | Sensor (mailbox empty) static jam<br>Media remains on the sensor (mailbox empty) during the warm up sequence. | |
| 27x.15 | Sensor (output pass through) static jam (high capacity stacker, mailbox, offset stacker, and output expander)<br>Media remains on the sensor (output pass through) during the warmup sequence. | |
| 27x.15 | Sensor (mailbox empty) static jam<br>Media remains on the sensor (mailbox empty) during the warm up sequence. | |
| 27x.29 | Sensor (output pass through) lingering jam (high capacity stacker, mailbox, offset stacker, and output expander)<br>The media reached the sensor (output pass through) but did not clear it in the specified time. | Go to **"Sensor (output pass through) lingering jam service check" on page 142**. |
| 27x.50 | Sensor (output pass through) lingering jam (mailbox)<br>The media reached the sensor (output pass through) but did not clear it in the specified time. | |

| Error code | Description | Action |
|---|---|---|
| 27x.50 | Left tamper does not leave home position failure (offset stacker)<br>The sensor (left tamper HP) does not detect that the tamper has moved from home position. | Go to **"Left tamper does not leave home position failure (offset stacker) service check" on page 145**. |
| 27x.51 | Sensor (output pass through) late jam (mailbox)<br>The media is late reaching the sensor (output pass through) within the specified time. | Go to **"Sensor (output pass through) late jam service check" on page 160**. |
| 27x.52 | Sensor (mailbox empty) lingering jam<br>The media reached the sensor (mailbox empty) but did not clear it in the specified time. | Go to **"Sensor (mailbox empty) lingering jam service check" on page 145**. |
| 27x.53 | Sensor (mailbox empty) late jam<br>The media is late reaching the sensor (mailbox empty) within the specified time. | Go to **"Sensor (mailbox empty) late jam service check" on page 146**. |
| 27x.54 | Sensor (output pass through) lingering jam (mailbox)<br>The media reached the sensor (output pass through) but did not clear it in the specified time. | Go to **"Sensor (output pass through) lingering jam service check" on page 142**. |
| 27x.55 | Sensor (mailbox empty) lingering jam<br>The media reached the sensor (mailbox empty) but did not clear it in the specified time. | Go to **"Sensor (mailbox empty) lingering jam service check" on page 145**. |
| 27x.58 | Sensor (output pass through) late jam (mailbox, high capacity stacker, offset stacker, and output expander)<br>The media is late reaching the sensor (output pass through) within the specified time. | Go to **"Sensor (output pass through) late jam service check" on page 160**. |

## Sensor (output pass through) lingering jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove, and then reinstall the output option.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove obstructions between the sensor (output pass through) machine and the media bin in the media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Check if the display on the operator panel changes every time the sensing area of the sensor (output pass through) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Output bin tests.<br>**c** Select Sensor test.<br>**d** Select Output bin x.<br>**e** Observe the line item “passthru.”<br>If possible, replace the sensor. Go to **“Sensor (high capacity stacker pass through) removal” on page 402**, **“Sensor (5-bin mailbox pass through) removal” on page 350**, or **“Sensor (output expander pass through) removal” on page 431**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the above sensor for proper connection, and if necessary, replace the connection.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Perform a print test using the output option. If necessary, replace the output option.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (output pass through and mailbox empty) static jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove any prestaged or jammed media from the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check if the display on the operator panel changes every time the sensing areas of the sensor (output pass through) is interrupted or blocked.<br>**a** Enter Diagnostic mode.<br>**b** Select Output bin tests.<br>**c** Select Sensor test.<br>**d** Select Output bin x<br>**e** Observe the line item “passthru.”<br>If necessary, replace the connection or the sensor (output pass through). Go to **“Sensor (high capacity stacker pass through) removal” on page 402**, **“Sensor (5-bin mailbox pass through) removal” on page 350**, **“Sensor (output expander pass through) removal” on page 431**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Perform a print test using the output option.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check if the display on the operator panel changes every time the sensing areas of the sensor (mailbox empty) is interrupted or blocked.<br>**a** Enter Diagnostic mode.<br>**b** Select Output bin tests.<br>**c** Select Sensor test.<br>**d** Select Output bin x<br>**e** Observe the line item “passthru.”<br>If necessary, replace the connection or the sensor (output pass through). Go to **“Sensor (5-bin mailbox media bin empty) removal” on page 352**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Perform a print test using the mailbox.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Left tamper does not leave home position failure (offset stacker) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all the connections on the output option controller card, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the tamper drive belt for damage, and if necessary, replace the tamper drive belt.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the left tamper motor assembly for damage, and if necessary, replace the left tamper motor assembly. Go to **"SFP stapler assembly tamper drive motor assembly removal" on page 442**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the sensor (tamper HP), and if necessary, replace the sensor. Go to **"Sensor (SFP stapler assembly tamper HP left and right) removal" on page 447**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Replace the output option.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (mailbox empty) lingering jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove, and then reinstall the output option.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove obtructions between the sensor (mailbox empty) and the media bin in the media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Check if the display on the operator panel changes every time the sensing areas of the sensor (mailbox empty) is interrupted or blocked.<br>**a** Enter Diagnostic mode.<br>**b** Select Output bin tests.<br>**c** Select Sensor test.<br>**d** Select Output bin x<br>**e** Observe the line item “passthru.”<br>If necessary, replace the connection or the sensor (output pass through). Go to **“Sensor (5-bin mailbox media bin empty) removal” on page 352**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Perform a print test using the output option.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (mailbox empty) late jam service check

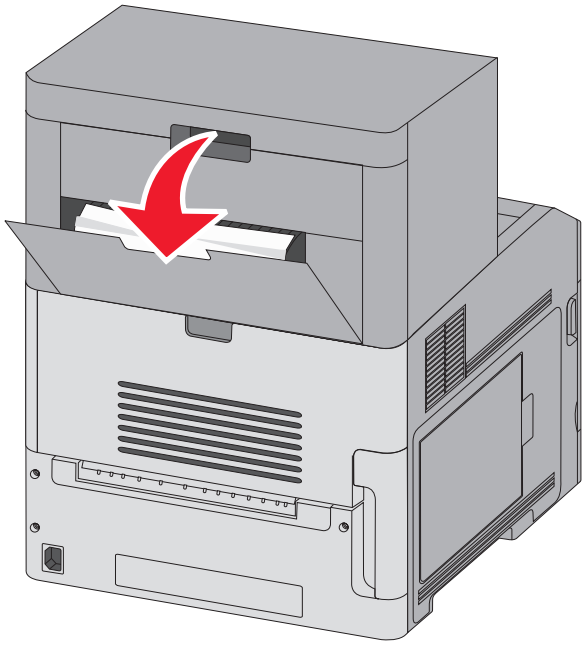
| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove, and then reinstall the output option.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove obstructions in the media path between the base machine and the output option.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Check if the display on the operator panel changes every time the sensing areas of the sensor (mailbox empty) is interrupted or blocked.<br>**a** Enter Diagnostic mode.<br>**b** Select Output bin tests.<br>**c** Select Sensor test.<br>**d** Select Output bin x<br>**e** Observe the line item “mailbox empty.”<br>If necessary, replace the connection or the sensor (mailbox empty). Go to **“Sensor (5-bin mailbox media bin empty) removal” on page 352**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Perform a print test using the output option.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

# How to clear 280 paper jams

## 280 paper jams

**1** Pull down the StapleSmart II Finisher door.



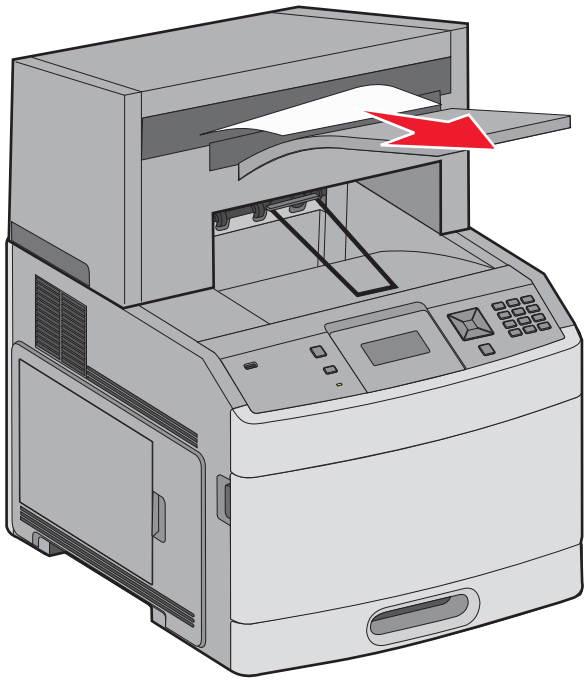
**2** Remove the jammed paper.

3 Close the StapleSmart II Finisher door.

4 Press ✓.

## 281 paper jam

1 Clear the jam from the stapler output bin.

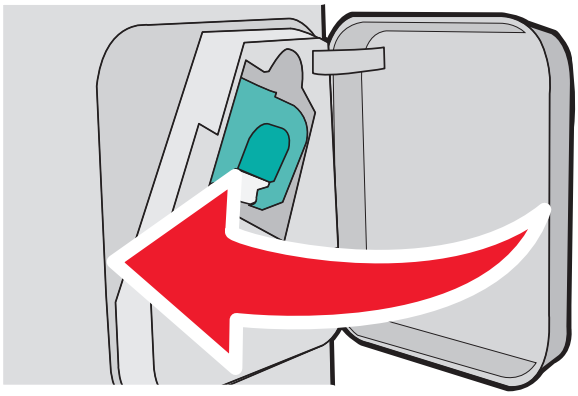


2 Press ✓.

## 282 paper jam

To prevent paper jams, the stapler motor does not run when the stapler door is open.

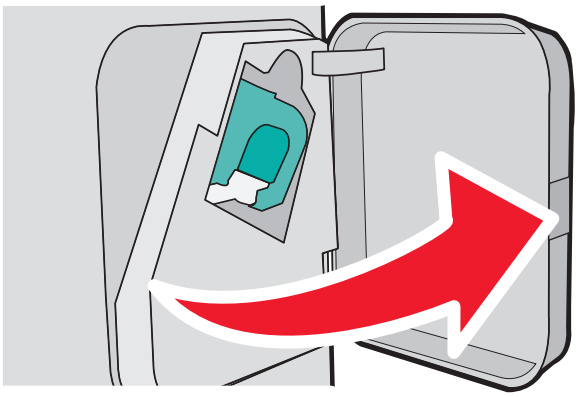
1 Close the stapler door until it *clicks* into place.



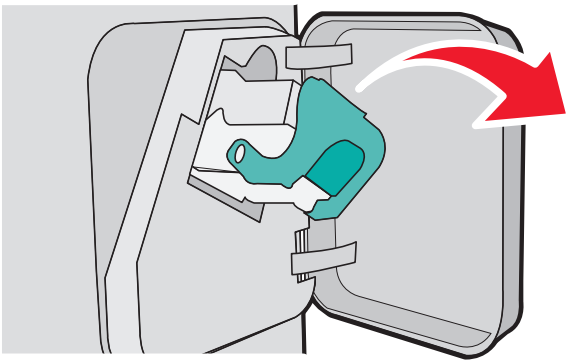
2 Press ✓.

## 283 staple jam

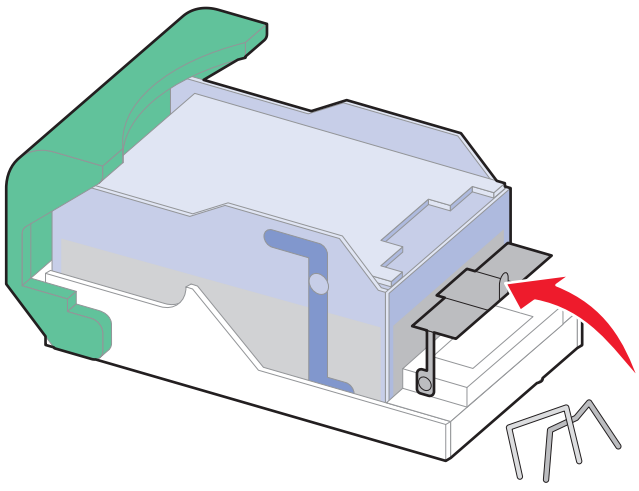
1 Press the latch to open the stapler door.



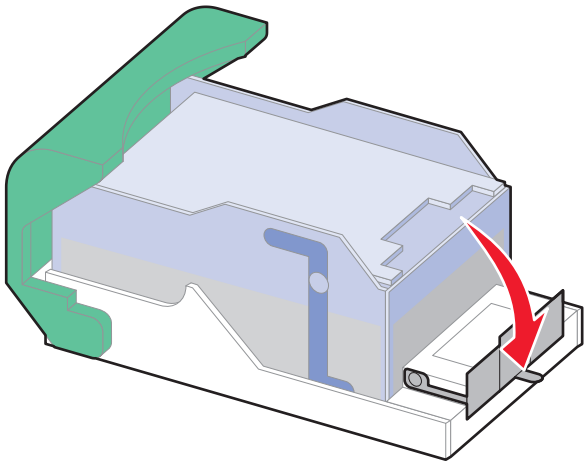
2 Pull the latch of the staple cartridge holder down, and then pull the holder out of the printer.



3 Use the metal tab to lift the staple guard, and then remove any loose staples.



**4** Press down on the staple guard until it *snaps* into place.



**5** Push the cartridge holder firmly back into the stapler unit until the cartridge holder *clicks* into place.

**6** Close the stapler door.

**7** Press ✓.

## 280 error messages

| Error code | Description | Action |
|---|---|---|
| 28x.25 | Invalid ejector motor manager status (staple finisher)<br>A software failure has occurred with the output option. | Go to **"Invalid ejector motor manager status (staple finisher) service check" on page 155**. |
| 28x.26 | Timer 0 overflow (1 ms timer did not get serviced for an entire 1 ms) (staple finisher)<br>A software failure has occurred with the output option. | |
| 28x.27 | Invalid paddle motor manager status (staple finisher)<br>A software failure has occurred with the output option. | |
| 28x.28 | Invalid main motor manager state (staple finisher)<br>A software failure has occurred with the output option. | |
| 28x.29 | Sensor (stapler pass through) lingering jam (staple finisher)<br>The media reached the sensor (stapler pass through) but did not clear it in the specified time. | Go to **"Sensor (stapler pass through) lingering jam service check" on page 156**. |
| 28x.30 | Page ID complete not clear (staple finisher)<br>A software failure has occurred with the output option. | Go to **"Invalid ejector motor manager status (staple finisher) service check" on page 155**. |

| Error code | Description | Action |
|---|---|---|
| 28x.31 | Transport motor encoder not detected (staple finisher)<br>The output option transport motor encoder is not detected upon startup. | Go to **"Transport motor encoder not detected (staple finisher) service check" on page 157**. |
| 28x.32 | Transport motor encoder not detected (staple finisher)<br>The transport motor encoder detection is lost during normal operation. | |
| 28x.33 | Transport motor encoder not detected (staple finisher)<br>The transport motor rotate at the specified speed | |
| 28x.34 | | |
| 28x.35 | Sensor (self priming) late failure (staple finisher)<br>The sensor (self priming) within the stapler assembly does not detect a ready staple in the specified time. | Go to **"Sensor (self priming) late failure (staple finisher) service check" on page 157**. |
| 28x.36 | Stapler drive motor jammed (staple finisher)<br>The stapler assembly has jammed while stapling or the stapler drive motor has failed. | |
| 28x.37 | Invalid tamper motor manager status (staple finisher)<br>A software failure has occurred with the output option. | Go to **"Invalid ejector motor manager status (staple finisher) service check" on page 155**. |
| 28x.38 | Staple ready home position jam (staple finisher)<br>The sensor (self priming) within the stapler assembly does not detect a ready staple in the specified time after the staple job was sent. | Go to **"Sensor (self priming) late failure (staple finisher) service check" on page 157**. |
| 28x.39 | Staple ready home position jam (staple finisher)<br>The sensor (self priming) within the stapler assembly does not detect a ready staple in the specified time during mechanical reset. | |

| Error code | Description | Action |
|---|---|---|
| 28x.40 | Left tamper does not leave home position failure (staple finisher)<br>The sensor (left tamper HP) does not detect that the tamper has moved from home position. | Go to **"Sensor (mailbox empty) lingering jam service check" on page 145**. |
| 28x.41 | Left tamper does not move to home position failure (staple finisher)<br>The sensor (left tamper HP) does not detect that the tamper has reached home position. | |
| 28x.42 | Right tamper does not leave home position failure (staple finisher)<br>The sensor (right tamper HP) does not detect that the tamper has reached home position. | |
| 28x.43 | Right tamper does not move to home position failure (staple finisher)<br>The sensor (right tamper HP) does not detect that the tamper has reached home position. | |
| 28x.44 | Eject home position jam (staple finisher)<br>The sensor (eject HP) does not detect that the eject mechanism is operating. | Go to **"Transport motor encoder not detected (staple finisher) service check" on page 157**. |
| 28x.45 | Eject home position jam (staple finisher)<br>The sensor (eject HP) does not detect the home position upon completion of normal media eject operation. | |
| 28x.46 | Paddle home position jam (staple finisher)<br>The sensor (paddle HP) does not detect that the paddle is operating. | Go to **"Paddle home position jam (staple finisher) service check" on page 158**. |
| 28x.47 | Paddle home position jam (staple finisher)<br>The sensor (paddle HP) does not detect the home position upon completion of normal paddle operation. | |
| 28x.48 | Deflector gate transition to output option not detected (staple finisher)<br>The sensor (deflector gate HP) does not detect transition of the deflector gate to the output option. | Go to **"Deflector gate transition to output option not detected (staple finisher) service check" on page 158**. |
| 28x.49 | Deflector gate transition to standard bin not detected (staple finisher)<br>The sensor (deflector gate HP) does not detect transition of the deflector gate to the standard bin. | |

| Error code | Description | Action |
|---|---|---|
| 28x.50 | Left tamper home position jam (staple finisher)<br>The left tamper home position is not detected by the sensor (left tamper HP). | Go to **"Sensor (mailbox empty) lingering jam service check" on page 145**. |
| 28x.51 | Right tamper home position jam (staple finisher)<br>The left tamper home position is not detected by the sensor (right tamper HP). | |
| 28x.52 | Paddle control motor timer error (staple finisher)<br>A software failure has occurred with the output option. | Go to **"Transport motor encoder not detected (staple finisher) service check" on page 157**. |
| 28x.53 | Eject motor encoder not detected (staple finisher)<br>The eject motor encoder is not detected upon startup. | |
| 28x.54 | Eject motor encoder not detected (staple finisher)<br>The eject motor encoder detection is lost during normal operation. | |
| 28x.55 | Eject motor overspeed failure (staple finisher)<br>The eject motor rotate at the specified speed. | |
| 28x.56 | Eject motor underspeed failure (staple finisher)<br>The eject motor rotate at the specified speed. | |
| 28x.57 | Sensor (stapler pass through) static jam (staple finisher)<br>Media remains on the sensor (stapler pass through) during the warmup sequence. | Go to **"Sensor (stapler pass through) lingering jam service check" on page 156**. |
| 28x.58 | Sensor (stapler pass through) late jam (staple finisher)<br>The media is late reaching the sensor (stapler pass through) within the specified time. | Go to **"Sensor (output pass through) late jam service check" on page 160**. |
| 28x.59 | Staple ready home position jam (staple finisher)<br>The sensor (self priming) within the stapler assembly does not detect a ready staple in the specified time after the staple job was sent. | Go to **"Sensor (self priming) late failure (staple finisher) service check" on page 157**. |

| Error code | Description | Action |
|---|---|---|
| 28x.60 | The status of stapler motor is not defined (staple finisher)<br>A software failure has occurred with the output option. | Go to **"Transport motor encoder not detected (staple finisher) service check" on page 157**. |
| 28x.61 | DMID command is not received for 500 ms after main motor runs (staple finisher)<br>A software failure has occurred with the output option. | |
| 28x.62 | When finishing job isn't completed yet, the first DMID command of the next job is received (staple finisher)<br>A software failure has occurred with the output option. | |
| 28x.63 | Bin clamp motor control timer error (staple finisher)<br>A software failure has occurred with the output option. | |
| 28x.64 | Bin clamp motor control timer error during tray holder initial (staple finisher)<br>A software failure has occurred with the output option. | |
| 28x.65 | Bin clamp home position jam (staple finisher)<br>The bin clamp home position is not detected by the sensor (bin clamp HP). | |
| 28x.66 | Bin clamp home position jam (staple finisher)<br>The sensor (bin clamp HP) does not detect that the bin clamp has moved from home position. | |
| 28x.67 | Invalid bin clamp manager state (staple finisher)<br>A software failure has occurred with the output option. | |

| Error code | Description | Action |
|---|---|---|
| 28x.68 | Staple ready home position jam (staple finisher)<br>The sensor (self priming) within the stapler assembly does not detect a ready staple prior to a staple job.<br>Staples empty. | Go to **"Sensor (self priming) late failure (staple finisher) service check" on page 157**. |
| 28x.69 | Staple ready home position jam (staple finisher)<br>The sensor (self priming) within the stapler assembly does not detect a ready staple in the specified time after the staple job was sent.<br>Staples not empty. | |
| 28x.70 | Stapler mechanism not in home position failure (staple finisher)<br>The sensor (home signal) within the stapler assembly detected that the stapler mechanism was not in the home position before stapling. | |
| 28x.71 | Deflector gate transition to standard bin not detected (staple finisher)<br>The sensor (deflector gate HP) does not detect transition of the deflector gate to the standard bin. | Go to **"Deflector gate transition to output option not detected (staple finisher) service check" on page 158**. |
| 28x.72 | Sensor (media in stapler) static jam (staple finisher)<br>Media remains on the sensor (media in stapler) during the warmup sequence. | Go to **"Sensor (media in stapler) static jam (staple finisher) service check" on page 161**. |

## Invalid ejector motor manager status (staple finisher) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off, and then turn on the printer.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Replace the staple finisher.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (stapler pass through) lingering jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove, and then reinstall the staple finisher.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove obstructions between the sensor (stapler pass through) machine and the media bin in the media path.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check if the display on the operator panel changes every time the sensing area of the sensor (stapler pass through) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Finisher test.<br>**c** Select Sensor test.<br>**d** Select pass & media.<br>**e** Observe the line item “passthru.”<br>If necessary, replace the connection.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the stapler unit assembly for damage. If necessary, replace the stapler unit assembly. Go to **“SFP stapler assembly stapler unit assembly removal” on page 444**.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Perform a print test using the staple finisher.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |
| **Step 6**<br>Check the staple finisher for damage. If necessary, replace the finisher.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Transport motor encoder not detected (staple finisher) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all connections on the staple finisher controller card for damage. If necessary, replace the connections.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the staple finisher for damage. If necessary, replace the finisher.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (self priming) late failure (staple finisher) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all connections on the staple finisher controller card and the stapler assembly for damage. If necessary, replace the connections.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check if you can remove the staple cartridge.<br><br>Can you remove it? | Go to step 3. | Go to step 5. |
| **Step 3**<br>Remove the staple cartridge and then check it for jammed staples. If necessary, remove the jammed staples.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Do the following:<br>**a** Remove the stapler assembly. Go to **"SFP stapler assembly rear door assembly removal" on page 434**.<br>**b** Manually rotate the drive gears, and then reset the stapler.<br>**c** Remove all jammed staples.<br>**d** Reinstall the stapler assembly.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 5**<br>Replace the stapler assembly. Go to **"SFP stapler assembly rear door assembly removal" on page 434**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Paddle home position jam (staple finisher) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all connections on the staple finisher controller card for damage. If necessary, replace the connections.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the sensor (paddle HP) for damage. If necessary, replace the sensor. Go to **"Sensor (SFP stapler assembly paddle HP) removal" on page 446**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the staple finisher.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Deflector gate transition to output option not detected (staple finisher) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all connections on the staple finisher controller card for damage. If necessary, replace the connections.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the sensor (deflector HP) for damage. If necessary, replace the sensor. Go to **"Sensor (SFP stapler assembly deflector HP) removal" on page 452**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the staple finisher.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (stapler pass through) static jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove any prestaged or jammed media from the media path.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check if the display on the operator panel changes every time the sensing area of the sensor (stapler pass through) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Finisher test.<br>**c** Select Sensor test.<br>**d** Select pass & media.<br>**e** Observe the line item “passthru.”<br>If necessary, replace the connection.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the stapler unit assembly for damage. If necessary, replace the stapler unit assembly. Go to **“SFP stapler assembly stapler unit assembly removal” on page 444**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Perform a print test using the staple finisher.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check the staple finisher for damage. If necessary, replace the finisher.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Sensor (output pass through) late jam service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Remove, and then reinstall the output option.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove obstructions between the base machine and the output option.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check if the display on the operator panel changes every time the sensing area of the sensor (output pass through) is interrupted or blocked.<br>**a** Enter the diagnostic mode.<br>**b** Select Output bin tests.<br>**c** Select Sensor test.<br>**d** Select Output bin x.<br>**e** Observe the line item “passthru.”<br>If possible, replace the sensor. Go to **“Sensor (high capacity stacker pass through) removal” on page 402**, **“Sensor (5-bin mailbox pass through) removal” on page 350**, or **“Sensor (output expander pass through) removal” on page 431**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Check the above sensor for proper connection, and if necessary, replace the connection.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Perform a print test using the output option. If necessary, replace the output option.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

### Sensor (media in stapler) static jam (staple finisher) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check if the sensor (media in stapler) is properly installed. If necessary, reinstall the sensor.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Check the sensor or damage. If necessary, replace the sensor. Go to **"Sensor (SFP stapler assembly media in stapler) removal" on page 451**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

# Understanding the printer messages

## Activating Menu Changes

Wait for the message to clear.

## Busy

Wait for the message to clear.

## Cancel not available

Wait for the message to clear.

## Canceling

Wait for the message to clear.

## Change <src> to <x>

<src> is a tray or feeder, and <x> is a paper type or size.

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ if the paper was changed.
- Press the arrow buttons until √**Use Current** appears, and then press ✓ to print on the paper currently in the printer.
- Cancel the current print job.

## Check duplex connection

Try one or more of the following:

- Turn the printer off and then back on.

  If the error occurs a second time:

  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Remove the duplex unit.
  4. Reattach the duplex unit.
  5. Connect the power cord to a properly grounded outlet.
  6. Restart the printer.

- Press  to clear the message and print without using the duplex unit.

## Check tray <x> connection

Try one or more of the following:

- Turn the printer off and then back on.

  If the error occurs a second time:

  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. If an optional duplex unit is installed, then remove it.
  4. Remove the indicated tray.
  5. Reattach the tray.
  6. Connect the power cord to a properly grounded outlet.
  7. Restart the printer.

- Press  to clear the message and print without using the tray.

## Clearing job accounting statistics

Wait for the message to clear.

## Close door or insert cartridge

The cartridge is missing or not installed correctly. Insert the cartridge and close all doors and covers.

## Close finisher side door

Close the finisher side door to clear the message.

## Defragmenting Flash DO NOT POWER OFF

Wait for the message to clear.

**Warning—Potential Damage:** Do not turn the printer off while this message appears on the display.

## Deleting

Wait for the message to clear.

## Deleting held jobs

Wait for the message to clear.

## Deletion complete

Wait for the message to clear.

## Deletion failed

Your attempt to delete a file failed.

1. Wait for the message to clear.
2. Try to delete the file again.

## Disabling DLEs

Wait for the message to clear.

## Disabling Menus

Wait for the message to clear.

**Note:** While the menus are disabled, printer settings cannot be changed from the printer control panel.

## Disk Corrupted

The printer attempted to recover a disk, but was not able to do so. **`Reformat`** appears. Press  to reformat the disk.

**Note:** Reformatting the disk deletes all the files currently stored on the disk.

## Disk recovery x/y XX% DO NOT POWER OFF

Wait for the message to clear.

**Warning—Potential Damage:** Do not power off while the printer is attempting to recover the printer hard disk.

Disk recovery takes place in several phases. The percentage completed during each phase appears on the display.

## Enabling Menus

Wait for the message to clear.

## Encrypting disk x/y XX% DO NOT POWER OFF

Wait for the message to clear.

**Warning—Potential Damage:** Do not power off while the printer is encrypting the printer hard disk.

The percentage completed appears on the display.

## Enter PIN

Enter the PIN you created in Print Properties when the confidential job was sent for printing.

## Error reading USB drive

Remove the device and wait for the message to clear. The USB drive may be corrupted.

## Flushing buffer

Wait for the message to clear.

## Formatting Disk x/y XX% DO NOT POWER OFF

Wait for the message to clear.

**Warning—Potential Damage:** Do not power off while the printer is formatting the printer hard disk.

The percentage completed appears on the display.

## Formatting Flash DO NOT POWER OFF

Wait for the message to clear.

**Warning—Potential Damage:** Do not power off while the printer is formatting the flash memory.

## Hex Trace Ready

The printer is in the **Ready** state, and Hex Trace is active. You can use Hex Trace to troubleshoot printer problems.

## Insert staple cartridge

Try one or more of the following:

- Insert a staple cartridge to clear the message.
- Press  to clear the message and print without using the staple feature.

## Insert Tray <x>

Insert the specified tray into the printer.

## Install bin <x>

Try one or more of the following:

- Install the specified bin:
  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Install the specified bin.
  4. Connect the power cord to a properly grounded outlet.
  5. Restart the printer.
- Cancel the current job.

## Install duplex

Try one or more of the following:

- Install the duplex unit:
  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Install the duplex unit.
  4. Connect the power cord to a properly grounded outlet.
  5. Restart the printer.
- Cancel the current job.

## Install envelope feeder

Try one or more of the following:

- Install the envelope feeder:
  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Install the envelope feeder.
  4. Connect the power cord to a properly grounded outlet.
  5. Restart the printer.
- Cancel the current job.

## Install Tray <x>

Try one or more of the following:

- Install the specified tray:
  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Install the specified tray.
  4. Connect the power cord to a properly grounded outlet.
  5. Restart the printer.
- Cancel the current job.

## Install MICR Cartridge

The printer does not have a MICR cartridge installed. Install a MICR cartridge to continue printing.

## Invalid Engine Code

You need to download valid engine code for the printer.

For more information, visit the Lexmark Web site at **www.lexmark.com**.

**Note:** Engine code may be downloaded while this message appears on the display.

## Invalid Network Code

You need to download valid network printing code for the internal print server. The internal print server is a hardware option installed inside the printer.

**Note:** Network code may be downloaded while this message appears on the display.

## Invalid PIN

Enter a valid PIN.

## Load manual feeder with <x>

Try one or more of the following:

- Load the specified paper in the multipurpose feeder.
- Press the arrow buttons until √ **Continue** appears, and then press  to clear the message and continue printing.

  If the printer finds a tray that has the correct paper type and size, then it feeds from that tray. If the printer cannot find a tray with the correct paper type and size, then it prints from the default source.
- Cancel the current job.

## Load <src> with <x>

<src> is a tray or feeder, and <x> is a paper type or size.

Try one or more of the following:

- Load the paper tray or other source with the correct paper type and size.
- Cancel the current job.

## Load staples

Try one or more of the following:

- Replace the specified staple cartridge in the finisher.
- Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message and continue printing.
- Cancel the print job.

## Maintenance

Replace the maintenance items and, if necessary, reset the printer maintenance counter.

For information on purchasing supplies, see the “Ordering supplies” section of the *User’s Guide*.

## Menu access turned off by system administrator

The printer menus cannot be accessed because your system support person disabled the menus. Wait for the message to clear.

## Menus are Disabled

The printer menus are disabled. The printer settings cannot be changed from the printer control panel. Contact your system support person for help.

**Note:** When menus are disabled, it is still possible to cancel a print job, print a confidential job, or print a held job.

## Must be in Ready state to enter menus

The printer menus cannot be accessed at this time because the printer control panel does not show the **Ready** message. Wait for the printer to complete its activity. When **Ready** appears, press 🔑.

## Network/Network <x>/Network <x>, <y>

The printer is connected to the network, so the network interface is the active communication link.

- **Network** indicates that the printer is using the standard network port built into the printer system board.
- **Network <x>** indicates that an internal print server is installed inside the printer or that the printer is connected to an external print server.

- **Network <x>, <y>** indicates a network interface is the active communication link, where <x>, <y> indicates the active interface is connected to the printer through channel y on PCI connector x. If x equals 0, then the standard network interface is active.

**Note:** The current interface displays on the menus settings page.

Wait for the message to clear.

## No held jobs

Wait for the message to clear.

## No jobs found

The PIN you entered is not associated with any confidential print job.

Try one or more of the following:

- Press the arrow buttons until √ **Try again** appears, and then press ✓ to enter another PIN.
- Press the arrow buttons until √ **Cancel** appears, and then press ✓ to exit.

## No jobs to cancel

Wait for the message to clear.

## Not Ready

The printer is not ready to receive or process data, or the printer ports are offline.

## No recognized file types

Either there are no files saved on the flash drive, or the files saved are not supported. Convert files to any of the following supported file types: .pdf, .gif, .jpeg, .jpg, .bmp, .png, .tiff, .tif, .pcx, or .dcx.

## Overflow bin full

Remove the stack of paper from the bin to clear the message.

## Parallel/Parallel <x>

The printer is using a parallel cable connection. The parallel port is the active communication link.

## [PJL RDYMSG]

This is the Printer Job Language (PJL) Ready message. It appears after the **Ready** or **Power Saver** message. If the message string is too long, it is truncated.

Wait for the message to clear.

## Power Saver

The printer is saving power while it waits for the next print job. Send a job to print to take the printer out of Power Saver mode.

## Printer busy, Continue, Quit

Try one or more of the following:

- Press  to read the information from the flash drive.
- Select **Quit** to cancel the information retrieval process.

## Printing

Wait for the message to clear.

## Printing from USB drive DO NOT REMOVE

**Warning—Potential Damage:** Do not turn the printer off or remove the flash drive while this message is displayed.

Wait for the message to clear.

## Programming disk DO NOT POWER OFF

Wait for the message to clear.

**Warning—Potential Damage:** Do not turn the printer power off while **Programming disk** appears on the display.

## Programming flash DO NOT POWER OFF

Wait for the message to clear.

**Warning—Potential Damage:** Do not turn the printer power off while **Programming flash** appears on the display.

## Reading USB drive DO NOT REMOVE

Wait for the message to clear.

## Ready

The printer is ready to receive print jobs.

## Reattach bin <x>

Try one or more of the following:

- Turn the printer off and then back on.

  If the error occurs a second time:

  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Remove the specified bin.
  4. Reattach the bin.
  5. Connect the power cord to a properly grounded outlet.
  6. Restart the printer.

  If the error occurs again:

  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Remove the specified bin.
  4. Contact Customer Support.

- Press ✓ to clear the message and print without using the specified bin.

## Reattach bin <x> – <y>

Try one or more of the following:

- Turn the printer off and then back on.

  If the error occurs a second time:

  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Remove the specified bins.
  4. Reattach the bins.
  5. Connect the power cord to a properly grounded outlet.
  6. Restart the printer.

- Press ✓ to clear the message and print without using the specified bins.

## Reattach envelope feeder

Try one or more of the following:

- Turn the printer off and then back on.

  If the error occurs a second time:

  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Remove the envelope feeder.

4 Reattach the envelope feeder.

5 Connect the power cord to a properly grounded outlet.

6 Restart the printer.

- Press  to clear the message and print without using the envelope feeder.

## Remote Management Active DO NOT POWER OFF

The printer settings are being configured. Wait for the message to clear.

**Warning—Potential Damage:** Do not turn the printer power off while **`Remote Management Active`** appears on the display.

## Remove packaging material, check <x>

Remove any remaining packaging material from the specified location.

## Remove paper from all bins

Remove the paper from all of the bins. The printer automatically senses paper removal and resumes printing.

If removing the paper does not clear the message, then touch **Continue**.

## Remove paper from bin <x>

Remove the paper from the specified bin. The printer automatically senses paper removal and resumes printing.

If removing the paper does not clear the message, then touch **Continue**.

## Remove paper from standard output bin

Remove the stack of paper from the standard exit bin.

## Remove paper from <linked bin set name>

Remove the paper from the specified bin. The printer automatically senses paper removal and resumes printing.

If removing the paper does not clear the message, press .

## Replace wiper

Try one or more of the following:

- Replace the fuser wiper.
- Press the arrow buttons until √ **`Continue`** appears, and then press  to clear the message and continue printing.

## Resetting active bin

Wait for the message to clear.

## Resetting the printer

Wait for the message to clear.

## Resetting without replacing may affect print quality.

You selected No from the “Verify PC unit replaced” screen. Wait for the message to clear.

## Restoring Factory Defaults

Wait for the message to clear.

When factory default settings are restored:

- All downloaded resources in the printer memory are deleted. This includes fonts, macros, and symbol sets.
- All settings return to the factory defaults except the Display Language setting in the Setup menu and the custom settings in the Serial <x>, Network, Infrared, LocalTalk, and USB menus.

## Restore Held Jobs?

Try one of the following:

- Press the arrow buttons until √ **Continue** appears, and then press ✓ to restore all held jobs stored on the printer hard disk.
- Press the arrow buttons until √ **Do not restore** appears, and then press ✓. No print jobs will be restored.

## Restoring Held Job(s) x/y

x represents the number of jobs being restored. y represents the total number of jobs to be restored.

Try one or more of the following:

- Wait for the message to clear.
- Press the arrow buttons until √ **Quit restoring** appears, and then press ✓ to delete unrestored held jobs.

## Routine maintenance needed

The printer needs to have routine maintenance done. Order a maintenance kit, which contains all the items necessary to replace the pick rollers, the charge roll, the transfer roller, and the fuser.

## Securely clearing disk space

The printer hard disk wiping process needs to recover. The message clears when all blocks are cleared.

## Serial <x>

The printer is using a serial cable connection. The serial port is the active communication link.

## Some held jobs were lost

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press  to clear the message and continue printing.
- Cancel the current print job.

## Staples <x> empty or misfed

Load the specified staple cartridge into the finisher to clear the message and continue stapling.

## Staples <x> low or missing

Load the specified staple cartridge in the finisher to clear the message.

## Standard Bin Full

Remove the stack of paper from the standard exit bin to clear the message.

## Submitting selection

Wait for the message to clear.

## Too many failed panel logins

The printer is now in a lockout mode because:

- You attempted to log in too many times with an incorrect PIN
- You attempted to log in using an incorrect password number for access to a printer feature, setting, or menu that you do not have access to.

  **Note:** There is a defined limit on the number of login attempts. Once the limit is reached, this message appears and the printer enters a lockout mode. The message remains on the printer control panel, and any further attempts to enter menus is denied until the defined time out expires. The time out duration is set by your system support person.

  Wait for the message to clear once the time out expires, and then:

  - Enter the correct PIN to access any held jobs
  - See your system support person if you need a password number to enter a specific printer feature, setting, or menu that is blocked from your use without the number.

## Toner low

Try one or more of the following:

- Replace the print cartridge.
- Press  to clear the message and continue printing.

## Tray <x> Empty

Load paper in the tray to clear the message.

## Tray <x> Low

Load paper in the specified tray to clear the message.

## Tray <x> Missing

Insert the specified tray into the printer.

## Unsupported disk

An unsupported printer hard disk has been installed. Remove the unsupported device, and then install a supported one.

## Unsupported USB device, please remove

Remove the unrecognized USB device.

## Unsupported USB hub, please remove

Remove the unrecognized USB hub.

## USB/USB <x>

The printer is using a USB cable connection. The USB port is the active communication link.

## USB drive removed

Try one or more of the following:

- Wait for the message to clear.
- Insert the flash drive.

## View supplies

This message shows the current level of supplies.

## Waiting

The printer has received data to print, but is waiting for an End-of-Job command, a Form Feed command, or additional data.

Try one or more of the following:

- Press  to print the contents of the buffer.
- Cancel the current print job.

## 30 Invalid refill, change cartridge

Remove the print cartridge, and then install a supported one.

## 31 Replace defective cartridge

Remove the defective print cartridge, and then install a new one.

## 32 Cartridge part number unsupported by device

Remove the print cartridge, and then install a supported one.

## 34 Short paper

Try one or more of the following:

- Load the appropriate paper in the tray.
- Press the arrow buttons until √**Continue** appears, and then press  to clear the message and print the job using a different paper tray.
- Check tray length and width guides and make sure the paper is properly loaded in the tray.
- For Windows users, check the Print Properties settings to make sure the print job is requesting the correct paper size and type.

  For Macintosh users, check the Print dialog settings to make sure the print job is requesting the correct paper size and type.
- Check that the paper size is correctly set. For example, if the MP Feeder Size is set to Universal, make sure the paper is large enough for the data being printed.
- Cancel the current print job.

## 35 Insufficient memory to support Resource Save feature

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press  to disable Resource Save and continue printing.
- To enable Resource Save after receiving this message, make sure the link buffers are set to Auto, and then exit the menus to activate the link buffer changes. When **Ready** appears, enable Resource Save.
- Install additional memory.

## 37 Insufficient memory for Flash Memory Defragment operation

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to stop the defragment process and continue printing.
- Delete fonts, macros, and other data in printer memory.
- Install additional printer memory.

## 37 Insufficient memory to collate job

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to print the portion of the job already stored and begin collating the rest of the print job.
- Cancel the current print job.

## 37 Insufficient memory, some held jobs were deleted

The printer deleted some held jobs in order to process current jobs.

Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message.

## 37 Insufficient memory, some Held Jobs will not be restored

The printer was unable to restore some or all of the confidential or held jobs on the printer hard disk.

Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message.

## 38 Memory full

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message.
- Cancel the current print job.
- Install additional printer memory.

## 39 Complex page, some data may not have printed

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message and continue printing.
- Cancel the current print job.
- Install additional printer memory.

## 42.xy Cartridge region mismatch

Install a print cartridge that matches the region number of the printer. x indicates the value of the printer region. y indicates the value of the cartridge region. x and y can have the following values:

| | |
|---|---|
| 1 | US |
| 2 | Europe, the Middle East, and Africa |
| 3 | Asia |
| 4 | Latin America |
| 9 | Invalid region |

## 50 PPDS font error

Try one or more of the following:

- Press the arrow buttons until **Continue** appears, and then press to clear the message and continue printing.
- The printer cannot find a requested font. From the PPDS menu, select **Best Fit**, and then select **On**. The printer will find a similar font and reformat the affected text.
- Cancel the current print job.

## 51 Defective flash detected

Try one or more of the following:

- Press the arrow buttons until **Continue** appears, and then press to clear the message and continue printing.
- Cancel the current print job.

## 52 Not enough free space in flash memory for resources

Try one or more of the following:

- Press the arrow buttons until **Continue** appears, and then press to stop the defragment operation and continue printing.

  Downloaded fonts and macros not previously stored in flash memory are deleted.
- Delete fonts, macros, and other data stored in flash memory.
- Upgrade to a larger capacity flash memory card.

## 53 Unformatted flash detected

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to stop the defragment operation and continue printing.
- Format the flash memory. If the error message remains, the flash memory may be defective and require replacing.

## 54 Serial option <x> error

<x> is the number of the serial option.

Try one or more of the following:

- Check that the serial cable is connected correctly and is the proper one for the serial port.
- Check that the serial interface parameters (protocol, baud, parity, and data bits) are set correctly on the printer and host computer.
- Press the arrow buttons until √**Continue** appears, and then press ✓ to continue printing.
- Turn the printer off and then back on to reset the printer.

## 54 Network <x> software error

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to continue printing.
- Turn the printer off and then back on to reset the printer.
- Upgrade (flash) the network firmware in the printer or print server.

## 54 Standard network software error

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to continue printing.
- Turn the printer off and then back on to reset the printer.
- Upgrade (flash) the network firmware in the printer or print server.

## 55 Unsupported option in slot <x>

<x> is a slot on the printer system board.

Try one or more of the following:

1. Turn the printer power off.
2. Unplug the power cord from the wall outlet.
3. Remove the unsupported option card from the printer system board.

4 Connect the power cord to a properly grounded outlet.

5 Turn the printer power back on.

## 56 Parallel port <x> disabled

<x> is the number of the parallel port.

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message.
  The printer discards any data received through the parallel port.
- Make sure the Parallel Buffer menu item is not set to Disabled.

## 56 Serial port <x> disabled

<x> is the number of the serial port.

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message.
  The printer discards any data received through the serial port.
- Make sure the Serial Buffer menu item is not set to Disabled.

## 56 Standard parallel port disabled

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message.
  The printer discards any data received through the parallel port.
- Make sure the Parallel Buffer menu item is not set to Disabled.

## 56 Standard USB port disabled

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message.
  The printer discards any data received through the USB port.
- Make sure the USB Buffer menu item is not set to Disabled.

## 57 Configuration change, some held jobs were not restored

Since the time the jobs were stored on the printer hard disk something has changed in the printer to invalidate the held jobs. Possible changes include:

- The printer firmware has been updated.
- Paper input, output, or duplex options needed for the print job were removed.

- The print job was created using data from a device in the USB port and the device is no longer in the port.
- The printer hard disk contains jobs that were stored while installed in a different printer model.

Press the arrow buttons until √ **Continue** appears, and then press ✓ to clear the message.

## 58 Too many bins attached

1. Turn the printer power off.
2. Unplug the power cord from the wall outlet.
3. Remove the additional bins.
4. Connect the power cord to a properly grounded outlet.
5. Turn the printer power back on.

## 58 Too many disks installed

1. Turn the printer off.
2. Unplug the power cord from the wall outlet.
3. Remove the extra disks.
4. Connect the power cord to a properly grounded outlet.
5. Turn the printer back on.

## 58 Too many flash options installed

Too many optional flash memory cards or too many optional firmware cards are installed on the printer.

Try one or more of the following:

- Press ✓ to clear the message and continue printing.
- Remove extra flash options:
  1. Turn the printer off.
  2. Unplug the power cord from the wall outlet.
  3. Remove extra flash options.
  4. Connect the power cord to a properly grounded outlet.
  5. Turn the printer back on.

## 58 Too many trays attached

1. Turn the printer off.
2. Unplug the power cord from the wall outlet.
3. Remove the additional trays.

4 Connect the power cord to a properly grounded outlet.

5 Turn the printer back on.

## 59 Incompatible Duplex

Only options designed specifically for this printer are supported.

Try one or more of the following:

- Remove the duplex unit.
- Press ✓ to clear the message and continue printing without using the duplex unit.

## 59 Incompatible envelope feeder

Only options designed specifically for this printer are supported.

Try one or more of the following:

- Remove the envelope feeder.
- Press ✓ to clear the message and continue printing without using the envelope feeder.

## 59 Incompatible output bin <x>

Only options designed specifically for this printer are supported.

Try one or more of the following:

- Remove the specified output bin.
- Press ✓ to clear the message and continue printing without using the specified output bin.

## 59 Incompatible tray <x>

Only options designed specifically for this printer are supported.

Try one or more of the following:

- Remove the specified tray.
- Press ✓ to clear the message and continue printing without using the specified tray.

## 61 Remove defective hard disk

Try one or more of the following:

- Press the arrow buttons until ✓ **Continue** appears, and then press ✓ to clear the message and continue printing.
- Install a different printer hard disk before performing any operations that require a hard disk.

## 62 Disk full

Try one or more of the following:

- Press the arrow buttons until √**Continue** appears, and then press ✓ to clear the message and continue processing.
- Delete fonts, macros, and other data stored on the printer hard disk.
- Install a larger printer hard disk.

## 80 Routine maintenance needed

The printer needs to have routine maintenance done. Order a maintenance kit, which contains all the items necessary to replace the pick rollers, the charge roll, the transfer roller, and the fuser.

## 81 Routine Maintenance

The fuser that had been previously installed in a different printer has reached its maximum page count.

Replace the fuser. See **"Fuser unit assembly removal" on page 333**.

## 88 Cartridge low

The toner is low. Replace the print cartridge, and then press ✓ to clear the message and continue printing.

## 88.yy Cartridge nearly low

The toner is low. Replace the print cartridge, and then press ✓ to clear the message and continue printing.

## 88.yy Replace cartridge

The print cartridge is exhausted.

1. Replace the print cartridge.
2. Press ✓ to clear the message.

## 200–282 Paper jam

1. Clear the paper path.
2. After clearing the paper path, press ✓ to continue printing.

### 1565 Emulation error, load emulation option

The printer automatically clears the message in 30 seconds and then disables the download emulator on the firmware card.

To fix this, download the correct download emulator version from the Lexmark Web site at **www.lexmark.com**.

# User attendance messages

## User attendance messages (0-99)

| Error code | Description | Action |
|---|---|---|
| System Timeout | The system detects a firmware component that is no longer responding. | See **"System timeout service check" on page 186**. |
| 30.xx | The cartridge is invalid. | See **"Invalid print cartridge service check" on page 186**. |
| 31.xx | The cartridge is defective. | See **"Defective print cartridge service check" on page 186**. |
| 32.xx | The cartridge is unsupported. | See **"Invalid print cartridge service check" on page 186**. |
| 34 | The paper is too short. | See **"Short paper service check" on page 187**. |
| 35 | The printer memory is insufficient to enable Resource Save. | See **"Resource Save off deficient memory service check" on page 187**. |
| 37 | The printer memory is insufficient for Flash Memory Defragment operation. | See **"Insufficient Collation Area service check" on page 188**. |
| 37 | The printer memory was insufficient to do the job. | See **"Insufficient Memory service check" on page 188**. |
| 38 | Memory is full. | See **"Memory Full service check" on page 188**. |
| 39 | The page is too complex to print. | See **"Insufficient Memory service check" on page 188**. |

| Error code | Description | Action |
|---|---|---|
| 44.01 | An RFID error occurred. | See **"RFID error service check" on page 189**. |
| 44.11 | | See **"RFID error service check" on page 189**. |
| 44.12 | | |
| 44.13 | | |
| 44.14 | | |
| 44.15 | | |
| 44.16 | | |
| 44.17 | | |
| 44.18 | | |
| 44.19 | | |
| 44.20 | | |
| 44.21 | | |
| 44.22 | | |
| 44.23 | | |
| 44.24 | | |
| 44.25 | | |
| 44.26 | | |
| 44.27 | | |
| 44.28 | | |
| 44.29 | | |
| 44.31 | | |
| 44.32 | | |
| 44.33 | | |
| 44.34 | | See **"RFID error service check" on page 189**. |
| 44.35 | | See **"RFID error service check" on page 190**. |
| 44.36 | | See **"RFID error service check" on page 189**. |
| 42.xy | The cartridge is incompatible due to printer region mismatch. | See **"Cartridge Region Mismatch service check" on page 190**. |
| 50 | PPDS encountered a font error. | See **"PPDS Font Error service check" on page 190**. |
| 51 | The flash memory is defective. | See **"Defective or full Flash service check" on page 190**. |
| 52 | The flash memory is insufficient. | See **"Defective or full Flash service check" on page 190**. |
| 54 | A serial option error occurred. | See **"Network service check" on page 191**. |

| Error code | Description | Action |
|---|---|---|
| 54 | The printer was not able to connect with the standard network. | See **"Network software eror service check" on page 193**. |
| 54 | The printer was not able to connect with an optional network. | |
| 55 | The internal option installed is unsupported. | See **"Unsupported Option in Slot [x] service check" on page 193**. |
| 56 | The parallel port or serial port is disabled. | See **"Network service check" on page 191**. |
| 56 | The standard or optional USB port is disabled. | See **"Network software eror service check" on page 193**. |
| 58 | Optional input trays installed above the RFID option or no input trays installed | See **"Invalid Tray Configuration service check" on page 194**. |
| 58 | Excess bins detected. | See **"Too Many Bins Attached service check" on page 194**. |
| 58 | Excess disks detected. | See **"Too Many Disks Attached service check" on page 194**. |
| 58 | Excess flash options detected. | See **"Too Many Flash Options service check" on page 194**. |
| 58 | Excess trays detected. | See **"Too Many Trays Attached service check" on page 195**. |
| 59 | The duplex option is incompatible. | See **"Incompatible Duplex service check" on page 195**. |
| 59 | The envelope feeder is incompatible. | See **"Incompatible Duplex service check" on page 195**. |
| 59 | The output bin is incompatible. | See **"Incompatible Output Bin [x] service check" on page 195**. |
| 59 | The tray is incompatible. | See **"Incompatible Output Tray [x] service check" on page 196**. |
| 61 | The hard disk is defective. | See **"Defective Disk service check" on page 196**. |
| 62 | The hard disk is full. | See **"Disk Full service check" on page 196**. |
| 80 | The printer requires maintenance. The appropriate maintenance kit needs to be installed. | See **"Routine Maintenance Needed service check" on page 196**. |
| 81 | The fuser that had been previously installed in a different printer has reached its maximum page count. | Go to **"Replace fuser service check" on page 197**. |
| 88 | The toner cartridge supply is low. | See **"Replace cartridge service check" on page 197**. |
| 88 | The toner cartridge supply is very low. | |
| 88 | The toner cartridge supply is empty. | |

## System timeout service check

| Action | Yes | No |
|---|---|---|
| Turn off the printer, wait for a few seconds, and then turn on the printer.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Invalid print cartridge service check

| Action | Yes | No |
|---|---|---|
| Install the proper print cartridge.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Defective print cartridge service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Install the proper print cartridge.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove and then reinstall the print cartridge ID connector assembly. Go to **"Print cartridge ID connector assembly removal" on page 281**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the print cartridge ID connector assembly. Go to **"Print cartridge ID connector assembly removal" on page 281**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Short paper service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Set the media tray guides properly for the media being used.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Remove and then reinstall the switch (media size). Go to **"Switch (media size) assembly removal " on page 284**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the switch (media). Go to **"Switch (media size) assembly removal " on page 284**.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Replace the media tray assembly.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Resource Save off deficient memory service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Enable Resource Save.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Install additional memory.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Insufficient Collation Area service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Delete fonts, macros, and other data in RAM.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Install additional memory.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Insufficient Memory service check

| Action | Yes | No |
|---|---|---|
| Install additional memory.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Memory Full service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Perform the defragment operation.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Delete fonts, macros, and other data in RAM.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Install additional memory.<br><br>Does the problem remain? | Go to step 4. | Problem is solved. |
| **Step 4**<br>Cancel the print job.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Reset the printer.<br><br>Does the problem remain? | Go to step 6. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 6**<br>Reset the active media bin.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## RFID error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Use new RFID media.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Reinstall the RFID firmware card, RFID interface card, RFID cable, and RFID option. Go to **"RFID UHF option installation and removal" on page 405**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the RFID option. Go to **"RFID UHF option installation and removal" on page 405**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## RFID error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the datastream for errors, and correct the errors if necessary.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Reinstall the RFID firmware card, RFID interface card, RFID cable, and RFID option. Go to **"RFID UHF option installation and removal" on page 405**.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the RFID option. Go to **"RFID UHF option installation and removal" on page 405**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## RFID error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Reinstall the RFID firmware card, RFID interface card, RFID cable, and RFID option. Go to **"RFID UHF option installation and removal" on page 405**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Replace the RFID option. Go to **"RFID UHF option installation and removal" on page 405**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Cartridge Region Mismatch service check

| Action | Yes | No |
|---|---|---|
| Install a new toner cartridge that matches the correct regional specification.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## PPDS Font Error service check

| Action | Yes | No |
|---|---|---|
| From the PPDS menu, select **Best Fit** > **On**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Defective or full Flash service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the flash memory card for damage, and replace if necessary.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Upgrade to a larger capacity flash memory card.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Network service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>If the device is physically connected to the network, verify that the Ethernet cable is properly connected on both ends.<br><br>Is the cable properly connected? | Go to step 3. | Go to step 2. |
| **Step 2**<br>Connect the Ethernet cable.<br><br>Does the problem remain? | Go to step 3. | Problem is solved. |
| **Step 3**<br>Check the printer online status under Printers and Faxes on the host computer. Delete all print jobs in the print queue.<br><br>Is the printer online and in a Ready state? | Go to step 5. | Go to step 4. |
| **Step 4**<br>Change the printer status to online.<br><br>Does the problem remain? | Go to step 5. | Problem is solved. |
| **Step 5**<br>Check if the IP address displayed on the network settings page matches the IP address in the port of the drivers using the printer.<br><br>Do the IP addresses match? | Go to step 10. | Go to step 6. |
| **Step 6**<br>Check if the LAN uses DHCP.<br><br>Does the LAN use DHCP? | Go to step 7. | Go to step 9. |
| **Step 7**<br>Check if the first two segments of the IP address are 169.254. Are the first two segments 169.<br><br>254? | Go to step 8. | Go to step 9. |
| **Step 8**<br>Turn on the printer, and then turn it off.<br><br>Does the problem remain? | Go to step 10. | Problem is solved. |
| **Step 9**<br>Reset the address on the printer to match the IP address on the driver.<br><br>Does the problem remain? | Go to step 10. | Problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 10**<br>Have the network administrator verify that the subnet addresses of the IP addresses of the printer and the computer are identical.<br><br>Are the subnet addresses identical? | Go to step 12. | Go to step 11. |
| **Step 11**<br>Using the subnet address from the network administrator, assign a unique IP address to the printer.<br><br>Does the problem remain? | Go to step 12. | Problem is solved. |
| **Step 12**<br>Check if the device is connected to the network by an Ethernet cable.<br><br>Is the device connected by an Ethernet cable? | Go to step 13. | Go to step 15. |
| **Step 13**<br>Replace the Ethernet cable.<br><br>Does the problem remain? | Go to step 14. | Problem is solved. |
| **Step 14**<br>Have the network administrator check the network drop for activity.<br><br>Is the drop functioning properly? | Replace the system card. Go to **"System card assembly removal" on page 285**. | Contact the network administrator. |
| **Step 15**<br>Check if the printer is on the same wireless network as the other devices.<br><br>Is the printer on the same wireless network? | Go to step 17. | Go to step 16. |
| **Step 16**<br>Assign the correct wireless network to the printer.<br><br>Does the problem remain? | Go to step 17. | Problem is solved. |
| **Step 17**<br>Check if the other devices on the wireless network are communicating properly.<br><br>Are the other devices communicating properly? | Go to step 18. | Contact the network administrator. |
| **Step 18**<br>Verify that the wireless card is properly seated on the controller board.<br><br>Is the wireless card properly seated? | Go to step 20. | Go to step 19. |

| Action | Yes | No |
|---|---|---|
| **Step 19**<br>Properly reseat the wireless card.<br><br>Does the problem remain? | Go to step 20. | Problem is solved. |
| **Step 20**<br>Check the antenna for damage, and replace if necessary.<br><br>Does the problem remain? | Go to step 21. | Go to step 20. |
| **Step 21**<br>Verify that the antenna is properly connected to the wireless card.<br><br>Is it connected correctly? | Go to step 23. | Go to step 22. |
| **Step 22**<br>Properly connect the antenna.<br><br>Does the problem remain? | Go to step 23. | Problem is solved. |
| **Step 23**<br>Check pin 6 for +3.3V and Pin 5 for +5V on connector <> of the controller board. Pins 1 and 4 are GND.<br><br>Are the voltages and GNDs correct? | Replace the wireless card. | Replace the system card. Go to **"System card assembly removal" on page 285**. |

## Network software eror service check

| Action | Yes | No |
|---|---|---|
| Upgrade the network firmware in the printer or print server.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Unsupported Option in Slot [x] service check

| Action | Yes | No |
|---|---|---|
| Remove unsupported internal option.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Invalid Tray Configuration service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Place the RFID option above all other optional input trays or place at least one optional input tray under it.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Reinstall the RFID firmware card, RFID interface card, RFID cable, and RFID option. Go to **"RFID UHF option installation and removal" on page 405**. | Go to step 3. | Problem is solved. |
| **Step 3**<br>Replace the RFID option. Go to **"RFID UHF option installation and removal" on page 405**. | Contact next level of support. | Problem is solved. |

## Too Many Bins Attached service check

| Action | Yes | No |
|---|---|---|
| **a** Turn off the printer, and unplug it.<br>**b** Remove the excess bins.<br>**c** Plug in the printer, and turn it on.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Too Many Disks Attached service check

| Action | Yes | No |
|---|---|---|
| **a** Turn off the printer, and unplug it.<br>**b** Remove the excess disks.<br>**c** Plug in the printer, and turn it on.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Too Many Flash Options service check

| Action | Yes | No |
|---|---|---|
| **a** Turn off the printer, and unplug it.<br>**b** Remove the excess flash options.<br>**c** Plug in the printer, and turn it on.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Too Many Trays Attached service check

| Action | Yes | No |
|---|---|---|
| **a** Turn off the printer, and unplug it.<br>**b** Remove the excess trays.<br>**c** Plug in the printer, and turn it on.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Incompatible Duplex service check

| Action | Yes | No |
|---|---|---|
| **a** Turn off the printer, and unplug it.<br>**b** Remove the incompatible external duplex unit assembly.<br>**c** Plug in the printer, and turn it on.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Incompatible Envelope Feeder service check

| Action | Yes | No |
|---|---|---|
| **a** Turn off the printer, and unplug it.<br>**b** Remove the incompatible envelope feeder.<br>**c** Plug in the printer, and turn it on.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Incompatible Output Bin [x] service check

| Action | Yes | No |
|---|---|---|
| **a** Turn off the printer, and unplug it.<br>**b** Remove the incompatible output option.<br>**c** Plug in the printer, and turn it on.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Incompatible Output Tray [x] service check

| Action | Yes | No |
|---|---|---|
| **a** Turn off the printer, and unplug it.<br>**b** Remove the incompatible trays.<br>**c** Plug in the printer, and turn it on.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Defective Disk service check

| Action | Yes | No |
|---|---|---|
| Replace the hard disk with a higher-capacity hard disk.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Disk Full service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Delete fonts, macros, and other data on the hard disk.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Replace the hard disk with a higher-capacity hard disk.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Routine Maintenance Needed service check

| Action | Yes | No |
|---|---|---|
| **a** Replace the maintenance kit.<br>**b** Reset the maintenance counter. Go to **"Maintenance page counter reset" on page 257**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Replace fuser service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>**a** Update the printer firmware to at least P631a/E220.<br>**b** Replace the fuser. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>**a** Replace the maintenance kit.<br>**b** Reset the maintenance counter. Go to **"Maintenance page counter reset" on page 257**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Replace cartridge service check

| Action | Yes | No |
|---|---|---|
| Replace the cartridge.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

# Printer hardware errors

## Procedure before starting the 9yy service checks

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

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

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

   **Note:** Not all of the items are retrievable from the printer you are working on.

### A. Collecting the history information from the SE menu

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

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

   **Notes:**

   - **`printer_IP_address`** is the TCP/IP address of the printer

- **se** is required to access the printer diagnostic information

2 Click **History Information**, copy all information, and then save it as a text file.

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

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

**Notes:**

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

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

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

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

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

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

## C. Collecting the settings from the menu settings page

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

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

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

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

2 Click Settings, and then select one of the settings pages from the links shown on the page.

3 Copy all the information, and then save it as a text file.

4 E-mail the text file to your next level of support.

### Printing the menu settings page

1 From the home screen, navigate to:

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

2 Print the menu settings page, and then use Scan to E-mail to send it to your next level of support.

### D. Collecting information from the user

Ask the user for information about the following:

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

## 9yy errors

### 900.xx–906.xx error messages

| Error code | Description | Action |
|---|---|---|
| 900.xx | Code detected unusual event or timing. | Go to **"System software (900.xx) error service check" on page 212**. |
| 901.xx | Code detected unusual event or timing. | Go to **"System software (901.xx) error service check" on page 217**. |
| 902.xx | Code detected unusual event or timing. | Go to **"System software (902.xx) error service check" on page 217**. |
| 903.xx | Code detected unusual event or timing. | Go to **"Paperport link driver error service check" on page 218**. |
| 904.xx | Code detected unusual event or timing. | Go to **"RIP interface error service check" on page 218**. |
| 905.xx | Code detected unusual event or timing. | Go to **"Paperport device interface error service check" on page 219**. |
| 906.xx | Code detected unusual event or timing. | Go to **"RIP interface driver error service check" on page 219**. |

### 910.xx–917.xx error messages

| Error code | Description | Action |
|---|---|---|
| 910.00 | The pick arm motor has stalled or become obstructed. | Go to **"Pick arm motor service check" on page 220**. |
| 911.00 | The pick arm motor encoder continues to detect pulse after motor stops. | |
| 912.00 | The pick arm motor does not rotate at the specified speed. | |
| 913.00 | The pick arm motor does not rotate at the specified speed. | |
| 914.00 | The pick arm motor encoder detection is lost during normal operation. | |
| 914.01 | The pick arm motor does not rotate at the specified speed. | |

| Error code | Description | Action |
|---|---|---|
| 915.00 | The redrive motor encoder detection is lost during normal operation. | Go to **"Redrive motor assembly service check" on page 220**. |
| 915.01 | The redrive motor does not rotate at the specified speed. | |
| 916.00 | The duplex drive motor encoder detection is lost during normal operation. | Go to **"Internal duplex drive motor service check" on page 221**. |
| 916.01 | The duplex drive motor does not rotate at the specified speed. | |
| 917.00 | Problem with transfer — transfer servo start error. | Go to **"Transfer problem service check" on page 221**. |

## 920.xx error messages

| Error code | Description | Action |
|---|---|---|
| 920.00 | Fuser does not maintain proper operating temperature within steady state control. | Go to **"Fuser (920.00–920.04) failure service check" on page 222**. |
| 920.01 | The fuser hot roll took too long to heat up after transitioning to new enhanced mode within standby control only. | |
| 920.02 | The fuser hot roll fell to far below desired temperature while in standby control. | |
| 920.03 | The fuser hot roll is too cool while checking for slope change in standby. | |
| 920.04 | The fuser hot roll is too cool when heating to desired temperature after slope change within standby control only. | |
| 920.06 | The fuser hot roll temperature does not increase while the lamp is turned on. | Go to **"Fuser (920.06) failure service check" on page 223**. |
| 920.07 | The fuser hot roll temperature is not maintained properly while the media in the fuser nip. | Go to **"Fuser (920.07, 920.31, 920.32) failure service check" on page 223**. |
| 920.25 | Fuser does not maintain proper operating temperature within steady state control. | Go to **"Fuser (920.25–920.29) failure service check" on page 224**. |
| 920.26 | The fuser hot roll took too long to heat up after transitioning to new enhanced mode within standby control only. | |
| 920.27 | The fuser hot roll fell to far below desired temperature while in standby control. | |
| 920.28 | The fuser hot roll is too cool while checking for slope change in standby. | |
| 920.29 | The fuser hot roll is too cool when heating to desired temperature after slope change within standby control only. | |

| Error code | Description | Action |
|---|---|---|
| 920.31 | The fuser hot roll temperature does not increase while the lamp is turned on. | Go to **"Fuser (920.07, 920.31, 920.32) failure service check" on page 223**. |
| 920.32 | The fuser hot roll temperature is not maintained properly while the media in the fuser nip. | |
| 920.50 | Fuser does not maintain proper operating temperature within steady state control.<br>Fuser page count has exceeded life. | Go to **"Fuser unit assembly removal" on page 333**. |
| 920.51 | The fuser hot roll took too long to heat up after transitioning to new enhanced mode within standby control only.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 920.52 | The fuser hot roll fell to far below desired temperature while in standby control.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 920.53 | The fuser hot roll is too cool while checking for slope change in standby.<br>Fuser page count has exceeded life. | |
| 920.54 | The fuser hot roll is too cool when heating to desired temperature after slope change within standby control only.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |

| Error code | Description | Action |
|---|---|---|
| 920.56 | The fuser hot roll temperature does not increase while the lamp is turned on.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | Go to **"Fuser unit assembly removal" on page 333**. |
| 920.57 | The fuser hot roll temperature is not maintained properly while the media in the fuser nip.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 920.75 | Fuser does not maintain proper operating temperature within steady state control.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 920.76 | The fuser hot roll took too long to heat up after transitioning to new enhanced mode within standby control only.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 920.77 | The fuser hot roll fell to far below desired temperature while in standby control.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 920.78 | The fuser hot roll is too cool while checking for slope change in standby.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | Go to **"Fuser unit assembly removal" on page 333**. |
| 920.79 | The fuser hot roll is too cool when heating to desired temperature after slope change within standby control only.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 920.81 | The fuser hot roll temperature does not increase while the lamp is turned on.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 920.82 | The fuser hot roll temperature is not maintained properly while the media in the fuser nip.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |

## 922.xx error messages

| Error code | Description | Action |
|---|---|---|
| 922.00 | Fuser hot roll failed to reach target departure. | Go to **“Fuser (922.00, 922.25) failure service check” on page 225**. |
| 922.02 | The fuser hot roll does not reach the “beginning lamp detection” parameter in the specified time. | Go to **“Fuser (922.02–922.04 and 922.06–922.07) failure service check” on page 225**. |
| 922.03 | The fuser hot roll does not reach the “final lamp detection” parameter, but not in the specified time. | |
| 922.04 | The fuser hot roll has timed out and not reached the “final lamp detection” parameter during the specified time. | |
| 922.05 | After hot roll lamp detection, did not roll over to steady state control in time.<br>The control code has gotten lost. | Go to **“Fuser hot roll control code service check” on page 222**. |
| 922.06 | The fuser hot roll did not reach operating temperature within new enhanced control. | Go to **“Fuser (922.02–922.04 and 922.06–922.07) failure service check” on page 225**. |
| 922.07 | The fuser hot roll did not reach operating temperature after increasing interpage gap. | |
| 922.25 | Fuser hot roll failed to reach target departure. | Go to **“Fuser (922.00, 922.25) failure service check” on page 225**. |
| 922.27 | The fuser hot roll does not reach the “beginning lamp detection” parameter in the specified time. | Go to **“Fuser (922.27–922.29, 922.31–922.32) failure service check” on page 226**. |
| 922.28 | The fuser hot roll does not reach the “final lamp detection” parameter, but not in the specified time. | |
| 922.29 | The fuser hot roll has timed out and not reached the “final lamp detection” parameter during the specified time. | |
| 922.30 | After hot roll lamp detection, did not roll over to steady state control in time.<br>The control code has gotten lost. | Go to **“Fuser hot roll control code service check” on page 222** |
| 922.31 | The fuser hot roll did not reach operating temperature within new enhanced control. | Go to **“Fuser (922.27–922.29, 922.31–922.32) failure service check” on page 226**. |
| 922.32 | The fuser hot roll did not reach operating temperature after increasing interpage gap. | |

| Error code | Description | Action |
|---|---|---|
| 922.50 | Fuser hot roll failed to reach target departure.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | Go to **“Fuser unit assembly removal” on page 333**. |
| 922.52 | The fuser hot roll does not reach the “beginning lamp detection” parameter in the specified time.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 922.53 | The fuser hot roll does not reach the “final lamp detection” parameter, but not in the specified time.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 922.54 | The fuser hot roll has timed out and not reached the “final lamp detection” parameter during the specified time.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 922.56 | The fuser hot roll did not reach operating temperature within new enhanced control.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 922.57 | The fuser hot roll did not reach operating temperature after increasing interpage gap.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |

| Error code | Description | Action |
|---|---|---|
| 922.75 | Fuser hot roll failed to reach target departure.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | Go to **"Fuser unit assembly removal" on page 333**. |
| 922.77 | The fuser hot roll does not reach the "beginning lamp detection" parameter in the specified time.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 922.78 | The fuser hot roll does not reach the "final lamp detection" parameter, but not in the specified time.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 922.79 | The fuser hot roll has timed out and not reached the "final lamp detection" parameter during the specified time.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 922.81 | The fuser hot roll did not reach operating temperature within new enhanced control.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |
| 922.82 | The fuser hot roll did not reach operating temperature after increasing interpage gap.<br>Fuser page count has exceeded life. Replace the fuser unit assembly. | |

## 923.xx–924.xx error messages

| Error code | Description | Action |
|---|---|---|
| 923.00 | Fuser hot roll has exceeded the proper operating temperature. | Go to **"Fuser (923.00–923.01, 923.25–923.26) failure service check" on page 227**. |
| 923.01 | Fuser hot roll has exceeded the proper operating temperature. | |
| 923.25 | Fuser hot roll has exceeded the proper operating temperature. | |
| 923.26 | Fuser hot roll has exceeded the proper operating temperature. | |

| Error code | Description | Action |
|---|---|---|
| 923.50 | Fuser hot roll has exceeded the proper operating temperature.<br>Replace the fuser unit assembly. | Go to **"Fuser unit assembly removal" on page 333**. |
| 923.51 | Fuser hot roll has exceeded the proper operating temperature.<br>Replace the fuser unit assembly. | |
| 923.75 | Fuser hot roll has exceeded the proper operating temperature.<br>Replace the fuser unit assembly. | |
| 923.76 | Fuser hot roll has exceeded the proper operating temperature.<br>Replace the fuser unit assembly. | |
| 924.00 | The fuser thermistor might be faulty.<br>Open the fuser thermistor check, and replace if necessary, the fuser unit assembly. | Go to **"Fuser unit assembly removal" on page 333**. |
| 924.01 | The fuser thermistor might be faulty.<br>Open the fuser thermistor check, and replace if necessary, the fuser unit assembly. | |
| 924.25 | The fuser thermistor might be faulty.<br>Open the fuser thermistor check, and replace if necessary, the fuser unit assembly. | |
| 924.26 | The fuser thermistor might be faulty.<br>Open the fuser thermistor check, and replace if necessary, the fuser unit assembly. | |
| 924.50 | The fuser thermistor might be faulty. Fuser page count has exceeded life.<br>Open the fuser thermistor check, and replace if necessary, the fuser unit assembly. | |
| 924.51 | The fuser thermistor might be faulty. Fuser page count has exceeded life.<br>Open the fuser thermistor check, and replace if necessary, the fuser unit assembly. | |
| 924.75 | The fuser thermistor might be faulty. Fuser page count has exceeded life.<br>Open the fuser thermistor check, and replace if necessary, the fuser unit assembly. | |
| 924.76 | The fuser thermistor might be faulty. Fuser page count has exceeded life.<br>Open the fuser thermistor check, and replace if necessary, the fuser unit assembly. | |

## 925.xx error messages

| Error code | Description | Action |
|---|---|---|
| 925.00 | The machine detected a 115 V lamp in a 220 V machine. The fuser lamp has an excessive wattage rating. | Go to **"Fuser (923.00–923.01, 923.25–923.26) failure service check" on page 227**. |
| 925.01 | | |
| 925.02 | | |
| 925.25 | | |
| 925.26 | | |
| 925.27 | | |
| 925.50 | The machine detected a 115 V lamp in a 220 V machine. The fuser lamp has an excessive wattage rating.<br>Fuser page count has exceeded life. | Go to **"Fuser (923.00–923.01, 923.25–923.26) failure service check" on page 227**. |
| 925.51 | | |
| 925.52 | | |
| 925.75 | | |
| 925.76 | | |
| 925.77 | | |

## 927.xx–935.xx error messages

| Error code | Description | Action |
|---|---|---|
| 927.01 | The main cooling fan is obstructed or has failed. | Go to **"Main cooling fan service check" on page 228**. |
| 927.02 | The print cartridge cooling fan is obstructed or has failed. | Go to **"Print cartridge cooling fan service check" on page 228**. |
| 927.03 | The main cooling does not reach the specified speed. | Go to **"Main cooling fan service check" on page 228**. |
| 927.04 | | |
| 927.05 | | |
| 927.06 | | |
| 927.07 | | |
| 927.11 | The print cartridge cooling fan is obstructed or has failed. | Go to **"Print cartridge cooling fan service check" on page 228**. |
| 927.13 | The print cartridge cooling fan does not reach the specified speed. | |
| 927.14 | | |
| 927.15 | | |
| 927.16 | | |
| 927.17 | | |
| 929.01 | The sensor (toner empty) does not provide toner level feedback or the print cartridge is damaged. | Go to **"Sensor (toner empty) service check" on page 228**. |
| 929.02 | | |
| 929.03 | | |

| Error code | Description | Action |
|---|---|---|
| 930.00 | Possible causes:<br>• A non-supported printhead is installed.<br>• Hsync signal is intermittent or noisy.<br>• Printhead ID resistor circuit is not to spec.<br>Replace the printhead. | Go to **"T650 printhead assembly removal" on page 336**. |
| 930.00 | | Go to **"T652, T654, and T656 printhead assembly removal" on page 338**. |
| 931.00 | The hsync signal is missing or not at the correct voltage. | Go to **"Printhead failure service check" on page 229**. |
| 932.00 | The hsync signal is missing or not at the correct voltage.<br>Replace the printhead. | Go to **"T650 printhead assembly removal" on page 336**. |
| 932.00 | | Go to **"T652, T654, and T656 printhead assembly removal" on page 338**. |
| 933.00 | | Go to **"T650 printhead assembly removal" on page 336**. |
| 933.00 | | Go to **"T652, T654, and T656 printhead assembly removal" on page 338**. |
| 934.00 | The signals driving the polygon motor may have been corrupted, or the cable may be loose, or the motor may be bad. | Go to **"Motor (printhead polygon mirror) service check" on page 230**. |
| 935.00 | | |

## 936.xx–945.xx error messages

| Error code | Description | Action |
|---|---|---|
| 936.10 | The main drive motor assembly may be faulty or has failed. | Go to **"Main drive motor assembly service check" on page 230**. |
| 936.11 | | |
| 936.20 | | |
| 936.21 | | |
| 936.30 | | |
| 936.31 | The main drive motor assembly may be faulty or has failed. | Go to **"Main drive motor assembly service check" on page 230**. |
| 936.60 | | |
| 936.61 | | |
| 936.90 | | |
| 936.91 | | |
| 937.40 | The main drive motor assembly may be faulty or has failed. | Go to **"Main drive motor assembly service check" on page 230**. |
| 937.41 | | |
| 937.50 | | |
| 937.51 | | |
| 937.70 | | |

| Error code | Description | Action |
|---|---|---|
| 937.71 | • The main drive motor assembly may be faulty or has failed.<br>• The internal duplex assembly is not properly grounded to the LVPS. This only applies to machines with an installed internal duplex assembly.<br>**Warning—Potential Damage:** Ensure that the metal frame of the internal duplex assembly is properly grounded to the metal frame of the LVPS with a jumper wire as shown in the graphic below.<br><br>**Note:** If the jumper wire is NOT present, then install the 40X7028 internal duplex grounding kit. This should only be done for machines with an installed internal duplex assembly. | Go to **"Main drive motor assembly service check" on page 230**. |
| 937.80 | The main drive motor assembly may be faulty or has failed. | Go to **"Main drive motor assembly service check" on page 230**. |
| 937.81 | | |
| 939.00 | RIP-engine communication lost. | Go to **"System card assembly removal" on page 285**. |
| 940.00 | LVPS zero cross test fails. Replace the LVPS card assembly. | Go to **"T650 LVPS card assembly removal" on page 292**. |
| 940.00 | | Go to **"T652, T654, and T656 LVPS card assembly removal" on page 294**. |

## 950.xx–990.xx error messages

| Error code | Description | Action |
|---|---|---|
| 950.00–950.29 | Mismatch between system card EEPROM and operator panel mirror. | Go to **"NVRAM mismatch (950.00 through 950.29) service check" on page 231**. |
| 950.30–950.60 | Mismatch between secure and system. | |
| 952.xx | A recoverable NVRAM Cyclic Redundancy Check (CRC) error occurred. | Go to **"NVRAM Cyclic Redundancy Check error service check" on page 231**. |
| 953.xx | The NVRAM chip has failed on the operator panel door assembly. | Go to **"NVRAM chip failure on operator panel door assembly service check" on page 232**. |

| Error code | Description | Action |
|---|---|---|
| 954.xx | NVRAM chip failure with system card assembly.<br>Replace the system card assembly. | Go to **"System card assembly removal" on page 285**. |
| 955.xx | The Code ROM or NAND Flash failed the Cyclic Redundancy Check (CRC) or the NAND experienced an uncorrectable multi-bit failure.<br>Replace the system card assembly. | |
| 956.xx | The processor has failed on the system card assembly.<br>Replace the system card assembly. | |
| 956.01 | The system card processor is over temperature or is damaged.<br>Replace the system card assembly. | |
| 957.xx | The ASIC has failed on the system card assembly.<br>Replace the system card assembly. | |
| 958.xx | Printer has performed more than 100 "shift and reflash" operations as a result of ECC bit corrections.<br>Replace the system card assembly. | |
| 959.xx | The system card cannot properly authenticate the print cartridge or the authentication process has failed.<br>Replace the system card assembly. | |
| 960.xx | RAM memory error: RAM soldered on the card is bad. | Go to **"RAM memory error service check" on page 233** |
| 961.xx | RAM memory error: Slot 1 RAM is bad. | |
| 962.xx | RAM memory error: Slot 2 RAM is bad. | |
| 963.xx | RAM memory error: Slot 3 RAM is bad. | |
| 964.xx | The download emulation Cyclic Redundancy Check (CRC) detected a failure.<br>Disable the download emulation, and then program the download emulation into the firmware card again. If the problem remains, replace the system card assembly. | Go to **"System card assembly removal" on page 285**. |
| 975.xx | The system detected an unrecognizable network port. | N/A |
| 976.xx | The system detected an unrecoverable software error network port. | N/A |
| 978.xx | The system detected a bad checksum while programming a network port. | N/A |
| 979.xx | The flash parts failed while programming a network port. | N/A |

| Error code | Description | Action |
|---|---|---|
| 982.04 | An output option was not fully seated onto the printer or has been removed while the main power is turned on. | Go to **"Output option is missing service check" on page 233**. |
| 982.07 | Exceeded the maximum number of input or output options. | Go to **"Too many options installed service check" on page 234**. |
| 982.13 | The printer has detected a hot plug of an optional device.<br>Low-level error on paper port. | Go to **"The printer has detected a hot plug service check" on page 234**. |
| 990.00 | Output option rear door is not fully closed. | Go to **"Rear doors are open service check" on page 234**. |
| 990.51 | The HCIT tray lift motor does not operate at the specified speed reported by tray [x]. | Go to **"Motor (HCIT tray lift) service check" on page 233**. |
| 990.53 | The HCIT tray lift motor does not reach the specified speed at the specified time. | |
| 990.54 | The HCIT tray lift motor is not reporting pulses back to the engine. | |

## System software (900.xx) error service check

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

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

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>POR the device.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>**a** Write down the exact 900.xx error code displayed on the device.<br>**b** Turn off the device.<br>**c** Clear the print queues.<br>**d** Disconnect all communication cables, and then remove all memory options.<br>**e** Remove all ISP and modem cards.<br>**f** Restart the device into diagnostic mode.<br><br>Does the problem remain? | Go to step 3. | Go to step 5. |
| **Step 3**<br>**a** Check all the cables connected to the RIP board for proper connectivity.<br>**b** Properly connect the cables to the RIP board.<br>**c** Restart the device into diagnostic mode.<br><br>Does the problem remain? | Go to step 4. | Go to step 5. |
| * Before contacting your next level of support, make you have the following information and materials:<br>• Exact 900.xx error digits and complete error message<br>• Printed menu settings page<br>• Printed network settings page<br>• Device error log<br>• A sample print file if error appears to be isolated to a single file<br>• File/application used if error is related to a specific print file<br>• Device operating system<br>• Driver used (PCL/PS)<br>• Frequency of the occurrence of the error | | |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Replace the RIP board, and then restart the device.<br>**Note:** If an error displayed is different from the original 900.xx, then consult the service check for that error.<br><br>Does the problem remain? | Contact the next level of support*. | The problem is solved. |
| **Step 5**<br>Print the following:<br>• Error log<br>• Menu settings page<br>• Network settings page<br><br>Does the problem remain? | Contact the next level of support*. | Go to step 6. |
| **Step 6**<br>**a** Reattach the communications cable, and then restart the printer to operating mode.<br>**b** Send the printer a print job.<br>**Note:** Before performing this step, write down this information about the file being sent to the printer.<br>• Application used<br>• Operating system<br>• Driver type<br>• File type (PCL, PostScript, XPS, etc.)<br><br>Does the problem remain? | Go to step 7. | Go to step 8. |
| **Step 7**<br>**a** Upgrade the firmware. Contact your next level of support for the correct firmware level to use.<br>**b** Restart the printer to operating mode.<br>**c** Send the printer a print job.<br><br>Does the problem remain? | Contact the next level of support*. | Go to step 8. |

* Before contacting your next level of support, make you have the following information and materials:
- Exact 900.xx error digits and complete error message
- Printed menu settings page
- Printed network settings page
- Device error log
- A sample print file if error appears to be isolated to a single file
- File/application used if error is related to a specific print file
- Device operating system
- Driver used (PCL/PS)
- Frequency of the occurrence of the error

| Action | Yes | No |
|---|---|---|
| **Step 8**<br><br>Is the device a multifunction printer? | Go to step 9. | Go to step 11. |
| **Step 9**<br>Run a copy job.<br><br>Does the problem remain? | Contact the next level of support*. | Go to step 10. |
| **Step 10**<br>Run a scan-to-PC job.<br><br>Does the problem remain? | Contact the next level of support*. | Go to step 11. |
| **Step 11**<br><br>Is there an installed optional memory card? | Go to step 12. | Go to step 13. |
| **Step 12**<br>Reinstall the optional memory card, and then send a print job to the device.<br><br>Does the problem remain? | Go to step 13. | Go to step 14. |
| **Step 13**<br>Install a Lexmark-recommended memory option, and then send a print job to the device.<br><br>Does the problem remain? | Contact the next level of support*. | The problem is solved. |
| **Step 14**<br><br>Is there a modem installed on the device? | Go to step 15. | Go to step 19. |
| **Step 15**<br>Reinstall the modem, and restart the device.<br><br>Does the problem remain? | Go to step 16. | Go to step 18. |

* Before contacting your next level of support, make you have the following information and materials:

- Exact 900.xx error digits and complete error message
- Printed menu settings page
- Printed network settings page
- Device error log
- A sample print file if error appears to be isolated to a single file
- File/application used if error is related to a specific print file
- Device operating system
- Driver used (PCL/PS)
- Frequency of the occurrence of the error

| Action | Yes | No |
|---|---|---|
| **Step 16**<br>**a** Upgrade the firmware. Contact your next level of support for the correct firmware level to use.<br>**b** Restart the printer to operating mode.<br>**c** Send the printer a print job.<br><br>Does the problem remain? | Go to step 17. | The problem is solved. |
| **Step 17**<br>Replace the modem, and then restart the device.<br><br>Does the problem remain? | Contact the next level of support*. | The problem is solved. |
| **Step 18**<br>Run a fax job.<br><br>Does the problem remain? | Contact the next level of support*. | Go to step 19. |
| **Step 19**<br><br>Are there any ISP (internal solutions port) options installed? | Go to step 20. | The problem is solved. |
| **Step 20**<br>**a** Reinstall the first ISP option, and then restart the device.<br>**b** Run a job to test the option.<br><br>Does the problem remain? | Go to step 21. | Go to step 23. |
| **Step 21**<br>**a** Upgrade the firmware. Contact your next level of support for the correct firmware level to use.<br>**b** Restart the printer to operating mode.<br>**c** Send the printer a print job.<br><br>Does the problem remain? | Go to step 22. | The problem is solved. |

* Before contacting your next level of support, make you have the following information and materials:

- Exact 900.xx error digits and complete error message
- Printed menu settings page
- Printed network settings page
- Device error log
- A sample print file if error appears to be isolated to a single file
- File/application used if error is related to a specific print file
- Device operating system
- Driver used (PCL/PS)
- Frequency of the occurrence of the error

| Action | Yes | No |
|---|---|---|
| **Step 22**<br>**a** Replace the faulty ISP option, and then restart the device.<br>**b** Run a job to test the new option.<br><br>Does the problem remain? | Contact the next level of support*. | Go to step 23. |
| **Step 23**<br><br>Are there any more ISP options to install? | Go to step 24. | The problem is solved. |
| **Step 24**<br>**a** Install the next ISP option, and then restart the device.<br>**b** Run a job to test the new option. | Go to step 25. | Go to step 23. |
| **Step 25**<br>**a** Upgrade the firmware. Contact your next level of support for the correct firmware level to use.<br>**b** Restart the printer to operating mode.<br>**c** Send the printer a print job.<br><br>Does the problem remain? | Go to step 26. | Go to step 23. |
| **Step 26**<br>**a** Replace the faulty ISP option, and then restart the device.<br>**b** Run a job to test the new option.<br><br>Does the problem remain? | Contact the next level of support*. | The problem is solved. |

* Before contacting your next level of support, make you have the following information and materials:

- Exact 900.xx error digits and complete error message
- Printed menu settings page
- Printed network settings page
- Device error log
- A sample print file if error appears to be isolated to a single file
- File/application used if error is related to a specific print file
- Device operating system
- Driver used (PCL/PS)
- Frequency of the occurrence of the error

## System software (901.xx) error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>**a** POR the machine, and then print a simple test page to determine if the problem is firmware related, or if the customer is sending a corrupted print job.<br>**b** Do the necessary steps to correct the issue.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## System software (902.xx) error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>**a** POR the machine, and then print a simple test page to determine if the problem is system software related, or if the customer is sending a corrupted print job.<br>**b** Do the necessary steps to correct the issue.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Paperport link driver error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>**a** POR the machine, and then print a simple test page to determine if the problem is system software related, or if the customer is sending a corrupted print job.<br>**b** Do the necessary steps to correct the issue.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## RIP interface error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>**a** POR the machine, and then print a simple test page to determine if the problem is system software related, or if the customer is sending a corrupted print job.<br>**b** Do the necessary steps to correct the issue.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Paperport device interface error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>**a** POR the machine, and then print a simple test page to determine if the problem is system software related, or if the customer is sending a corrupted print job.<br>**b** Do the necessary steps to correct the issue.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## RIP interface driver error service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>**a** POR the machine, and then print a simple test page to determine if the problem is system software related, or if the customer is sending a corrupted print job.<br>**b** Do the necessary steps to correct the issue.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Pick arm motor service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all the connections on the pick arm assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the pick arm assembly. Go to **"Pick arm assembly removal" on page 322**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Redrive motor assembly service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all the connections on the redrive motor assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the redrive motor assembly. Go to **"T652, T654, and T656 redrive motor assembly removal" on page 340**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Transfer problem service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the HVPS.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check the system board.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check the HVPS, input sensor, and toner sensor cable.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>**a** Check the voltage at J20-4.<br>**Note:** The voltage changes from +24 V dc (with the printer idle) to 0 V dc (when the printer runs the print test).<br>**b** If the voltage is incorrect, then check the continuity of line J20-4 in the front cable harness to the HVPS.<br>**c** If there is no continuity, then replace the cable harness and the HVPS if necessary. Go to **"HVPS card assembly removal" on page 290**.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |
| **Step 5**<br>Replace the system card. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Internal duplex drive motor service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all the connections on the duplex drive motor assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the connections on the system card assembly, and if necessary, replace the connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Replace the duplex drive motor assembly. Go to **"T652, T654, and T656 duplex drive motor assembly removal" on page 330**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser hot roll control code service check

| Action | Yes | No |
|---|---|---|
| Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser (920.00–920.04) failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check if the fuser unit assembly is properly installed.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check if the proper voltage fuser is installed in the machine.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser (920.06) failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check if the proper voltage fuser is installed in the machine.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check all connections on the fuser and LVPS card assembly.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Check if the proper voltage setting is being used on the switchable LVPS assembly.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |
| **Step 5**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 6. | The problem is solved. |
| **Step 6**<br>Replace the LVPS card assembly. Go to **"T650 LVPS card assembly removal" on page 292** or **"T652, T654, and T656 LVPS card assembly removal" on page 294**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser (920.07, 920.31, 920.32) failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check if the proper voltage fuser is installed in the machine.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Check all connections on the fuser and LVPS card assembly.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |
| **Step 5**<br>Replace the LVPS card assembly. Go to **"T650 LVPS card assembly removal" on page 292** or **"T652, T654, and T656 LVPS card assembly removal" on page 294** .<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser (920.25–920.29) failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check if the fuser unit assembly is properly installed.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check if the proper voltage fuser is installed in the machine.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser (922.00, 922.25) failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check if the fuser unit assembly is properly installed.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check if the proper voltage fuser is installed in the machine.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser (922.02–922.04 and 922.06–922.07) failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check if the proper voltage fuser is installed in the machine.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check all connections on the fuser and LVPS card assembly.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Check if the proper voltage setting is being used on the switchable LVPS assembly.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 5**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 6. | The problem is solved. |
| **Step 6**<br>Replace the LVPS card assembly. Go to **"T650 LVPS card assembly removal" on page 292** or **"T652, T654, and T656 LVPS card assembly removal" on page 294** .<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser (922.27–922.29, 922.31–922.32) failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check if the proper voltage fuser is installed in the machine.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check all connections on the fuser and LVPS card assembly.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Check if the proper voltage setting is being used on the switchable LVPS assembly.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |
| **Step 5**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Go to step 6. | The problem is solved. |
| **Step 6**<br>Replace the LVPS card assembly. Go to **"T650 LVPS card assembly removal" on page 292** or **"T652, T654, and T656 LVPS card assembly removal" on page 294** .<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser (923.00–923.01, 923.25–923.26) failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check if the fuser unit assembly is properly installed.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check if the proper voltage fuser is installed in the machine.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Fuser (925.xx) failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Turn off the machine, and then turn it back on.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check if the fuser unit assembly is properly installed.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check if the proper voltage fuser is installed in the machine.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Main cooling fan service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check for cooling fan obstructions.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check the connections on the main cooling fan, and replace the connections if necessary.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the main cooling fan. Go to **"Main cooling fan removal" on page 275**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Print cartridge cooling fan service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check for cooling fan obstructions.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check the connections on the main cooling fan, and replace the connections if necessary.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the print cartridge cooling fan. Go to **"Print cartridge cooling fan removal" on page 295**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Sensor (toner empty) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>**a** Check the sensor (toner empty) for proper installation.<br>**b** If necessary, remove and then reinstall the sensor.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 2**<br>Check the sensor (toner empty) for proper operation.<br>**a** Enter the Diagnostics menu.<br>**b** Select **Base sensor test** > **Sensor tests**.<br>**c** Observe the line item, “toner empty.”<br><br>Does the display on the operator panel change every time the sensing area of the sensor is interrupted or blocked? | The problem is solved. | Go to step 3. |
| **Step 3**<br>**a** Check the sensor (toner empty) for proper connection.<br>**b** Replace the connection, if necessary.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Replace the sensor (toner empty). Go to **“Sensor (toner empty) removal” on page 298**.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |
| **Step 5**<br>Check the toner pulse wheel on the print cartridge for damage, and if necessary, replace the cartridge.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Printhead failure service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all connections on the printhead assembly for proper connectivity.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all connections on the system card assembly for proper connectivity.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Check all printhead connections for possible damage and poor continuity.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 4**<br>Replace the system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |
| **Step 5**<br>Replace the printhead assembly. Go to **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Motor (printhead polygon mirror) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all connections on the printhead assembly for proper connectivity.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all connections on the system card assembly for proper connectivity.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the printhead assembly. Go to **"T650 printhead assembly removal" on page 336** or **"T652, T654, and T656 printhead assembly removal" on page 338**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Main drive motor assembly service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check all connections on the system card assembly for proper connectivity.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all connections on the main drive motor assembly.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Replace the main drive motor assembly. Go to **"Main drive motor assembly removal" on page 276**.<br><br>Does the problem remain? | Go to step 4. | The problem is solved. |
| **Step 4**<br>Replace the system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## NVRAM Cyclic Redundancy Check error service check

| Action | Yes | No |
|---|---|---|
| Turn off the machine, and then turn it back on. This resets the error condition.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## NVRAM mismatch (950.00 through 950.29) service check

**Warning—Potential Damage:** When replacing the operator panel assembly or the system card assembly, make sure to:

- Replace only one component at a time.
- Perform a POR every after each component is replaced.

If this procedure is not followed, then the printer will be rendered inoperable.

These components can be used as a method of troubleshooting as long as the machine is booted into diagnostic mode or is operating in diagnostic mode. Once a component has been installed in a machine and powered up into user mode, it cannot be used in another machine. It must be returned to the manufacturer.

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check the operator panel assembly.<br><br>Was the operator panel assembly recently replaced? | Go to step 3. | Go to step 2. |
| **Step 2**<br>Check the system card assembly.<br><br>Was the system card assembly recently replaced? | Go to step 4. | Contact the next level of support. |

| Action | Yes | No |
|---|---|---|
| **Step 3**<br>Replace the current operator panel assembly with the original operator panel assembly.<br><br>Does the problem remain? | Go to step 5. | The problem is solved. |
| **Step 4**<br>Replace the current system card assembly with the original system card assembly. Go to **"System card assembly removal" on page 285**.<br><br>Does the problem remain? | Go to step 6. | The problem is solved. |
| **Step 5**<br>Replace the original operator panel assembly with a new and not previously installed operator panel assembly.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |
| **Step 6**<br>Replace the original operator panel assembly with a new and not previously installed operator panel door assembly or the operator panel assembly. Go to **"T650, T652, and T654 operator panel door assembly removal" on page 307** or **"T656 operator panel door assembly removal" on page 312**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## NVRAM chip failure on operator panel door assembly service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Replace the operator panel door assembly. Go to **"T650, T652, and T654 operator panel door assembly removal" on page 307**.<br><br>Does the problem remain? | Go to step 2. | Problem is solved. |
| **Step 2**<br>Replace the fuser unit assembly. Go to **"Fuser unit assembly removal" on page 333**.<br><br>Does the problem remain? | Contact next level of support. | Problem is solved. |

## Motor (HCIT tray lift) service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>Check and remove all obstructions in the HCIT lift area.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check the connections on the HCIT tray lift motor assembly for proper connections.<br><br>Does the problem remain? | Go to step 3. | The problem is solved. |
| **Step 3**<br>Replace the HCIT tray lift drive motor assembly. Go to **"High capacity input tray (HCIT) tray lift drive motor assembly removal" on page 384**.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## RAM memory error service check

| Action | Yes | No |
|---|---|---|
| Replace the appropriate module.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Output option is missing service check

| Action | Yes | No |
|---|---|---|
| **Step 1**<br>**a** Turn off the main power.<br>**b** Remove, and then reinstall the output option.<br><br>Does the problem remain? | Go to step 2. | The problem is solved. |
| **Step 2**<br>Check all the output option interface connections, and if necessary, replace the connections.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## Too many options installed service check

| Action | Yes | No |
|---|---|---|
| Remove the appropriate input or output options.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

## The printer has detected a hot plug service check

| Action | Yes | No |
|---|---|---|
| **a** Turn off the printer, and then install all the options.<br>**b** Turn the printer back on.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

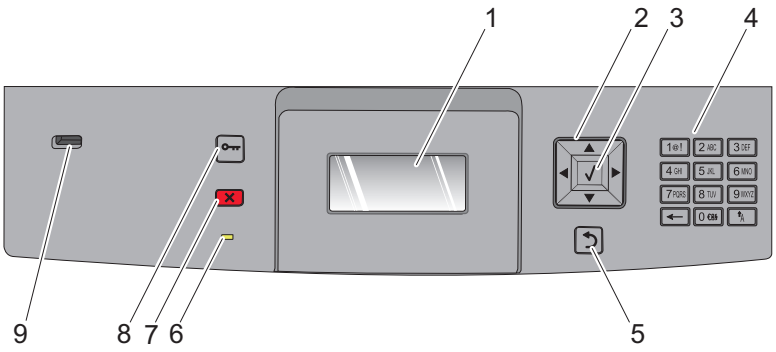
## Rear doors are open service check

| Action | Yes | No |
|---|---|---|
| Close the rear door on all output options.<br><br>Does the problem remain? | Contact the next level of support. | The problem is solved. |

# Service menus

## Understanding the printer control panel

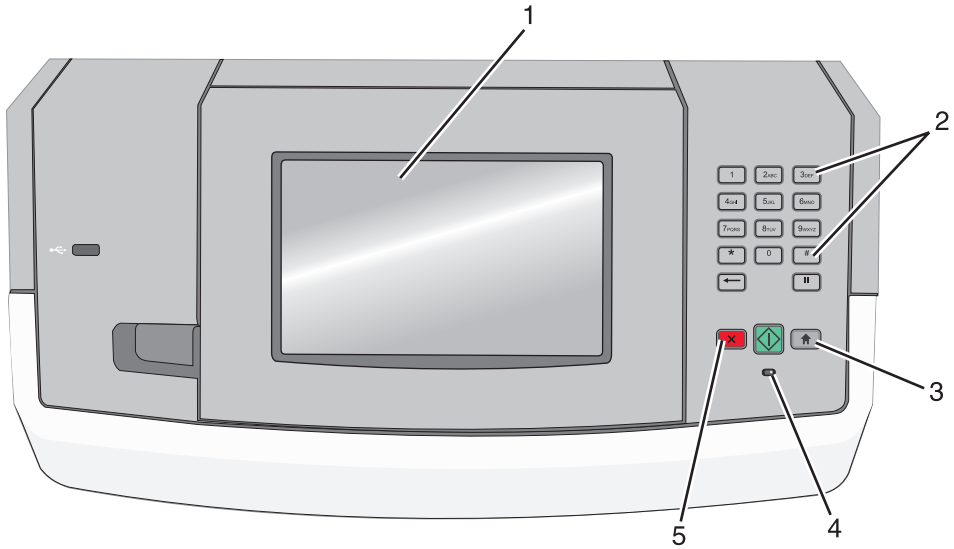
### T650, T652, and T654 printer models




| Item | | Description |
|---|---|---|
| 1 | Display | Shows messages and pictures that communicate the status of the printer |
| 2 | Navigation buttons  | • Press the up or down arrow button to scroll through menus or menu items, or to increase or decrease a value when entering numbers.<br>• Press the left or right arrow button to scroll through menu settings (also called values or options), or to scroll through text that rolls to another screen. |
| 3 | Select button  | • Opens a menu item and displays the available values or settings. The current setting is indicated by an asterisk (*).<br>• Saves a displayed menu item as the new user default setting. |
| 4 | Keypad | Enters numbers or symbols on the display. |
| 5 | Back button  | Returns the display to the previous screen |
| 6 | Indicator light | Indicates the printer status. For more information, see **"Understanding the colors of the Sleep button and indicator lights" on page 237**. |

| Item | | Description |
|---|---|---|
| 7 | Stop or Cancel button  | Stops all printer activity |
| 8 | Menu button  | Opens the menu index<br>**Note:** The menus are available only when the printer is in Ready state. |
| 9 | USB port | Connects a flash drive to the printer<br>**Note:** Only the front USB port supports flash drives. |

## T656 printer model




| Item | | Description |
|---|---|---|
| **1** | Display | Shows printing options as well as status and error messages |
| **2** | Keypad  | Enters numbers or symbols on the printer display |
| **3** | Home button  | Returns to the home screen |

| Item | | Description |
|---|---|---|
| 4 | Indicator light | Indicates the printer status. For more information, see **"Understanding the colors of the Sleep button and indicator lights" on page 237**. |
| 5 | Stop or Cancel button  | Stops all printer activity |

# Understanding the colors of the Sleep button and indicator lights

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

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

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

# Diagnostics menu

## Entering the Diagnostics menu

### For models T650, T652, and T654

1. Turn off the printer.
2. From the control panel, press and hold the down and right arrow buttons while turning the printer on.
3. Release the buttons when the screen with the progress bar appears.

### For model T656

1. Turn off the printer.
2. From the control panel, press and hold **3** and **6** while turning the printer on.

3 Release the buttons when the screen with the progress bar appears.

## Exiting the Diagnostics menu

**Note:** This is applicable only to models T650, T652, and T654.

From the menu, select **Exit Diagnostics** to reset the printer. The printer then performs a POR, and returns to Ready state.

## Registration

Configure this setting to make sure printouts are aligned properly.

### For models T650, T652, and T654

1 From the Diagnostics menu, select **REGISTRATION**.

2 Print a test page. For more information, see **"Printing a quick test page" on page 239**. Retain this page to determine what changes to make to the margin settings.

3 Configure any of the following margin settings.

- **Top Margin** (value: -25 to +25)—A positive change moves the image down the page and increases the top margin. A negative change moves the image up and decreases the top margin.
- **Bottom Margin** (value: -20 to +20)—A positive change compresses the image so it appears to move down the page and a negative change moves the image up.
- **Left Margin** (value: -25 to +25)—A positive change moves the image to the left and a negative change moves the image to the right. No compression occurs.
- **Right Margin** (value: -99 to +99)—A positive change moves the image to the right and a negative change moves the image to the left.

**Notes:**

- Use the left or right arrow button to decrease or increase the values. You can press the Select button to reset the values.
- You need to print a test page every time you configure a margin setting in order to verify the changes.

4 Press the Back button to exit REGISTRATION.

### For model T656

1 From the Diagnostics menu, select **REGISTRATION**.

2 Print a test page. For more information, see **"Printing a quick test page" on page 239**. Retain this page to determine the changes you need to make to the margin settings.

3 Configure any of the following margin settings.

- **Top Margin** (value: -25 to +25)—A positive change moves the image down the page and increases the top margin. A negative change moves the image up and decreases the top margin.
- **Bottom Margin** (value: -20 to +20)—A positive change compresses the image so it appears to move down the page and a negative change moves the image up.

- **Left Margin** (value: -25 to +25)—A positive change moves the image to the left and a negative change moves the image to the right. No compression occurs.
- **Right Margin** (value: -10 to +10)—A positive change moves the image to the right and a negative change moves the image to the left.

**Notes:**

- Use the left or right arrow button to decrease or increase the values.
- You need to print a test page every time you configure a margin setting in order to verify the changes.

4 Touch **Submit** to save the changes.

5 Touch **Back** to exit REGISTRATION.

### Printing a quick test page

**Note:** Use only A4- or letter-size paper.

The test page contains the following information:

- Printer registration settings
- Code levels
- Alignment diamonds at the top, bottom, and each side
- Horizontal lines for skew adjustment
- General printer information, including current page count, installed memory, processor speed, serial number, engine ID, and system card ID

**For models T560, T652, T654**

1 From the Diagnostics menu, select **REGISTRATION**.

2 Press the down arrow button until **`Quick Test`** with a check mark appears.

3 Press the Select button to start printing.

**For model T656**

1 From the Diagnostics menu, select **REGISTRATION**.

2 Touch **Quick Test** to start printing.

## PRINT TESTS

This test determines if the printer can print on paper from any of the installed trays. Only the installed trays are listed in the Print Tests menu.

The content of the test page varies depending on the paper in the selected tray. Check each test page from each source to assist in print quality and paper feed problems.

### Input Source Test

1. From the Diagnostics menu, select **PRINT TESTS**.
2. Select an input source to test:
   - Tray 1 (standard tray)
   - Tray 2
   - Tray 3
   - Tray 4
   - Tray 5
   - Multipurpose feeder
   - Envelope feeder

   **Note:** Trays 2–5 and the feeders are optional and are only available if installed.
3. Select one of the following:
   - **Single**—A single sheet is printed.
   - **Continuous**—Printing continues until the Stop button is pressed to cancel the test.

   **Note:** If the input source contains envelopes, then an envelope test pattern is printed. Even if Continuous is selected, the test pattern is only printed on the first envelope.
4. Depending on your printer model, press the Back button or touch **Back** to return to PRINT TESTS.

   **Note:** Print Test Page always prints on one side of the paper even if duplex printing is enabled.

### Print Quality Pages

This allows printing of the print quality pages with the toner cartridge lockout-function disabled. The Print Quality Test pages are printed in English and must always be printed on letter, legal, or A4 paper.

1. From the Diagnostics menu, select **PRINT TESTS**.
2. Depending on your printer model, select **Prt Quality Pgs** or **Printing Quality Test Pages**.

   **For models T650, T652, and T654**

   The print quality pages consist of four pages. The DIAGNOSTICS version of the first print quality test page contains a mixture of graphics and text, which includes the following:
   - Device information
   - Printer revision levels
   - Cartridge information
   - Printer margin settings
   - EP setup
   - Printer setup
   - Minimum stroke width

   **For model T656**

   The print quality pages for this model includes the following information:
   - Values from EP SETUP
   - Contents of the EVENT LOG

- Configuration information, including printer serial number, controller code level, engine code level, and cartridge information.
- Default values for the QUALITY MENU settings used to print the pages.

# HARDWARE TESTS

## Panel Test

This test automatically toggles each pixel of the display or home screen, depending on your printer model, through every contrast level beginning with the darkest to the brightest. This continues until you press the Stop button.

## Button Test

This test verifies the operation of the buttons on the control panel. When Button Test is selected, a diagram of the control panel appears on the panel.

If you press a button on the control panel while running the test:

- **Models T650, T652, and T654**—Then **x** appears on the corresponding diagram. It only disappears when the button is released.
- **Model T656**—Then the corresponding touch screen key is emphasized.

Depending on your printer model, touch **Back** or press the Back or Stop button to cancel the test.

## DRAM Test

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

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

   **Note:** The printer performs the test and then resets.

2. After the printer resets, the results of the test appear: **DRAM Test [x] P:###### F:######**.

   Where:

   - **[x]** represents the size of the installed DRAM.
   - **P:######** represents the number of times the memory test passed and finished successfully. The maximum pass count is 999,999.
   - **F:#####** represents the number of times the memory test failed and finished with errors. The maximum pass count is 999,999.

   **Note:** After the maximum pass or fail count is reached or when all the DRAM has been tested, the test stops and the final results appear.

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

## USB HS Test Mode

1. From the Diagnostics menu, navigate to **HARDWARE TESTS** > **USB HS Test Mode**.
2. Find and select the port to be tested, and then press the Select button.
3. Select a test, and then press the Select button.

| Port | Test |
|---|---|
| Port 0 | Test J<br>Test K<br>Test SEO NAK<br>Test Packet<br>Test Force Enable |
| Port 1 | |
| Port 2 | |
| Port 3 | |
| Single Step Get Device Descriptor*<br>Single Step Set Feature* | |
| * This is available only in model T656. | |

**Notes:**

- To exit the test, turn off the printer.
- If the test fails, then replace the failing USB cable.

## RFID Option Test

This test confirms whether the RFID firmware and hardware are working properly. If the test fails, repeat the test to confirm that the problem is not intermittent or caused by a single failed piece of RFID media.

**Note:** If the printer has problems picking RFID media from a tray, try using a shorter stack of media (less than 100 sheets) before assuming a pick mechanism problem. The RFID media should contain as RFID tag that is positioned within the first half of the page from the leading edge.

1. From the Diagnostics menu, select **RFID Option Test**.
2. Load RFID media in Tray 2, and then press **Continue**.

   A test page is printed.
3. Check the test page to determine whether the test has passed or failed.

   If the page has a print of a sheet with a prohibition sign, then the test fails. Possible causes are:

   - Bad RFID media
   - RFID UHF option failure

   Try the test again with a new piece of RFID media. If the test fails again, then replace the RFID UHF option.
4. If the test has passed, then reload in Tray 2 the RFID media that was printed in **step 2 on page 242**.

   **Note:** Make sure to load the media facedown with the arrow pointing toward the front of the printer.
5. Press **Continue**, and then check the test page to determine whether the test has passed or failed.

If the page has a print of an arrow and a sheet with a prohibition sign, then the test fails. Possible causes are:

- Bad RFID media
- RFID UHF option failure

Try the test again with a new piece of RFID media. If the test fails again, then replace the RFID UHF option.

If the page is without an arrow but has a print of a sheet with a prohibition sign, then the test also fails. This is an indication that the RFID tag could not be read because the RFID sheet printed in **step 2 on page 242** was not reloaded (or reloaded incorrectly). Try the test again with a new piece of RFID media, and make sure that the sheet printed in **step 2 on page 242** is reloaded into Tray 2 for another test.

6 Load plain media in Tray 2, and then press **Continue**.

A test page is printed.

7 Check the test page to determine whether the test has passed or failed.

If the page has a sheet with a prohibition sign that appears both at the middle and bottom, then the test has passed and the RFID Option test is complete. The RFID firmware and hardware are working properly.

8 If the page has only one sheet with a prohibition sign that appears at the middle, then the test fails.

This is an indication that the printer was able to read an RFID tag when it was not supposed to. Possible causes are:

- RFID media was printed instead of plain media
- A separate RFID tag may be placed in close proximity to the RFID option
- RFID UHF option failure

Try the test again, and make sure that plain media is used for **step 6 on page 243**. If the test fails again, inspect the printer to make sure there are no RFID option. For example, if an RFID tag was applied to the printer front cover itself, this tag may be causing problems with the RFID reader. If no problems found, replace the RFID UHF option.

# DUPLEX TESTS

## Quick Test

This test determines whether the top margin at the back of a duplexed page is set correctly. This prints a duplexed version of the Quick test page that can be used to adjust the duplex top margin. Use either Letter or A4 paper.

1 From the Diagnostics menu, navigate to **DUPLEX TESTS** > **Quick Test**.

2 Select one of the following:

- **Single**—Prints a single quick test page.
- **Continuous**—Continuously prints the quick test pages until the Stop button is pressed.

The printer attempts to print the quick test page from the default paper source. If the default paper source supports only envelopes, then the page is printed from Tray 1.

3 Check the page for the correct offset between the placement of the first scan line on the front and back side of a duplexed sheet.

4 If duplex top margin needs adjustment, then adjust first the top margin setting in the Registration menu.

**Note:** A positive offset moves the text down the page and widens the top margin, while a negative offset moves the text up the page and narrows the top margin.

## Top Margin

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

**Note:** If duplex top margin needs adjustment, then adjust first the top margin setting in the Registration menu.

1 Print a quick test page.
   a From the Diagnostics menu, navigate to **DUPLEX TESTS** > **Quick Test**.
   b Select **Single**.
   c Hold the page to light to see whether the top margins of the back and front side are aligned.

2 From the Diagnostics menu, navigate to **DUPLEX TESTS** > **Top Margin**.

3 Change the margin value.

**Notes:**

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

4 Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

5 To verify the adjustment, print a quick test page.

## Left Margin

This setting allows the user to shift the position of the left margin of the back side of the duplexed page to the left or right.

**Note:** This is applicable only to model T656.

1 Print a quick test page.
   a From the Diagnostics menu, navigate to **DUPLEX TESTS** > **Quick Test**.
   b Select **Single**.
   c Hold the page to light to see whether the left margins of the back and front side are aligned.

2 From the Diagnostics menu, navigate to **DUPLEX TESTS** > **Left Margin**.

3 Change the margin value.

**Notes:**

- Each increment shifts the duplex left margin by 1/100 of an inch
- The Left Margin range is -25 to +25, and the default value is 0.

- A positive value moves the left margin to the right and widens the left margin. A negative value moves the left margin to the left and narrows the left margin.

4 Touch **Submit**, and then print a quick test page to verify the adjustment.

## Sensor Test

This test determines whether the duplex sensors and switches are working properly.

1 From the Diagnostics menu, navigate to **DUPLEX TESTS** > **Sensor Test**.

**`Sensor Test Testing`** appears on the display.

2 Manually actuate the duplex input and exit sensors. The input sensor is in the back part of the duplex unit, while the exit sensor is in the return paper path.

**Note:** **`CL`** or **`OP`** appears on the display to indicate whether the sensor or switch is closed (CL) or open (OP).

3 Press the Stop button to exit the test.

## Motor Test

This test determines whether the power and velocity values of the duplex option paper feed drive system are acceptable. The duplex runs the DC motor at high and low speed, taking an average of the power (PWM) required for each speed and calculating the KE value.

1 From the Diagnostics menu, navigate to **DUPLEX TESTS** > **Motor Test**.

The power indicator light blinks and **`Motor Test Testing`** appears on the display.

2 When the motor stops, see the message that appears on the display to check whether the motor passed or failed the test.

3 Press the Stop button to exit the test.

## Duplex Feed 1

This test feeds a blank sheet of paper to the duplex paper stop position 1. This can be run using any of the supported paper sizes.

1 From the Diagnostics menu, navigate to **DUPLEX TESTS** > **Duplex Feed 1**.

The power indicator blinks while the paper is feeding and **`Duplex Feed 1 Feeding...`** appears on the display.

**Note:** Do not cancel this test.

2 When **`Duplex Feed 1 Clear Paper`** appears on the display, then remove the media from the duplex unit.

3 From the control panel, press the Stop button to clear the message.

### Duplex Feed 2

This test feeds a blank sheet of paper to the duplex paper stop position 2. This can be run using any of the supported paper sizes.

1. From the Diagnostics menu, navigate to **DUPLEX TESTS** > **Duplex Feed 2**.

   The power indicator blinks while the paper is feeding and **`Duplex Feed 2 Feeding...`** appears on the display.

   **Note:** Do not cancel this test.

2. When **`Duplex Feed 2 Clear Paper`** appears on the display, then remove the media from the duplex unit.
3. From the control panel, press the Stop button to clear the message.

## INPUT TRAY TESTS

### Feed Tests (input tray)

This test feeds blank pages through the paper path. This runs using any supported paper or envelope sizes.

1. From the Diagnostics menu, navigate to **INPUT TRAY TESTS** > **Feed Tests**.
2. Select a paper source, and then select one of the following:
   - **Single**—This feeds a single page.
   - **Continuous**—This continuously feeds pages until the Stop button is pressed.

### Sensor Test

This determines whether the input tray sensors are working correctly.

1. From the Diagnostics menu, navigate to **INPUT TRAY TESTS** > **Sensor Test**.
2. Select a paper source.

   **Note:** Only installed paper sources are listed in the menu.

3. Select a sensor to test.

**Sensors available for each paper source**

| Paper source | Tray empty sensor | Paper low sensor | Pass through sensor |
|---|---|---|---|
| Tray 1 | ✓ | ✓ | |
| Tray 2 | ✓ | ✓ | ✓ |
| Tray 3 | ✓ | ✓ | ✓ |
| Tray 4 | ✓ | ✓ | ✓ |
| Multipurpose feeder | ✓ | | |
| Envelope feeder | ✓ | | ✓ |

4 Manually actuate each sensor to make it toggle between **Open** and **Closed**. The tray empty sensor can be actuated by hand. Use a sheet of paper to cover the pass through sensor.

**Note:** If the sensor does not toggle, then it is malfunctioning.

5 Press the Stop button to exit the test.

# OUTPUT BIN TESTS

## Feed Tests

This test verifies that media can be fed to a specific output bin. No information is printed on the media.

**Note:** Make sure that Configure Bins is not set to Link.

1 From the Diagnostics menu, select **OUTPUT BIN TESTS** > **Feed Tests**.

2 Select an output bin to test.

**Note:** Only the installed bins are listed in the menu.

3 Select one of the following:

- **Single**—This feeds a single page.
- **Continuous**—This continuously feeds pages until the Stop button is pressed.

4 Depending on your printer model, touch **Back** or press the Back button to return to OUTPUT BIN TESTS.

## Feed To All Bins

**Note:** This is applicable only to models T650, T652, and T654.

This test verifies whether media can be fed to all standard and optional bins. No information is printed on the media. The media feeds from the default paper source.

1 From the Diagnostics menu, navigate to **OUTPUT BIN TESTS** > **Feed To All Bins**.

The printer feeds media to the standard bin before it feeds a separate piece of media to each output bin installed in the following order:

| Order of sheets that are fed | Output bin |
|---|---|
| 1 | Standard bin |
| 2 | Bin 1 |
| 3 | Bin 2 |
| 4 | Bin 3 |
| 5 | Bin 4 |
| 6 | Bin 5 |
| 7 | Bin 6 |
| 8 | Bin 7 |
| 9 | Bin 8 |
| 10 | Bin 9 |

| Order of sheets that are fed | Output bin |
|---|---|
| 11 | Bin 10 |
| 12 | Bin 10 |
| 13 | Bin 9 |
| 14 | Bin 8 |
| 15 | Bin 7 |
| 16 | Bin 6 |
| 17 | Bin 5 |
| 18 | Bin 4 |
| 19 | Bin 3 |
| 20 | Bin 2 |
| 21 | Bin 1 |
| 22 | Standard bin |

**Note:** The printer continuously feeds pages until the Stop button is pressed.

2 Press the Back button to return to OUTPUT BIN TESTS.

## Sensor Test (standard bin)

This test verifies whether the standard bin sensor is working correctly.

1 From the Diagnostics menu, navigate to:

**OUTPUT BIN TESTS** > **Sensor Test** > **Standard Bin**

**Note:** The current state of the sensor appears on the control panel display.

2 Manually actuate the sensor to make it toggle between **Open** and **Closed** or between **empty** and **full**, depending on the printer model. If the sensor does not toggle, then the sensor is malfunctioning.

3 Press the Stop button to exit the test.

## Sensor Test (output expander)

This test determines whether the bin sensor for the output expander is working correctly.

**Note:** This is applicable only in models T650, T652, and T654.

1 From the Diagnostics menu, navigate to:

**OUTPUT BIN TESTS** > **Sensor Test** > **Output Bin [x]**

**Notes:**

- **x** represents the number of the output option to be tested.
- The printer display would indicate that the pass through sensor (passThru), bin full sensor (Full), or bin near full sensor (NearFull) is open.

2 Manually actuate the sensor to make it toggle between **Open** and **Closed**. If the sensor does not toggle, then the sensor is malfunctioning.

3 Press the Back or Stop button to exit the test.

## Sensor Test (high capacity output stacker)

This test determines whether the bin sensor for the output expander is working correctly.

**Note:** This is applicable only to models T650, T652, and T654.

1 From the Diagnostics menu, navigate to:

**OUTPUT BIN TESTS** > **Sensor Test** > **HC Bin [x]**

**Notes:**

- **x** represents the number of the output option to be tested.
- The printer display would indicate that the top position sensor (TP), pass through sensor (passThru), bin full sensor (Full), or bin near full sensor (NearFull) is open.

2 Manually actuate the sensor to make it toggle between **Open** and **Closed**. If the sensor does not toggle, then the sensor is malfunctioning.

3 Press the Back or Stop button to exit the test.

## Sensor Test (5-bin mailbox)

**Note:** This is applicable only to models T650, T652, and T654.

1 From the Diagnostics menu, navigate to:

**OUTPUT BIN TESTS** > **Sensor Test** > **Output Bin [x]**

**Note: x** represents the number of the output option to be tested.

2 Manually actuate passThru sensor to make it toggle between **Open** and **Closed** and the empty sensor to make it toggle between **Normal**, **Full**, and **NearFull**. If the sensor does not toggle, then the sensor is malfunctioning.

3 Press the Back or Stop button to exit the test.

## Deflector Test

**Note:** This is applicable only to models T650, T652, and T654.

This test verifies the functioning of each of the 5-bin mailbox output media deflectors. If more than one 5-bin mailbox is installed, then all deflectors are tested.

From the Diagnostics menu, navigate to **OUTPUT BIN TESTS** > **Deflector Test**. The test runs once and then stops.

# StapleSmart FINISHER TESTS

## Staple Test

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

1. From the Diagnostics menu, navigate to **FINISHER TESTS** > **Staple Test**.
2. Select an output bin, and then press the Select button.

   **`Staple Test Running...`** appears on the display while the test is running. The test cannot be canceled.

## Feed Test

This test verifies that media can be fed from the default paper source to a finisher bin. Any supported paper sizes can be used. The printer feeds eight blank sheets of media from the default source to the finisher bin.

1. From the Diagnostics menu, select **FINISHER TESTS**.
2. Select **Feed Test**.

   **`Feed Test Running...`** appears on the display. This test cannot be canceled.

## Sensor Test

This test verifies whether the finisher sensors are working correctly.

**CAUTION—SHOCK HAZARD:** Do not use your hand to toggle these switches. Use a nonconducting object.

1. From the Diagnostics menu, navigate to **FINISHER TESTS** > **Sensor Test**.
2. Select a set of sensors to test:

   **Staple Sensors**
   - Cartridge present sensor
   - Staple low sensor
   - Self-priming sensor
   - Home signal sensor

   **Cover and Door**
   - Finisher top cover sensor
   - Side door sensor

   **Pass and Media**
   - Finisher pass thru
   - Media sensor

   **Bin Level**
   - Finisher bin empty
   - Bin full sensor

- Bin near full

3 Manually actuate each sensor to make it toggle between **Open** and **Closed**. If the sensor does not toggle, then it is malfunctioning.

4 Press the Back or Sleep button to exit the test.

## BASE SENSOR TEST

This test determines whether the following sensors inside the printer are working properly.

- Toner level sensor
- Narrow media sensor
- Input sensor
- Output (exit) sensor
- Front door sensor

**CAUTION—SHOCK HAZARD:** Do not use your hand to toggle these switches. Use a nonconducting item.

1 From the Diagnostics menu, select **BASE SENSOR TEST**.

2 Select a sensor.

3 Manually actuate the sensor to make it toggle between **Open** and **Closed**. If the sensor does not toggle, then it is malfunctioning.

**Note:** Remove and then reinstall the toner cartridge to actuate the toner level sensor.

4 Press the Stop button to exit the test.

## DEVICE TESTS

### Quick Disk Test

**Note:** This is applicable only to model T656.

This test performs a non-destructive read/write test on one block per track on the disk. If the block is good, then the saved data is written back to the disk.

1 From the Diagnostics menu, navigate to **DEVICE TESTS** > **Quick Disk Test**.

After the testing is completed, a message indicating whether the test passed or failed appears on the display.

2 Press the Stop button to return to DEVICE TESTS.

### Disk Test/Clean

**Note:** This is applicable only to model T656.

**Warning—Potential Damage:** This test destroys all data and should not be attempted on a good disk.

1. From the Diagnostics menu, navigate to **DEVICE TESTS** > **Disk Test/Clean**.
2. Touch **Yes** to continue.

   **Note:** This test cannot be canceled, and this may run approximately 1½ hours depending on the disk size. A progress bar appears on the display.
3. After the test is completed, check the message on the display to determine whether the test passed or failed. If the test fails, then the disk is unusable.

## PRINTER SETUP

### Defaults

**Warning—Potential Damage:** Data may be lost.

This setting is used by the printer to determine whether U.S. or international factory default values should be used. The following are among the printer settings affected:

- Paper size
- Envelope size
- PCL symbol set
- Code pages
- Units of measure

1. From the Diagnostics menu, navigate to **PRINTER SETUP** > **Defaults**.
2. Select **US** or **Non-US**.
3. Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

### Printed Page Count

The value of this setting gauges the amount of usage on the printer. The value will equal the values of the Picked Sides meter. After all print tests have been completed, the value will reset to zero.

**Note:** The value of the setting cannot be changed manually.

To view the page count, from the Diagnostics menu, select **PRINTER SETUP** > **Printed Page Count**.

### Permanent Page Count

**Note:** The Permanent Page Count value cannot be reset.

The value of this setting indicates the total amount of pages that have been printed. After all print tests have been completed, the value will reset to zero.

1. From the Diagnostics menu, select **PRINTER SETUP**.
2. Depending on your printer model, select **Perm Setup Page** or **Permanent Setup Page**.

## Serial Number

**Note:** The value of the setting can only be viewed.

1. From the Diagnostics menu, navigate to **PRINTER SETUP** > **Serial Number**.
2. Depending on your printer model, touch **Back** or press the Back button to return to PRINTER SETUP.

## Engine Setting [x]

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

These settings are used by Engine code ECs to fix field problems. [**x**] represents any value from 1 to 16.

## Model Name

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

## Configuration ID

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

When the printer detects a Configuration ID that is not defined or invalid:

- The default standard model configuration ID is used instead.
- The configuration ID becomes the only function available in DIAGNOSTICS.
- **`Check Config ID`** appears on the display except when the menu is in DIAGNOSTICS.

1. From the Diagnostics menu, navigate to **PRINTER SETUP** > **Configuration ID**.

   **Note: `Submitting Selection`** and the value for Configuration ID 1 appear on the display

2. Enter configuration ID 1.
   - Use the left or right arrow button to select a digit or character. Wait until the digit or character is underlined.
   - Use the up or down arrow button to change a digit or character.

     **Notes:**

     - When the last digit or character is changed, press the select button to validate Configuration ID 1.
     - If the process is successful, then **`Submitting Selection`** and the value for configuration ID 2 appear on the display.
3. Enter configuration ID 2.
4. Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

   **Note:** The process is successful if **`Submitting Selection`** or a check mark, depending on your printer model, appears on the display.
5. Restart the printer.

### Edge to Edge

When enabled, this setting shifts all four margins (top, bottom, left, and right) to the physical edge of the page (printable area of a supported paper size).

Set the setting to Off to restore normal margins.

## EP SETUP

### EP Defaults

This setting restores each printer setting listed in EP SETUP to its factory default value. This is also used to help correct print quality problems.

1. From the Diagnostics menu, navigate to **EP SETUP** > **EP Defaults**.
2. Select one of the following:
   - **Restore**—To restore the default values.
   - **Do Not Restore**—To exit without changing the settings.

### Fuser Temperature (Fuser Temp)

This setting adjusts the fuser temperature to solve problems with paper curl on low-grade paper and problems with letterheads on some types of media.

1. From the Diagnostics menu, navigate to **EP SETUP** > **Fuser Temp**.
2. Set the fuser temperature to Normal, Lower, or Lowest.

   **Note:** Normal is the factory default setting.

### Fuser Page Count

**Note:** The fuser page count can only be viewed.

From the Diagnostics menu, navigate to **EP SETUP** > **Fuser Page Count**.

### Warm Up Time

This setting determines the amount of time the printer warms up before allowing the pages to print. The factory default setting is 0. This time period lets the backup roll heat up and helps reduce curl in some environments.

### Transfer

This setting can be set to Low, Medium, or High. Medium is the factory default setting.

## Print Contrast

This setting controls the developer voltage offset.

1. From the Diagnostics menu, navigate to **EP SETUP** > **Print Contrast**.
2. Set the setting to Low, Medium, or High.

   **Note:** Medium is the factory default setting.
3. Apply the changes.

## Charge Roll

This setting controls the charge roll voltage.

1. From the Diagnostics menu, navigate to **EP SETUP** > **Charge Roll**.
2. Set the setting to Low, Medium, or High.

   **Note:** Medium is the factory default setting.
3. Apply the changes.

## Gap Adjust

The setting adjusts the minimum gap between sheets. Increasing this value reduces curl of some printed media and eliminates some output bin stacking problems. This also results in slower overall performance, measured in pages per minute.

1. From the Diagnostics menu, navigate to **EP SETUP** > **Gap Adjust**.
2. Adjust the setting.

   **Note:** The range of values is 0 to 255. 0 is the factory default setting.
3. Apply the changes.

## Auto Dark Adj

Enable this setting to optimize the amount of toner used when printing with a specific operating point.

Each time this setting executes, the printer performs the following:

- Calibrates its toner density sensor
- Measures the reflectivity of its bare drum
- Prints patches on the drum and measures the reflectivity of the drum through the patches
- Cleans the transfer roll
- Calculates reflectivity ratios and operating points to attain the darkness target of each operating point
- Modifies the EP mechanism as necessary to adjust toner darkness

The cartridge smart chip controls how often this process executes.

1. From the Diagnostics menu, navigate to **EP SETUP** > **Auto Dark Adj**.
2. Select **Enable** or **Disable**.
3. Apply the changes.

# REPORTS

## Menu Settings Page

This setting prints the menu settings page.

From the Diagnostics menu, navigate to **REPORTS** > **Menu Settings Page**.

# EVENT LOG

## Display Log

This event log lists the 12 most recent errors that have occurred on the printer. The most recent error appears in position 1, and the oldest error appears in position 12. If an error occurs after the log is full, the oldest error is discarded. Identical errors in consecutive positions in the log are entered.

**Note:** All 2xx and 9xx error messages are stored in the event log.

1. From the Diagnostics menu, navigate to **EVENT LOG** > **Display Log**.

   **Note:** Only three error codes appear at a time.

2. Depending on your printer model, touch **Back** or press the Back button to return to EVENT LOG.

## Print Log

Additional diagnostic information is available when this event log is printed. The specific events that appear in the report vary depending on the operational history of the printer. Logs may include the following:

- Detailed printer information, including code versions
- Time and date stamps
- Page counts for most errors
- Additional debug information in some cases

1. From the Diagnostics menu, navigate to **EVENT LOG** > **Print Log**.

   **Note:** You can fax this event log to Lexmark or to your next level of support for verification or diagnosis.

2. Depending on your printer model, touch **Back** or press the Back button to return to EVENT LOG.

## Clear Log

This allows you to remove all the current information in the event log. This affects both the viewed and printed log information.

1. From the Diagnostics menu, navigate to **EVENT LOG** > **Clear Log**.
2. Select **Yes**.

   **Note:** **`Deleting EVENT LOG`** appears on the display.

# Configuration menu

## Entering the Configuration menu

The Configuration Menu group contains a set of menu, 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.

1. Turn off the printer.
2. Press and hold the **Select** and **Right arrow** buttons.
3. Turn on the printer.
4. Release the buttons when the screen with the progress bar appears.

## Maintenance page count

When selected, the printer displays the current value for the maintenance kit counter. This counter tracks printer usage. A print job containing a single page increments the counter by one, while a duplex print job increments the counter by two.

If the value has reached the rated life of the maintenance kit, then scheduled maintenance is required.

**Note:** Reset the counter after the replacement maintenance kit is installed.

1. From the Configuration menu, select **Maintenance Counter Value** or **Maint Cnt Value** depending on your printer model.

   **Note:** This value cannot be changed.
2. Depending on your printer model, touch **Back** or press the Back button to return to the Configuration menu.

## Maintenance page counter reset

After installing the maintenance kit, reset the maintenance counter.

1. From the Configuration menu, select **Reset Maintenance Counter** or **Reset Cnt** depending on your printer model.
2. Depending on your printer model, touch **Yes** or press the Select button to reset the counter.

## Print quality pages

This option is a limited version of a similar setting that appears in the Diagnostics menu. To print the pages from the Diagnostics menu, see **“PRINT TESTS” on page 239**.

From the Configuration menu, select **Print Quality Pages** or **Prt Quality Pgs** depending on your printer model.

The print quality test pages, which contain a mixture of graphics and text, include the following information:

- Device information
- Printer revision levels
- Cartridge information

- Printer margin settings
- Minimum stroke width

**Note:** These pages are printed in English and must always be on letter, legal, or A4 paper.

## Reports

### Menu Settings Page

From the Configurations menu, navigate to **Reports** > **Menu Settings Page**.

This generates reports on several Configuration menu settings, including the following:

- Reset Cnt
- Maintenance Counter Value
- Disable Scanner
- Disk Encryption
- Panel Menu
- PPDS Emulation
- Reports
- Size Sensing
- Factory Defaults
- Debug Information

**Note:** Some settings are applicable only to some printer models.

### Event Log

This generates a report on the history of printer errors.

From the Configuration menu, navigate to **Reports** > **Event Log**.

## SIZE SENSING

This setting determines whether the printer automatically senses the size of the paper loaded on the following paper sources:

- Tray 1 (integrated)
- 250-sheet drawer
- 550-sheet drawer
- High-capacity feeder

1. From the Configuration menu, select **SIZE SENSING**.
2. Select **Auto** or **Off**.

   **Note:** When printing, make sure that the size of your document matches the size of the paper loaded on any of the paper sources.
3. Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

## Panel Menus

This setting allows the system support person to enable or disable the control panel menus. When disabled, users are not allowed to access and configure the menus.

1. From the Configuration menu, select **Panel Menus**.
2. Select **Enable** or **Disable**.

   **Note:** Enable is the factory default setting.
3. Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

## PPDS Emulation

This setting allows the user to activate or deactivate the PPDS emulation data stream. When activated, the following changes also occur:

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

  **Note:** Users can still switch languages on the control panel and through the PJL data stream.

1. From the Configuration menu, select **PPDS Emulation**.
2. Select **Deactivate** or **Activate**.

   **Note:** Deactivate is the factory default setting.
3. Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

## Demo Mode

**Warning—Potential Damage:** Activating this setting only allows the printer to print the demonstration files. Files received across the network or from the host computer are ignored.

When activated, the printer remains in demo mode until the setting is deactivated.

## Factory Defaults

**Warning—Potential Damage:** This operation cannot be undone.

Except the following, this setting enables users to restore the factory default settings.

- Display language
- NETWORK/PORTS menu settings

1. From the Configuration menu, select **Factory Defaults**.
2. Select one of the following:
   - **Restore Base**—To restore all non-critical base printer NVRAM settings.
   - **Restore Network** or **Restore STD Net**—To restore all network NVRAM settings.

     **Note:** This is available only to network printers or printers connected to print servers.
   - **Restore LES**—To restore the factory default settings of the Lexmark Embedded Solutions applications. This is applicable only to some printer models.

## LES Applications

**Note:** This setting is for touch-screen models only.

This setting allows you to enable or disable Lexmark Embedded Solutions (LES) applications. This setting does not affect built-in applications.

1. From the Configuration menu, select **LES Applications**.
2. Select **Enable** or **Disable**.

   **Note:** Enable is the factory default setting.
3. Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

## Energy Conserve

This setting controls what values appear on the Power Saver menu.

1. From the Configuration menu, select **Energy Conserve**.
2. Select one of the following:
   - **On**—The Power Saver feature cannot be turned off. On is the factory default setting.
   - **Off**—**`Disabled`** appears in the Power Saver menu, but Power Saver can be turned off.
3. Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

## Paper Prompts

When the paper source (tray or feeder) is out of the indicated paper size, a prompt is sent to the user to load the paper in the paper source. This setting allows you to assign a paper source with the correct size of paper loaded.

1. From the Configuration menu, select **Paper Prompts**.
2. Select one of the following:
   - Auto

     **Note:** This is the factory default setting.
   - MP Feeder or Multi-Purpose Feeder (depending on your printer model)
   - Manual Paper
3. Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

## Envelope Prompts

This setting allows you to assign a specific tray or feeder with a correct size of envelope loaded.

1. From the Configuration menu, select **Env Prompts** or **Envelope Prompts** depending on your printer model.
2. Select one of the following:
   - Auto

     **Note:** This is the factory default setting.
   - MP Feeder

- Envelope Feeder

  **Note:** This is available only in models T650, T652, and T654.
- Manual Env or Manual Envelope (depending on your printer model)

3 Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

## Action for Prompts

This setting determines what action is required from the printer to resolve any paper- or envelope-related change prompts.

1 From the Configuration menu, select **Action for Prompts**.

2 Select one of the following:
- **Prompt User**—Printer always requires user intervention to resolve the change prompt. This is the factory default setting.
- **Continue**—Printer automatically assumes that the user selects Continue when a change prompt occurs.
- **Use Current**—Printer automatically assumes that the user selects Use Current when a change prompt occurs.

3 Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

## Jobs on Disk

**Note:** This is applicable only to model T656.

This setting appears only if a hard disk is installed. This does not affect held or parked jobs.

1 From the Configuration menu, select **Jobs on Disk**.

2 Select one of the following:
- **Delete**—To delete the buffered jobs saved on the disk.
- **Do Not Delete**—To cancel and return to the Configuration menu. This is the factory default setting.

## Disk Encryption

**Note:** This is applicable only to model T656.

**Warning—Potential Damage:** If the settings are changed, then the printer completely formats the hard disk. All information on the disk is unrecoverable.

This setting appears only if a hard disk is installed. It controls whether the printer encrypts the information that it writes to the hard disk.

1 From the Configuration menu, select **Disk Encryption**.

2 Select one of the following:
- **Enable**—To enable encryption of the hard disk.
- **Disable**—To enable formatting of the hard disk.

3 Select **Yes** to proceed with the encryption or formatting of the disk.

A progress bar appears on the display that indicates the overall completion of the selected operation.

## Wipe Disk

**Note:** This is applicable only to model T656.

This setting allows you to erase the contents of the hard disk.

1. From the Configuration menu, select **Wipe Disk**.
2. Touch **Wipe disk (fast)** or **Wipe disk (secure)**, and then touch **Yes** to continue.

   **Note:** Erased data is unrecoverable.

## Font Sharpening

**Note:** This is not supported when the device generates an output at 600 dpi resolution.

This setting allows you to set a text point-size value below which the high-frequency screens are used when printing font data.

1. From the Configuration menu, select **Font Sharpening**.
2. Increase or decrease the value.

   **Notes:**

   - The values for this setting range from 0 to 150. 24 is the factory default setting.
   - This setting affects PostScript, PCL, and XL.
3. Depending on your printer mode, touch **Submit** or press the Select button to apply the changes.

## Wiper Messages

1. From the Configuration menu, select **Wiper Messages**.
2. Select **On** or **Off**.

   **Note:** On is the factory default setting.
3. Depending on your printer model, touch **Submit** or press the Select button to apply the changes.

## Key Repeat Initial Delay

**Note:** This is applicable only to model T656.

This setting determines the length of delay before a repeating key starts repeating. The range is 0.25–5 seconds, with increments of 0.25. One second is the factory default setting.

1. From the Configuration menu, navigate to **Key Repeat Initial Delay**.
2. Adjust the setting.
3. Touch **Submit** to apply the changes.

## Key Repeat Rate

**Note:** This is applicable only to model T656.

This setting indicates the number of presses per second for repeating keys. The range is 1–100. 15 presses per second is the factory default setting.

1. From the Configuration menu, navigate to **Key Repeat Rate**.
2. Adjust the setting.
3. Touch **Submit** to apply the changes.

## Clear Custom Status

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

1. From the Configuration menu, select **Clear Custom Status**.
2. Press the Select button to start the operation.

## USB Speed

**Note:** This is applicable only to model T656.

This setting is used to set the throughput of the USB port on the printer.

1. From the Configuration menu, select **USB Speed**.
2. Set the setting to **Auto** or **Full**.

   **Note:** Auto is the factory default setting. When set to Full, the USB port runs at full speed and its high-speed capabilities are disabled.
3. Touch **Submit** to apply the changes.

## Best Speed

**Note:** This is applicable only to models T650, T652, and T654.

1. From the Configuration menu, select **Best Speed**.
2. Set the setting to **For short jobs** or **For long jobs**.
3. Press the Select button to apply the changes.

# Parts removal


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- “SFP stapler assembly removals” on page 434


## Removal precautions

**CAUTION—SHOCK HAZARD:** For personal safety and to prevent damage to the printer, remove the power cord from the electrical outlet before you connect or disconnect any cable, electronic board, or assembly. Disconnect any connections between the printer and the PCs/peripherals.

### Handling ESD-sensitive parts

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

- Turn off the printer before removing logic boards.
- Keep the parts in their original packing material until you are ready to install them into the printer.
- Make the least possible movements with your body to prevent an increase of static electricity from clothing fibers, carpets, and furniture.

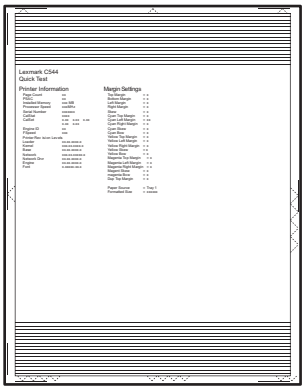
- Put the ESD wrist strap on your wrist. Connect the wrist band to the system ground point. This action discharges any static electricity in your body to the printer.
- Hold the parts by their edge connector shroud. Do not touch its pins. If you are removing a pluggable module, then use the correct tool.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

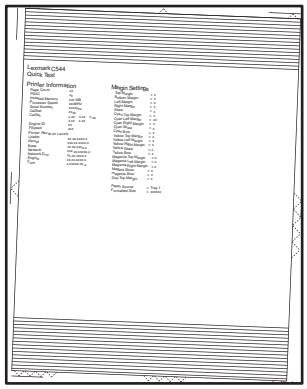
# Adjustments

## Printer skew specifications

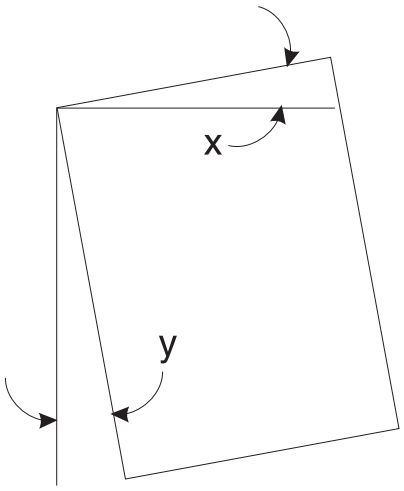
### Abnormal skew printer correction

1. The repair operator should evaluate the left edge of the paper to determine if the aligner is properly set. If the left vertical line is with the defined limit, parallel to the edge of the paper, the aligner is correct and properly set. If the left edge vertical line is not within the defined limit or spec, then the repair operator can adjust the aligner at the repair station.
2. The repair operator should evaluate the horizontal line at the top edge of the page for potential LSU induced skew. If the horizontal line does not fall within the defined limit or spec, then it is considered skewed and the printhead must be adjusted. Go to **“Polygon and Oscillating printhead mechanical registration adjustment” on page 268**


Straight


Skewed

Printhead Skew + Paper Feed Skew




"x" = +/- 0.005mm/mm max.
"y" = +/- 0.005mm/mm max.

Duplex Skew Specification

| Side | 1 | 2 |
|---|---|---|
| Print Sequence Thru Printer | 2nd | 1st |
| 16 lb. to 24 lb. | +/-0.007 mm/mm | +/-0.005 mm/mm |
| All Other Papers | +/-0.010 mm/mm | +/-0.005 mm/mm |
| Card Stock | +/-0.007 mm/mm | +/-0.007 mm/mm |
| Labels<br>• Paper, Dual-Web Paper<br>• Vinyl, Polyester (less than or equal 92# liner) | +/-0.010 mm/mm<br>+/-0.010 mm/mm | +/-0.010 mm/mm<br>+/-0.010 mm/mm |

## Print Registration

Initial adjustment (adjustable in increments of T=0.3mm, B=0.5mm, R and L=0.2mm)

- Left print position accuracy (scanning direction): +/-0.5mm - start on scan
- Top print position accuracy (feeding direction): +/-0.5 mm - start on scan
- Horizontal page width accuracy: +/-0.5mm - mirror motor
- Vertical page length accuracy: +/-0.5mm - drive motor

## Print Position Error

Measured at any point in the printable area using core media papers.

- Vertical (process): +/-0.7mm
- Horizontal (magnification): +/-0.7mm

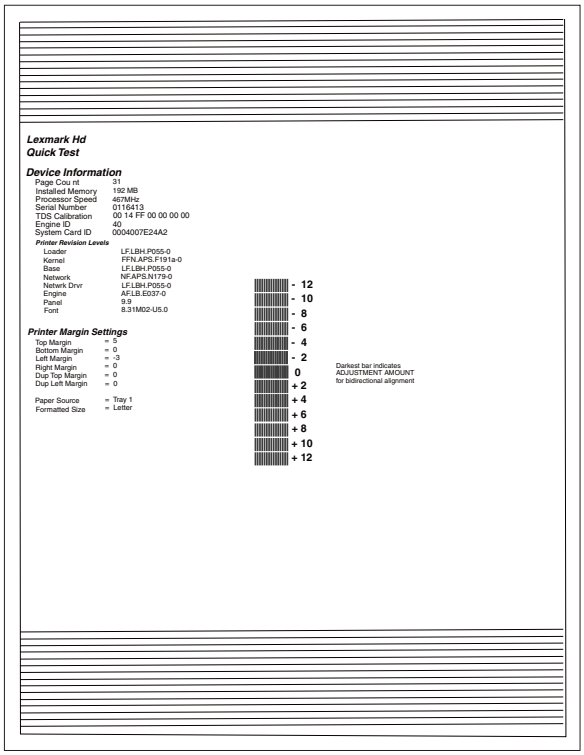
## Polygon and Oscillating printhead mechanical registration adjustment

Do the printhead mechanically registration adjustment whenever you remove or replace the printhead or loosen the mounting screws.

Install the new printhead with the mounting screws centered in the slots in the printhead frame assembly. Leave the screws loose enough to allow the printhead to move from side to side within the slots. It is necessary to perform a mechanical registration adjustment before locking down the three printhead mounting screws.

**Note:** In the case of paper feed skew, go to **"Alignment assembly adjustment" on page 270**.

1. Turn the printer off.
2. Press and hold the down and right buttons to enter the diagnostic mode.
3. Turn the printer on, and release the buttons when **`Performing Self Test`** displays.
4. Select **Registration** from the menu.
5. Select **Quick Test Page**. The test page should only be printed on letter or A4 paper from Tray 1. The Quick Test Page consists of alignment diamonds, horizontal lines that can be used for mechanical registration adjustment. An example of the printhead alignment printout is shown below:



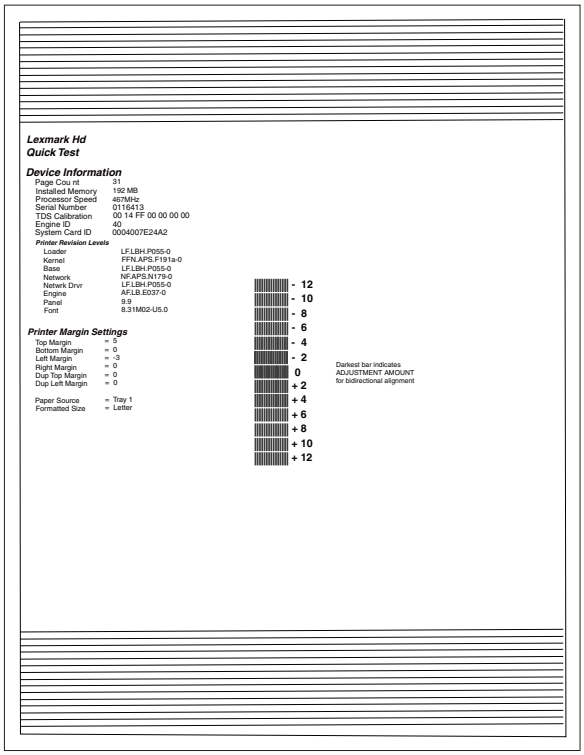

6. Check the Quick Test Page for any sign of misalignment by checking the diamonds at the top left and top right of the test page for equal distance from the top of the page. If necessary, rotate the printhead to the left or right and tighten down the mounting screws and check for proper alignment again by running another Quick Test Page. This procedure may take two or three attempts before you get satisfactory results.
7. When you have the correct adjustment, ensure that the printhead mounting screws are properly tightened.

# Oscillating printhead assembly electronic adjustment

A step-by-step process to align a new printhead.

**Note:** Before aligning the printhead electronically, first align the printhead mechanically, if needed. Go to **"Polygon and Oscillating printhead mechanical registration adjustment" on page 268**

1. Turn the printer off.
2. Press and hold the down and right buttons to enter the diagnostic mode.
3. Turn the printer on, and release the buttons when Performing Self Test displays.
4. Select **Registration** from the menu.
5. Select **Quick Test Page**. The test page should only be printed on letter or A4 paper from Tray 1. The Quick Test Page consists of alignment diamonds, horizontal lines that can be used for skew adjustment, page count setting, printer serial number code levels, and print registration settings. An example of the printhead alignment printout is shown below:




6. In the Registration menu, select the right margin setting.
7. To determine the margin setting, choose the value that is closest to the darkest bar on the center graph of the margin page. Add that value to the current right margin setting printed on the left hand side of the margin page. (The right margin setting will also appear on the operator panel display.) For example, if the right margin setting on the page is -2, and the number that is closest to the darkest line on the graph is 3 (-2+3), then the right margin setting will be equal to +1.

8 Press the down or up buttons to the desired setting, and press the Select button.

9 Print the Quick Test page again and check that the darkest line in the center graph is equal to zero. If it is, then check to see if the left, top, and bottom margins are detected. If it is not, then repeat step 5.

**Note:** The alignment of the left margin positions the black plane to the right or left. The alignment of the right margin does not alter the margins and should only be used to adjust the printhead.

## Alignment assembly adjustment

Do the alignment assembly adjustment whenever you replace the alignment assembly. Always print a copy of the Quick Test Page before making any adjustments to the alignment assembly reference adjustment screw. When replacing the alignment assembly, it is necessary to back the reference adjustment screw out far enough to remove the old assembly and install the new one.

- If you are replacing the alignment assembly, go to step A.
- If you are only adjusting the reference adjustment screw, go to step B.

### Step A

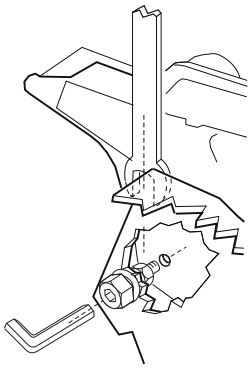
Print a copy of the Quick Test Page and check the margin adjustments printed on the test page. These settings should be within the range specified in **"Registration" on page 238**.

Do the reference adjustment if you are sure the margins are set correctly.

1 Loosen the locknut on the inside rear of the alignment assembly.

2 Remove the two screws holding the alignment assembly to the left side frame.

3 Back the reference adjustment screw out far enough to allow the alignment assembly to be removed from the printer. It is not necessary to completely remove the screw.

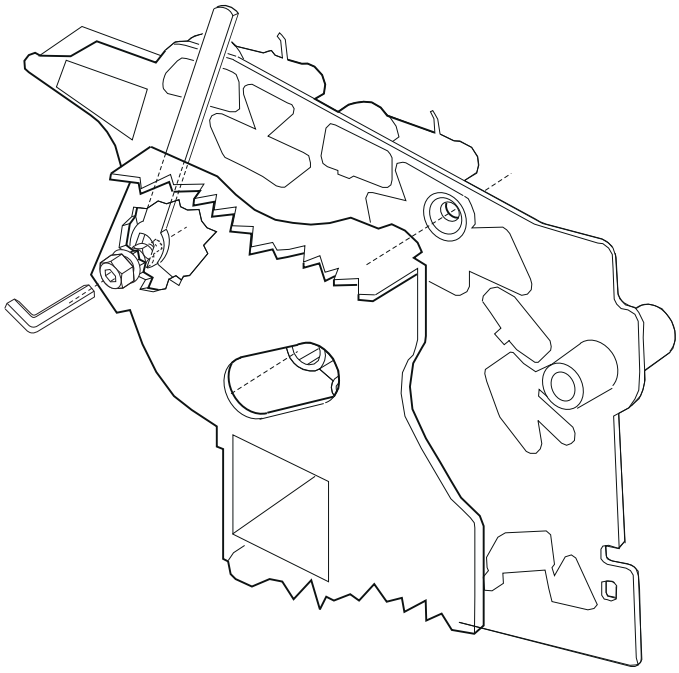



4 Install the new alignment assembly. Turn the reference screw clockwise with a 7 mm M3 Allen wrench until it touches the back of the reference plate, and tighten the nut with a 5.5 mm wrench.

The reference adjustment screw can be adjusted without loosening the nut. Turn the screw clockwise a few turns and print a copy of the Quick Test Page as you check the diamonds on the left margin. Continue adjusting the screw as you check the results of each adjustment on a new test page until you obtain the results you want.

### Step B

Print a copy of the Quick Test Page and check the margin adjustments printed on the test page. These settings should be within the range specified in **"Registration" on page 238**. The reference screw can be adjusted without loosening the locknut. Turn the screw a few turns, and print a copy of the Quick Test Page as you check the diamonds on the left margin. Continue adjusting the screw as you check the results of each adjustment on a new test page until you obtain the results you want.



## Fuser solenoid adjustment

Perform the fuser solenoid adjustment whenever you replace the fuser solenoid. Adjust the fuser solenoid while installed in the printer. Adjust the screw on the eccentric mounted on the solenoid housing to provide an air gap between the rear of the solenoid stator and the solenoid armature. The solenoid air gap for all models is 4.5 mm ± 0.1 mm.

## Gap adjustment

The gap adjustment allows you to increase the minimum gap between sheets of paper as they are fed through the printer. This adjustment reduces the printer overall performance, such as pages per minute, but can help in reducing the amount of curl of some printed media, thus improving media stacking in the output bin.

1. Enter the Diagnostic Mode.
2. Select **Ep Setup** from the Diagnostic Menu.
3. Select **Gap Adjust**.
4. The range of the GAP adjustment is 0 to 255. Adjust the gap setting by using the Menu button to select the value. If GAP=0 displays, it indicates a factory setting to minimum gap. Select a value and run several copies of the media that displays a curl problem. It may take several tries before improvement is noticed.

   **Note:** This setting has no effect when duplexing.

# Removal procedures

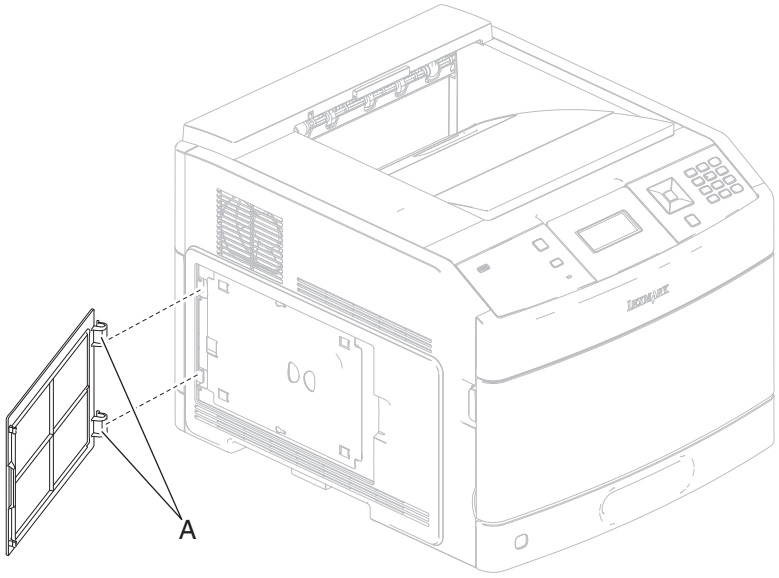
Keep the following tips in mind as you replace parts:

- Some removal procedures require removing cable ties. You must replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.
- Remove the toner cartridges, imaging unit, and media tray before removing other printer parts. The imaging unit should be carefully set on a clean, smooth, and flat surface. It should also be protected from light while out of the device.
- Disconnect all external cables from the printer to prevent possible damage during service.
- Unless otherwise stated, reinstall the parts in reverse order of removal.
- When reinstalling a part held with several screws, start all screws before the final tightening.

# Left side removals

## Access door removal

1. Open the access door.
2. Gently detach the two hinges (A) of the access door from the machine.

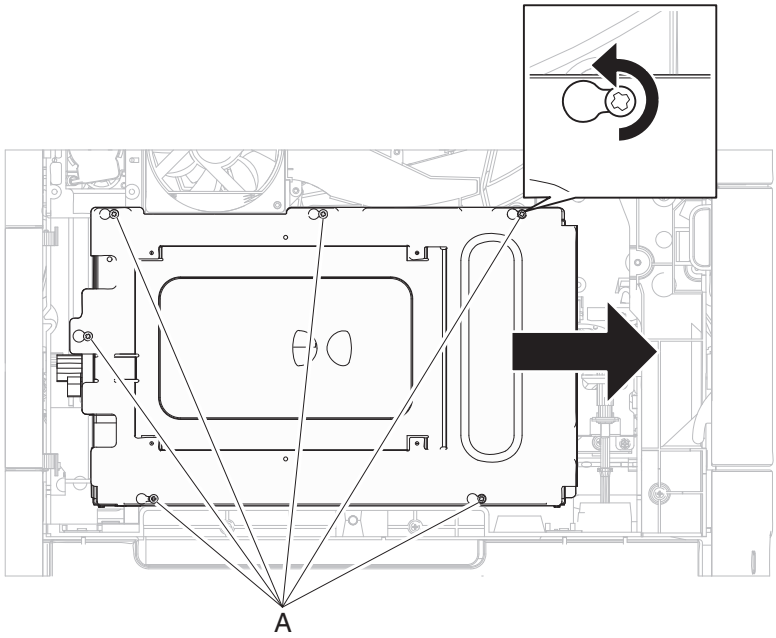



3. Remove the access door.

# Alignment assembly removal

**Warning—Potential Damage:** When replacing the alignment assembly, ensure that the media skew is properly adjusted using the adjuster screw (C), or jamming will occur. Go to **"Alignment assembly adjustment" on page 270**.

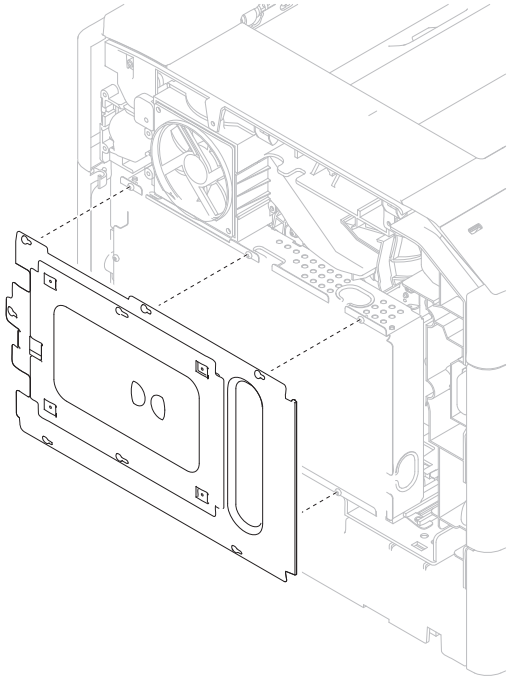
1 Remove the side cover, left. Go to **"T650 left side cover removal" on page 281** or **"T652, T654, and T656 left side cover removal" on page 282**.




2 Remove the six screws (A) securing the metal cover to the machine.

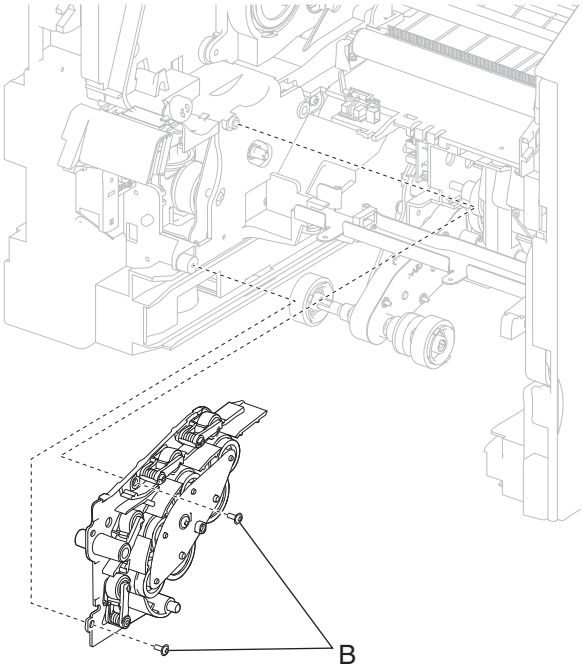
3 Remove the metal cover.

**4** Remove the inner deflector. Go to **"Inner deflector removal" on page 301**.



**5** Remove the MPF pick solenoid assembly. Go to **"MPF pick solenoid assembly removal" on page 277**.

**6** Remove the two screws (B) securing the alignment assembly to the machine.

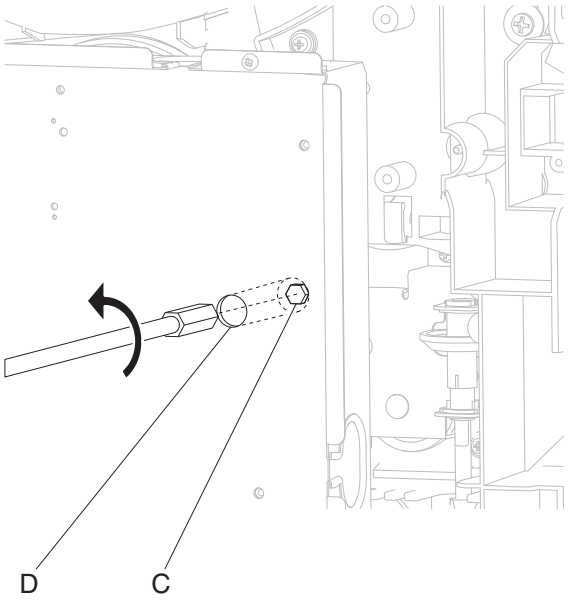



**Note:** The adjuster screw (C) requires a hex wrench to loosen and tighten.

**Note:** The adjuster screw (C) can be accessed through the hole (D) in the system card.

**7** Completely loosen the adjuster screw (C) securing the alignment assembly to the machine.

**8** Remove the alignment assembly.

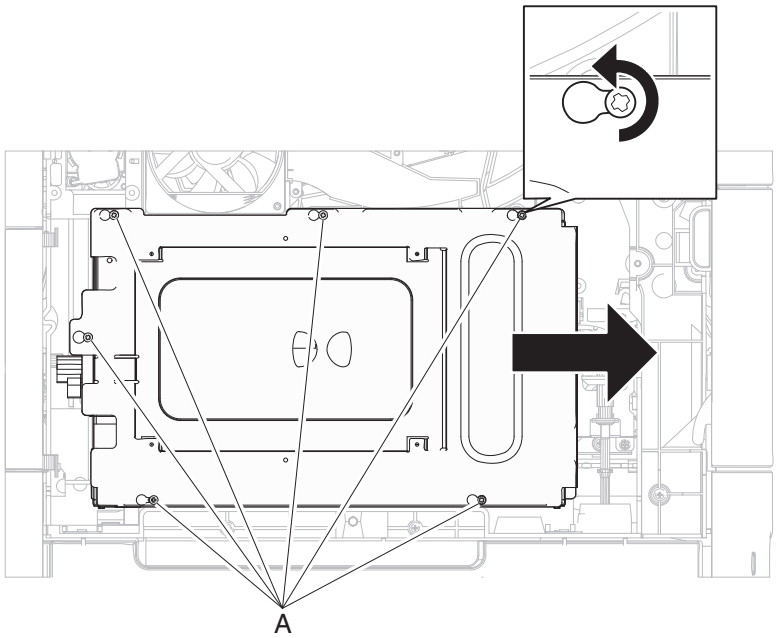



**Installation warning:** When replacing the alignment assembly, ensure that the media skew is properly adjusted using the adjuster screw (C) or jamming will occur. Go to **"Alignment assembly adjustment" on page 270**.

## Main cooling fan removal

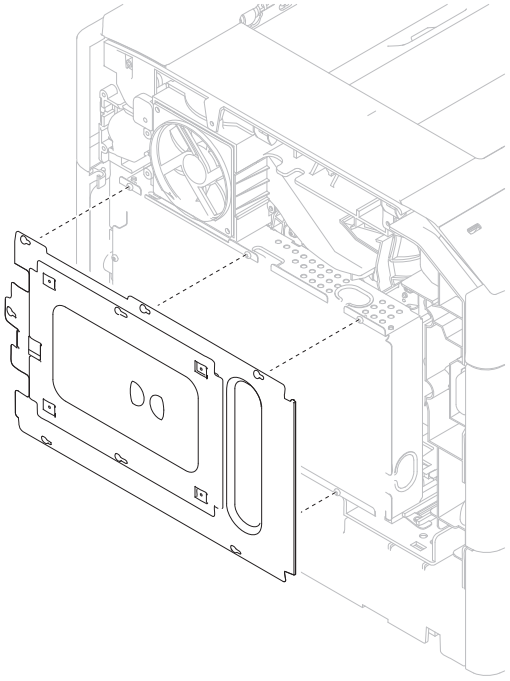
**1** Remove the side cover, left assembly. Go to **"MPF cam gear removal" on page 339** or **"T652, T654, and T656 left side cover removal" on page 282**.

**2** Remove the six screws (A) securing the metal shield to the machine.




**3** Move the metal shield in the direction of the arrow.

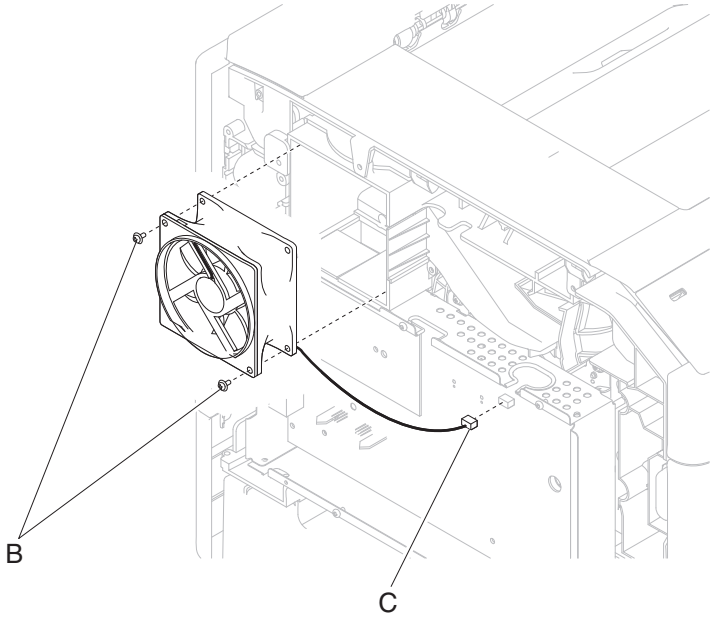
4 Remove the metal shield.



5 Remove the two screws (B) securing the fuser cooling fan to the machine.

6 Remove the fuser cooling fan.

7 Remove the fuser cooling fan connection (C).




## Main drive motor assembly removal

1 Remove the system card assembly. Go to **"System card assembly removal" on page 285**.

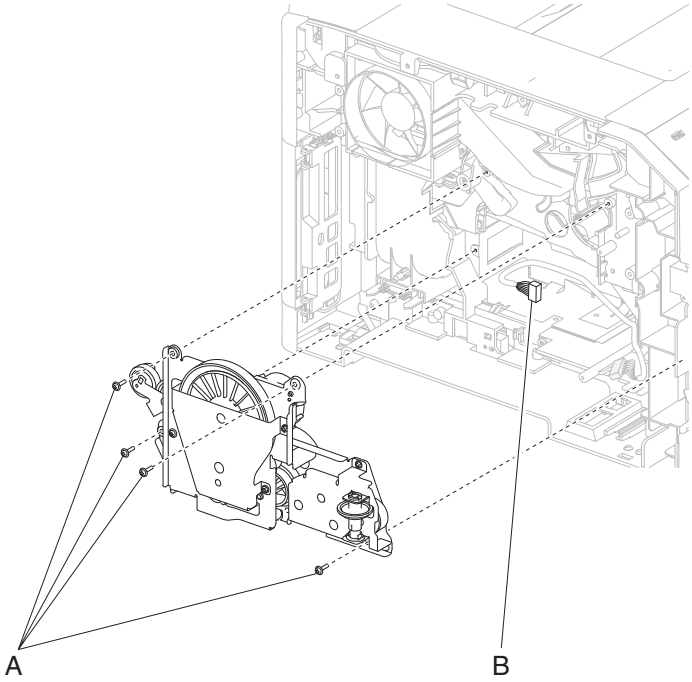
2 Remove the fuser drive release linkage. Go to **"Fuser drive release linkage removal" on page 289**.

3 Close the operator panel door assembly.

4 Remove the four screws (A) securing the main drive motor assembly to the machine.

5 Gently remove the main drive motor assembly.

6 Disconnect the connection (B) from the main drive motor assembly.




**Installation warning:** Ensure that all electrical connections are properly replaced.

**Installation warning:** When replacing the main drive motor assembly, ensure that the operator panel door assembly is in the closed position or the main drive motor assembly will not align properly and damage will occur.

**Installation warning:** When replacing the main drive motor assembly, ensure that all gears and drive shafts are properly aligned, or damage will occur.

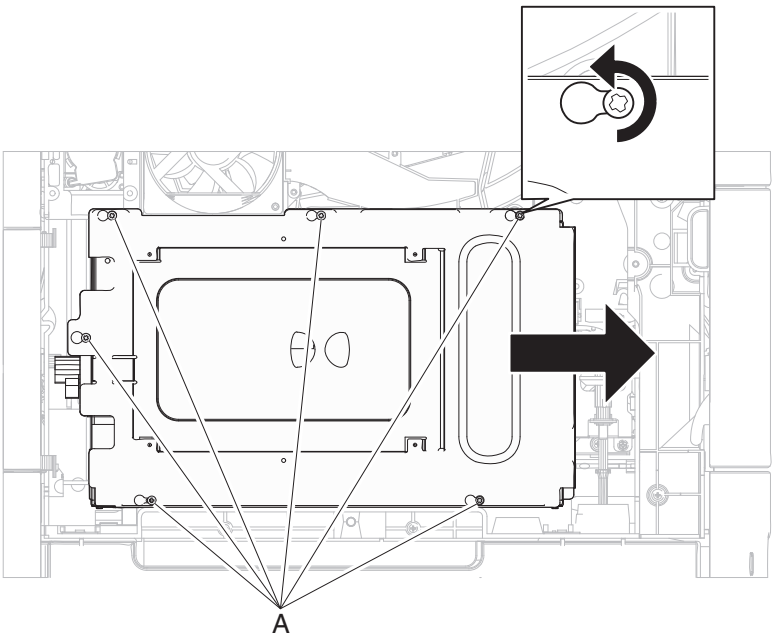
## MPF pick solenoid assembly removal

**Note:** The MPF lift plate assembly can be detached and allowed to hang by the harness. The connection does not need to be disconnected.

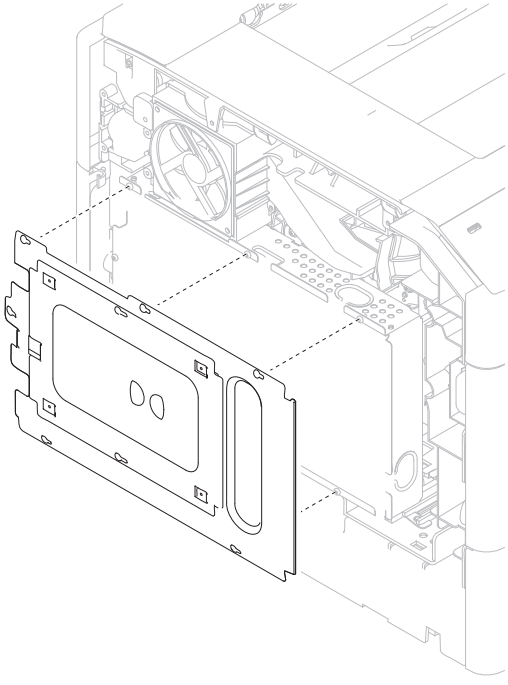
1 Remove the MPF lift plate assembly. Go to **"MPF lift plate assembly removal" on page 302**.

2 Remove the side cover, left. Go to **"MPF cam gear removal" on page 339** or **"T652, T654, and T656 left side cover removal" on page 282**.

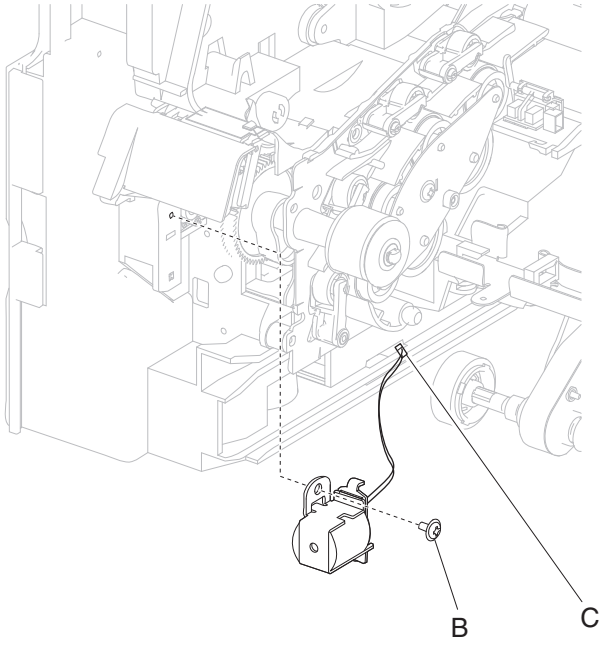
**3** Remove the six screws (A) securing the metal cover to the machine.




**4** Remove the metal cover.

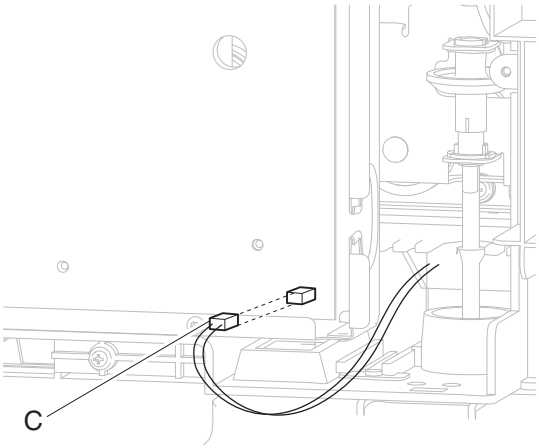


**5** Remove the screw (B) securing the MPF pick solenoid assembly to the machine.




**6** Remove the MPF pick solenoid assembly.

**7** Disconnect the connection (C) from the MPF pick solenoid assembly.

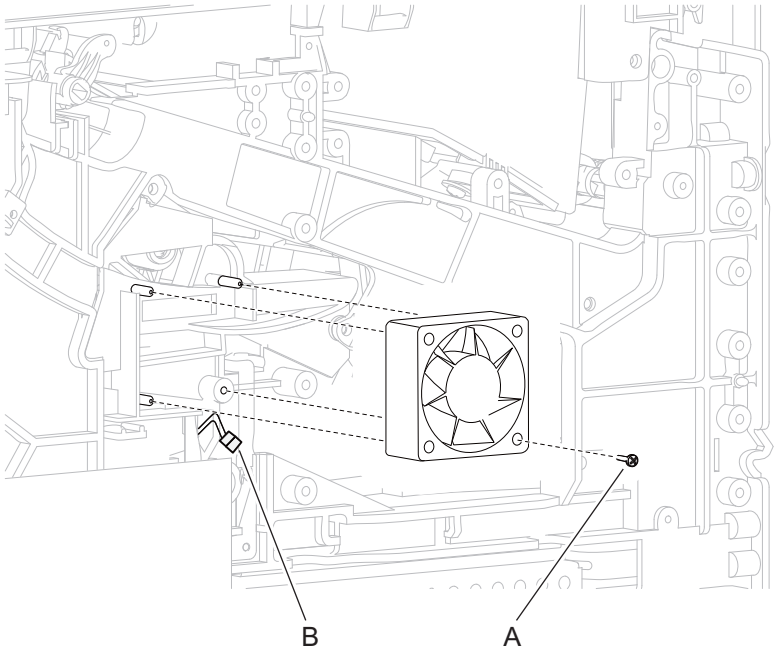


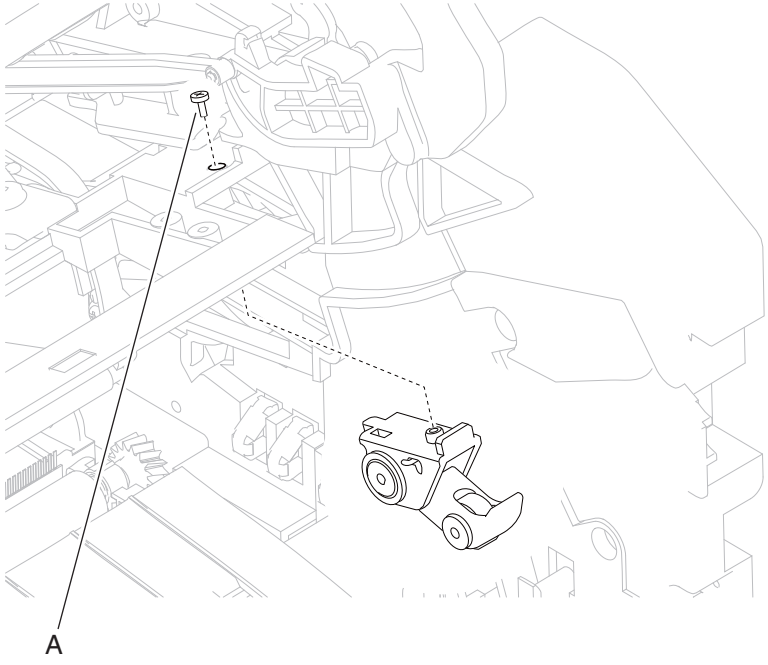
## Print cartridge clamp assembly removal

**Note:** This procedure can be applied to the left or right printer cartridge hold down assembly.

1 Remove the laser cover. Go to **"Laser cover removal" on page 291**.

2 Remove the screw (A) securing the print cartridge clamp assembly to the machine.



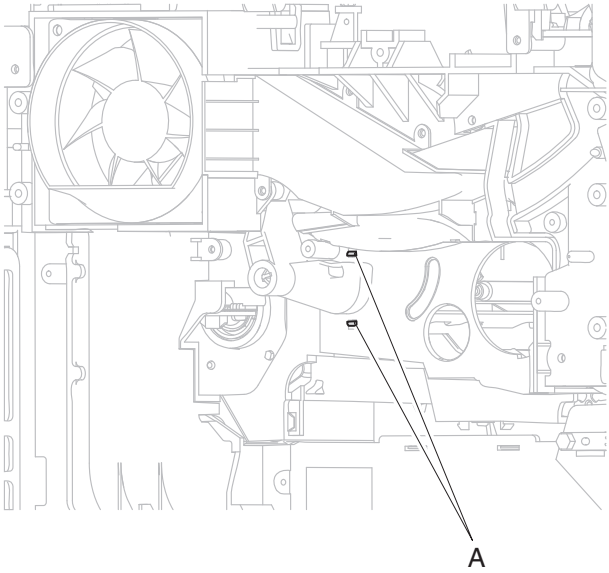

3 Remove the print cartridge clamp assembly.

## Print cartridge ID connector assembly removal

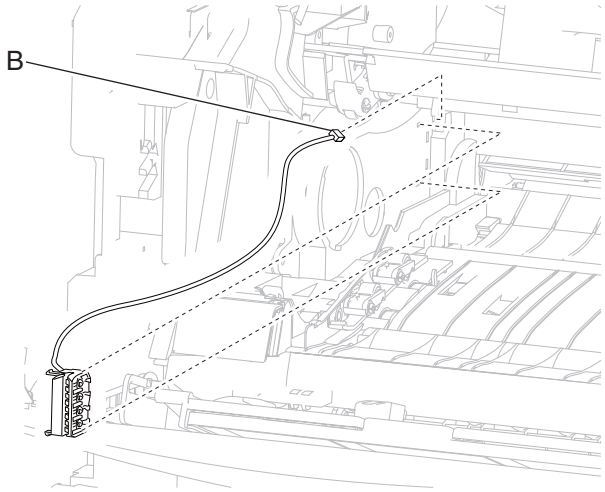
1 Remove the print cartridge.

2 Remove the main drive motor assembly. Go to **"Main drive motor assembly removal" on page 276**.

3 Release the two hooks (A) securing the print cartridge ID connector assembly to the machine.




4 Remove the print cartridge ID connector assembly.




5 Disconnect the connection (B) from the print cartridge ID connector assembly.

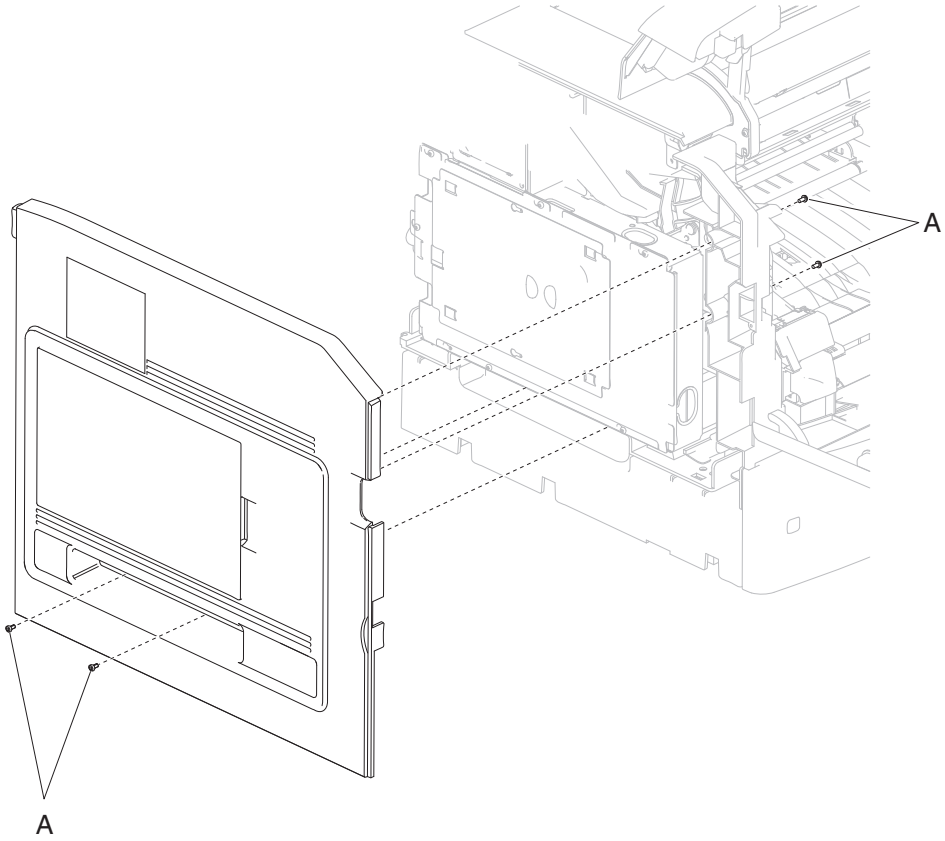
## T650 left side cover removal

1 Open the MPF tray door assembly.

2 Open the operator panel door assembly.

3 Remove the cover assembly, rear lower. Go to **"T650 rear lower cover assembly removal" on page 328**.

4 Remove the four screws (A) securing the side cover, left to the machine.




5 Swing the side cover, left away from the machine.

6 Remove the side cover, left.

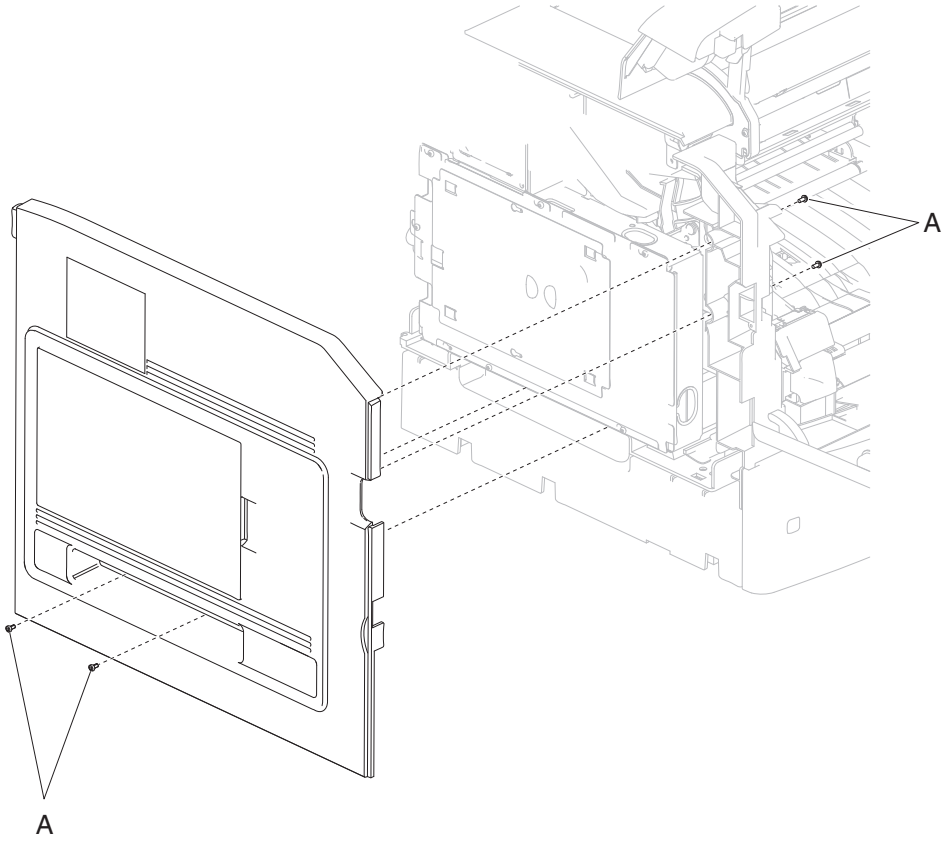
## T652, T654, and T656 left side cover removal

1 Open the MPF tray door assembly.

2 Open the operator panel door assembly.

3 Remove the cover assembly, rear lower. Go to **“T650 rear lower cover assembly removal” on page 328** or **“T652 and T654 rear lower cover assembly removal” on page 328**.

**4** Remove the four screws (A) securing the side cover, left to the machine.



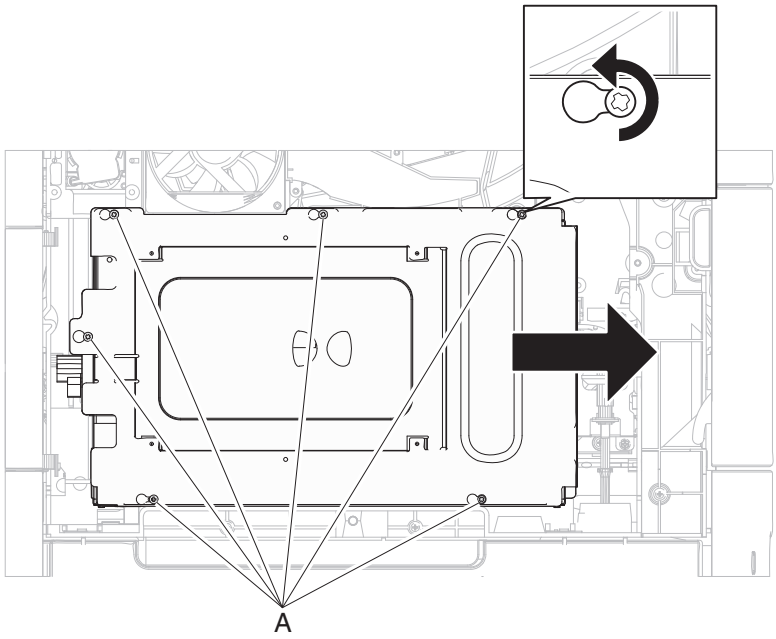

**5** Swing the side cover, left away from the machine.

**6** Remove the side cover, left.

## Switch (media size) assembly removal

1 Remove the side cover, left. Go to **"MPF cam gear removal" on page 339** or **"T652, T654, and T656 left side cover removal" on page 282**.

2 Remove the six screws (A) securing the metal cover to the machine.

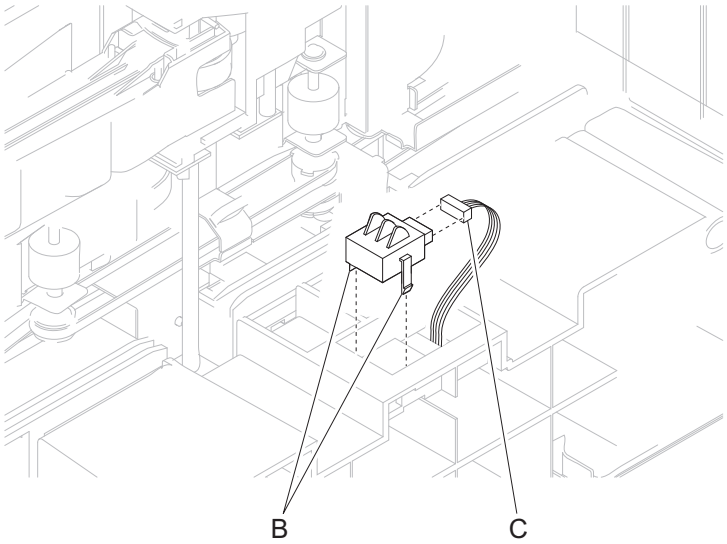



3 Remove the metal cover.

4 Remove the media tray.

5 Gently place the machine on the left of right side.

6 Release the two hooks (B) securing the switch (media size) assembly to the machine.




7 Remove the switch (media size) assembly.

8 Disconnect the connection (C) from the switch (media size) assembly.

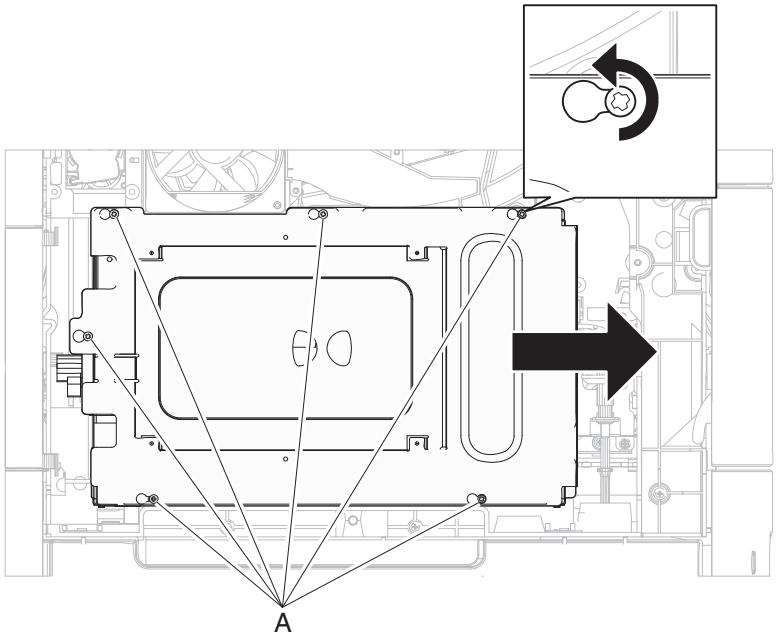
## System card assembly removal

**Warning—Potential Damage:** When replacing the operator panel assembly or the system card assembly, only replace one component at a time. Replace the required component and perform a POR before replacing another component. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more components without a POR after installing each one or the printer will be rendered inoperable. Never install and remove the components as a method of troubleshooting components. Once a component has been installed in a machine, it cannot be used in another machine. It must be returned to the manufacturer.

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

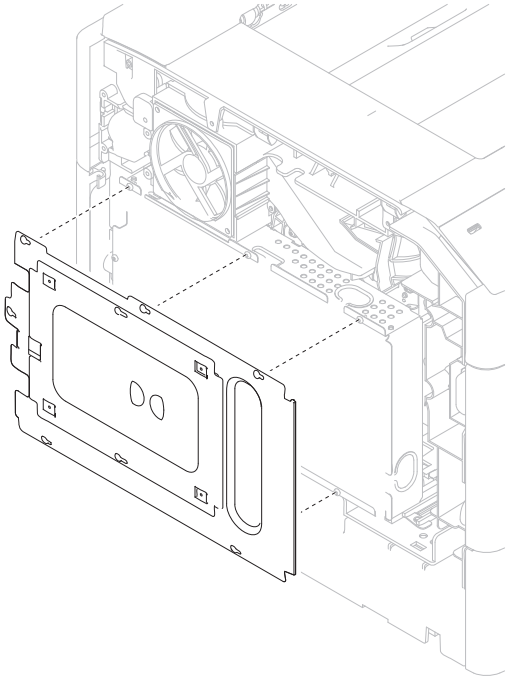
1 Remove the side cover, left. Go to **"MPF cam gear removal" on page 339** or **"T652, T654, and T656 left side cover removal" on page 282**.

2 Remove the six screws (A) securing the metal shield to the machine.

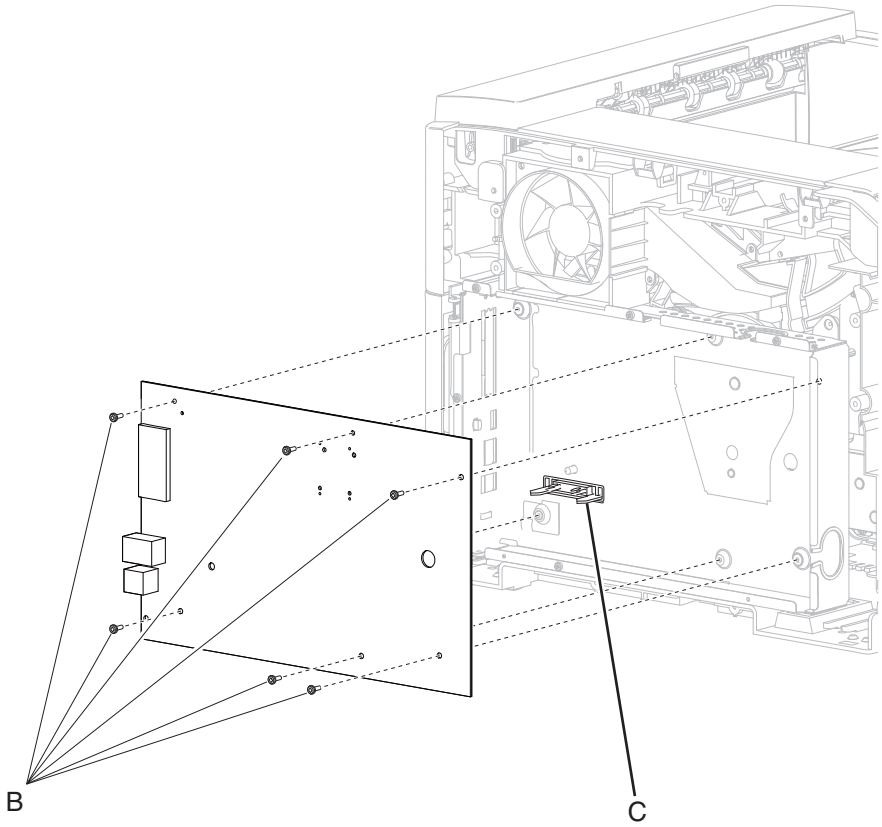



3 Slide the metal shield in the direction of the arrow.

**4** Remove the metal shield.



**Warning—Potential Damage:** When disconnecting all the electrical connections, ensure that the connectors and harnesses do not become damaged.



5 Disconnect all connections from the system card assembly.

**Note:** There are two fine thread screws and four course thread screws securing the system card assembly to the machine, ensure that these screws are properly reinstalled.

6 Remove the six screws (B) securing the system card assembly to the machine.

**Warning—Potential Damage:** When removing the system card assembly from the machine, ensure that the LVPS assembly connection (C) does not become damaged.

7 Remove the system card assembly.

8 Remove any remaining screws securing the system card assembly to the metal box.

9 Remove the system card assembly.

**Installation warning:** Ensure that all ground wires are properly replaced.

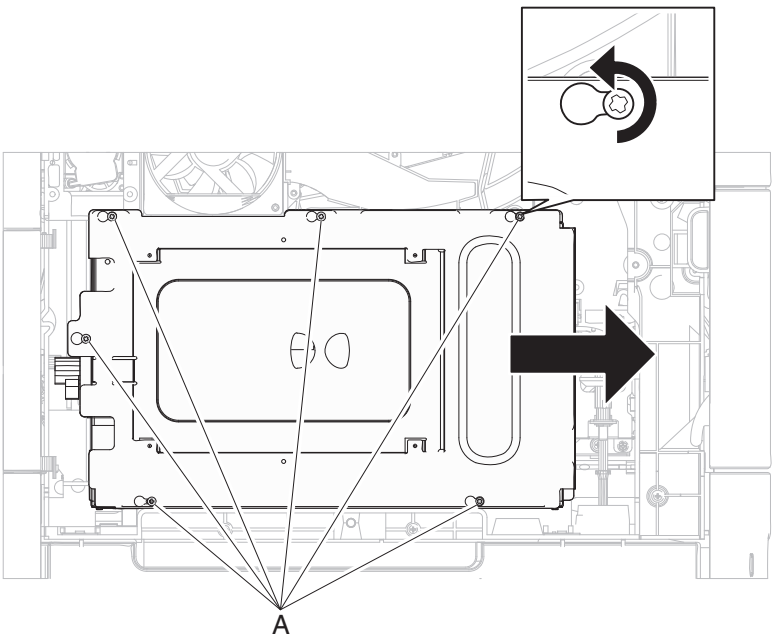
**Installation warning:** When replacing the system card assembly, ensure that the LVPS assembly connections (C) are properly aligned and inserted into the system card assembly, or damage will occur.

## NVM card assembly removal

**Warning—Potential Damage:** When replacing the operator panel assembly (T650, T652, and T654 only), NVM card assembly (T656 only), or the system card assembly, only replace one component at a time. Replace the required component and perform a POR before replacing another component. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more components without a POR after installing each one or the printer will be rendered inoperable. Never install and remove the components as a method of troubleshooting components. Once a component has been installed in a machine, it cannot be used in another machine. It must be returned to the manufacturer.

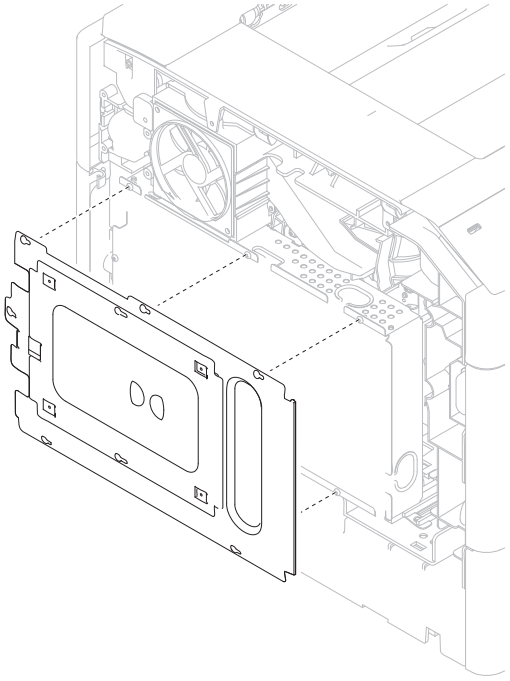
1 Remove the side cover, left. Go to **"T650 left side cover removal" on page 281** or **"T652, T654, and T656 left side cover removal" on page 282**.

2 Remove the six screws (A) securing the metal shield to the machine.

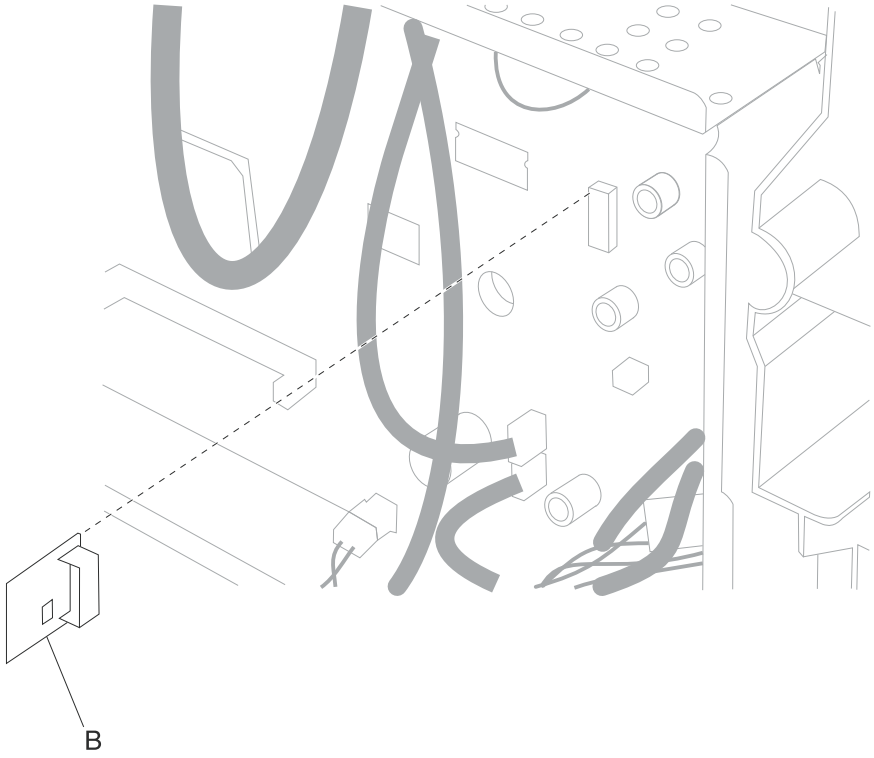



3 Slide the metal shield in the direction of the arrow.

**4** Remove the metal shield.



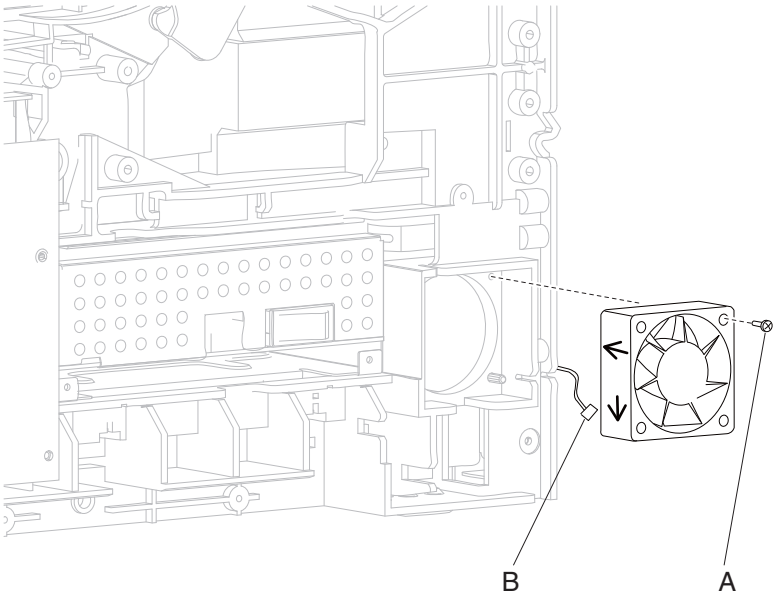
**5** Gently remove the NVM card assembly (B) from the machine.



# Right side removals

## T652, T654, and T656 duplex cooling fan removal

1. Remove the side cover, right. See **"T652, T654, and T656 right side cover removal" on page 297**.
2. Remove the screw (A) securing the duplex cooling fan to the machine.
3. Disconnect the connector (B) from the duplex cooling fan.



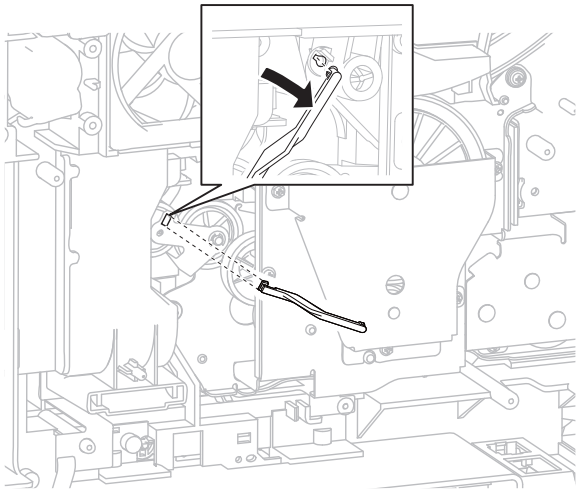

4. Remove the duplex cooling fan.

   **Installation warning:** When replacing the duplex cooling fan, ensure that it is installed as shown in the picture.

## Fuser drive release linkage removal

1. Remove the system card assembly. Go to **"System card assembly removal" on page 285**
2. Gently unsnap the upper end of the fuser drive release linkage from the machine.
3. Rotate the fuser drive release linkage 90° to release the lower end of the fuser drive release linkage from the machine.

4 Remove the fuser drive release linkage.



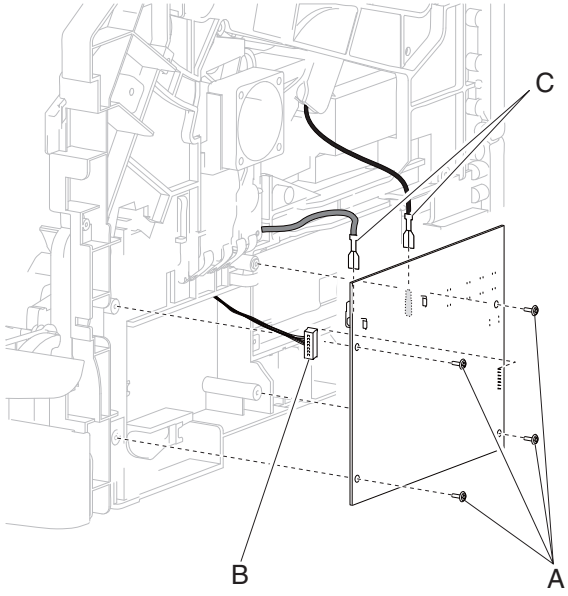
## HVPS card assembly removal

1 Remove the side cover, right. Go to **“T650 right side cover removal” on page 296** or **“T652, T654, and T656 right side cover removal” on page 297**.

2 Remove the four screws (A) securing the HVPS card assembly to the machine.

3 Remove the HVPS card assembly.

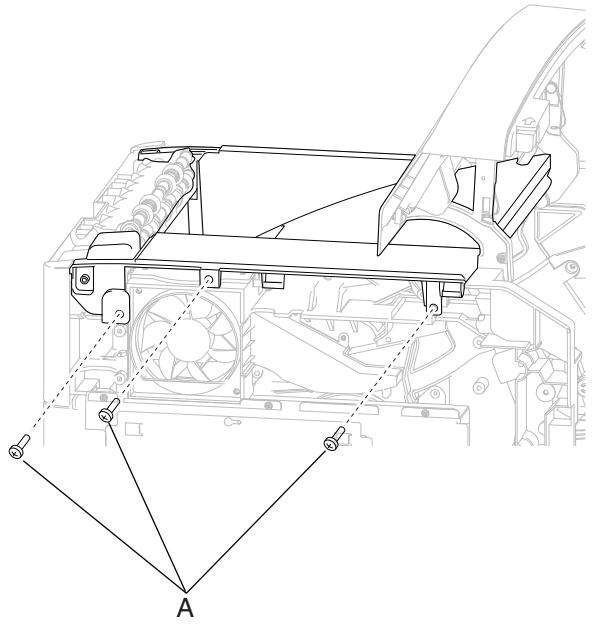
4 Remove connection (B) and the two high voltage connections (C) from the HVPS card assembly.

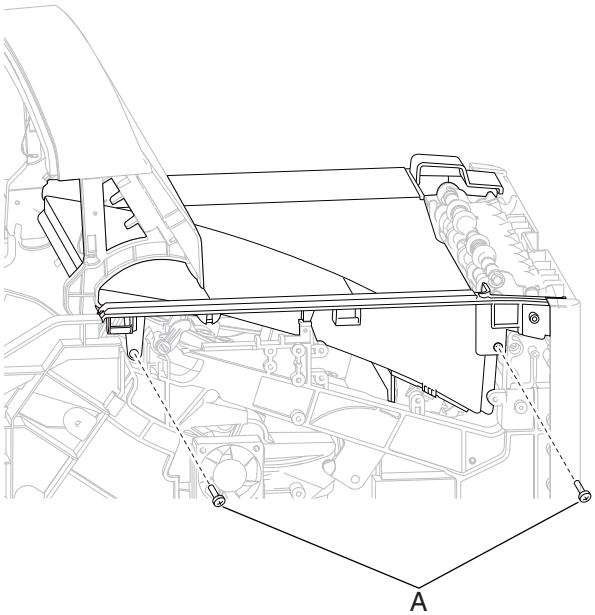



**Installation warning:** When replacing the HVPS card assembly, ensure that the two high voltage connections (C) are properly replaced.

## Laser cover removal

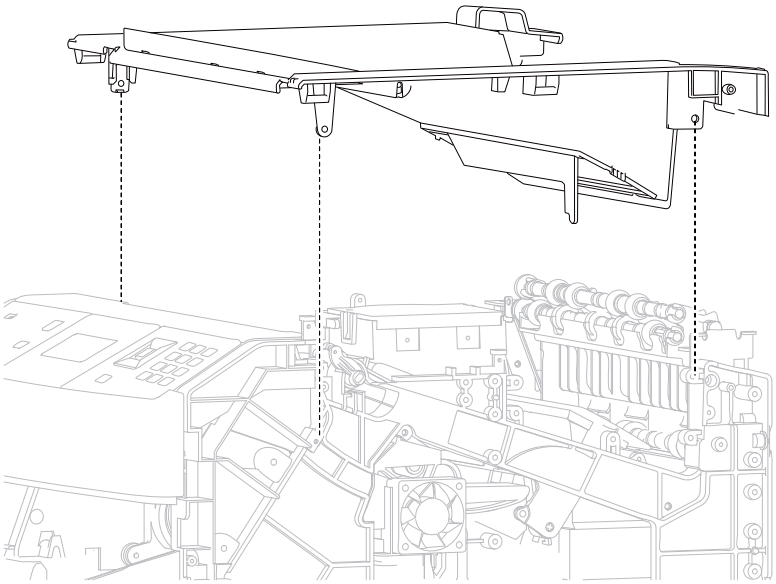
1. Remove the output cover assembly. Go to **"Output cover assembly removal" on page 335**.
2. Remove the fuser wiper cover assembly. Go to **"Fuser wiper cover assembly removal" on page 334**.
3. Remove the side cover, left. Go to **"T650 left side cover removal" on page 281** or **"T652, T654, and T656 left side cover removal" on page 282**.
4. Remove the side cover, right. Go to **"T650 right side cover removal" on page 296** or **"T652, T654, and T656 right side cover removal" on page 297**.
5. Remove the five screws (A) securing the laser cover to the machine.




**Warning—Potential Damage:** When removing the laser cover, ensure that the standard bin actuator assembly does not become damaged.

6 Remove the laser cover.



## T650 LVPS card assembly removal

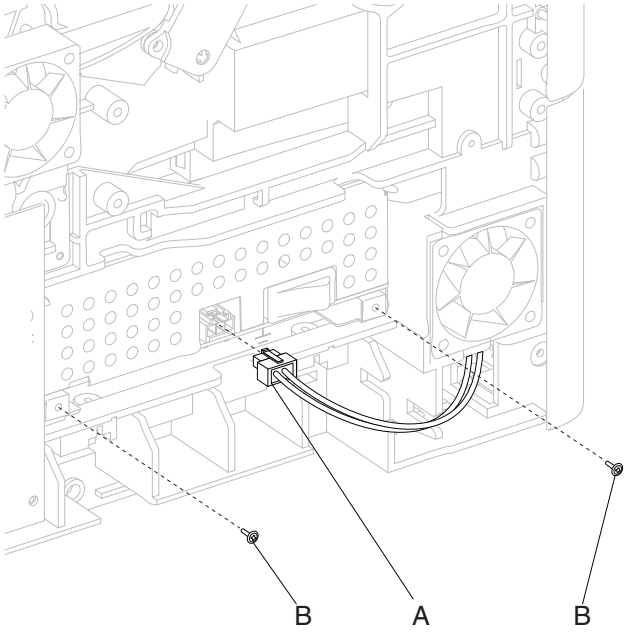
**Warning—Potential Damage:** WARNING: When replacing the LVPS card assembly, ensure that the voltage selection switch is set to the proper setting, or damage will occur.

1 Remove the door assembly, rear. Go to **"Rear door assembly removal" on page 329**.

2 Remove the side cover, right. Go to **"T650 right side cover removal" on page 296**.

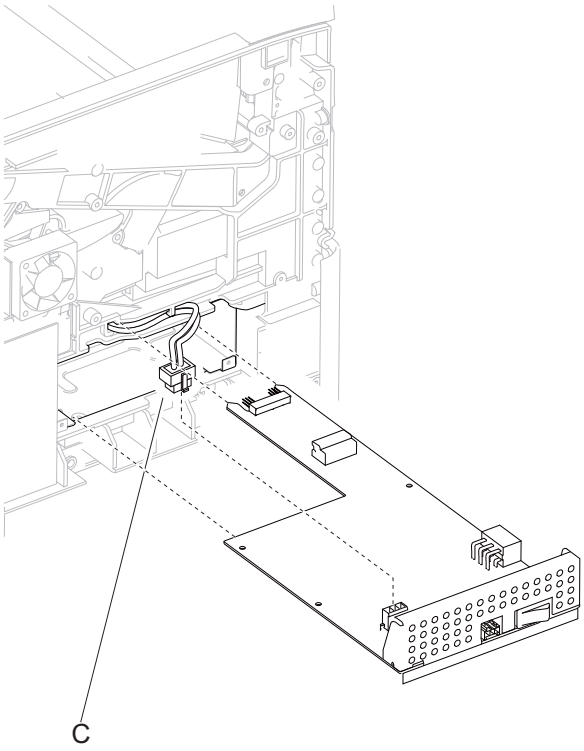
3 Disconnect the connector (A) from the LVPS card assembly.

4 Remove the two screws (B) from the LVPS card assembly.




5 Gently pull the LVPS card assembly from the machine.

**6** Disconnect the connector (C) from the LVPS card assembly.

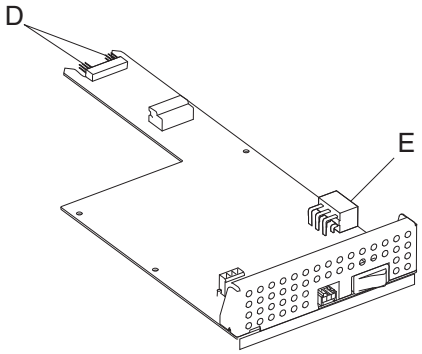



**7** Remove the LVPS card assembly.

**Installation warning:** Replacement Warning: When replacing the LVPS card assembly, ensure that all connections are replaced.

**Installation warning:** Replacement Warning: When replacing the LVPS card assembly, ensure that the connector pins (D) properly engage the system card.

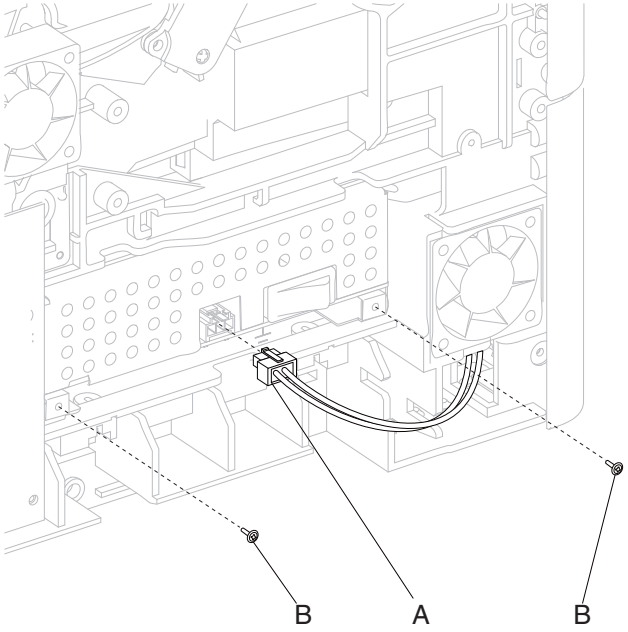
**Installation warning:** Replacement Warning: When replacing the LVPS card assembly, ensure that the voltage selection switch (E) is set to the proper setting, or damage will occur.



# T652, T654, and T656 LVPS card assembly removal

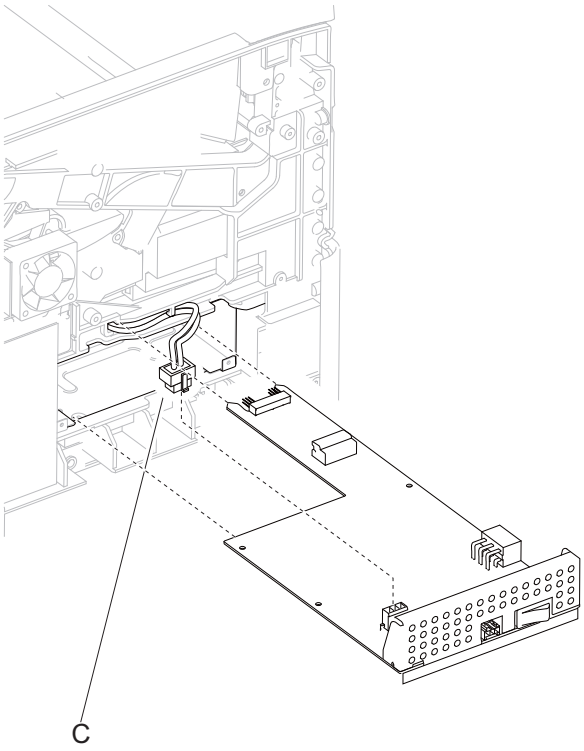
**Warning—Potential Damage:** When replacing the LVPS card assembly, ensure that the voltage selection switch (E) is set to the proper setting, or damage will occur.

1. Remove the door assembly, rear. Go to **"Rear door assembly removal" on page 329**.
2. Remove the side cover, right. Go to **"T652, T654, and T656 right side cover removal" on page 297**.
3. Disconnect the connector (A) from the LVPS card assembly.
4. Remove the two screws (B) from the LVPS card assembly.




5. Gently pull the LVPS card assembly from the machine.

**6** Disconnect the connector (C) from the LVPS card assembly.

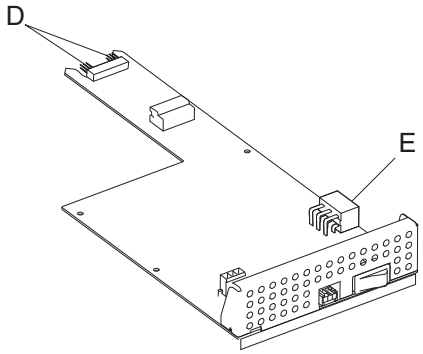



**7** Remove the LVPS card assembly.

**Installation warning:** When replacing the LVPS card assembly, ensure that all connections are replaced.

**Installation warning:** When replacing the LVPS card assembly, ensure that the connector pins (D) properly engage the system card.

**Installation warning:** When replacing the LVPS card assembly, ensure that the voltage selection switch (E) is set to the proper setting, or damage will occur.



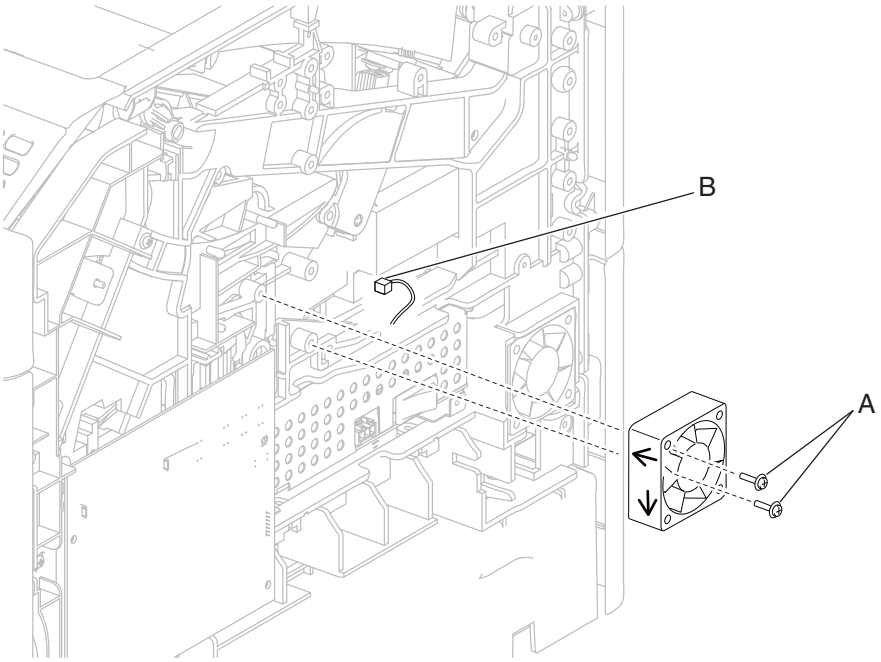

## Print cartridge cooling fan removal

**1** Remove the side cover, right. Go to "**"T650 right side cover removal" on page 296** or **"T652, T654, and T656 right side cover removal" on page 297**.

**2** Remove the screw (A) securing the print cartridge cooling fan to the machine.

**3** Remove the print cartridge cooling fan.

4 Disconnect the connection (B) from the print cartridge cooling fan.




**Installation warning:** Replacement Warning: When replacing the print cartridge cooling fan, ensure that it is installed as shown in the picture.

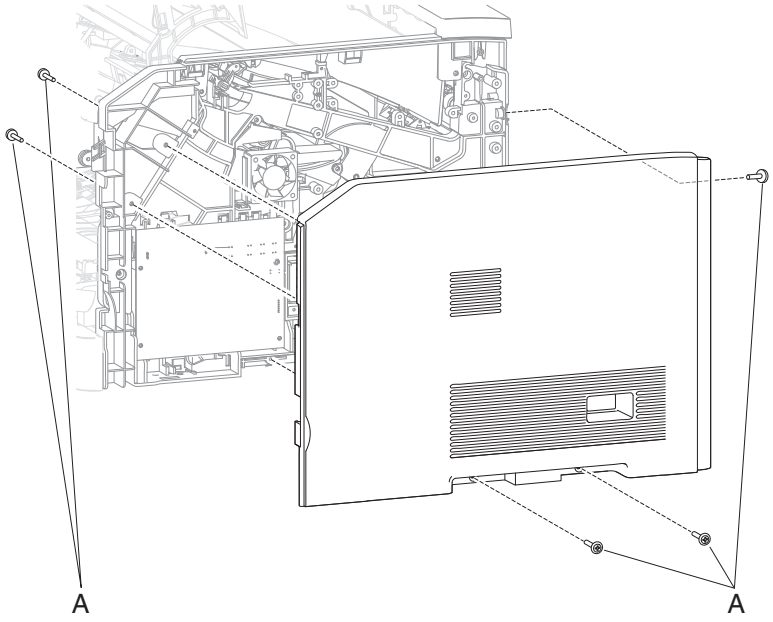
## T650 right side cover removal

1 Open the operator panel door assembly.

2 Open the MPF tray door assembly.

3 Remove the cover assembly, rear lower. Go to **"T650 rear lower cover assembly removal" on page 328**.

4 Remove the five screws (A) securing the side cover, right to the machine.




5 Remove the side cover, right.

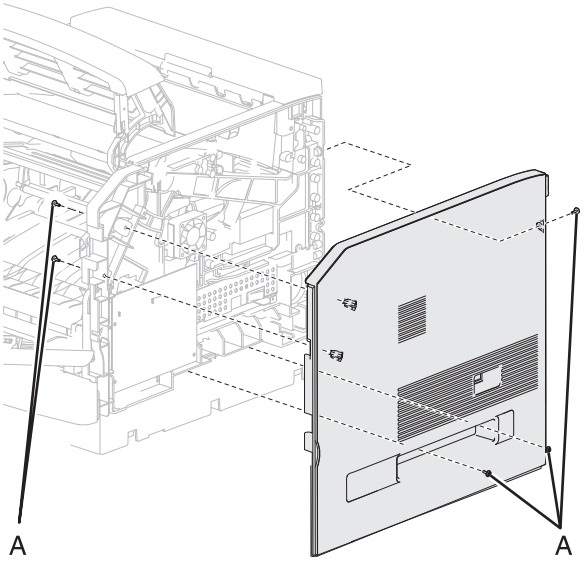
## T652, T654, and T656 right side cover removal

1 Open the operator panel door assembly.

2 Open the MPF tray door assembly.

3 Remove the cover assembly, rear lower. Go to **"T652 and T654 rear lower cover assembly removal" on page 328**.

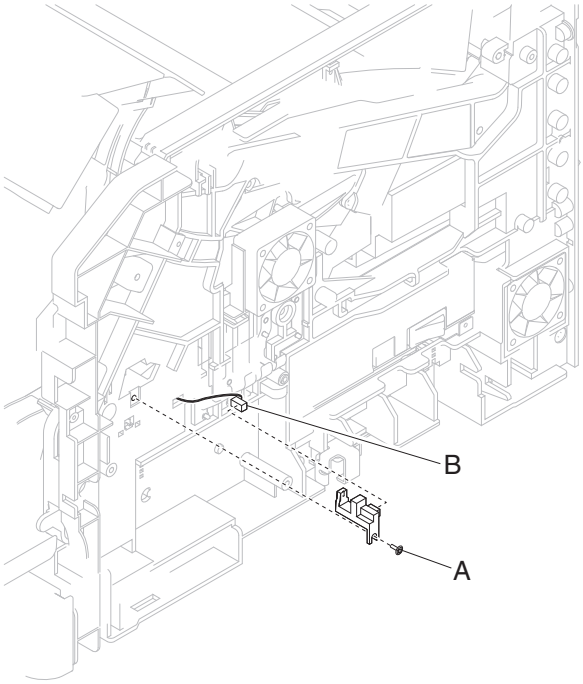
4 Remove the five screws (A) securing the side cover, right to the machine.




5 Remove the side cover, right.

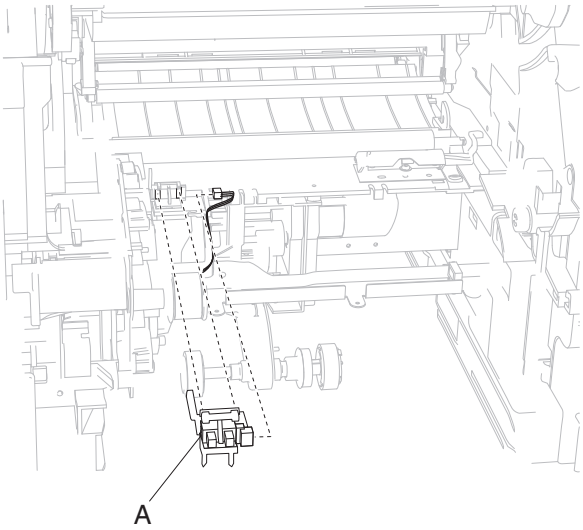
## Sensor (toner empty) removal

1. Remove the HVPS card assembly. Go to **"HVPS card assembly removal" on page 290**.
2. Remove the screw (A) securing the sensor (toner empty) to the machine.
3. Remove the sensor (toner empty).
4. Disconnect the connection (B) from the sensor (toner empty).




## Sensor (input) removal

1. Remove the inner deflector. Go to **"Inner deflector removal" on page 301**.
2. Release the hooks (A) securing the sensor (input) to the machine.



3 Remove the sensor (input).

4 Disconnect the connection (B) from the sensor (input).

# Front side removals

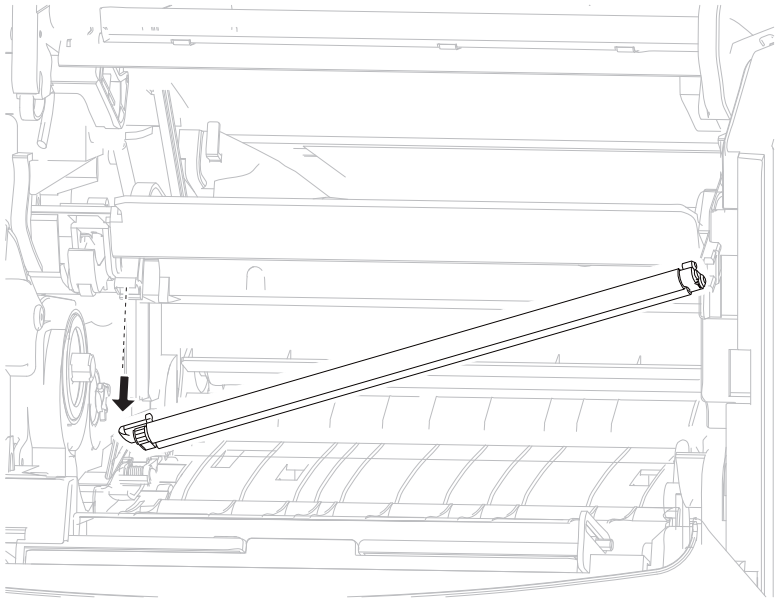
## Charge roll assembly removal

**Warning—Potential Damage:** When removing the charge roll assembly, avoid touching the charge roll surface.

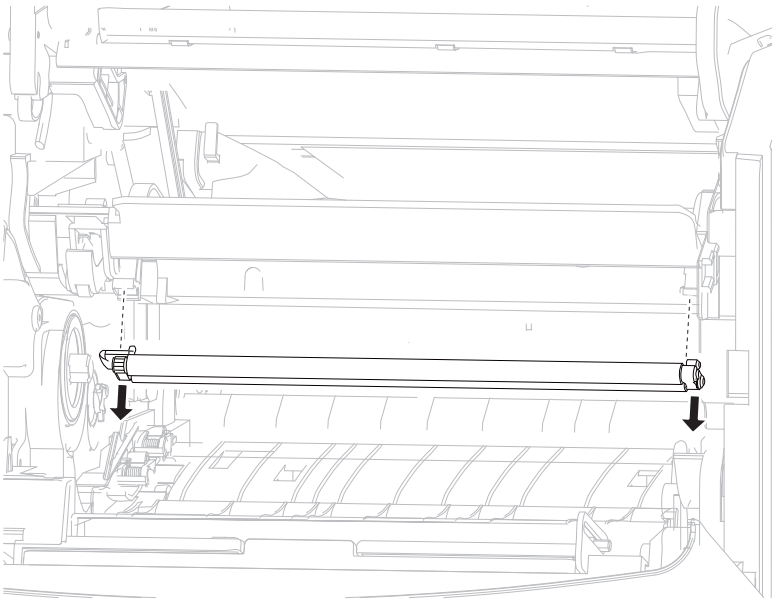
1 Open the MPF door assembly.

2 Open the operator panel front cover assembly.

3 Detach the left side of the charge roll assembly from the machine.



4 Detach the right side of the charge roll assembly from the machine.



5 Remove the charge roll assembly.

**Installation warning:** When replacing the charge roll assembly, avoid touching the charge roll surf

## T650, T652, and T654 LCD screen bezel removal

1 Locate the LCD screen bezel from the operator panel door assembly.

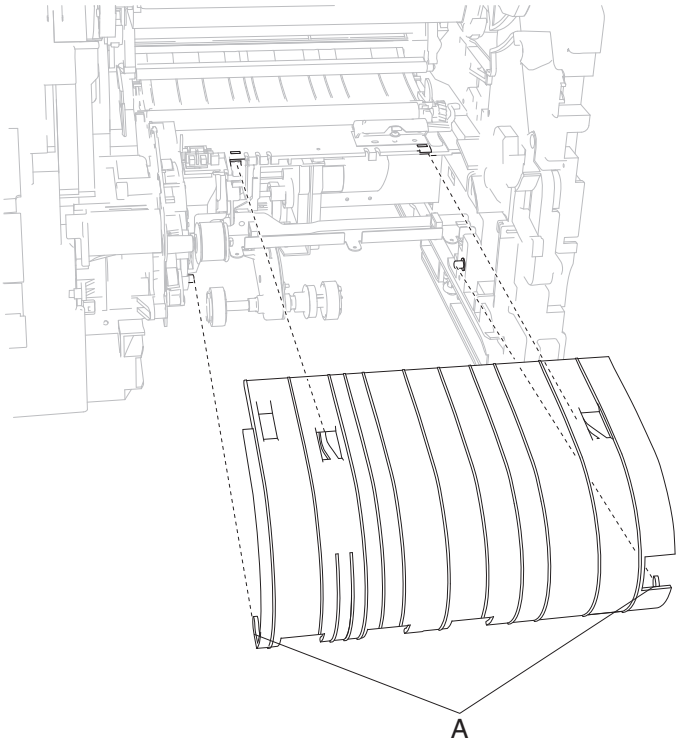
2 Gently detach the LCD screen bezel.

## Inner deflector removal

**Note:** The MPF lift plate assembly can be detached and allowed to hang by the harness. The connection to the MPF lower deflector assembly does not need to be disconnected.

1 Remove the MPF lift plate assembly. Go to **"MPF lift plate assembly removal" on page 302**.

2 Release the two hooks (A) securing the lower portion of the inner deflector to the machine.



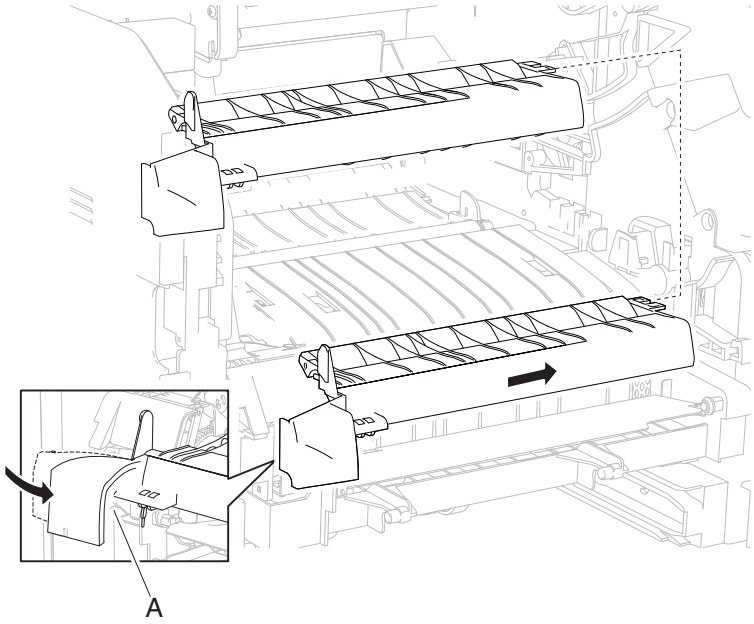

3 Remove the inner deflector.

**Installation warning:** When replacing the inner deflector, ensure that it is properly installed, or jamming will occur.

## Media turn guide removal

1 Remove the MPF tray door assembly. Go to **"T650, T652, and T654 MPF tray door assembly removal" on page 304**.

2 Gently bend the left side of the media turn guide to release the hook (A) as shown in the picture.




3 While gently bending the media turn guide, move the media turn guide in the direction of the arrow.

4 Remove the media turn guide.

**Installation warning:** When replacing the media turn guide, ensure that it is properly installed, or jamming will occur.

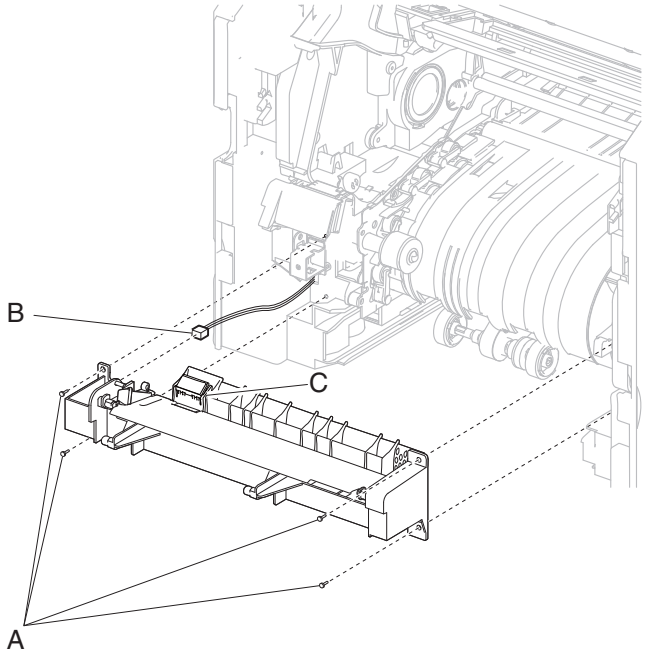
## MPF lift plate assembly removal

1 Remove the media turn guide. Go to **"Media turn guide removal" on page 302**.

2 Remove the four screws (A) securing the MPF lift plate assembly to the machine.

3 Gently detach the MPF lift plate assembly.

4 Disconnect the connector (B) from the MPF lower deflector assembly.




5 Remove the MPF lift plate assembly.

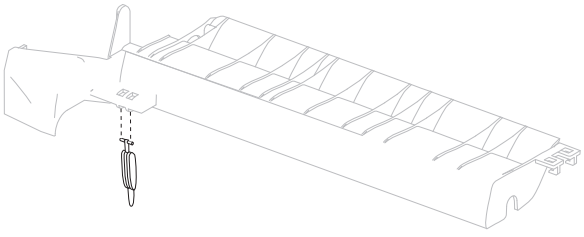
**Installation warning:** When replacing the MPF lift plate assembly, ensure that the lever (C) is held down when reinstalling the MPF lift plate assembly, or damage will occur.

**Installation warning:** When replacing the MPF lift plate assembly, ensure that the MPF pick solenoid assembly does not become damaged.

## MPF media out actuator removal

1 Remove the media turn guide. Go to **"Media turn guide removal" on page 302**.

2 Gently unsnap the MPF media out actuator from the machine.



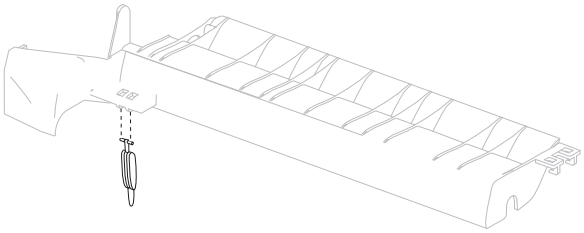
3 Remove the media out actuator.

## MPF pick roll assembly removal

1 Remove the media turn guide. Go to **"Media turn guide removal" on page 302**.

2 Remove the E-clip (A) securing the MPF print roll assembly to the machine.

3 Remove the plastic washer (B).



4 Remove the MPF pick roll assembly.

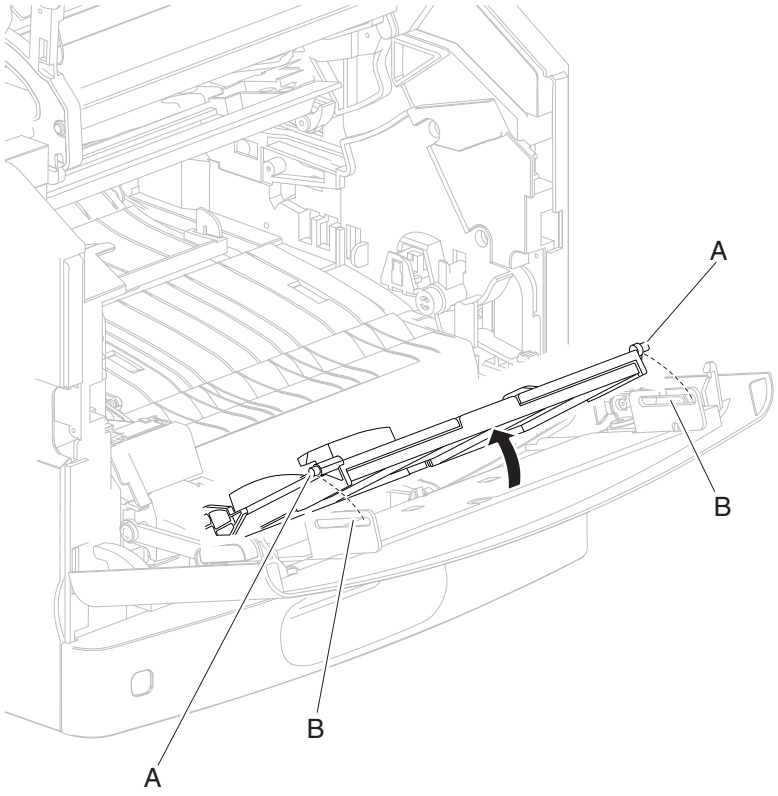
**Installation warning:** When replacing the MPF pick roll assembly, do not touch the rubber surface.

## T650, T652, and T654 MPF tray door assembly removal

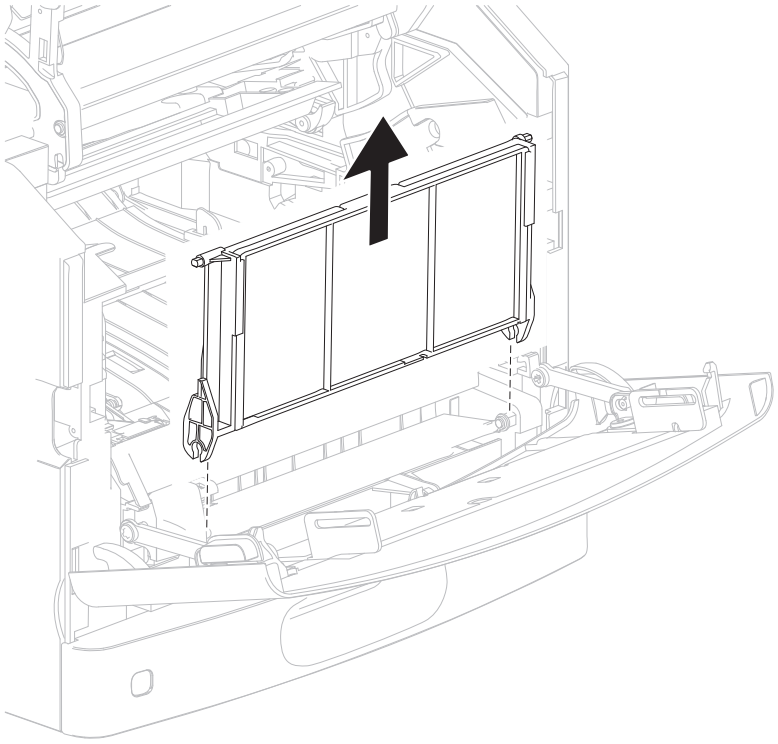
1 Open the operator panel door assembly.

2 Open the MPF tray door assembly, and position it as shown in the picture.

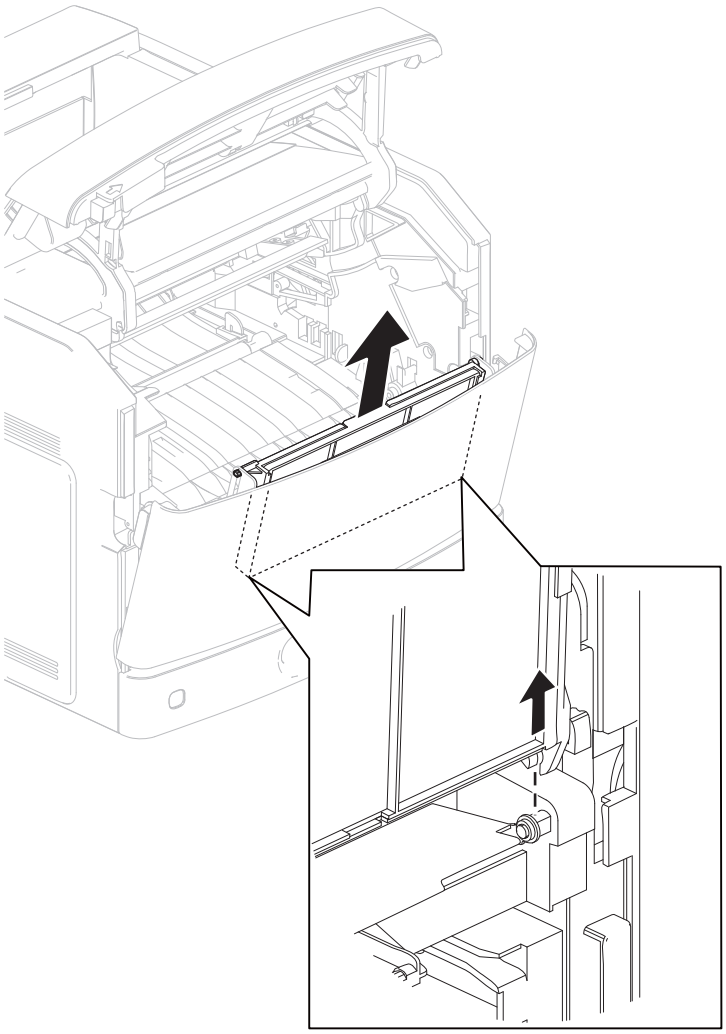
3 Gently release the two bosses (A) from the slots (B).



**4** While holding the MPF tray in its uppermost position, swing the MPF tray door assembly away from the machine to detach the MPF tray from the machine.



**5** Slide the MPF tray door assembly in the direction of the arrow to detach it from the machine.



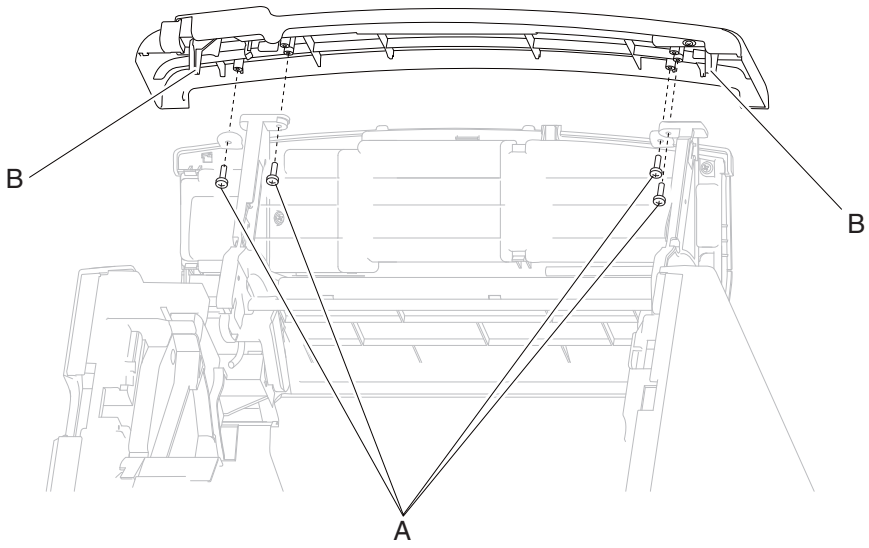
**6** Remove the MPF tray door assembly.

## T650, T652, and T654 operator panel latch assembly removal

**1** Open the operator panel door assembly.

**2** Remove the four screws (A) securing the operator panel latch assembly to the machine.

3 Release the two hooks (B).




4 Remove the operator panel latch assembly.

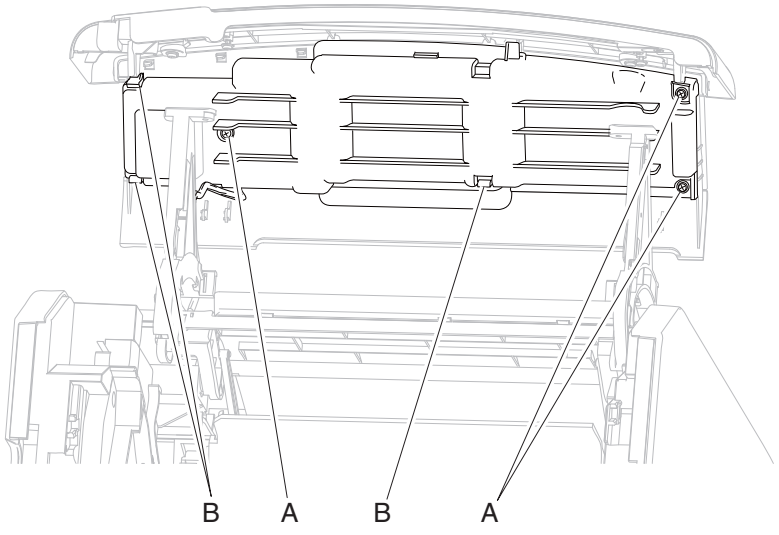
## T650, T652, and T654 operator panel door assembly removal

**Warning—Potential Damage:** When replacing the operator panel assembly or the system card assembly, only replace one component at a time. Replace the required component and perform a POR before replacing another component. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more components without a POR after installing each one or the printer will be rendered inoperable. Never install and remove the components as a method of troubleshooting components. Once a component has been installed in a machine, it cannot be used in another machine. It must be returned to the manufacturer.

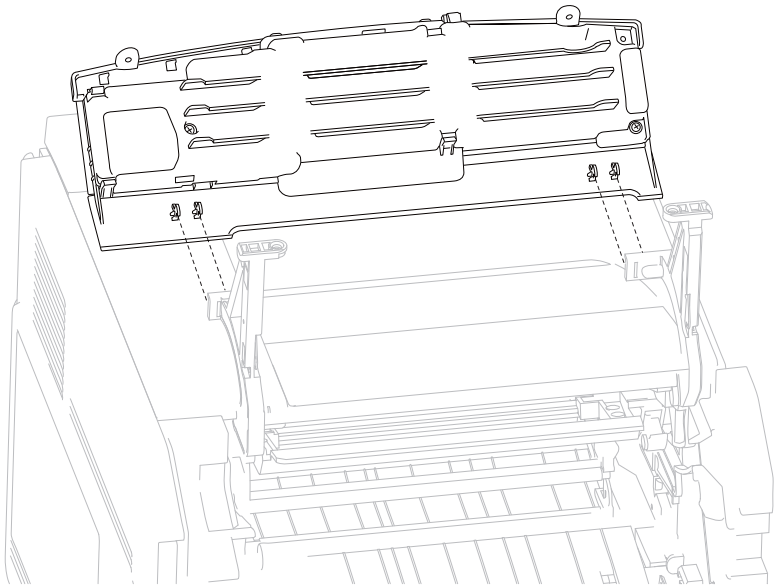
1 Remove the operator panel latch assembly. Go to **"T650, T652, and T654 operator panel latch assembly removal" on page 306**.

2 Remove the three screws (A) securing the cover to the assembly.

3 Release the three hooks (B) securing the cover to the assembly.



4 Detach the operator panel door assembly from the machine.

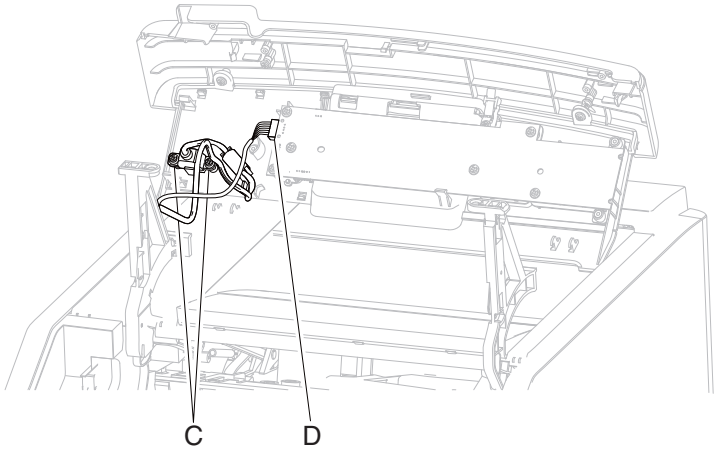


5 Remove the black plastic cover.

6 Remove the two screws (C) securing the USB socket to the assembly.

7 Remove the USB socket.

8 Disconnect the connector (D) from the assembly.




## T650, T652, and T654 left operator panel hinge assembly removal

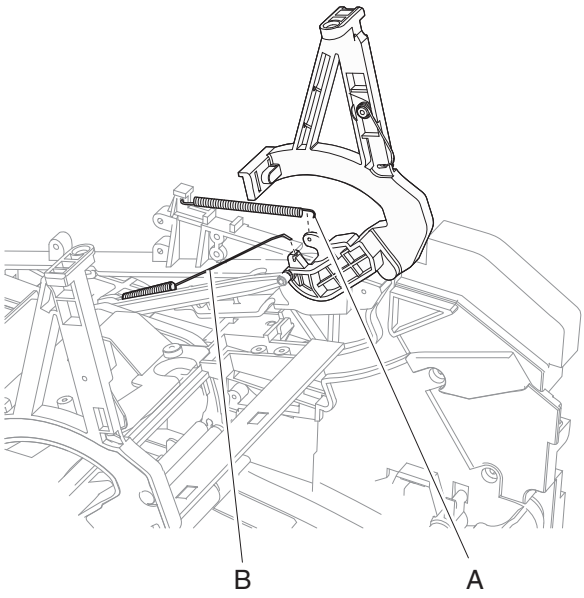
1 Remove the operator panel door assembly. Go to **"T650, T652, and T654 operator panel door assembly removal" on page 307**.

2 Remove the screw (A) securing the cover to the operator panel hinge assembly, left.

3 Remove the cover.

4 Detach the switch (B) from the operator panel hinge assembly, left.

**5** Remove the harnesses (C) from the operator panel hinge assembly, left.

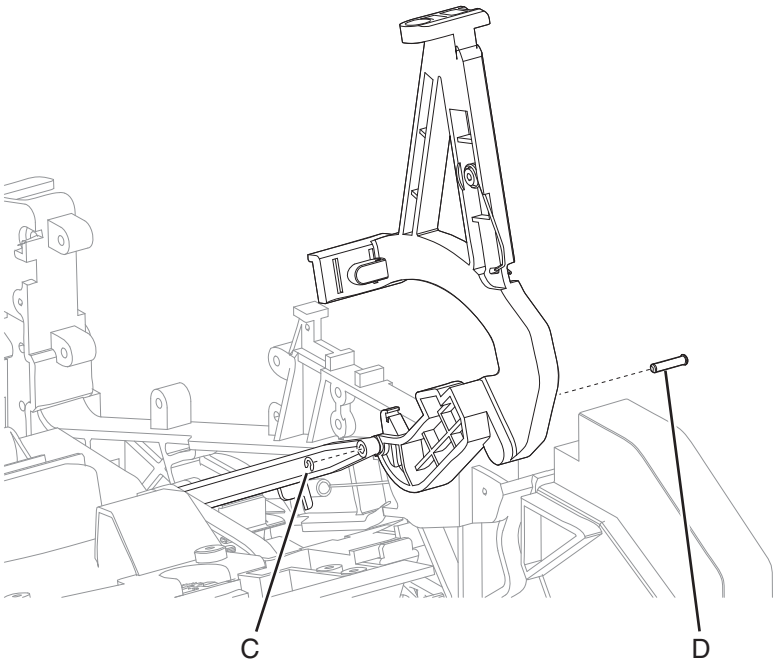



**6** Detach the spring (D) from the operator panel hinge assembly, left.

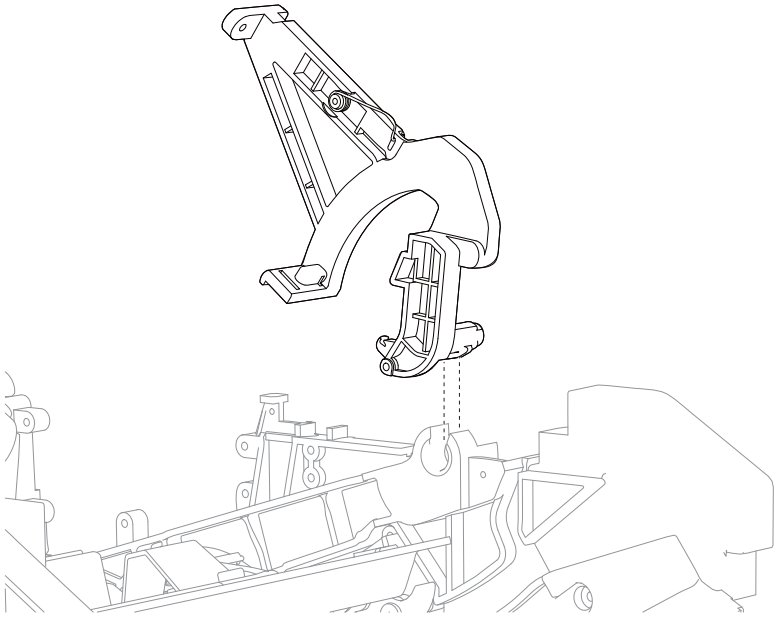
**7** Detach the spring (E) from the operator panel hinge assembly, left.

**8** Remove the E-clip (F) from the operator panel hinge assembly, left.

**9** Remove the pin (G) from the operator panel hinge assembly, left.



**10** Remove the operator panel hinge assembly, left.

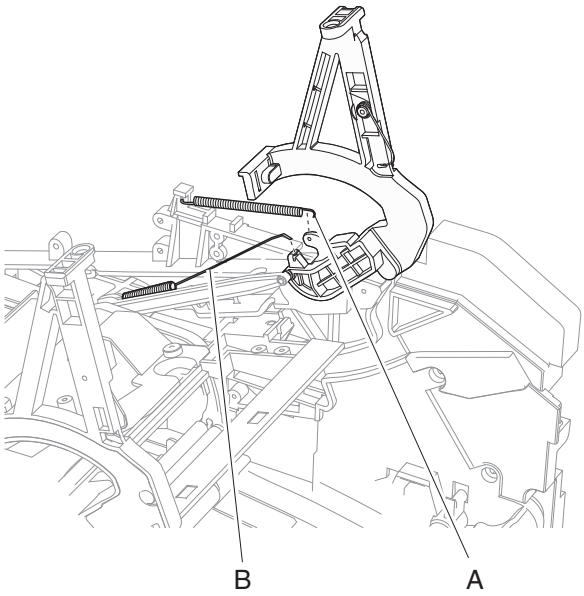


## T650, T652, and T654 right operator panel hinge assembly removal

**1** Remove the operator panel door assembly. Go to **"T650, T652, and T654 operator panel door assembly removal" on page 307**.

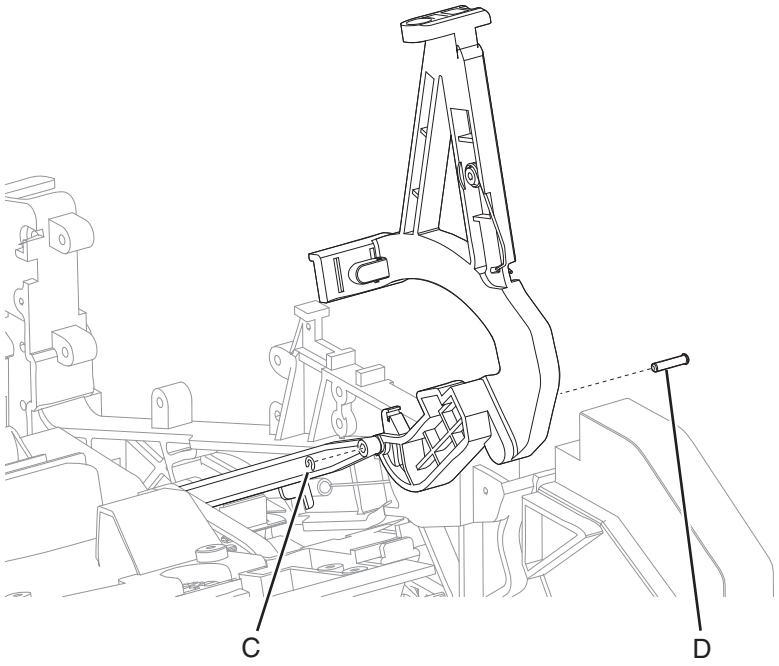
**2** Detach the spring (A) from the operator panel hinge assembly, right.

**3** Detach the spring (B) from the operator panel hinge assembly, right.

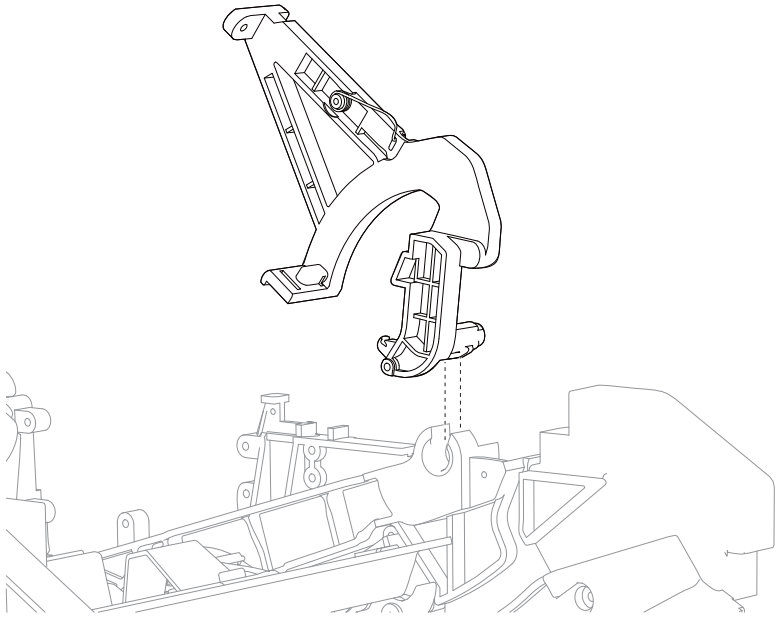



**4** Remove the E-clip (C) from the operator panel hinge assembly, right.

**5** Remove the pin (D) from the operator panel hinge assembly, right.



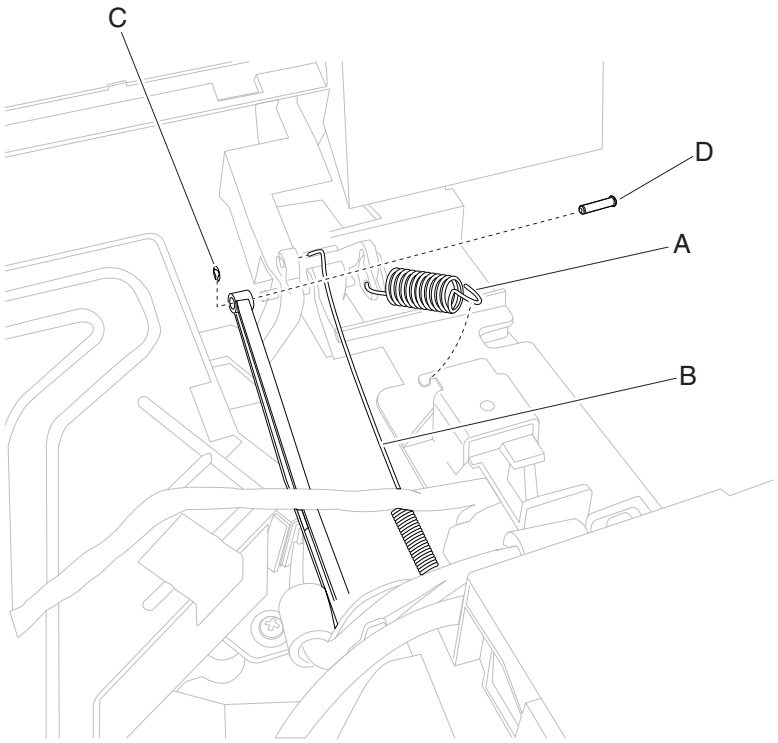

**6** Remove the operator panel hinge assembly, right.



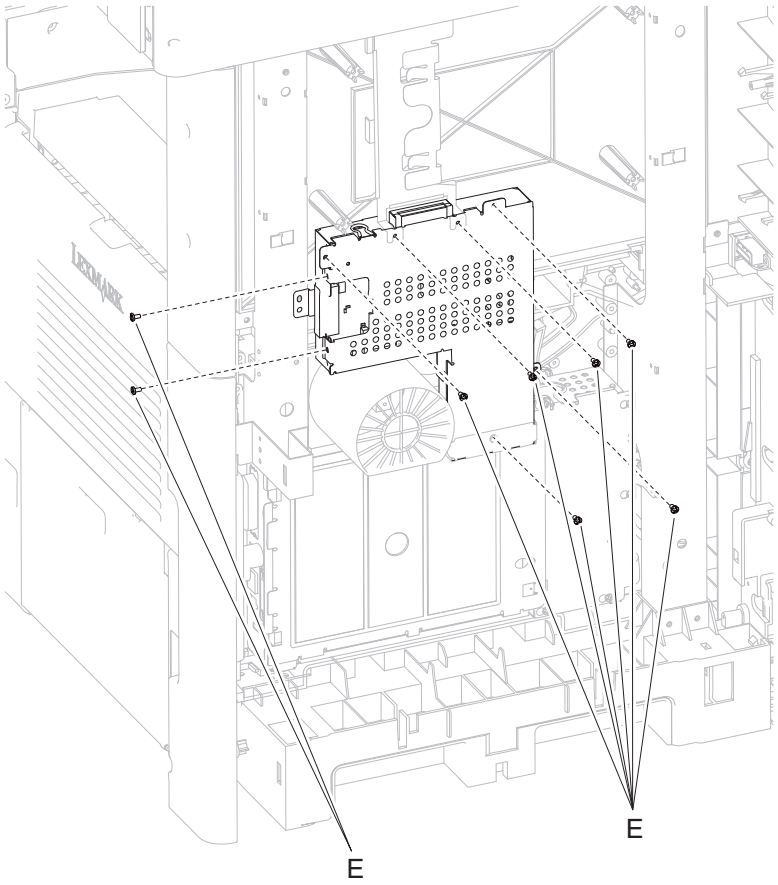
# T656 operator panel door assembly removal

**Warning—Potential Damage:** When replacing the operator panel assembly or the system card assembly, only replace one component at a time. Replace the required component and perform a POR before replacing another component. If this procedure is not followed, the printer will be rendered inoperable. Never replace two or more components without a POR after installing each one or the printer will be rendered inoperable. Never install and remove the components as a method of troubleshooting components. Once a component has been installed in a machine, it cannot be used in another machine. It must be returned to the manufacturer.

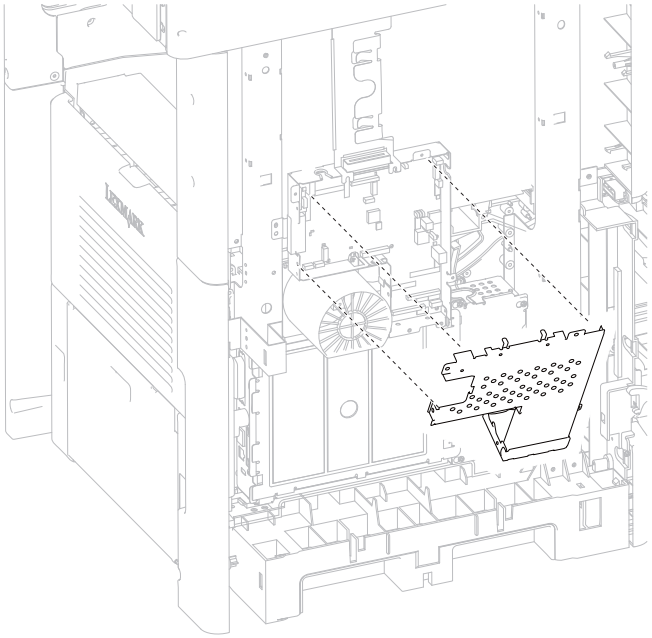
1. Remove the laser cover. See **"Laser cover removal" on page 291**.
2. Remove the counter balance springs (A) on both sides.
3. Remove the print cartridge cover springs (B) on both sides.
4. Remove the E-clips (C) on both sides securing the links to the hinges, and remove the links.
5. Remove the pins (D) on both sides securing the links.



**6** Remove eight screws (E) securing the scanner controller cage cover to the cage. An X658 model is represented in the graphic below, however, the card cage cover removal procedure is similar for all models.

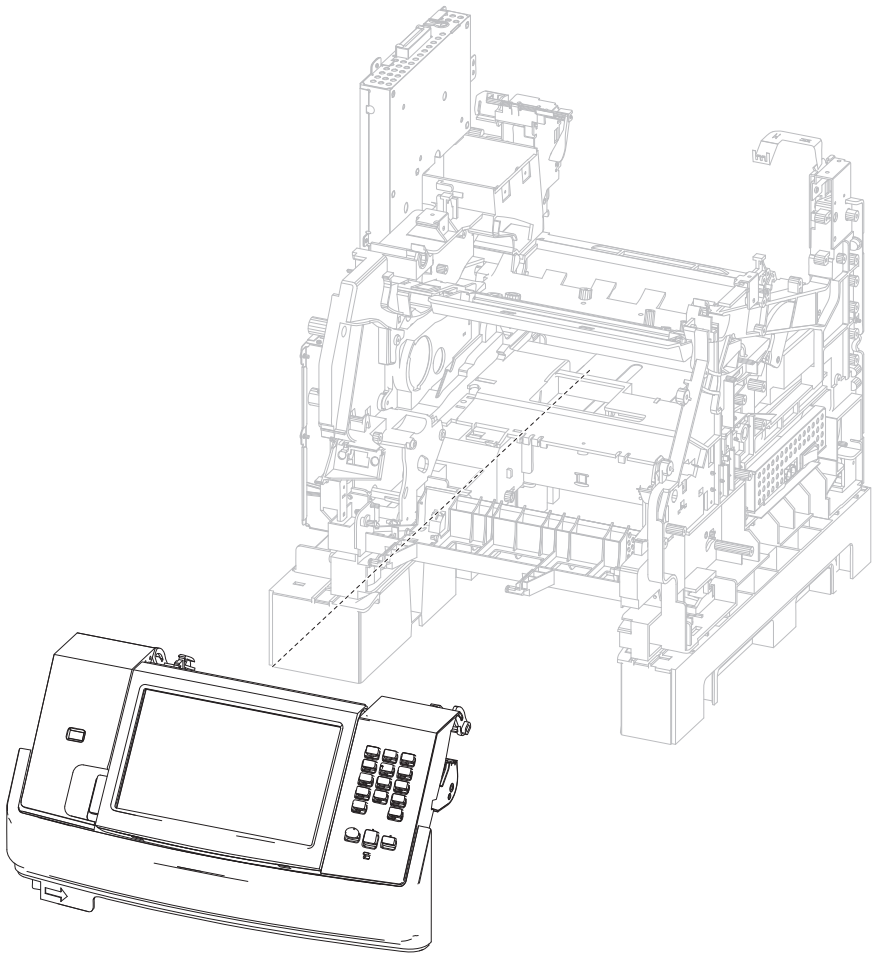



**7** Remove the printer controller card cage cover.



**8** Disconnect the USB cable and the cover closed interlock switch harness.

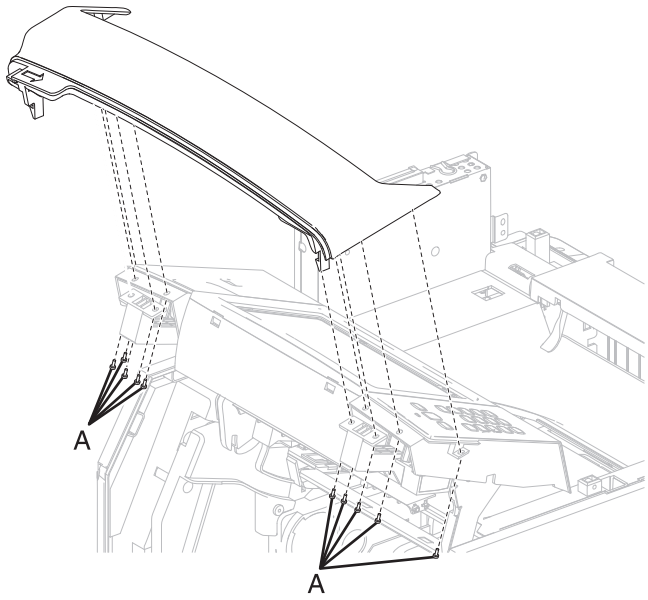
**9** Lift the operator panel door assembly out of the machine.



## T656 Operator panel cover latch assembly removal

1 Lift the operator panel cover assembly.

2 Remove the ten screws (A) securing the operator panel cover latch assembly to the operator panel cover assembly.

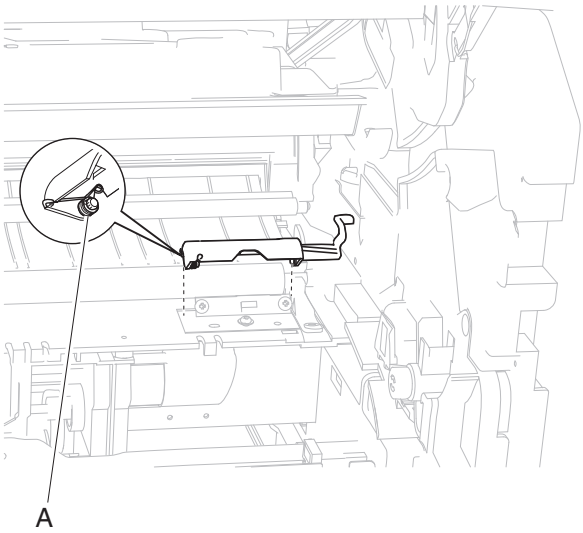



3 Remove the operator panel cover latch assembly.

## Sensor shield assembly removal

1 Remove the inner deflector. Go to **"Inner deflector removal" on page 301**.

2 Gently unsnap the sensor shield assembly from the machine.




3 Remove the sensor shield assembly.

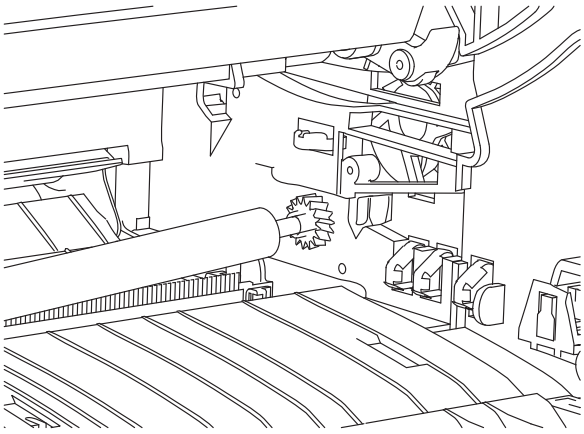
**Installation warning:** When replacing the sensor shield assembly, ensure that the spring (A) is properly aligned and the sensor shield assembly opens and closes properly.

## Transfer roll assembly removal

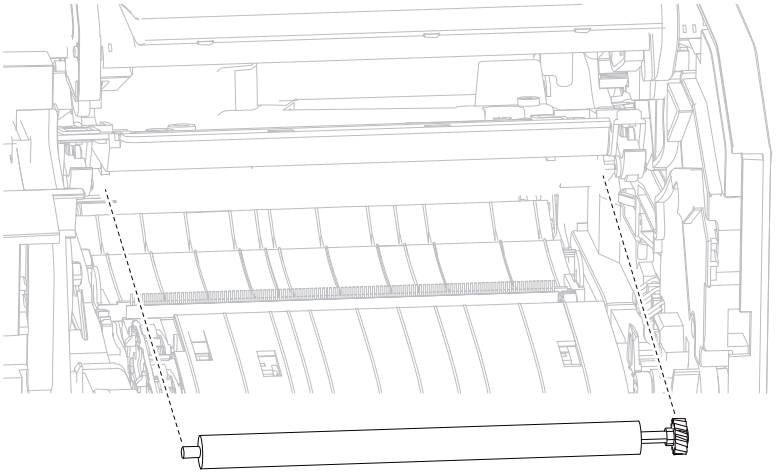
1 Open the operator panel door assembly.

2 Remove the print cartridge.

3 Gently unsnap the transfer roll assembly from the machine.



4 Remove the transfer roll assembly.



**Installation warning:** When replacing the transfer roll assembly, do not touch the foam surface.

## Left transfer roll bracket assembly removal

1 Remove the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.

2 Remove the inner deflector. Go to **"Inner deflector removal" on page 301**.

3 Remove the screw (A) securing the transfer roll bracket assembly, left to the machine.

4 Remove the transfer roll bracket assembly, left.

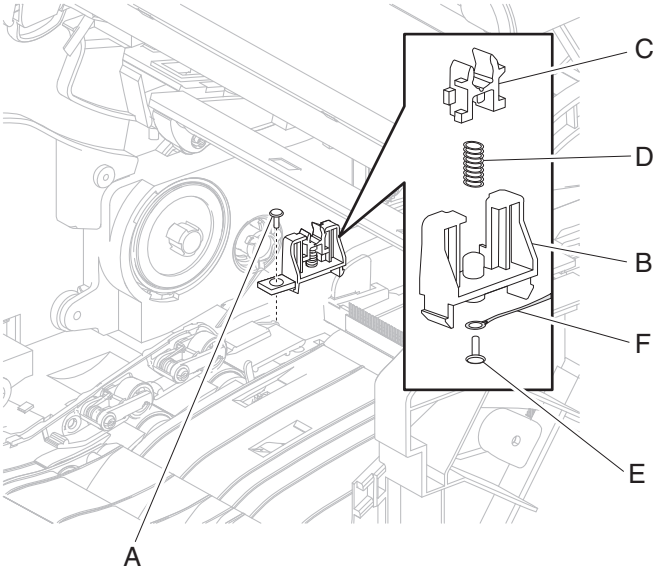
5 Remove the roll clamp (B) from the transfer roll bracket assembly, left.

6 Remove the bushing (C).

7 Remove the spring (D).

8 Remove the screw (E).

9 Remove the ground wire (F).



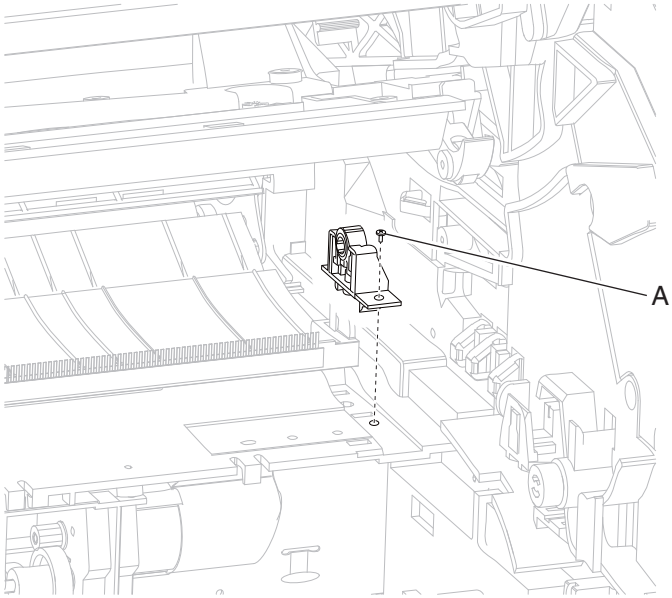

**Installation warning:** When reinstalling the transfer roll bracket assembly, left, ensure that the bushing (C), spring (D), and ground wire (F) are properly replaced.

## Right transfer roll bracket assembly removal

1 Remove the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.

2 Remove the inner deflector. Go to **"Inner deflector removal" on page 301**.

3 Remove the screw (A) securing the transfer roll bracket assembly, right to the machine.




4 Remove the transfer roll bracket assembly, right.

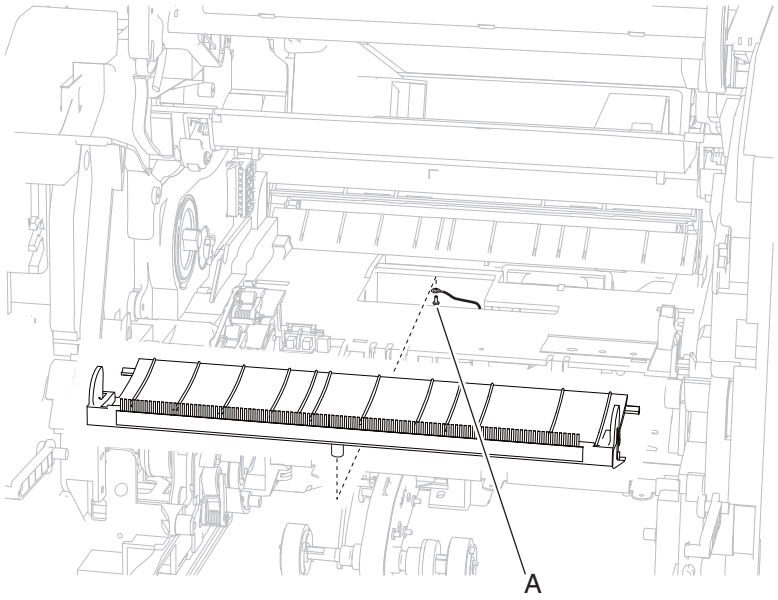
## Transfer deflector removal

1 Remove the transfer roll assembly. Go to **"Transfer roll assembly removal" on page 316**.

2 Gently unsnap the transfer deflector from the machine.

3 Remove the transfer deflector.

4 Remove the screw (A) securing the ground wire to the transfer deflector.




5 Remove the ground wire.

**Installation warning:** When replacing the transfer deflector, ensure that the ground wire is properly replaced.

# Bottom side removals

## T652, T654, and T656 duplex assembly removal

**Note:** When removing the duplex drive motor assembly, it does not need to be completely removed from the machine. It may be allowed to gently hang out of the way by the harness.

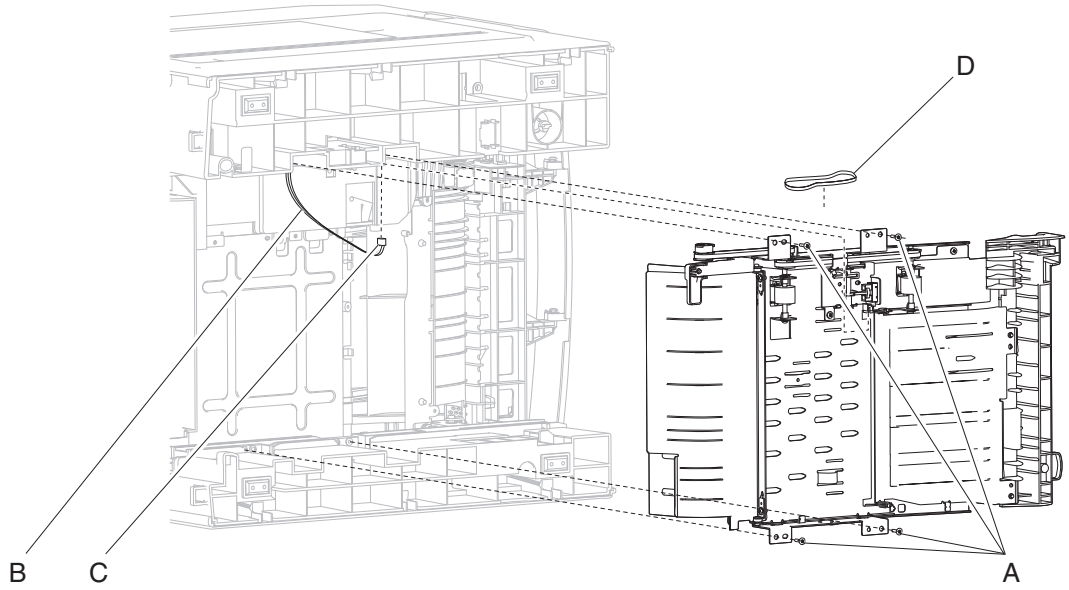
1 Remove the duplex drive motor assembly. See **"T652, T654, and T656 duplex drive motor assembly removal" on page 330**.

2 Remove the pick arm assembly. See **"Pick arm assembly removal" on page 322**.

3 Remove the four screws (A) securing the duplex assembly to the machine.

4 Remove the harnesses (B) from the clamp.

5 Disconnect the connection (C) from the duplex assembly.




**Note:** When removing the duplex assembly, the lower duplex drive belt (D) will become detached.

6 Remove the duplex assembly.

**Installation warning:** When replacing the duplex assembly, ensure that the lower duplex drive belt (D) is properly reattached.

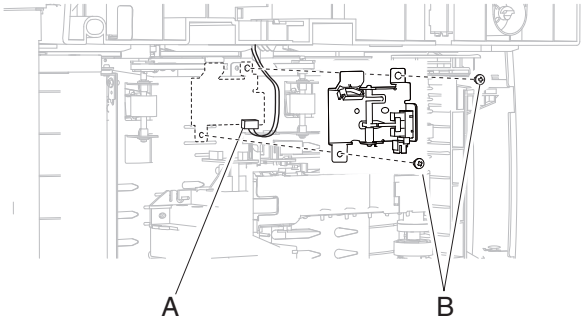
## T652, T654, and T656 duplex input sensor assembly removal

1 Remove the media tray.

2 Gently place the printer on its left or right side.

3 Disconnect the connection (A) from the duplex input sensor assembly.

4 Remove the two screws (B) securing the duplex input sensor assembly to the machine.




5 Remove the duplex input sensor assembly.

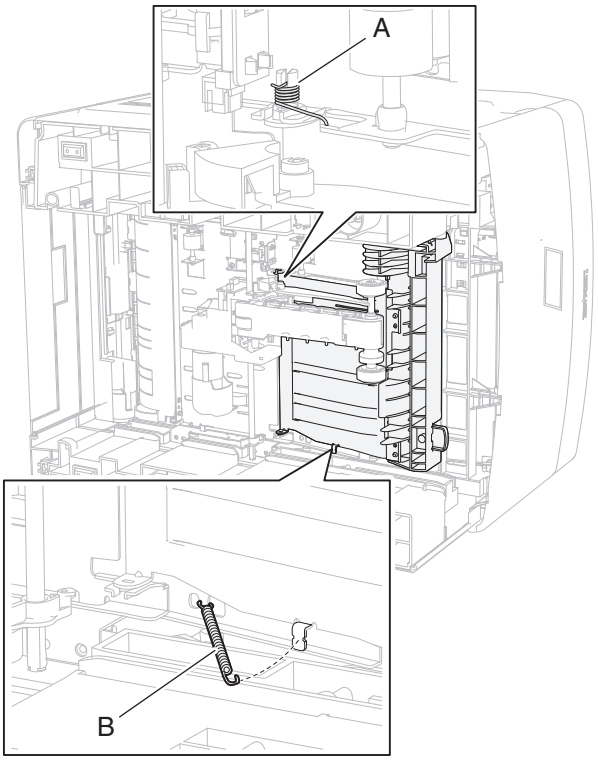
## T652, T654, and T656 front duplex guide assembly removal

1 Remove the media tray.

2 Gently place the printer on its left or right side.

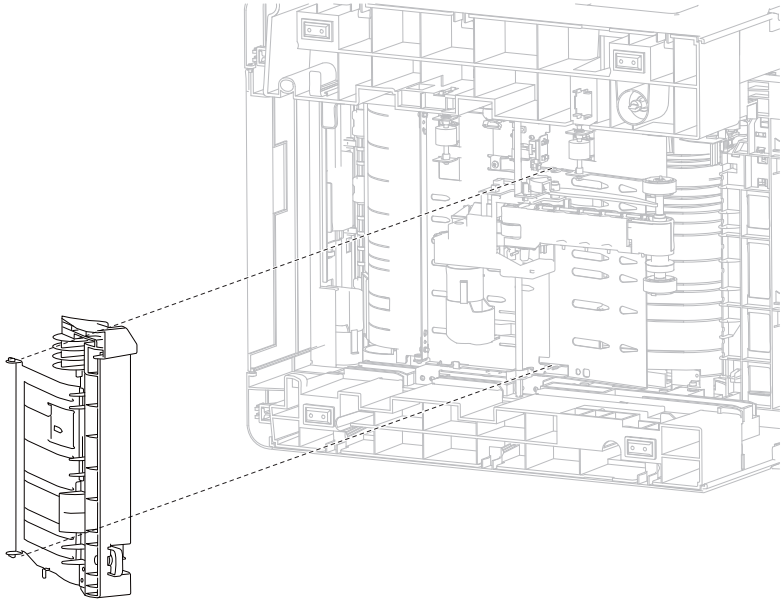
**3** Detach the front left duplex guide spring (A) from the duplex guide assembly, front.

**4** Detach the front right duplex guide spring (B) from the duplex guide assembly, front.




**5** Fully open the duplex guide assembly, front 90°, and detach it from the machine.

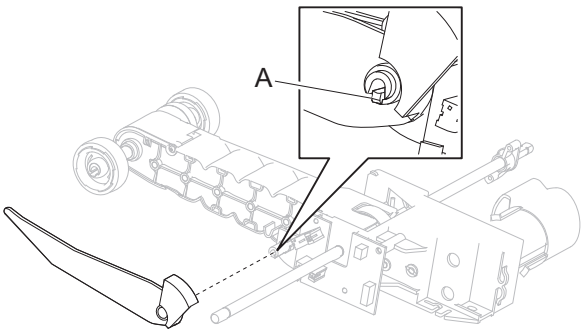
**6** Remove the duplex guide assembly, front.



## Media out actuator removal

1 Remove the pick arm assembly. Go to **"Pick arm assembly removal" on page 322**.

2 Release the hook (A) securing the media out actuator to the unit.



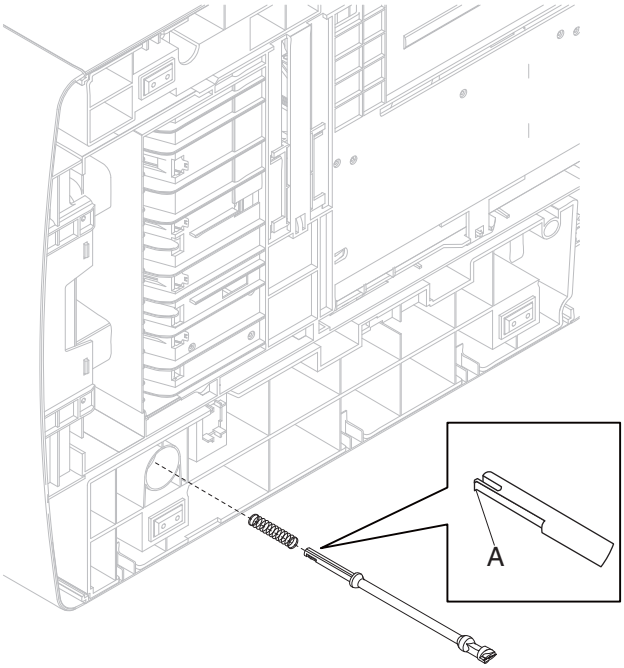

3 Remove the media out actuator.

## Option drive shaft removal

1 Gently place the printer on its left or right side.

2 Using pliers, gently pull the option drive shaft from the machine.

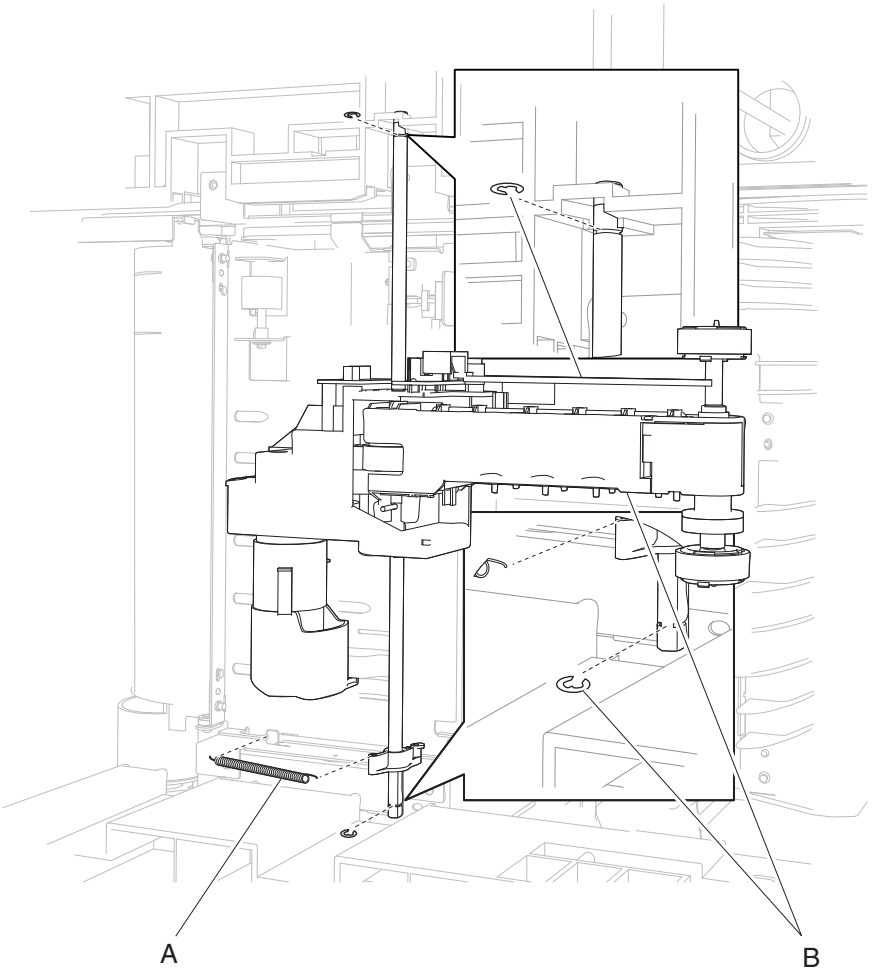
3 Remove the spring.



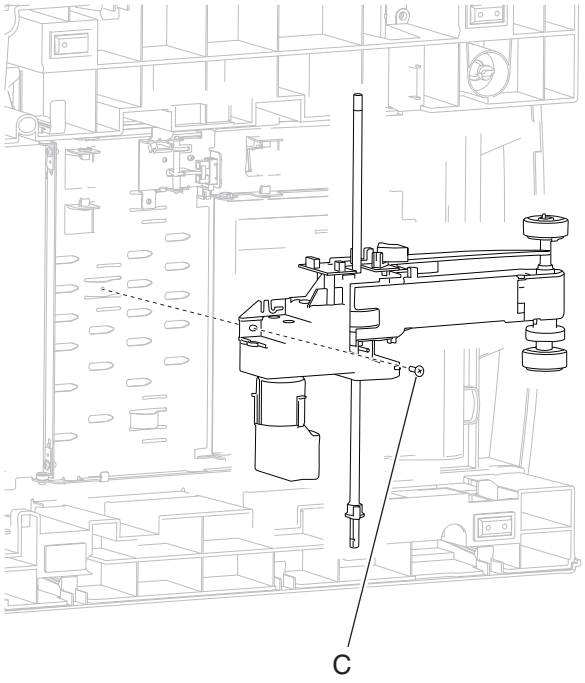

**Installation warning:** When replacing the option drive shaft, ensure that the plastic hook (A) is not damaged, or the option drive shaft will not remain secured.

## Pick arm assembly removal

1. Remove the media tray from the machine.
2. Place the machine on the left or right side.
3. Remove the spring (A).
4. Remove the two E-clips (B) securing the pick arm assembly to the machine.



**5** Remove the screw (C) securing the pick arm assembly to the machine.

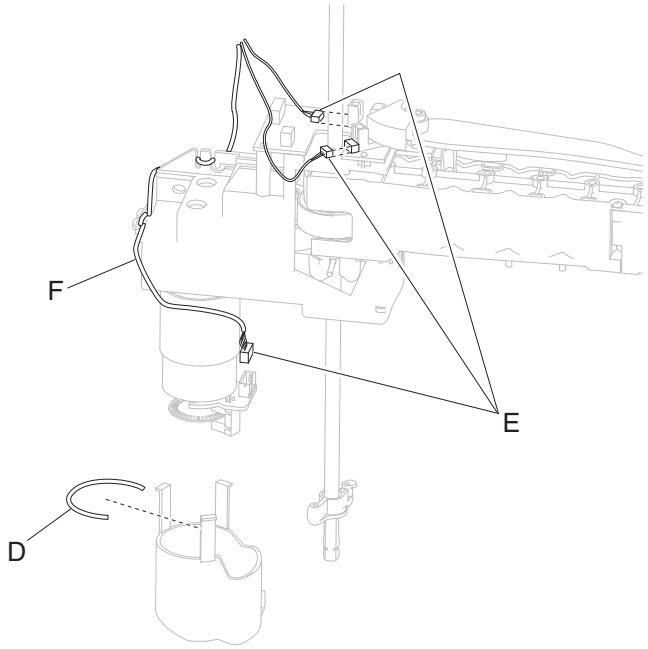



**6** Remove the band (D) from the pick arm assembly.

**7** Remove the cover from the pick arm assembly.

**8** Remove the three connections (E) from the pick arm assembly.

**9** Remove the wiring harness (F) from the pick arm assembly.




**10** Remove the pick arm assembly.

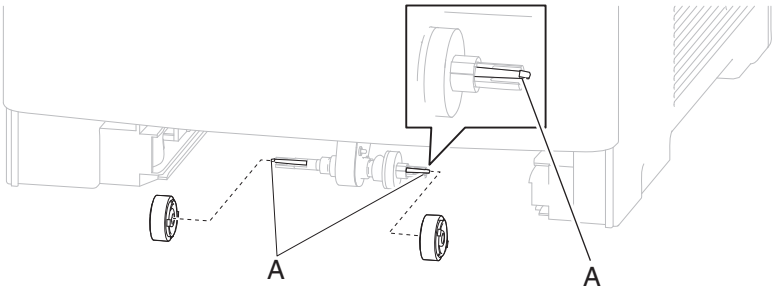
**Installation warning:** When replacing the pick arm assembly, ensure that the harnesses are properly rerouted.

**Installation warning:** When replacing the pick arm assembly, ensure that the connections are properly replaced.

## Pick roll assembly removal

**1** Remove the media tray.

**2** Gently pull the pick arm assembly down, and release the two hooks (A) securing the two pick roll assemblies.



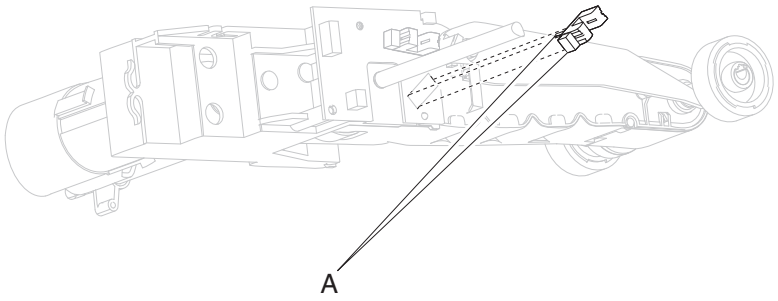

**3** Remove the two pick roll assemblies.

**Installation warning:** When replacing the pick roll assembly, do not touch the rubber surface.

## Sensor (media level) removal

1 Remove the pick arm assembly. Go to **“Pick arm assembly removal” on page 322**.

2 Release the hooks (A) securing the sensor (media level) to the assembly.

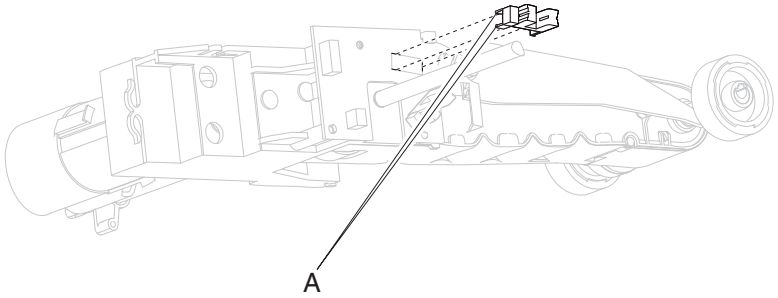



3 Remove the sensor (media level).

## Sensor (media out) removal

1 Remove the pick arm assembly. Go to **“Pick arm assembly removal” on page 322**.

2 Release the hooks (A) securing the sensor (media out) to the assembly.

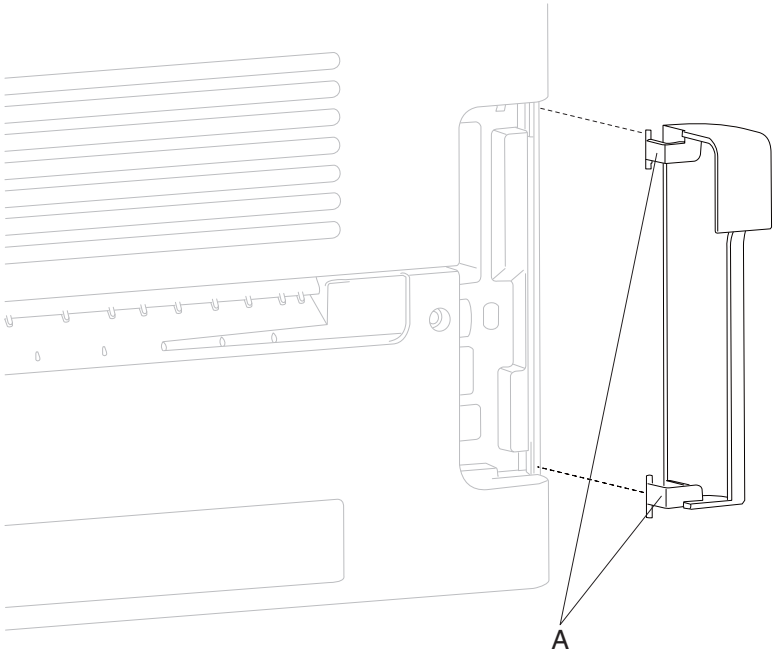



3 Remove the sensor (media out).

# Rear side removals

## Rear connection access cover removal

1 Gently detach the two hinges (A) of the connection access cover, rear from the machine.



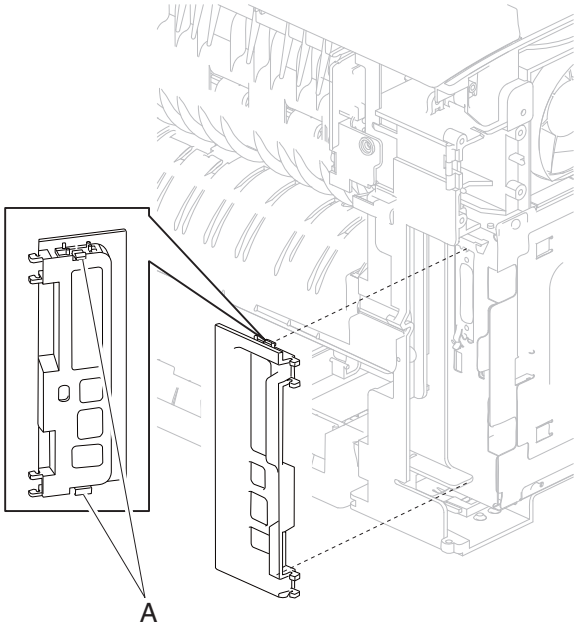

2 Remove the connection access cover, rear.

## T650 rear connection bezel assembly removal

1 Remove the side cover, left. Go to **“T650 left side cover removal” on page 281**.

2 Remove the cover assembly, rear lower. Go to **“T650 rear lower cover assembly removal” on page 328**.

3 Release the two hooks (A) securing the connection bezel assembly, rear to the machine.



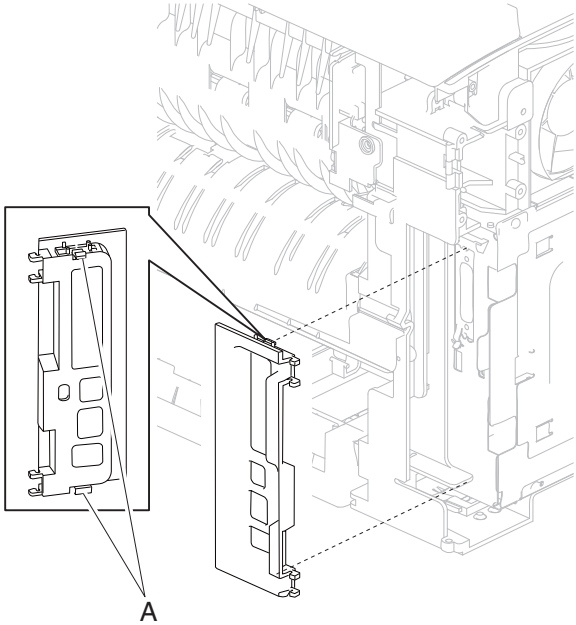

4 Remove the connection bezel assembly, rear.

## T652 and T654 rear connection bezel assembly removal

1 Remove the side cover, left. Go to **"T652, T654, and T656 left side cover removal" on page 282**.

2 Remove the cover assembly, rear lower. Go to **"T652 and T654 rear lower cover assembly removal" on page 328**.

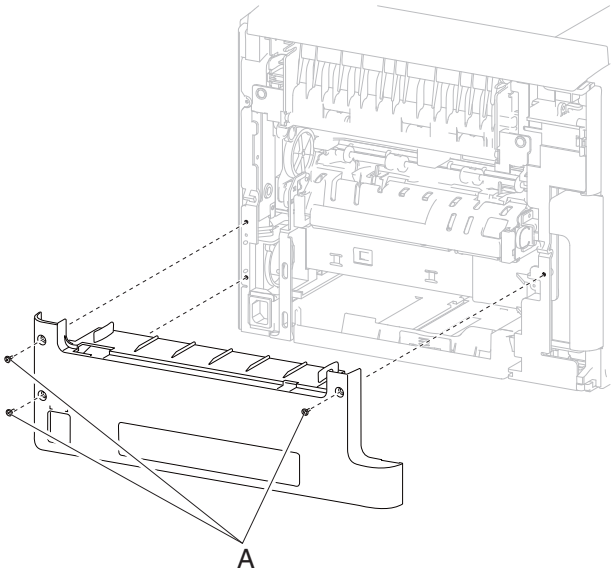
3 Release the two hooks (A) securing the connection bezel assembly, rear to the machine.




4 Remove the connection bezel assembly, rear.

## T650 rear lower cover assembly removal

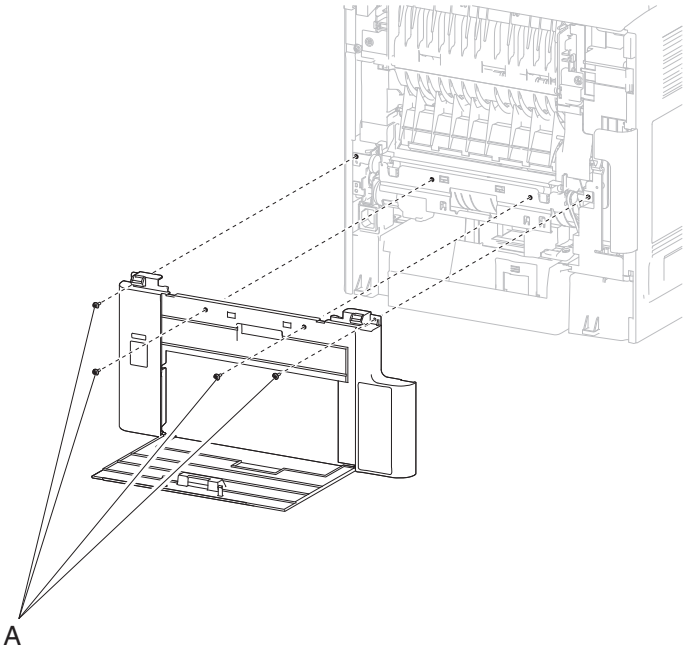
1. Remove the fuser access door assembly. Go to **"Fuser access door assembly removal" on page 332**.
2. Open the rear lower door.
3. Remove the three screws (A) securing the cover assembly, rear lower to the machine.




4. Remove the cover assembly, rear lower.

## T652 and T654 rear lower cover assembly removal

1. Open the rear lower door.
2. Remove the four screws (A) securing the cover assembly, rear lower to the machine.



3 Remove the cover assembly, rear lower.

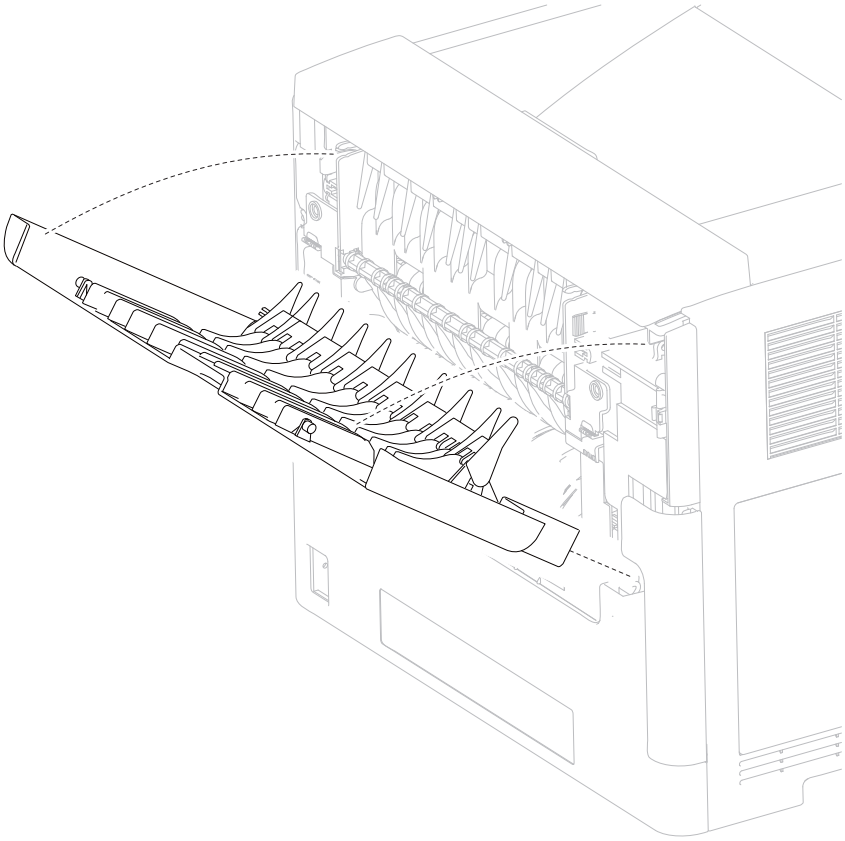
## Rear door assembly removal

1 Pull the door assembly, rear away from the machine.

2 Twist the door strap left or right until vertical, and pull the strap out of the slot.

3 Position the door assembly, rear at a 45° angle as shown in the picture.

4 Remove the door assembly, rear.



## T652, T654, and T656 rear duplex guide assembly removal

1 Remove the cover assembly, rear lower. Go to **"T652 and T654 rear lower cover assembly removal" on page 328**.

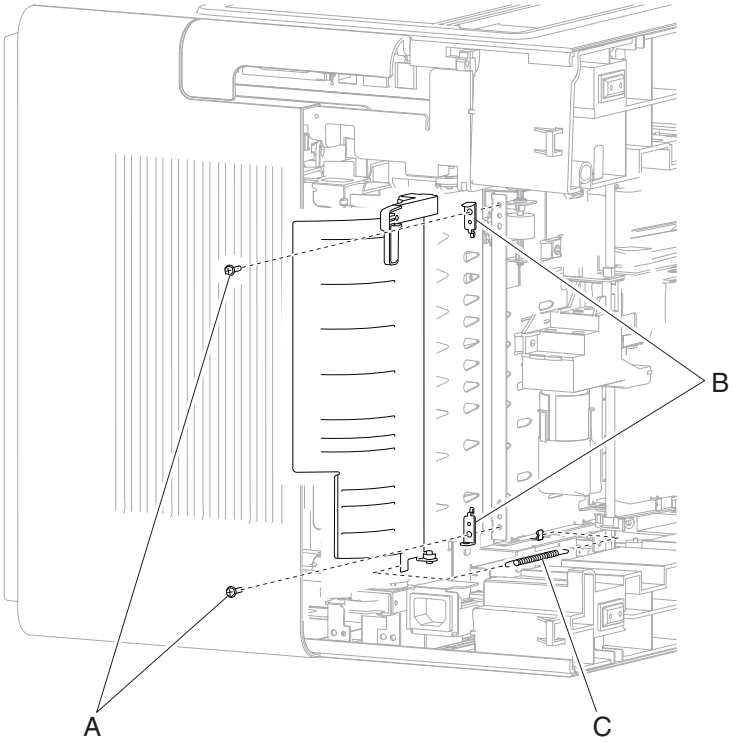
2 Remove the media tray.

3 Gently place the printer on its left or right side.

4 Remove the two screws (A) securing the two retainers (B) to the machine.

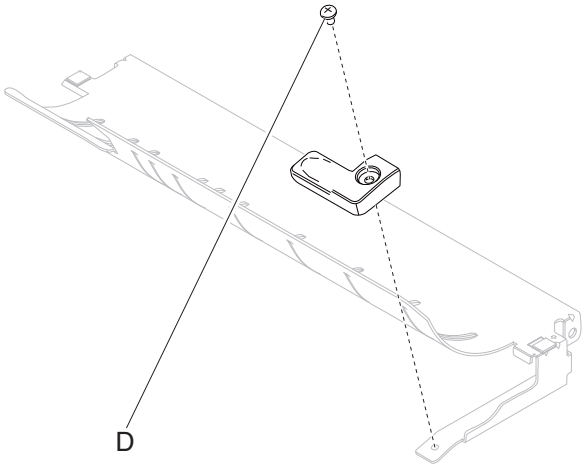
5 Remove the two retainers (B).

6 Detach the rear duplex guide spring (C).




7 Remove the duplex guide assembly, rear.

8 Remove the screw (D) securing the rear duplex guide handle to the assembly.



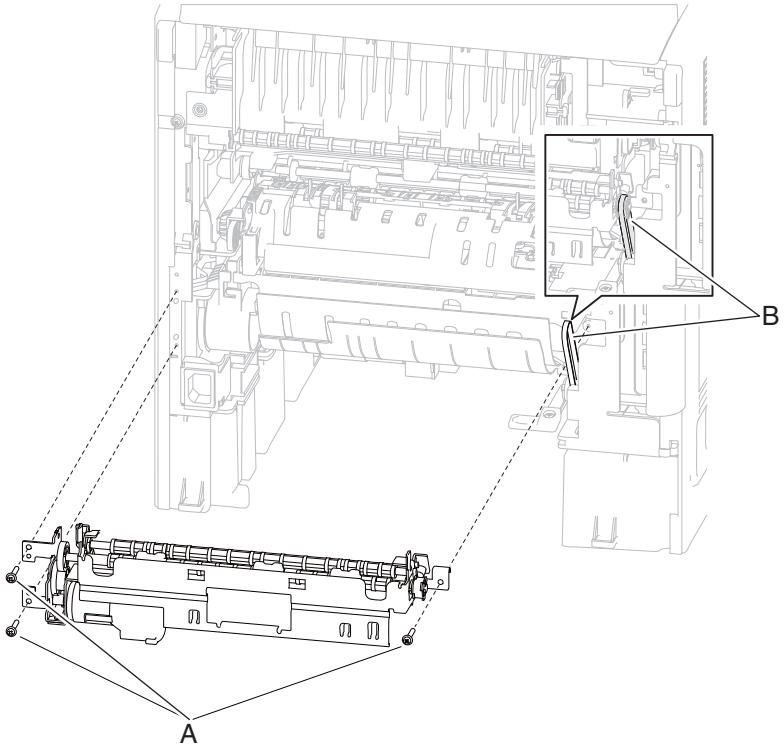

9 Remove the duplex guide assembly, rear.

## T652, T654, and T656 duplex drive motor assembly removal

1 Remove the fuser access door. See **“HVPS card assembly removal” on page 290**.

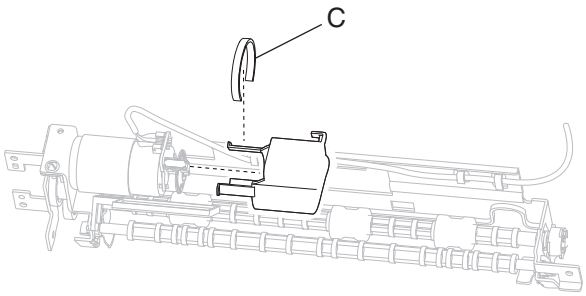
2 Remove the cover assembly, rear lower. See **“T652 and T654 rear lower cover assembly removal” on page 328**.

**3** Remove the three screws (A) securing the duplex drive motor assembly to the machine.




**Note:** When removing the duplex drive motor assembly, the upper duplex drive belt (B) will become detached.

**4** Remove the band (C) from the duplex drive motor assembly.




**5** Remove the cover from the duplex drive motor assembly.

**6** Disconnect the connection (D) to the duplex drive motor assembly.

**7** Remove the harness (E) from the duplex drive motor assembly.

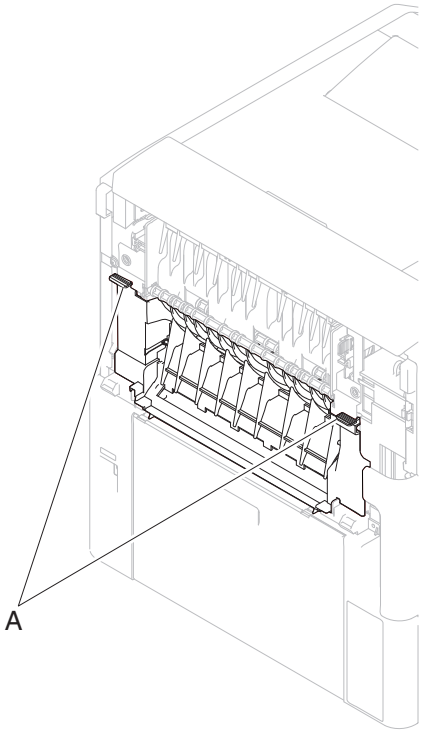
**Installation warning:** When replacing the duplex drive motor assembly, ensure that all harnesses are properly re-routed.

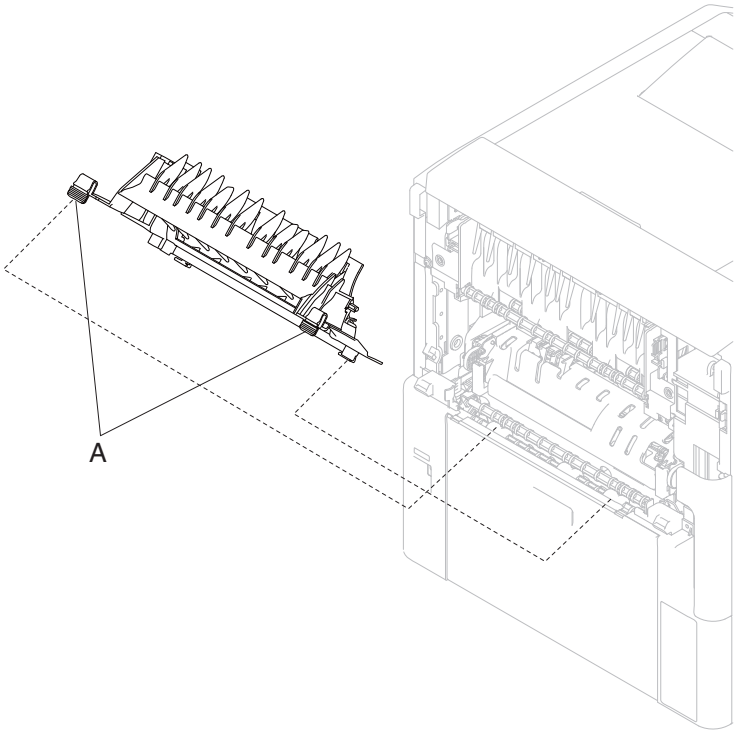
**Installation note:** Ensure the belt is replaced properly.

## Fuser access door assembly removal

1 Remove the door assembly, rear. Go to **"Rear door assembly removal" on page 329**.

2 Press the two tabs (A) on the fuser access door assembly, and detach it from the machine.




3 Swing the fuser access door assembly away from the machine.

4 Unsnap the fuser access door assembly from the machine.

5 Remove the fuser access door assembly.

## Fuser unit assembly removal

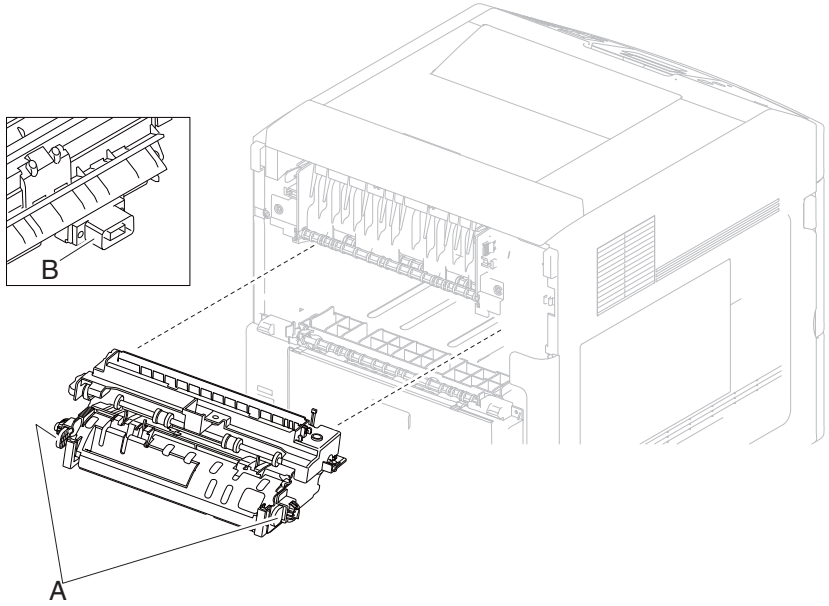
1 Remove the fuser wiper cover assembly. Go to **"Fuser wiper cover assembly removal" on page 334**.

2 Remove the door assembly, rear. Go to **"Rear door assembly removal" on page 329**.

3 Open the fuser access door.

4 Press the two buttons (A) on the fuser unit assembly to release it from the machine.

5 While pressing the two buttons (A), pull the fuser unit assembly from the machine.




**Installation warning:** When replacing the fuser unit assembly, ensure that the electrical connection (B) and the two buttons (A) are properly secured.

## Redrive assembly removal

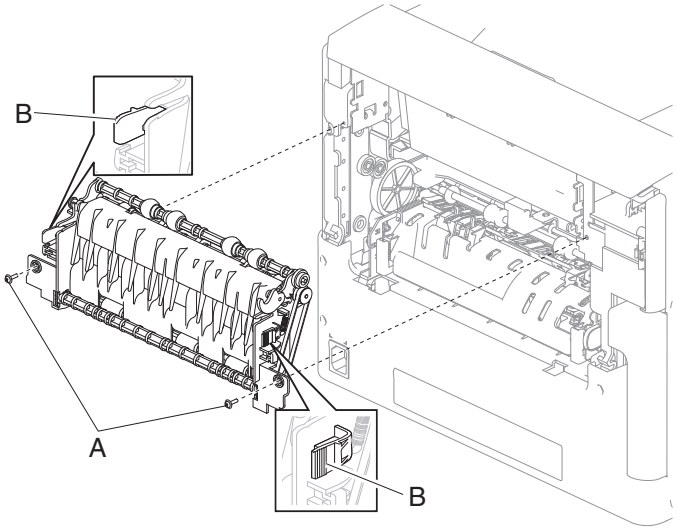
1 Remove the door assembly, rear. Go to **"Rear door assembly removal" on page 329**.

2 Open the fuser access door.

3 Remove the two screws (A) securing the redrive assembly to the machine.

4 Press the two tabs (B) to release the redrive assembly to the machine.

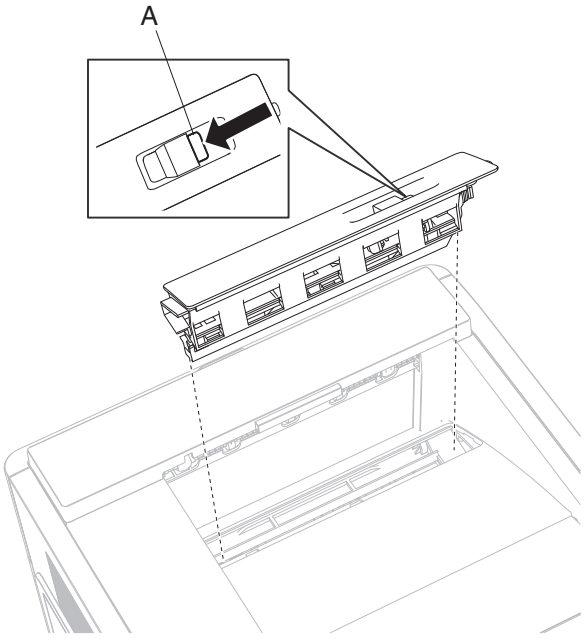
**5** While pressing the two tabs (B), pull the redrive assembly from the machine.




# Top side removals

## Fuser wiper cover assembly removal

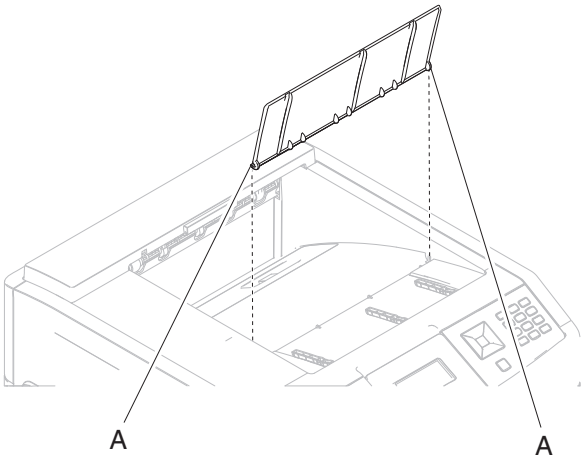
**1** Press the button (A) securing the fuser wiper cover assembly to the machine.




**2** Remove the fuser wiper cover assembly.

## Media support removal

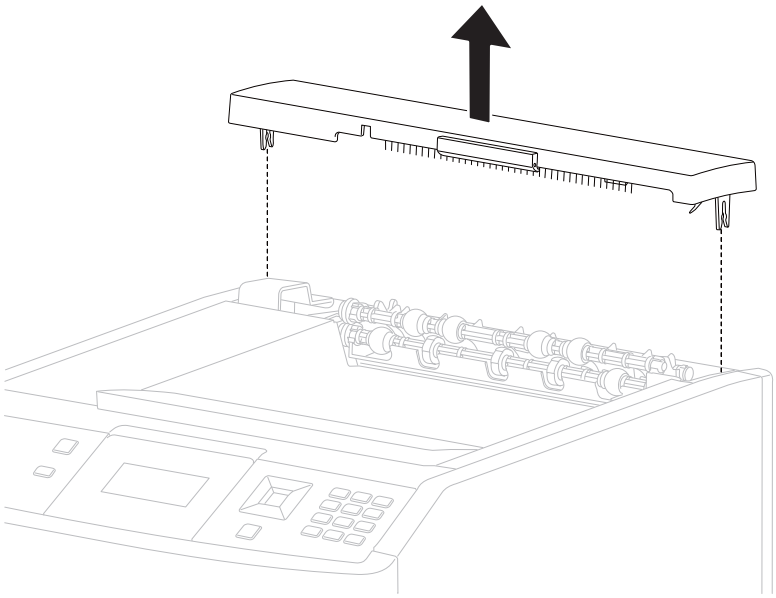
**1** Gently detach the two bosses (A) of the media support from the machine.




**2** Remove the media support.

## Output cover assembly removal

**1** Unsnap the output cover assembly from the machine.

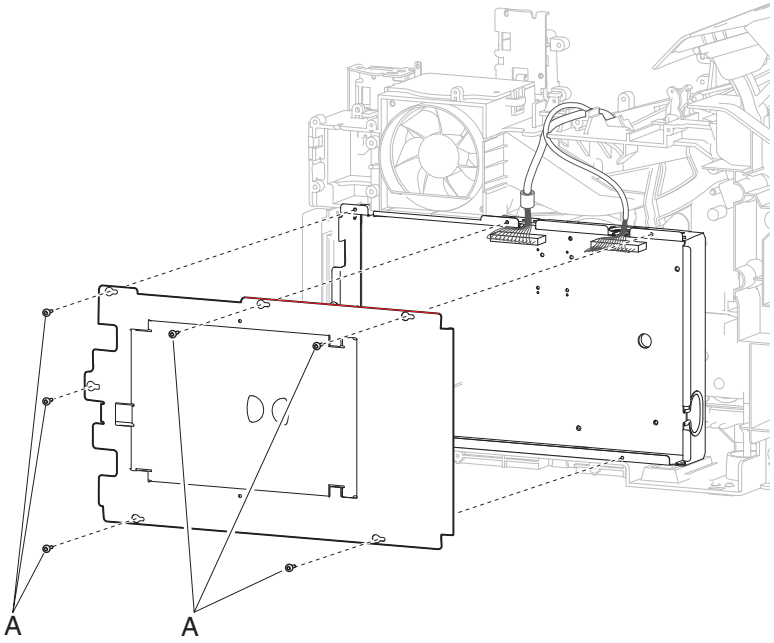


**2** Remove the output cover assembly.

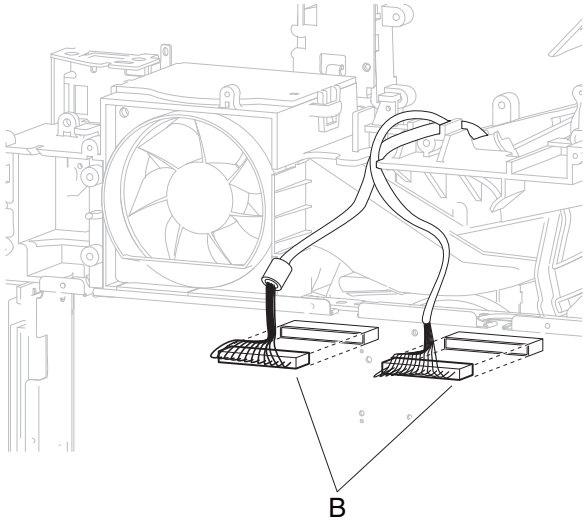
# T650 printhead assembly removal

**Note:** When replacing the printhead assembly, ensure that the printhead is properly calibrated, or print quality issues will occur. Go to **"Alignment assembly adjustment" on page 270**.

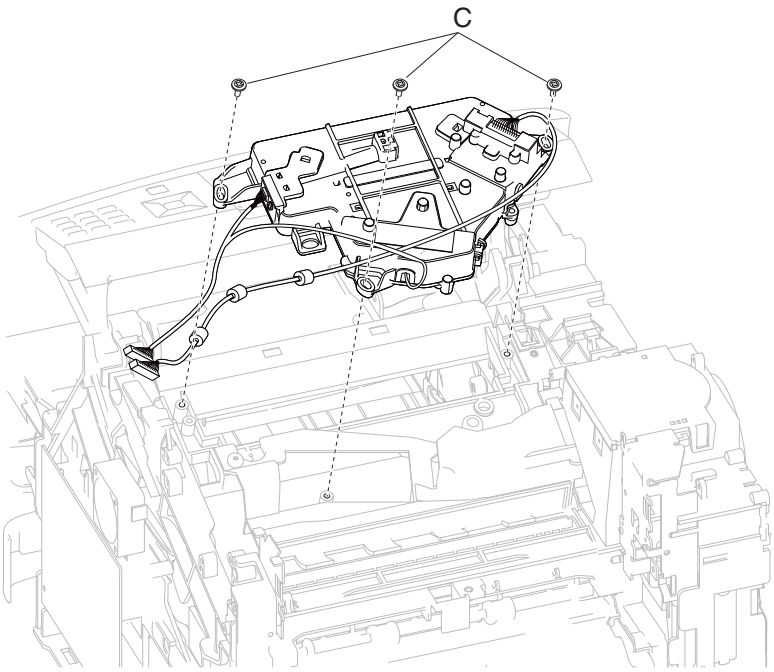
1. Remove the laser cover. Go to **"Laser cover removal" on page 291**.
2. Remove the six screws (A) securing the metal cover to the machine.




3. Remove the metal cover.
4. Disconnect the connections (B) from the printhead assembly.



**5** Remove the three screws (C) securing the printhead assembly to the machine.



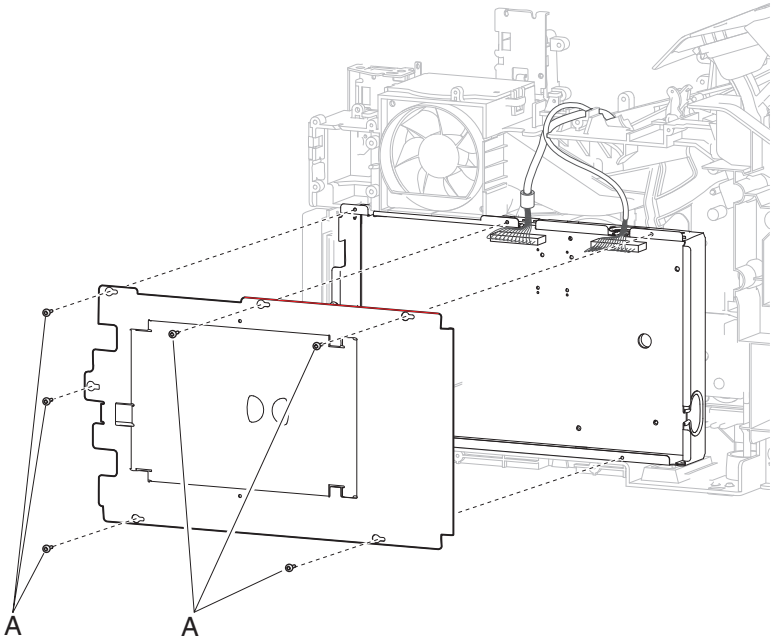

**6** Remove the printhead assembly.

**Installation warning:** When replacing the printhead assembly, ensure that the printhead is properly calibrated, or print quality issues will occur.

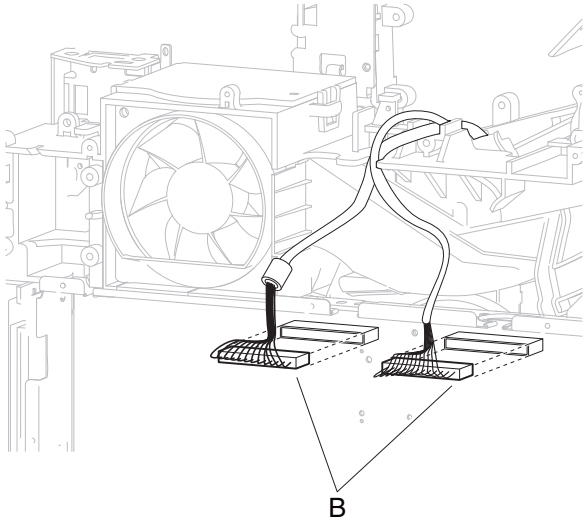
# T652, T654, and T656 printhead assembly removal

**Warning—Potential Damage:** When replacing the printhead assembly, ensure that the printhead skew is properly adjusted, or print quality issues will occur.

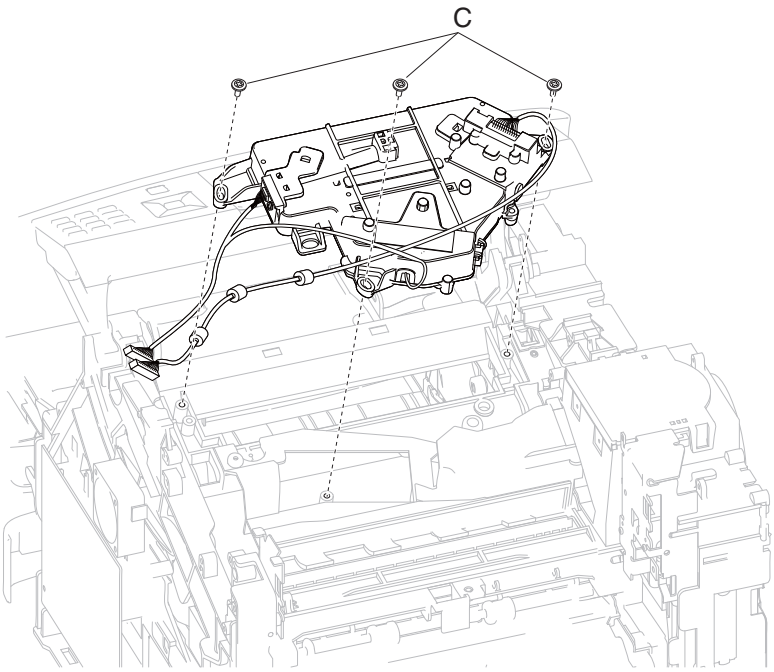
1. Remove the laser cover. Go to **"Laser cover removal" on page 291**.
2. Remove the six screws (A) securing the metal cover to the machine.




3. Remove the metal cover.
4. Disconnect the connections (B) from the printhead assembly.



**5** Remove the four screws (C) securing the printhead assembly to the machine.



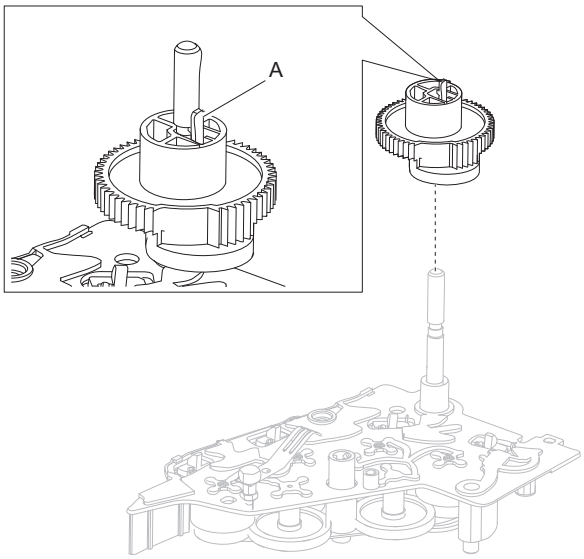

**6** Remove the printhead assembly.

**Installation warning:** When replacing the printhead assembly, ensure that the printhead skew is properly adjusted, or print quality issues will occur.

# MPF cam gear removal

**1** Remove the alignment assembly. Go to **"Output cover assembly removal" on page 335**.

**2** Release the hook (A) securing the gear to the unit.

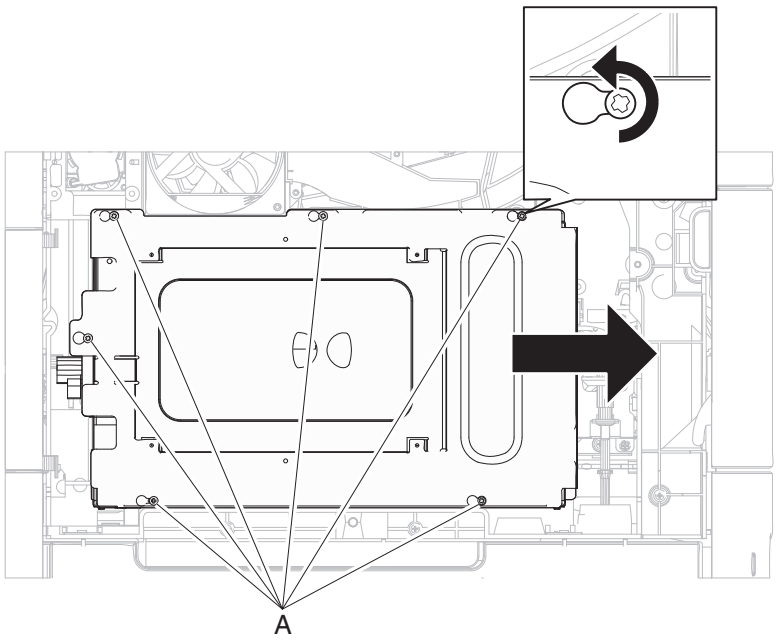



**3** Remove the MPF cam gear.

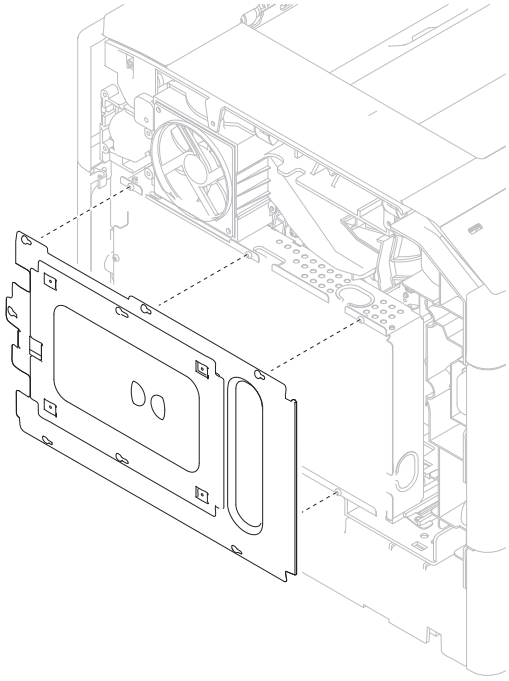
# T652, T654, and T656 redrive motor assembly removal

1 Remove the laser cover. Go to **“Laser cover removal” on page 291**.

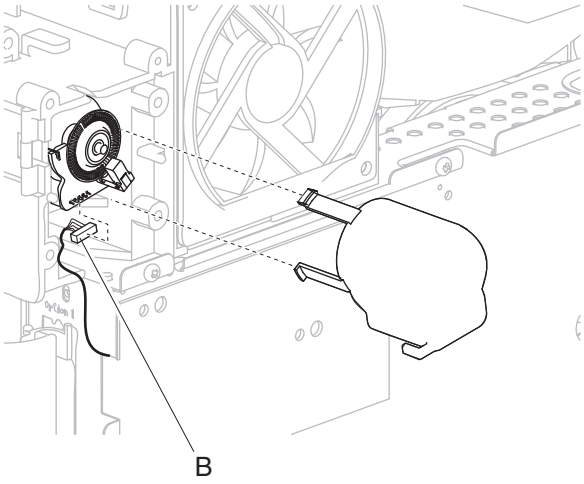
2 Remove the six screws (A) securing the metal cover to the machine.




3 Remove the metal cover.

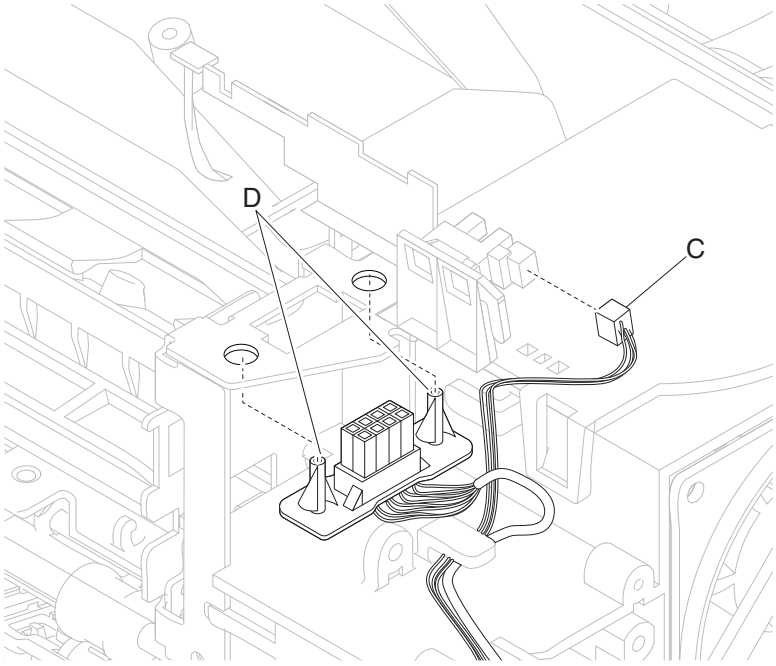


**4** Disconnect the connection (B) from the redrive motor assembly.



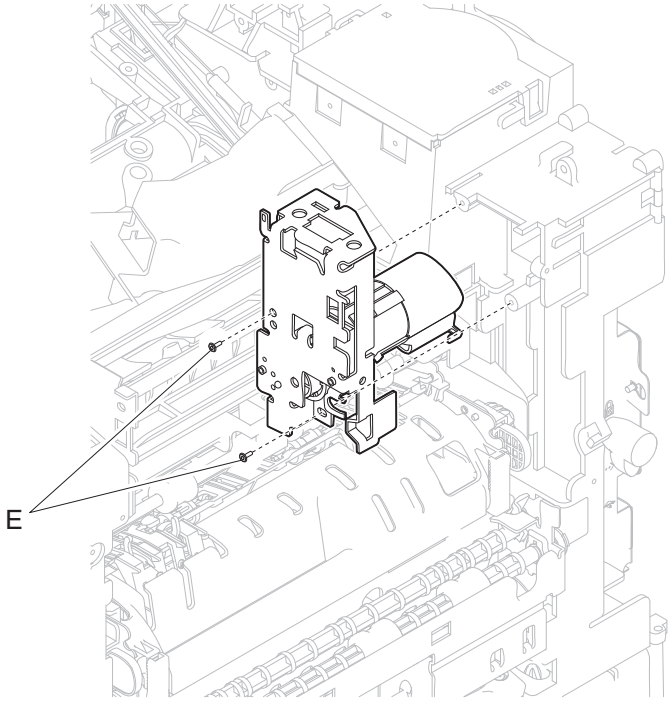

**5** Disconnect the connection (C) from the sensor (standard media bin full).

**6** Release the hooks (D) securing the output option interface cable assembly to the machine.




**7** Detach the output option cable assembly.

8 Remove the two screws (E) securing the redrive motor assembly to the machine.

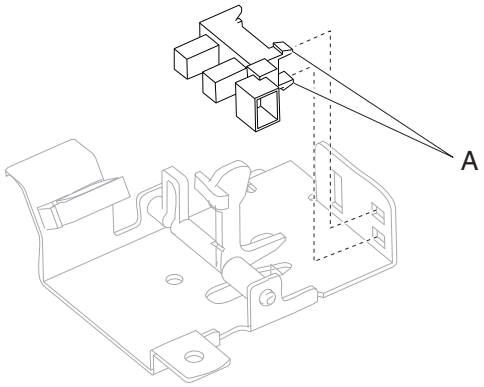



9 Remove the redrive motor assembly.

# Sensor (duplex input) removal (T652, T654, T656)

1 Remove the duplex input sensor assembly. Go to **"T652, T654, and T656 duplex input sensor assembly removal" on page 319**.

2 Release the hooks (A) securing the senor (duplex media path) to the bracket.

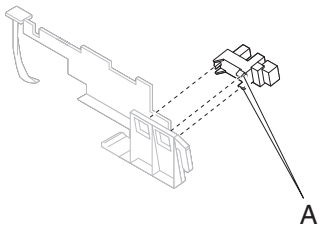



3 Remove the sensor (duplex input).

# Sensor (standard bin exit) removal

1 Remove standard bin actuator assembly.

2 Release the hooks (A) securing the sensor (standard bin exit) to the assembly.




3 Remove the sensor (standard bin exit).

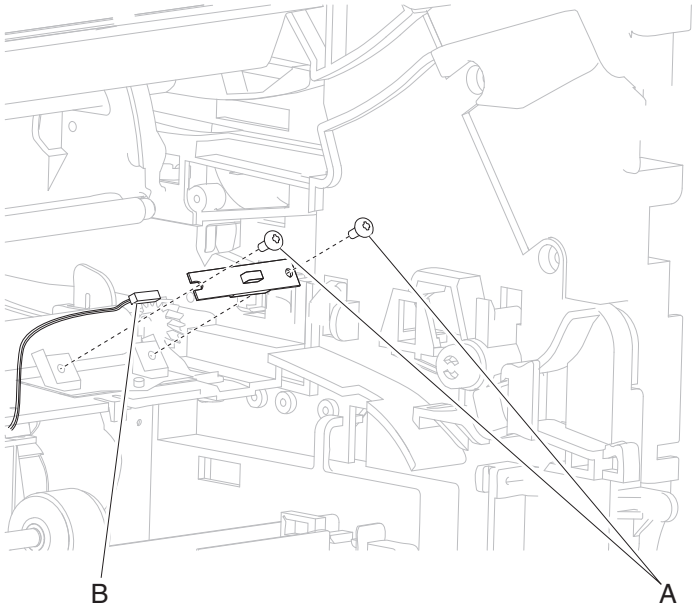
# Sensor (toner density) removal

1 Remove the sensor shield assembly. Go to **“Sensor shield assembly removal ” on page 315**.

2 Remove the two screws (A) securing the sensor (toner density) to the machine.

3 Remove the sensor (toner density).

4 Disconnect the connection (B) to the sensor (toner density).

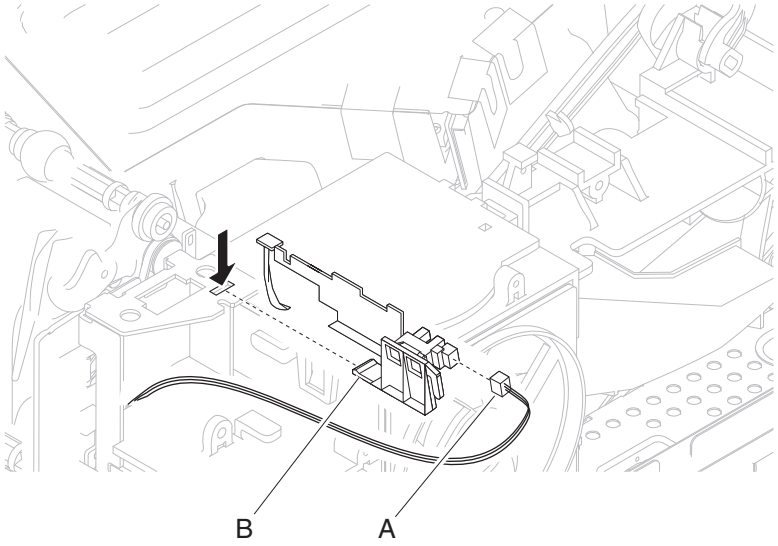



# Standard bin actuator assembly removal

1 Remove the laser cover. Go to **“Laser cover removal” on page 291**.

2 Disconnect the connection (A) from the standard bin actuator assembly.

3 Press the tab (B) to release the standard bin actuator assembly from the machine.



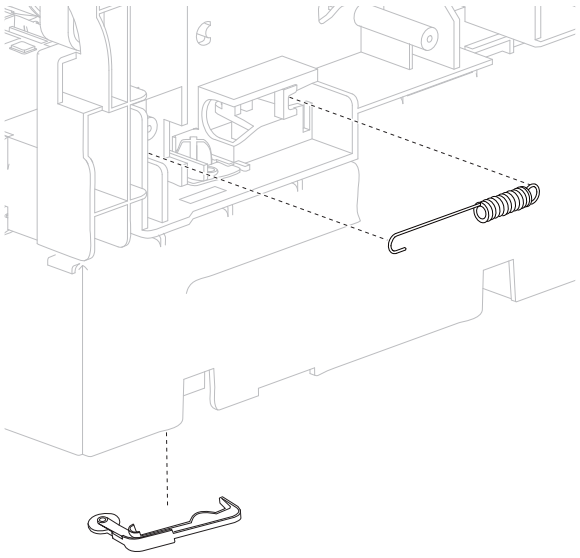

4 Remove the standard bin actuator assembly.

# Tray roller catch assembly removal

1 Remove the media tray.

2 Remove the HVPS card assembly. Go to **"HVPS card assembly removal" on page 290**.

3 Release the spring from the machine.



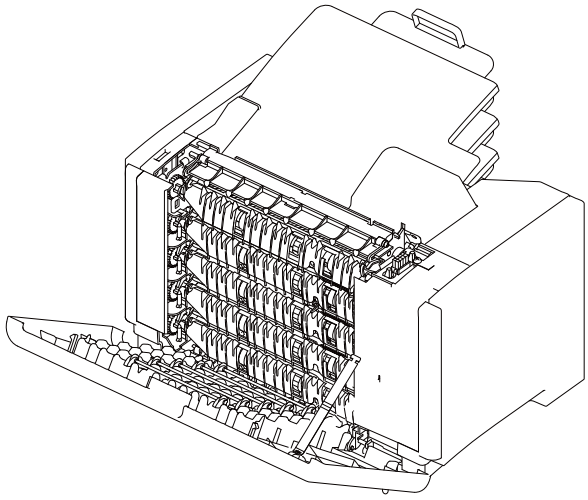
**Note:** The tray roller catch assembly should be removed from the media tray cabinet.

4 Remove the tray roller catch assembly from the machine.

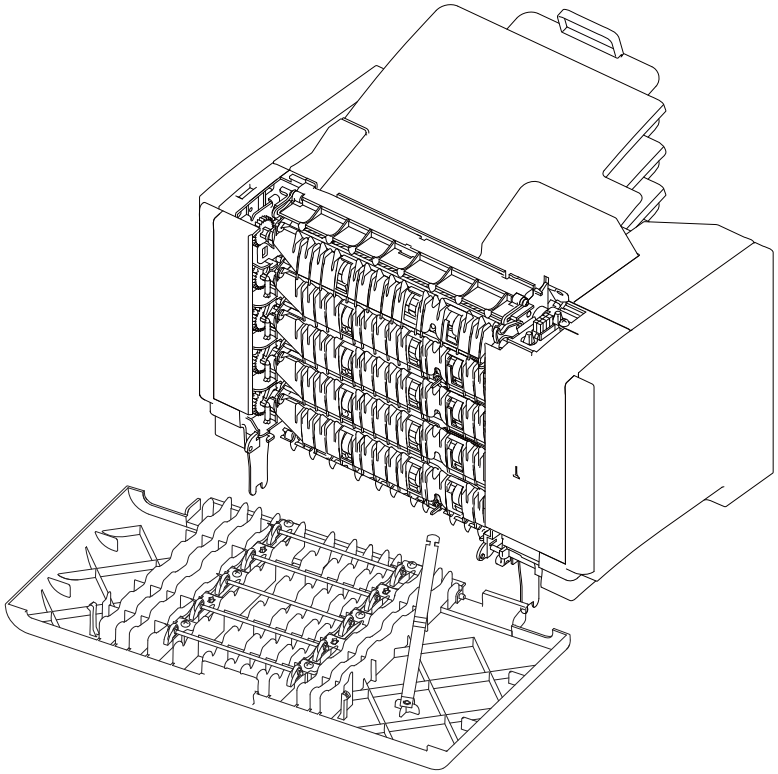
# 5-bin mailbox removals

## 5-bin mailbox rear door assembly removal

**1** Open the rear door assembly and twist the rear door strap vertical and remove the strap.



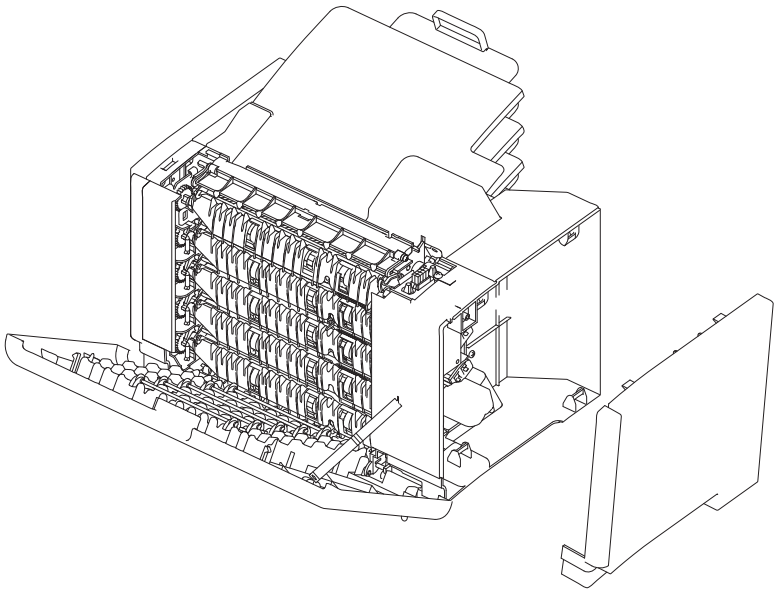
**2** Pry the rear door hinges out of the bottom hinges and remove.



## 5-bin mailbox left outer cover removal

1 Open the rear door assembly.

2 Grasp the upper rear corner of the left outer cover and pull it off the 5-bin mailbox assembly.

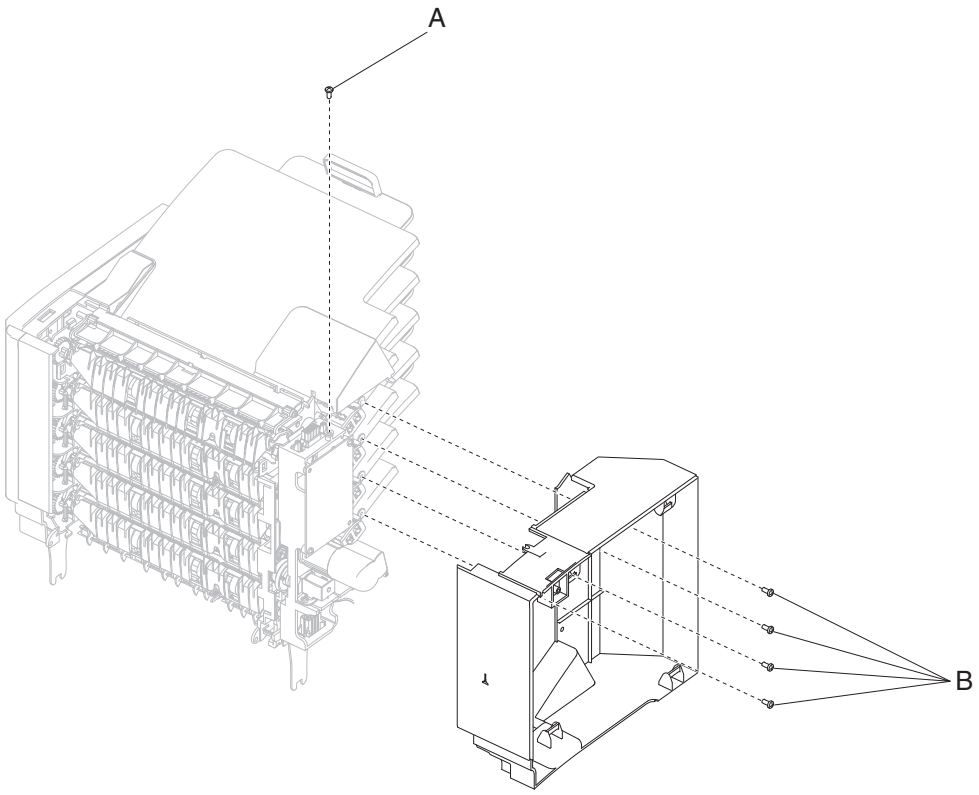


## 5-bin mailbox left inner cover removal

1 Remove the 5-bin mailbox rear door assembly. Go to **“5-bin mailbox rear door assembly removal” on page 345**.

2 Remove the 5-bin mailbox left outer cover. Go to **“5-bin mailbox left outer cover removal” on page 346**.

**3** Remove the single screw (A) on the top and the four screws (B) on the inside of the left inner cover.

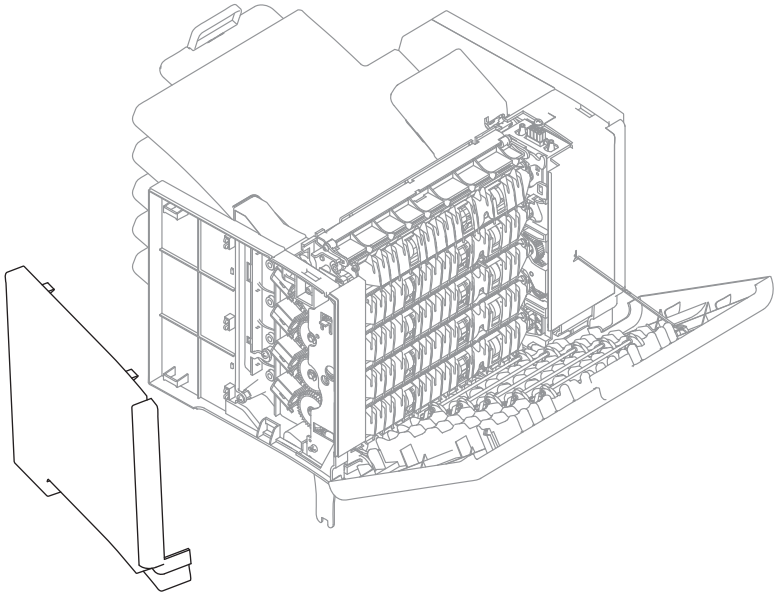



**4** Remove the 5-bin mailbox left inner cover.

## 5-bin mailbox right outer cover removal

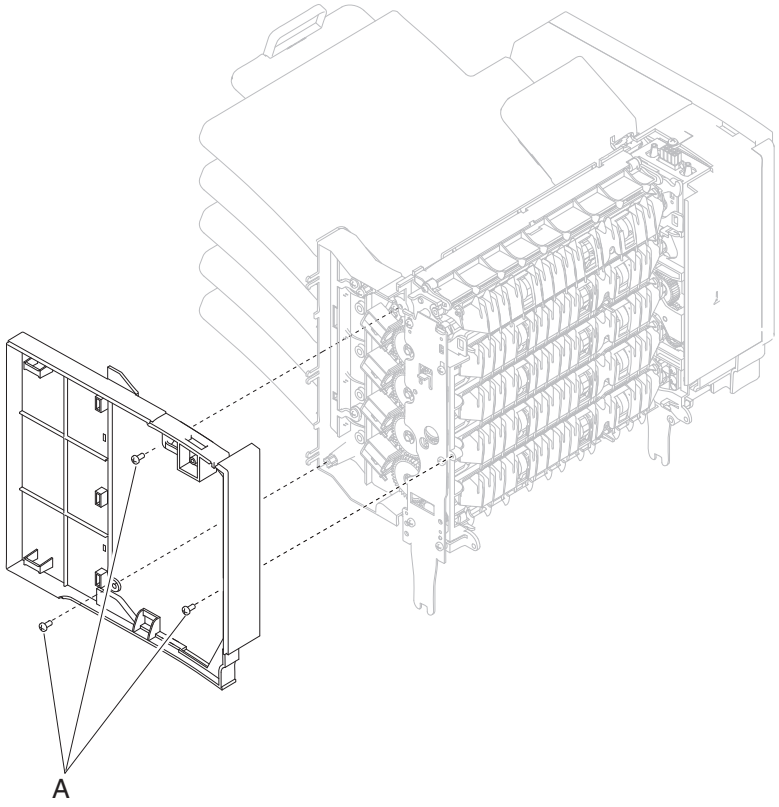
**1** Open the rear door assembly.

**2** Grasp the upper rear corner of the right outer cover and pull it off the 5-bin mailbox assembly.



# 5-bin mailbox right inner cover removal

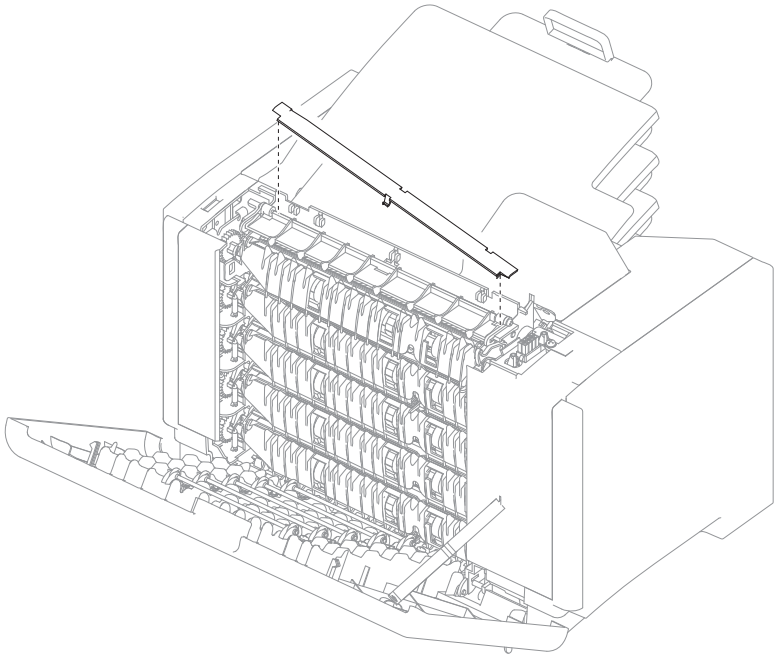
1. Remove the 5-bin mailbox rear door assembly. Go to **“5-bin mailbox rear door assembly removal” on page 345**.
2. Remove the 5-bin mailbox right outer cover. Go to **“5-bin mailbox right outer cover removal” on page 347**.
3. Remove the three screws (A) securing the right inner cover to the 5-bin mailbox assembly.



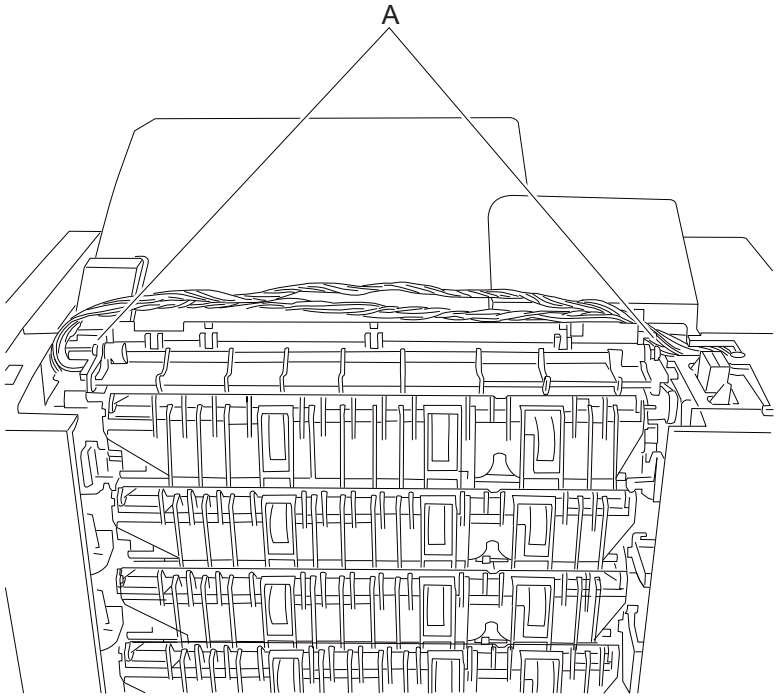

4. Remove the 5-bin mailbox right inner cover.

## 5-bin mailbox top cover removal

1. Open the rear door assembly.
2. Remove the cable cover panel by lifting up on the right side and pull to the right and out.



3. Remove the two screws (A) on each side of the top cover.

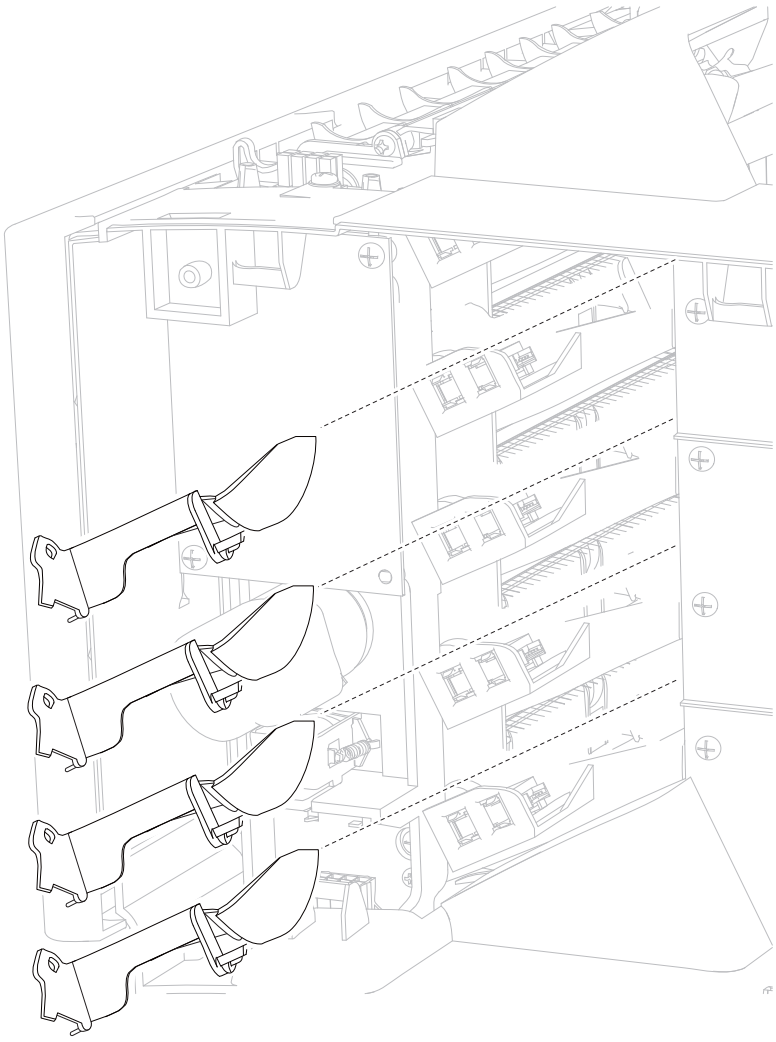



4. Pull the left side up first and carefully unroute the cables from the channels and then remove the top cover.

## 5-bin mailbox media bin full actuator removal

1 Remove the 5-bin mailbox left inner cover. Go to **"5-bin mailbox left inner cover removal" on page 346**.

2 Grasp the media bin full actuator and pull the pins from the bosses.

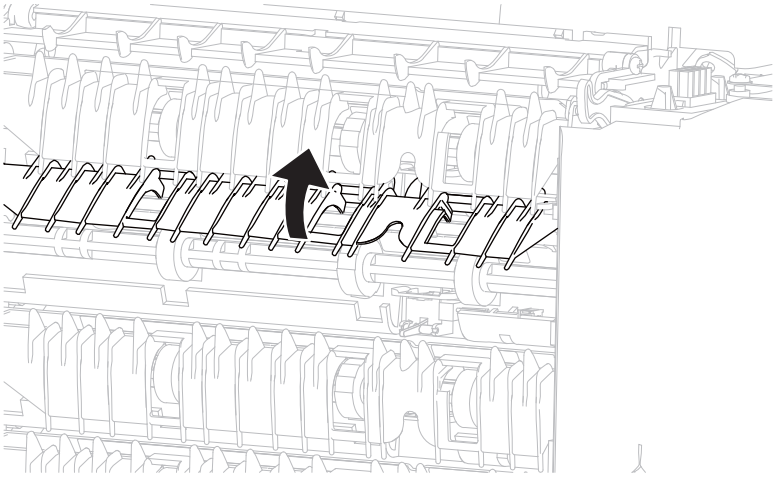


## Sensor (5-bin mailbox pass through) removal

1 Remove the 5-bin mailbox left outer cover. Go to **"5-bin mailbox left outer cover removal" on page 346**.

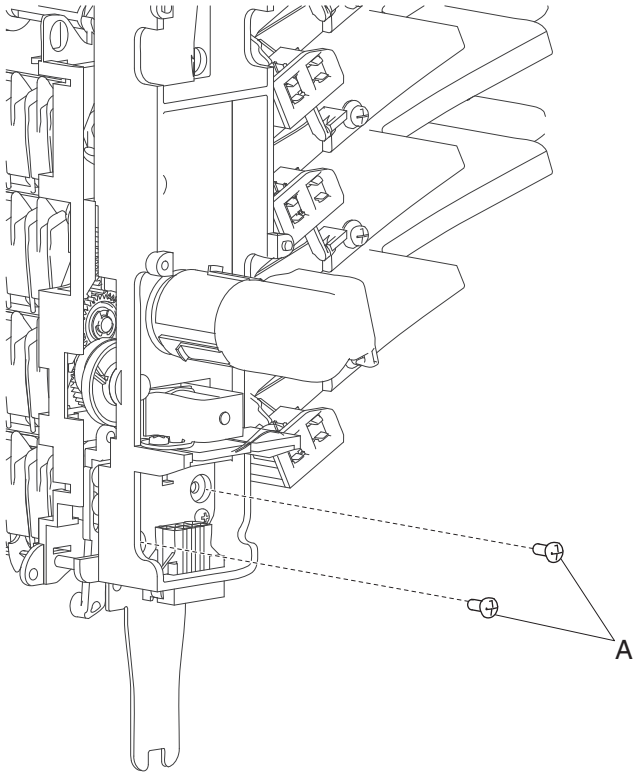
2 If the lower pass through sensor needs to be removed, first remove the 5-bin mailbox rear door assembly. Go to **"5-bin mailbox rear door assembly removal" on page 345**.

**3** Lift up the deflector gate above the sensor (pass through) and using a flat-blade screwdriver, release the tabs securing the sensor.



**4** Disconnect the appropriate harness from the controller card (J11) for the upper sensor (pass through) and (J5) for the lower sensor (pass through).

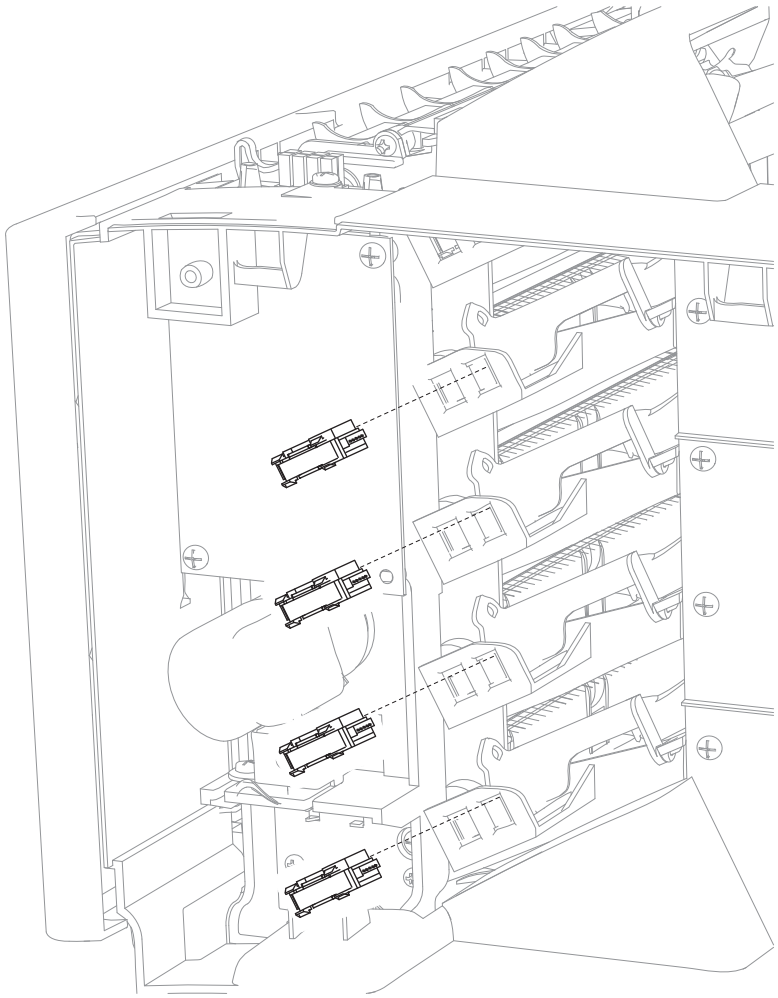
**Note:** The use of a spring hook facilitates the unrouting of the cables. Remove the two screws (A) and lift the left frame assembly to ease removal of the lower sensor (pass through) harness.



## Sensor (5-bin mailbox media bin empty) removal

1 Remove the 5-bin mailbox left outer cover. Go to **"5-bin mailbox left outer cover removal" on page 346**.

2 Release the connecting tabs on the sensor (media bin empty) and remove from its bracket.



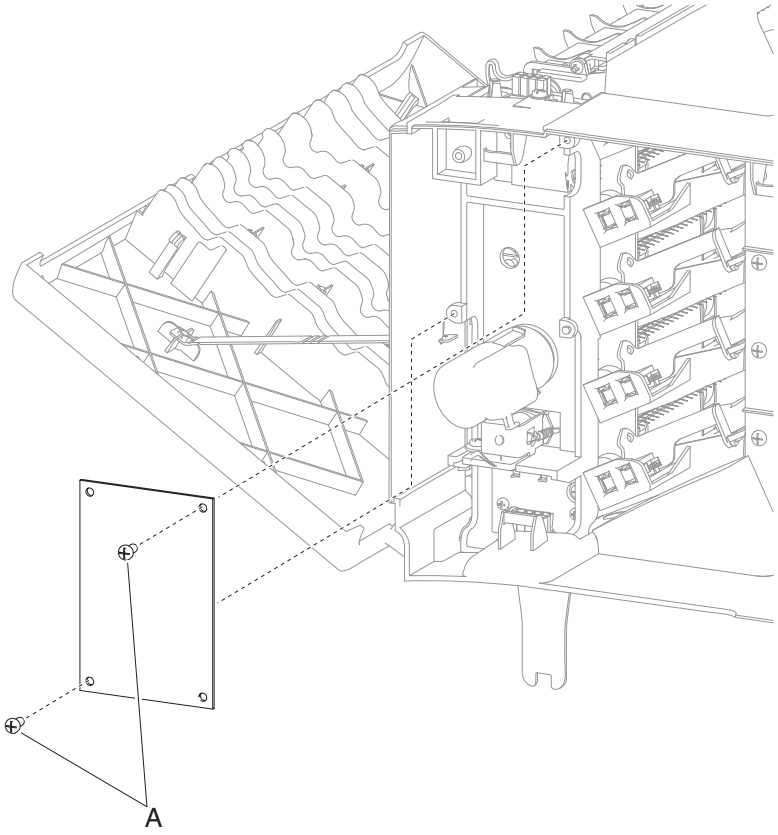
3 Disconnect the harness from the sensor (media bin empty).

## 5-bin mailbox controller card assembly removal

1 Remove the 5-bin mailbox left outer cover. Go to **"5-bin mailbox left outer cover removal" on page 346**.

2 Disconnect all the harnesses from the 5-bin mailbox controller card assembly.

3 Remove the two screws (A) securing the controller card assembly to the 5-bin mailbox assembly.



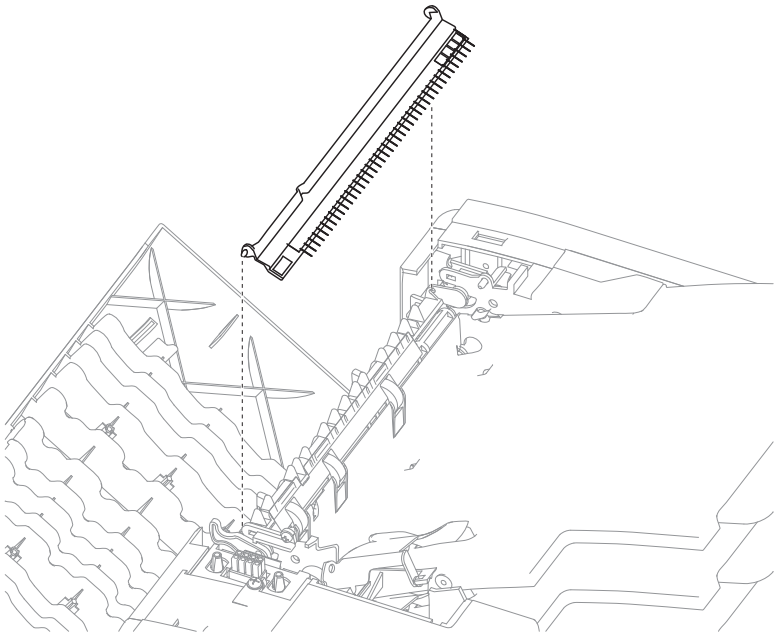

4 Remove the 5-bin mailbox controller card assembly.

## 5-bin mailbox static brush mylar assembly removal

1 Remove the 5-bin mailbox top cover. Go to **“5-bin mailbox top cover removal” on page 349**.

2 Carefully flex the 5-bin mailbox static brush mylar assembly to detach the hinges on each side.

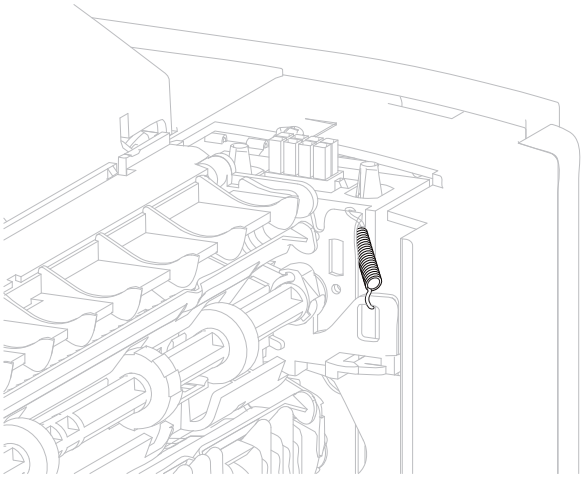
3 Remove the 5-bin mailbox static brush mylar assembly.



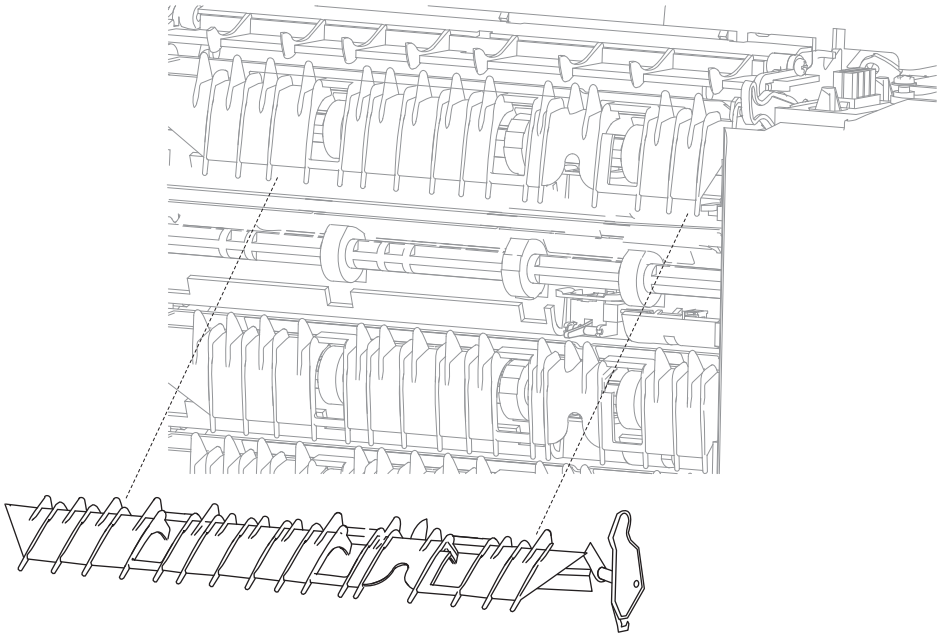
## 5-bin mailbox media bin fifth deflector removal

1 Remove the rear door assembly. Go to **"5-bin mailbox rear door assembly removal" on page 345**.

2 With a spring hook, carefully remove the upper deflector gate spring and for ease of reassembly, temporarily hook the spring to the upper frame tab.



3 Unsnap each side of the deflector gate and remove.

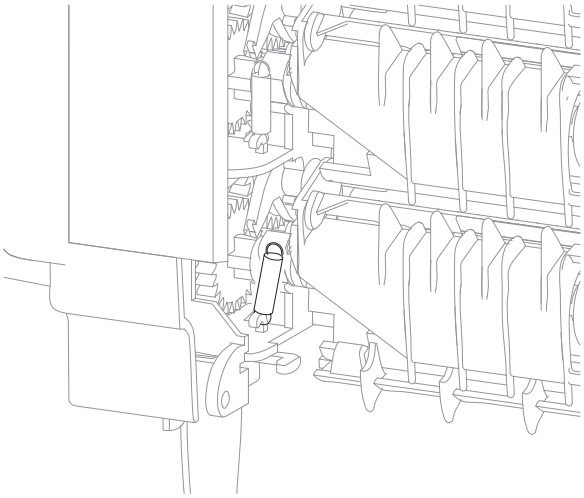


**Installation note:** The static brush mylar assembly is attached to the media bin fifth deflector. Do not forget to reinstall it on the new deflector.

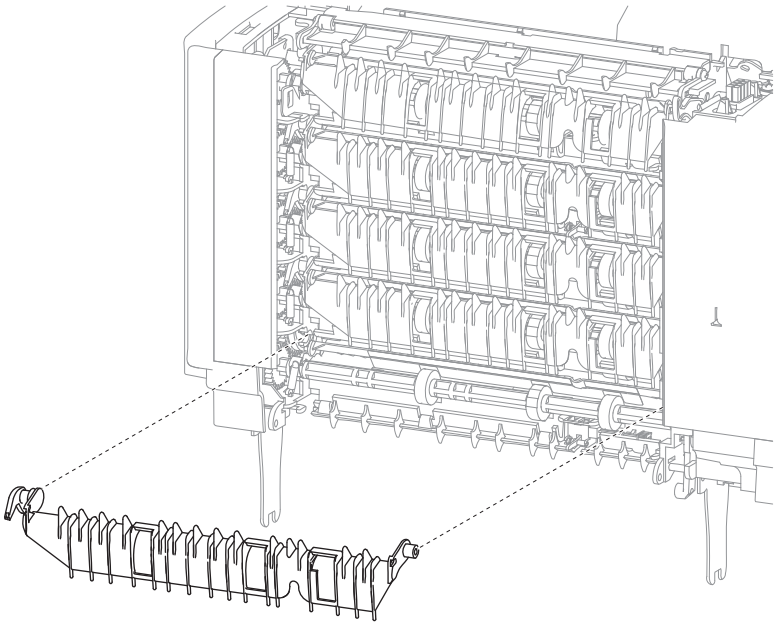
## 5-bin mailbox media bin first through fourth deflector removal

1 Remove the rear door assembly. Go to **"5-bin mailbox rear door assembly removal" on page 345**.

2 Using a springhook, remove the deflector spring from the deflector.



3 Unsnap each side of the deflector and remove.



**Installation note:** The static brush mylar assembly is attached to the media bin fifth deflector. Do not forget to reinstall it on the new deflector.

## 5-bin mailbox media bin extension assembly removal

1 Fully extend the media bin extension.

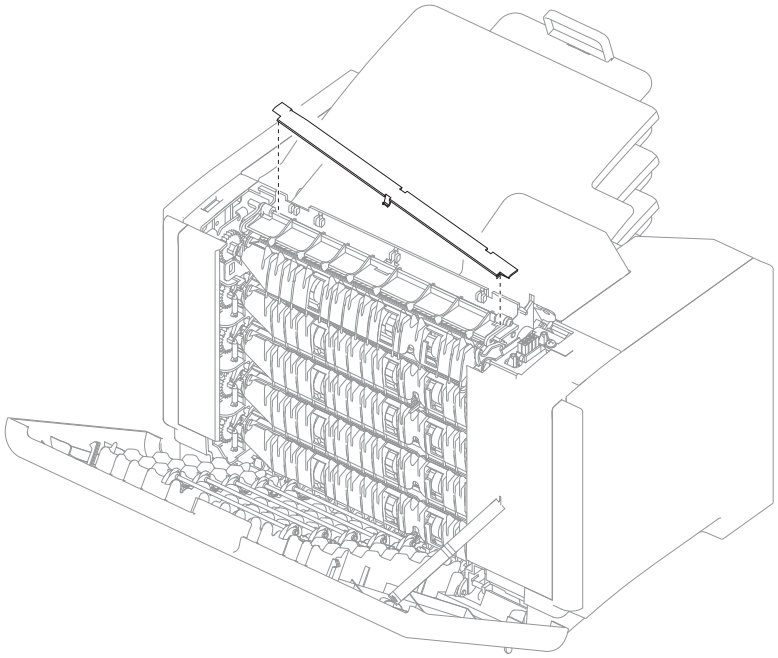
2 Release the two tabs on the underside of the extension and pull out the rest of the way.

## 5-bin mailbox deflector gate solenoid removal

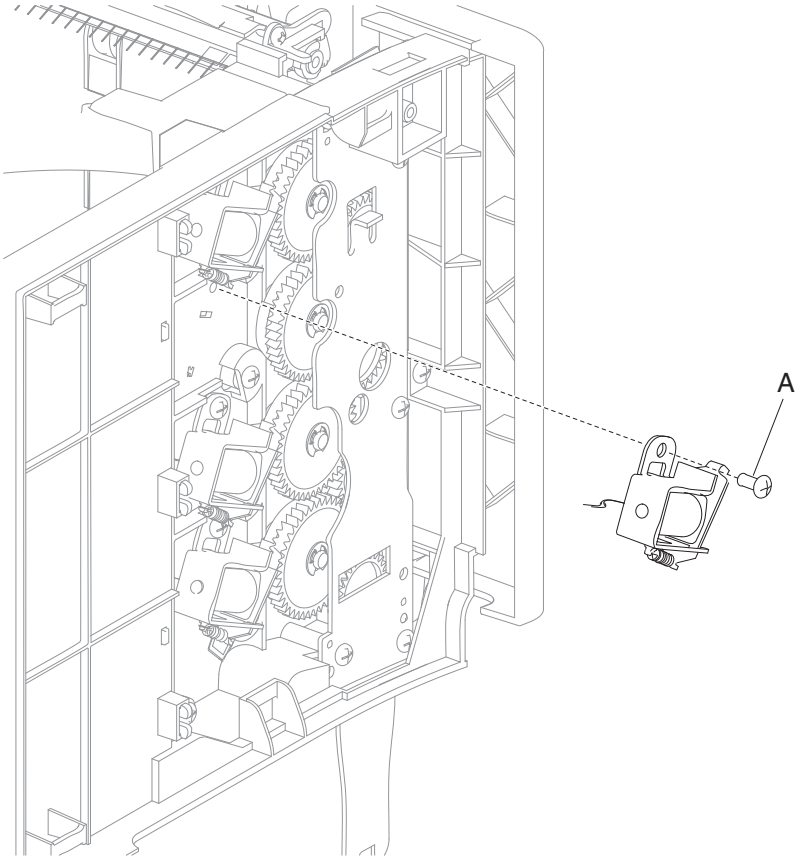
1 Remove the 5-bin mailbox right outer cover. Go to **"5-bin mailbox right outer cover removal" on page 347**.

2 Remove the 5-bin mailbox left outer cover. Go to **"5-bin mailbox left outer cover removal" on page 346**.

**3** Remove the top cable cover panel.



**4** Remove the screw (A) securing the appropriate 5-bin mailbox deflector gate solenoid.



5 Remove and unroute the cable to the deflector gate solenoid.

6 Disconnect the proper deflector gate solenoid harness from the controller card.

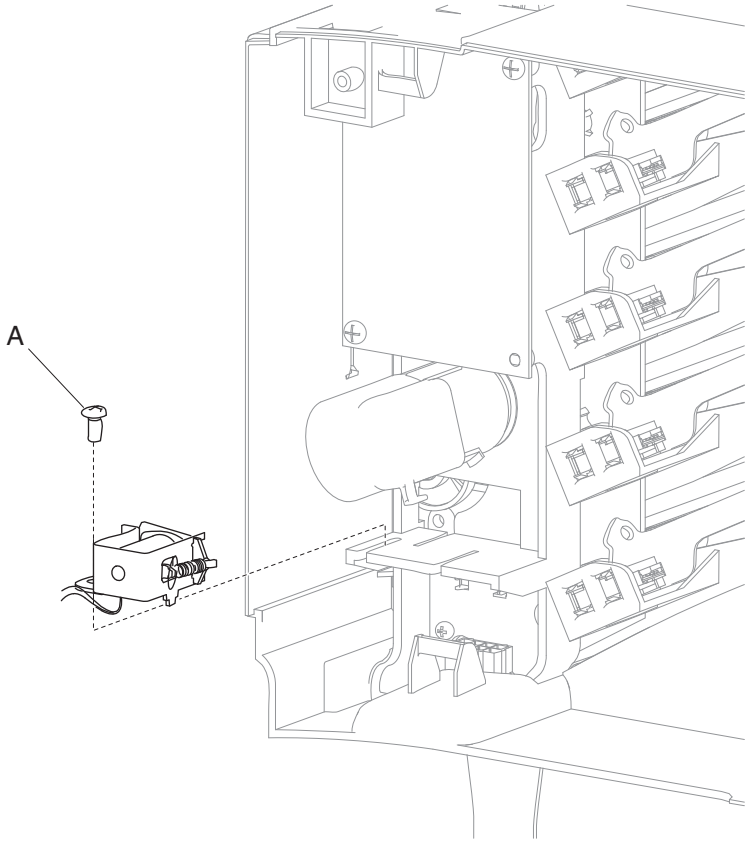
**Installation note:** To ease the cable unrouting, cut the appropriate cable.

## 5-bin mailbox transport solenoid removal

1 Remove the 5-bin mailbox left outer cover. Go to **"5-bin mailbox left outer cover removal" on page 346**.

2 Disconnect J15 at the controller card.

3 Remove the screw (A) securing the 5-bin mailbox transport solenoid to the left frame.



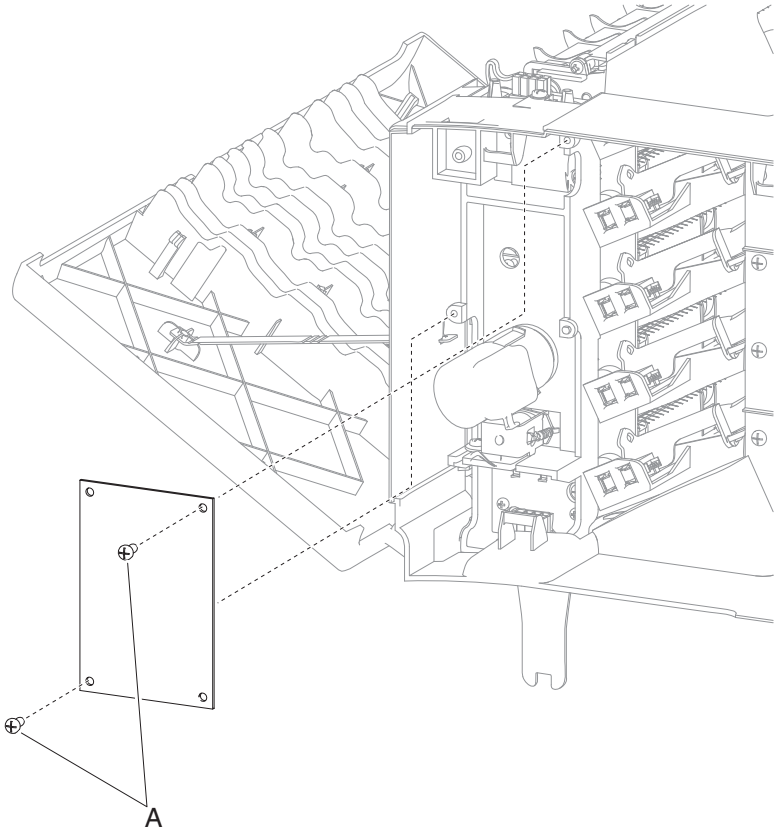

4 Remove the 5-bin mailbox transport solenoid.

## Sensor (5-bin mailbox sensor deflector gate HP) removal

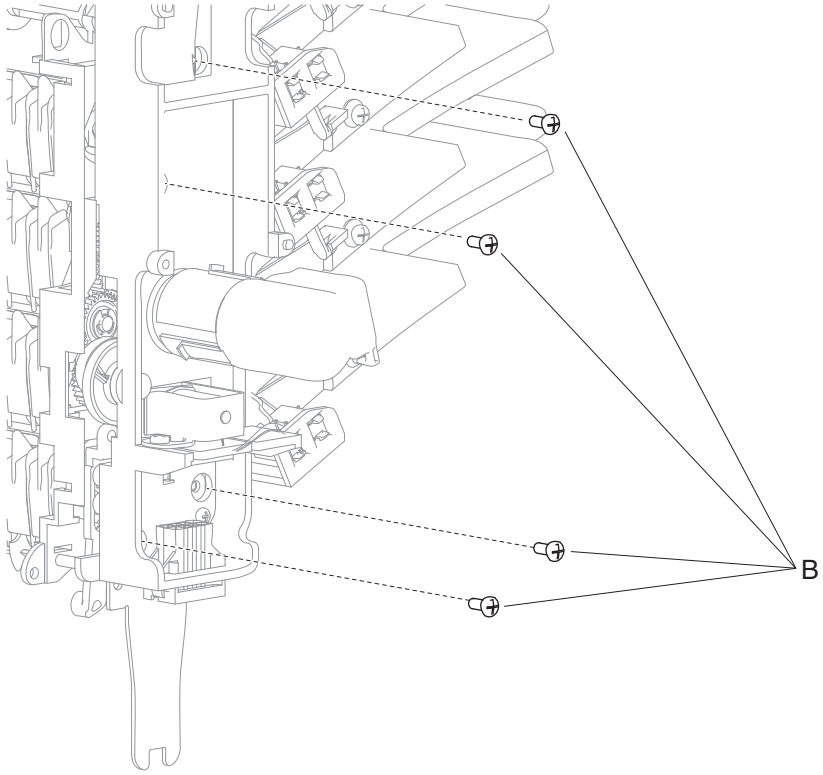
1 Remove the 5-bin left inner cover. Go to **"5-bin mailbox left inner cover removal" on page 346**.

2 Remove the following harnesses from the controller card: J14 A and B, J2, and J11.

**3** Remove the two screws (A) securing the controller card assembly and move the card to the side.



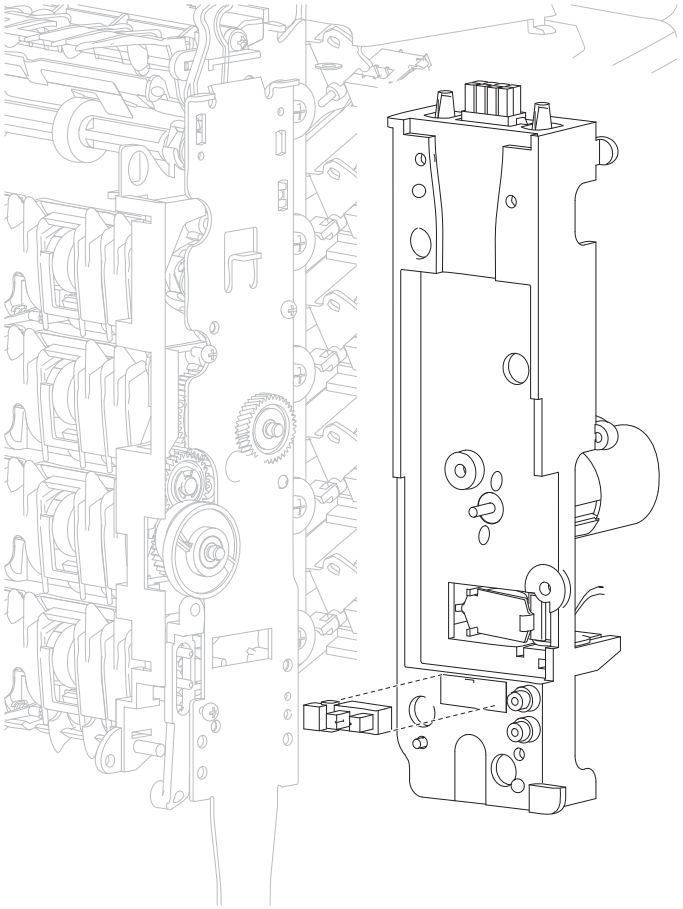

**4** Remove the four screws (B) securing the left frame assembly to the 5-bin mailbox assembly.



**5** Move the left frame assembly out of the way.

**6** Remove the 5-bin mailbox sensor (deflector gate HP) by pressing the tabs.

**7** Disconnect the harness from the 5-bin mailbox sensor (deflector gate HP).

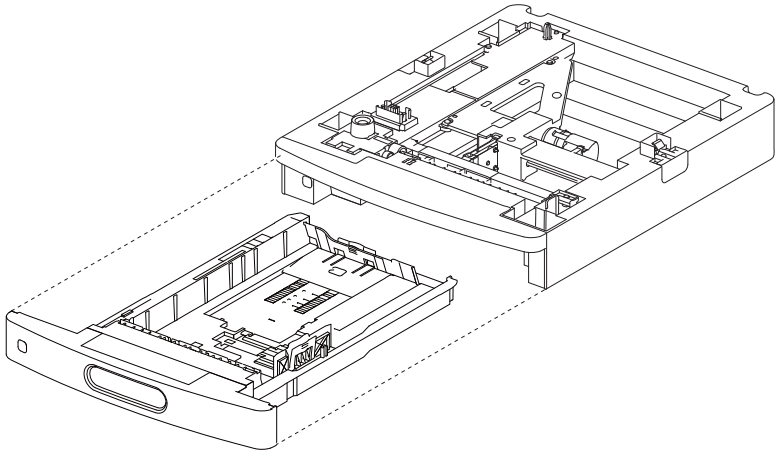


# 250-sheet option tray removals

## 250-sheet media tray assembly removal

**Note:** This removal procedure can be applied to 250-sheet option drawer assembly.

1. Find the 250-sheet media tray assembly in the 250-sheet option drawer assembly.
2. Remove the 250-sheet media tray assembly from the 250-sheet option drawer assembly.

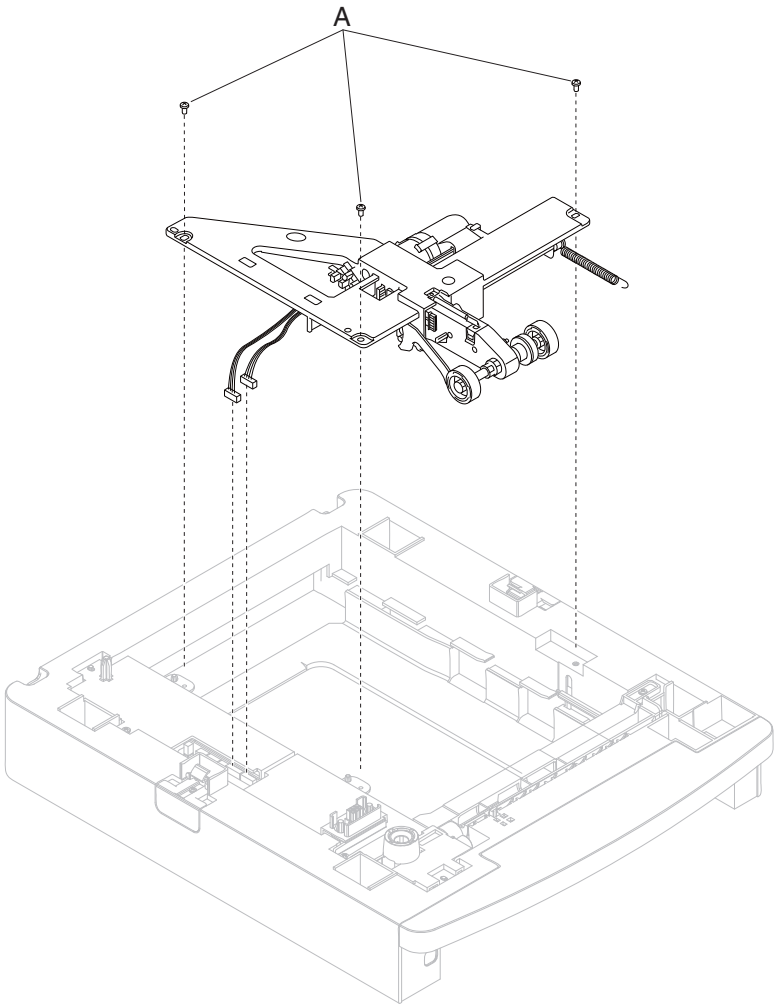


## 250-sheet tray pick arm bracket assembly removal

**Note:** Carefully remove the base machine from the input option tray assembly before proceeding.

1. Disconnect the two 250-sheet tray pick arm bracket assembly cable connectors from the 250-sheet tray controller card assembly.
2. Detach the pick arm spring from the drawer.

3 Remove the three screws (A) securing the 250-sheet tray pick arm bracket assembly to the drawer.




4 Remove the 250-sheet tray pick arm bracket assembly.

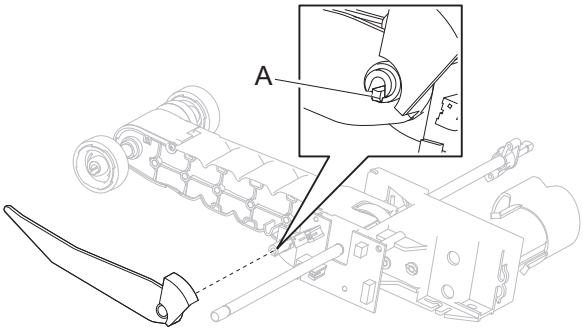
## 250-sheet tray media out actuator removal

**Note:** Carefully remove the base machine from the input option tray assembly before proceeding.

1 Remove the 250-sheet tray pick arm bracket assembly. Go to **"250-sheet tray pick arm bracket assembly removal" on page 361**.

2 Release the hook (A) securing the 250-sheet tray media out actuator to the 250-sheet tray pick arm bracket assembly.

3 Remove the 250-sheet tray media out actuator from the drawer.




## 250-sheet tray frame assembly removal

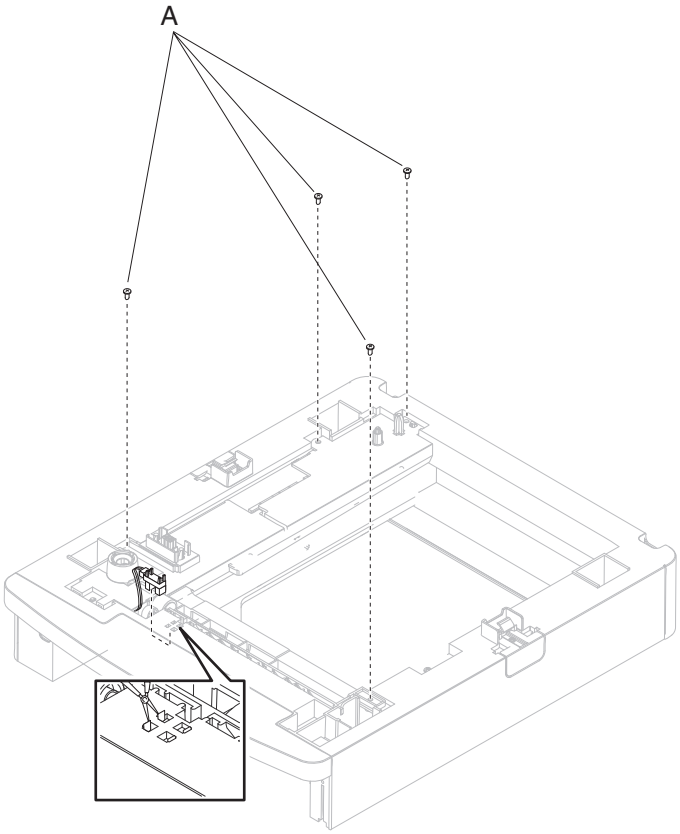
**Note:** The 250-sheet tray frame assembly is not a FRU.

1 Remove the 250-sheet tray pick arm bracket assembly. Go to **"250-sheet tray pick arm bracket assembly removal" on page 361**.

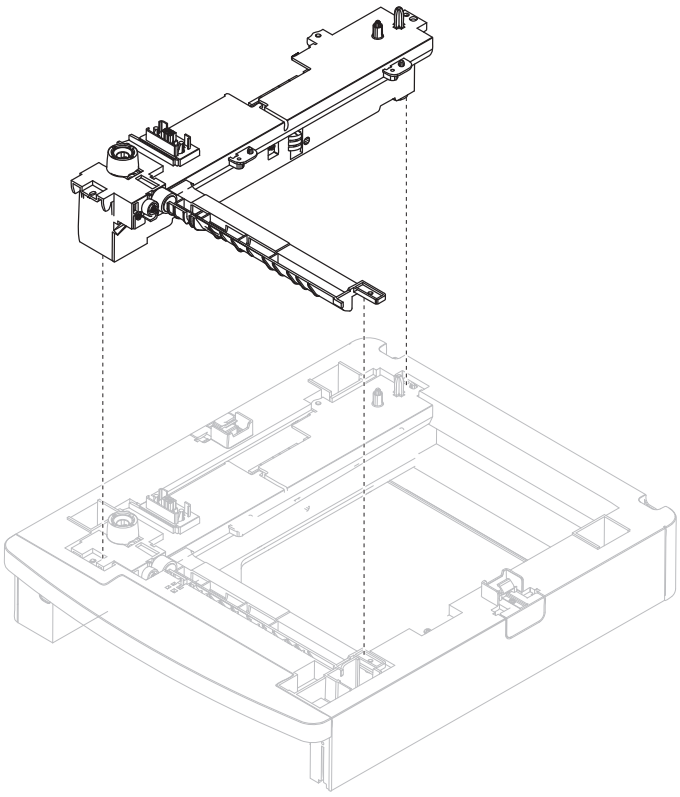
2 Release the hooks securing the sensor (pass through) to the drawer.

3 Remove the sensor (pass through) from the drawer.

4 Remove the four screws (A) securing the 250-sheet tray frame assembly to the drawer.



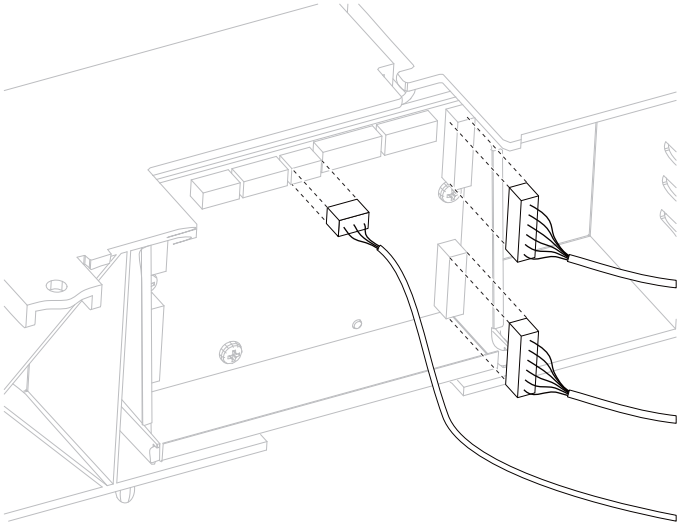
5 Remove the 250-sheet tray frame assembly.



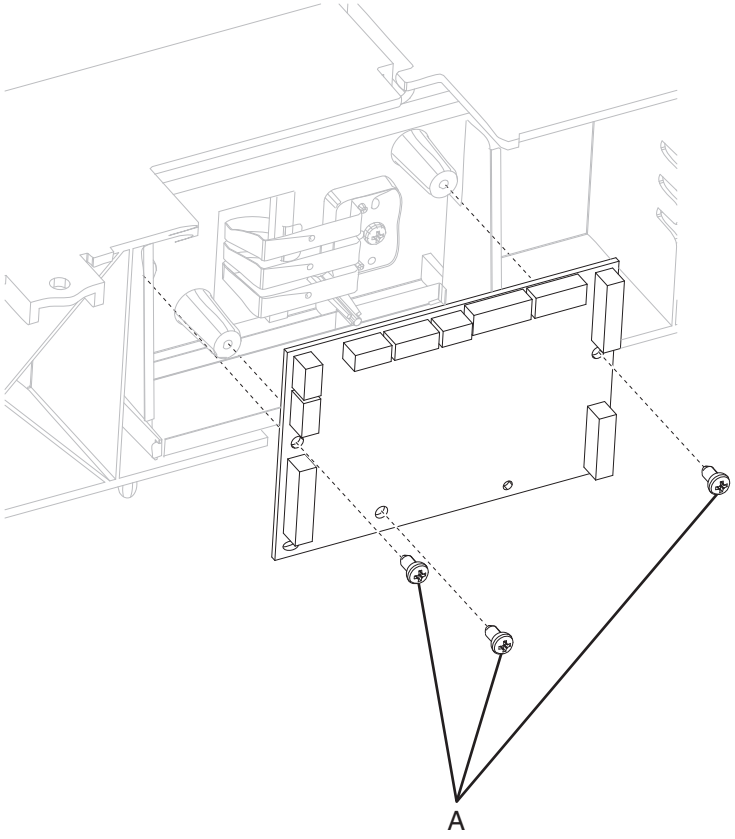
## 250-sheet tray controller card assembly removal

1 Remove the 250-sheet tray frame assembly. Go to **"250-sheet tray frame assembly removal" on page 363**.

2 Disconnect the three connectors from the 250-sheet tray controller card assembly.



**3** Remove the three screws (B) securing the 250-sheet tray controller card assembly to the 250-sheet tray frame.



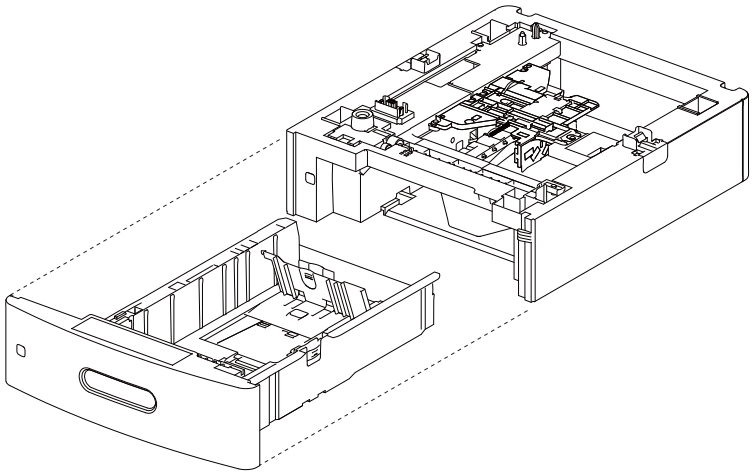

**4** Remove the 250-sheet tray controller card assembly.

# 550-sheet option tray removals

## 550-sheet media tray assembly removal

**Note:** This removal procedure can be applied to 550-sheet option drawer assembly.

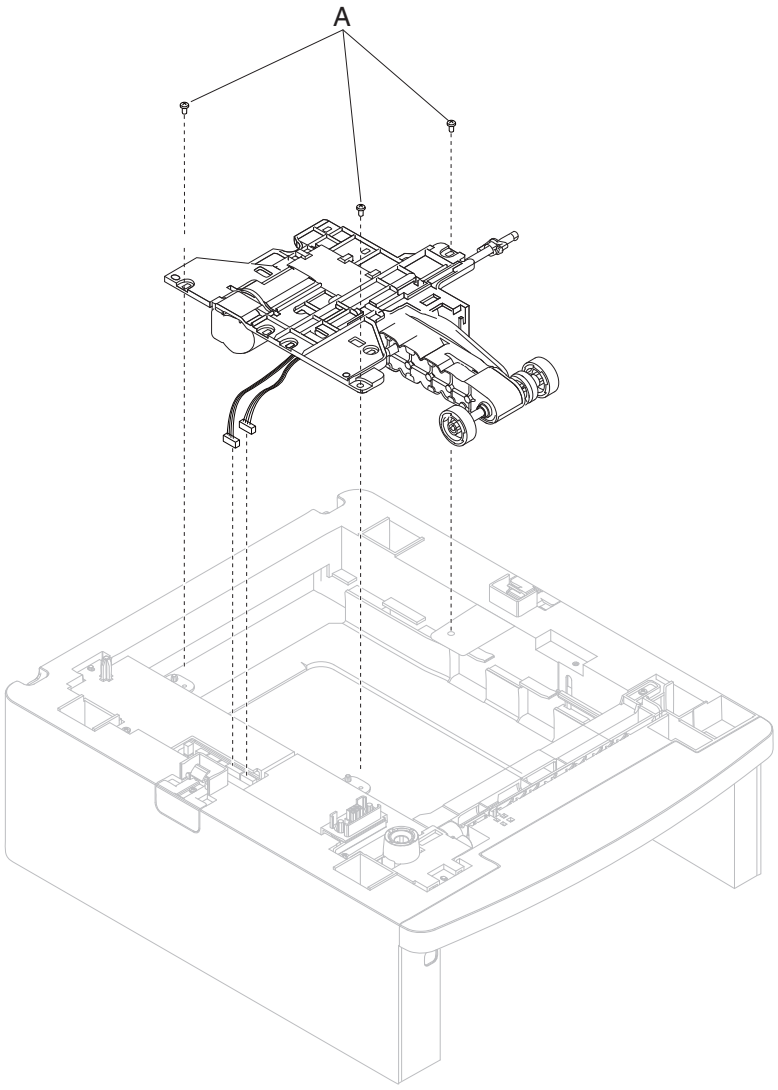
1. Find the 550-sheet media tray assembly in the 550-sheet option drawer assembly.
2. Remove the 550-sheet media tray assembly from the 550-sheet option drawer assembly.



## 550-sheet tray pick arm bracket assembly removal

1. Remove the 550-sheet media tray assembly. Go to **“T652 and T654 media out actuator removal” on page 416**.
2. Remove the two 550-sheet tray pick arm bracket assembly cable connectors (A) from the 550-sheet tray controller card assembly.
3. Detach the 550-sheet tray bellcrank recoil spring (B) from the drawer.

**4** Remove the four screws (C) securing the 550-sheet tray pick arm bracket assembly to the drawer.

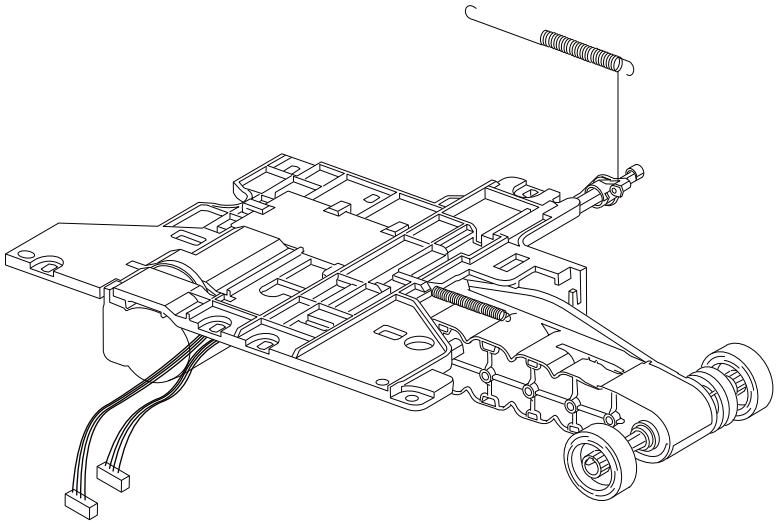



**5** Remove the 550-sheet tray pick arm bracket assembly.

## 550-sheet tray bellcrank recoil spring removal

1 Remove the 550-sheet tray pick arm bracket assembly. Go to **"550-sheet tray pick arm bracket assembly removal" on page 366**.

2 Remove the 550-sheet tray bellcrank recoil spring from the 550-sheet tray pick arm bracket assembly.



## 550-sheet tray frame assembly removal

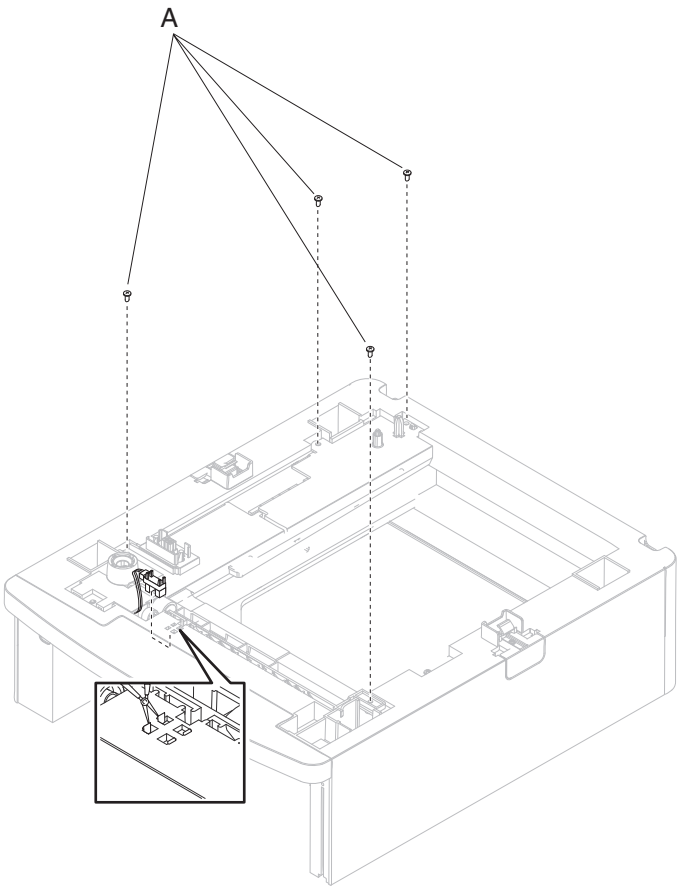
**Note:** The 550-sheet tray frame assembly is not a FRU.

1 Remove the 550-sheet tray pick arm bracket assembly. Go to **"550-sheet tray pick arm bracket assembly removal" on page 366**.

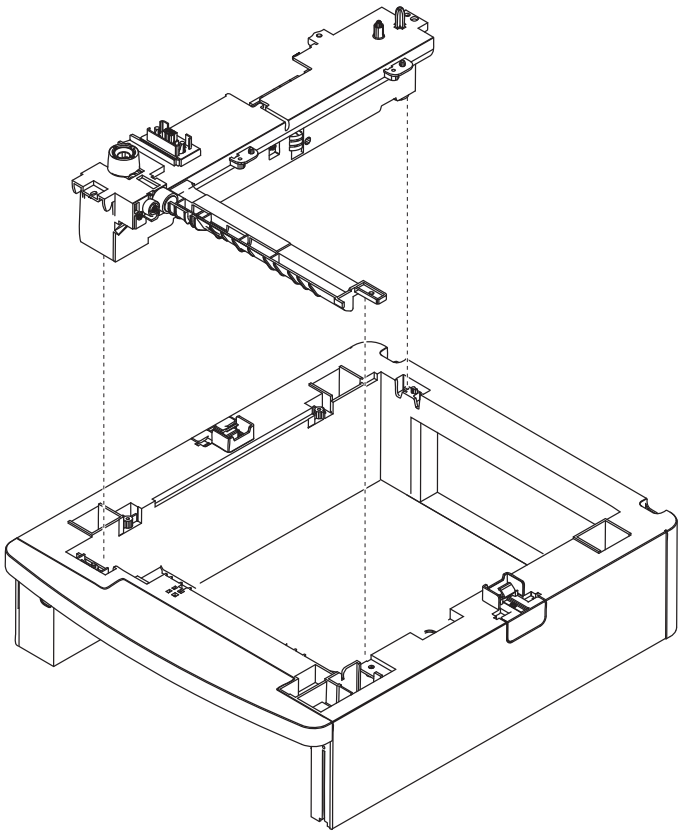
2 Release the hooks securing the sensor (pass through) to the drawer.

3 Remove the sensor (pass through) from the drawer.

**4** Remove the four screws (A) securing the 550-sheet tray frame assembly to the drawer.



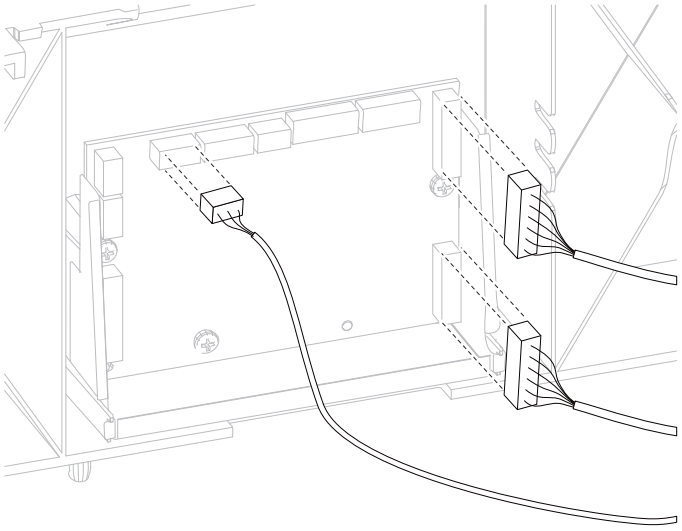
5 Remove the 550-sheet tray frame assembly.



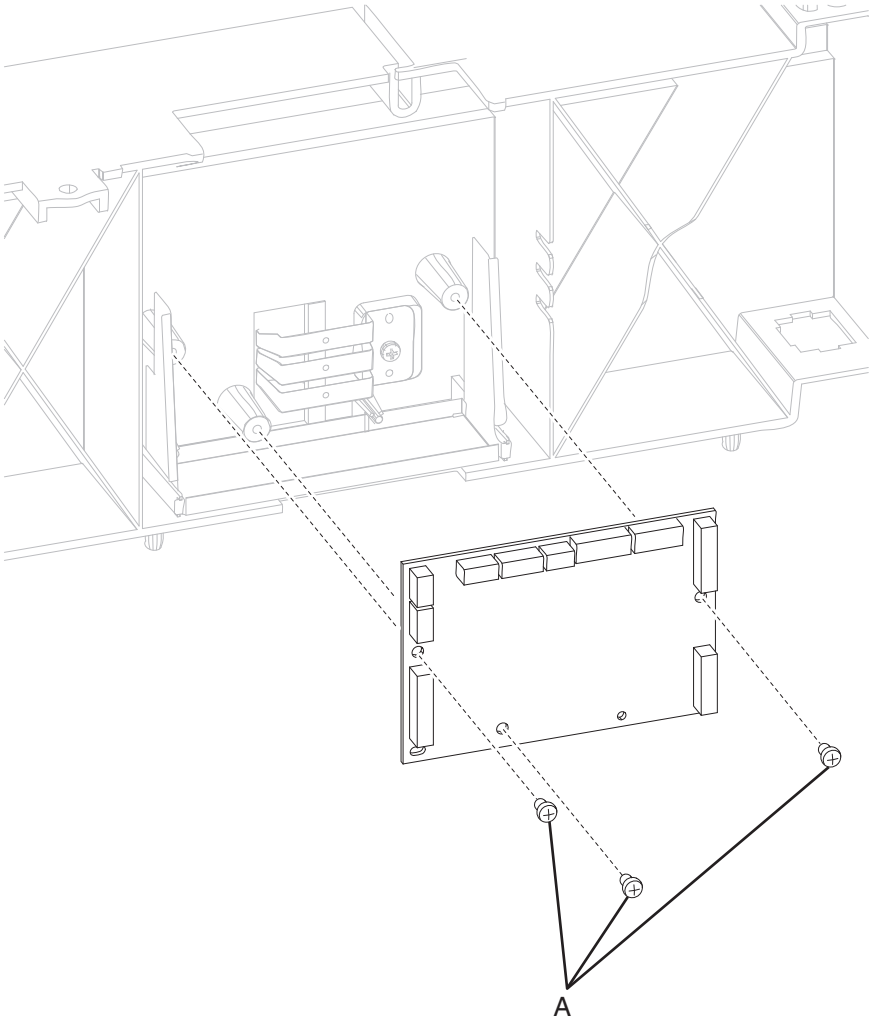
## 550-sheet tray controller card assembly removal

1 Remove the 550-sheet tray frame assembly. Go to **"Media size actuator removal" on page 417**.

2 Disconnect the three connectors from the 550-sheet tray controller card assembly.



3 Remove the three screws (A) securing the 550-sheet tray controller card assembly to the 550-sheet tray frame.



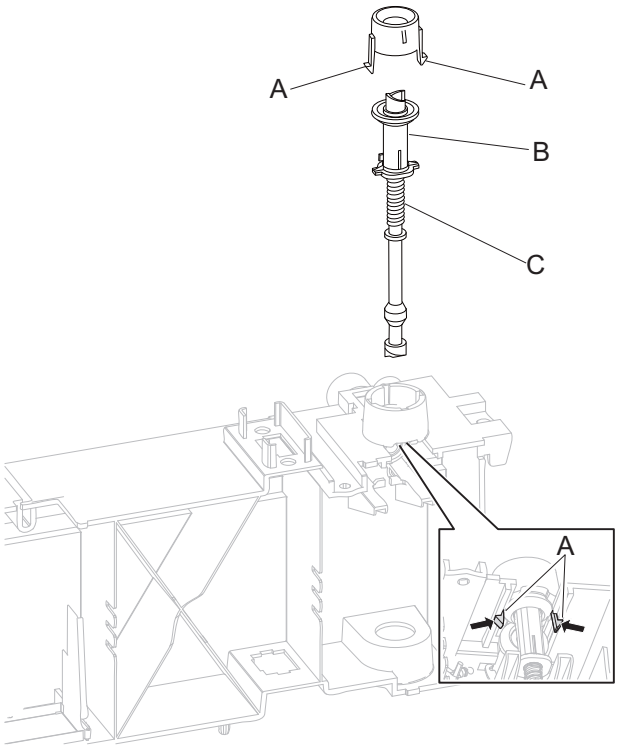

4 Remove the 550-sheet tray controller card assembly.

## 550-sheet tray option drive shaft with spring removal

1 Remove the 550-sheet tray frame assembly. Go to **"Media size actuator removal" on page 417**.

2 Pinch the two hooks (A) on the cap, and detach it from the 550-sheet tray frame.

3 Pull the drive roll gear (B), the shaft with spring (C), and the bevel out through the opening.




4 Remove the 550-sheet tray option drive shaft with spring.

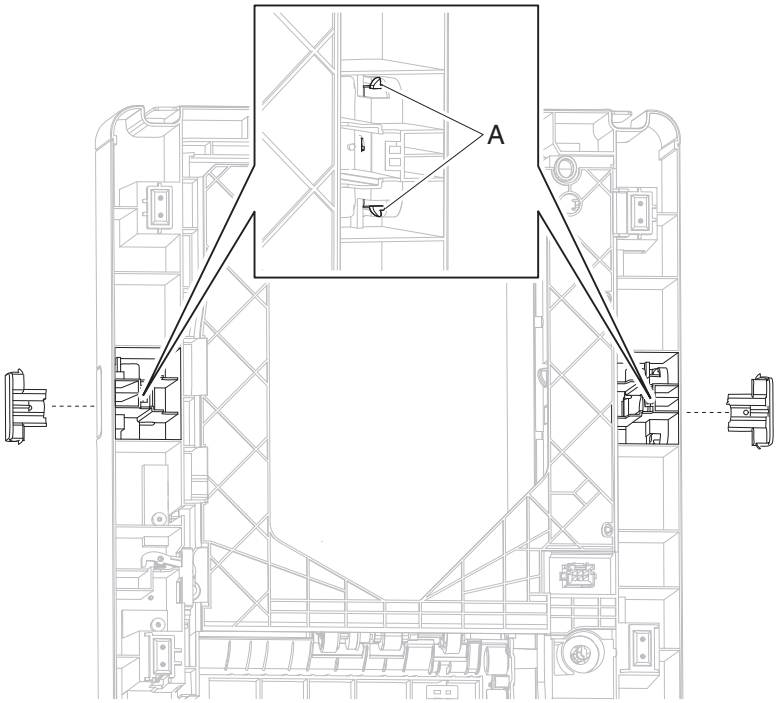
## Anti-tip latch assembly removal

**Note:** Carefully remove the base machine from the input option tray assembly before proceeding. The left and right anti-tip latch assemblies are the same, and only one is in a package. The instructions below are for removing the left latch, but removing the right latch is similar.

1 Remove the 250-sheet media tray assembly. Go to **"250-sheet media tray assembly removal" on page 361**.

2 Turn the drawer upside down, and unsnap the two hooks (A) securing the anti-tip latch assembly to the drawer with a flathead screwdriver.

**Note:** The hooks might break when detaching the anti-tip assembly from the drawer.



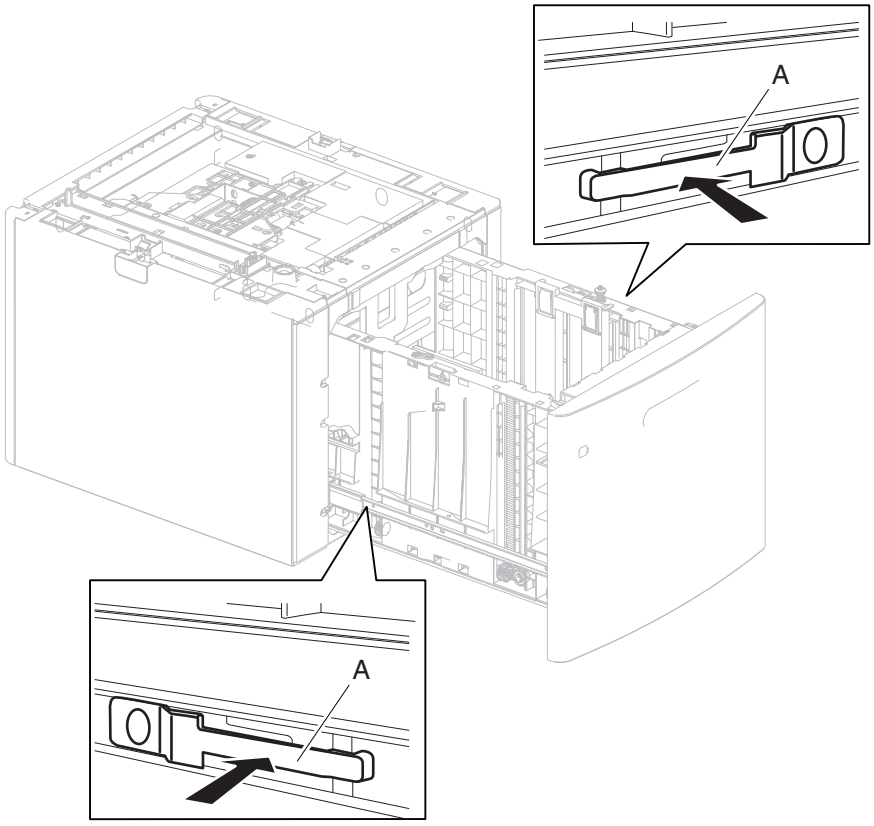

**3** Remove the anti-tip latch assembly.

# High capacity input tray (HCIT) removals

## High capacity input tray (HCIT) media tray assembly removal

1 Open the HCIT media tray assembly until it reaches a stop.

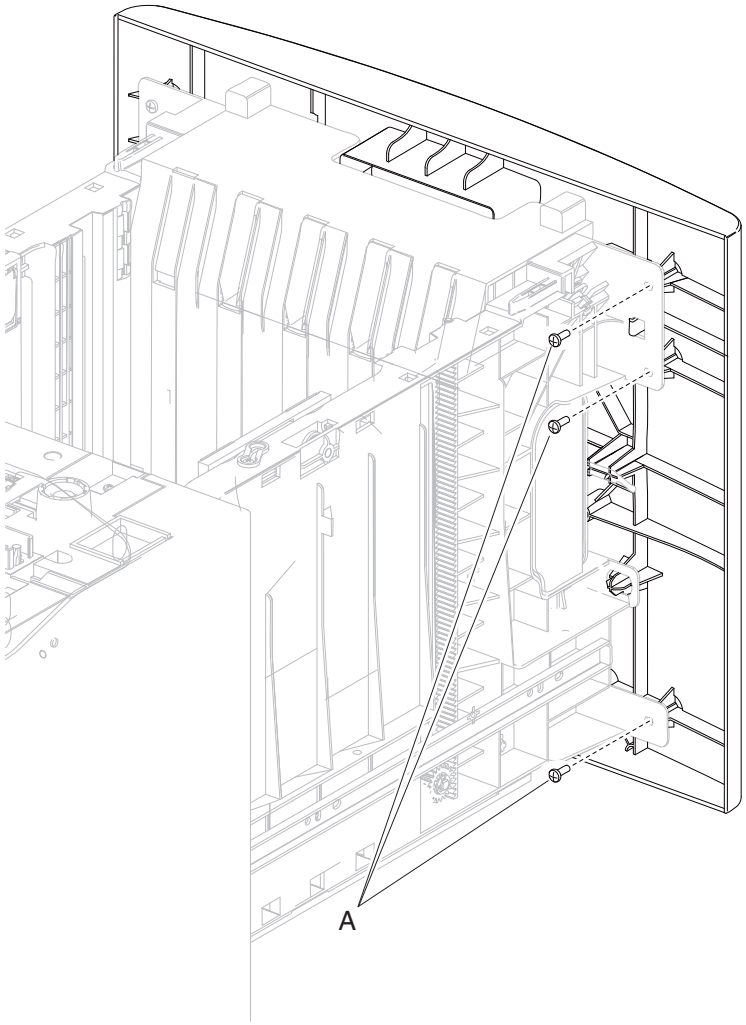
2 Press the latches (A) on the left and right sides of the HCIT tray slides.

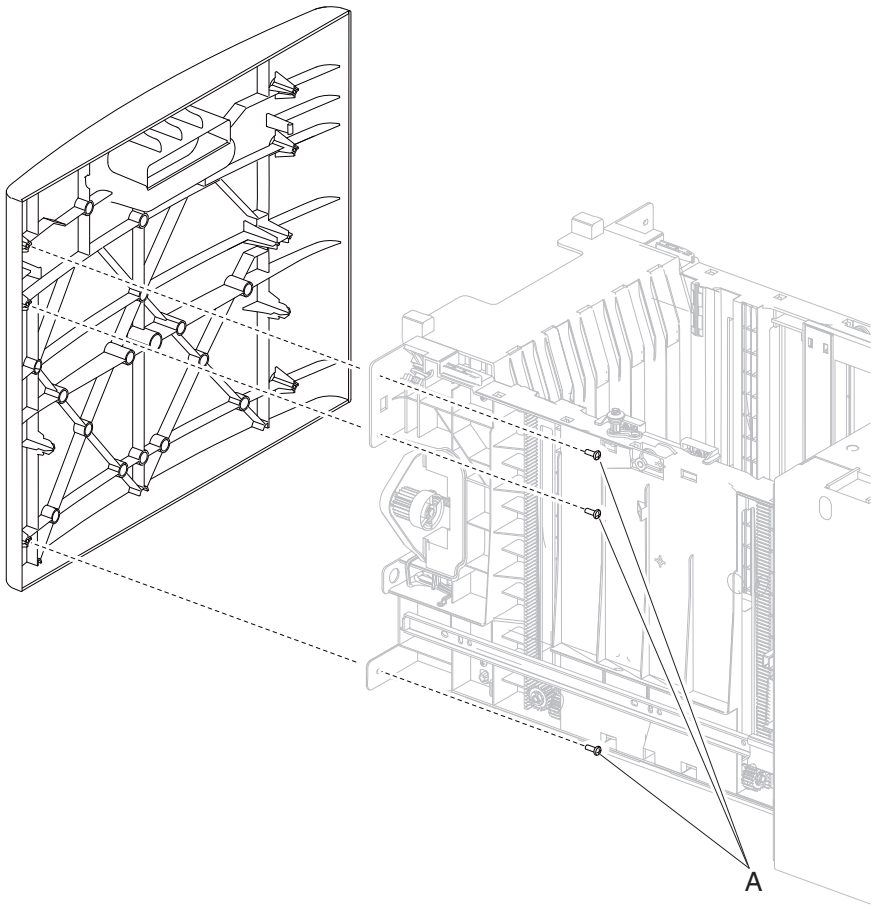



3 Slide the HCIT media tray assembly out of the drawer.

# High capacity input tray (HCIT) tray cover, front removal

1. Open the HCIT media tray assembly until it reaches a stop.
2. Remove the six screws (A) securing the HCIT tray cover, front to the HCIT media tray assembly.

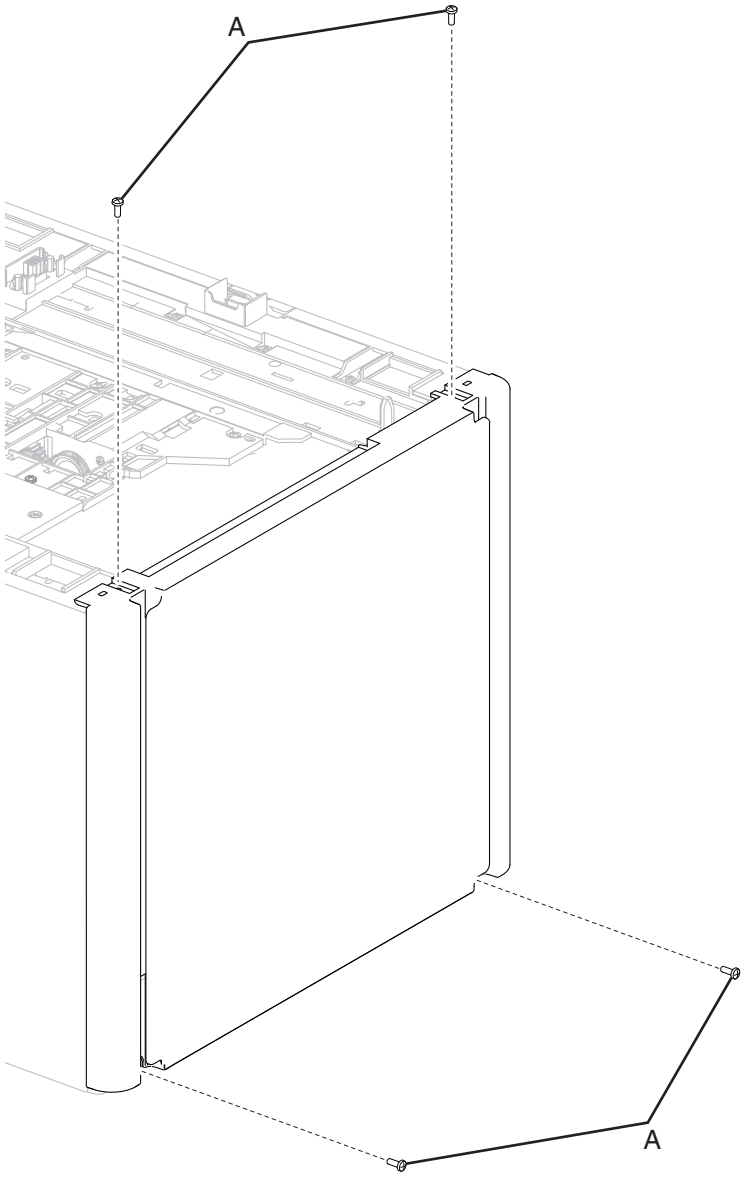




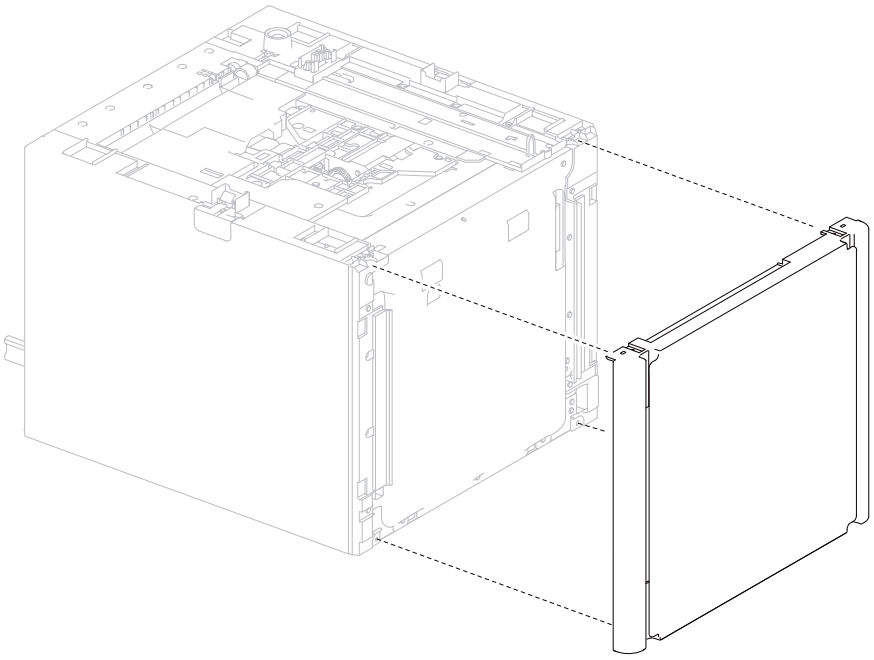

**3** Remove the HCIT tray cover, front.

# High capacity input tray (HCIT) cover, rear removal

1. Remove the HCIT media tray assembly. Go to **“High capacity input tray (HCIT) media tray assembly removal” on page 374**.
2. Remove the four screws (A) securing the HCIT cover, rear to the drawer.



**3** Remove the HCIT cover, rear.

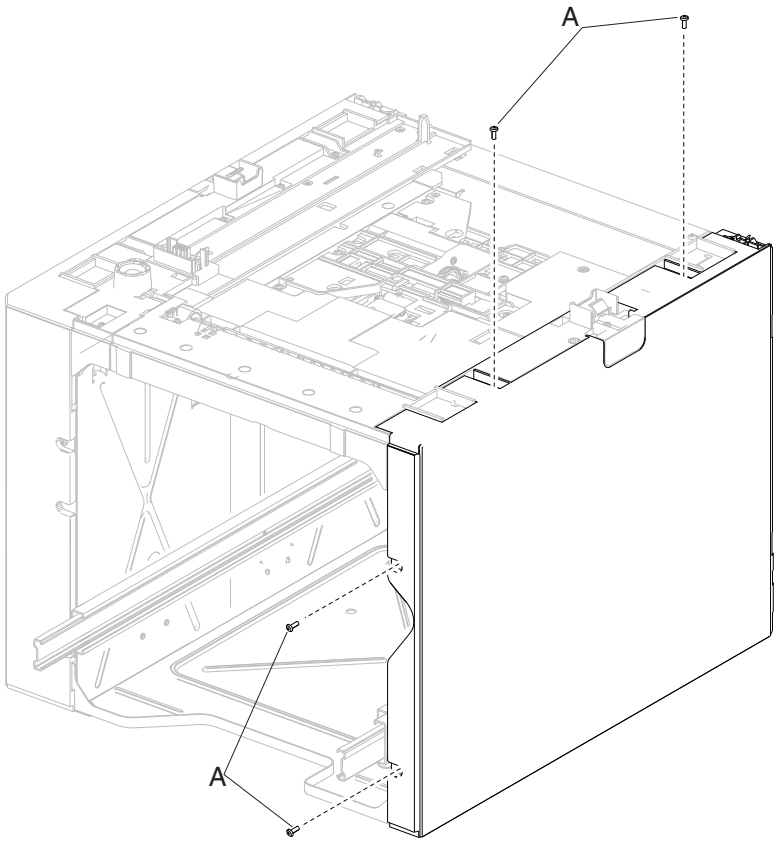


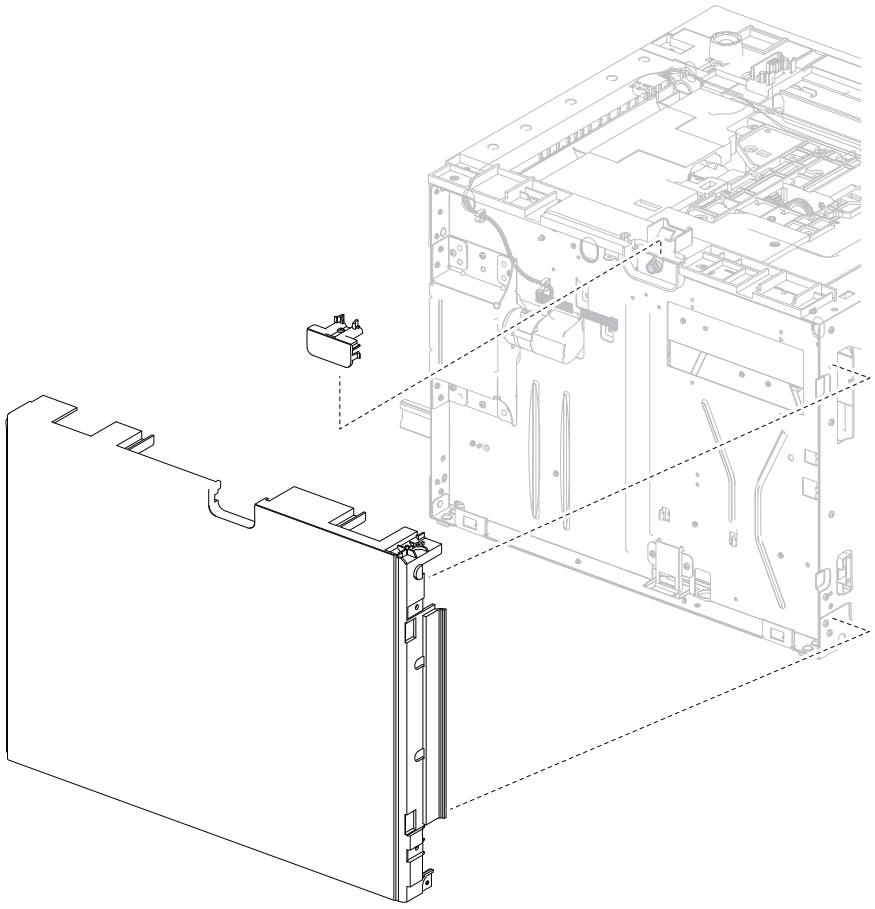
## High capacity input tray (HCIT) cover, right removal

**Note:** Carefully remove the base machine from the HCIT tray assembly before proceeding.

**Note:** Before removing the HCIT right cover, first remove the right side anti-tip latch assembly. Go to **"High capacity input tray (HCIT) anti-tip latch assembly removal" on page 382**.

1. Remove the high capacity input tray (HCIT) cover, rear. Go to **"High capacity input tray (HCIT) cover, rear removal" on page 377**.
2. Remove the four screws (A) securing the HCIT cover, right to the drawer.





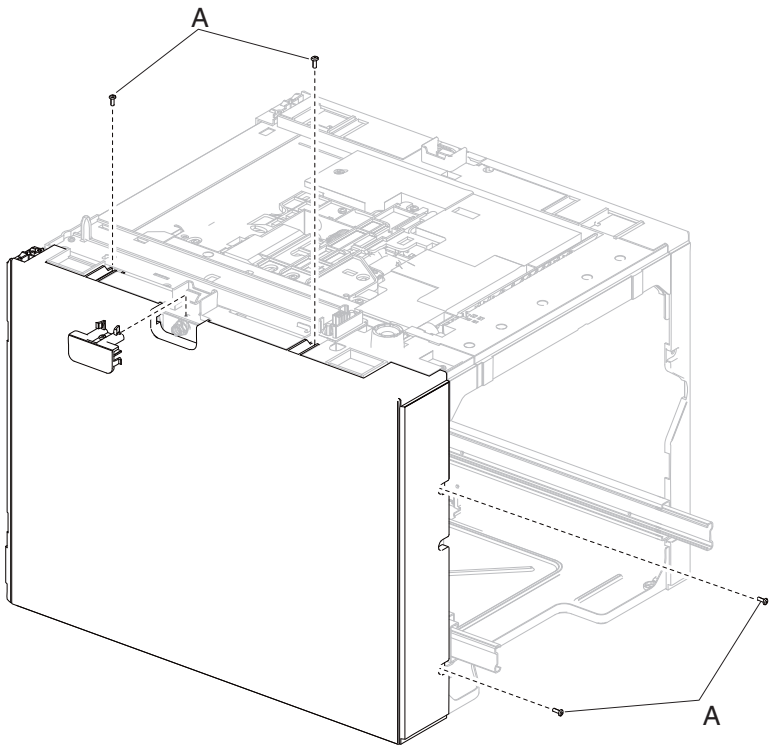
**3** Remove the HCIT cover, right.

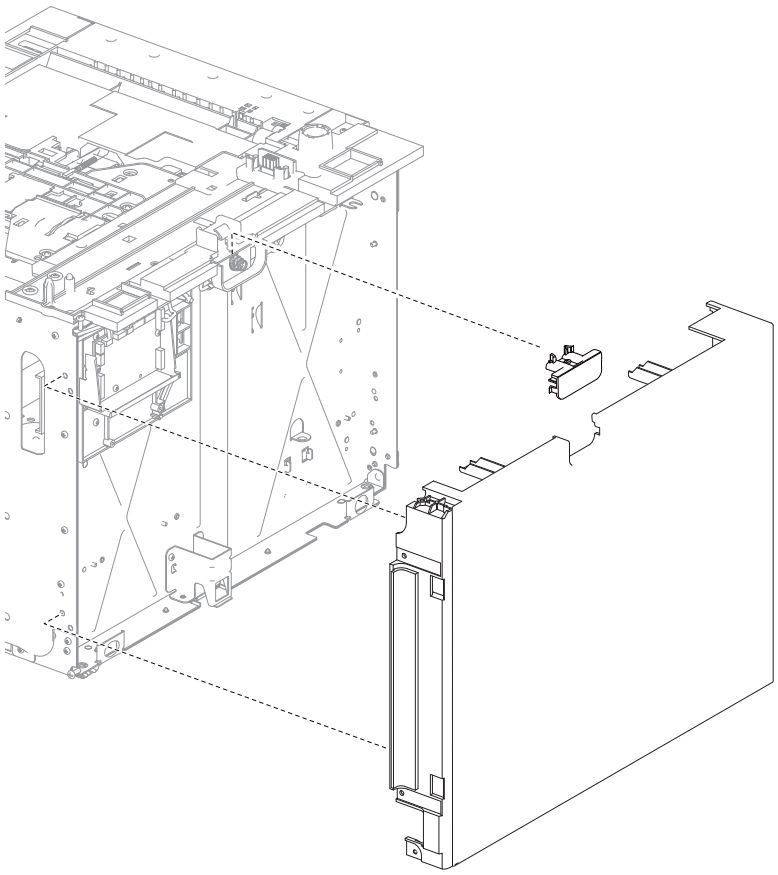
## High capacity input tray (HCIT) cover, left removal

**Note:** Carefully remove the base machine from the HCIT tray assembly before proceeding.

**Note:** Before removing the HCIT left cover, first remove the left side anti-tip latch assembly. Go to **"High capacity input tray (HCIT) anti-tip latch assembly removal" on page 382**.

1. Remove the high capacity input tray (HCIT) cover, rear. Go to **"High capacity input tray (HCIT) cover, rear removal" on page 377**.
2. Remove the four screws (A) securing the HCIT cover, left to the drawer.





3 Remove the HCIT cover, left.

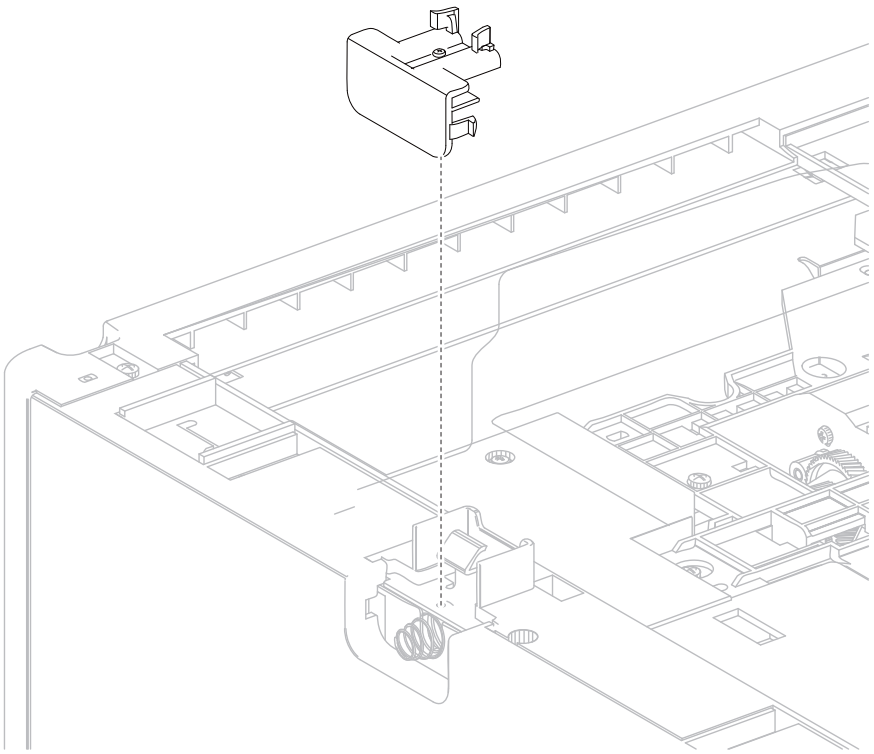
## High capacity input tray (HCIT) anti-tip latch assembly removal

**Note:** Carefully remove the base machine from the HCIT tray assembly before proceeding. The left and right anti-tip latch assemblies are the same, and only one is in a package. The instructions below are for removing the left latch; removing the right latch has similar instructions.

1 Find the HCIT cover, left.

2 Remove the HCIT cover, left. Go to **"High capacity input tray (HCIT) cover, left removal" on page 380**.

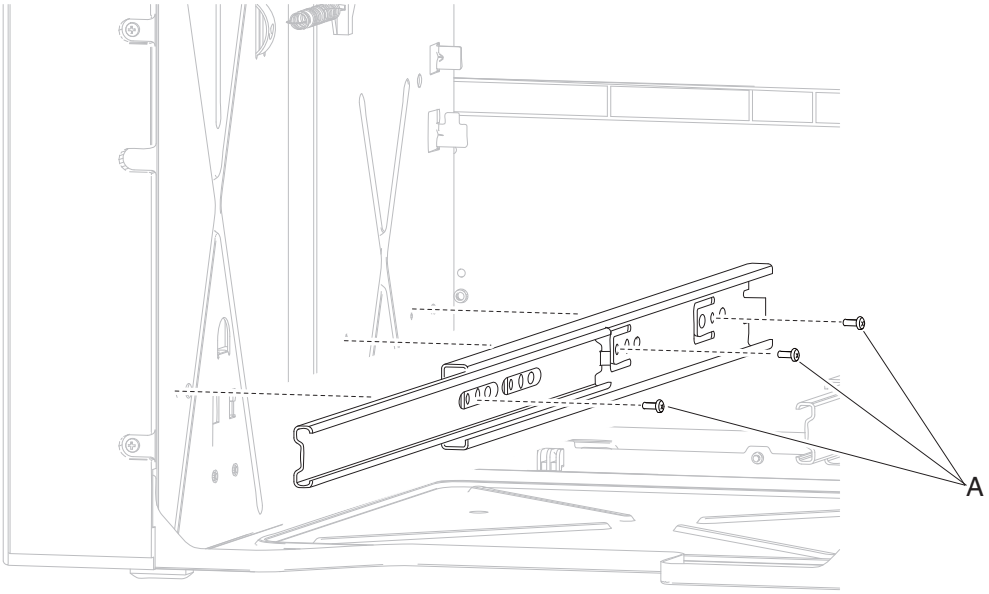
**Note:** The left side anti-tip assembly will come off when removing the HCIT cover, left.



## High capacity input tray (HCIT) drawer slide assembly removal

**Note:** The left and right drawer slide assemblies are the same, and only one is in a package. The instructions below are for removing the left slide; removing the right slide has similar instructions.

1. Remove the HCIT media tray assembly. Go to **"High capacity input tray (HCIT) media tray assembly removal" on page 374**.
2. Remove the three screws (A) securing the HCIT drawer slide to the frame of the drawer.

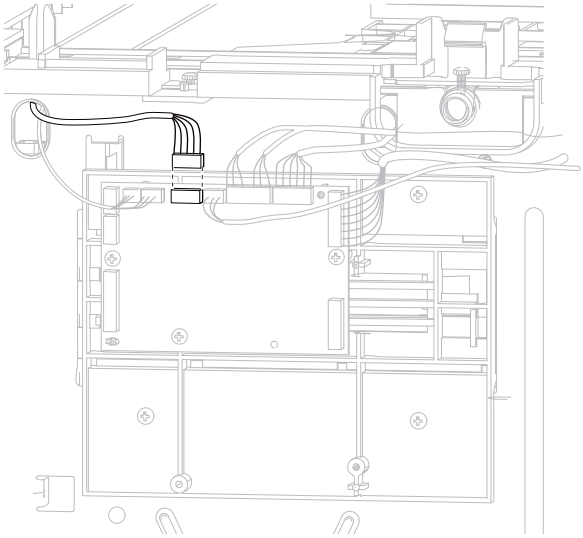



3. Remove the HCIT drawer slide.

# High capacity input tray (HCIT) tray lift drive motor assembly removal

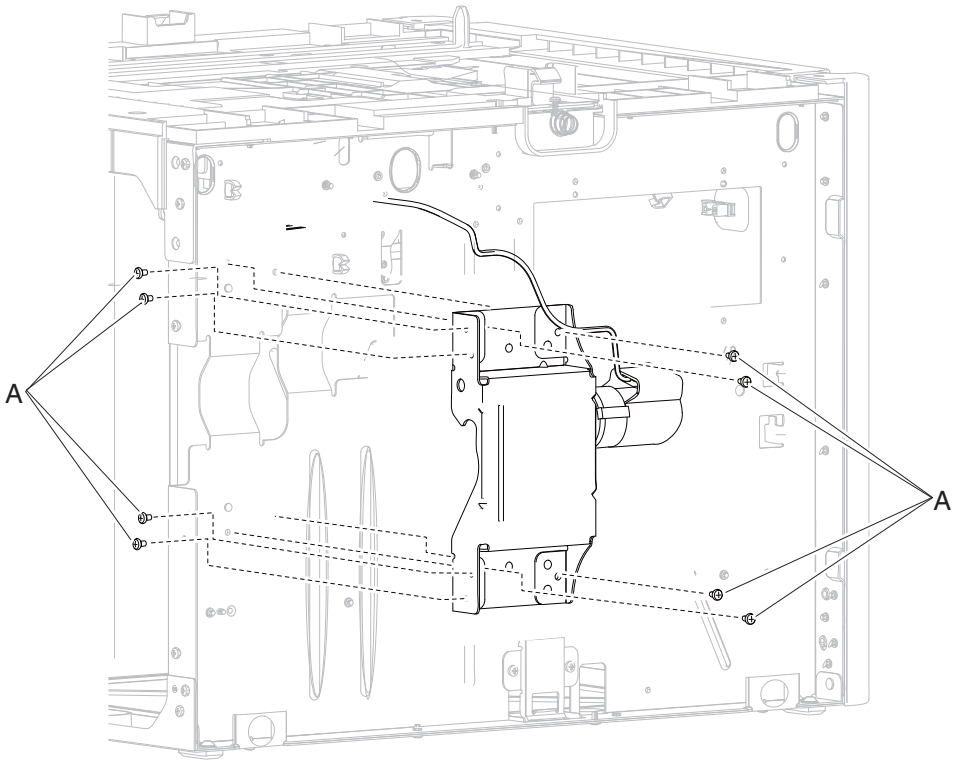
**Note:** Carefully remove the base machine from the HCIT tray assembly before proceeding.

1. Remove the HCIT cover, right. Go to **"High capacity input tray (HCIT) cover, right removal" on page 378**.
2. Remove the HCIT cover, left. Go to **"High capacity input tray (HCIT) cover, left removal" on page 380**.
3. Disconnect the HCIT tray lift drive motor cable connector from the HCIT controller card assembly.



**Note:** Remove the cable from the restraint, and observe the routing for reinstallation.

**4** Remove the eight screws (A) securing the HCIT tray lift drive motor assembly.

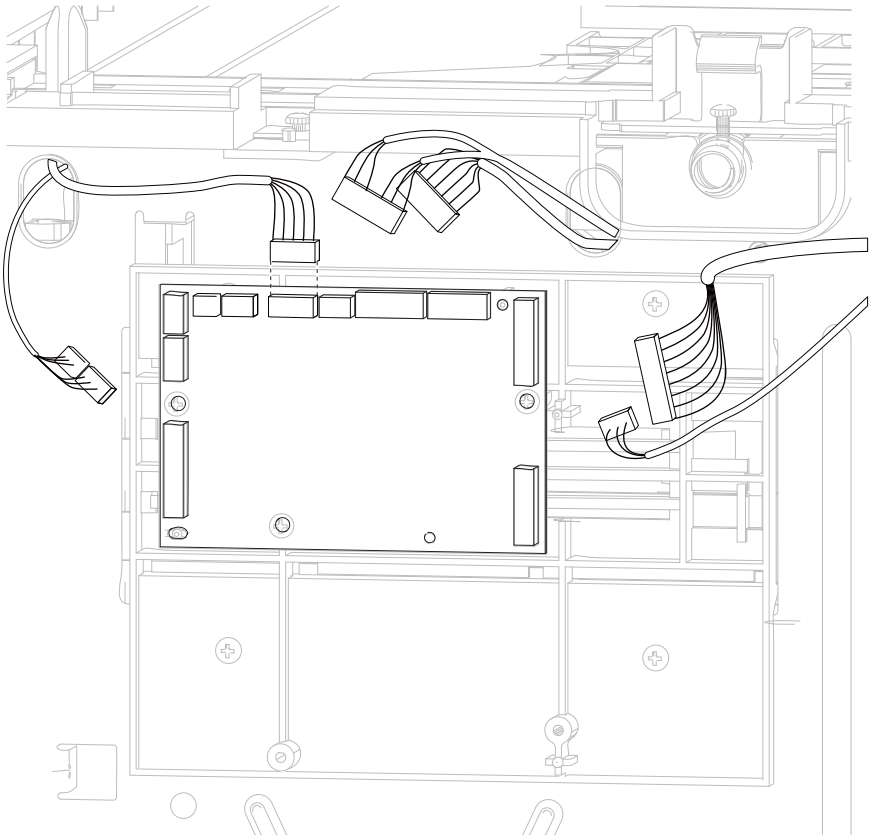



**5** Remove the HCIT tray lift drive motor assembly.

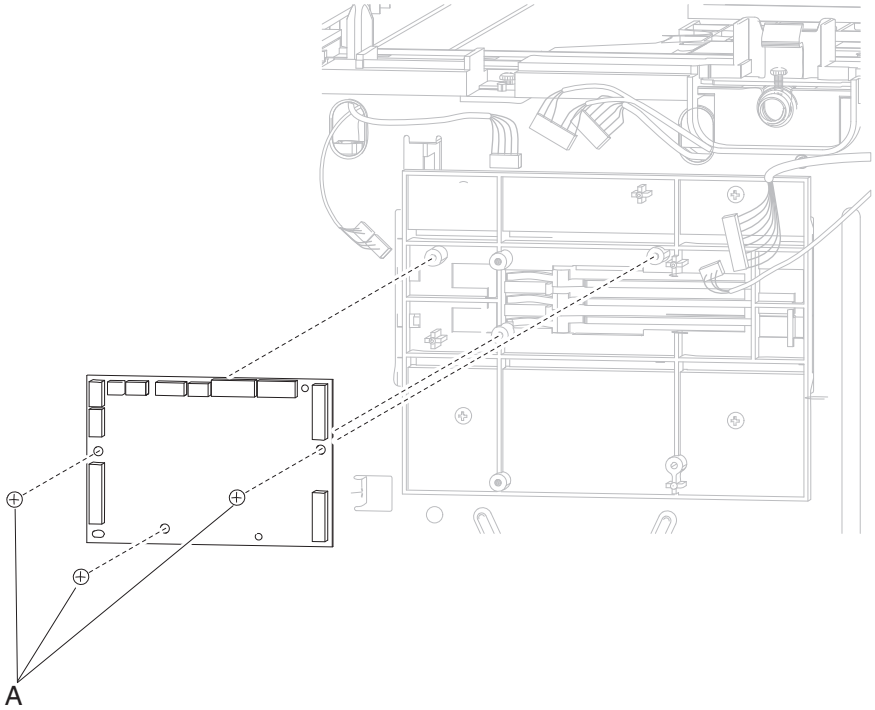
# High capacity input tray (HCIT) controller card assembly removal

**Note:** Carefully remove the base machine from the HCIT tray assembly before proceeding.

1. Remove the HCIT cover, left. Go to **"High capacity input tray (HCIT) cover, left removal" on page 380**.
2. Disconnect all connectors from the HCIT controller card assembly.



3 Remove the three screws (A) securing the HCIT controller card assembly.




4 Remove the HCIT controller card assembly and the shield.

## High capacity input tray (HCIT) media size actuator assembly removal

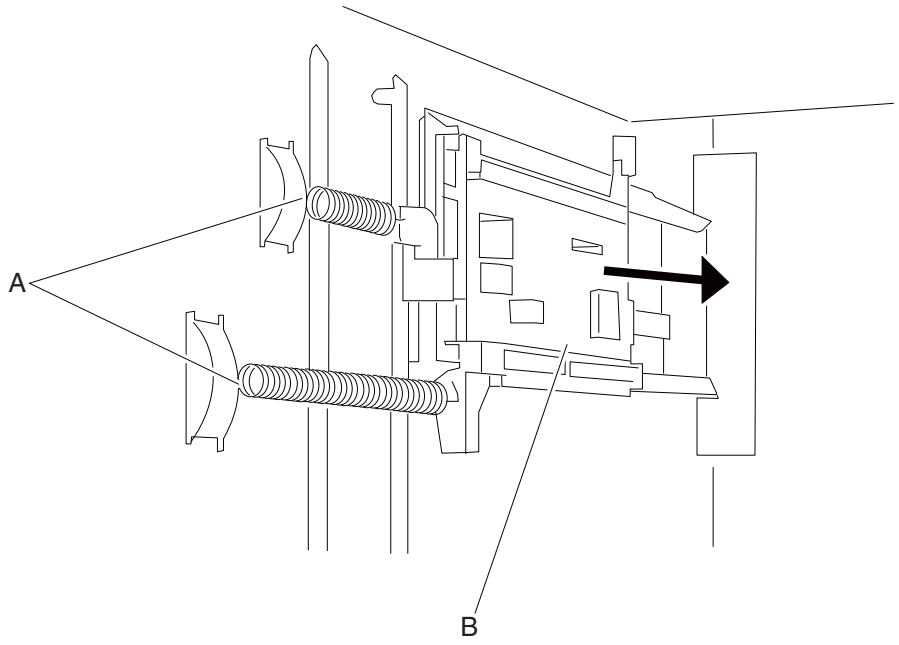
**Note:** Carefully remove the base machine from the HCIT tray assembly before proceeding.

1 Remove the HCIT controller card assembly. Go to **"High capacity input tray (HCIT) controller card assembly removal" on page 386**.

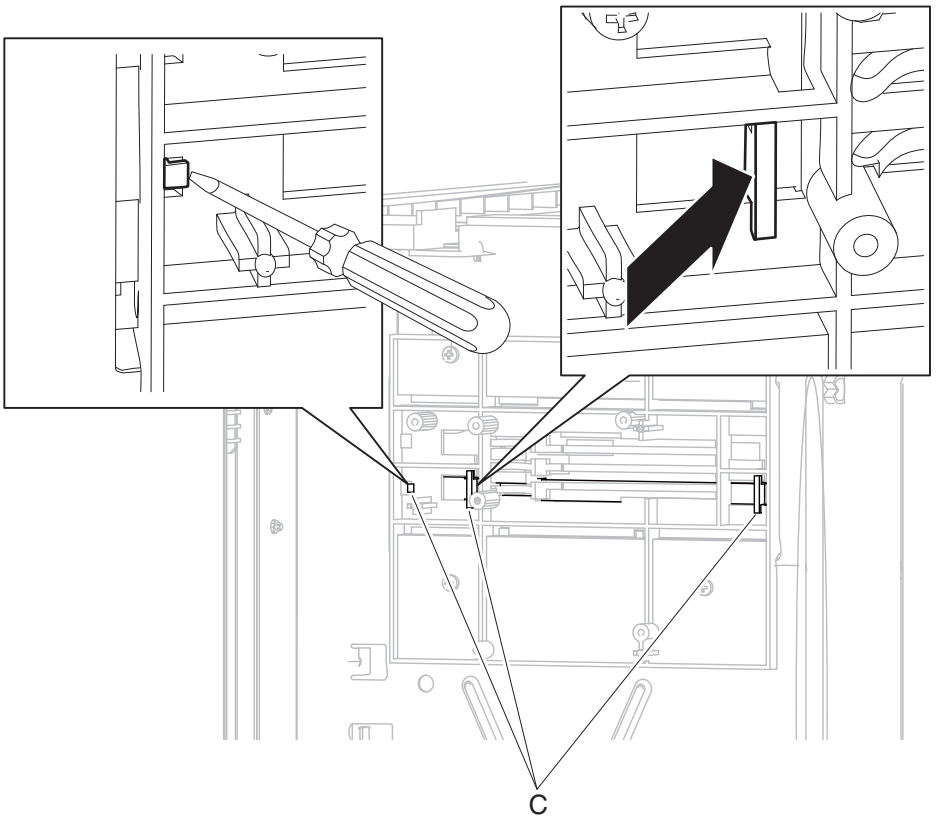
2 Disconnect the two springs (A) from the frame.

**Note:** Leave the springs (A) attached to the cam size sensing plate (B) and the actuator switch (C).

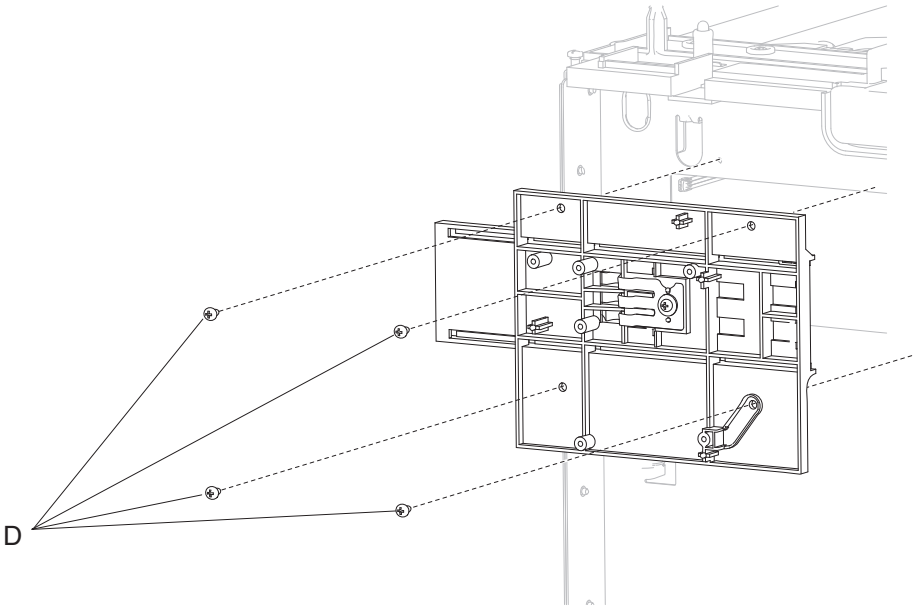
**3** Slide the cam size sensing plate (B) through the access hole in the rear side frame.




**4** Snap loose the actuator switch (C) and remove.



**5** Remove the four screws (D) securing the card mount option with the media size actuator to the frame.




**6** Remove the card mount option with the media size actuator.

**Installation notes:**

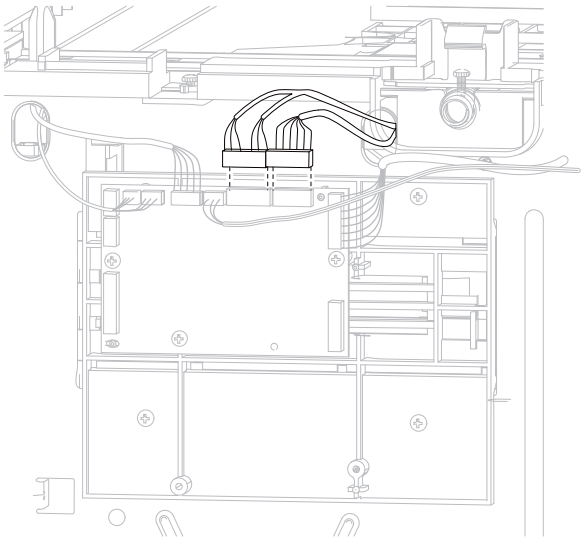
- **a** Re-install the card mount option with the media size actuator to the frame by inserting the leftmost part of it through the hole, and then securing it with the four screws.
- **b** Re-install the actuator switch with the spring to the card mount option through the drawer opening.
- **c** Re-install the cam size sensing plate with the spring to the card mount option through the access hole in the rear side.
- **d** Reattach the two springs to the frame.

# High capacity input tray (HCIT) pick arm bracket assembly removal

**Note:** Carefully remove the base machine from the HCIT tray assembly before proceeding.

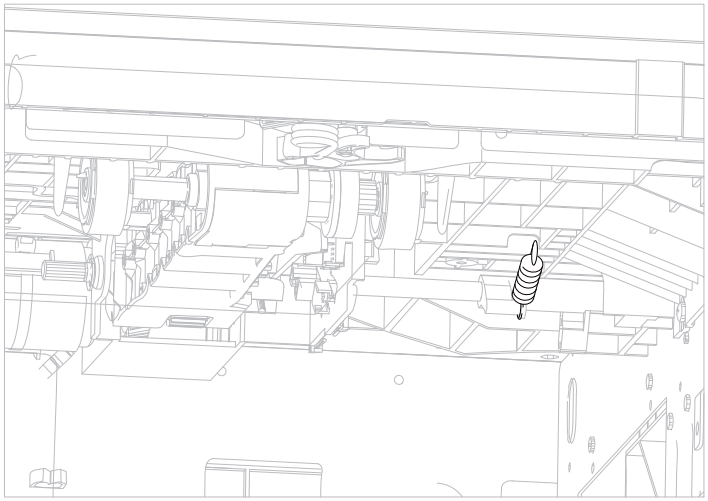
1 Remove the HCIT cover, left. Go to **"High capacity input tray (HCIT) cover, left removal" on page 380**.

2 Remove the HCIT pick arm bracket assembly cable connectors from the HCIT controller card assembly.

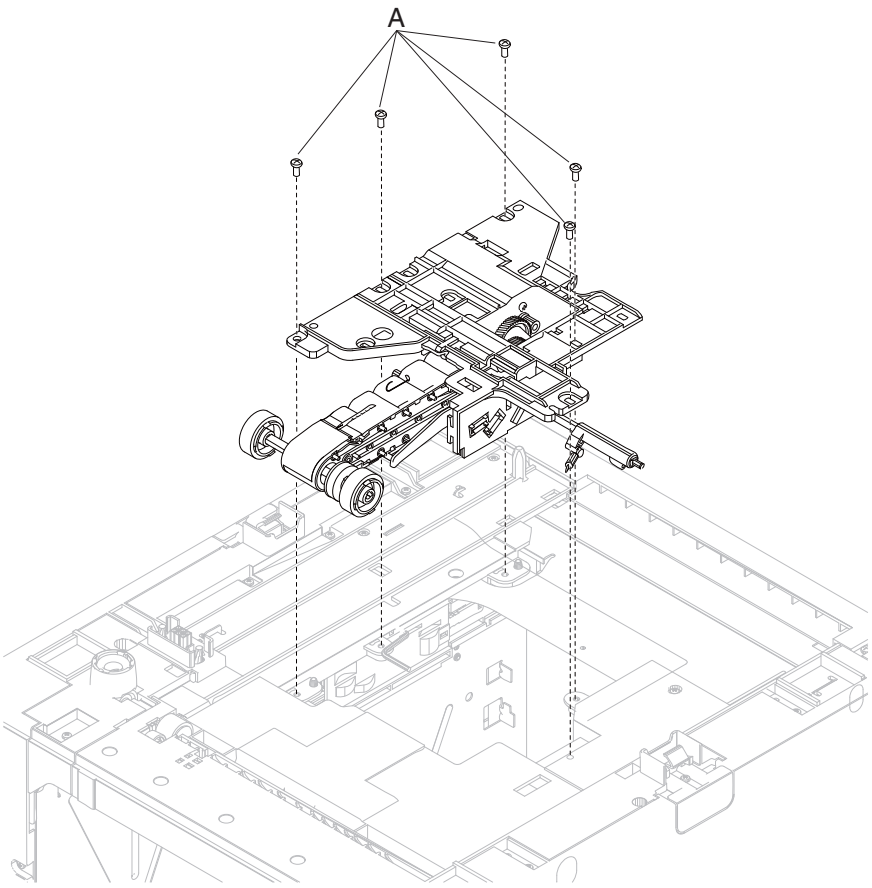


**Note:** Remove the cable from the restraint, and observe the routing for reinstallation.

3 Remove the pick arm lift spring from the drawer.



**4** Remove the five screws (A) securing the HCIT pick arm bracket assembly.

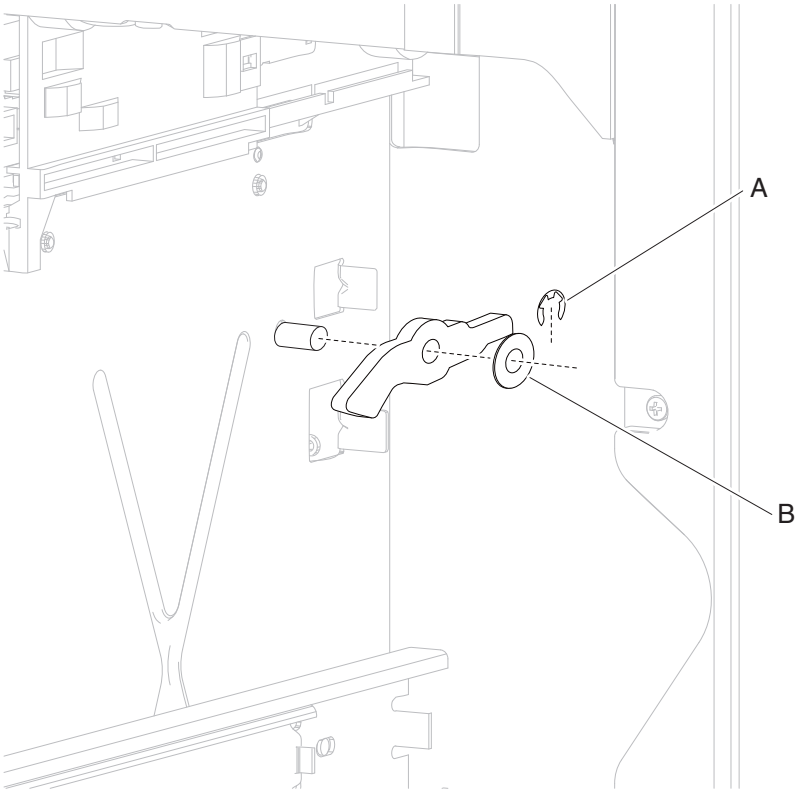



**5** Remove the HCIT pick arm bracket assembly from the drawer by slightly lifting and removing it.

## High capacity input tray (HCIT) tray closed latch with spring removal

The left and right tray closed latches with springs are the same, and only one is in a package. The instructions below are for removing the left latch; removing the right latch has similar instructions.

1. Remove the HCIT media tray assembly. Go to **"High capacity input tray (HCIT) media tray assembly removal" on page 374**.
2. Remove the E-clip (A) and the washer (B) with a prying tool securing the HCIT tray closed latch with spring to the left frame.



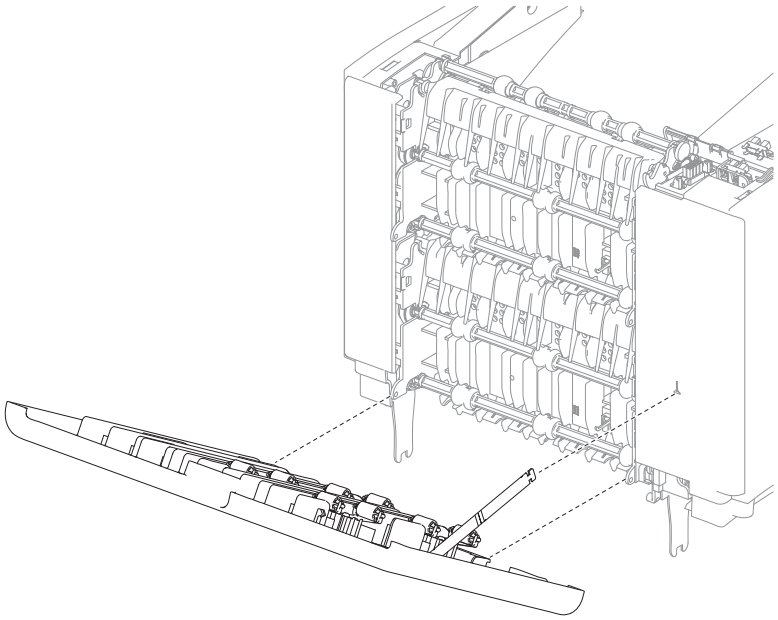

3. Remove the HCIT tray closed latch with spring.

# High capacity stacker removals

## High capacity stacker rear door assembly removal

1. Open the rear door assembly.
2. Remove the rear door strap by twisting vertically and pulling it out of the slot.

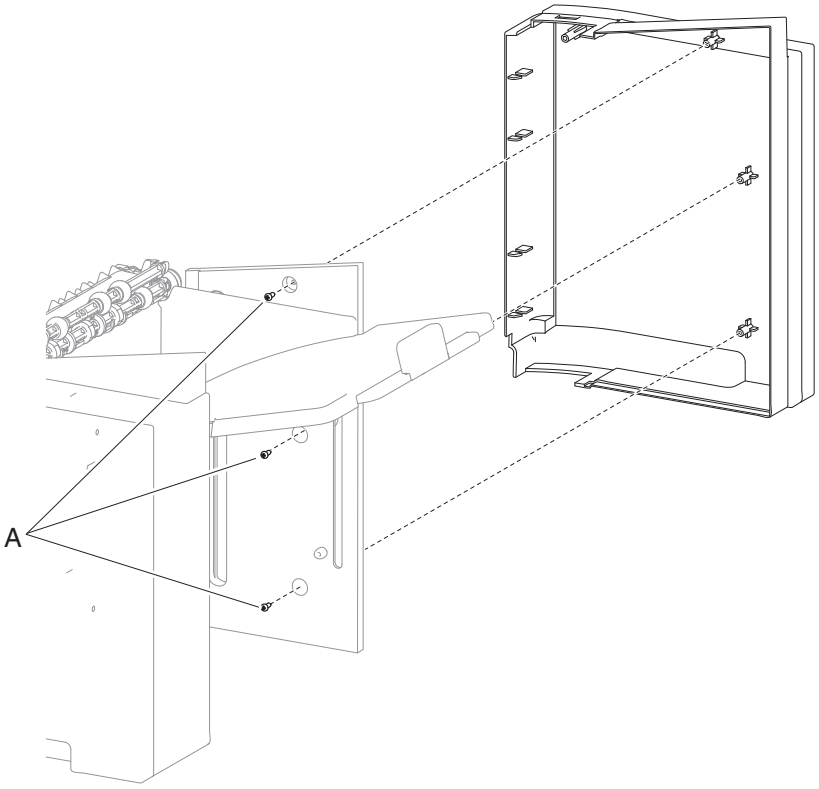
3 Remove the rear door assembly from the hinges by gently prying the hinges off the bosses.



## High capacity stacker right cover removal

1 Remove the high capacity stacker rear door assembly. Go to **“High capacity stacker rear door assembly removal” on page 392**.

2 Using a #1 phillips screwdriver, remove the three screws (A) securing the right cover to the high capacity stacker assembly.

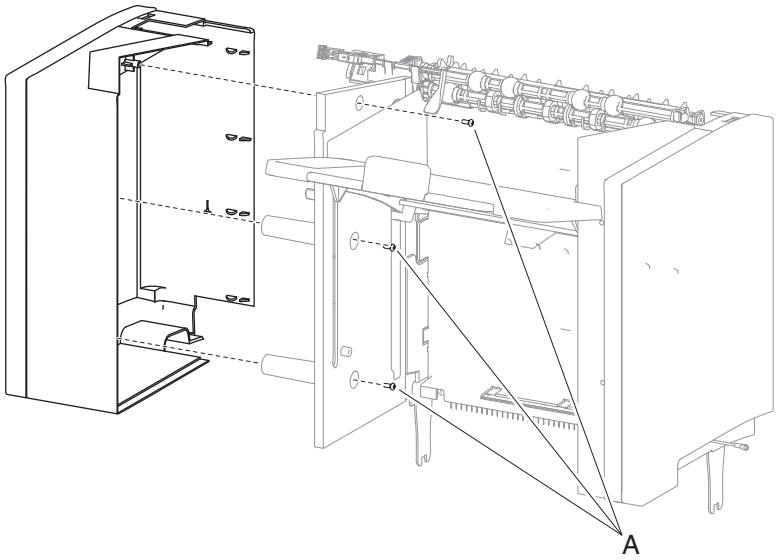


3 Remove the right cover.

## High capacity stacker left cover removal

1 Remove the high capacity stacker rear door assembly. Go to **"High capacity stacker rear door assembly removal" on page 392**.

2 Using a #1 phillips screwdriver, remove the three screws (A) securing the left cover to the high capacity stacker assembly.



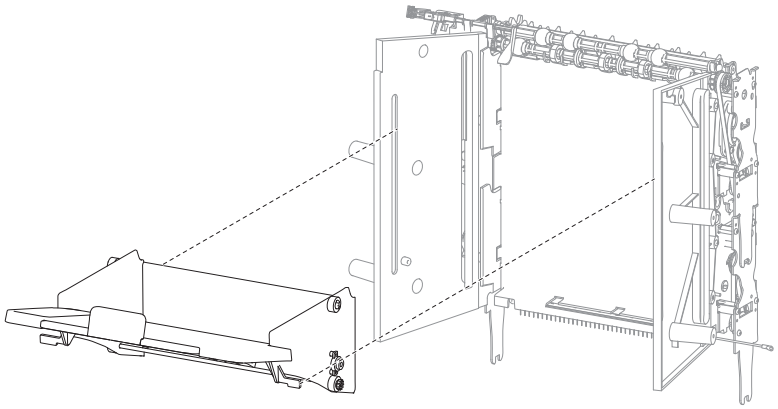

3 Remove the left cover.

## High capacity stacker media output bin assembly removal

1 Remove both the high capacity stacker media output bin recoil springs.

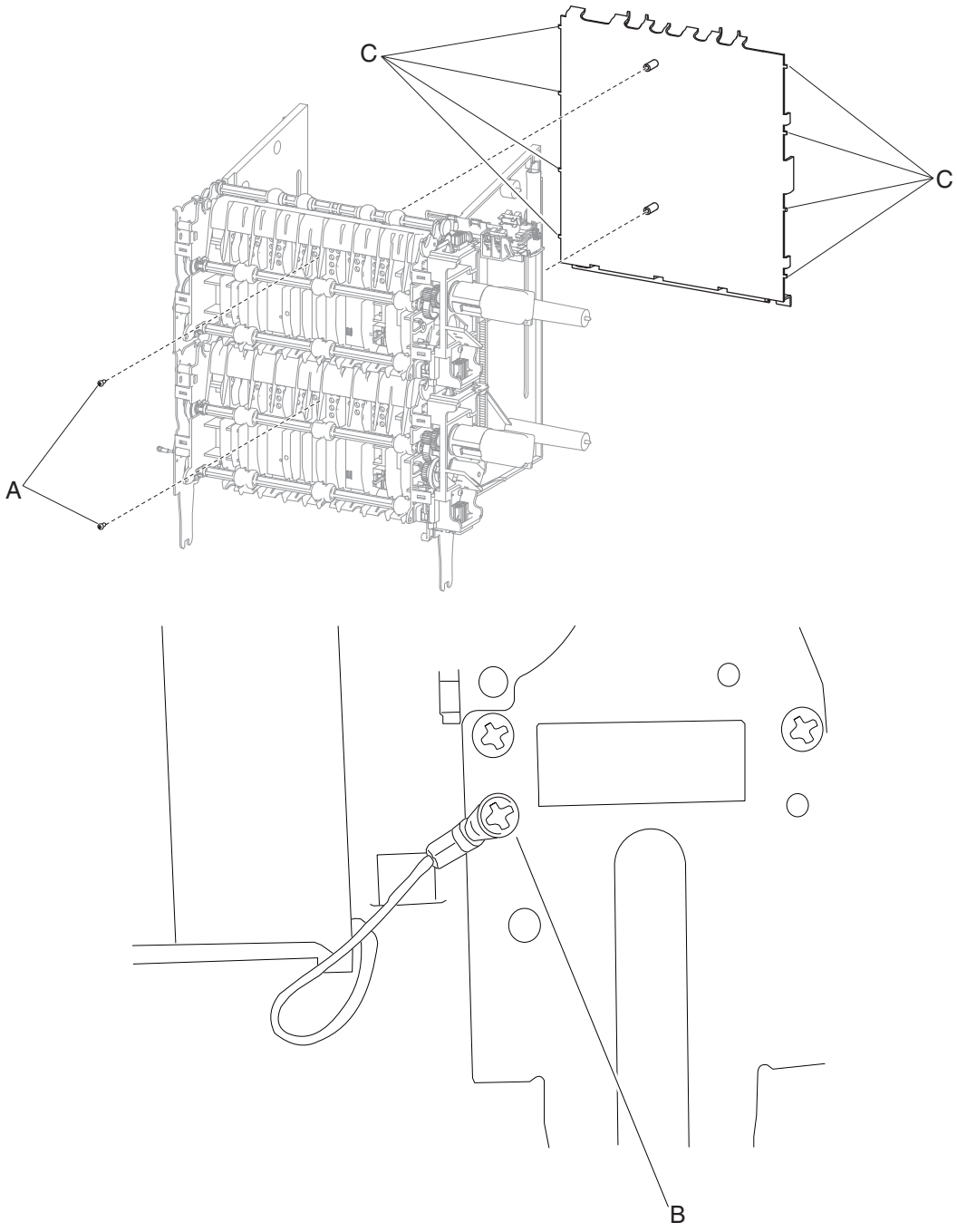
2 Remove the high capacity stacker standard output bin LED.

3 Carefully spread the left side of the high capacity stacker assembly and maneuver the media output bin from the assembly.



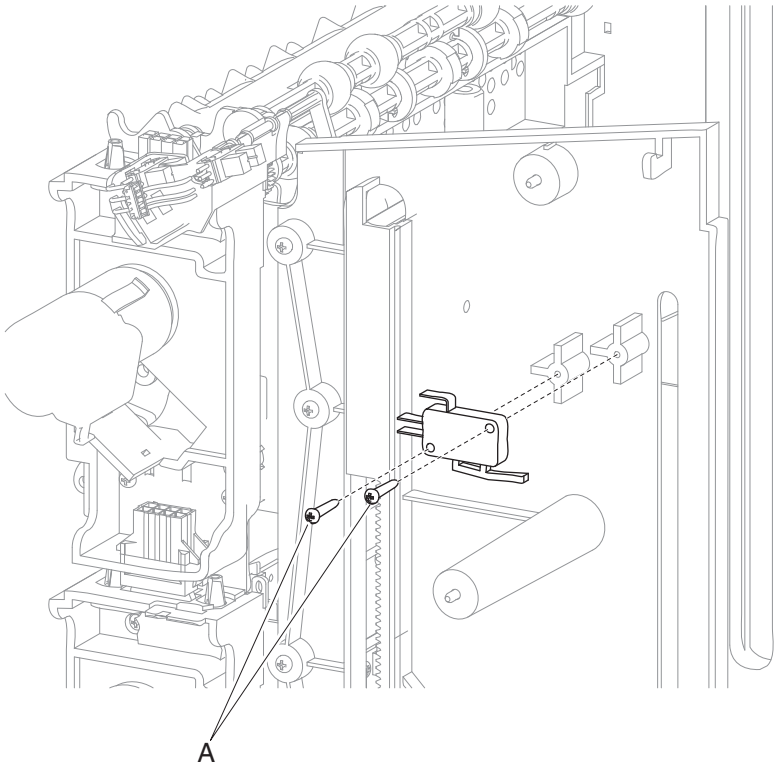
# High capacity stacker controller card cover panel removal

1. Remove the media output bin assembly. Go to **"High capacity stacker rear door assembly removal" on page 392**.
2. Remove the two screws (A) securing the controller card cover panel on the rear of the assembly.
3. Remove the screw (B) securing the ground strap to the right frame.
4. Flex the controller card cover panel by grasping the bottom middle of the panel and lifting it, releasing the tabs (C) from the left and right frame.



## High capacity stacker switch (media bin HP) removal

1. Remove the high capacity stacker controller card cover panel. Go to **"High capacity stacker controller card cover panel removal" on page 395**.
2. Remove the two screws (A) securing the high capacity stacker switch (media bin HP) to the left frame.

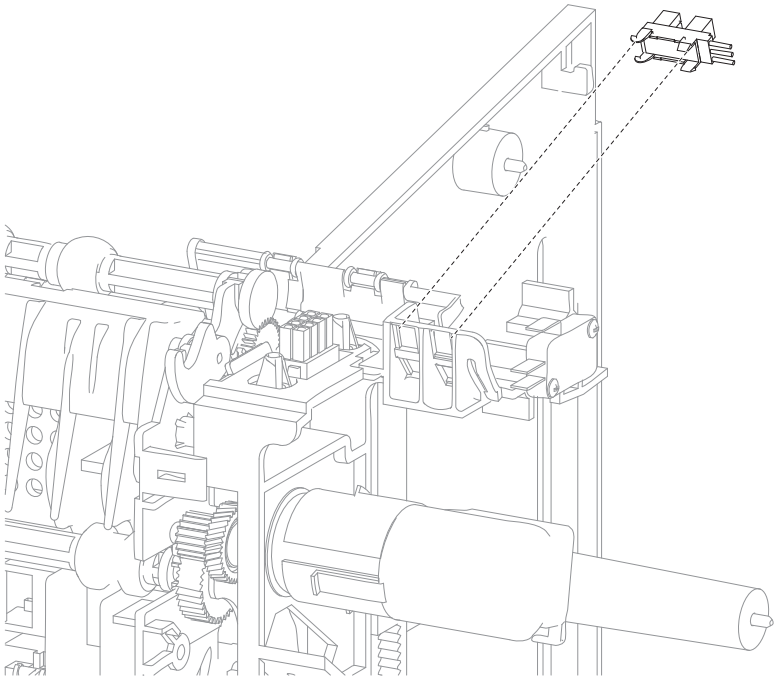



3. Disconnect the high capacity stacker switch (media bin HP) harness from the upper controller card.
4. Remove the high capacity stacker switch (media bin HP).

## High capacity stacker sensor (media bin full) assembly removal

1. Remove the high capacity stacker controller card cover panel. Go to **"High capacity stacker controller card cover panel removal" on page 395**.
2. Release the tabs securing the high capacity stacker sensor (media bin full) assembly to the left frame.
3. Disconnect the sensor (media bin full) harness from the upper controller card.

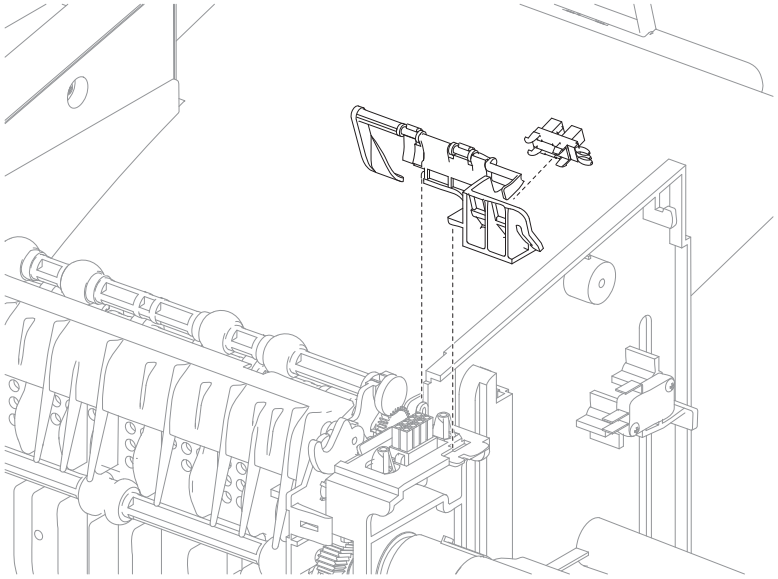
4 Remove the high capacity stacker sensor (media bin full) assembly.



## High capacity stacker sensor (media bin full) bracket assembly removal

1 Remove the high capacity stacker left cover. Go to **"High capacity stacker left cover removal" on page 394**.

2 Release the tab securing the bracket to the left frame.

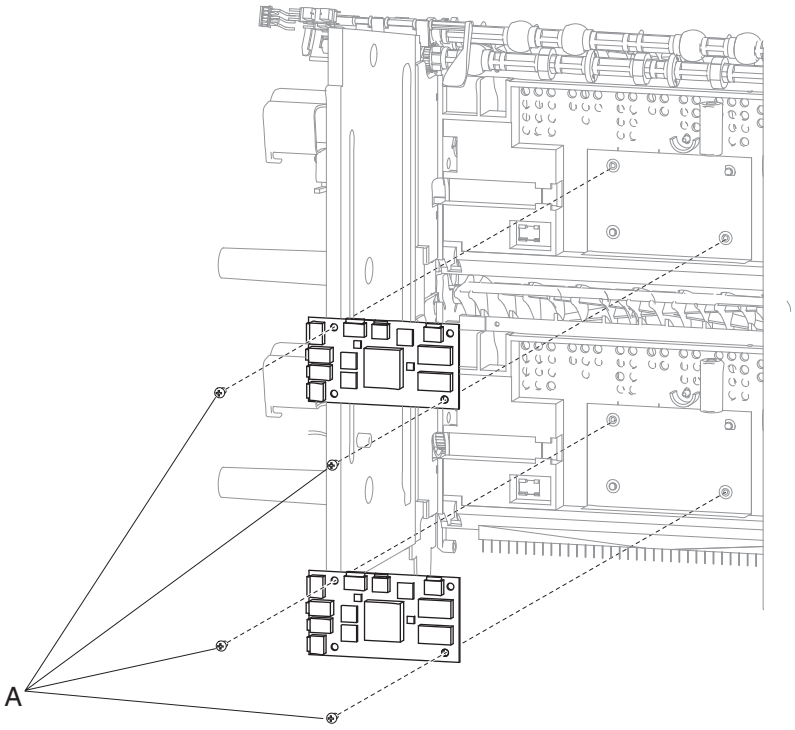


3 Remove the bracket from the frame and disconnect the sensor (media bin full) and media bin full actuator.

## High capacity stacker controller card assembly (upper and lower) removal

1. Remove the high capacity stacker controller card cover panel. Go to **"High capacity stacker controller card cover panel removal" on page 395**.
2. Disconnect the harnesses from the controller card.

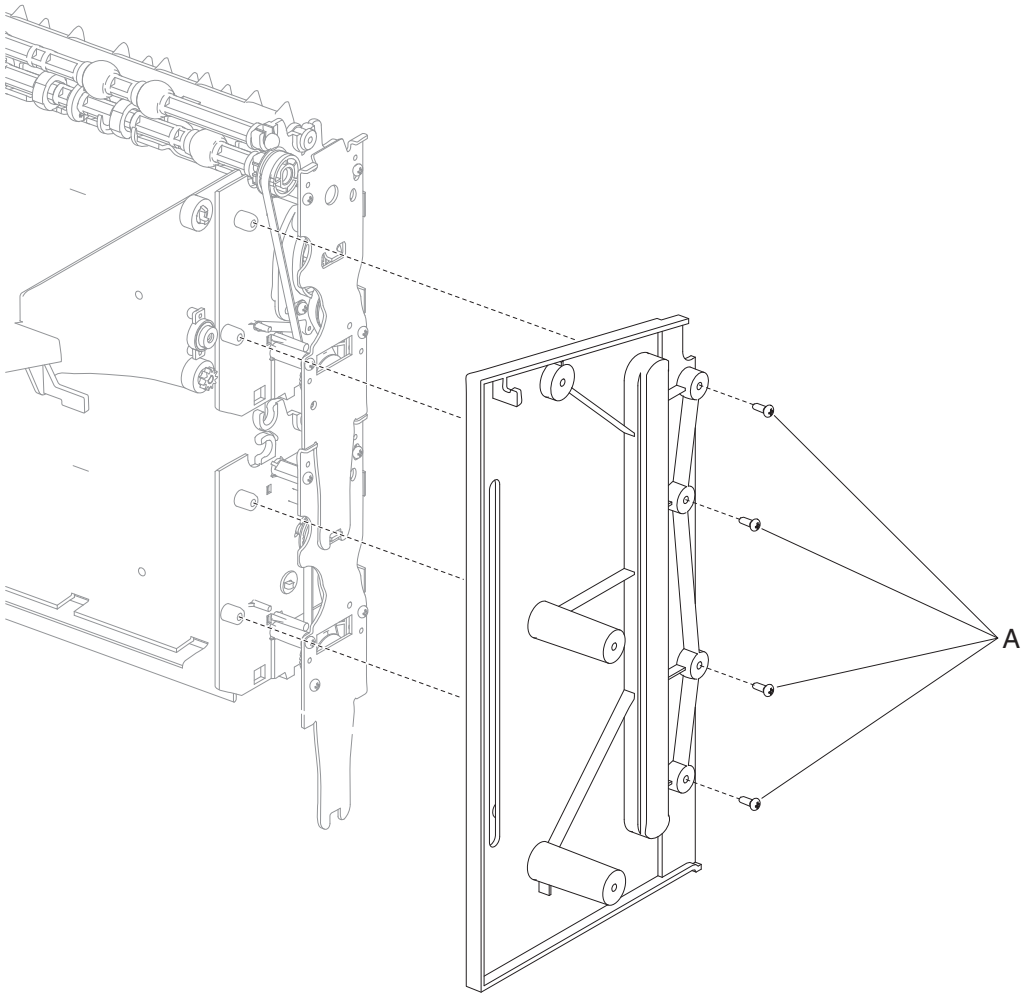
   **Note:** Pay careful attention to where the power input and output harnesses are attached.
3. Remove the two screws (A) securing the high capacity stacker controller card assembly and remove the card.




## High capacity stacker right frame removal

1. Remove the right media output bin recoil spring.
2. Remove the four screws (A) securing the right frame to the high capacity stacker assembly.

**3** Carefully remove the right frame.




**Note:** When installing the right frame, make sure the media output bin assembly is aligned properly.

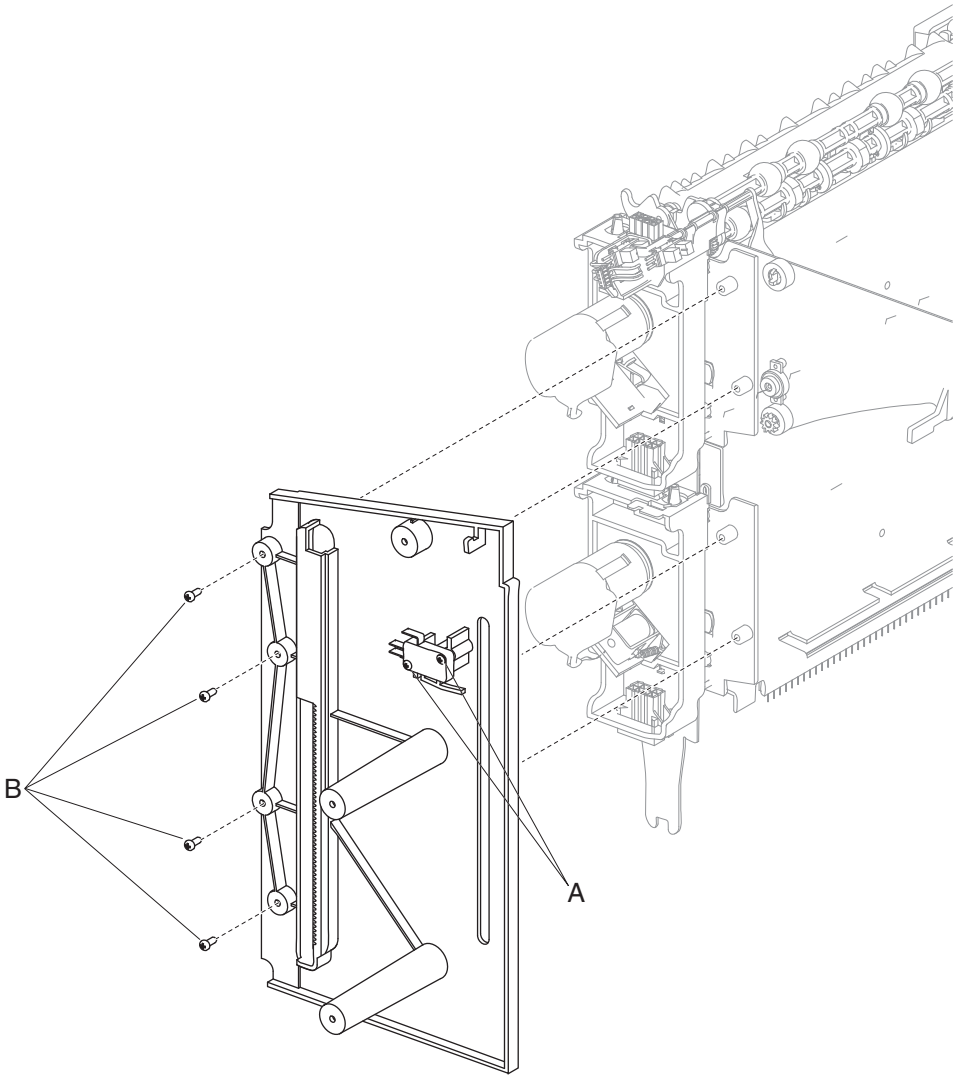
## High capacity stacker left frame removal

**1** Remove the left media output bin recoil spring.

**2** Remove the two screws (A) securing the switch (media bin HP) to the left frame.

**3** Remove the high capacity stacker standard output bin LED.

**4** Remove the four screws (B) securing the left frame to the high capacity stacker assembly.



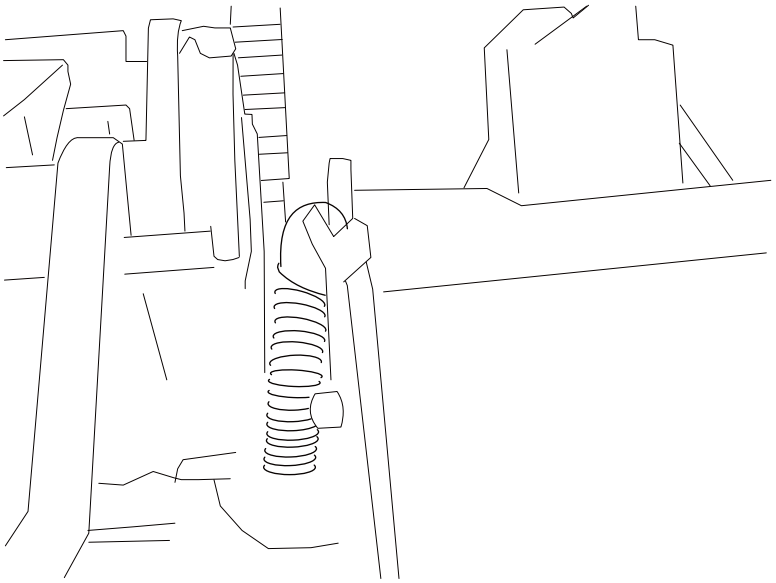

**5** Carefully remove the left frame.

**Note:** When installing the left frame, make sure the media output bin assembly is aligned properly.

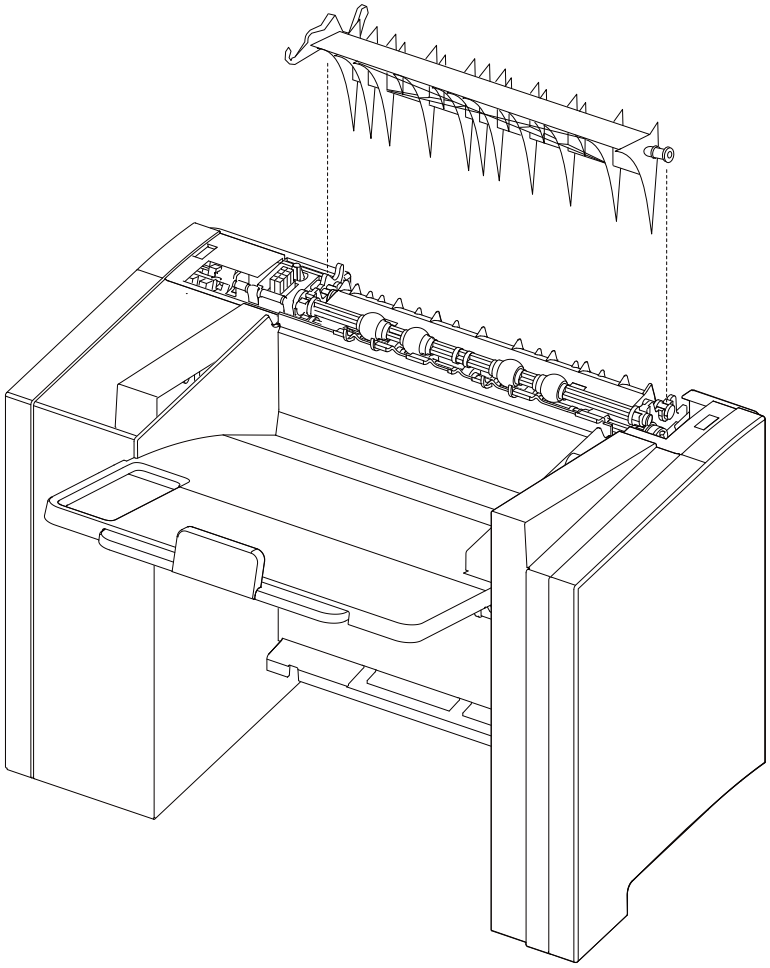
## High capacity stacker upper deflector gate removal

1 Remove the rear door assembly. Go to **“High capacity stacker rear door assembly removal” on page 392**.

2 With a spring hook, carefully remove the upper deflector gate spring and for ease of reassembly, temporarily hook the spring to the upper frame tab.



3 Unsnap each side of the deflector gate and remove.



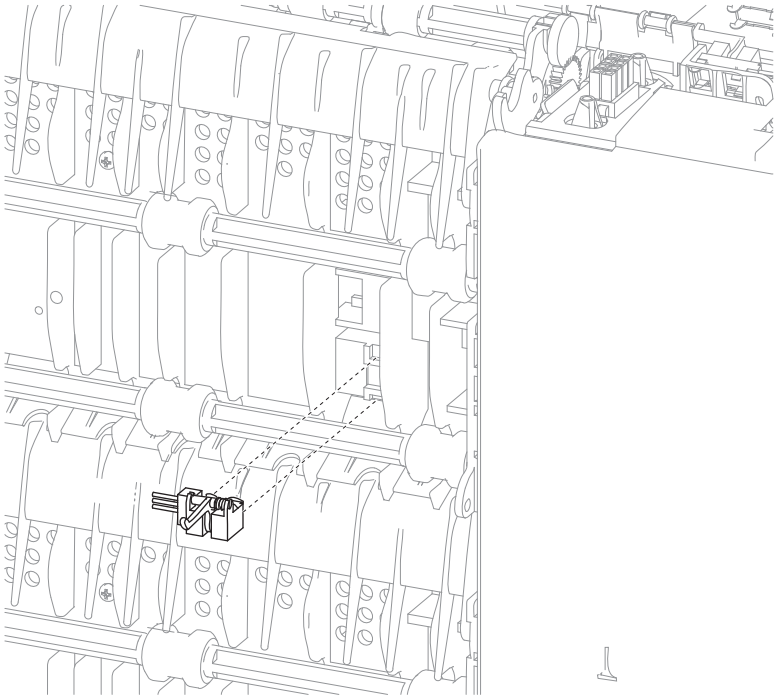
## Sensor (high capacity stacker pass through) removal

1 Remove the rear door assembly. Go to **“High capacity stacker rear door assembly removal” on page 392**.

2 Using needle-nose pliers or your finger, pull out and downward on the sensor (pass through) until the sensor unsnaps.

3 Remove the high capacity controller card cover panel. Go to **“High capacity stacker controller card cover panel removal” on page 395**.

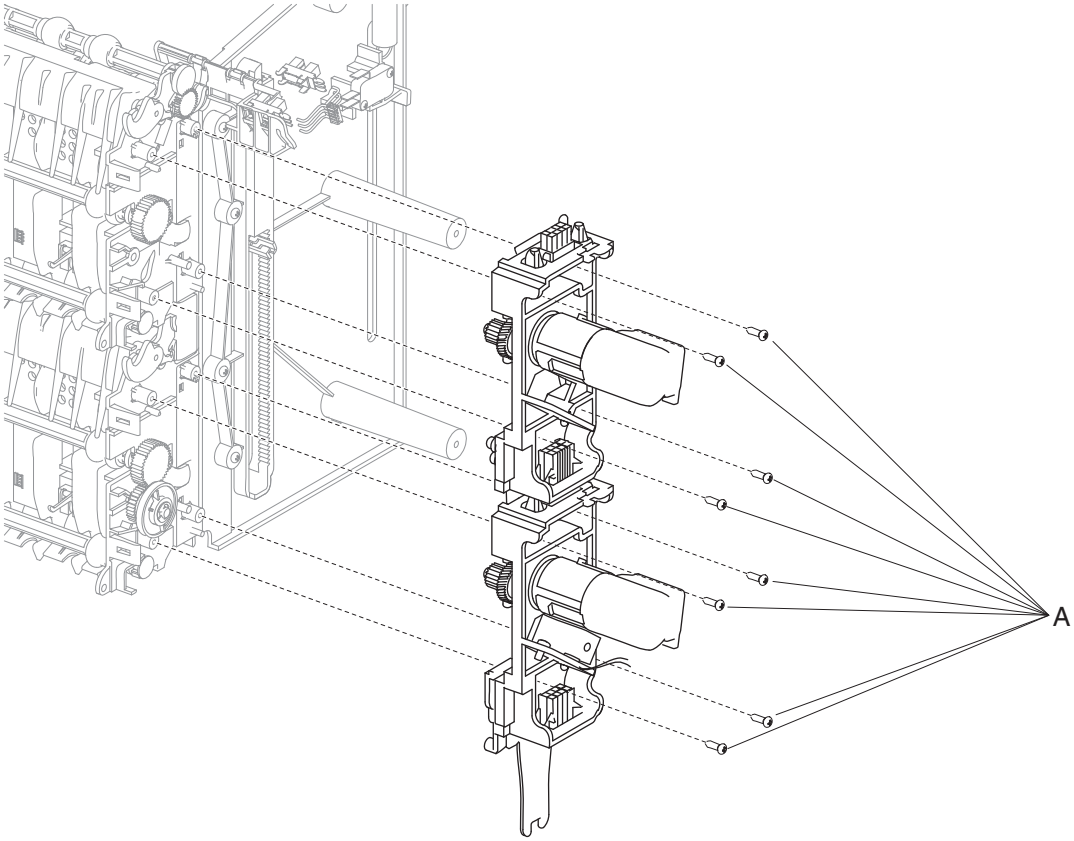
**4** Disconnect the sensor (pass through) harness from the controller card and remove the sensor.



## High capacity stacker left mounting bracket removal

1 Remove the high capacity stacker left cover. Go to **"High capacity stacker left cover removal" on page 394**.

2 Remove the eight screws (A) securing the high capacity stacker left mounting bracket.



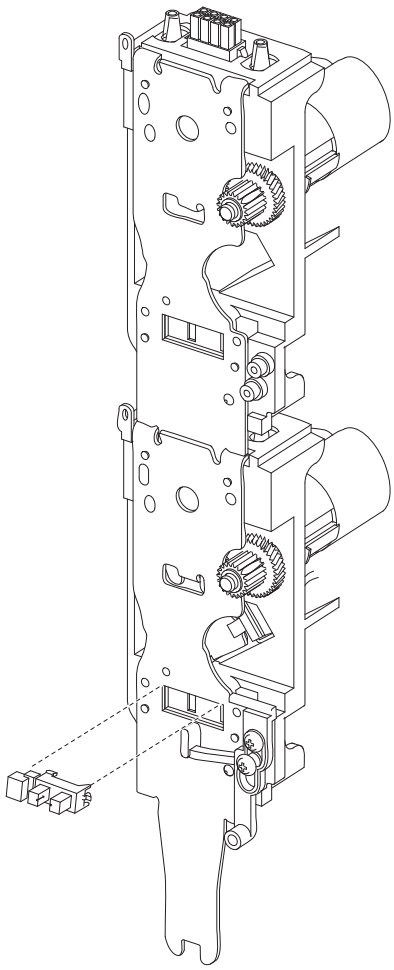

3 Pull the bracket up and let it rest on the assembly with the cables intact.

## Sensor (high capacity stacker deflector gate HP) removal

1 Remove the high capacity stacker left mounting bracket. Go to **"High capacity stacker left mounting bracket removal" on page 404**.

2 Remove the harness from the sensor.

**3** Unclip the sensor tabs and remove.

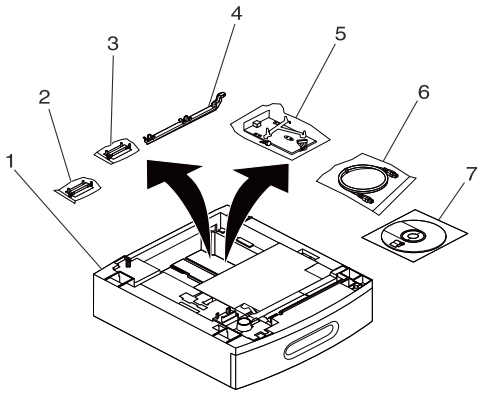


# Other removals

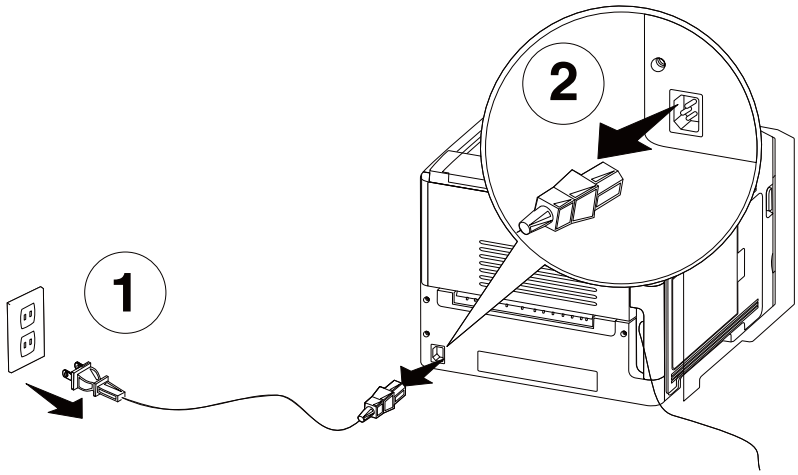
## RFID UHF option installation and removal

**1** Prepare the following RFID UHF option components:

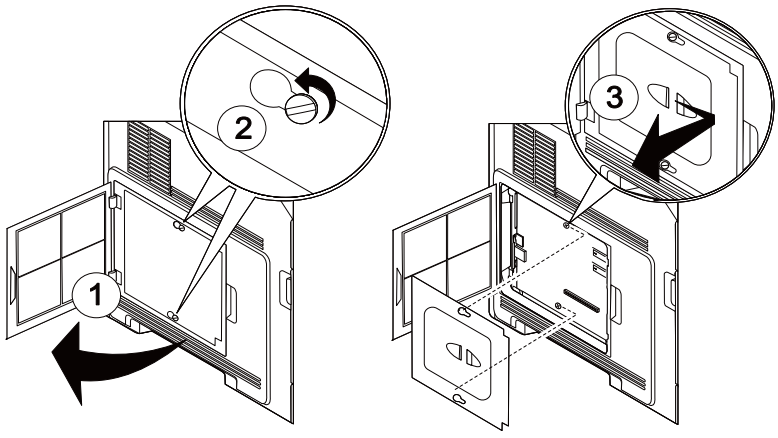
- **a** RFID UHF option
- **b** Firmware card
- **c** User flash card
- **d** Fuser wiper
- **e** Interface card, plastic tee, screw
- **f** RFID cable
- **g** Documentation CD



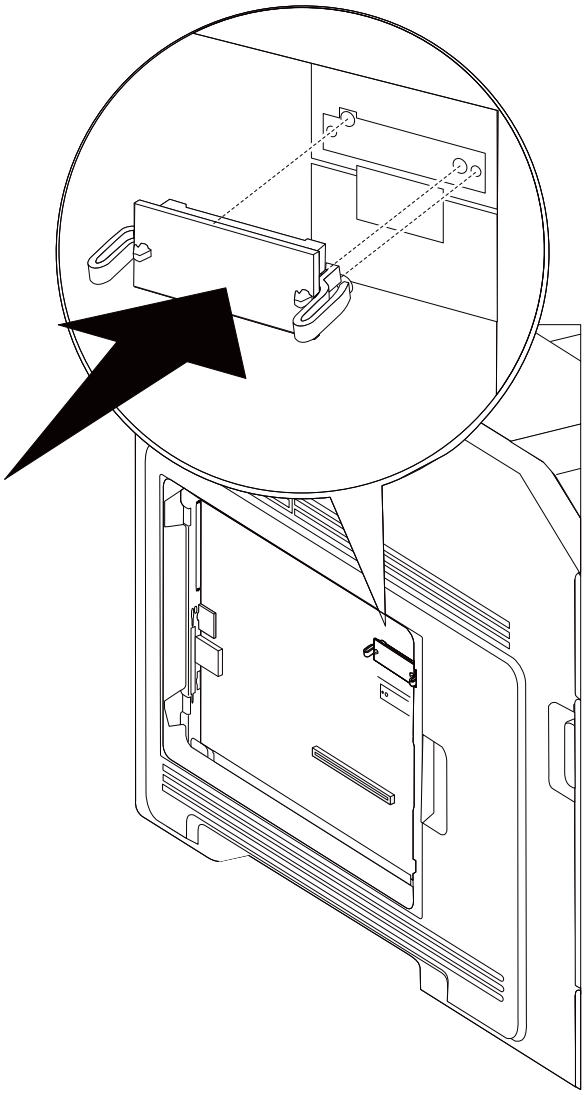

**2** Unplug the power cord from the electrical outlet, and then disconnect all cables from the printer.



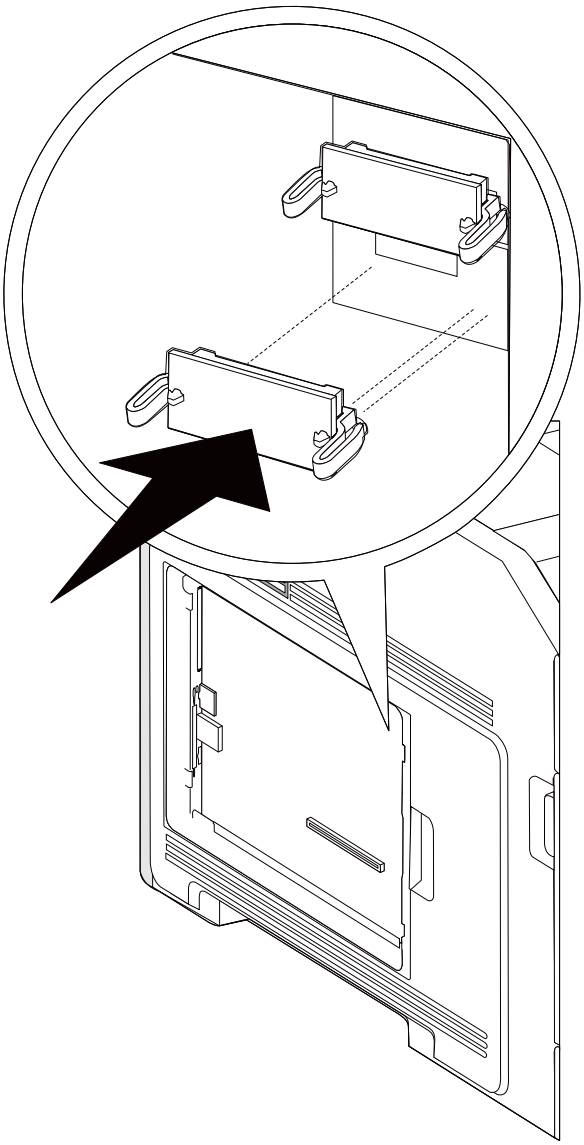

**3** Open the system board door, and loosen the screw on the system board cover. Remove the cover.



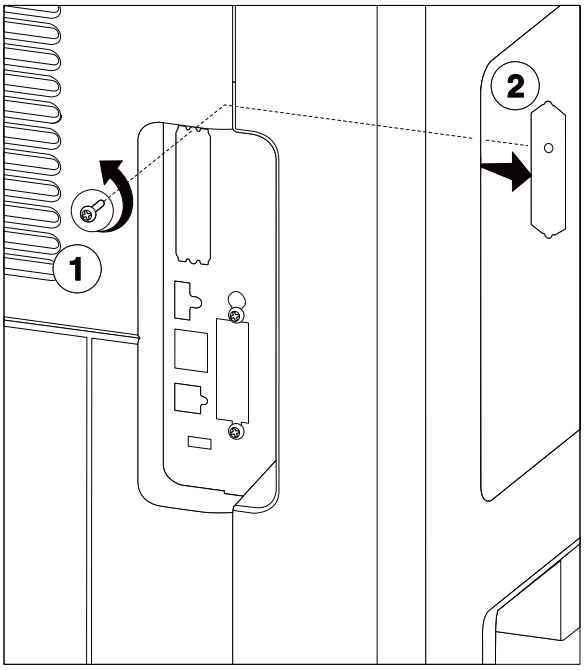
**4** Install the firmware card into the system board.



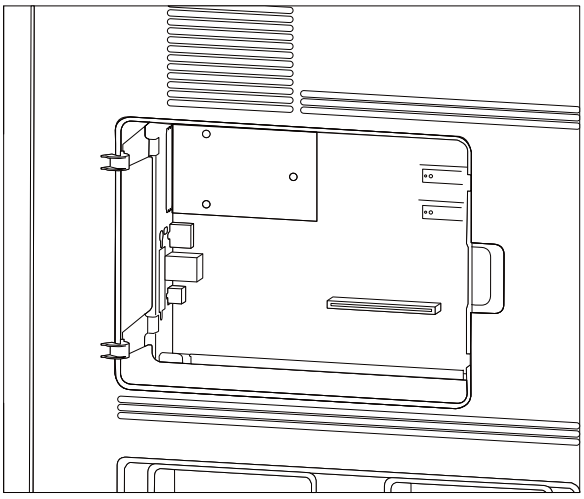
**5** Install the flash card into the system board.



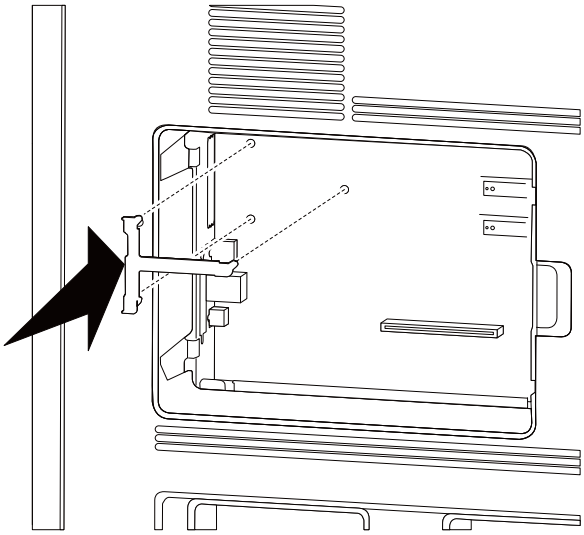
**6** Remove the metal cover from the system card opening.



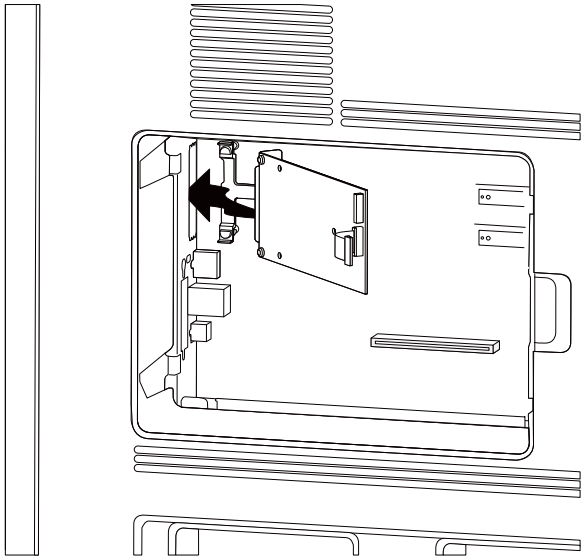

**7** Locate the interface card mounting area on the system board.



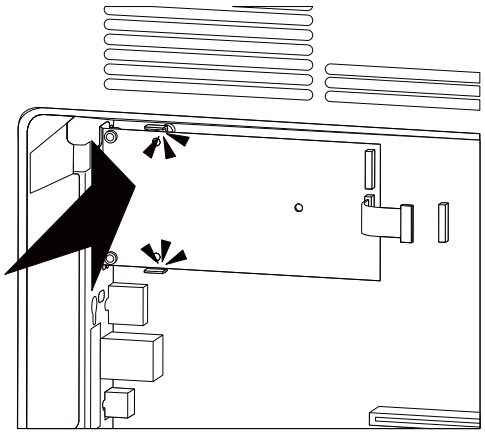
**8** Snap the plastic tee card holder into place on the system board.



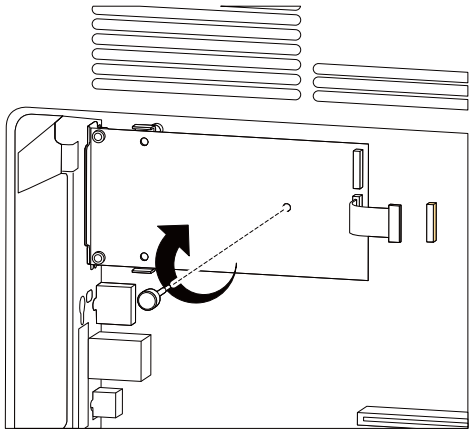
**9** Angle the interface card through the connector opening.



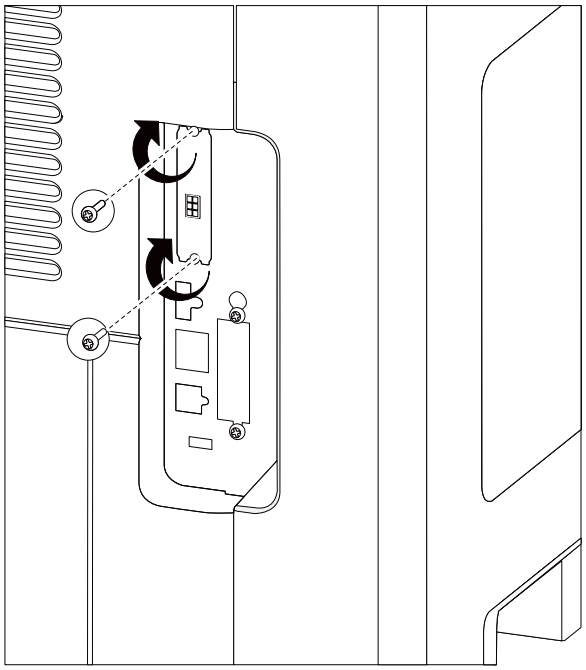
**10** Insert the interface card into the plastic tee card holder.



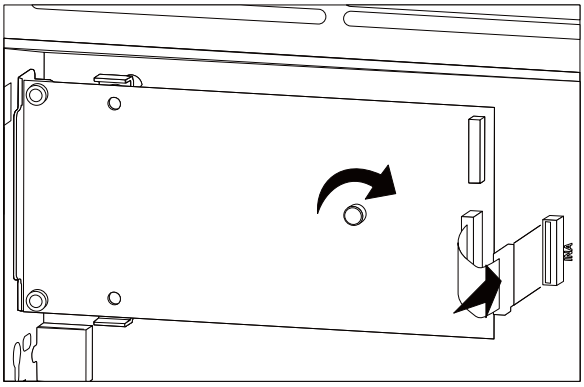
**11** Insert the long thumbscrew into the hole in the interface card. Turn it just enough to hold the card in place. Do not tighten yet.



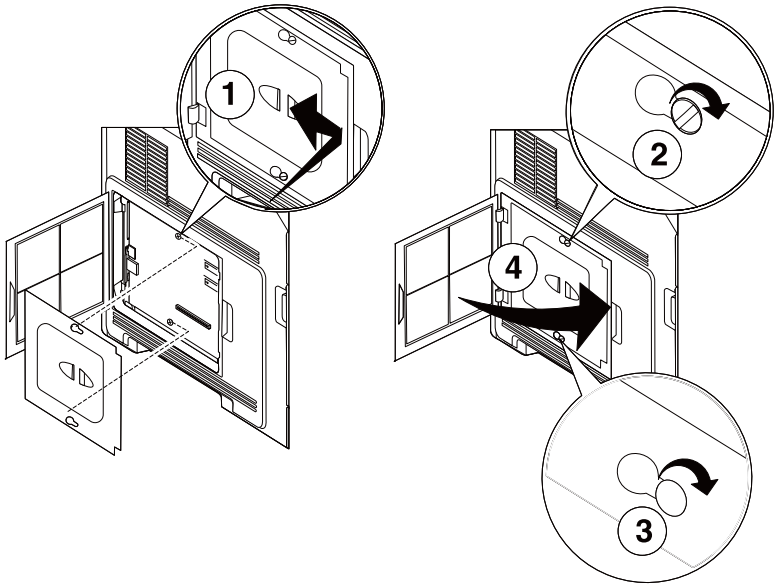
**12** Insert the screws to secure the mounting bracket to the system board.



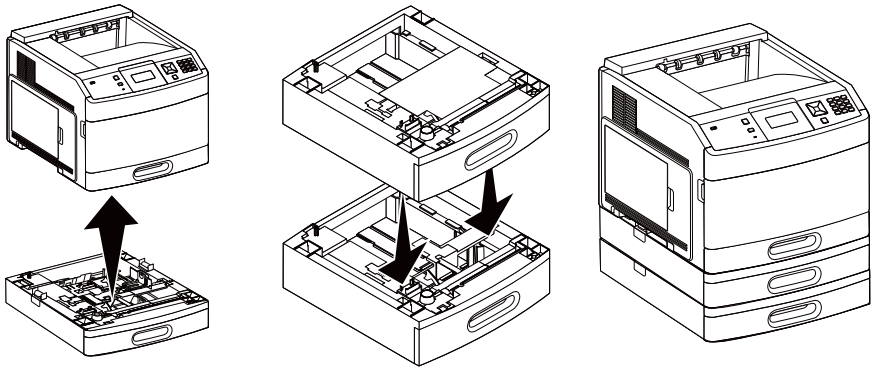
**13** Tighten the thumbscrew, and insert the interface card plug into the blue connector on the system board.



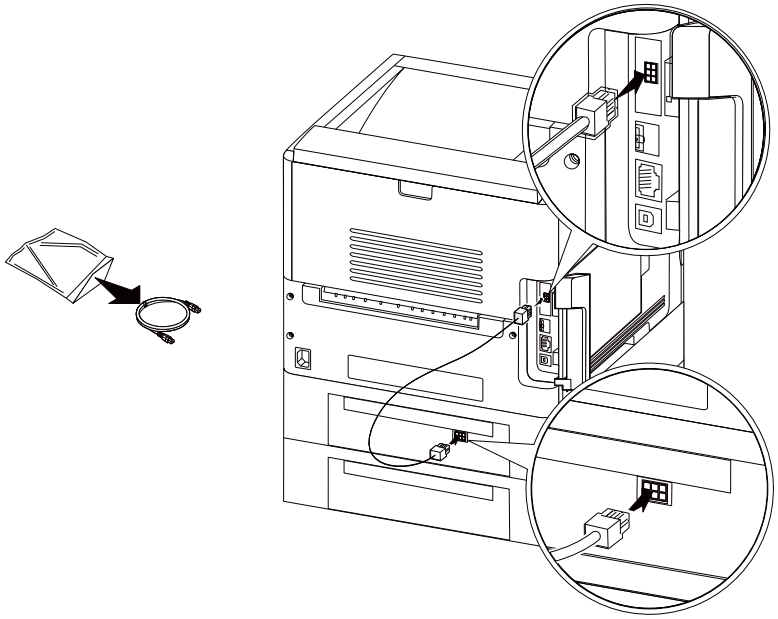
**14** Replace the system board cover.



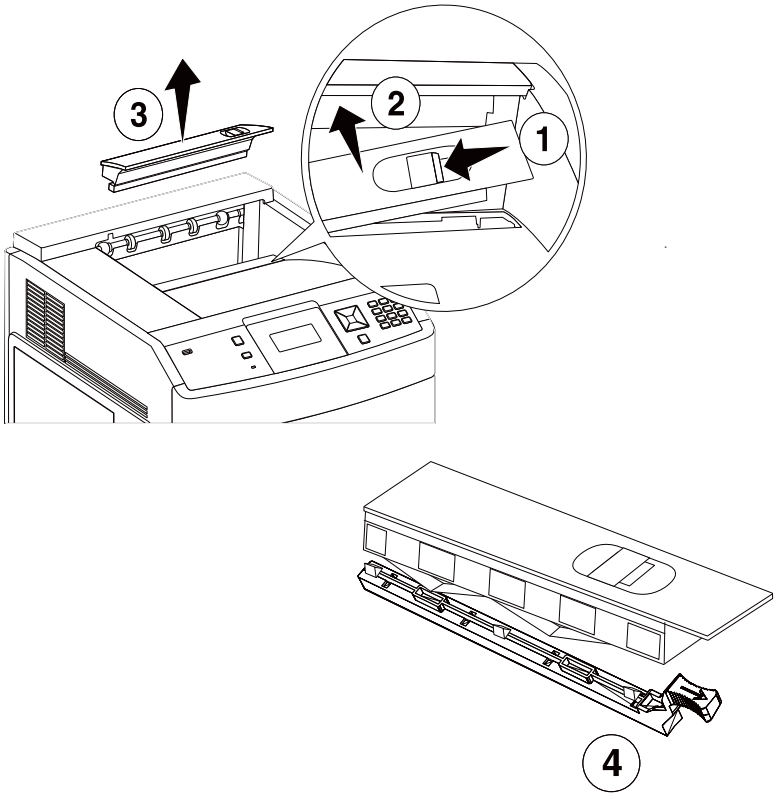

**15** Lift the printer off the 250/550 sheet optional drawer, place the RFID option on top of the drawer, and place the printer on top of the RFID option.



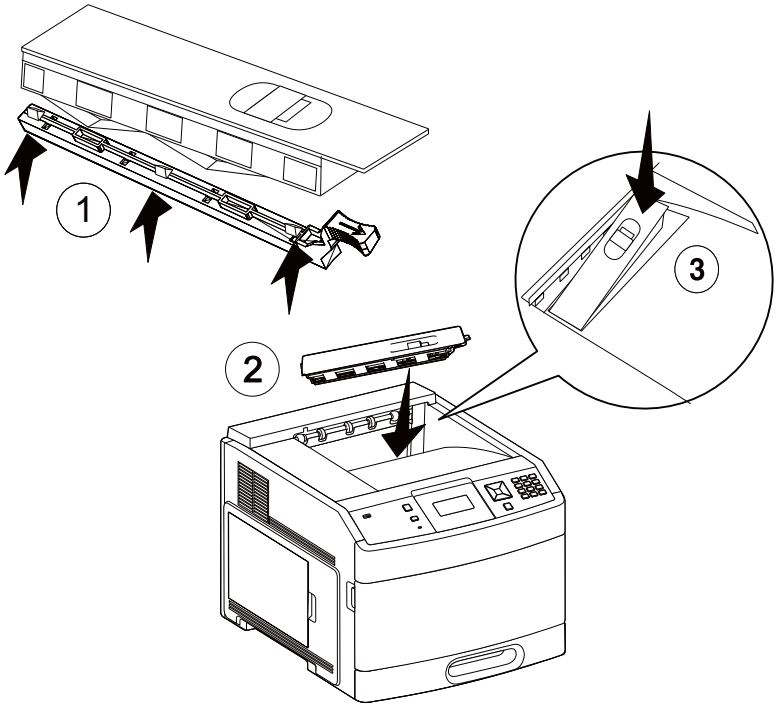
**16** Unpack the RFID cable, and attach between the RFID option and the interface card. Reconnect all printer cables.



**17** Remove the old fuser wiper (or blank).



**18** Install the new wiper. Turn the printer on.



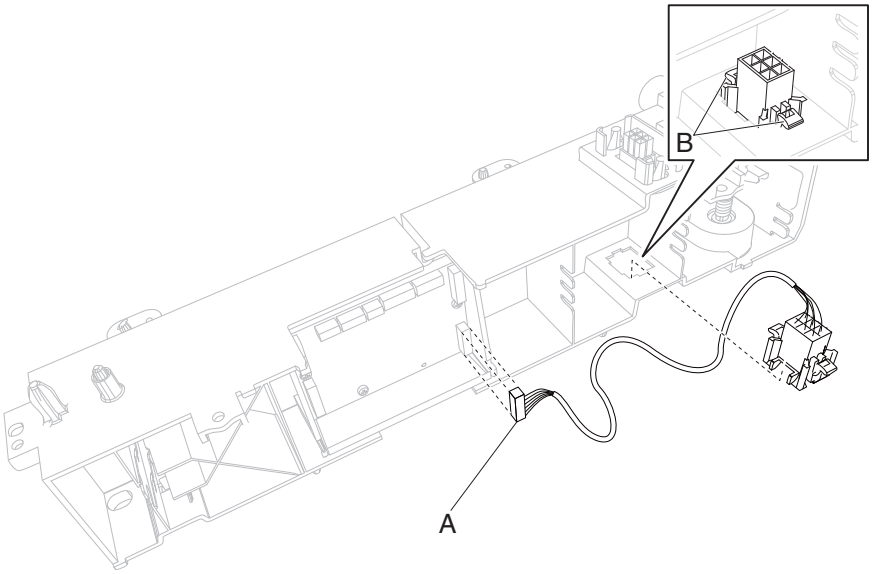

**19** To remove the RFID UHF option, reverse the order of installation.

## Lower interface cable assembly removal

**1** Remove the 550-sheet frame assembly. Go to **"Media size actuator removal" on page 417**.

**2** Disconnect the lower interface cable connector (A) from the 550-sheet controller card.

**3** Pinch the options auto connect (B) to separate the lower interface cable assembly from the 550-sheet frame.

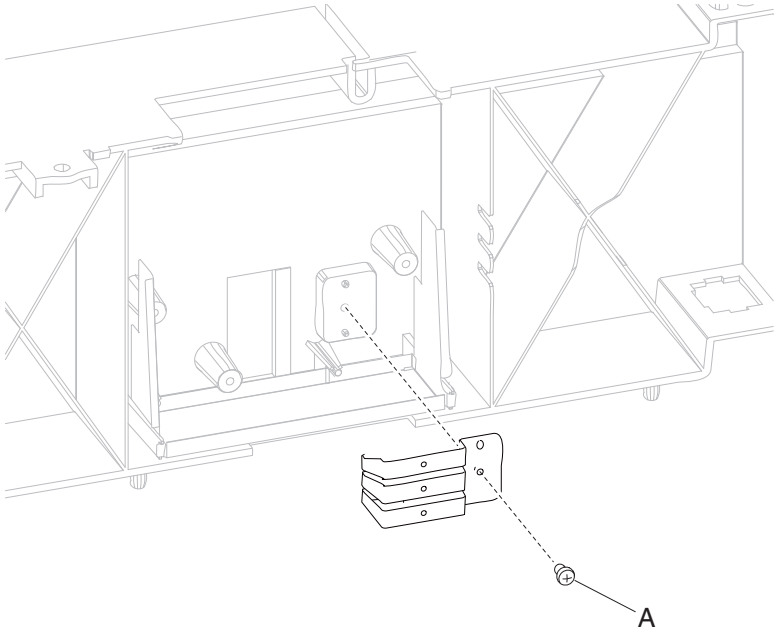



**4** Remove the lower interface cable assembly.

## Media size actuator removal

**Note:** Carefully remove the base machine from the input option tray assembly before proceeding.

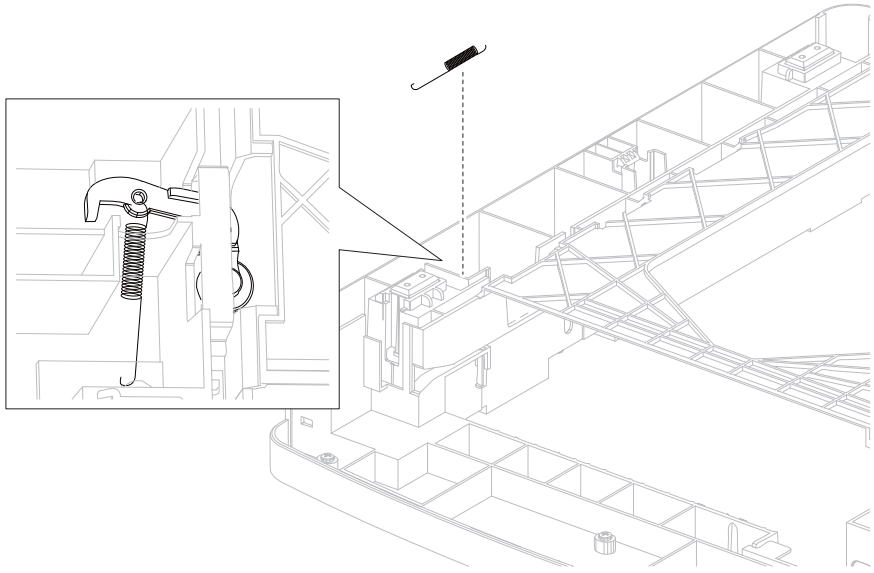
1. Remove the 250-sheet controller card assembly. Go to **"250-sheet tray controller card assembly removal" on page 364**.
2. Remove the screw (A) securing the media size actuator to the 250-sheet frame.




3. Remove the media size actuator.

## Media tray catch spring removal

1. Remove the 250-sheet frame assembly. Go to **"250-sheet tray frame assembly removal" on page 363**.
2. Turn the drawer upside down to access the media tray catch spring.



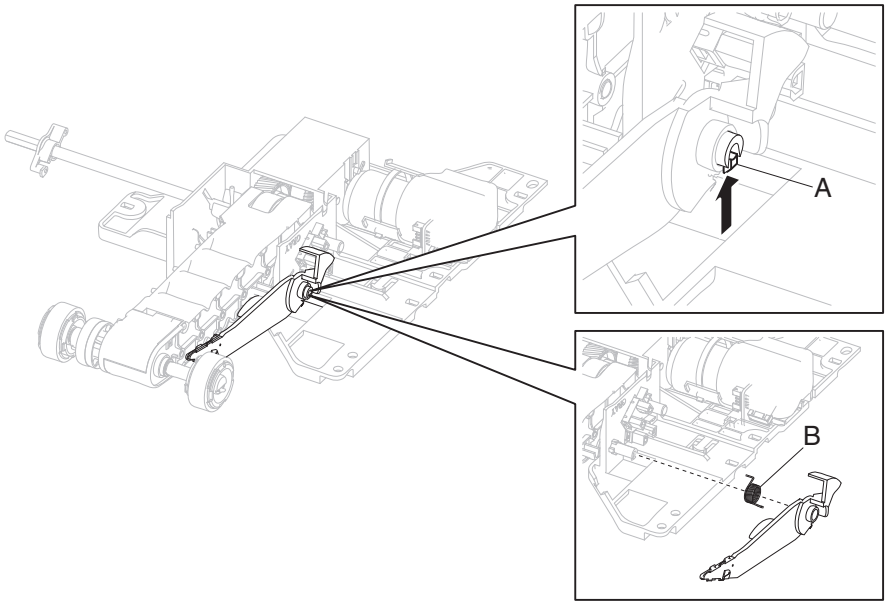
3 Release the media tray catch spring.

## T652 and T654 media out actuator removal

1 Remove the 550-sheet pick arm bracket assembly. Go to **"550-sheet tray pick arm bracket assembly removal" on page 366**.

2 Release the hook (A) securing the media out actuator with spring to the 550-sheet pick arm bracket assembly.

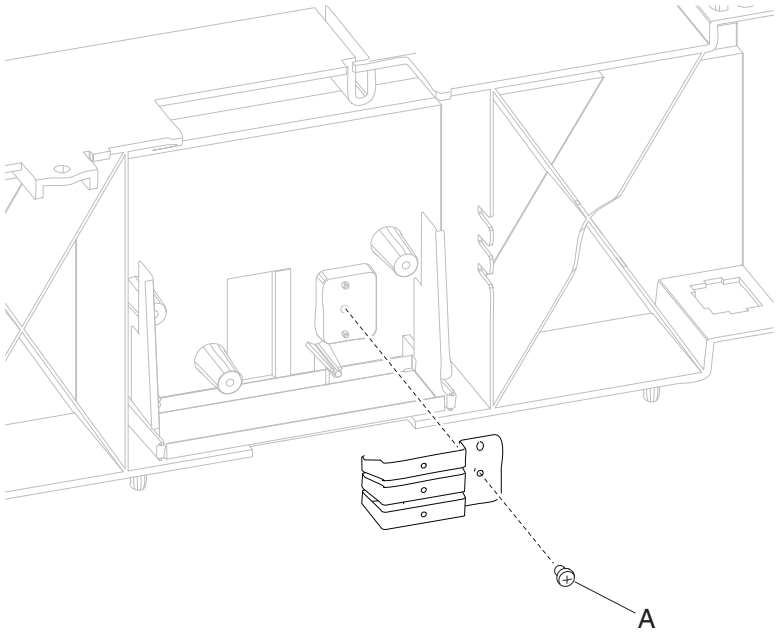
3 Detach the spring (B) from the media out actuator.



## Media size actuator removal

1 Remove the 550-sheet controller card assembly. Go to **"550-sheet tray controller card assembly removal" on page 370**.

2 Remove the screw (A) securing the media size actuator to the 550-sheet frame.



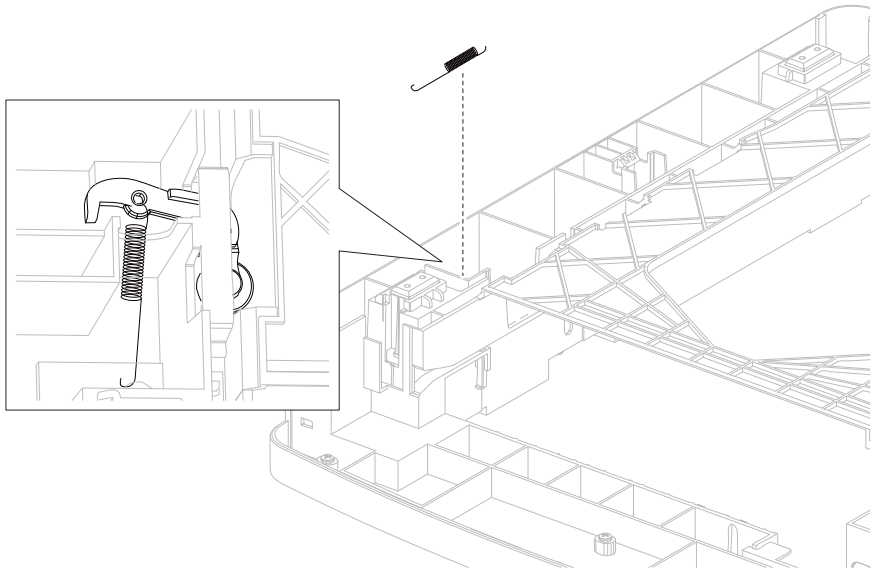

3 Remove the media size actuator.

## Media tray catch spring removal

1 Remove the 550-sheet frame assembly. Go to **"Media size actuator removal" on page 417**.

2 Turn the drawer over so that you can access the media tray catch spring.

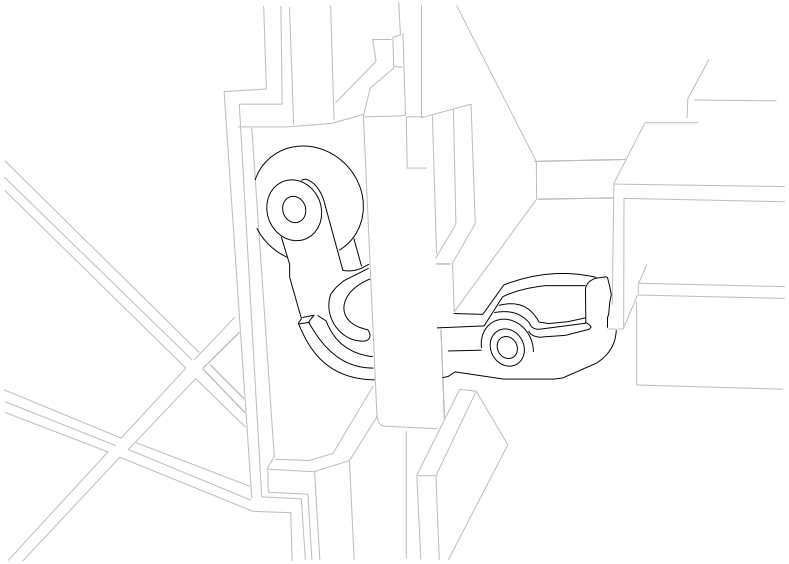
3 Release the media tray catch spring.



## Media tray roller catch assembly removal

1 Remove the media tray catch spring. Go to **"Media tray catch spring removal" on page 417**.

2 Remove the tray roller catch assembly from the drawer.

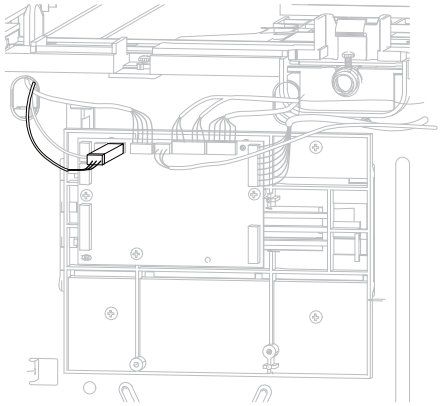


## Sensor (HCIT tray raised HP) with cable assembly removal

**Note:** Carefully remove the base machine from the HCIT tray assembly before proceeding.

1 Remove the HCIT cover, left. Go to **"High capacity input tray (HCIT) cover, left removal" on page 380**.

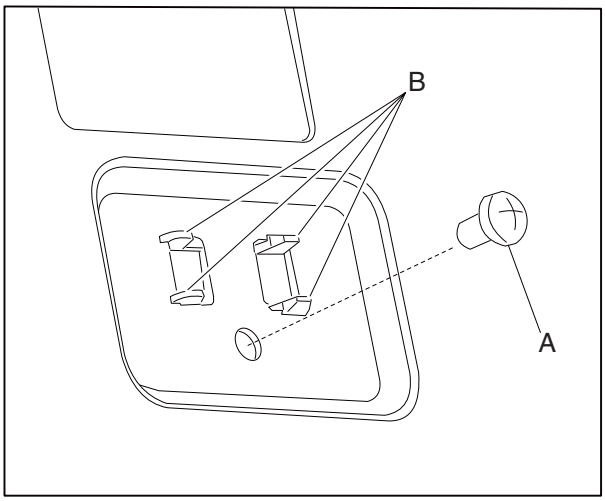
2 Disconnect the sensor (HCIT tray raised HP) cable connector from the HCIT controller card assembly.

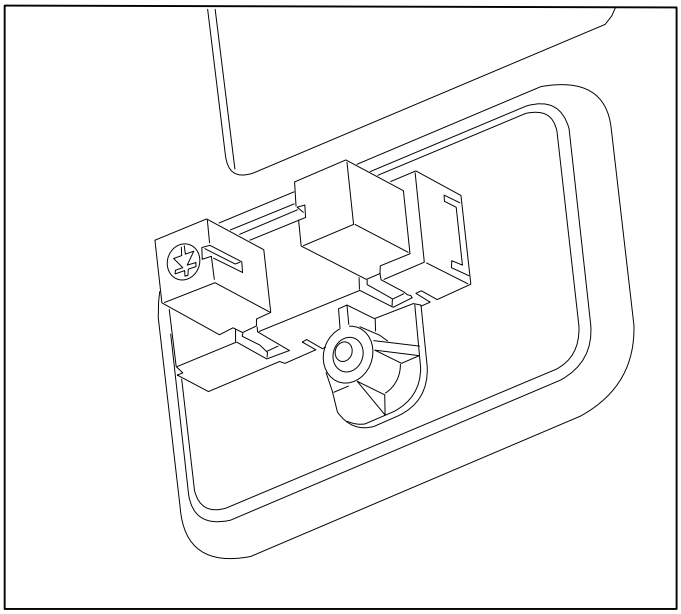


**Note:** Remove the cable from the restraints, and observe the routing for reinstallation.

3 Remove the screw (A) securing the sensor to the rear frame.

**4** Release the hooks (B) securing the sensor to the rear frame.



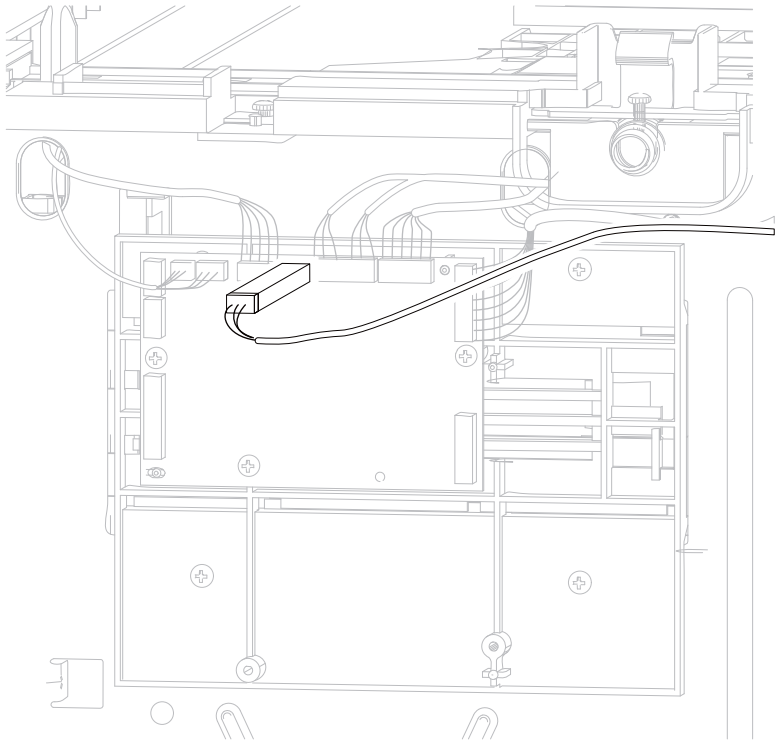



**5** Remove the sensor (HCIT tray raised HP).

## Sensor (HCIT pass through) with cable removal

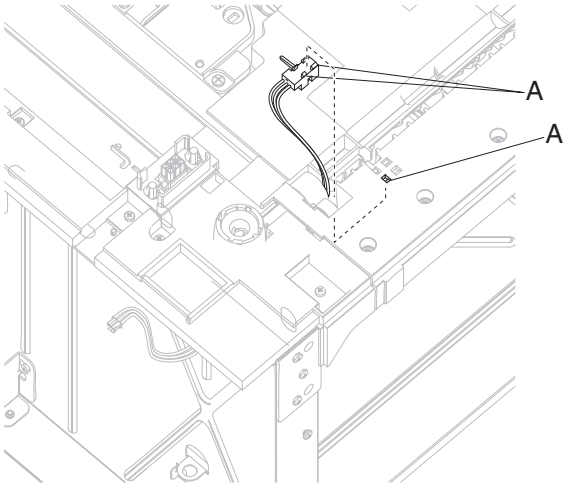
**Note:** Carefully remove the base machine from the HCIT tray assembly before proceeding.

1. Remove the HCIT cover, left. Go to **"High capacity input tray (HCIT) cover, left removal" on page 380**.
2. Disconnect the sensor (HCIT pass through) cable connector from the HCIT controller card assembly.



**Note:** Remove the cable restraint, and observe the routing for reinstallation.

3. Release the hooks (A) securing the sensor (HCIT pass through) to the machine.
4. Remove the sensor (HCIT pass through) with cable from the top plate.

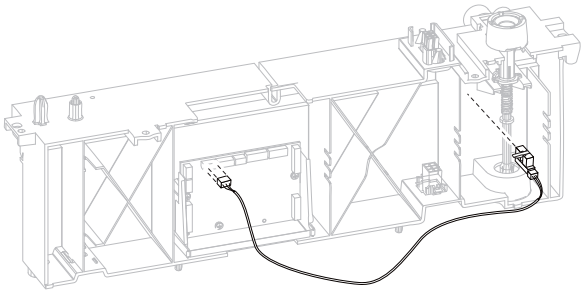


## Sensor (pass through) with cable removal

1 Remove the 250-sheet frame assembly. Go to **"250-sheet tray frame assembly removal" on page 363**.

2 Disconnect the sensor (pass through) cable connector from the 250-sheet controller card.

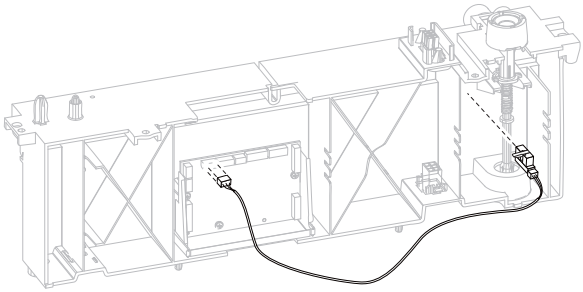
3 Remove the sensor (pass through) with cable.



## Sensor (pass through) with cable removal

1 Remove the 550-sheet frame assembly. Go to **"550-sheet tray frame assembly removal" on page 368**.

2 Disconnect the sensor (pass through) cable connector from the 550-sheet controller card.

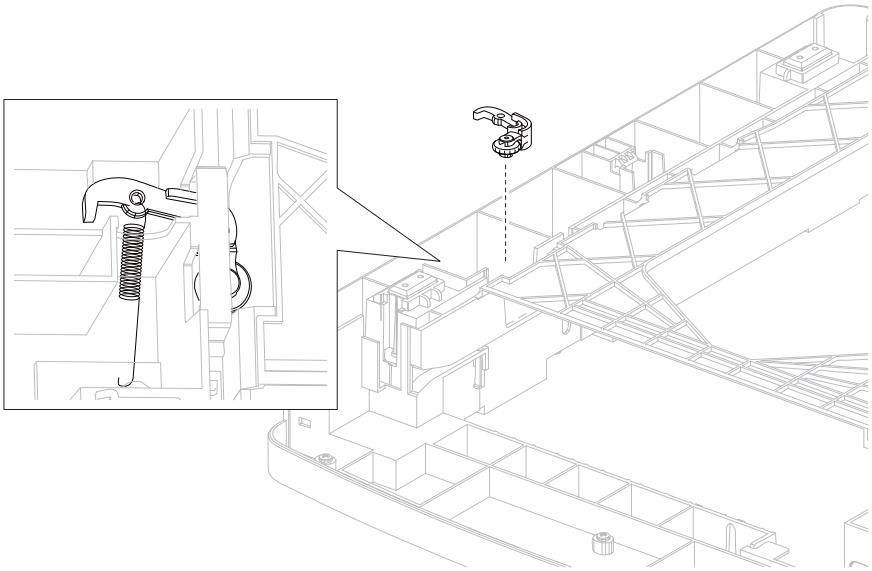


3 Remove the sensor (pass through) with cable.

## Tray roller catch assembly removal

1 Remove the media tray catch spring. Go to **"Media tray catch spring removal" on page 415**.

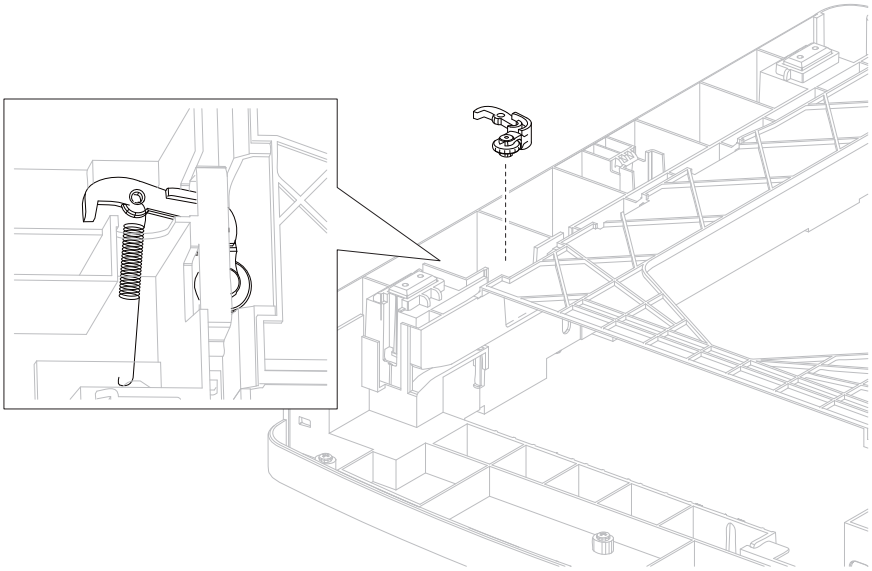
2 Remove the tray roller catch assembly from the drawer.



## Tray roller catch assembly removal

1 Remove the media tray catch spring. Go to **"Media tray catch spring removal" on page 417**.

2 Remove the tray roller catch assembly from the drawer.

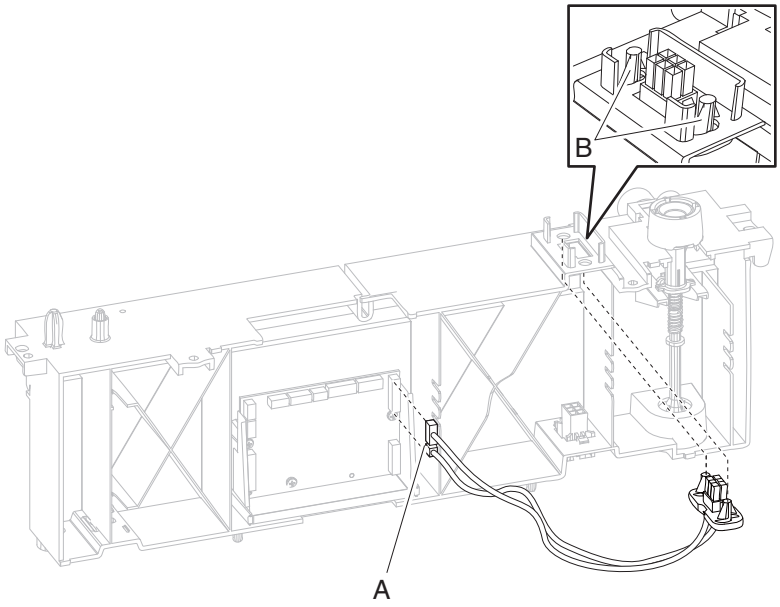


## Upper interface cable assembly removal

1 Remove the 550-sheet frame assembly. Go to **"Media size actuator removal" on page 417**.

2 Disconnect the upper interface cable connector (A) from the 550-sheet controller card.

3 Release the two hooks (B) securing the options auto connect to the 550-sheet frame.



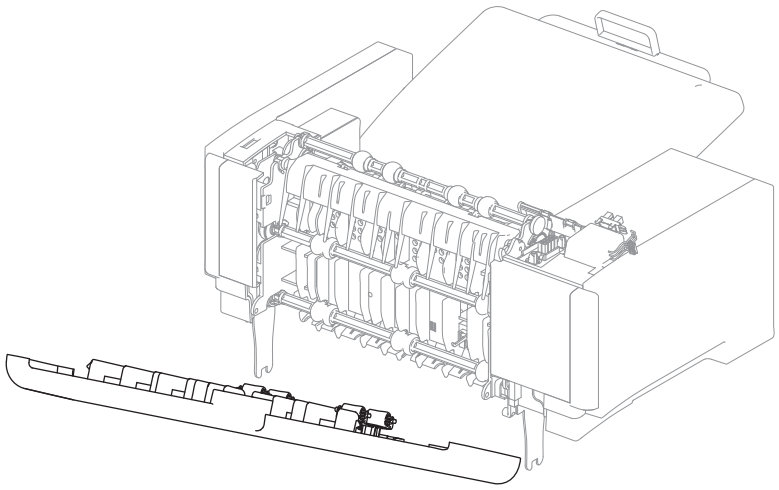

4 Remove the upper interface cable assembly.

# Output expander removals

## Output expander rear door assembly removal

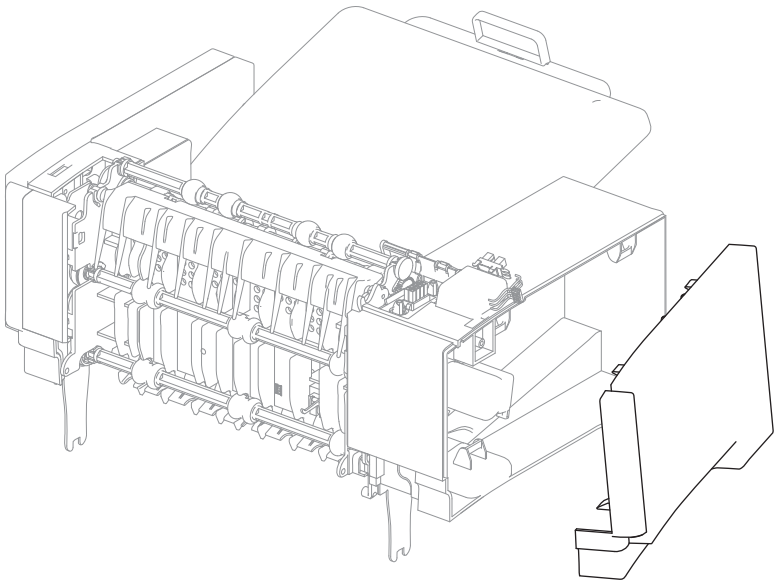
1 Open the rear door assembly.

2 Hold the door to approximately 45° angle, and force out the left hinge and slide the right hinge out to remove the door.



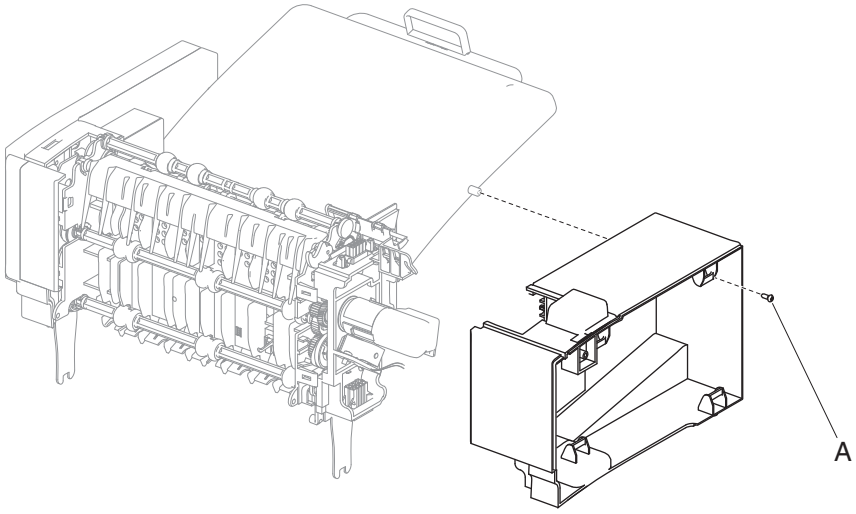
## Output expander left outer cover removal

1. Remove the output expander rear door assembly. Go to **"Output expander rear door assembly removal" on page 423**.
2. Grasp the lower rear corner of the left outer cover and pull out to remove.



## Output expander left inner cover removal

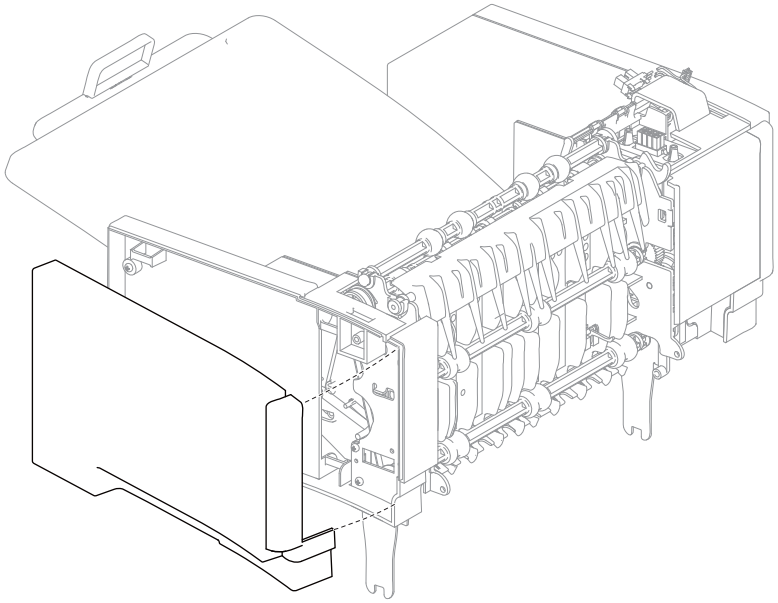
1. Remove the output expander left outer cover. Go to **"Output expander left outer cover removal" on page 424**.
2. Remove the screw (A) securing the left inner cover.




3. Holding the rear of the left inner cover, pull out while simultaneously separating it from the option.

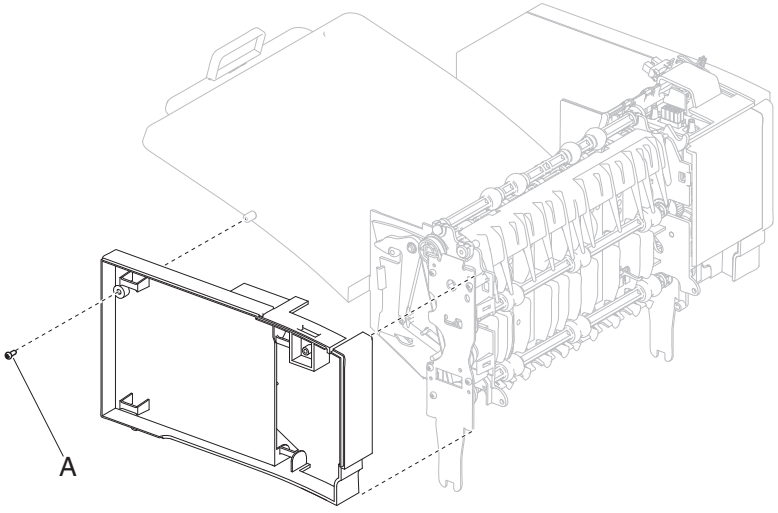
## Output expander right outer cover removal

1. Remove the output expander rear door assembly. Go to **"Output expander rear door assembly removal" on page 423**.
2. Grasp the lower rear corner of the right outer cover and pull out to remove.



## Output expander right inner cover removal

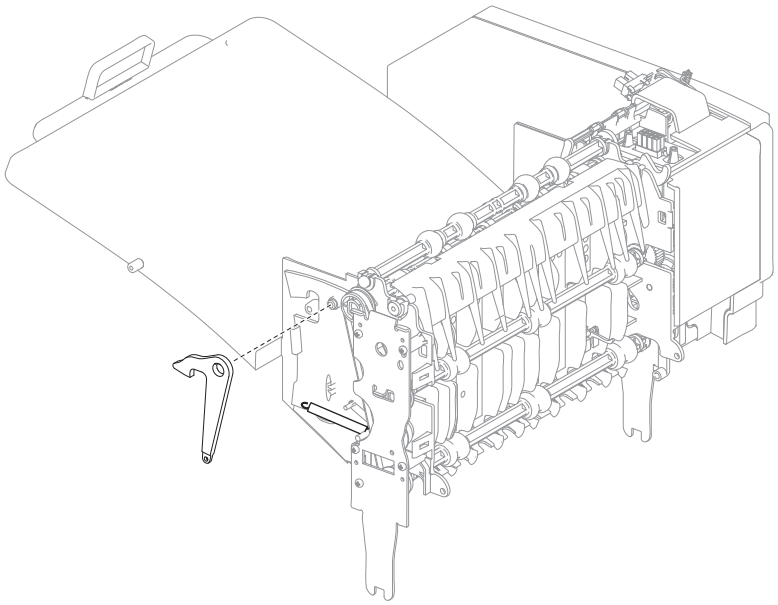
1. Remove the output expander right outer cover. Go to **"Output expander right outer cover removal" on page 425**.
2. Remove the screw (A) securing the right inner cover to the unit.




3. At the rear of the right inner cover, pull out from the option and remove the right inner cover.

## Output expander media bin latch (left and right) removal

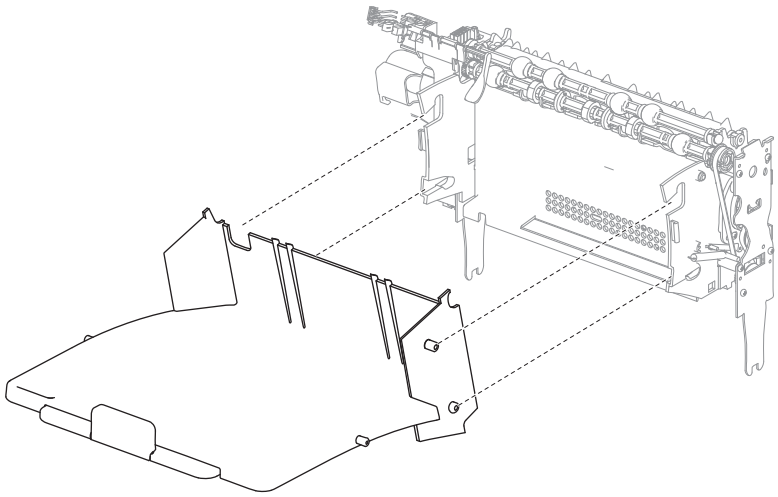
1. Remove the output expander left or right inner cover. Go to **"Output expander left inner cover removal" on page 424** or **"Output expander right inner cover removal" on page 425**.
2. If removing the right side media bin latch, use a springhook to pull the media bin latch spring off the spring post on the output expander frame.
3. If removing the left side media bin latch, just pull out on the bottom of the latch and pull the top off the boss.
4. Pull the media bin latch from its boss to remove.



## Output expander media output bin assembly removal

1. Remove the left and right output expander media bin latches. Go to **"Output expander media bin latch (left and right) removal" on page 426**.
2. Remove the standard output bin LED. Go to **"Sensor (output expander pass through) removal" on page 431**.

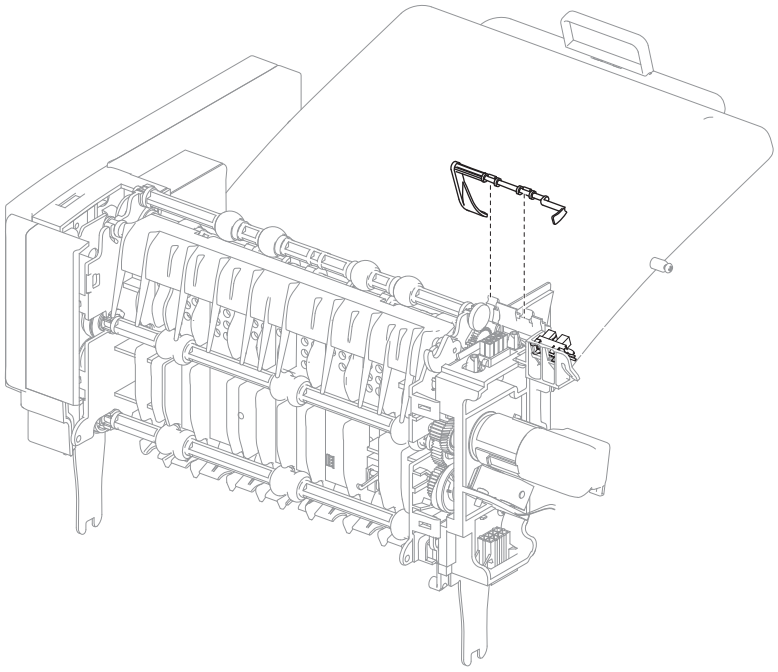
3 Rotate the output bin assembly downward and out of the slots to remove.



## Output expander media bin full actuator removal

1 Remove the output expander left inner cover. Go to **"Output expander left inner cover removal" on page 424**.

2 Unsnap the actuator from its hinges and pull out to remove.



## Output expander sensors (media bin full) assembly removal

1 Remove the output bin left inner cover. Go to **"Output expander left inner cover removal" on page 424**.

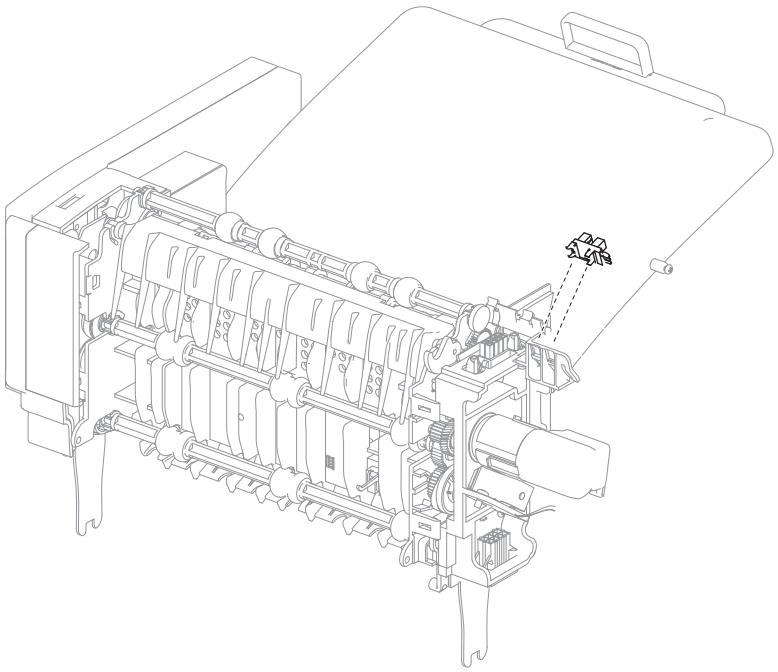
2 Untwist the sensor harnesses from the cable guide.

3 Release the tabs securing the sensors (media bin full) and remove.

**Installation note:** Be sure to replace the sensors in the correct order. Make sure their positions are not switched.

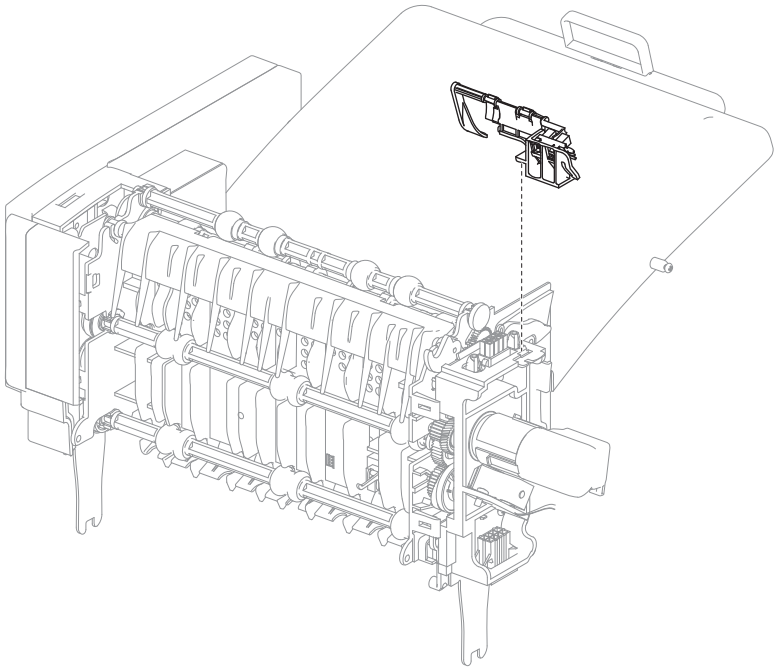
4 Remove the output expander controller card cover panel. Go to **"Output expander controller card cover panel removal" on page 430**.

5 Disconnect the sensor (media bin full) harness from the controller card and remove.



# Output expander sensor (media bin full) bracket assembly removal

1. Remove the output expander left inner cover. Go to **“Output expander left inner cover removal” on page 424**.
2. Grasp the sensor bracket and pull away from the option while releasing the tab.

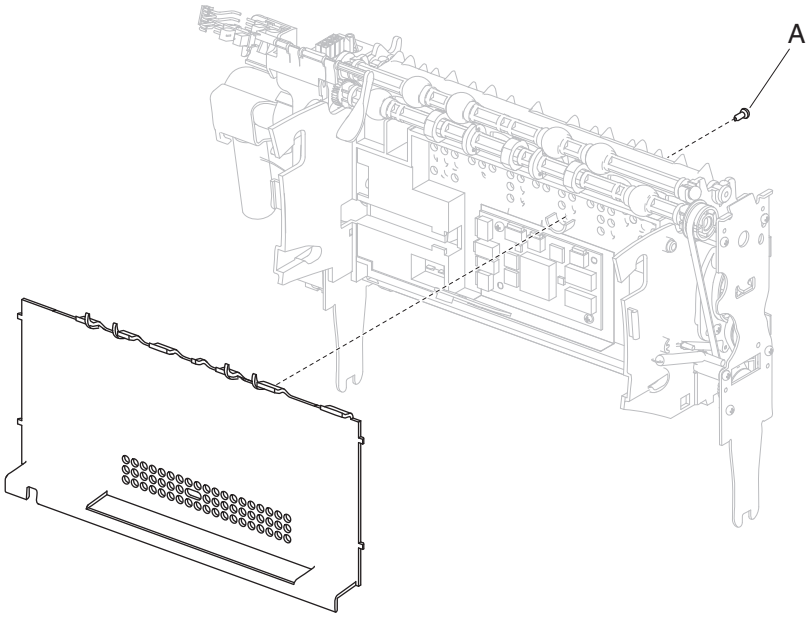


3. If replacing the bracket, remove the sensors (media bin full) from the bracket.
4. Replacement Note: Be sure to replace the sensors in the correct order. Make sure their positions are not switched.

## Output expander controller card cover panel removal

1 Remove the output expander media output bin assembly. Go to **"Output expander media output bin assembly removal" on page 426**.

2 Remove the screw (A) on the back side of the option.




3 Remove the grounding screw (B) on the right output option frame guide the grounding cable through the hole in the frame.

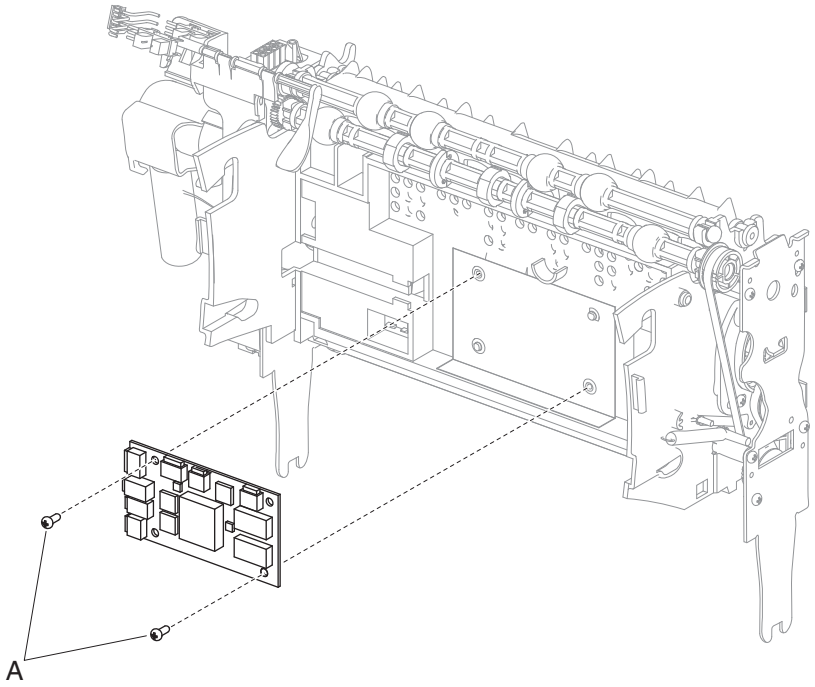
4 Carefully flex the panel from the lower middle and pull the four tab (C) out of the frame and remove.

## Output expander controller card removal

1 Remove the output expander controller card cover panel. Go to **"Output expander controller card cover panel removal" on page 430**.

2 Disconnect all harnesses from the controller card.

3 Remove the two screws (A) securing the controller card to the frame.




4 Remove the controller card.

5 Replacement Note: Be sure to replace the interface connectors in their proper orientation as the two have common connection pins.

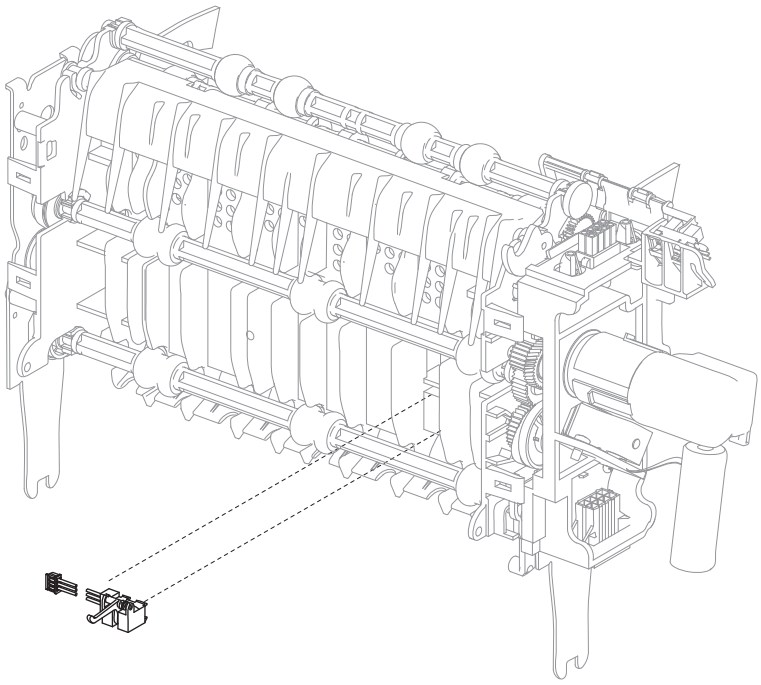
## Sensor (output expander pass through) removal

1 Remove the output expander controller card cover panel. Go to **"Output expander controller card cover panel removal" on page 430**.

2 Release the tabs securing the sensor (pass through).

3 Remove the sensor harness from the controller card.

4 Pull the connector harness through the frame and remove.

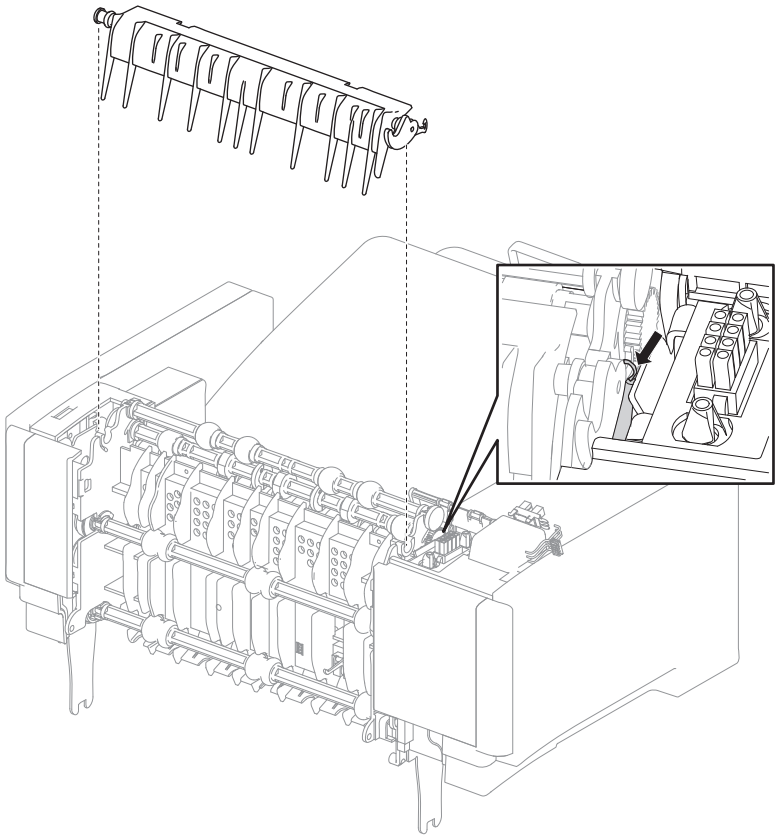


## Output expander deflector gate removal

1 Use a spring hook to disconnect the upper end of the deflector gate spring.

2 Temporarily hook the upper end of the deflector gate spring to the left frame.

3 Pull the deflector gate out of its hinges and remove.



## Sensor (output expander deflector gate HP) removal

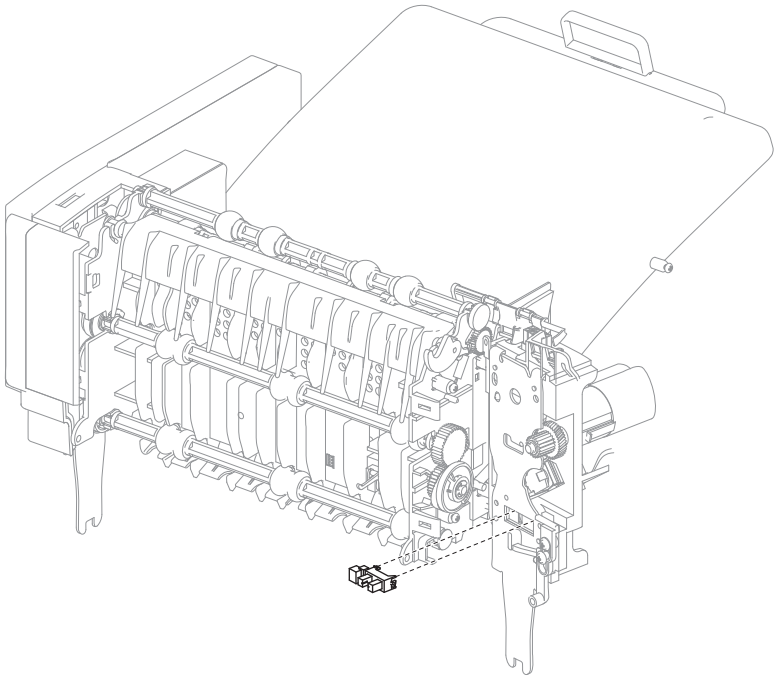
1 Remove the output expander left inner cover. Go to **"Output expander left inner cover removal" on page 424**.

2 Remove the four screws securing the left frame assembly to the option.

3 Pull the left frame assembly out far enough to gain access to the sensor (deflector gate HP).

4 Release the tabs securing the sensor (deflector gate HP) and remove.

5 Disconnect the harness to the sensor and remove.



# SFP stapler assembly removals

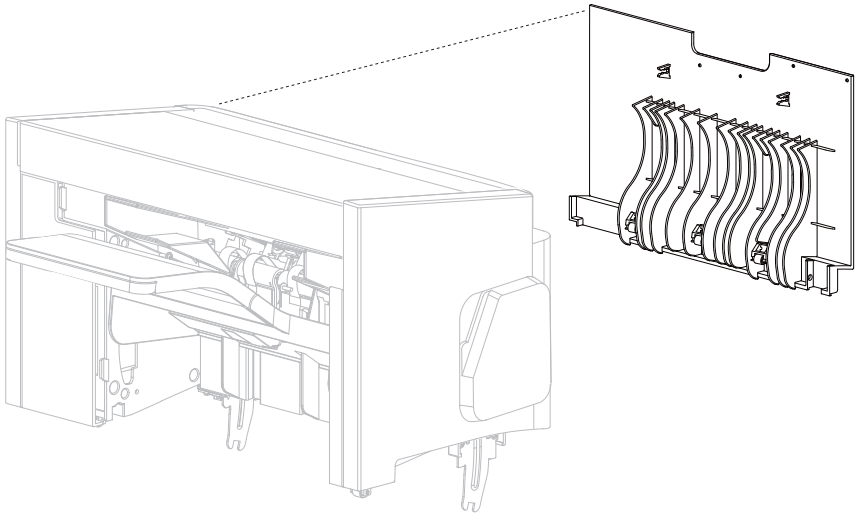
## SFP stapler assembly rear door assembly removal

1 Open the rear door assembly.

2 Force the left hinge out of the slot by pushing the door to the right.

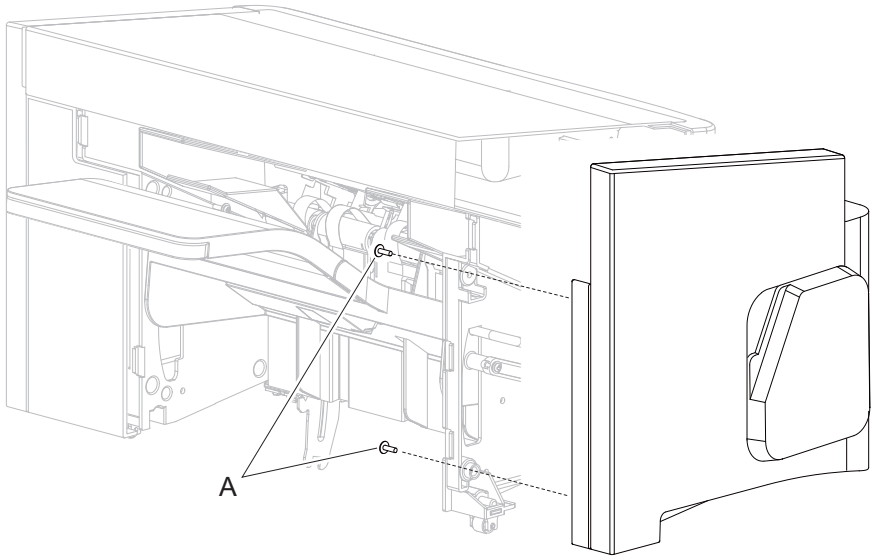
3 Once the left hinge has been disengaged, pull the right hinge out.

4 Remove the rear door assembly.



## SFP stapler assembly right cover removal

**1** Remove the two screws (A) on the inside of the exit bin compartment securing the right cover.

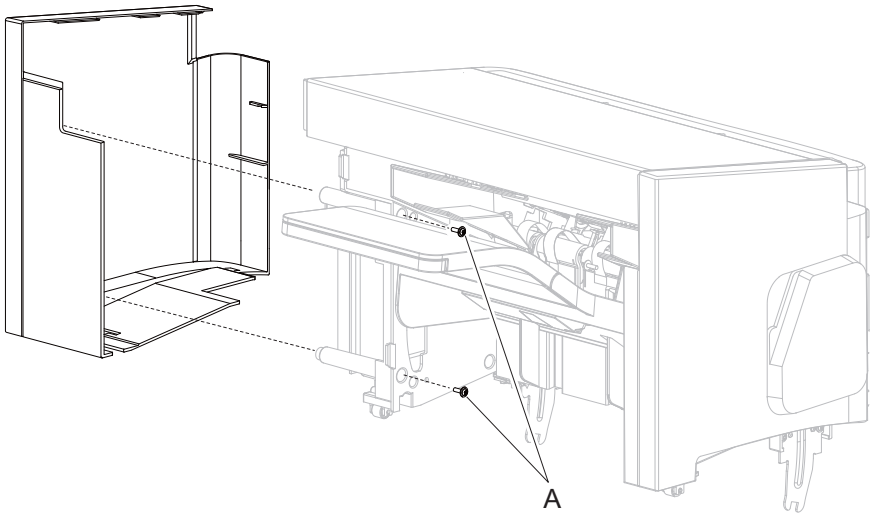



**2** Pull out on the front side of the right cover to disengage the tabs.

**3** Remove the right cover.

## SFP stapler assembly left cover removal

1 Remove the two screws (A) on the inside of the exit bin compartment securing the left cover.

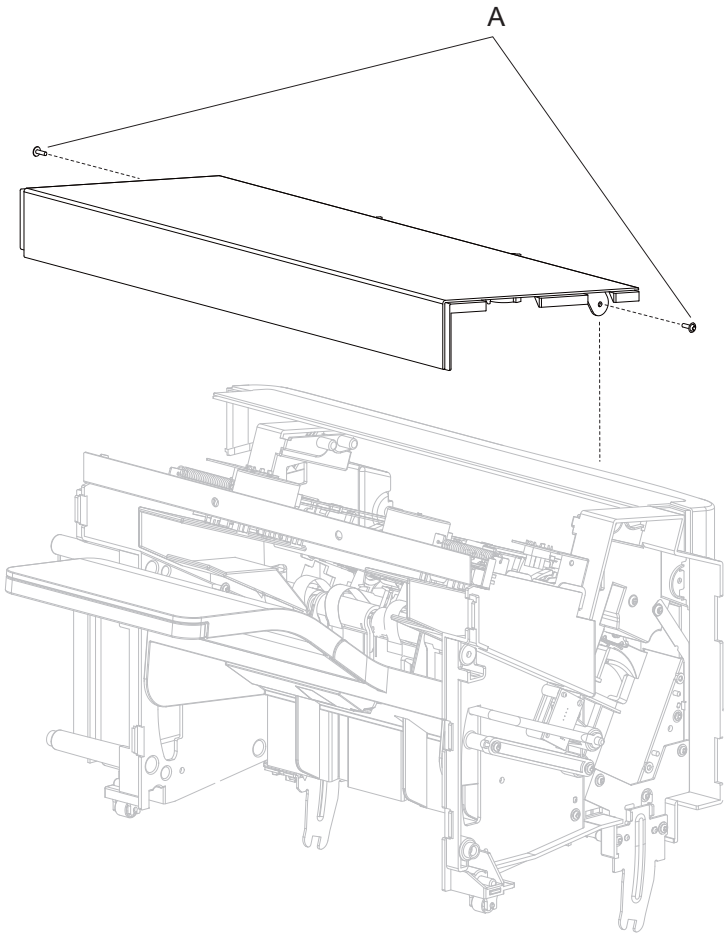



2 Pull out on the front side of the left cover to disengage the tabs.

3 Remove the left cover.

## SFP stapler assembly top cover removal

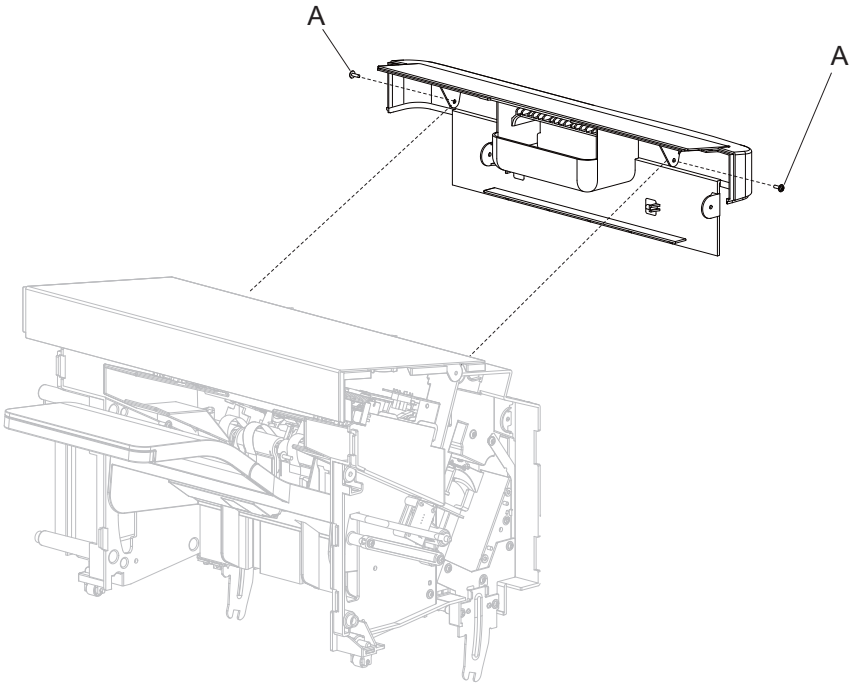
1. Remove the left and right cover. Go to **“SFP stapler assembly left cover removal” on page 436** and **“SFP stapler assembly right cover removal” on page 435**.
2. Remove the two screws (A) from the left and right side of the top cover.




3. Pull up and toward the front to remove the top cover.

## SFP stapler assembly handle cover removal

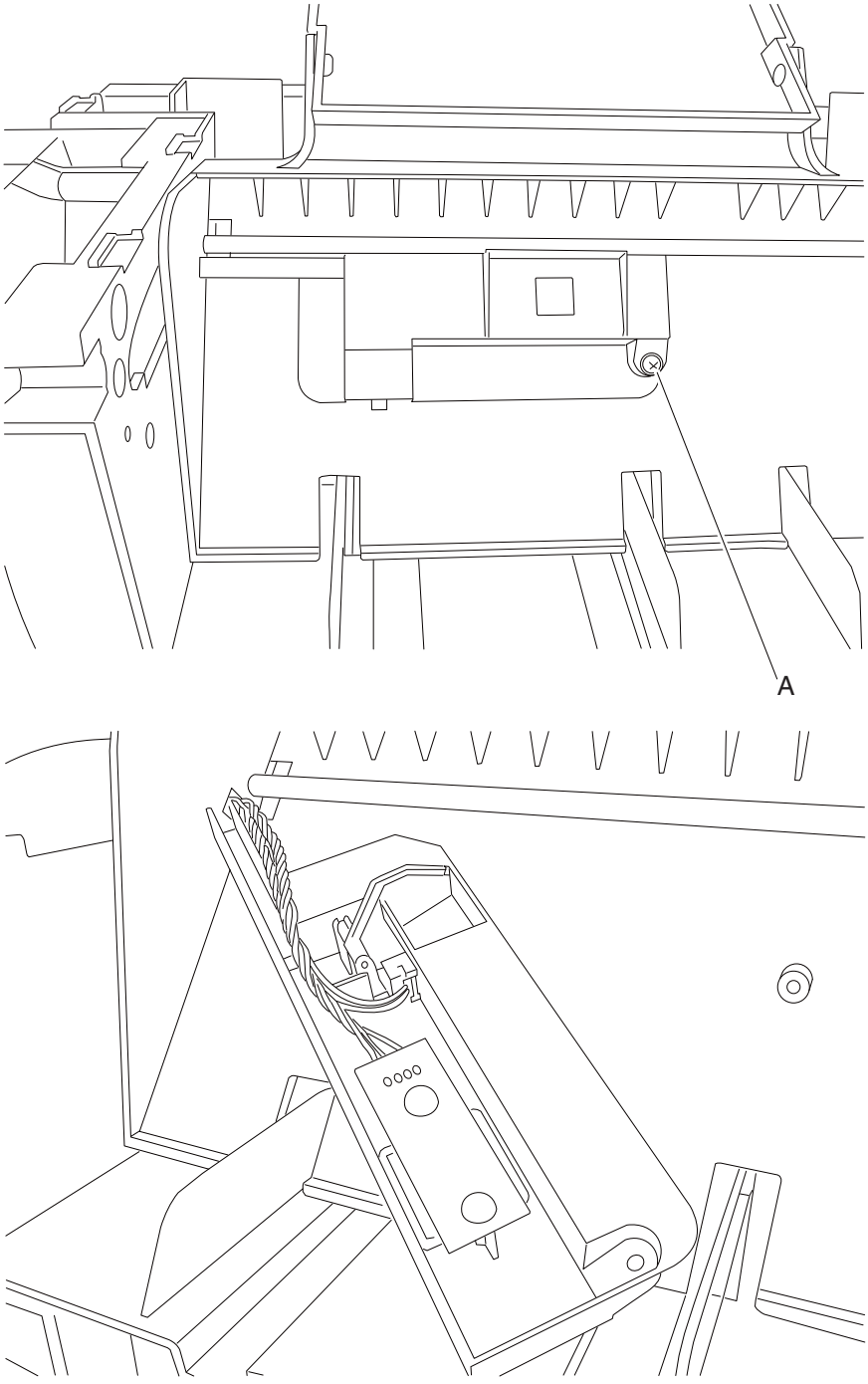
1. Remove the left and right cover. Go to **“SFP stapler assembly left cover removal” on page 436** and **“SFP stapler assembly right cover removal” on page 435**.
2. Remove two screws (A) from each side of the SFP stapler assembly.




3. Lift up and to the rear to remove the cover.

## SFP stapler assembly LED sensor cover removal

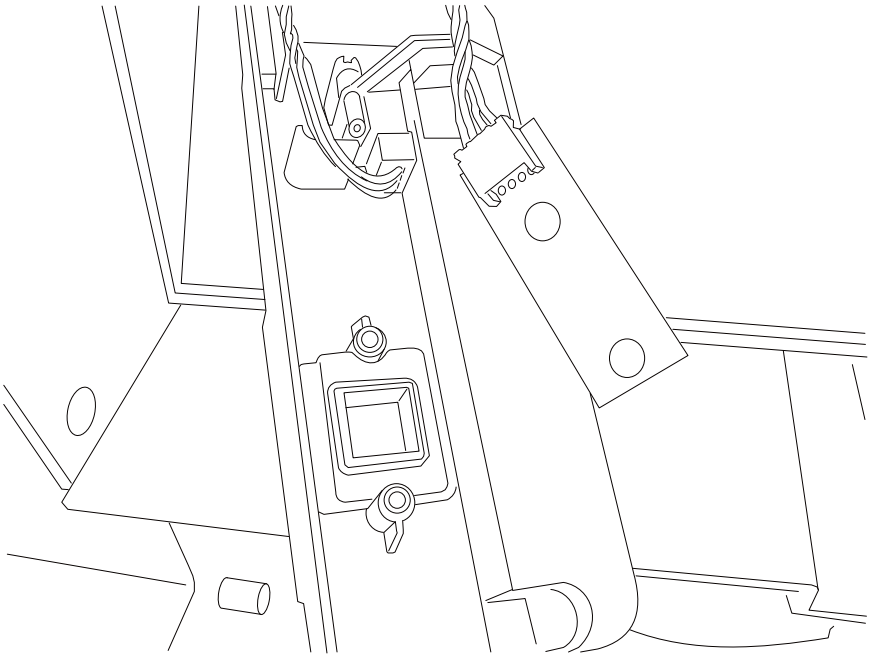
1 Remove the screw (A) securing the LED sensor cover to the underside of the output bin.




2 Remove the output bin LED. Go to **"SFP stapler assembly standard output bin LED and LED clear lens removal" on page 441**.

3 Remove the sensor (finisher bin media present). Go to **"Sensor (SFP stapler assembly finisher bin media present) removal" on page 440**.

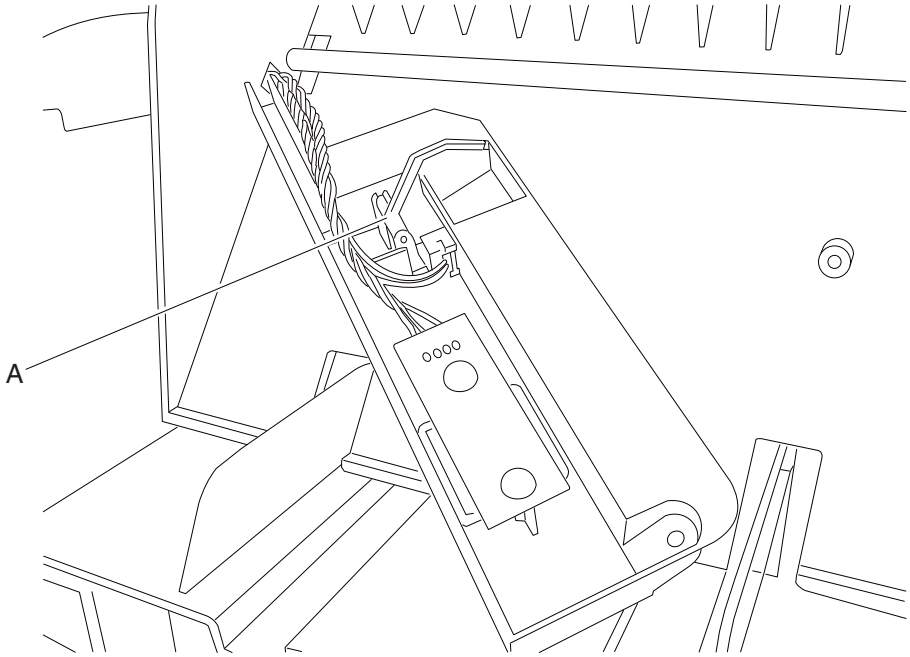
4 Remove the LED sensor cover.



## Sensor (SFP stapler assembly finisher bin media present) removal

1 Remove the LED sensor cover. Go to **"SFP stapler assembly LED sensor cover removal" on page 439**.

2 Using a flat-blade screwdriver, release the tabs (A) on the sensor and remove it from the sensor cover.

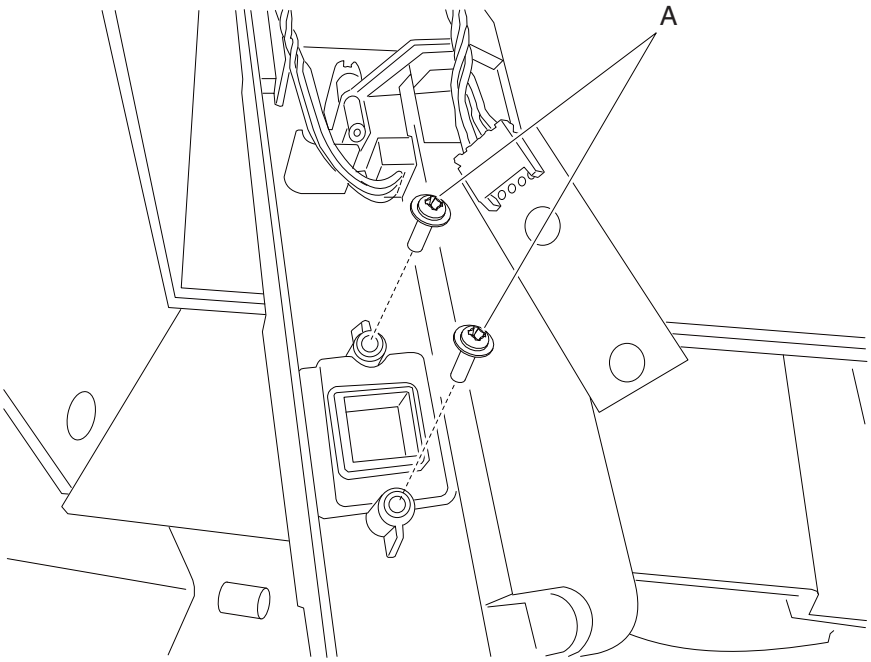



3 Remove the harness connected to the media bin present sensor.

4 Remove the sensor (finisher bin media present).

# SFP stapler assembly standard output bin LED and LED clear lens removal

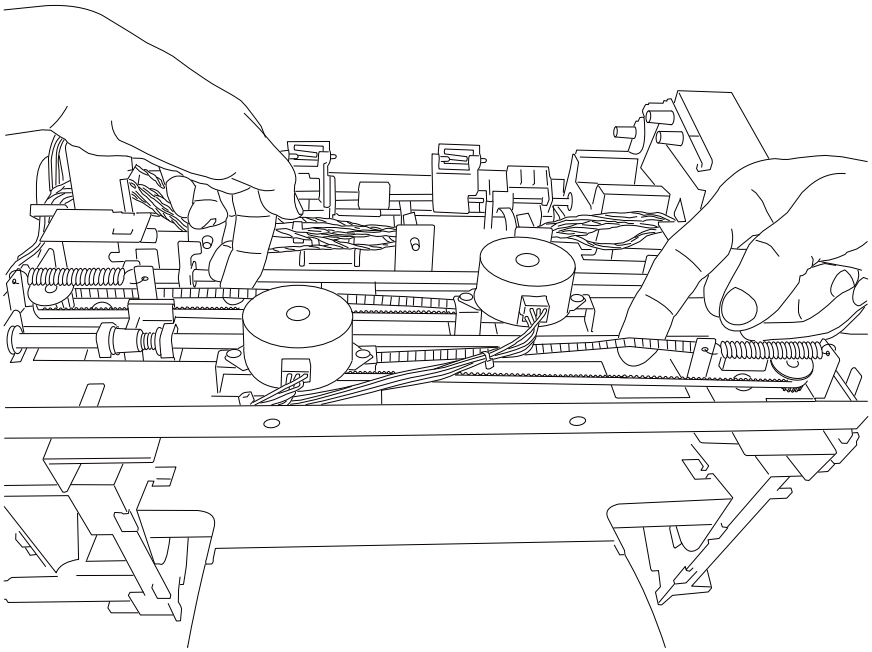
1. Remove the LED sensor cover. Go to **“SFP stapler assembly LED sensor cover removal” on page 439**.
2. Remove the two screws (A) securing the LED to the cover.




3. Remove the LED and disconnect the harness.
4. Remove the LED clear lens.

## SFP stapler assembly tamper drive belt removal

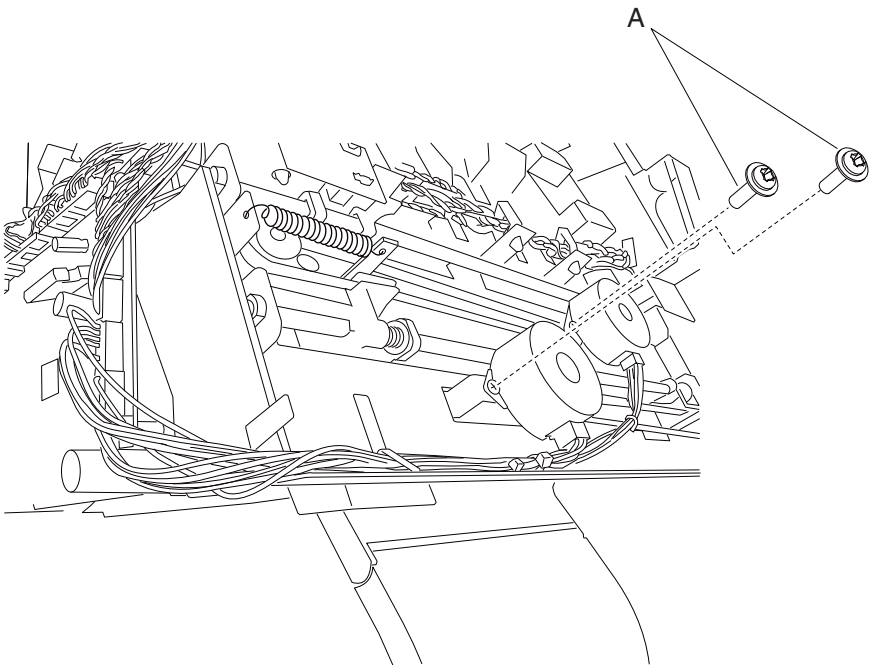
1. Remove the tamper recoil spring.
2. Pull the belt out the tamper belt holder and remove the belt from the pulley.



## SFP stapler assembly tamper drive motor assembly removal

1. Remove the top cover. Go to **“SFP stapler assembly top cover removal” on page 437**.
2. Pull slack in the tamper drive belt and remove the belt from the tamper drive belt pulley.
3. Disconnect the tamper driver motor harness from the controller card.

4 Remove the two screws (A) securing the tamper drive motor assembly to the tamper frame.



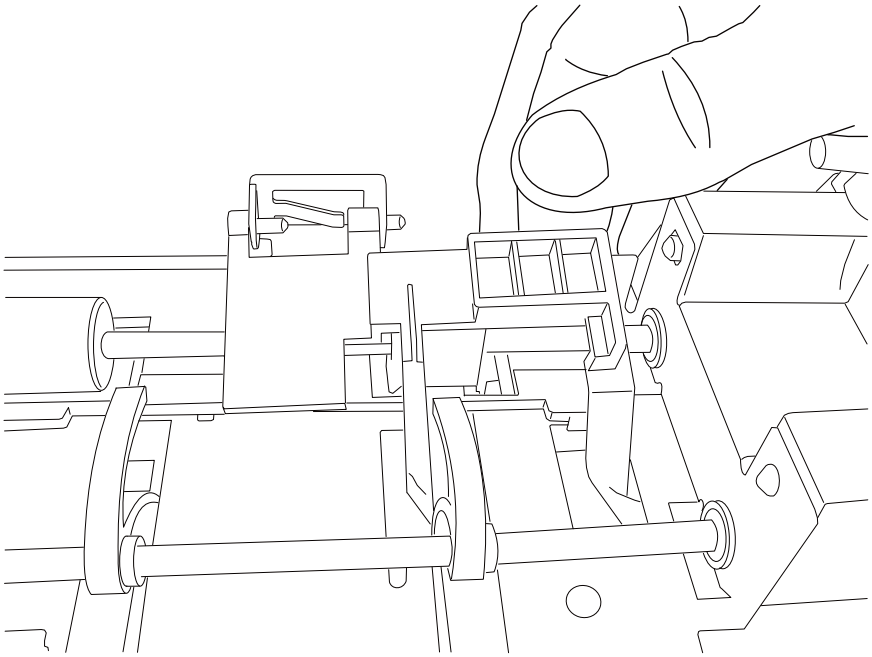

5 Remove the tamper drive motor assembly.

## SFP stapler assembly media stack flap and media stack flap actuator removal

1 Remove the handle cover. Go to **"SFP stapler assembly handle cover removal" on page 438**.

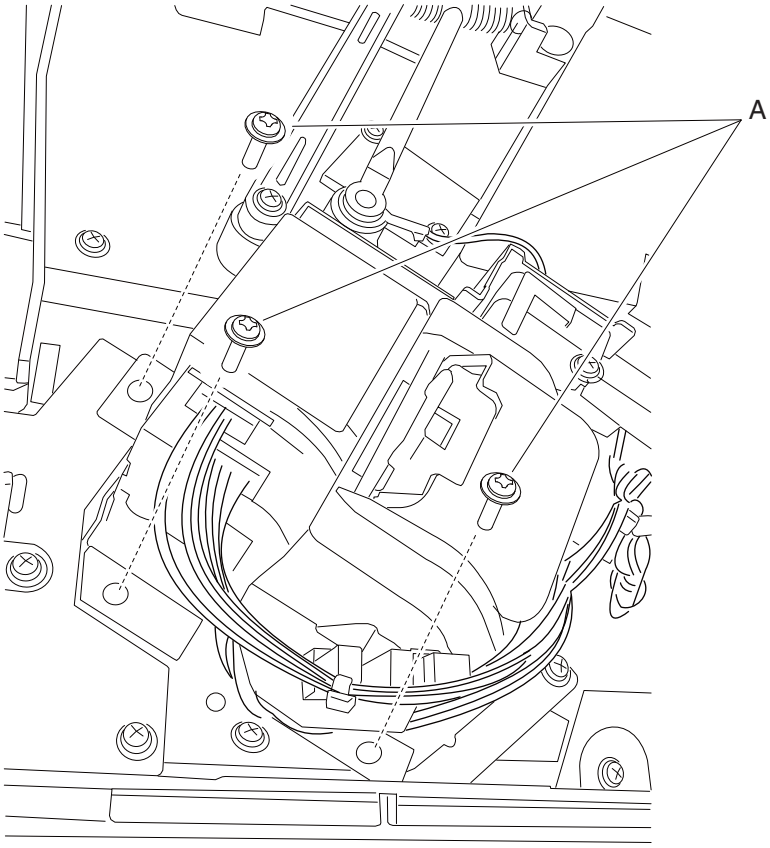
2 Release the locking tab and slide the media stack flap actuator to the right and remove.





## SFP stapler assembly stapler unit assembly removal

1. Remove the right cover. Go to **“SFP stapler assembly right cover removal” on page 435**.
2. Remove the four cable harnesses attached to the stapler unit assembly.



3 Remove the three screws (A) securing the stapler unit assembly.

4 Remove the stapler unit assembly.

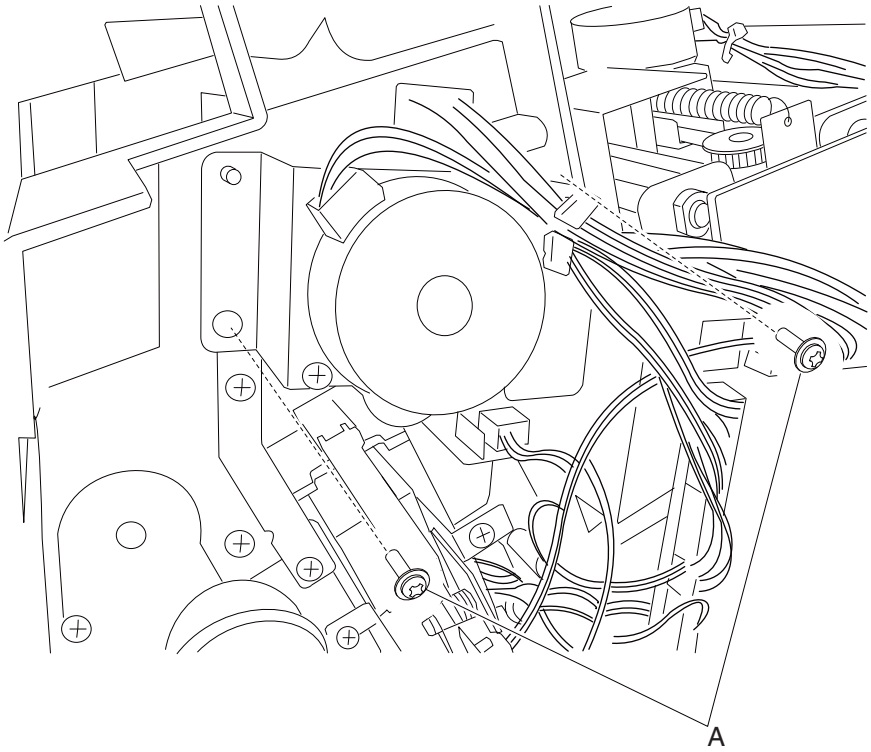
## SFP stapler assembly paddle drive motor assembly removal

1 Remove the left cover. Go to **“SFP stapler assembly left cover removal” on page 436**.

2 Disconnect the paddle motor harness from the controller card.

3 Remove the cable from the harness clip.

4 Remove the two screws (A) securing the two paddle drive motor assemblies.



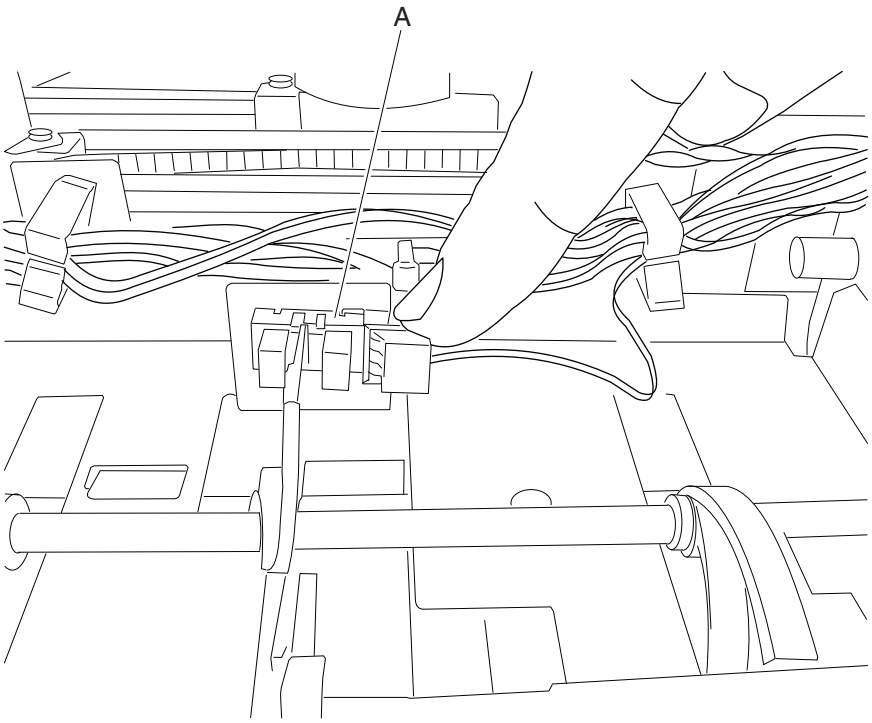

5 Remove the paddle drive motor assembly.

## Sensor (SFP stapler assembly media stack) removal

1 Remove the top cover. Go to **“SFP stapler assembly top cover removal” on page 437**.

2 Disconnect the harness to the sensor (media stack).

3 Using your fingers, pinch tab (A) securing the sensor (media stack) and remove.

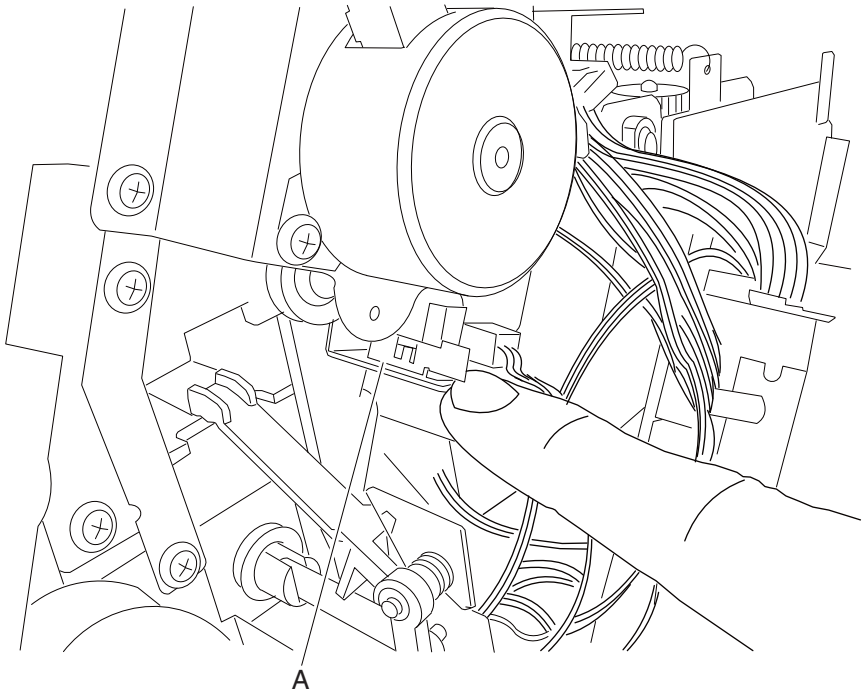



## Sensor (SFP stapler assembly paddle HP) removal

1 Remove the left cover. Go to **“SFP stapler assembly left cover removal” on page 436**.

2 Disconnect the harness to the sensor (paddle home position).

3 Using your fingers, pinch tab (A) securing the sensor (paddle home position) and remove.

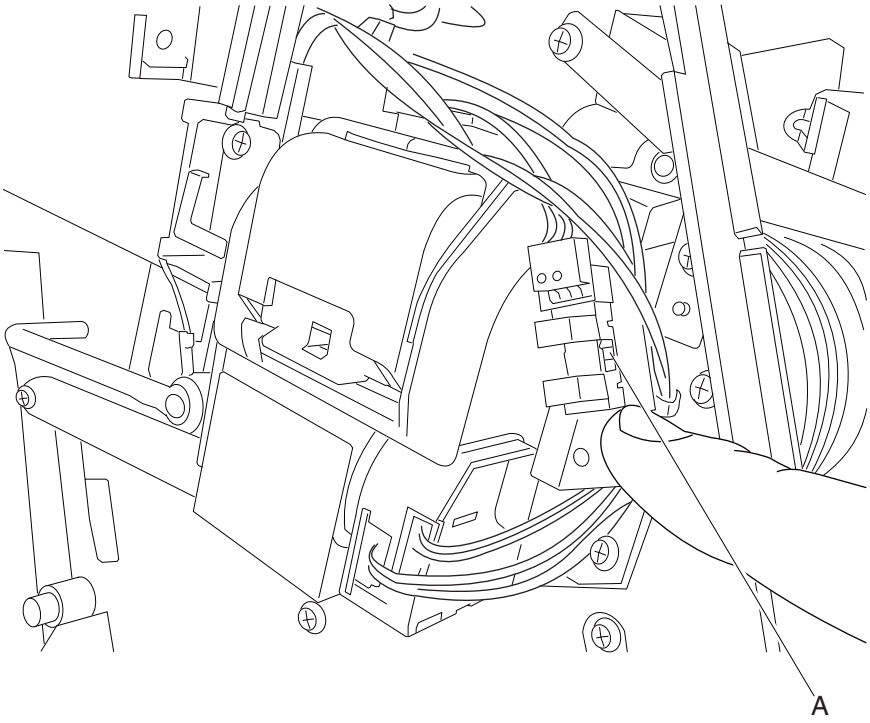


## Sensor (SFP stapler assembly stapler access door interlock) removal

1 Remove the right cover. Go to **"SFP stapler assembly right cover removal" on page 435**.

2 Disconnect the harness to the sensor (stapler access door interlock).

3 Using your fingers, pinch tab (A) securing the sensor (stapler access door interlock) and remove.

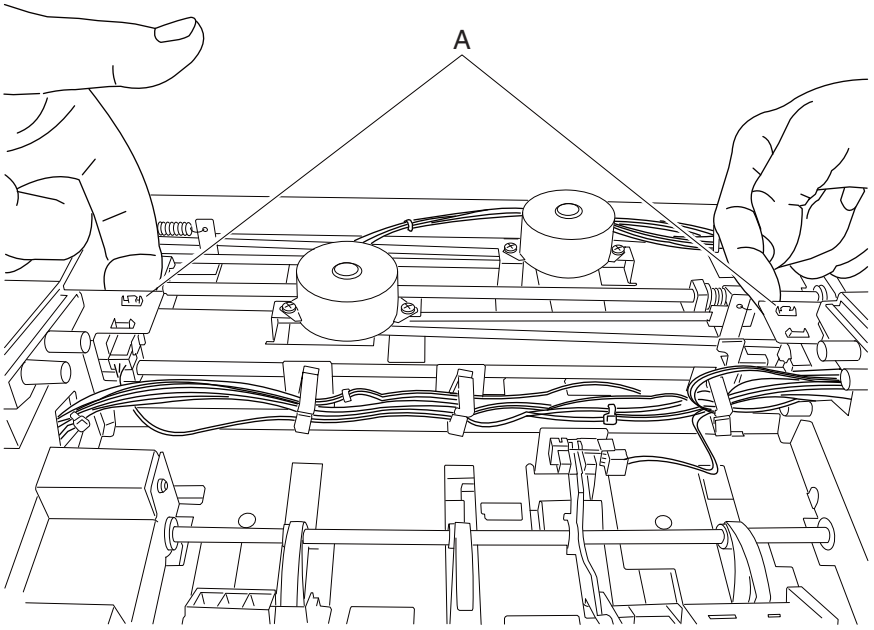


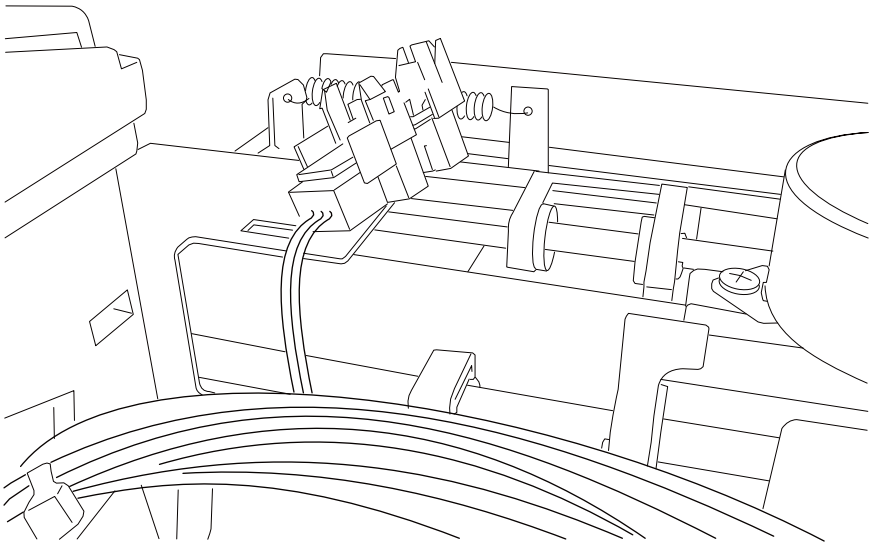

## Sensor (SFP stapler assembly tamper HP left and right) removal

1 Remove the SFP stapler assembly top cover. Go to **"SFP stapler assembly top cover removal" on page 437**.

2 Disconnect the harness to the SFP stapler assembly sensor (tamper HP left and right).

**3** Using your fingers, pinch the tabs (A) securing the staple finisher sensor (tamper HP left and right) and remove.

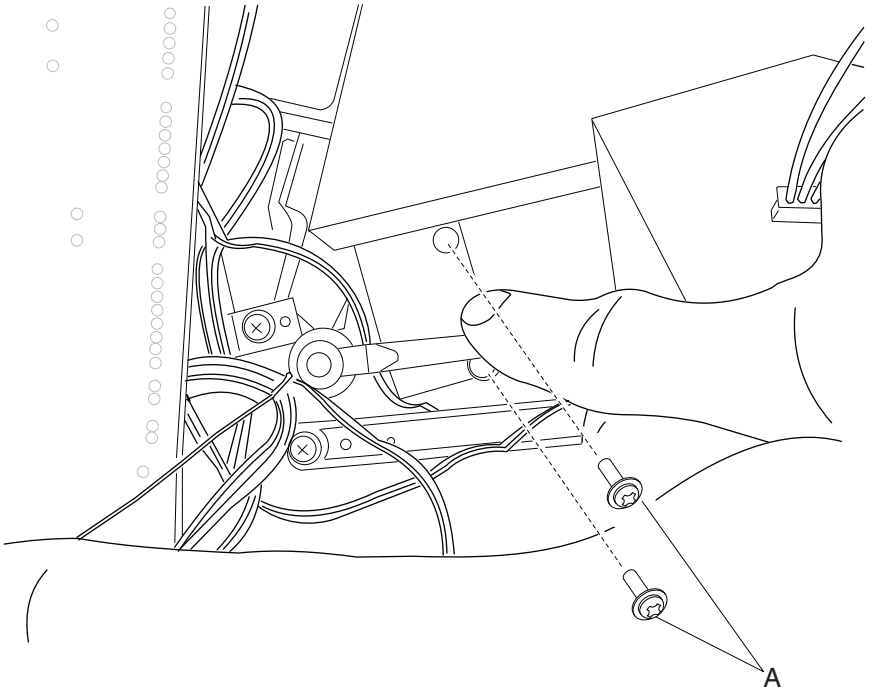


## Sensor (SFP stapler assembly bin full send) removal

1 Remove the stapler/stacker controller card assembly. Go to **“Stapler/stacker controller card assembly removal” on page 453**.

2 Remove the two screws (A) securing the staple finisher sensor (bin full send).

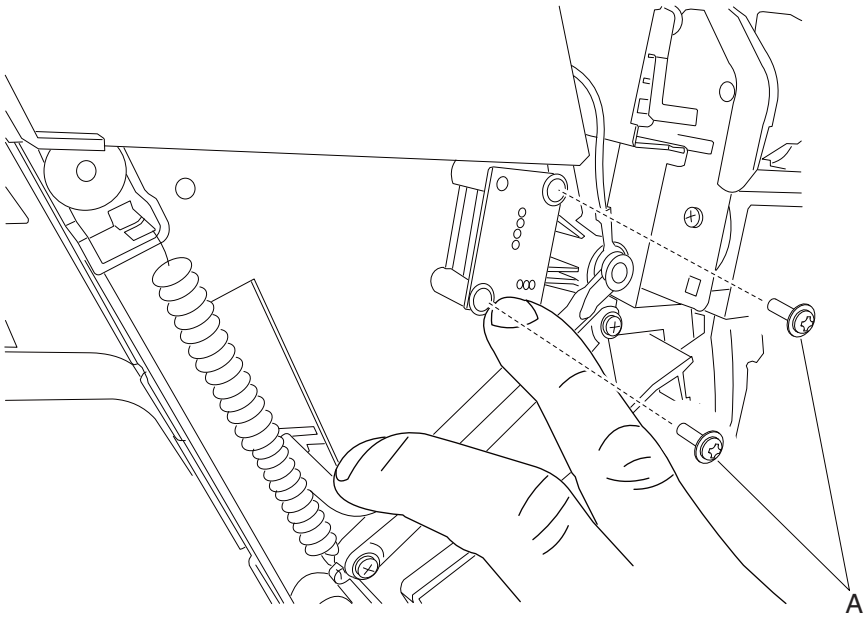



3 Disconnect the harness and remove.

## Sensor (SFP stapler assembly bin full receive) removal

1 Remove the right cover. Go to **“SFP stapler assembly right cover removal” on page 435**.

2 Remove the two screws (A) securing the sensor (bin full receive).

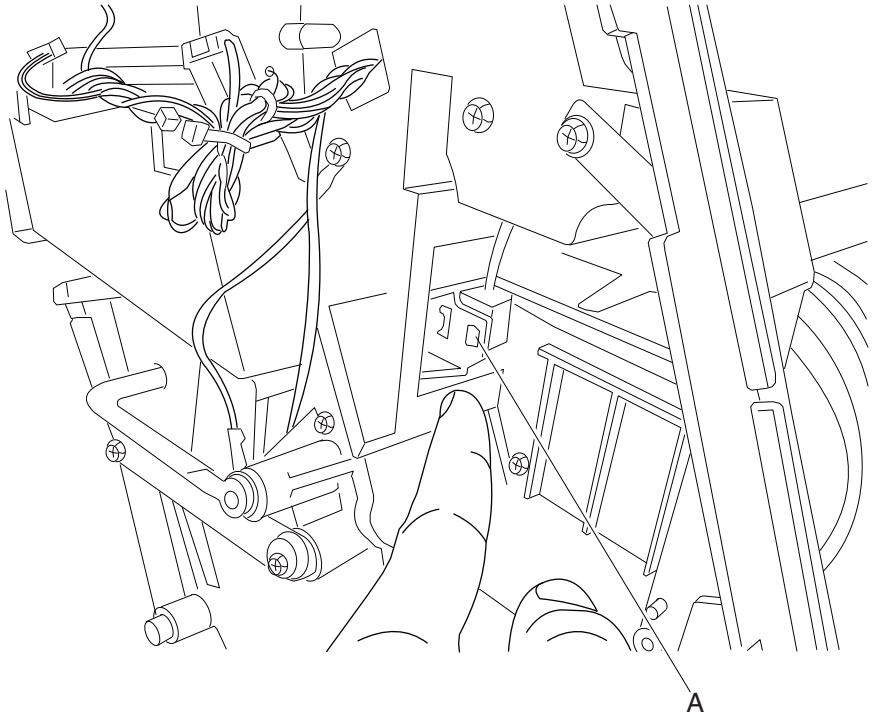



3 Disconnect the harness and remove.

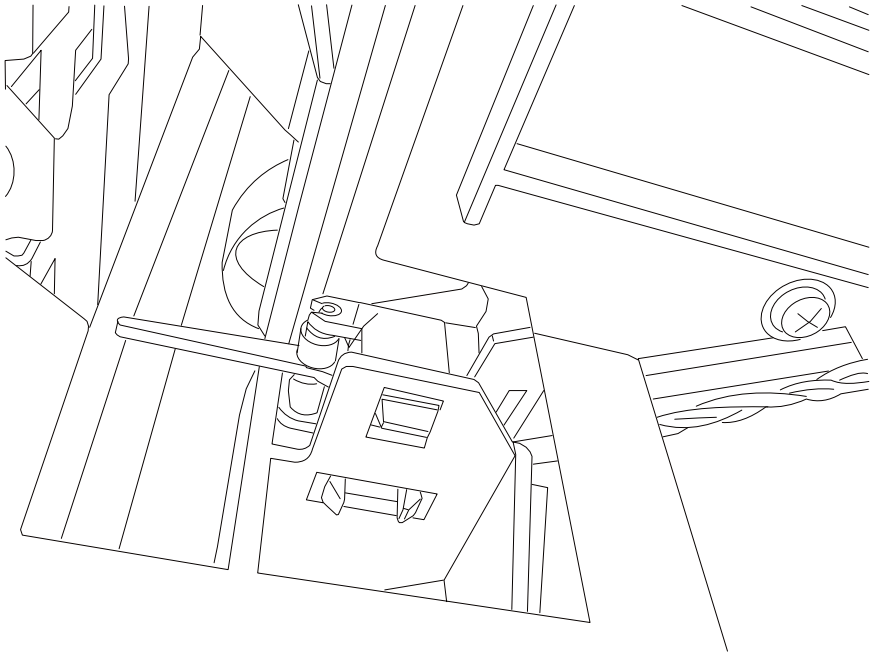
## Sensor (SFP stapler assembly media in stapler) removal

1 Remove the stapler unit assembly from the. Go to **"SFP stapler assembly stapler unit assembly removal" on page 444**.

2 Using a flat-blade screwdriver, release the tabs (A) securing the sensor.




3 Using needlenose pliers, carefully grip the sensor and pull it out and disconnect the harness.

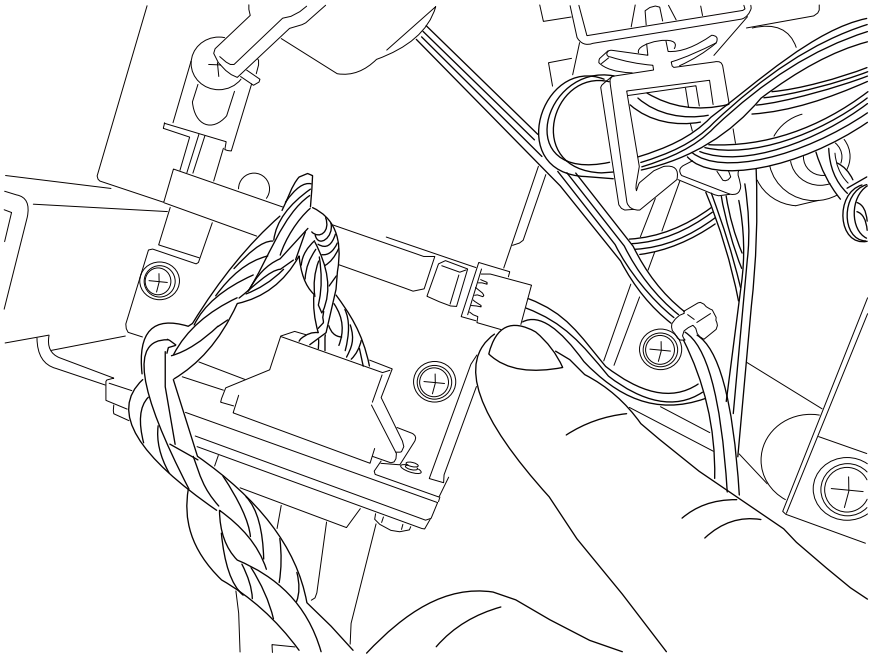


**Installation note:** Using needlenose pliers, place the rear most tab in the sensor bracket first. Then push on the rear face of the sensor until the other two tabs snap into place.

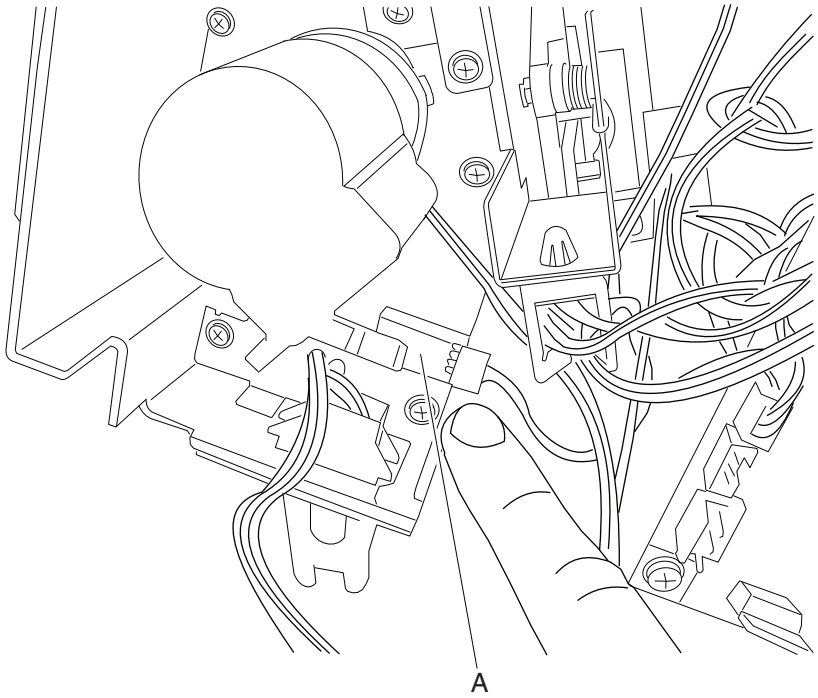
## Sensor (SFP stapler assembly deflector HP) removal

1 Remove the left cover. Go to **“SFP stapler assembly left cover removal” on page 436**.

2 Disconnect the harness to the sensor (deflector HP).



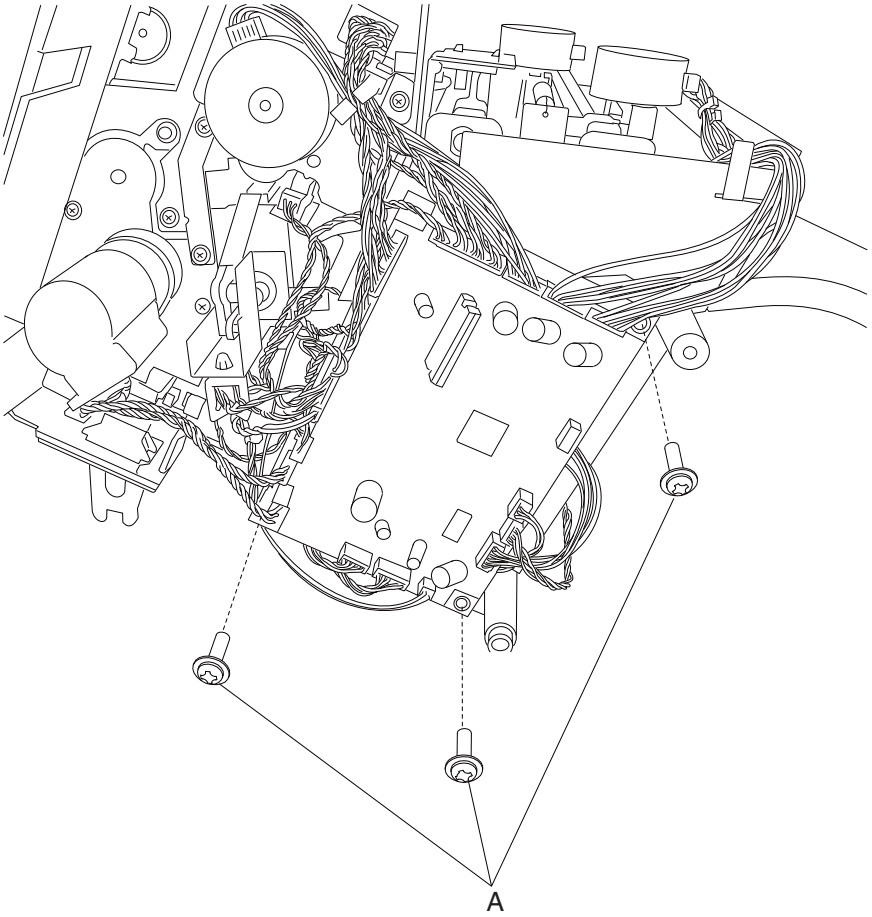
3 Release the tabs (A) securing the sensor to the unit.




**Note:** The tabs may be difficult to access. The use of a spring hook or flat-blade screwdriver may be necessary to release the tabs.

## Stapler/stacker controller card assembly removal

1. Remove the left cover. Go to **“SFP stapler assembly left cover removal” on page 436**.
2. Disconnect all harnesses to the controller card.
3. Remove the three screws (A) securing the stapler/stacker controller card assembly.

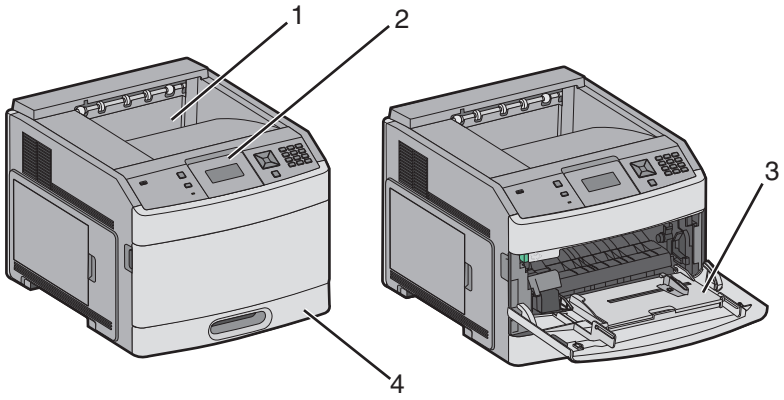


# Component locations

## T650, T652, and T654 exterior locations

### Printer configurations

#### Basic model

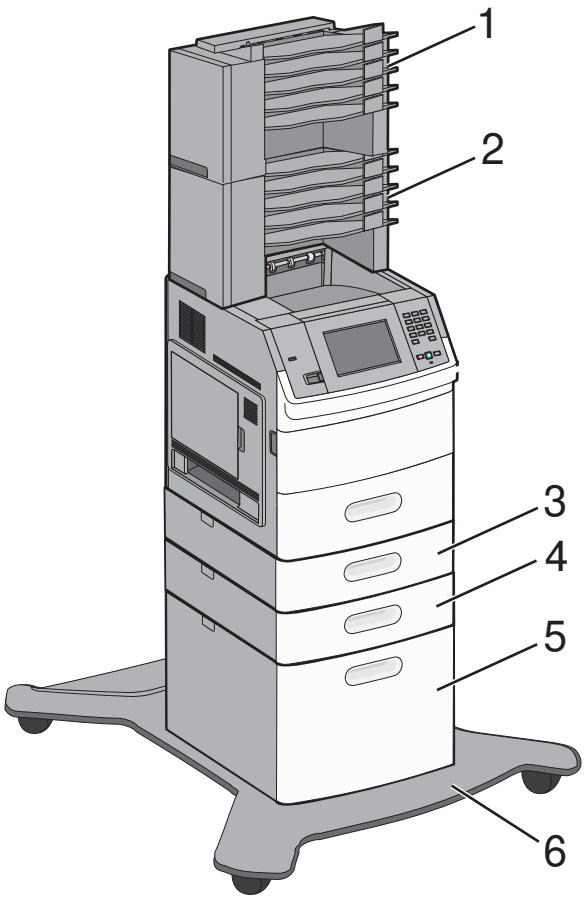



| | Feature | Paper Capacity* |
|---|---|---|
| **1** | Standard exit bin | 350 or 550 sheets |
| **2** | Printer control panel | Not applicable |
| **3** | Multipurpose feeder | 100 sheets |
| **4** | Standard tray (Tray 1) | 250 or 550 sheets |

* Based on 75 g/m$^2$ (20 lb.) paper.

#### Fully configured model

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




| | Feature/Option | Paper Capacity[1] |
|---|---|---|
| **1** | 5-bin mailbox[2] | 500 sheets |
| **2** | 5-bin mailbox | 500 sheets |
| **3** | Envelope feeder | 85 envelopes |
| **4** | Standard tray (Tray 1) | 250 or 550 sheets |
| **5** | Duplex unit[3] | Not applicable |
| **6** | Optional tray (Tray 2) | 250 or 550 sheets |
| **7** | Optional tray (Tray 3) | 250 or 550 sheets |
| **8** | Optional 2000-sheet tray (Tray 4) | 2000 sheets |
| **9** | Caster base | Not applicable |

[1] Based on 75 g/m$^2$ (20 lb.) paper.

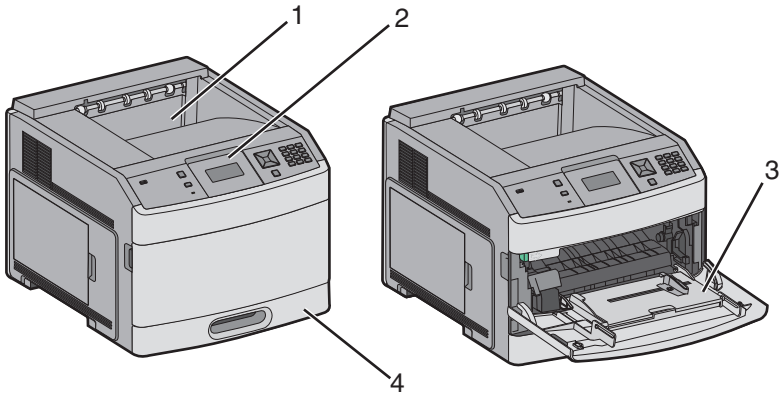
[2] The printer supports up to three output expander units, two 5-bin mailboxes, one high capacity output expander (not depicted), or one stapler unit (not depicted).

[3] An optional duplex unit is available for basic models with a 250-sheet standard tray. Models with a 550-sheet standard tray may have an internal duplex unit.

# T656 exterior locations

## Printer configurations

### Basic model

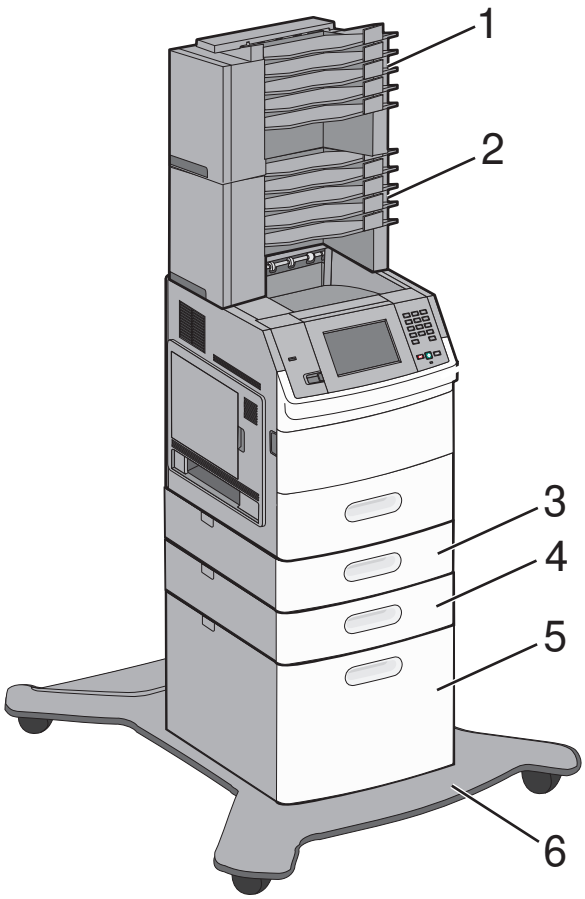



| | Feature | Paper Capacity[1] |
|---|---|---|
| **1** | Standard exit bin | 550 sheets |
| **2** | Printer control panel with touch screen | Not applicable |
| **3** | Multipurpose feeder | 100 sheets |
| **4** | Standard tray (Tray 1) | 550 sheets |

[1] Based on 75 g/m$^2$ (20 lb) paper.

### Fully configured model

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




| | Feature/Option | Paper Capacity[1] |
|---|---|---|
| **1** | 5-bin mailbox[2] | 500 sheets |
| **2** | 5-bin mailbox | 500 sheets |
| **3** | Optional tray (Tray 2) | 250 or 550 sheets |
| **4** | Optional tray (Tray 3) | 250 or 550 sheets |
| **5** | Optional 2000-sheet tray (Tray 4) | 2000 sheets |
| **6** | Caster base | Not applicable |

[1] Based on 75 g/m$^2$ (20 lb) paper.

[2] The printer supports up to three output expander units, two 5-bin mailbox units, one high capacity output expander (not depicted), and one stapler unit (not depicted). Other combinations of options are possible. Contact the place where you purchased the printer.

# Connectors

## Controller board

Go to the Wiring diagram section at the last part of this manual.

# Maintenance

## 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.

As you service the machine, check for the following:

- Damaged, missing, or altered parts, especially in the area of the On/Off switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top cover and the power supply cover
- Possible safety exposure from any non-Lexmark attachments

## Individual maintenance part expected life

| Description | Part | Maintenance Interval |
|---|---|---|
| Charge roll assembly with tool | 40X0127 | 300K |
| Transfer roll assembly with tool | 40X1886 | 300K |
| Pick roll assembly (2) | 40X4308 | 300K |
| Printer maintenance kit (100 V type 1 fuser) | 40X4723 | 300K |
| Printer maintenance kit (110 V type 1 fuser) | 40X4724 | 300K |
| Printer maintenance kit (220 V type 1 fuser) | 40X4765 | 300K |
| Printer maintenance kit (100 V type 2 fuser) | 40X4766 | 150K |
| Printer maintenance kit (110 V type 2 fuser) | 40X4767 | 150K |
| Printer maintenance kit (220 V type 2 fuser) | 40X4768 | 150K |

## Scheduled maintenance

The control panel displays an 80.xy error when it reaches 200K page counts. It is necessary to install the appropriate maintenance kit to maintain the print quality and reliability of the printer. Reset the maintenance counter after replacing the maintenance kit.

### Maintenance kits

| Description | Part | Maintenance Interval |
|---|---|---|
| Printer maintenance kit (100 V type 1 fuser) | 40X4723 | 300K |
| Printer maintenance kit (110 V type 1 fuser) | 40X4724 | 300K |
| Printer maintenance kit (220 V type 1 fuser) | 40X4765 | 300K |
| Printer maintenance kit (100 V type 2 fuser) | 40X4766 | 150K |
| Printer maintenance kit (110 V type 2 fuser) | 40X4767 | 150K |

| Description | Part | Maintenance Interval |
|---|---|---|
| Printer maintenance kit (220 V type 2 fuser) | 40X4768 | 150K |

# Parts catalog

## Legend

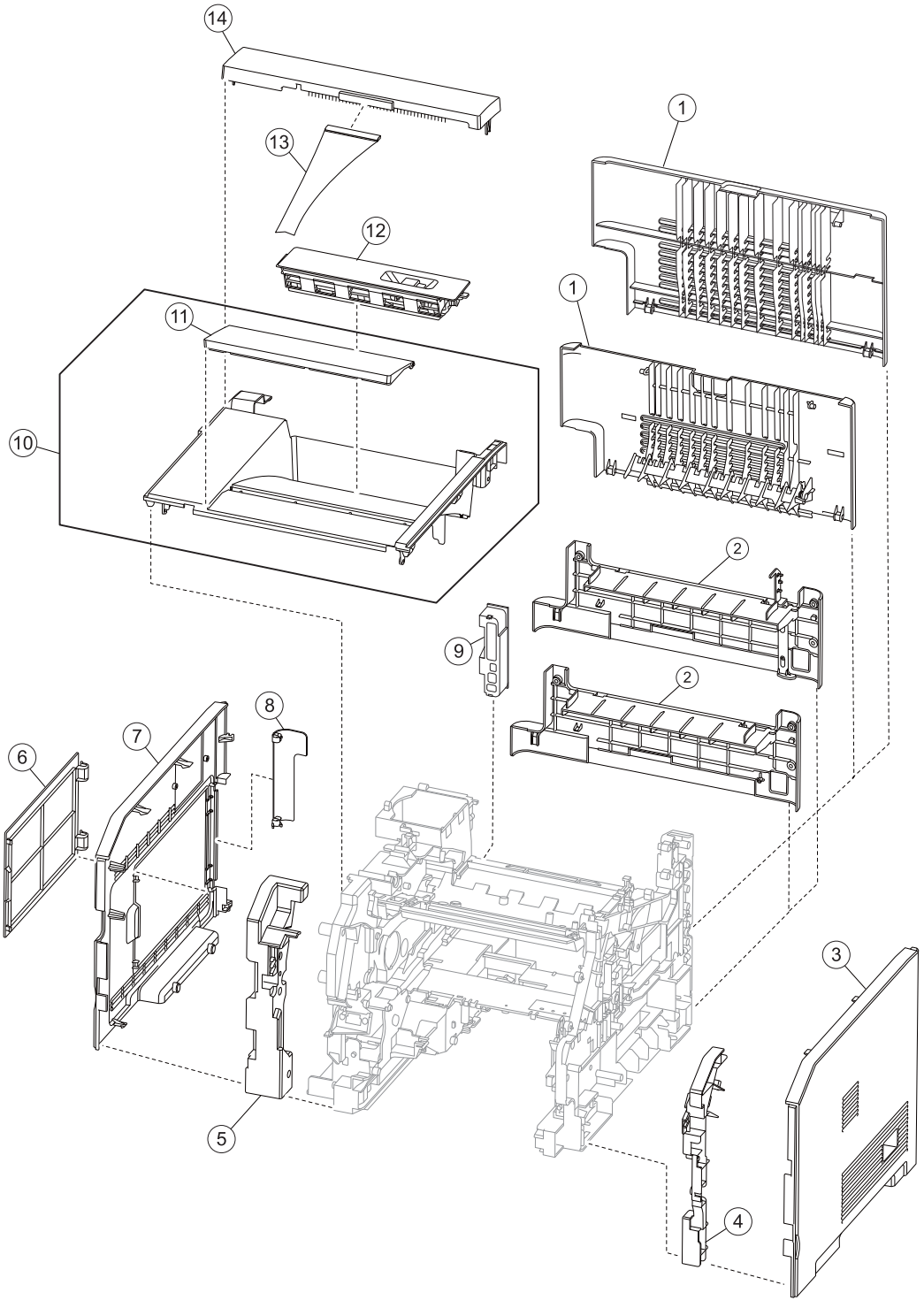
The following column headings are used in the parts catalog:

- **Asm-index**—Identifies the item in the illustration
- **P/N**—Identifies the part number of a FRU
- **Units/mach**—Refers to the number of units in a printer
- **Units/opt**—Refers to the number of units in an option
- **Units/FRU**—Refers to the number of units in a FRU
- **Description**—A brief description of the part

The following abbreviations are used in the parts catalog:

- **NS** (not shown) in the Asm-index column indicates that the part is procurable but is not shown in the illustration.
- **PP** (parts packet) in the Description column indicates that the part is contained in a parts packet.

# Assembly 1: Covers

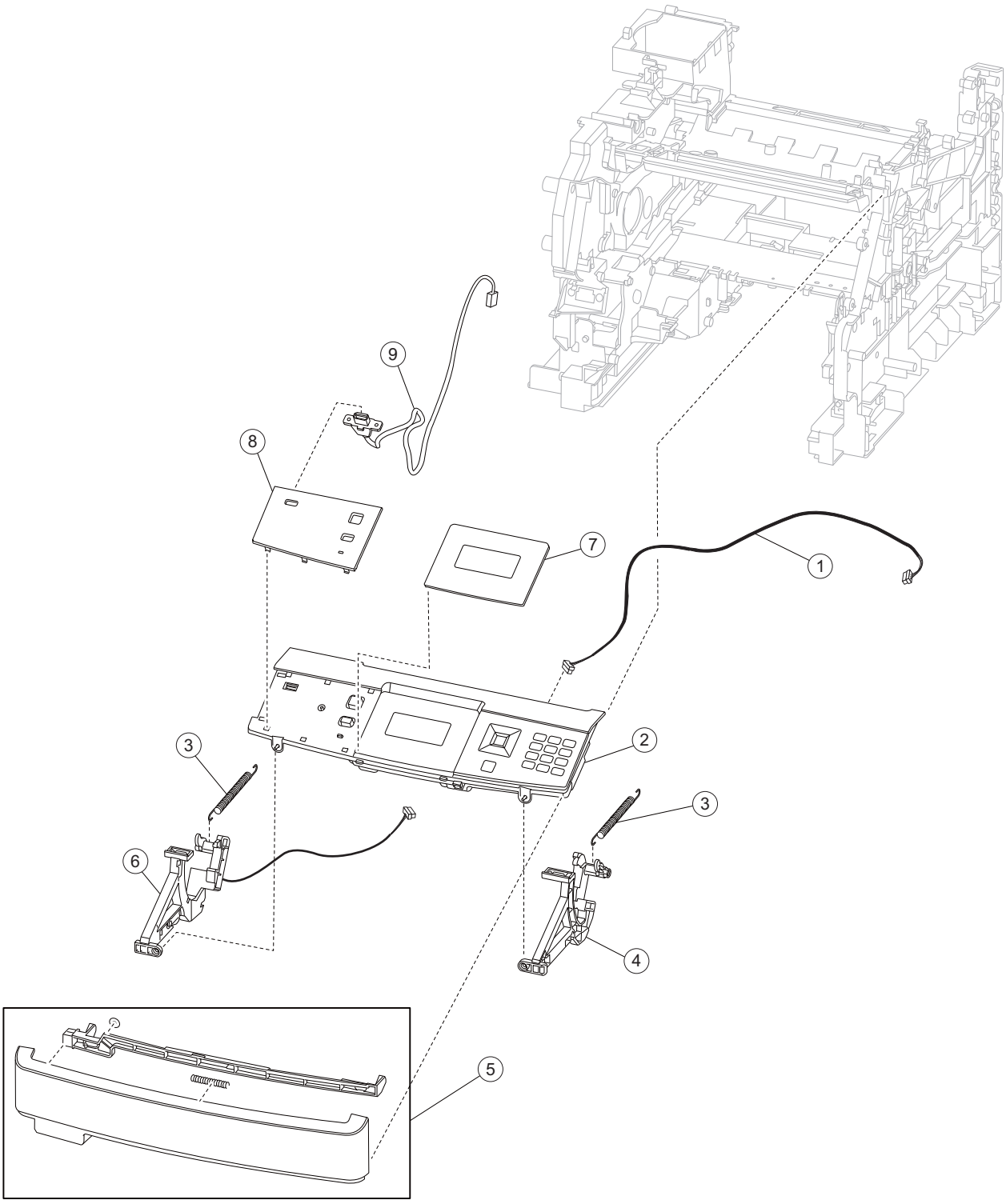


# Assembly 1: Covers

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4332 | 1 | 1 | Door assembly, rear (T650) | -- |
| 1 | 40X4329 | 1 | 1 | Door assembly, rear (T652) | -- |
| 1 | 40X4331 | 1 | 1 | Door assembly, rear (T654 and T656) | -- |
| 2 | 40X4334 | 1 | 1 | Cover assembly, rear lower (T650) | -- |
| 2 | 40X4335 | 1 | 1 | Cover assembly, rear lower (T652, T654, and T656) | -- |
| 3 | 40X4338 | 1 | 1 | Side cover, right (T650) | -- |
| 3 | 40X1862 | 1 | 1 | Side cover, right (T652) | -- |
| 3 | 40X4337 | 1 | 1 | Side cover, right (T654) | -- |
| 3 | 40X7033 | 1 | 1 | Side cover, right (T656) | -- |
| 4 | 40X4336 | 1 | 1 | Inner cover, right (T650, T652, and T654) | -- |
| 5 | 40X4322 | 1 | 1 | Inner cover, left (T650, T652, and T654) | -- |
| 6 | 40X4339 | 1 | 1 | Access door (T650, T652, and T654) | -- |
| 6 | 40X7034 | 1 | 1 | Access cover (T656) | -- |
| 7 | 40X4324 | 1 | 1 | Side cover, left (T650) | -- |
| 7 | 40X4325 | 1 | 1 | Side cover, left (T652) | -- |
| 7 | 40X4323 | 1 | 1 | Side cover, left (T654) | -- |
| 7 | 40X7032 | 1 | 1 | Side cover, left (T656) | -- |
| 8 | 40X4330 | 1 | 1 | Connection access cover, rear (T650) | -- |
| 8 | 40X4314 | 1 | 1 | Connection access cover, rear (T652, T654, and T656) | -- |
| 9 | 40X4630 | 1 | 1 | Connection bezel assembly, rear (T650) | -- |
| 9 | 40X4629 | 1 | 1 | Connection bezel assembly, rear (T652, T654, and T656) | -- |
| 10 | 40X4320 | 1 | 1 | Laser cover assembly, 250 sheet output (T650 and T652) | -- |
| 10 | 40X4321 | 1 | 1 | Laser cover assembly, 500 sheet output (T654) | -- |
| 10 | 40X7031 | 1 | 1 | Laser cover assembly, 500 sheet output (T656) | -- |
| 11 | 40X4311 | 1 | 1 | Media support (T650, T652) | -- |
| 11 | 40X4697 | 1 | 1 | Media support (T654) | -- |
| 11 | 40X1973 | 1 | 1 | Media support (T656) | -- |
| 12 | 41X4417 | 1 | 1 | Fuser wiper cover assembly | -- |
| 13 | 40X4470 | 1 | 2 | Output bail | -- |

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 14 | 40X4326 | 1 | 1 | Output cover assembly | -- |

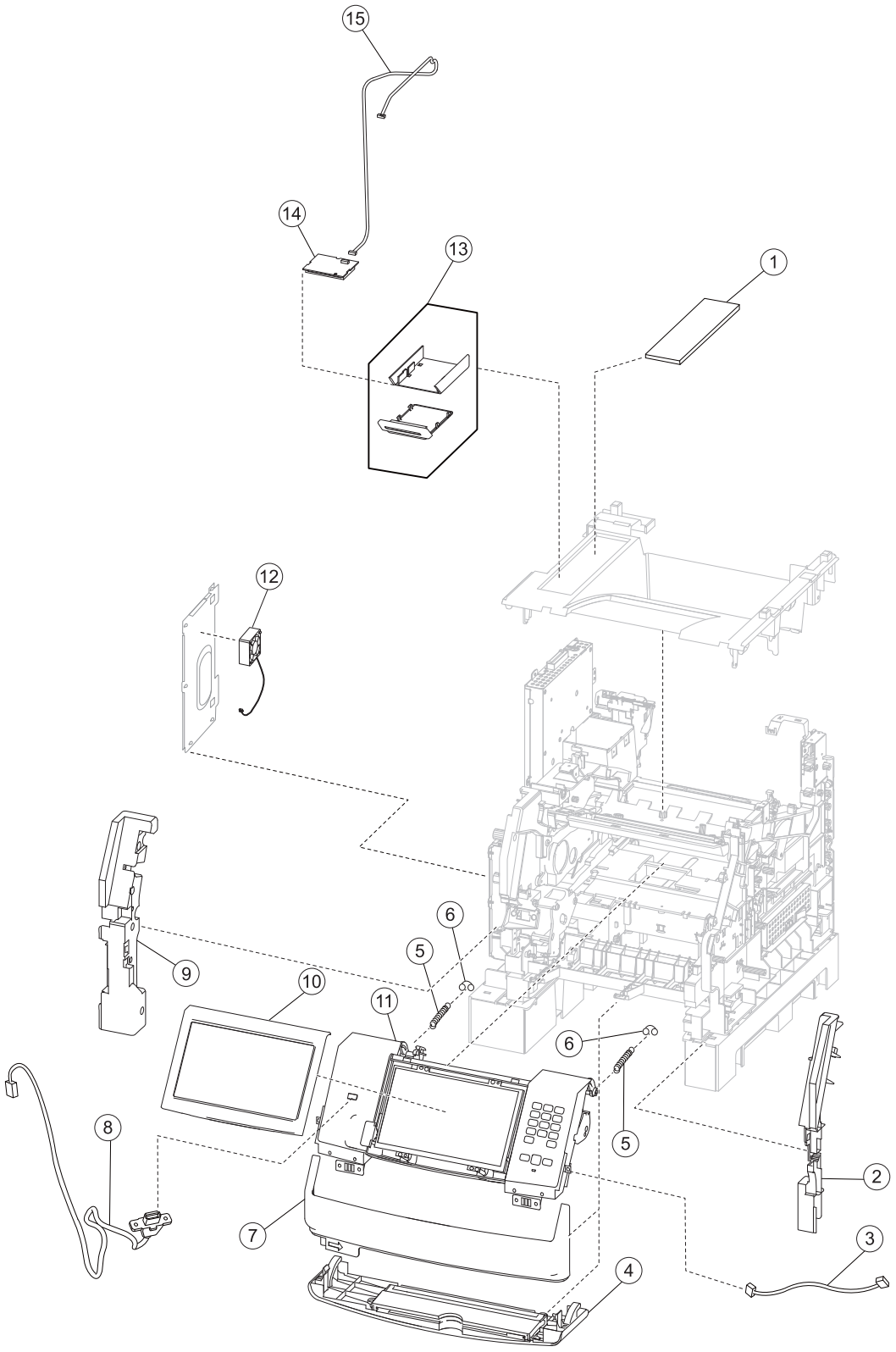
# Assembly 2: T650, T652, and T654 operator panel



# Assembly 2: T650, T652, and T654 operator panel

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4366 | 1 | 1 | Operator panel cable assembly (T650, T652, and T654) | -- |
| 2 | 40X4462 | 1 | 1 | Operator panel door assembly (T650, T652, and T654) | -- |
| 3 | 40X4380 | 2 | 1 | Counterbalance spring (T650, T652, and T654) | -- |
| 4 | 40X4397 | 1 | 1 | Operator panel hinge assembly, right (T650, T652, and T654) | -- |
| 5 | 40X4616 | 1 | 1 | Operator panel latch assembly (T650, T652, and T654) | -- |
| 6 | 40X4396 | 1 | 1 | Operator panel hinge assembly with interlock switch, left (T650, T652, and T654) | -- |
| 7 | 40X4415 | 1 | 1 | LCD screen bezel (T650n) | -- |
| 7 | 40X4494 | 1 | 1 | LCD screen bezel (T652n) | -- |
| 7 | 40X4471 | 1 | 1 | LCD screen bezel (T652dn) | -- |
| 7 | 40X4628 | 1 | 1 | LCD screen bezel (T654n) | -- |
| 7 | 40X4627 | 1 | 1 | LCD screen bezel (T654dn) | -- |
| 7 | 40X7043 | 1 | 1 | LCD screen bezel (TG654dn) | -- |
| 8 | 40X5746 | 1 | 1 | Operator panel bezel, left | -- |
| 8 | 40X5729 | 1 | 1 | Operator panel bezel, left (NON USB) | -- |
| 9 | 40X4377 | 1 | 1 | USB cable assembly (T650, T652, and T654) | -- |

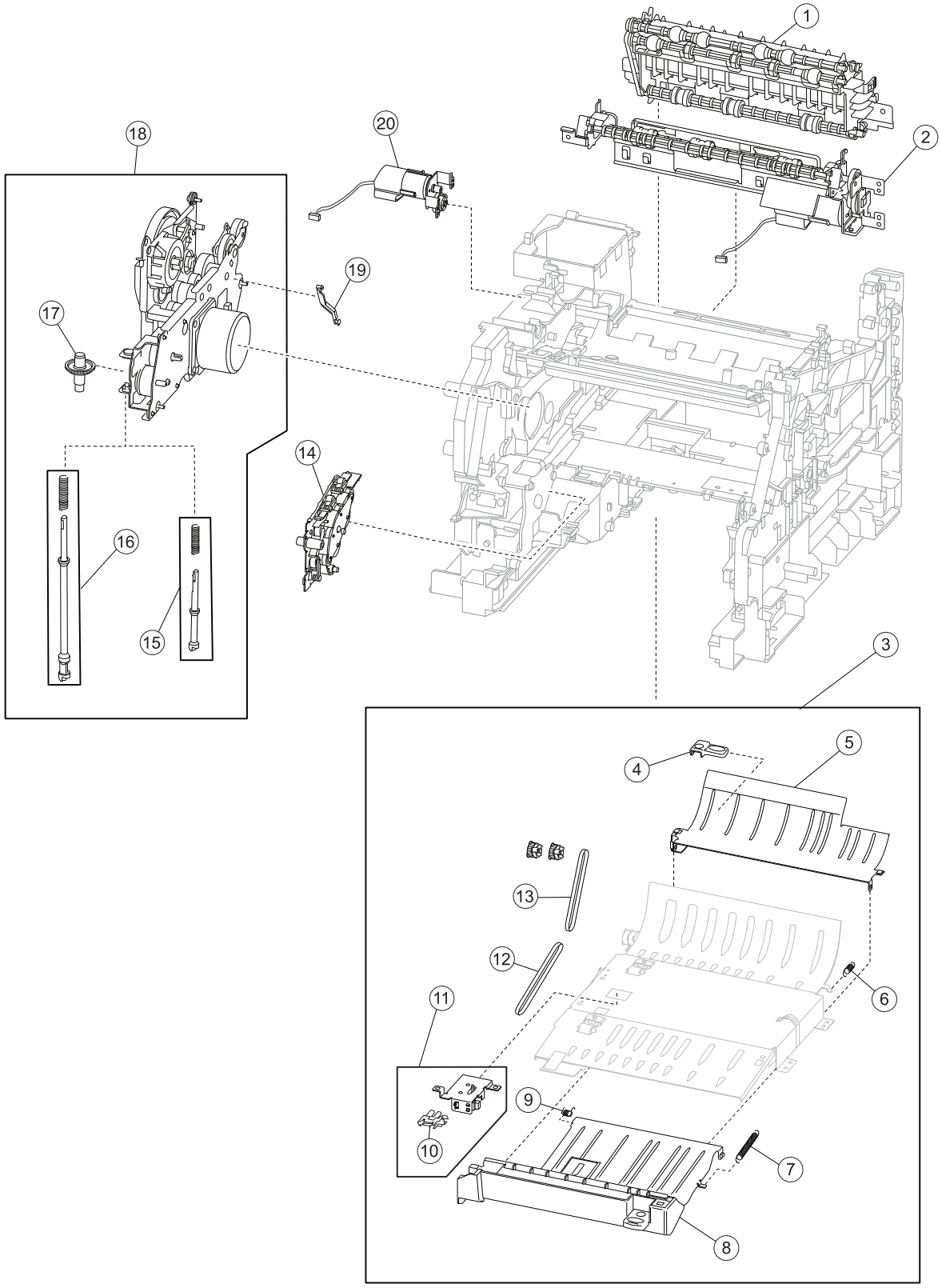
# Assembly 3: T656 Operator panel, MPF and smart card



# Assembly 3: T656 Operator panel, MPF and smart card

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X7039 | 1 | 1 | Card reader cable assembly (T656) | -- |
| 2 | 40X1972 | 1 | 1 | Inner cover, right (T656) | -- |
| 3 | 40X2045 | 1 | 1 | Operator panel cable assembly (T656) | -- |
| 4 | 40X2089 | 1 | 1 | MPF tray door assembly (T656) | -- |
| 5 | 40X2077 | 2 | 1 | Counterbalance spring (T656) | -- |
| 6 | 40X2078 | 2 | 1 | Spring connector (T656) | -- |
| 7 | 40X4631 | 1 | 1 | Operator panel door latch assembly (T656) | -- |
| 8 | 40X2051 | 1 | 1 | USB cable assembly (T656) | -- |
| 9 | 40X1971 | 1 | 1 | Inner cover, left (T656) | -- |
| 10 | 40X7038 | 1 | 1 | Operator panel bezel (T656) | -- |
| 11 | 40X1385 | 1 | 1 | Operator panel door assembly (T656) | -- |
| 12 | 40X7035 | 1 | 1 | Hard drive cooling fan (T656) | -- |
| 13 | 40X7042 | 1 | 1 | Card reader mounting bracket (T656) | -- |
| 14 | 40X4602 | 1 | 1 | Card reader assembly (3121 contact) (T656) | -- |
| 14 | 40X4603 | 1 | 1 | Card reader assembly (5121 contact/RFID) (T656) | -- |
| 14 | 40X4604 | 1 | 1 | Card reader assembly (5125 contact/HID) (T656) | -- |
| 15 | 40X7037 | 1 | 1 | Card reader cable assembly (T656) | -- |

# Assembly 4: Drive motor assemblies and duplex

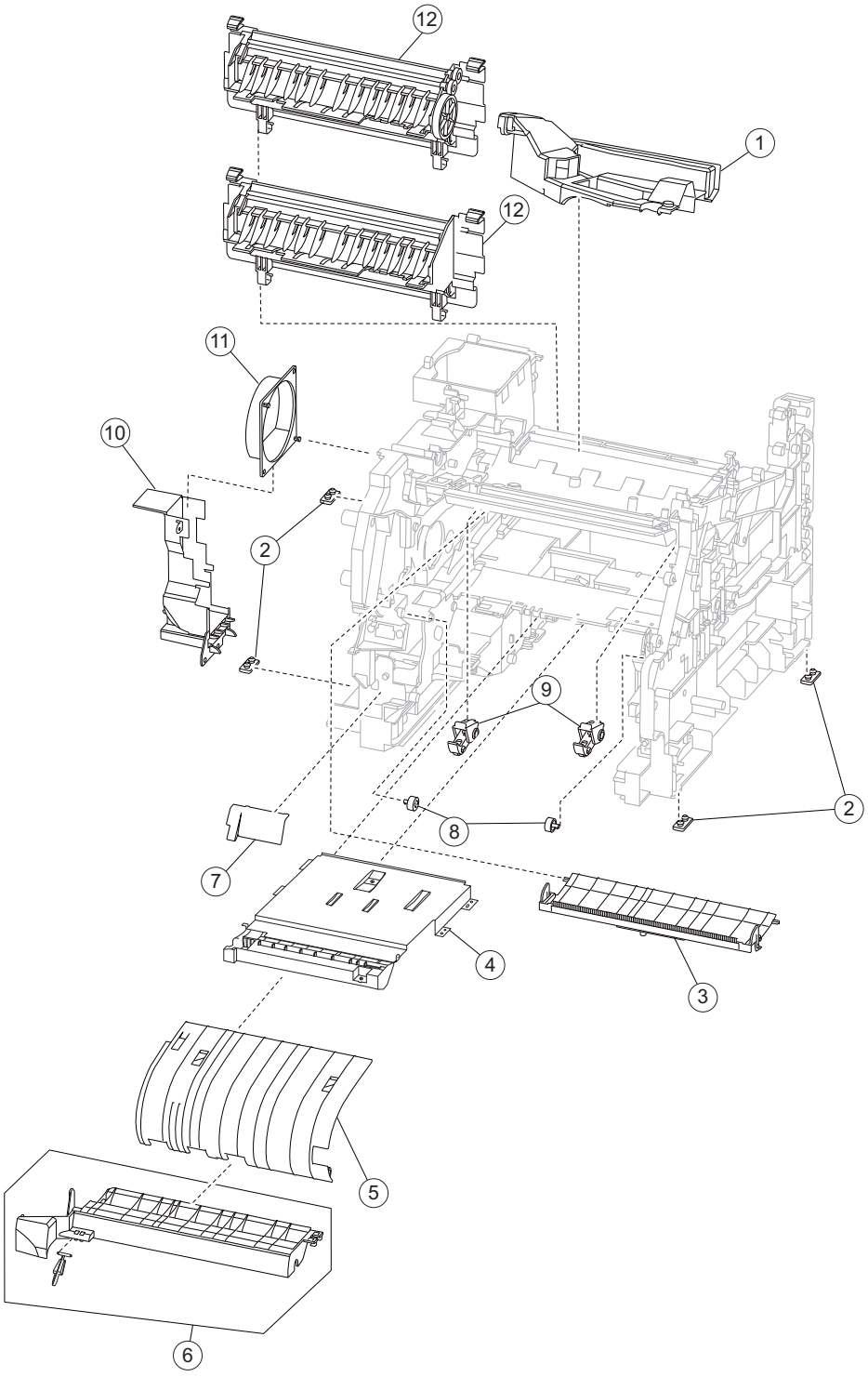


# Assembly 4: Drive motor assemblies and duplex

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4465 | 1 | 1 | Redrive assembly (T650) | -- |
| 1 | 40X4466 | 1 | 1 | Redrive assembly (T652) | -- |
| 1 | 40X4467 | 1 | 1 | Redrive assembly (T654 and T656) | -- |
| 2 | 40X4344 | 1 | 1 | Duplex drive motor assembly (T652, T654, and T656) | -- |
| 3 | 40X4346 | 1 | 5 | Duplex assembly with 2 belts and 2 pulleys (T652, T654, and T656) | -- |
| 4 | 40X4351 | 1 | 1 | Duplex guide handle (T652, T654, and T656) | -- |
| 5 | 40X4352 | 1 | 1 | Duplex guide, rear (T652, T654, and T656) | -- |
| 6 | 40X4353 | 1 | 1 | Duplex guide spring, rear (T652, T654, and T656) | -- |
| 7 | 40X4349 | 1 | 1 | Duplex guide spring, right (T652, T654, and T656) | -- |
| 8 | 40X4348 | 1 | 1 | Duplex guide assembly, front (T652, T654, and T656) | -- |
| 9 | 40X5551 | 1 | 1 | Duplex guide spring, left (T652, T654, and T656) | -- |
| 10 | 40X4369 | 1 | 1 | Sensor (duplex input) (T652, T654, and T656) | -- |
| 11 | 40X4345 | 1 | 1 | Duplex (input) sensor assembly (T652, T654, and T656) | -- |
| 12 | 40X4350 | 1 | 1 | Duplex drive belt, lower (T652, T654, and T656) | -- |
| 13 | 40X4354 | 1 | 1 | Duplex drive belt, upper (T652, T654, and T656) | -- |
| 14 | 40X4302 | 1 | 3 | Aligner assembly with ground strap and adj. screw (T650) | -- |
| 14 | 40X4303 | 1 | 3 | Aligner assembly with ground strap and adj. screw (T652, T654, and T656) | -- |
| 15 | 40X1863 | 1 | 2 | Option drive shaft with spring (T650) | -- |
| 16 | 40X4473 | 1 | 2 | Option drive shaft with spring (T652, T654, and T656) | -- |
| 17 | 99A0954 | 1 | 1 | Bevel gear with grease packet and washer, includes:<br>• Bevel gear (1)<br>• Instruction sheet (1)<br>• Grease packet (1) | -- |

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 18 | 40X5749 | 1 | 1 | Main drive motor assembly with option drive shaft | -- |
| 19 | 40X4386 | 1 | 1 | Fuser drive release linkage | -- |
| 20 | 40X4343 | 1 | 1 | Redrive motor assembly (T652, T654, and T656) | -- |

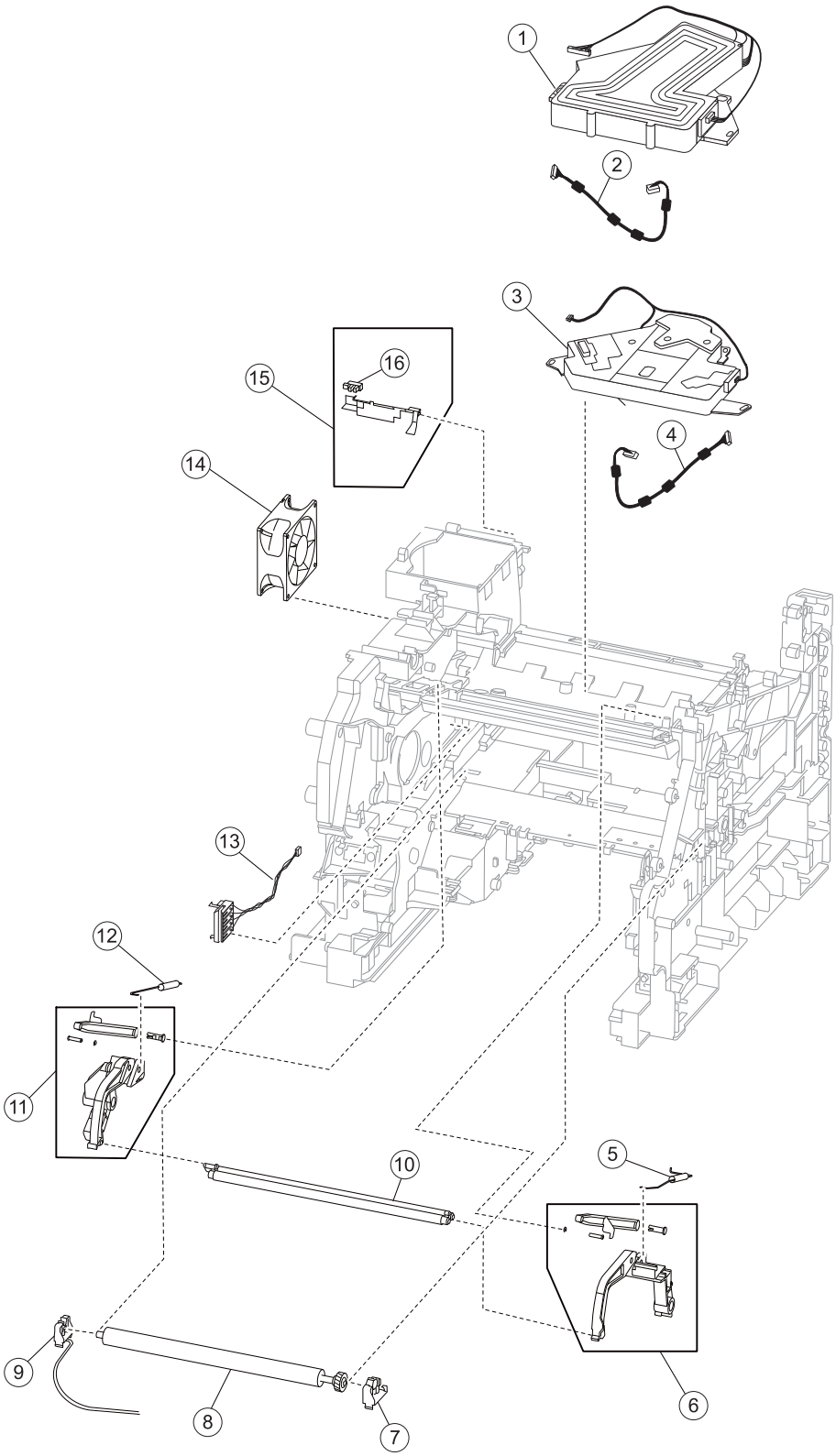
# Assembly 5: Media path and ducts



# Assembly 5: Media path and ducts

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4384 | 1 | 1 | EP cooling fan duct (T625, T654, and T656) | -- |
| 2 | 40X4390 | 4 | 1 | Machine pad | -- |
| 3 | 40X1869 | 1 | 1 | Transfer deflector with static brush | -- |
| 4 | 40X1889 | 1 | 1 | Simplex assembly (T652, T654) | -- |
| 5 | 40X4387 | 1 | 1 | Inner deflector (T650) | -- |
| 5 | 40X4388 | 1 | 1 | Inner deflector (T652, T654, and T656) | -- |
| 6 | 40X1900 | 1 | 1 | Media turn guide with actuator | -- |
| 7 | 40X4385 | 1 | 1 | Envelope feeder interface cover | -- |
| 8 | 40X4406 | 2 | 1 | Print cartridge support roller | -- |
| 9 | 40X1868 | 2 | 1 | Print cartridge clamp assembly | -- |
| 10 | 40X4389 | 1 | 1 | LVPS cooling duct | -- |
| 11 | 40X4391 | 1 | 1 | Main cooling duct (T650) | -- |
| 11 | 40X4392 | 1 | 1 | Main cooling duct (T652, T654, and T656) | -- |
| 12 | 40X4319 | 1 | 1 | Fuser access door assembly (T650) | -- |
| 12 | 40X4318 | 1 | 1 | Fuser access door assembly (T652, T654, and T656) | -- |

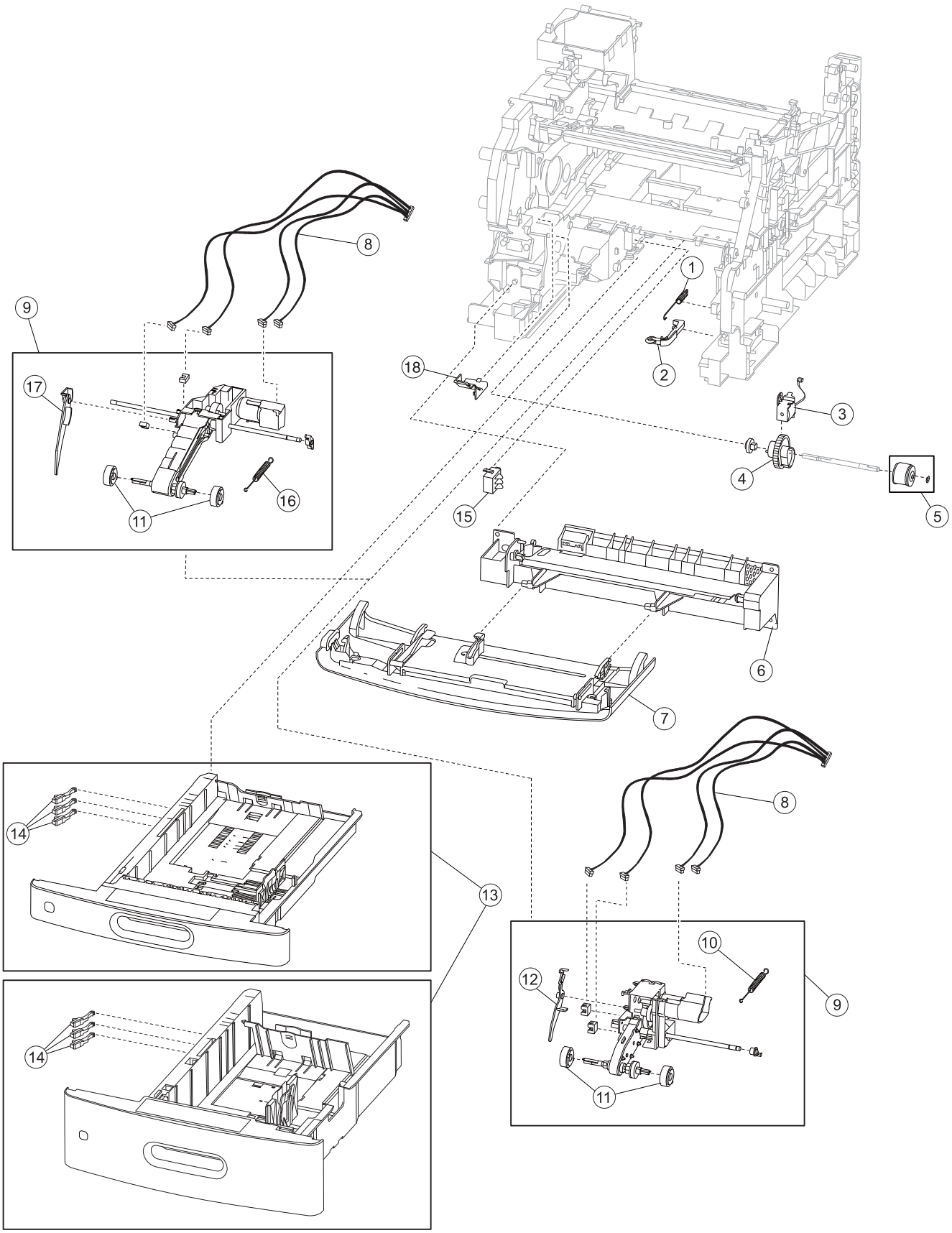
# Assembly 6: Printhead, charge, and transfer



# Assembly 6: Printhead, charge, and transfer

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4464 | 1 | 2 | Printhead (T652 and T654) | -- |
| 1 | 40X7040 | 1 | 1 | Printhead (T656) | -- |
| 2 | 40X1865 | 1 | 1 | Printhead cable (T652, T654, and T656) | -- |
| 3 | 40X4463 | 1 | 2 | Printhead (T650) | -- |
| 4 | 40X4367 | 1 | 1 | Printhead cable (T650) | -- |
| 5 | 40X4317 | 1 | 1 | Charge roll link spring, right | -- |
| 6 | 40X1893 | 1 | 4 | Charge roll arm assembly with cable, right | -- |
| 7 | 40X1888 | 1 | 2 | Transfer roll bracket assembly, right | -- |
| 8 | 40X1886 | 1 | 1 | Transfer roll assembly with tool | -- |
| 8 | 40X5976 | 1 | 1 | Banner transfer roll | -- |
| 9 | 40X1887 | 1 | 2 | Transfer roll bracket with cable assembly, left | -- |
| 10 | 40X0127 | 1 | 1 | Charge roll assembly with tool | -- |
| 11 | 40X1892 | 1 | 4 | Charge roll arm assembly, left | -- |
| 12 | 40X4316 | 1 | 1 | Charge roll link spring, left | -- |
| 13 | 40X1864 | 1 | 1 | Print cartridge ID connector assembly | -- |
| 14 | 40X4363 | 1 | 1 | Main cooling fan (T650) | -- |
| 14 | 40X4364 | 1 | 1 | Main cooling fan (T652, T654, and T656) | -- |
| 15 | 40X4372 | 1 | 1 | Sensor (standard bin exit) actuator assembly | -- |
| 16 | 40X4369 | 1 | 1 | Sensor (standard bin exit) | -- |

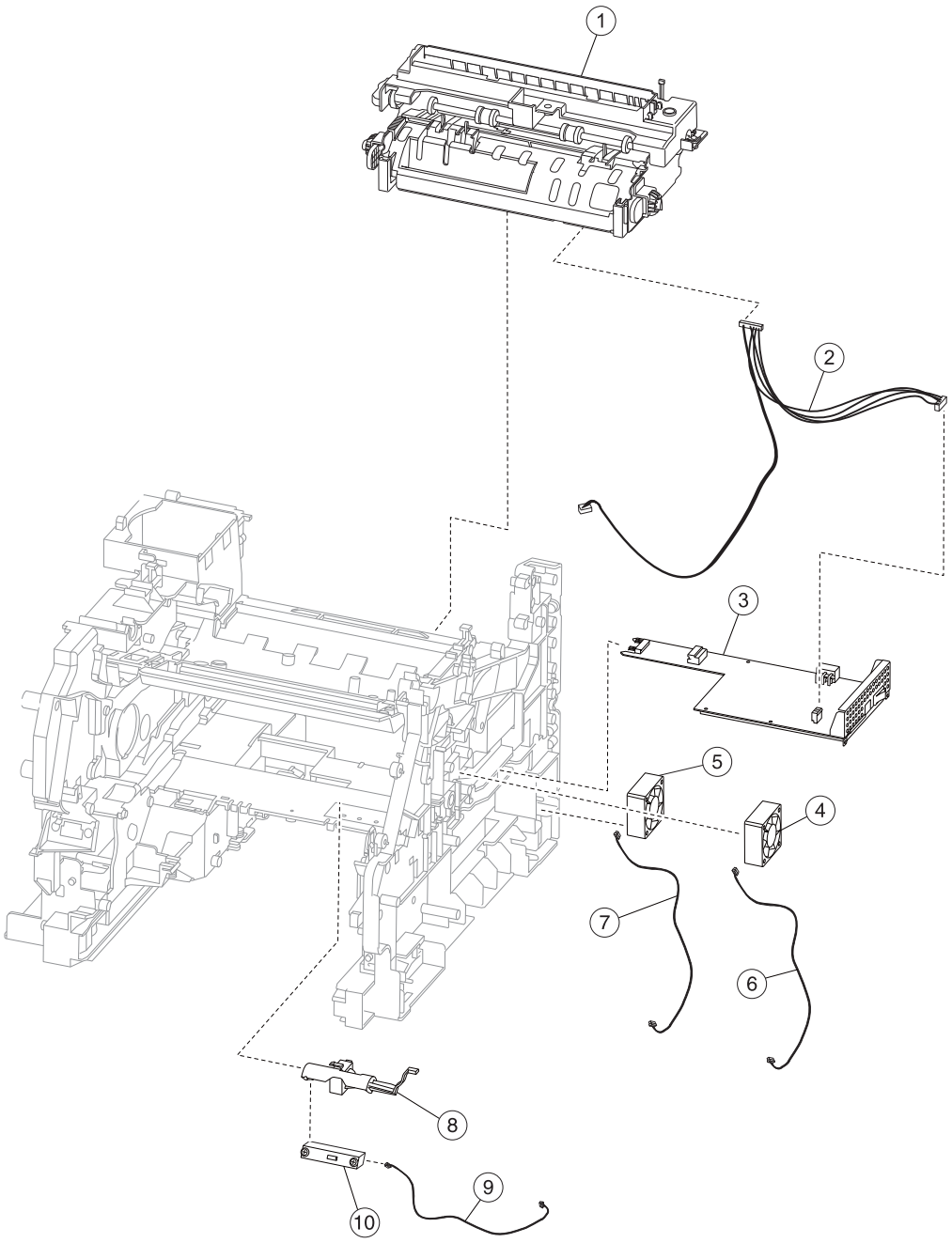
# Assembly 7: Pick arm assembly, trays, and MPF



# Assembly 7: Pick arm assembly, trays, and MPF

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4394 | 1 | 1 | Tray catch spring | -- |
| 2 | 40X4395 | 1 | 1 | Tray roller catch assembly | -- |
| 3 | 40X6994 | 1 | 1 | MPF pick solenoid assembly | -- |
| 4 | 40X4457 | 1 | 1 | MPF cam gear | -- |
| 5 | 40X1883 | 4 | 1 | MPF pick roll assembly with flanges and clip | -- |
| 6 | 40X4458 | 1 | 1 | MPF lift plate assembly (T650) | -- |
| 6 | 40X4459 | 1 | 1 | MPF lift plate assembly (T652, T654, and T656) | -- |
| 7 | 40X4460 | 1 | 1 | MPF tray door assembly (T650) | -- |
| 7 | 40X4461 | 1 | 1 | MPF tray door assembly (T652) | -- |
| 7 | 40X1884 | 1 | 1 | MPF tray door assembly (T654) | -- |
| 8 | 40X4313 | 1 | 1 | Pick arm sensor cable assembly | -- |
| 9 | 40X4304 | 1 | 1 | Pick arm assembly with spring, 250 sheet (T650) | -- |
| 9 | 40X4305 | 1 | 1 | Pick arm assembly with spring, 500 sheet (T652, T654, and T656) | -- |
| 10 | 40X4306 | 1 | 1 | Pick arm spring (T650) | -- |
| 11 | 40X4308 | 1 | 2 | Pick roll assembly (2) | -- |
| 12 | 40X1384 | 1 | 1 | 250 Sheet media out actuator (T650) | -- |
| 13 | 40X6391 | 1 | 1 | Media tray assembly, 250 sheet | -- |
| 13 | 40X5786 | 1 | 1 | Media tray assembly, 550 sheet | -- |
| 14 | 40X6932 | 3 | 1 | Trays size sensing actuator | -- |
| 15 | 40X4472 | 1 | 1 | Switch (media size) assembly | -- |
| 16 | 40X4307 | 1 | 1 | Pick arm spring (T652, T654, and T656) | -- |
| 17 | 40X4310 | 1 | 1 | 550 Sheet media out actuator (T652, T654, and T656) | -- |
| 18 | 40X1876 | 1 | 1 | MPF gear shield | -- |

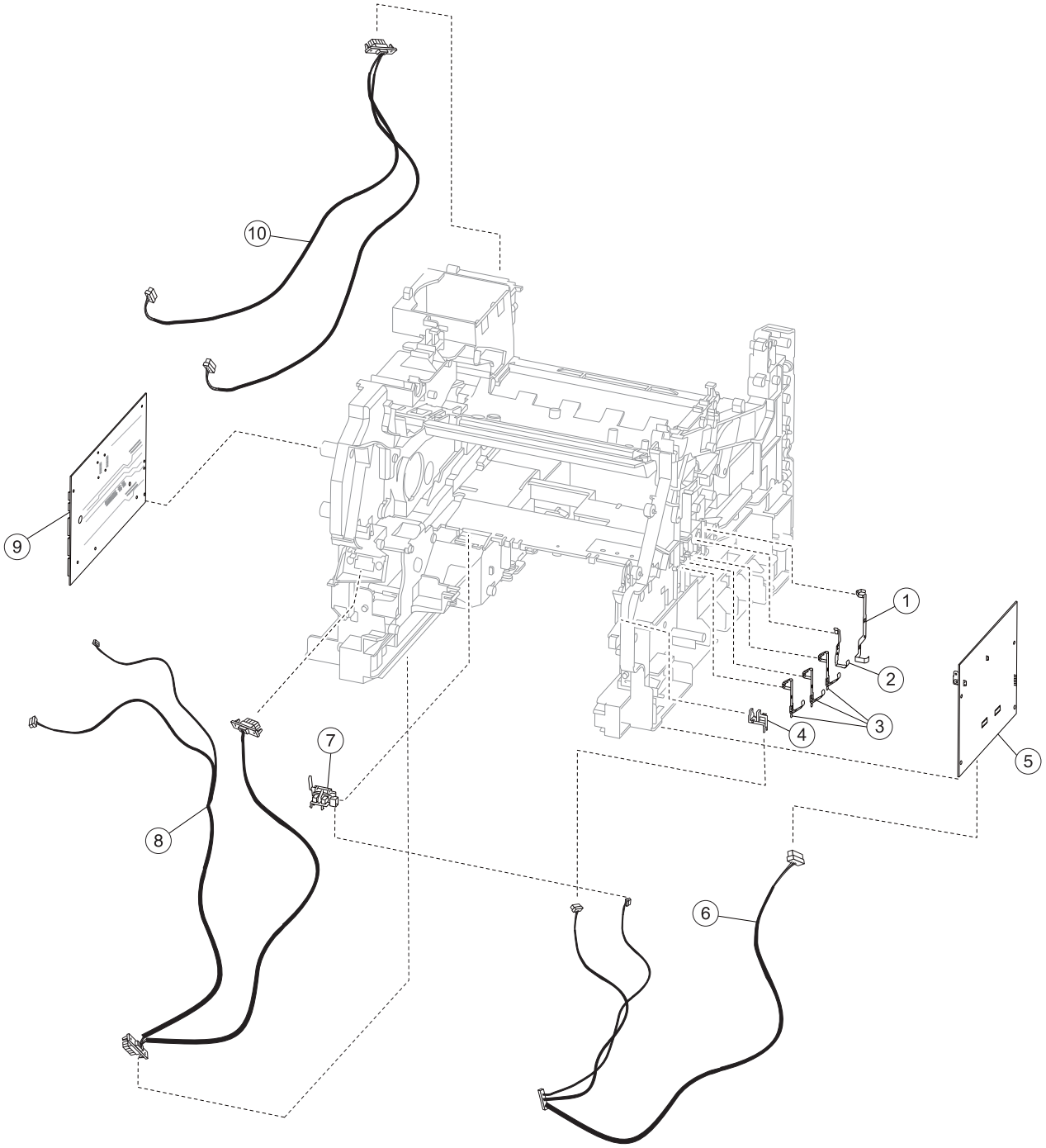
# Assembly 8: LVPS, fuser, and electrical cables 1



# Assembly 8: LVPS, fuser, and electrical cables 1

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X1870 | 1 | 1 | 100V type 1 fuser assembly | -- |
| 1 | 40X4418 | 1 | 1 | 110V type 1 fuser assembly | -- |
| 1 | 40X1871 | 1 | 1 | 220V type 1 fuser assembly | -- |
| 1 | 40X5853 | 1 | 1 | 100V type 2 fuser assembly | -- |
| 1 | 40X5854 | 1 | 1 | 110V type 2 fuser assembly | -- |
| 1 | 40X5855 | 1 | 1 | 220V type 2 fuser assembly | -- |
| 2 | 40X4419 | 1 | 1 | Fuser interface cable assembly | -- |
| 3 | 40X4355 | 1 | 1 | LVPS card assembly | -- |
| 4 | 40X4359 | 1 | 1 | Print cartridge cooling fan, three wire | -- |
| 5 | 40X4356 | 1 | 1 | Duplex cooling fan, two wire | -- |
| 6 | 40X4360 | 1 | 1 | Print cartridge cooling fan cable assembly | -- |
| 7 | 40X4357 | 1 | 1 | Duplex cooling fan cable assembly | -- |
| 8 | 40X1866 | 1 | 1 | Sensor shield assembly | -- |
| 9 | 40X4379 | 1 | 1 | Toner density sensor cable assembly | -- |
| 10 | 40X4378 | 1 | 1 | Sensor (toner density) | -- |

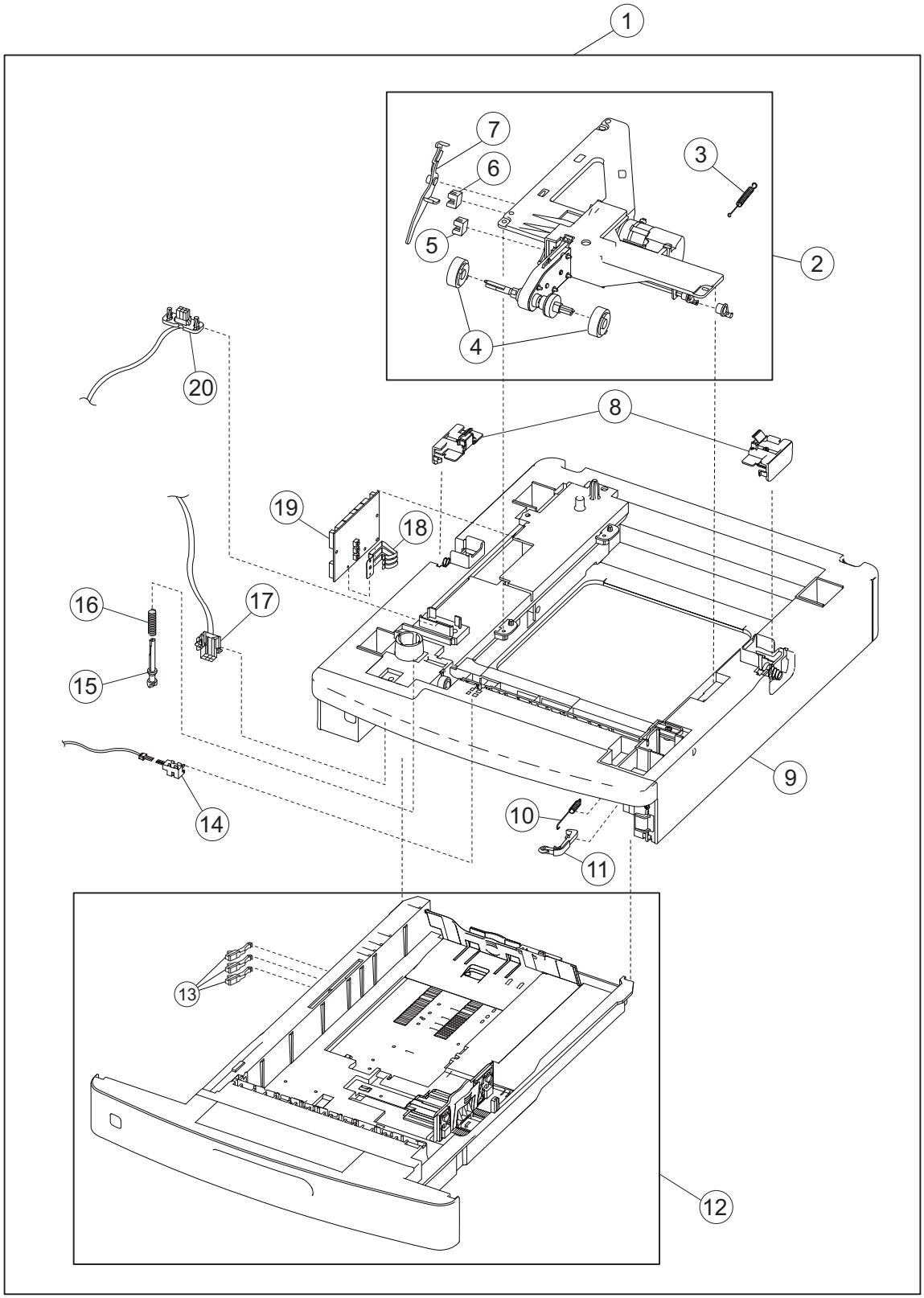
# Assembly 9: HVPS, system card, and electrical cables 2



# Assembly 9: HVPS, system card, and electrical cables 2

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4383 | 1 | 1 | Cleaning blade contact | -- |
| 2 | 40X4381 | 1 | 1 | Drum grounding contact | -- |
| 3 | 40X4382 | 1 | 1 | Print cartridge HV contact | -- |
| 4 | 40X4370 | 1 | 1 | Sensor (toner empty) | -- |
| 5 | 40X4362 | 1 | 1 | HVPS card assembly | -- |
| 6 | 40X4361 | 1 | 1 | HVPS / sensor cable assembly | -- |
| 7 | 40X8673 | 1 | 1 | Sensor (input) | -- |
| 8 | 40X4358 | 1 | 1 | Envelope / input option tray cable assembly | -- |
| 9 | 40X5911 | 1 | 1 | System card assembly (T654) | -- |
| 9 | 40X7036 | 1 | 1 | System card assembly (T656) | -- |
| 9 | 40X4375 | 1 | 1 | System card assembly (T650) | -- |
| 9 | 40X4474 | 1 | 1 | System card assembly (T652) | -- |
| 10 | 40X4376 | 1 | 1 | Output option interface cable assembly | -- |

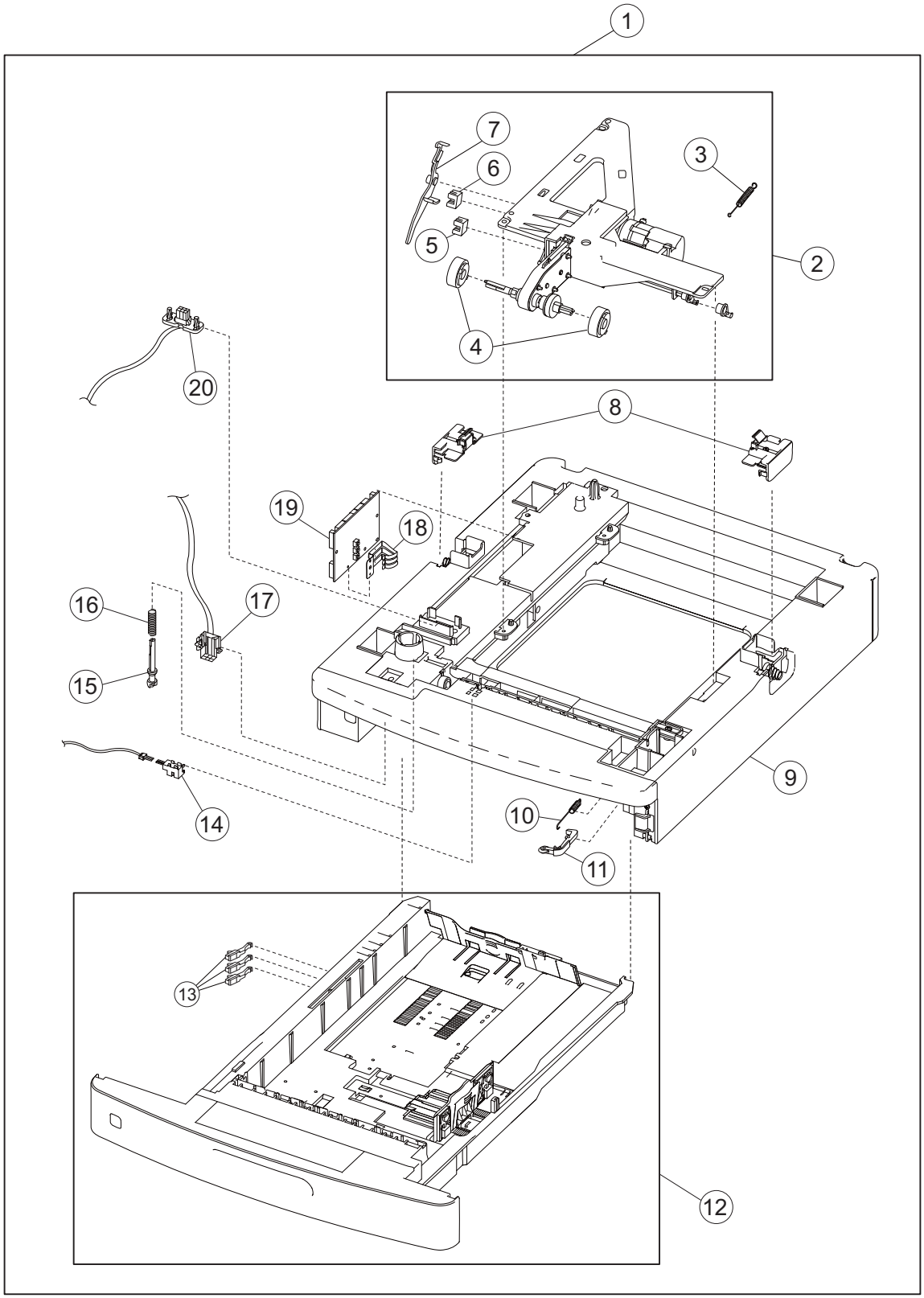
# Assembly 10: 250-sheet option tray assembly



# Assembly 10: 250-sheet option tray assembly

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4569 | 1 | 1 | Complete 250 sheet option tray assembly | -- |
| 2 | 40X3447 | 1 | 1 | 250 Sheet pick arm bracket assembly | -- |
| 3 | 40X3448 | 1 | 1 | 250 Sheet bellcrank recoil spring | -- |
| 4 | 40X4308 | 2 | 1 | Pick roll assembly (2) | -- |
| 5 | 40X4369 | 1 | 1 | Sensor (media low) | -- |
| 6 | 40X4369 | 1 | 1 | Sensor (media empty) | -- |
| 7 | 40X5840 | 1 | 1 | 250 Sheet media out actuator | -- |
| 8 | 40X4570 | 1 | 1 | Anti-tip latch assembly | -- |
| 9 | 40X3453 | 1 | 1 | 250 Sheet option drawer assembly | -- |
| 10 | 40X3822 | 1 | 1 | Media tray catch spring | -- |
| 11 | 40X4395 | 1 | 1 | Media tray roller catch assembly | -- |
| 12 | 40X6391 | 1 | 1 | Media tray assembly, 250 sheet | -- |
| 13 | 40X6932 | 3 | 1 | Tray size sensing actuator | -- |
| 14 | 40X4575 | 1 | 1 | Sensor (pass through) with cable | -- |
| 15 | 99A0272 | 1 | 1 | 250 Option drive shaft | -- |
| 16 | 99A0275 | 1 | 1 | Spring | -- |
| 17 | 40X4572 | 1 | 1 | Lower interface cable assembly | -- |
| 18 | 40X3854 | 1 | 1 | Media size actuator | -- |
| 19 | 40X4574 | 1 | 1 | 250 Sheet controller card assembly | -- |
| 20 | 40X4571 | 1 | 1 | Upper interface cable assembly | -- |

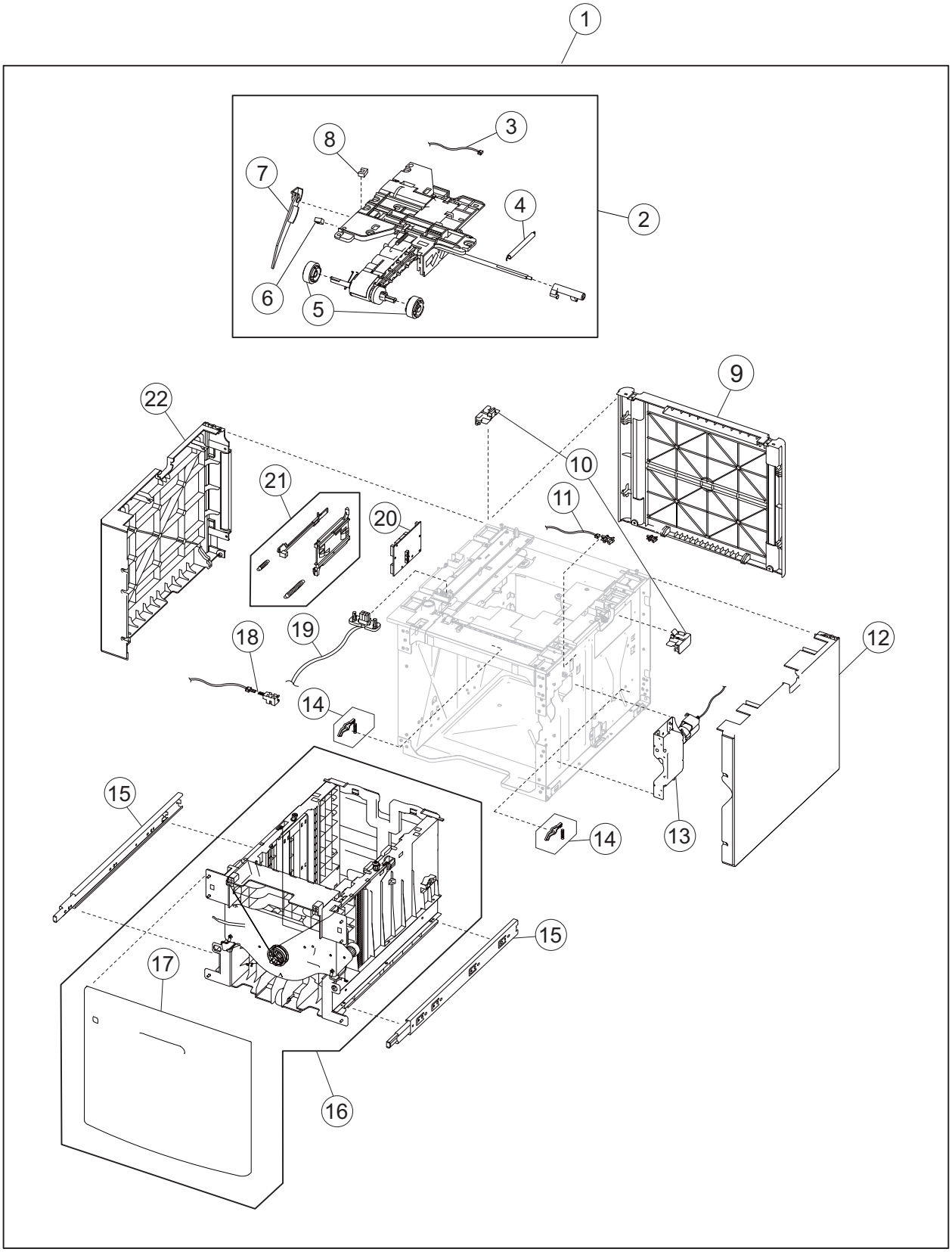
# Assembly 11: 550-sheet option tray assembly



# Assembly 11: 550-sheet option tray assembly

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4576 | 1 | 1 | Complete 550 sheet option tray assembly | -- |
| 2 | 40X3454 | 1 | 1 | 550 Sheet pick arm bracket assembly | -- |
| 3 | 40X4307 | 1 | 1 | 550 Sheet bellcrank recoil spring | -- |
| 4 | 40X4308 | 1 | 2 | Pick roll assembly (2) | -- |
| 5 | 40X4369 | 1 | 1 | Sensor (media low) | -- |
| 6 | 40X4369 | 1 | 1 | Sensor (media empty) | -- |
| 7 | 40X4310 | 1 | 1 | 550 Sheet media out actuator | -- |
| 8 | 40X4570 | 2 | 2 | Anti-tip latch assembly | -- |
| 9 | 40X3957 | 1 | 1 | 550 Sheet option drawer assembly | -- |
| 10 | 40X3822 | 1 | 1 | Media tray catch spring | -- |
| 11 | 40X4395 | 1 | 1 | Media tray roller catch assembly | -- |
| 12 | 40X5786 | 1 | 1 | Media tray assembly, 550 sheet | -- |
| 13 | 40X6932 | 3 | 1 | Tray size sensing actuator | -- |
| 14 | 40X4575 | 1 | 1 | Sensor (pass through) with cable | -- |
| 15 | 99A0447 | 1 | 1 | 550 Option drive shaft | -- |
| 16 | 99A0275 | 1 | 1 | Spring | -- |
| 17 | 40X4572 | 1 | 1 | Lower interface cable assembly | -- |
| 18 | 40X3854 | 1 | 1 | Media size actuator | -- |
| 19 | 40X4578 | 1 | 1 | 550 Sheet controller card assembly | -- |
| 20 | 40X4571 | 1 | 1 | Upper interface cable assembly | -- |

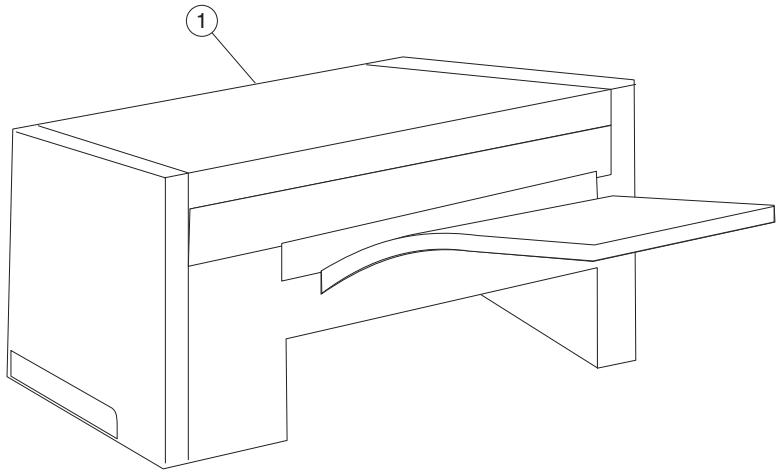
# Assembly 12: HCIT Sheet option tray assembly



# Assembly 12: HCIT Sheet option tray assembly

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4579 | 1 | 1 | Complete HCIT option tray assembly | -- |
| 2 | 40X4590 | 1 | 2 | HCIT pick arm bracket assembly | -- |
| 3 | 40X4595 | 1 | 1 | Pick arm sensor cable assembly | -- |
| 4 | 40X4591 | 1 | 1 | HCIT bellcrank recoil spring | -- |
| 5 | 40X4308 | 2 | 2 | Pick roll assembly (2) | -- |
| 6 | 40X4369 | 2 | 1 | Sensor (media low) | -- |
| 7 | 40X8310 | 1 | 1 | HCIT media out actuator | -- |
| 8 | 40X4369 | 2 | 1 | Sensor (media empty) | -- |
| 9 | 40X4581 | 1 | 1 | HCIT cover, rear | -- |
| 10 | 40X4570 | 1 | 1 | Anti-tip latch assembly | -- |
| 11 | 40X4588 | 1 | 1 | Sensor (HCIT tray raised HP) with cable assembly | -- |
| 12 | 40X4582 | 1 | 1 | HCIT cover, right | -- |
| 13 | 40X4586 | 1 | 1 | HCIT tray lift drive motor assembly | -- |
| 14 | 40X4585 | 1 | 2 | HCIT tray closed latch with spring | -- |
| 15 | 40X4593 | 2 | 2 | HCIT drawer slide assembly | -- |
| 16 | 40X4580 | 1 | 1 | HCIT media tray assembly | -- |
| 17 | 40X4584 | 1 | 1 | HCIT tray cover, front | -- |
| 18 | 40X4589 | 1 | 2 | Sensor (HCIT pass through) with cable | -- |
| 19 | 40X4594 | 1 | 1 | HCIT interface cable assembly | -- |
| 20 | 40X4592 | 1 | 1 | HCIT controller card assembly | -- |
| 21 | 40X4587 | 1 | 4 | HCIT media size actuator assembly | -- |
| 22 | 40X4583 | 1 | 1 | HCIT cover, left | -- |

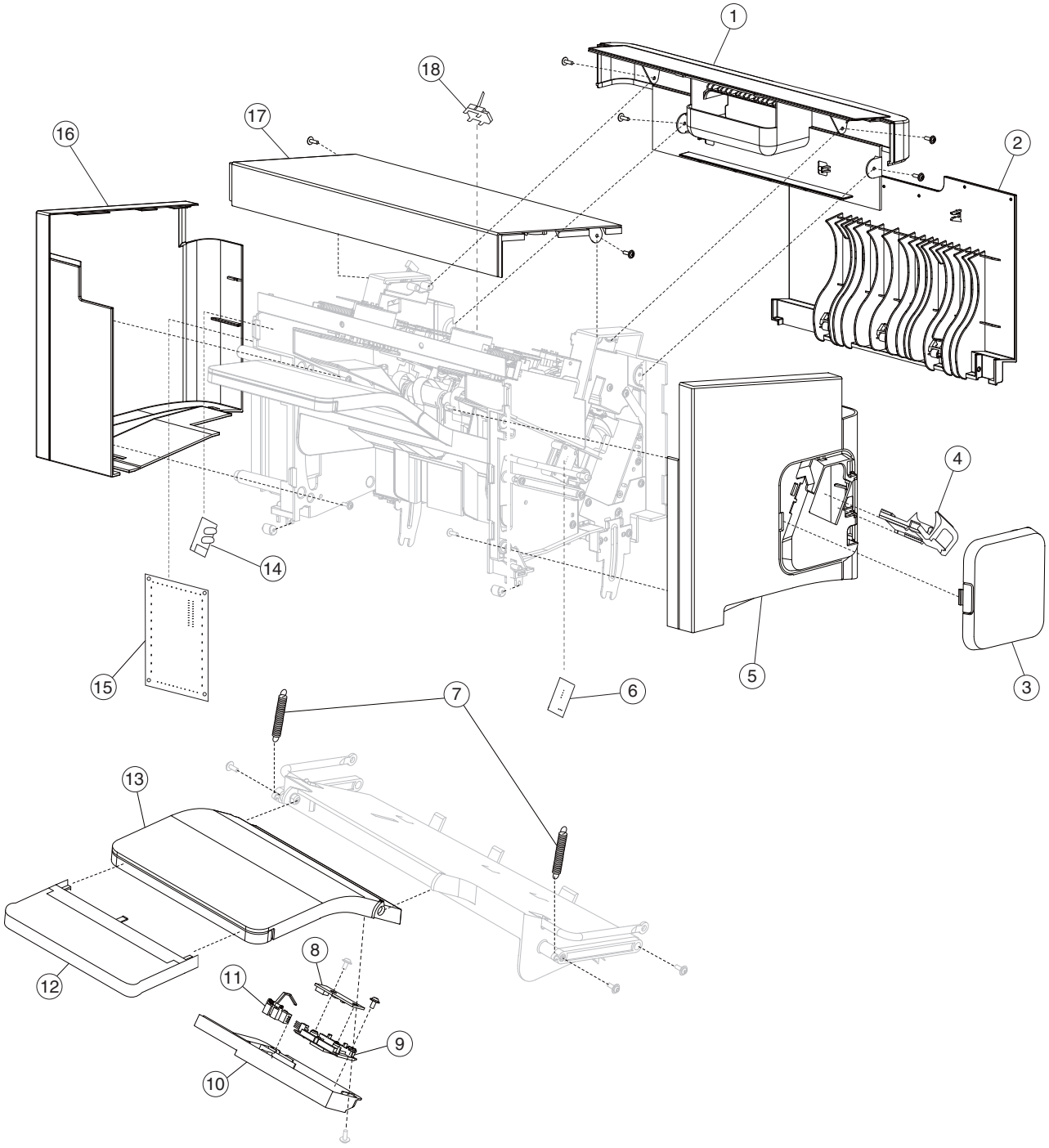
# Assembly 13: SFP stapler assembly 1



# Assembly 13: SFP stapler assembly 1

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X5547 | 1 | 1 | SFP stapler assembly (comes completely assembled) | -- |

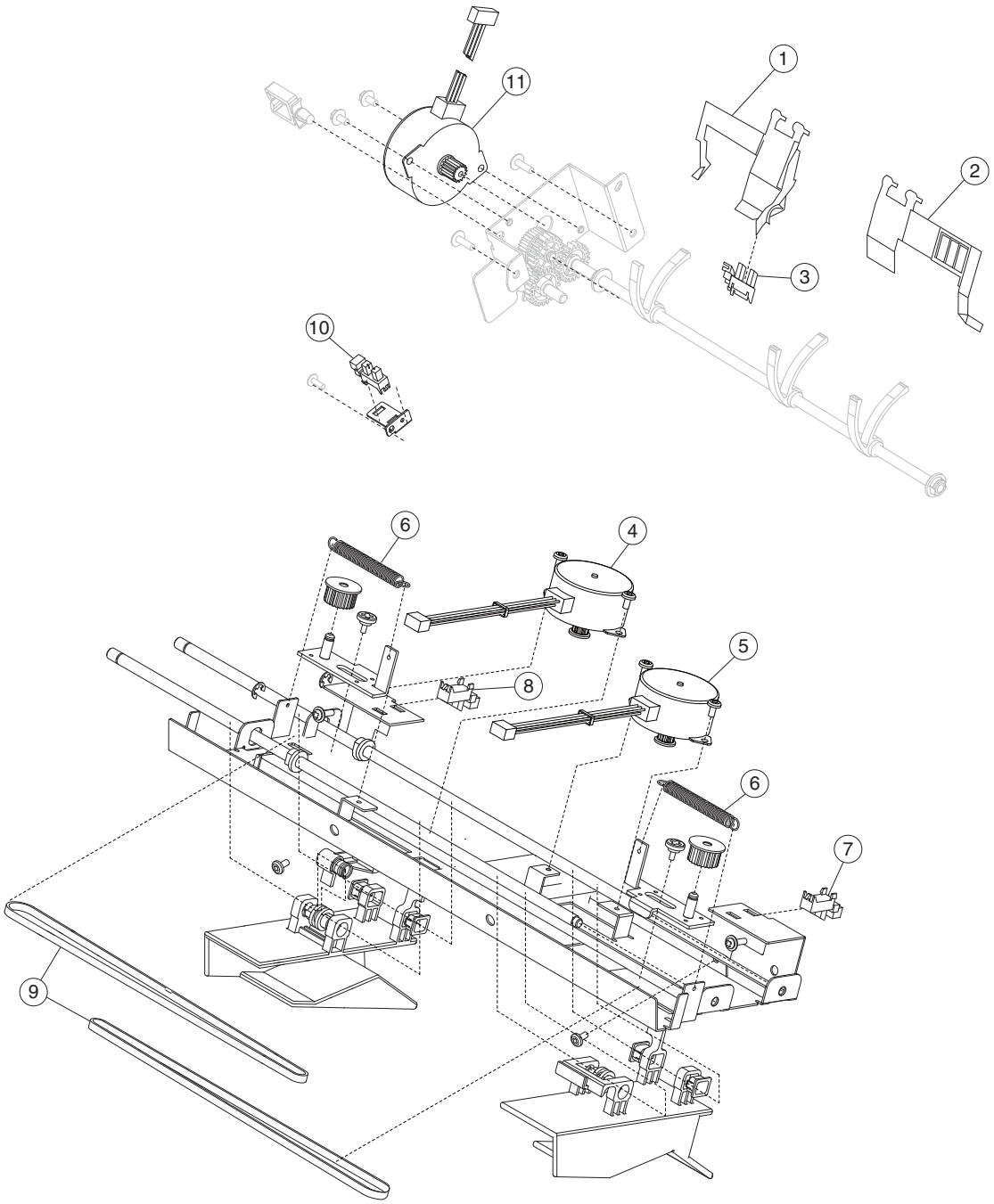
# Assembly 14: SFP stapler assembly 2



# Assembly 14: SFP stapler assembly 2

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4612 | 1 | 1 | Handle cover | -- |
| 2 | 40X4613 | 1 | 1 | Rear door assembly | -- |
| 3 | 40X5910 | 1 | 1 | Stapler cover | -- |
| 4 | 40X7466 | 1 | 1 | Staple cartridge holder | -- |
| 5 | 40X4610 | 1 | 1 | Right cover | -- |
| 6 | 40X5544 | 1 | 1 | Sensor (bin full receive) | -- |
| 7 | 40X4617 | 1 | 2 | Finisher bin spring | -- |
| 8 | 40X5545 | 1 | 1 | Standard output bin LED | -- |
| 9 | 40X5727 | 1 | 1 | LED clear lens | -- |
| 10 | 40X5720 | 1 | 1 | LED sensor cover | -- |
| 11 | 40X4618 | 1 | 1 | Sensor (finisher bin media present) | -- |
| 12 | 40X4619 | 1 | 1 | Media output bin extension | -- |
| 13 | 40X5541 | 1 | 1 | Media output bin | -- |
| 14 | 40X4626 | 1 | 1 | Sensor (bin full send) | -- |
| 15 | 40X4625 | 1 | 1 | Stapler/stacker controller card assembly | -- |
| 16 | 40X4609 | 1 | 1 | Left cover | -- |
| 17 | 40X4611 | 1 | 1 | Top cover | -- |
| 18 | 40X5906 | 1 | 1 | Sensor (stapler/stacker pass through) | -- |

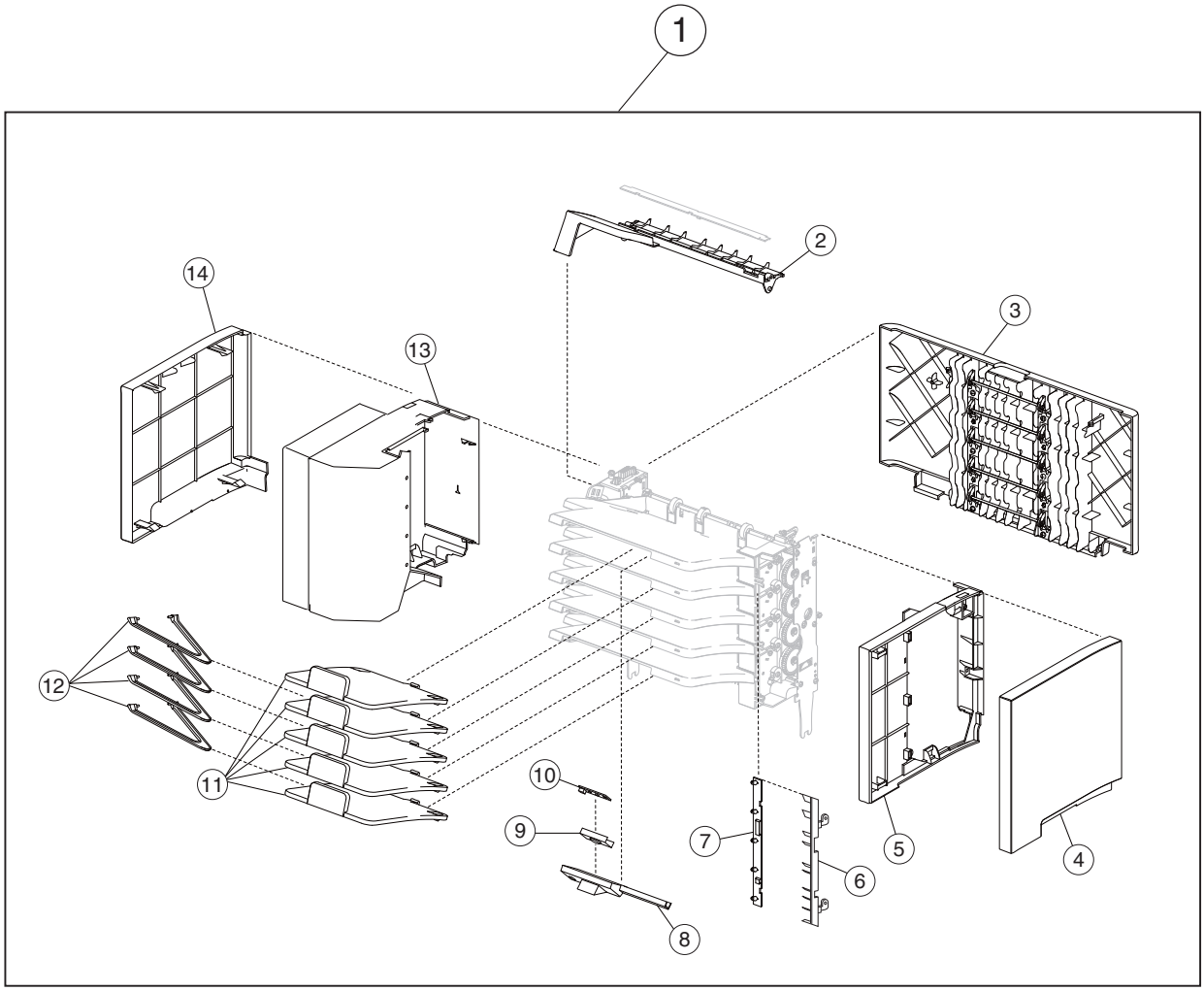
# Assembly 15: SFP stapler assembly 3



# Assembly 15: SFP stapler assembly 3

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X4645 | 1 | 1 | Media stack flap actuator | -- |
| 2 | 40X4646 | 1 | 1 | Media stack flap | -- |
| 3 | 40X4369 | 1 | 1 | Sensor (media stack) | -- |
| 4 | 40X4621 | 1 | 1 | Left tamper motor assembly | -- |
| 5 | 40X4622 | 1 | 1 | Right tamper motor assembly | -- |
| 6 | 40X4624 | 1 | 2 | Tamper recoil spring | -- |
| 7 | 40X4369 | 1 | 1 | Sensor (tamper HP right) | -- |
| 8 | 40X4369 | 1 | 1 | Sensor (tamper HP left) | -- |
| 9 | 40X4623 | 1 | 1 | Tamper drive belt | -- |
| 10 | 40X4369 | 1 | 1 | Sensor (paddle HP) | -- |
| 11 | 40X4615 | 1 | 1 | Paddle drive motor | -- |

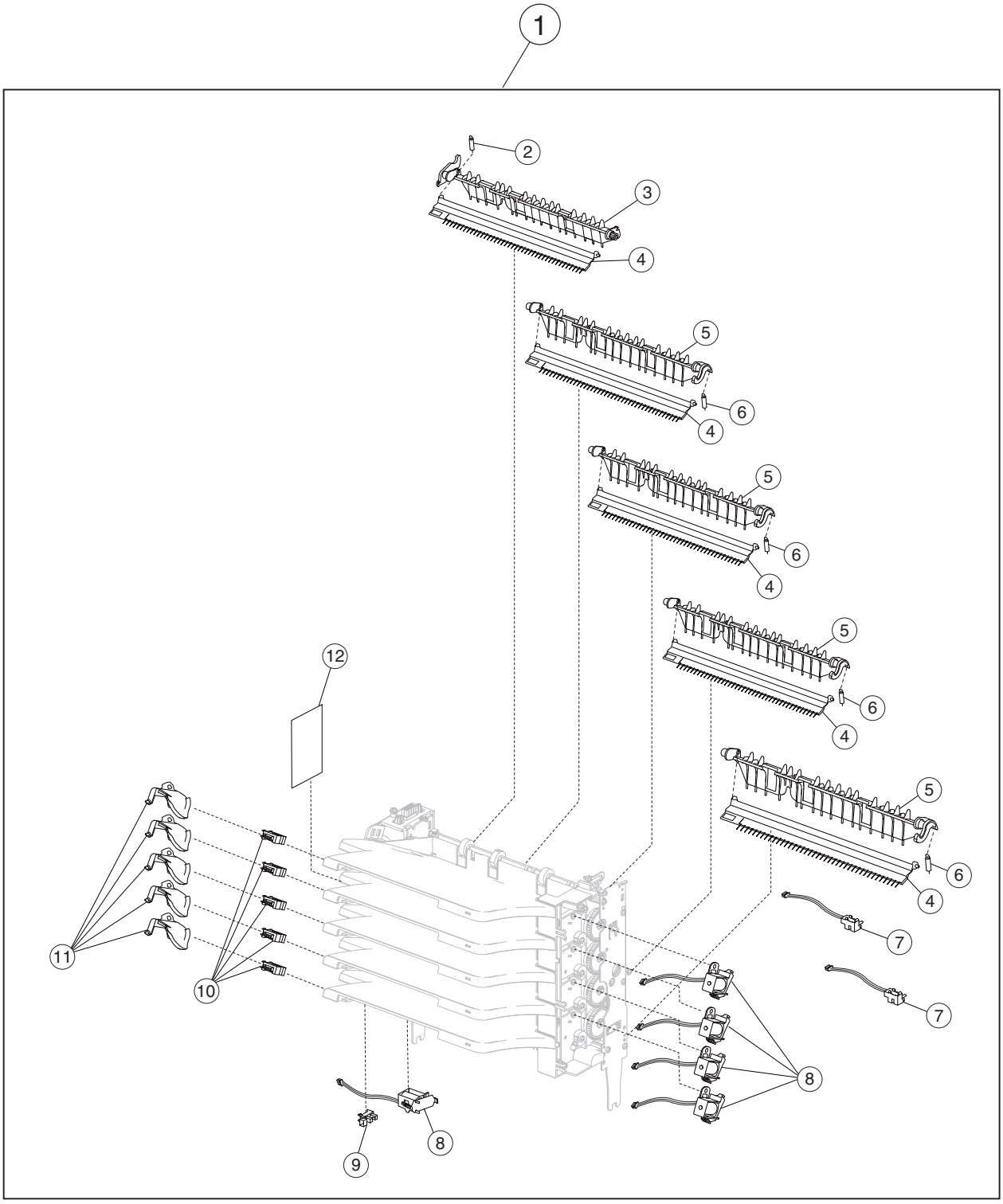
# Assembly 16: 5-bin mailbox 1



# Assembly 16: 5-bin mailbox 1

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X5550 | 1 | 1 | Complete 5 bin mailbox unit assembly | -- |
| 2 | 40X5708 | 1 | 1 | Top cover | -- |
| 3 | 40X5709 | 1 | 1 | Rear door assembly | -- |
| 4 | 40X5712 | 1 | 1 | Right outer cover | -- |
| 5 | 40X5713 | 1 | 1 | Right inner cover | -- |
| 6 | 40X5756 | 1 | 1 | Output bin LED bracket | -- |
| 7 | 40X5717 | 1 | 1 | Output bin LED assembly | -- |
| 8 | 40X5714 | 1 | 1 | Standard output bin LED bracket | -- |
| 9 | 40X5755 | 1 | 1 | LED clear lens | -- |
| 10 | 40X4773 | 1 | 1 | Standard output bin LED | -- |
| 11 | 40X5753 | 1 | 1 | Media bin extension assembly | -- |
| 12 | 56P4191 | 1 | 1 | Media bail assembly | -- |
| 13 | 40X5711 | 1 | 1 | Left inner cover | -- |
| 14 | 40X5710 | 1 | 1 | Left outer cover | -- |

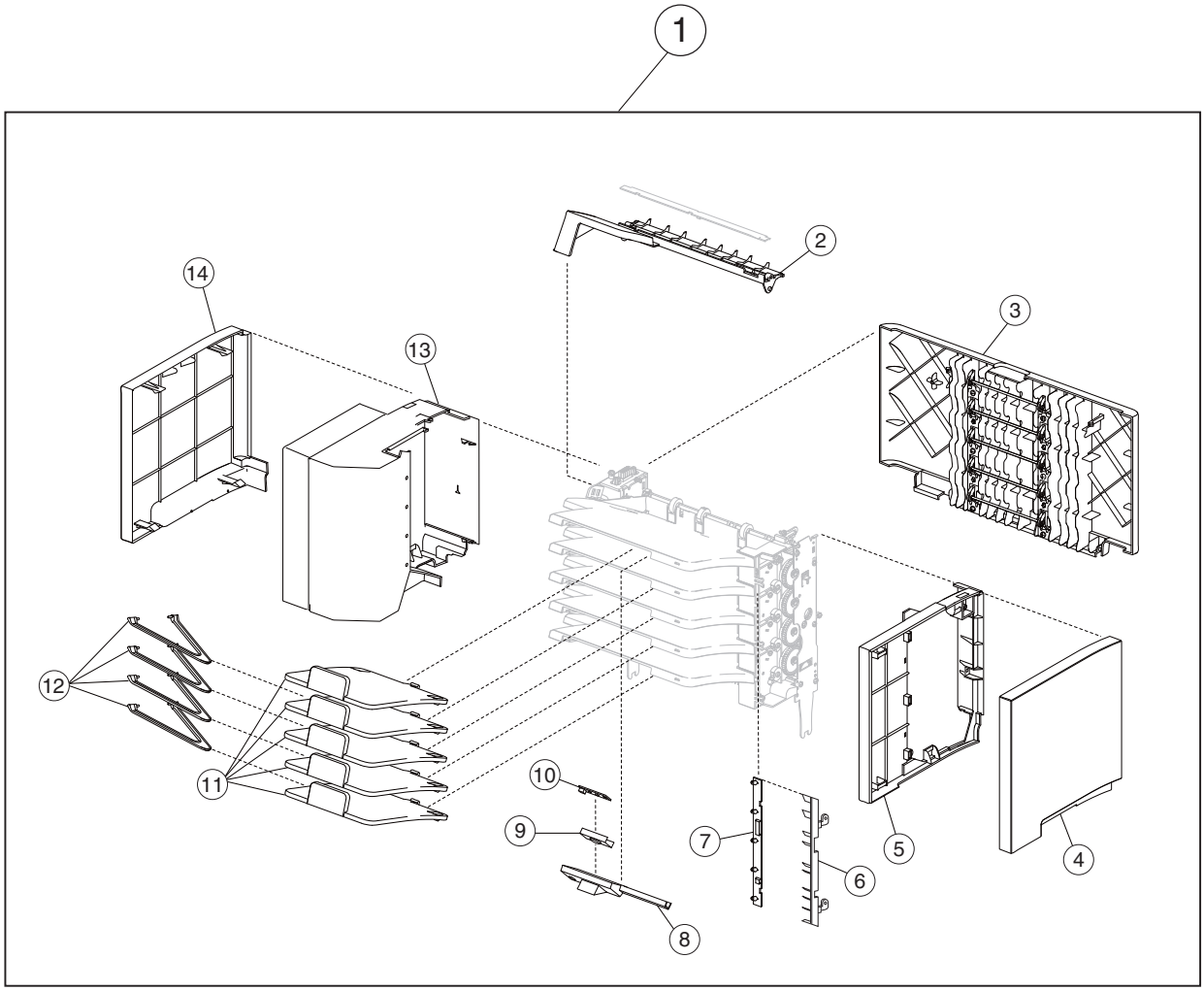
# Assembly 17: 5-bin mailbox 2



# Assembly 17: 5-bin mailbox 2

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X5550 | 1 | 1 | Complete 5 bin mailbox unit assembly | -- |
| 2 | 40X0028 | 1 | 1 | Spring (top) | -- |
| 3 | 40X2036 | 1 | 1 | Deflector gate (top) | -- |
| 4 | 40X4772 | 1 | 1 | Static brush mylar assembly | -- |
| 5 | 40X2037 | 1 | 1 | Deflector gate | -- |
| 6 | 40X2065 | 1 | 1 | Spring | -- |
| 7 | 40X3242 | 1 | 1 | Sensor (pass through) | -- |
| 8 | 40X2061 | 5 | 1 | Deflector gate solenoid | -- |
| 9 | 40X4369 | 1 | 1 | Sensor (deflector gate HP) | -- |
| 10 | 40X3240 | 1 | 1 | Sensor (media bin empty) | -- |
| 11 | 40X2038 | 1 | 1 | Media bin full actuator | -- |
| 12 | 40X5718 | 1 | 1 | 5 bin mailbox controller card assembly | -- |

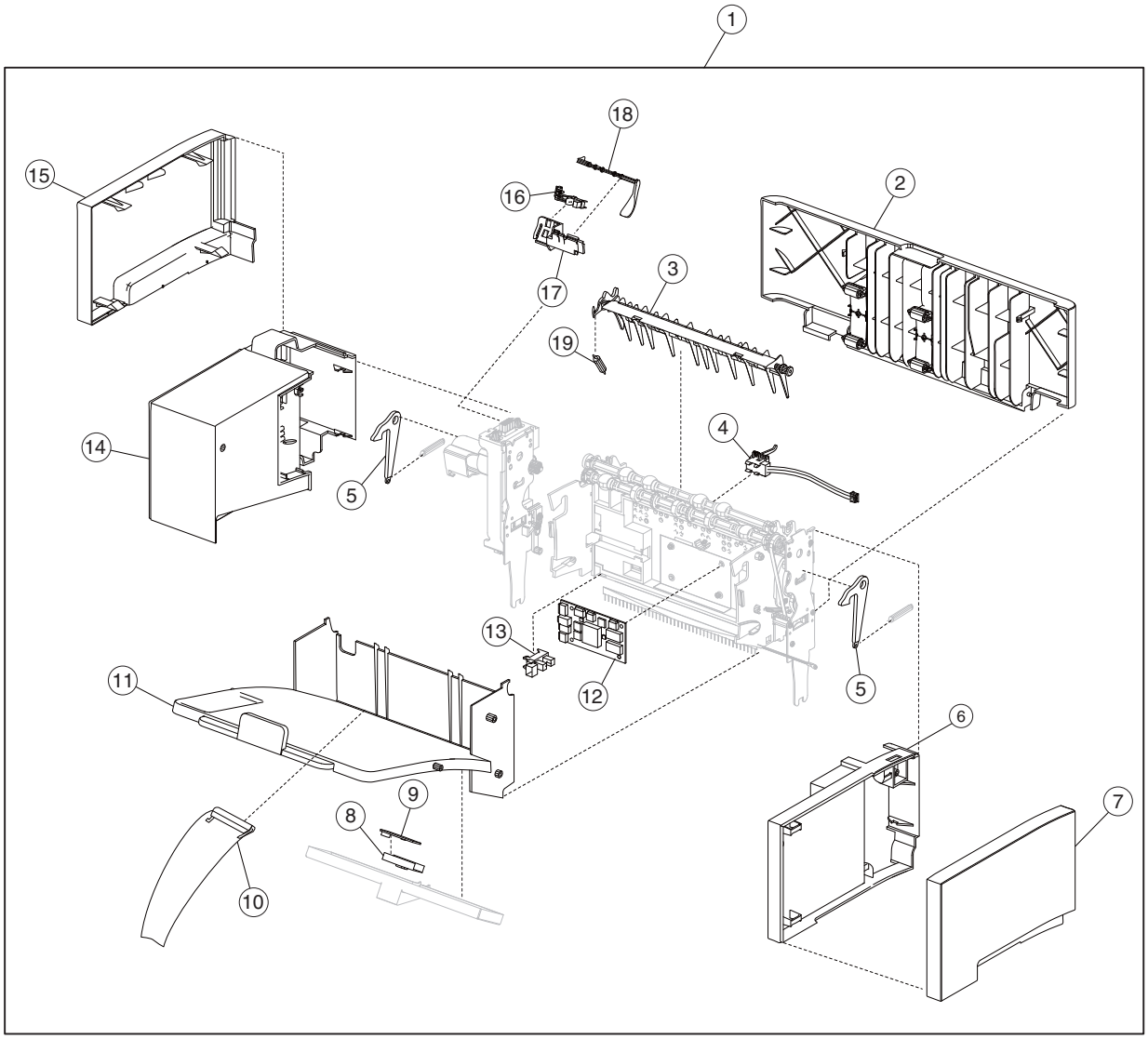
# Assembly 18: High capacity stacker



# Assembly 18: High capacity stacker

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X5730 | 1 | 1 | Complete high capacity stacker assembly | -- |
| 2 | 40X5737 | 1 | 1 | Rear door assembly | -- |
| 3 | 40X1988 | 1 | 1 | Deflector gate | -- |
| 4 | 40X3264 | 2 | 1 | Sensor (pass through) | -- |
| 5 | 40X5733 | 1 | 1 | High capacity output controller card assembly | -- |
| 6 | 40X5734 | 1 | 1 | Right frame | -- |
| 7 | 40X5735 | 1 | 1 | Right cover | -- |
| 8 | 56P4210 | 1 | 2 | Media output bin recoil spring | -- |
| 9 | 40X4773 | 1 | 1 | Standard output bin LED | -- |
| 10 | 40X5755 | 1 | 1 | LED clear lens | -- |
| 11 | 40X5731 | 1 | 1 | Media output bin assembly | -- |
| 12 | 40X1998 | 1 | 1 | Media bail assembly | -- |
| 13 | 40X4369 | 1 | 1 | Sensor (deflector gate HP) | -- |
| 14 | 40X5748 | 1 | 1 | Left frame | -- |
| 15 | 56P4208 | 1 | 1 | Switch (media bin HP) | -- |
| 16 | 40X5736 | 1 | 1 | Left cover | -- |
| 17 | 40X1989 | 1 | 1 | Sensor bracket | -- |
| 18 | 40X3265 | 1 | 1 | Sensor (media bin full assembly) | -- |
| 19 | 56P4212 | 1 | 1 | Media bin full actuator | -- |
| 20 | 40X0028 | 1 | 1 | Spring (top) | -- |

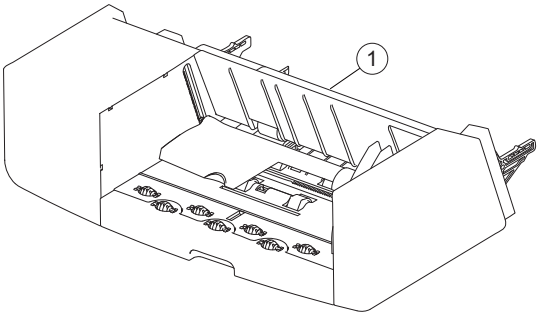
# Assembly 19: Output expander

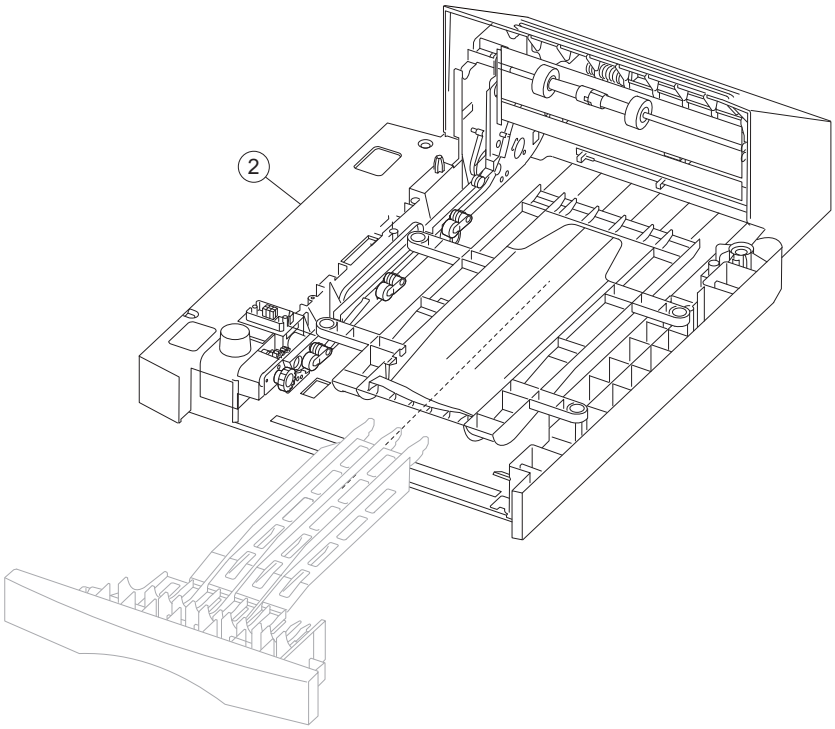


# Assembly 19: Output expander

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X5719 | 1 | 1 | Complete output expander assembly | -- |
| 2 | 40X5722 | 1 | 1 | Rear door assembly | -- |
| 3 | 40X1988 | 1 | 1 | Deflector gate | -- |
| 4 | 40X3264 | 1 | 1 | Sensor (pass through) | -- |
| 5 | 40X1991 | 2 | 1 | Output expander media bin latch | -- |
| 6 | 40X5726 | 1 | 1 | Right inner cover | -- |
| 7 | 40X5725 | 1 | 1 | Right outer cover | -- |
| 8 | 40X5755 | 1 | 1 | LED clear lens | -- |
| 9 | 40X4773 | 1 | 1 | Standard output bin LED | -- |
| 10 | 40X1998 | 1 | 1 | Media bail assembly | -- |
| 11 | 40X5721 | 1 | 1 | Media output bin assembly | -- |
| 12 | 40X5747 | 1 | 1 | Output expander controller card | -- |
| 13 | 40X4369 | 1 | 1 | Sensor (deflector gate HP) | -- |
| 14 | 40X5724 | 1 | 1 | Left inner cover | -- |
| 15 | 40X5723 | 1 | 1 | Left Outer cover | -- |
| 16 | 40X3265 | 1 | 1 | Sensor (media bin full) | -- |
| 17 | 40X1989 | 1 | 1 | Sensor bracket | -- |
| 18 | 40X1990 | 1 | 1 | Media bin full actuator | -- |
| 19 | 40X0028 | 1 | 1 | Spring (top) | -- |

# Assembly 20: Envelope feeder and external duplex

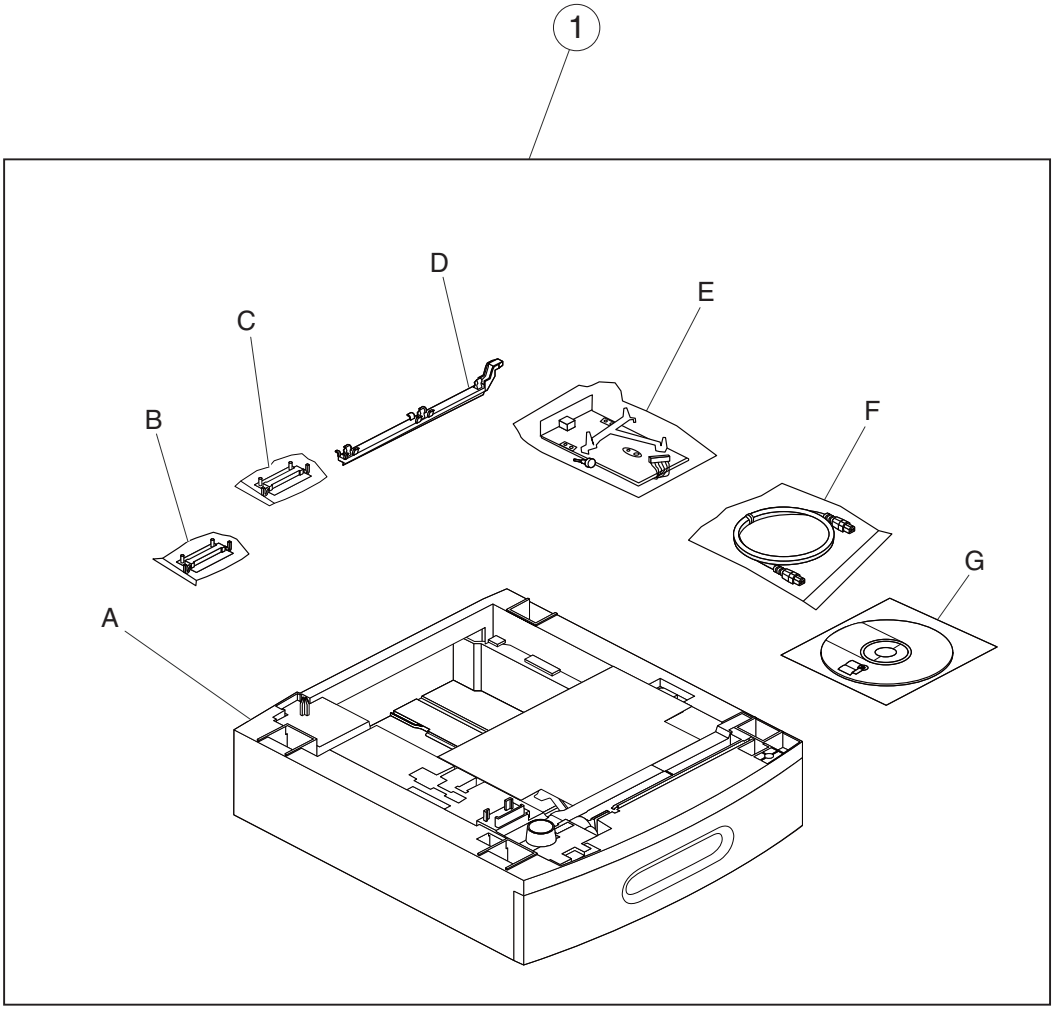


# Assembly 20: Envelope feeder and external duplex

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X5739 | 1 | 1 | Envelope feeder (T650, T652, and T654 only - will not fit the T656) | -- |
| 2 | 40X5904 | 1 | 1 | External duplex | -- |

# Assembly 21: RFID UHF Option assembly



# Assembly 21: RFID UHF Option assembly

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| 1 | 40X1483 | 1 | 1 | US RFID UHF option assembly includes:<br>• RFID UHF option<br>• Firmware card<br>• User flash card<br>• Fuser wiper<br>• Interface card, plastic tee, screw<br>• RFID cable<br>• Documentation CD<br>**Note:** This part is obsolete. | -- |
| 1 | 40X1484 | 1 | 1 | EU RFID UHF option assembly includes:<br>• RFID UHF option<br>• Firmware card<br>• User flash card<br>• Fuser wiper<br>• Interface card, plastic tee, screw<br>• RFID cable<br>• Documentation CD | -- |

# Assembly 22: Miscellaneous 1

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| NS | 40X5903 | 1 | 1 | Relocation kit | -- |
| NS | 40X4723 | 1 | 1 | Printer maintenance kit (100 V type 1 fuser) | -- |
| NS | 40X4724 | 1 | 1 | Printer maintenance kit (110 V type 1 fuser) | -- |
| NS | 40X4765 | 1 | 1 | Printer maintenance kit (220 V type 1 fuser) | -- |
| NS | 40X4766 | 1 | 1 | Printer maintenance kit (100 V type 2 fuser) | -- |
| NS | 40X4767 | 1 | 1 | Printer maintenance kit (110 V type 2 fuser) | -- |
| NS | 40X4768 | 1 | 1 | Printer maintenance kit (220 V type 2 fuser) | -- |
| NS | 40X5937 | 1 | 1 | 128MB DIMM, DDR1, for T650 and T652 | -- |
| NS | 40X5938 | 1 | 1 | 256MB DIMM, DDR1, for T650 and T652 | -- |
| NS | 40X5939 | 1 | 1 | 512MB DIMM, DDR1, for T650 and T652<br>**Note:** This part is obsolete. | -- |
| NS | 40X5301 | 1 | 1 | 256 MB SO-DIMM, DDR2 for T654 | -- |
| NS | 40X5302 | 1 | 1 | 12MB SO-DIMM, DDR2 for T654 | -- |
| NS | 40X5303 | 1 | 1 | 1GB (1024MB) SO-DIMM, DDR2 for T654 | -- |
| NS | 40X5704 | 1 | 1 | 256MB user flash memory card for T65X | -- |
| NS | 40X4822 | 1 | 1 | Hard disk drive for T65X | -- |
| NS | 40X7029 | 1 | 1 | T650/T652 Card for PRESCRIBE Emulation | -- |
| NS | 40X7030 | 1 | 1 | T654 Card for PRESCRIBE Emulation | -- |
| NS | 40X2863 | 1 | 1 | T656 Card for PRESCRIBE Emulation<br>**Note:** This part is obsolete. | -- |
| NS | 40X5952 | 1 | 1 | Lexmark PrintCryption card | -- |
| NS | 40X5955 | 1 | 1 | T650/T652 Forms and Bar code card | -- |
| NS | 40X5956 | 1 | 1 | T650/T652 Card for IPDS and SCS/TNe | -- |
| NS | 40X5962 | 1 | 1 | T650/T652 KS emulation card | -- |
| NS | 40X5954 | 1 | 1 | T654 Forms and Bar code card | -- |
| NS | 40X2859 | 1 | 1 | T656 Forms and Bar code card | -- |
| NS | 40X5957 | 1 | 1 | T654 card for IPDS and SCS/TNe | -- |
| NS | 40X2862 | 1 | 1 | T656 card for IPDS and SCS/TNe | -- |
| NS | 40X5969 | 1 | 1 | Korean font card | -- |
| NS | 40X5970 | 1 | 1 | Simplified Chinese font card | -- |
| NS | 40X5971 | 1 | 1 | Traditional Chines font card | -- |
| NS | 40X5972 | 1 | 1 | Japanese font card | -- |
| NS | 40X1556 | 1 | 1 | Parts pack, ISP thumbscrew and standoff | -- |

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| NS | 40X5316 | 1 | 1 | ISP interface cable assembly | -- |
| NS | 40X4826 | 1 | 1 | MarkNet N8120 gigabit ethernet print server | -- |
| NS | 40X4827 | 1 | 1 | MarkNet N8130 fiber ethernet print server | -- |
| NS | 40X5038 | 1 | 1 | MarkNet N8150 802.11n wireless print server (US/Americas) | -- |
| NS | 40X5039 | 1 | 1 | MarkNet N8150 802.11n wireless print server (WW, except US/Americas) | -- |
| NS | 56P2129 | 1 | 1 | Lexmark N4000e print server | -- |
| NS | 56P2744 | 1 | 1 | Lexmark N4050e (1 port USB) wireless 802.11g (US/Americas) | -- |
| NS | 40X1593 | 1 | 1 | MarkNet N7000e Fash Ethernet 10/100BaseTX-USB | -- |
| NS | 40X1594 | 1 | 1 | MarkNet N7002e Fast Ethernet 10/100BaseTX - Parallel | -- |
| NS | 40X1592 | 1 | 1 | Lexmark MarkNet N7020e (4 port USB) ethernet 10base T/100Base TX/1000BaseT | -- |
| NS | 40X4819 | 1 | 1 | RS-232C serial interface card | -- |

# Assembly 23: Miscellaneous 2

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| NS | 40X4823 | 1 | 1 | Parallel 1284-B interface card | -- |
| NS | 40X1367 | 1 | 1 | 10-Foot parallel printer cable | -- |
| NS | 40X2665 | 1 | 1 | Fuser oil wiper (black housing) | -- |
| NS | 40X2666 | 1 | 1 | Fuser wax wiper (gray housing) | -- |
| NS | 40X1368 | 1 | 1 | 2-Meter USB printer cable | -- |

# Assembly 24: Power cords

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| NS | 40X0269 | 1 | 1 | Power cord LV, USA and Canada, Latin America | -- |
| NS | 40X0288 | 1 | 1 | Power cord HV, Argentina | -- |
| NS | 40X1766 | 1 | 1 | Power cord HV, Bolivia and Peru | -- |
| NS | 40X0273 | 1 | 1 | Power cord HV, Chile, Uruguay | -- |
| NS | 40X3141 | 1 | 1 | Power cord HV, Paraguay, Austria, Belgium, France, Germany, Italy, Netherlands, Bluemark, Czech and Solvic countries, Greece, Hungary, Medmark 1, Medmark 2, Arabic, Poland, Russia, CIS, Spain, Portugal, and Ireland | -- |
| NS | 40X4596 | 1 | 1 | Power cord LV, Brazil PPB kits | -- |
| NS | 40X0271 | 1 | 1 | Power cord HV, United Kingdom, Asian, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka, Tibet, and Hong Kong | -- |
| NS | 40X0301 | 1 | 1 | Power cord HV, Australia and New Zealand | -- |
| NS | 40X3609 | 1 | 1 | Power cord 100 V, Japan | -- |
| NS | 40X1792 | 1 | 1 | Power cord, HV, Korea | -- |
| NS | 40X0303 | 1 | 1 | Power cord, HV PRC | -- |
| NS | 40X1791 | 1 | 1 | Power cord LV, Taiwan | -- |
| NS | 40X1774 | 1 | 1 | Power cord HV, Denmark, Finland, Norway, Sweden | -- |
| NS | 40X0275 | 1 | 1 | Power cord, HV, Israel | -- |
| NS | 40X1773 | 1 | 1 | Power cord HV, South Africa, Namibia, Lesotho, Botswana and Pakistan | -- |
| NS | 40X1772 | 1 | 1 | Power cord HV, Switzerland | -- |

# Assembly 25: Universal trays and accessories

| Asm-index | P/N | Units/mach | Units/FRU | Description | Removal procedure |
|---|---|---|---|---|---|
| NS | 40X5857 | 1 | 1 | Universal media drawer with tray, 200 sheet | -- |
| NS | 40X5858 | 1 | 1 | Universal media tray, 200 sheet | -- |
| NS | 40X5859 | 1 | 1 | Universal media drawer with tray, 400 sheet | -- |
| NS | 40X5860 | 1 | 1 | Universal media tray, 400 sheet | -- |
| NS | 40X5945 | 1 | 1 | 33” banner drawer with tray | -- |
| NS | 40X5946 | 1 | 1 | 33” banner tray | -- |
| NS | 40X5947 | 1 | 1 | 48” banner drawer with tray | -- |
| NS | 40X7007 | 1 | 1 | 48” banner tray | -- |
| NS | 40X5863 | 1 | 1 | Adjustable label stacking device | -- |
| NS | 40X5861 | 1 | 1 | Kiosk presenter | -- |
| NS | 40X7001 | 1 | 1 | Wear strips, smooth 250 sheet | -- |
| NS | 40X7002 | 1 | 1 | Wear strips, dimpled 250 sheet | -- |
| NS | 99A1206 | 1 | 1 | Wear strips, 3 row dimpled 250 sheet | -- |
| NS | 40X2786 | 1 | 1 | Wear strips, 4 row dimpled 250 sheet | -- |
| NS | 40X7004 | 1 | 1 | Wear strips, dinky 550 sheet | -- |
| NS | 40X2787 | 1 | 1 | Wear strips, 3 row dimpled 550 sheet | -- |
| NS | 40X2788 | 1 | 1 | Wear strips, 4 row dimpled 550 sheet | -- |
| NS | 40X7009 | 1 | 1 | 250 sheet tray replacement wear strip kit | -- |
| NS | 40X7010 | 1 | 1 | 550 sheet tray replacement wear strip kit | -- |
| NS | 40X1462 | 1 | 1 | Locking universal media drawer with tray, 200 sheet | -- |
| NS | 40X1463 | 1 | 1 | Locking media drawer with tray, 550 sheet | -- |
| NS | 40X1464 | 1 | 1 | Locking universal media drawer with tray, 400 sheet | -- |

# Printer specifications

## Power consumption

### Product power consumption

The following table documents the power consumption characteristics of the product.

**Note:** Some models may not apply to your product.

| Mode | Description | Power consumption (Watts) |
|---|---|---|
| Printing | The product is generating hard-copy output from electronic inputs. | T650: 640 W (simplex), 540 W (duplex); T652: 725 W (simplex), 565 W (duplex); T654: 740 W (simplex), 575 W (duplex); T656: 780 W (simplex), 600 W (duplex) |
| Copy | The product is generating hard-copy output from hard-copy original documents. | N/A |
| Scan | The product is scanning hard-copy documents. | N/A |
| Ready | The product is waiting for a print job. | T650: 80 W; T652: 85 W; T654: 85 W; T656: 100 W |
| Power Saver | The product is in energy-saving mode. | T650: 12 W; T652: 13 W; T654: 14 W; T656: 19 W |
| Off | The product is plugged into an electrical outlet, but the power switch is turned off. | 0 W |

The power consumption levels listed in the previous table represent time-averaged measurements. Instantaneous power draws may be substantially higher than the average.

Values are subject to change. See **www.lexmark.com** for current values.

### Power Saver

This product is designed with an energy-saving mode called *Power Saver*. The Power Saver mode saves energy by lowering power consumption during extended periods of inactivity. The Power Saver mode is automatically engaged after this product is not used for a specified period of time, called the *Power Saver Timeout*.

**Factory default Sleep Mode Timeout for this product**—30 minutes

By using the configuration menus, the Power Saver Timeout can be modified between 1 minute and 240 minutes. setting the Power Saver Timeout to a low value reduces energy consumption, but may increase the response time of the product. Setting the Power Saver Timeout to a high value maintains a fast response, but uses more energy.

### Off mode

If this product has an off mode which still consumes a small amount of power, then to completely stop product power consumption, disconnect the power supply cord from the wall outlet.

## Total energy usage

It is sometimes helpful to calculate the total product energy usage. Since power consumption claims are provided in power units of Watts, the power consumption should be multiplied by the time the product spends in each mode in order to calculate energy usage. The total product energy usage is the sum of each mode's energy usage.

# Noise emission levels

The following measurements were made in accordance with ISO 7779 and reported in conformance with ISO 9296.

**Note:** Some models may not apply to your product.

| Mode | 1-meter average sound pressure, dBA |
|---|---|
| Printing | 53 dBA for T650, 54 dBA for T652, 55 dBA for T654, 56 dBA for T656 |
| Scanning | N/A |
| Copying | N/A |
| Ready | 30 dBA for T650, T652, T654; 27 dBA for T656 |

Values are subject to change. See **www.lexmark.com** for current values.

# Temperature information

| | |
|---|---|
| Ambient operating temperature | 15 to 32°C (60 to 90°F) |
| Shipping temperature | -40 to 60°C (-40 to 140°F) |
| Storage temperature | -1 to 60°C (34 to 140°F) |

# Options and features

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

## Available internal options

- Memory cards
  - Printer memory
  - Flash memory
  - Fonts
- Firmware cards
  - Bar Code and Forms
  - IPDS and SCS/TNe
  - PrintCryption™
  - PRESCRIBE
- Printer hard disk
- Lexmark Internal Solutions Ports (ISP)
  - RS-232-C serial interface ISP
  - Parallel 1284-B interface ISP
  - MarkNet™ N8150 802.11 b/g/n Wireless ISP
  - MarkNet N8130 10/100 Fiber ISP
  - MarkNet N8120 10/100/1000 Thick Ethernet ISP
- MarkNet N8110 v.34 Fax Card

## Media handling options

Some options may not be available for all models.

| | |
|---|---|
| 1 | 250- and 550-sheet paper trays of A4, letter, A5, B5, Executive, folio, statement, and legal size |
| 2 | 250-sheet universally adjustable tray |
| 3 | 250- and 550-sheet paper drawers |
| 4 | 2000-sheet high-capacity feeder |
| 5 | Envelope feeder |
| 6 | Duplex option—250-sheet (external) |
| 7 | Duplex option—550-sheet (internal) |
| 8 | Output expander |
| 9 | High-capacity output stacker |
| 10 | StapleSmart Finisher |
| 10 | 5-bin mailbox |

| | |
|---|---|
| 10 | Vertical kiosk presenter |
| 10 | Horizontal kiosk presenter |
| 10 | RFID UHF |

# Theory of operation

## POR sequence

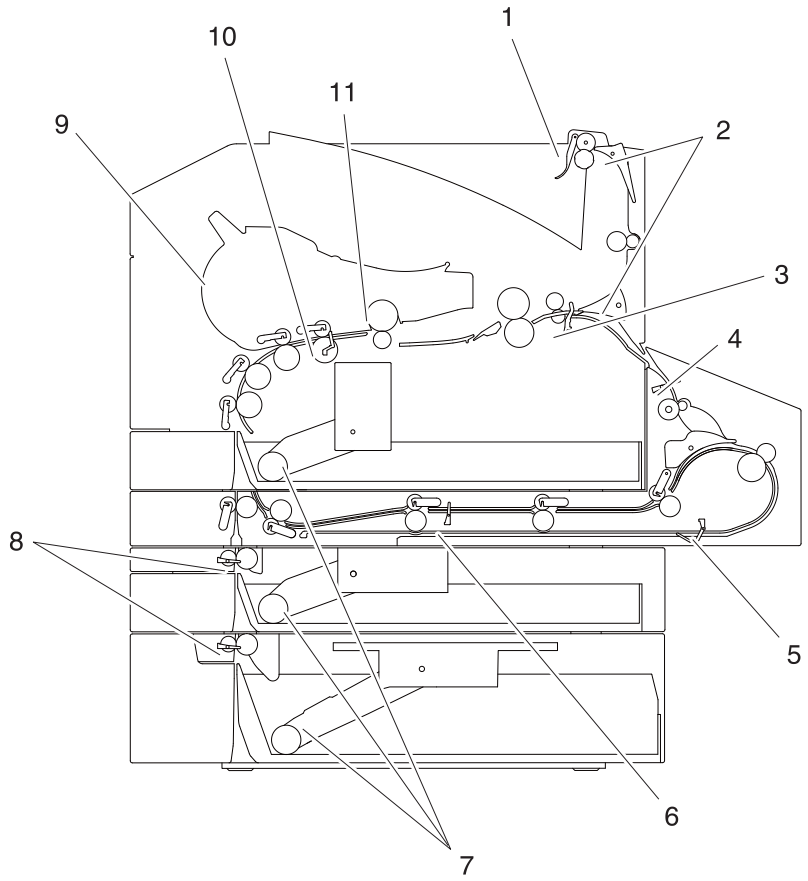
As the printer is turned on, the engine code goes through a series of tests to verify hardware integrity. If a hardware failure is detected, then it is reported to the printer. If the POR sequence cannot be completed successfully, then the printer may post an error message. The message states that service may be needed.

## Printer control

The printer uses a single processor for both RIP and engine functions. The raster image processor (RIP) code performs system responsibilities such as PC connection, LAN, ISP attachments, and bitmap generation. The engine code performs tasks related to the operation of the electrical and mechanical device systems such as motors, lasers, power supplies, and fusers. The NVRAMs are located on the controller board and control panel, replacement of either the controller board or control panel will pull or mirror NVRAM data from each other.

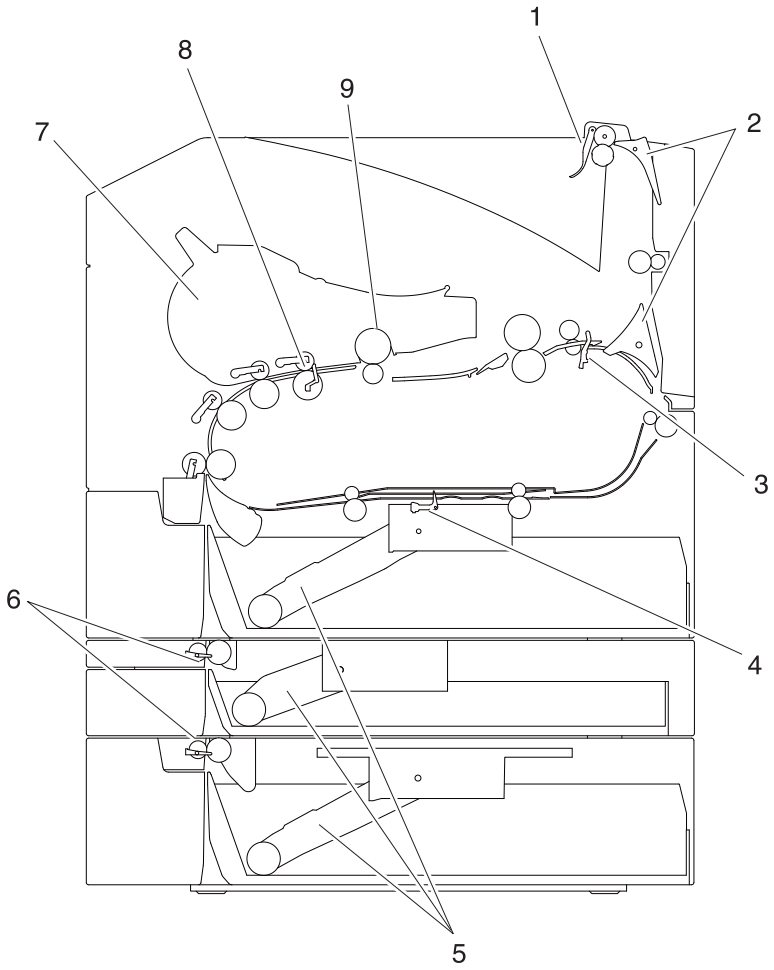
## Printer theory

### T650 with duplex, paper path, rolls, and sensors



| # | Part |
|---|---|
| **1** | Standard bin full actuator and sensor |
| **2** | Diverter |
| **3** | Sensor (fuser output, narrow media) |
| **4** | Sensor (duplex input) |
| **5** | Sensor (duplex double feed) |
| **6** | Sensor (duplex exit) |
| **7** | Pick arm assembly |
| **8** | Sensor (option pass through) |
| **9** | PC cartridge |
| **10** | Sensor (input) |
| **11** | PC drum |

## T652 and T654 with duplex, paper path, rolls, and sensors



| # | Part |
|---|---|
| 1 | Standard bin full actuator and sensor |
| 2 | Diverter |
| 3 | Sensor (fuser output, narrow media) |
| 4 | Sensor (duplex input) |
| 5 | Pick arm assembly |
| 6 | Sensor (option pass through) |
| 7 | PC cartridge |
| 8 | Sensor (input) |
| 9 | PC drum |

## Functions of main components

- Pic arm assembly (feed)
- MPF
- Xerographics
- Transfer
- Fuser
- Drive
- Electrical components and rolls

### Media tray assembly

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

### Rear media guide

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

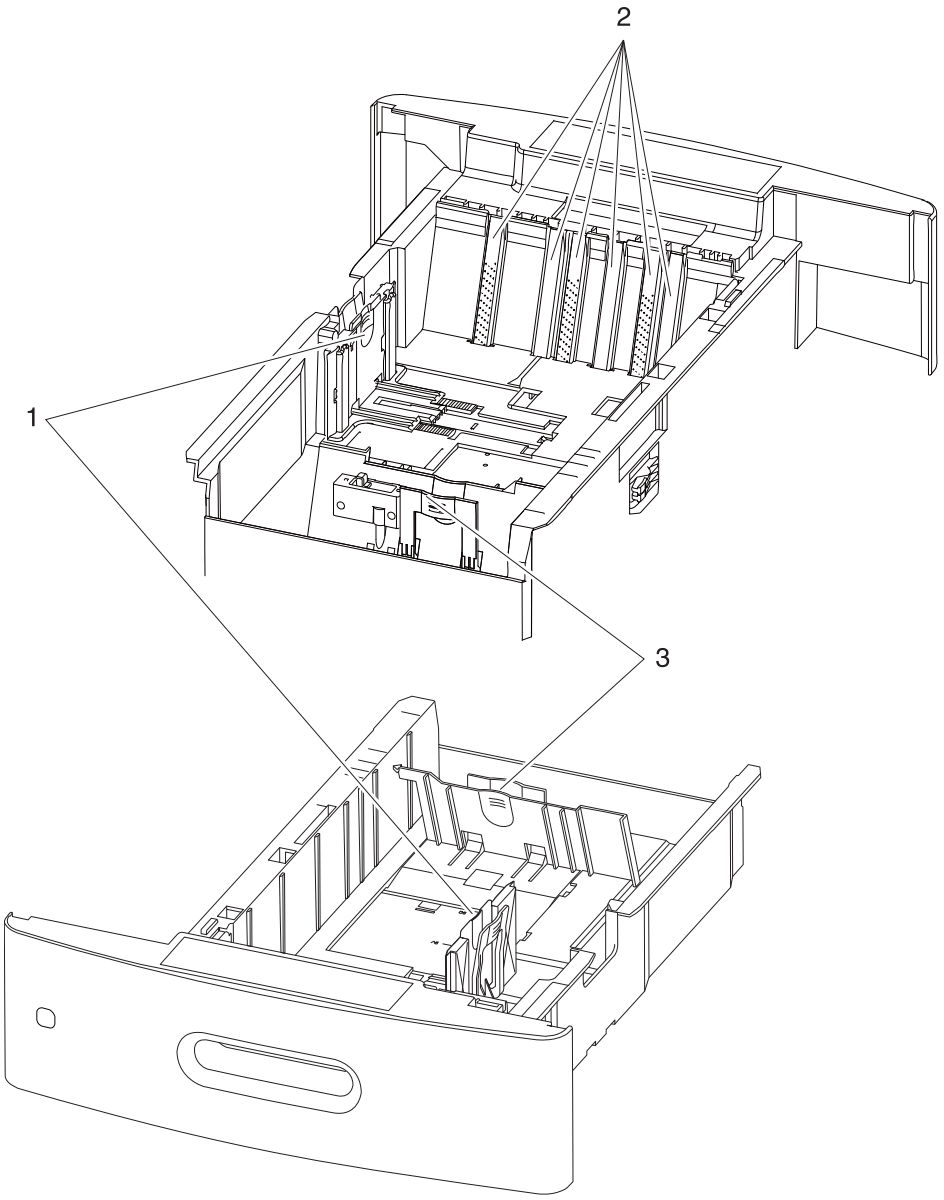
### Side guide

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

### Wear strips

The wear strips are designed to provide a fixed resistance to ensure that a single piece of paper is properly fed out of the media tray. There are several types of wear strips available for custom or hard to feed media.

## Media tray assembly

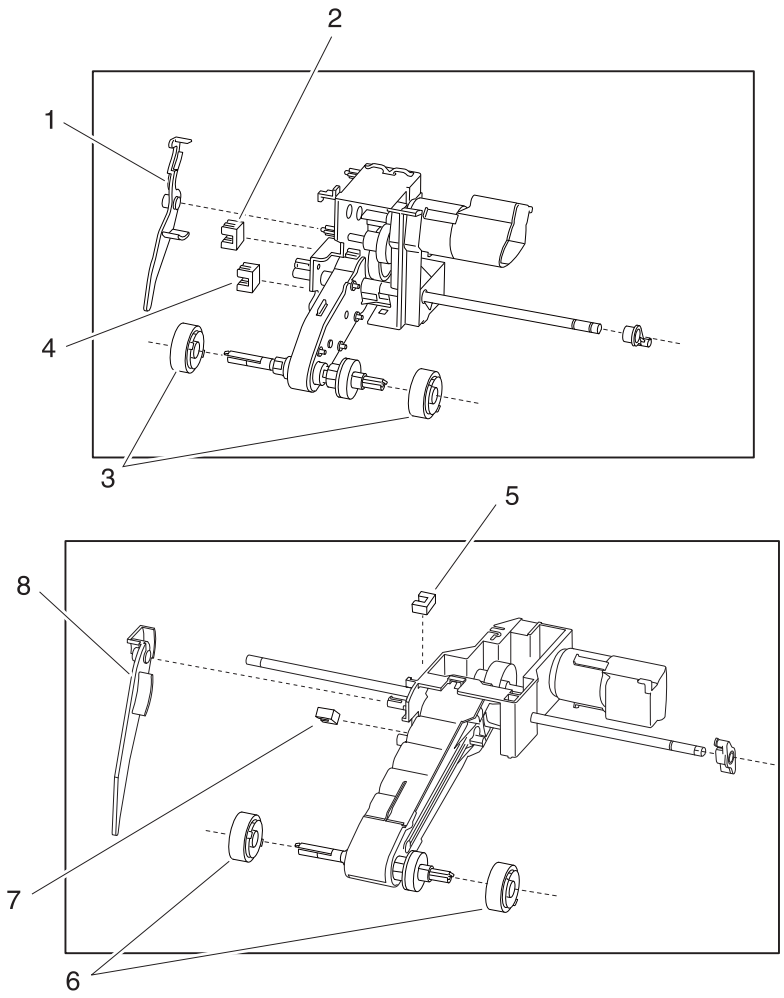



| # | Part |
|---|---|
| **1** | Side guides |
| **2** | Wear strips |
| **3** | End guides |

### 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.

## Pick arm assembly




| # | Part |
|---|---|
| **1** | Media out actuator |
| **2** | Sensor (media empty) |
| **3** | Pick roll assemblies |
| **4** | Sensor (media low) |
| **5** | Sensor (media empty) |
| **6** | Pick roll assemblies |
| **7** | Sensor (media low) |
| **8** | Media out actuator |

Since all media trays are functionally equivalent in terms of the switch (media size), sensor (media empty), sensor (media low), only the components of one tray are described here.

The pick arm assembly is a mechanical unit supplying media from the media tray assembly to the printer. The driving force, from the pick arm drive motor on the pick arm assembly, is transmitted to the two pick rolls to feed media.

When the pick rolls pick up media, the remaining media decreases, and the media out actuator will lower and interact with the sensor (media low) and sensor (media empty) to determine the amount of media remaining.

The pick arm assembly (autocompensator) is a paper pick device that generates its own normal force. This force generation is inherent in the fundamental design of the pick arm. If light media is used, it picks very gently. If a heavy media is used, it picks very aggressively. No customer adjustments are necessary, therefore no special trays are needed for card stock or labels. The gearing in the arm is designed so the input torque from the motor produces a movement about the pivot of the arm. This movement produces a downward force at the pick rolls. The friction between the pick roll and the paper produces a frictional locking condition. If the paper is physically held and not allowed to feed, then the motor stalls. Slippage between the roll and the paper is theoretically impossible. When the motor is energized, the pick rolls are driven down into the stack, increasing the normal force and drive force until the bending strength of the paper is overcome and the paper bends and moves up the wear strip.

### 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 system card assembly.

### Sensor (media empty)

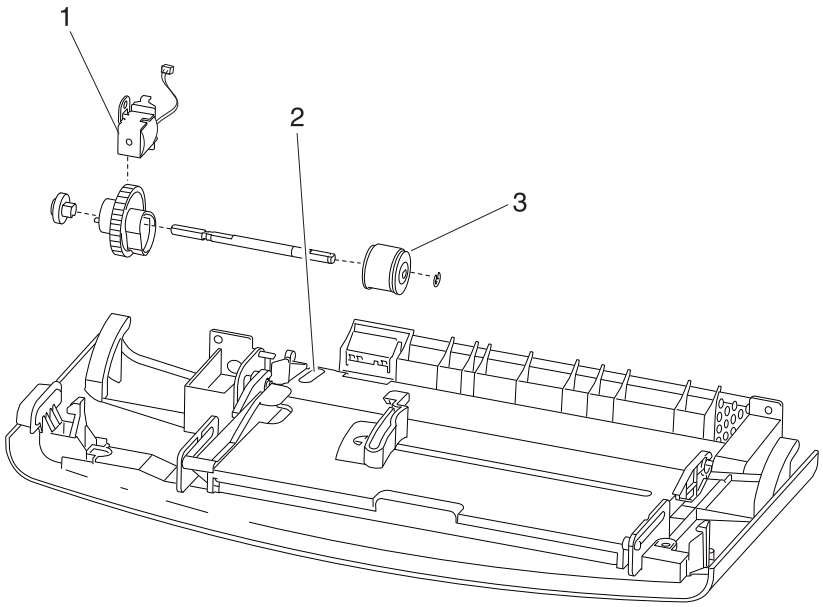
If media runs out in a media tray assembly, the actuator lowers and the actuator flag, unlocks the sensing area of the sensor (media empty). The sensor light is transmitted. When the sensing area is blocked (media is present), the signal is off.

### Sensor (media low)

This sensor detects by the actuator position whether media in the media tray assembly is low. When the flag of the actuator blocks, then unblocks the sensing area of the sensor (media low), the media level is determined to be low.

## MPF

The MPF is a mechanical unit supplying media to the printer. The driving force from the main drive motor drive motor is transmitted to the MPF pick roll to feed media.




| # | Part |
|---|---|
| **1** | MPF pick solenoid |
| **2** | Sensor (MPF media empty) |
| **3** | MPF pick roll assembly |

## MPF feed roll

The MPF pick roll feeds the media set on the MPF into the printer.

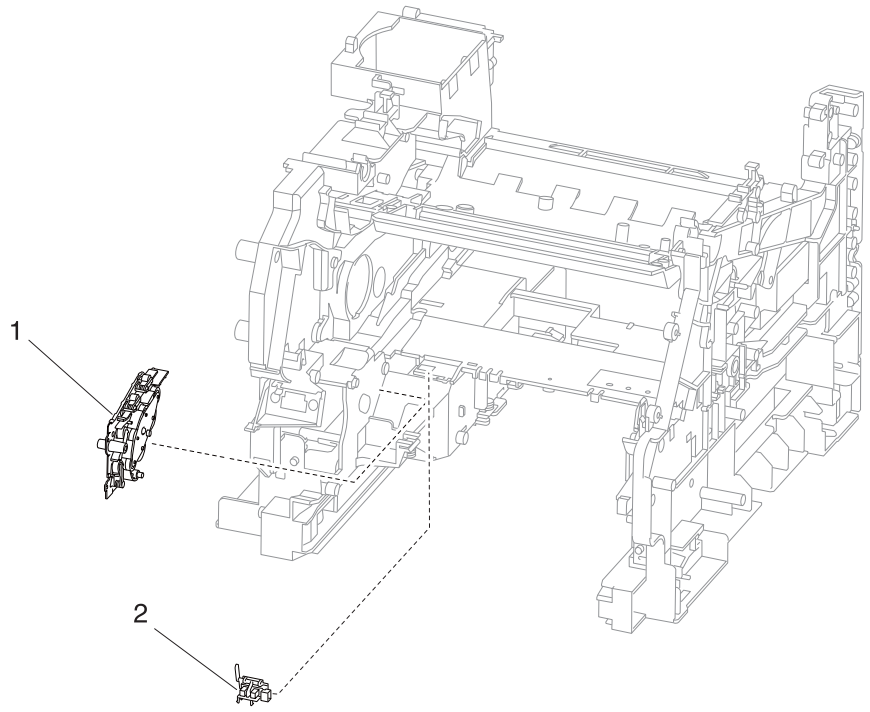
## MPF pick solenoid

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

## Sensor (MPF media empty)

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

# Registration




| # | Part |
|---|---|
| **1** | Aligner assembly |
| **2** | Sensor (input) |

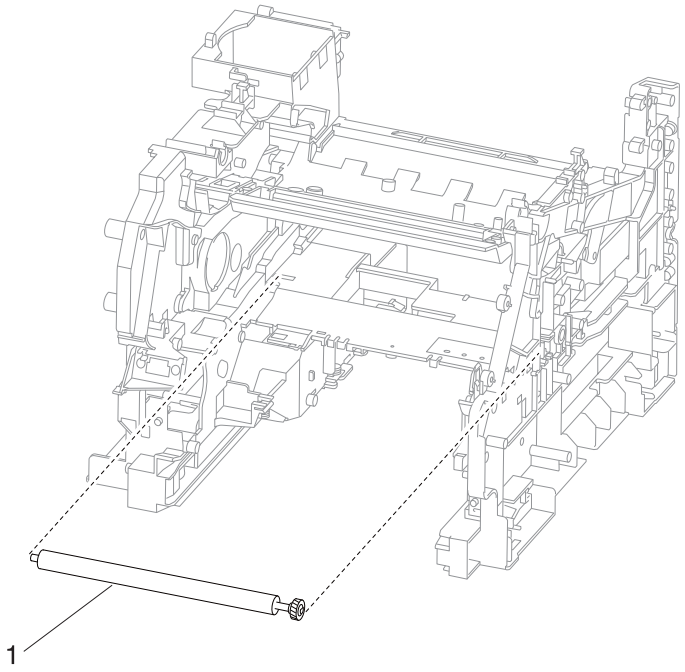
## Sensor (input)

The sensor (input) is located just before the print cartridge and can detect whether media exists in the input path.

## Aligner assembly

The aligner assembly is used to feed the media through the input path and to ensure that media is fed through the machine in a perfectly straight manner and not in a skewed manner. The aligner assembly can be adjusted to correct media skew issues and should always be adjusted when it is replaced.

## Transfer



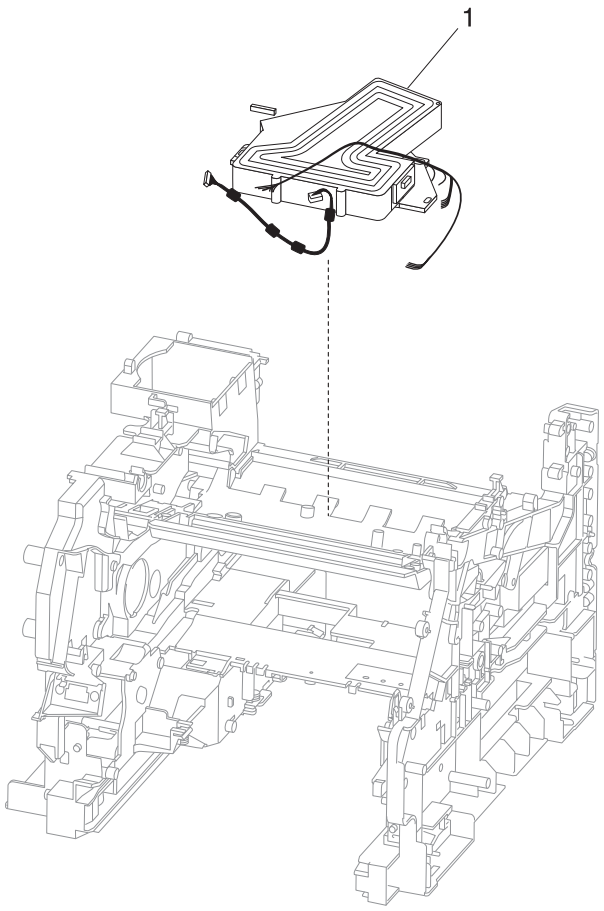

| # | Part |
|---|---|
| 1 | Transfer roll |

### Transfer roll assembly

The transfer roll assembly applies charge to the rear surface of the media when the media passes between the transfer roll assembly and photo conductor (drum). Thus, the toner image is transferred from the photo conductor (drum) surface to the media surface.

## Polygon printhead assembly

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



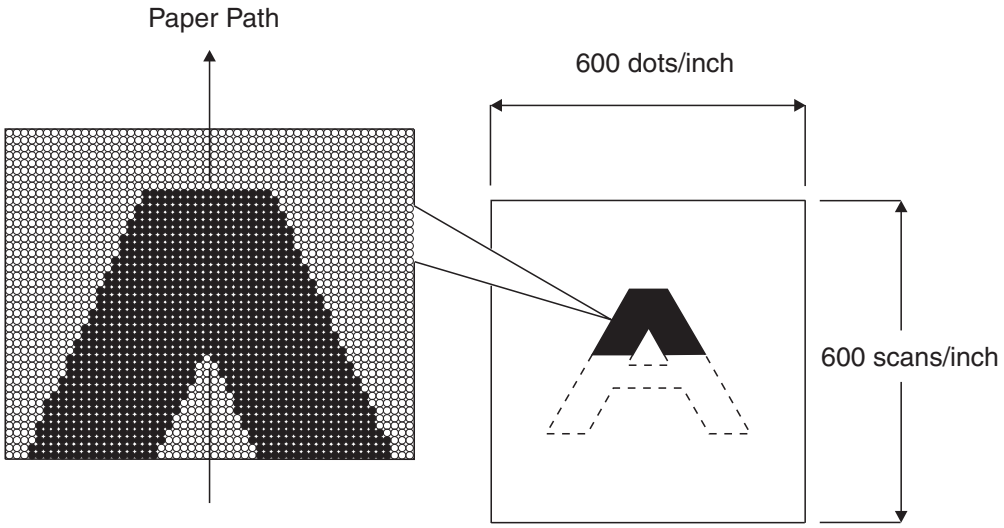

| # | Part |
|---|---|
| 1 | Polygon printhead |

**1** LD card assembly — This generates the laser beam. The beam is turned on or off according to a print data signal coming from the system card.

**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 photoconductor (drum) in a single direction. The laser beam reaches the polygon mirror as it passes through multiple lenses, mirrors, and windows. The laser beam then arrives at the photo conductor (drum) surface.

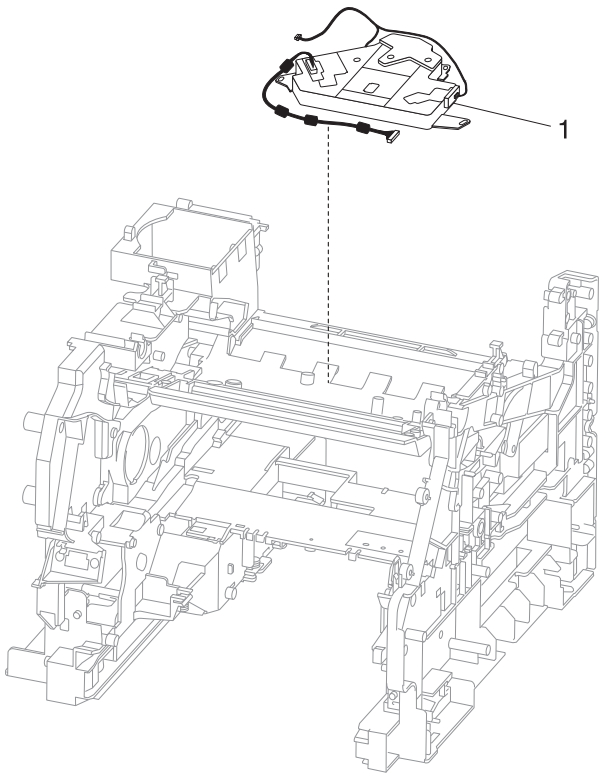
**3** SOS card assembly —When a laser beam hits the SOS sensor on the SOS card assembly, the beam is converted to an electrical signal (SOS signal), and detects the initial position where a scan starts on each line.

When a laser beam is scanned across the photoconductor (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.)




## Oscillating printhead assembly

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




| # | Part |
|---|---|
| 1 | Oscillating printhead |

**1** LD card assembly — This generates the laser beam. The beam is turned on or off according to a print data signal coming from the system card.

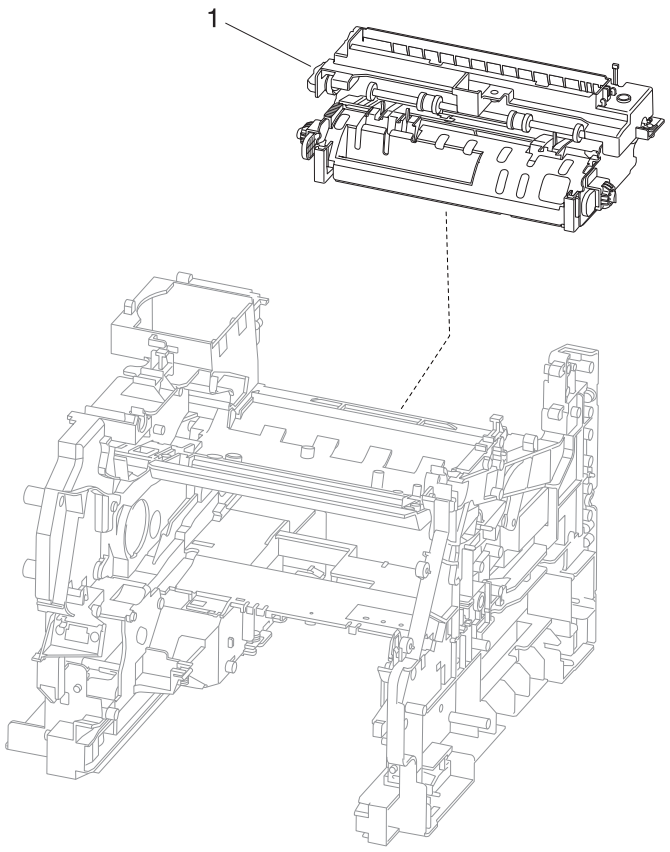
**2** Printhead motor/polygon mirror — The polygon mirror is mounted to the shaft of the printhead motor, and is rotated at a high speed by the printhead motor. The mirror rotation shifts the incidence and reflection angles of a laser beam to scan the photoconductor (drum) in a single direction. The laser beam reaches the polygon mirror as it passes through multiple lenses, mirrors, and windows. The laser beam then arrives at the photo conductor (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 photoconductor (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.)

## Fuser

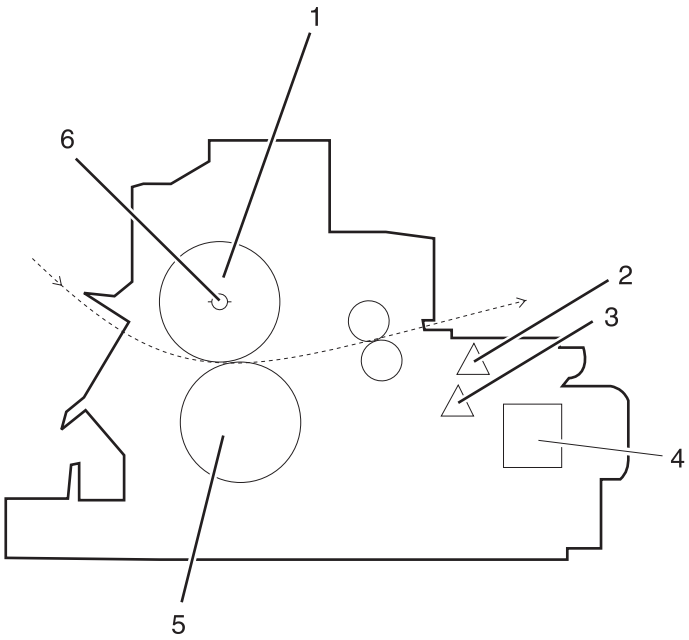
The printhead scans the photo conductor drum surface with a laser beam. It consists of four components: laser diode (LD) card assembly, printhead motor, polygon mirror, and the start of scan card assembly.




| # | Part |
|---|---|
| 1 | Fuser unit assembly |

## Fuser components

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




| # | Part |
|---|---|
| **1** | Fuser unit assembly |
| **2** | Sensor (fuser output) |
| **3** | Sensor (narrow media) |
| **4** | Fuser solenoid |
| **5** | Pressure roll |
| **6** | Fuser lamp |

## Heat roll

The heat roll is a hollow metal tube with a coated surface. This tube is heated by the inner heater lamp. 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 used to apply pressure to the media surface for fusing. Pressure is applied to the media between the pressure roll and heat roll, pressing the melted toner against the media.

## Heater lamp

The heater lamp is a quartz glass tube containing a heater coil. A terminal is mounted to the end of the heater rod via a harness.

## Thermal cutoff

If the heat roll temperature exceeds the preset temperature, the thermal cutoff cuts off the circuits of the main heater lamp and sub heater lamp.

### Thermistor

The thermistor monitors the surface temperature of the media-feed portion of the heat roll to control on/off of the main heater lamp and sub heater lamp.

### Sensor (fuser output)

The sensor (fuser output) 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.

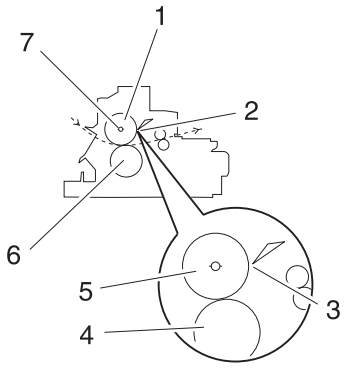
### Sensor (narrow media)

The sensor (narrow media) detects the arrival of narrow media at the detection point in the exit area of the fuser, and also detects the ejection of media from this point. It is used to make adjustments to ensure that narrow media is properly fused.

## Fuser unit assembly (types 1 and 2)

### Type 1 fuser unit assembly

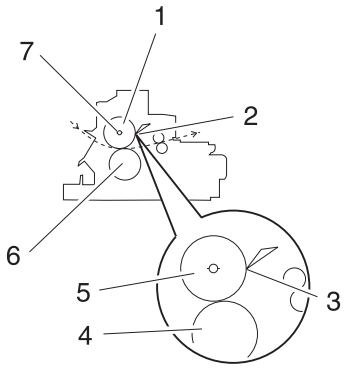
In the type 1 fuser unit assembly, the detacs, which are used to prevent the media from sticking to the hot roll, do not make contact with the hot roller. The type 1 fuser unit assembly has a life of 300K.




| # | Part |
|---|---|
| **1** | Hot roll |
| **2** | Non contact detac |
| **3** | Non contact detac |
| **4** | Pressure roll |
| **5** | Hot roll |
| **6** | Pressure roll |
| **7** | Fuser lamp |

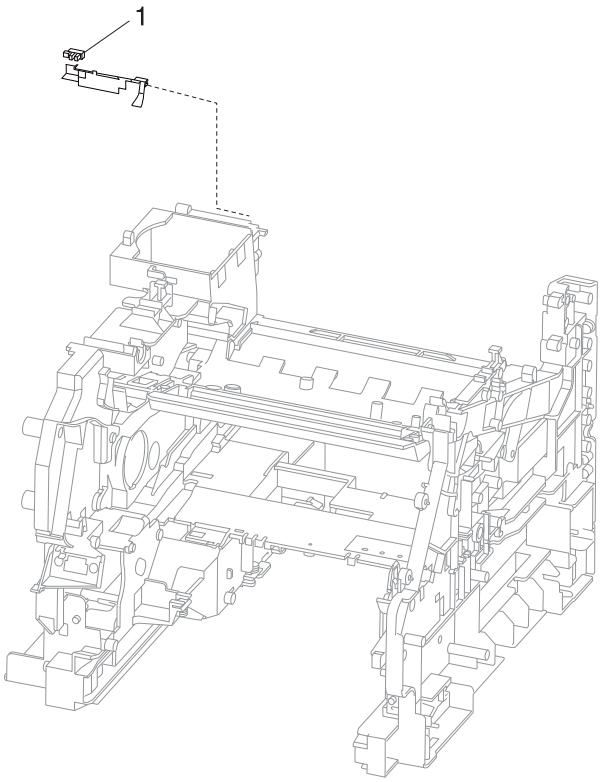
### Type 2 fuser unit assembly

In the type 2 fuser unit assembly, the detacs, which are used to prevent the media from sticking to the hot roll, make contact with the hot roller. The type 2 fuser unit assembly has a life of 150K.




| # | Part |
|---|---|
| **1** | Hot roll |
| **2** | Full detac |
| **3** | Full detac |
| **4** | Pressure roll |
| **5** | Hot roll |
| **6** | Pressure roll |
| **7** | Fuser lamp |

## Exit



| # | Part |
|---|---|
| 1 | Sensor (standard bin exit) |

### Sensor (standard bin full)

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

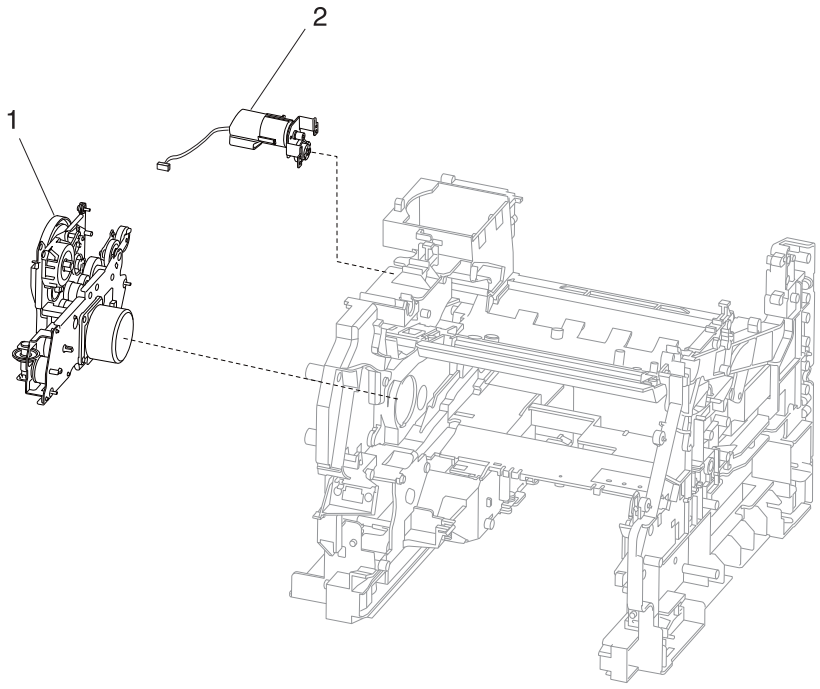
## Drive

### Main drive motor assembly

The main drive motor is a DC motor that drives the print cartridge, aligner, MFP, and fuser.

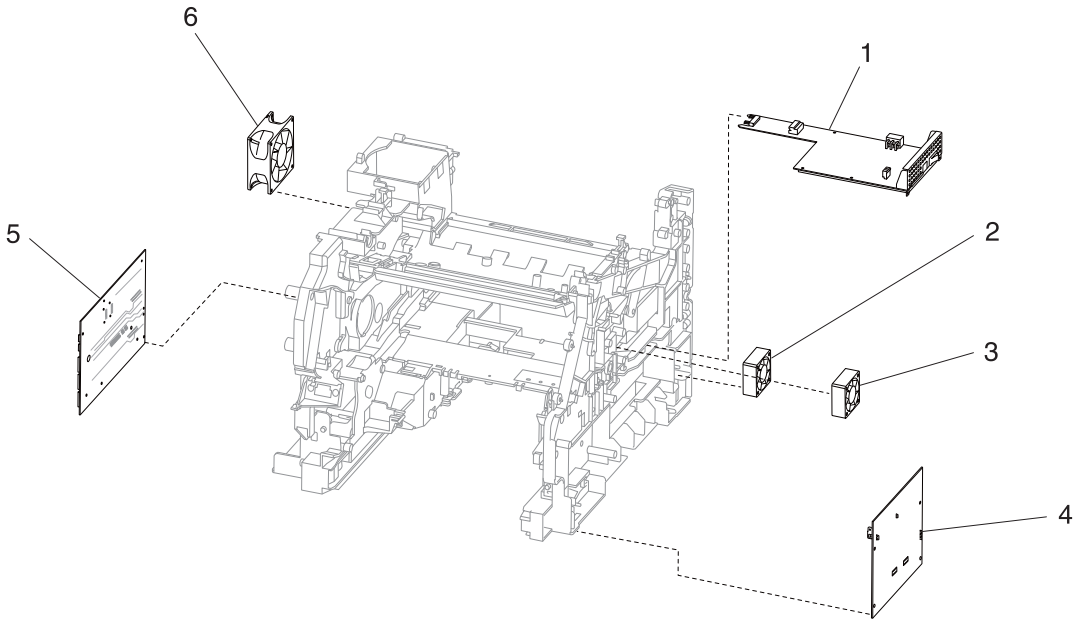
### Redrive motor assembly

The redrive motor assembly is a DC motor that drives the redrive assembly that transports the media into the standard bin or output option.




| # | Part |
|---|---|
| 1 | Main drive motor assembly |
| 2 | Redrive motor assembly |

# Electrical components and controller




| # | Part |
|---|---|
| 1 | LVPS card assembly |
| 2 | Duplex cooling fan |
| 3 | Print cartridge cooling fan |
| 4 | HVPS card assembly |
| 5 | System card assembly |
| 6 | Main cooling fan |

## Switch (printer front 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 system card assembly and to the main drive motor assembly, while the printer front door assembly is open.

## Main cooling fan

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

## Print cartridge cooling fan

The print cartridge cooling fan discharges air from the print cartridge area to prevent excessive temperature increase.

## Duplex cooling fan

The duplex cooling fan discharges air from the duplex drive motor area to prevent excessive temperature increase.

### LVPS card assembly

The LVPS card assembly generates low voltages 5V for logic circuits, 5V for laser diodes, and 24V for cooling fans. The LVPS is switchable and can be switched to work with 100V, 110V, and 220V machines.

### HVPS card assembly

The HVPS card assembly generates AC power and feeds it to the developer roll, the transfer roll assembly, and the charge roll assembly.

### System card assembly

The system card assembly controls printing operation based on the communication with the RIP controller and optional peripherals. It also controls toner dispense, fuser control, sensor switch feedback, drive motors, clutches, and solenoids.

## 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 to 98% or more 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 system 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.

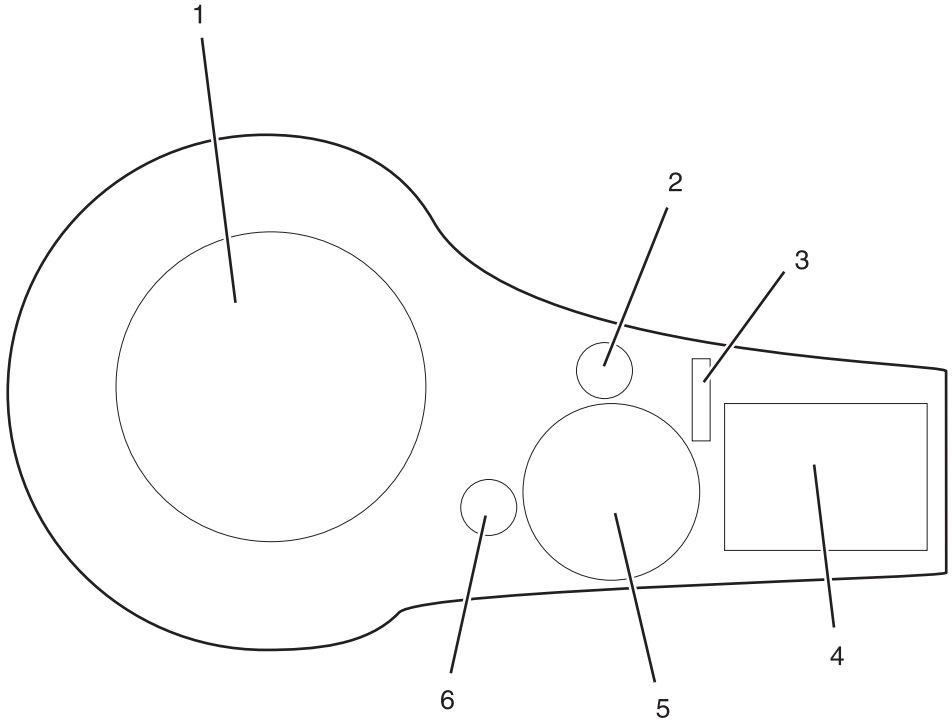
### Fuser lamp on/off control

The thermistor detects the heat roll surface temperature (fuser temperature) to regulate the temperature at the target control temperature by turning on or off the heater lamp.

### 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.

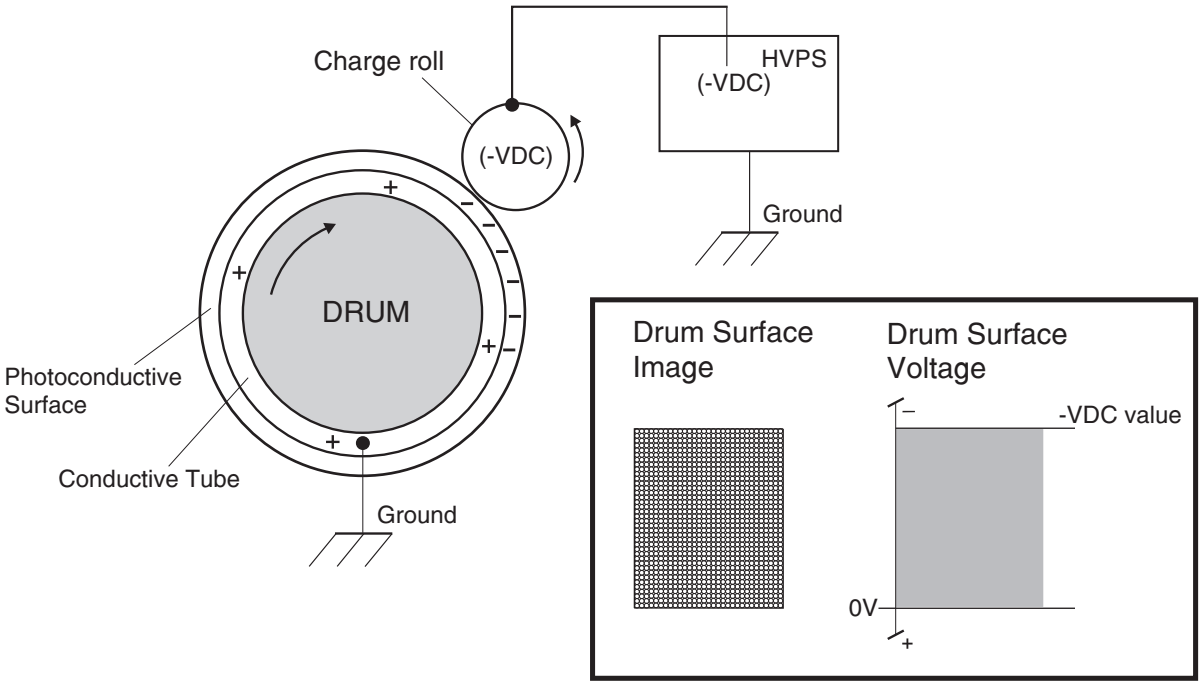
## Xerographic and print cartridge components




| # | Part |
|---|---|
| 1 | Toner supply |
| 2 | Charge roll |
| 3 | Cleaning blade |
| 4 | Waste toner collection |
| 5 | Drum |
| 6 | Developer roll |

## 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.

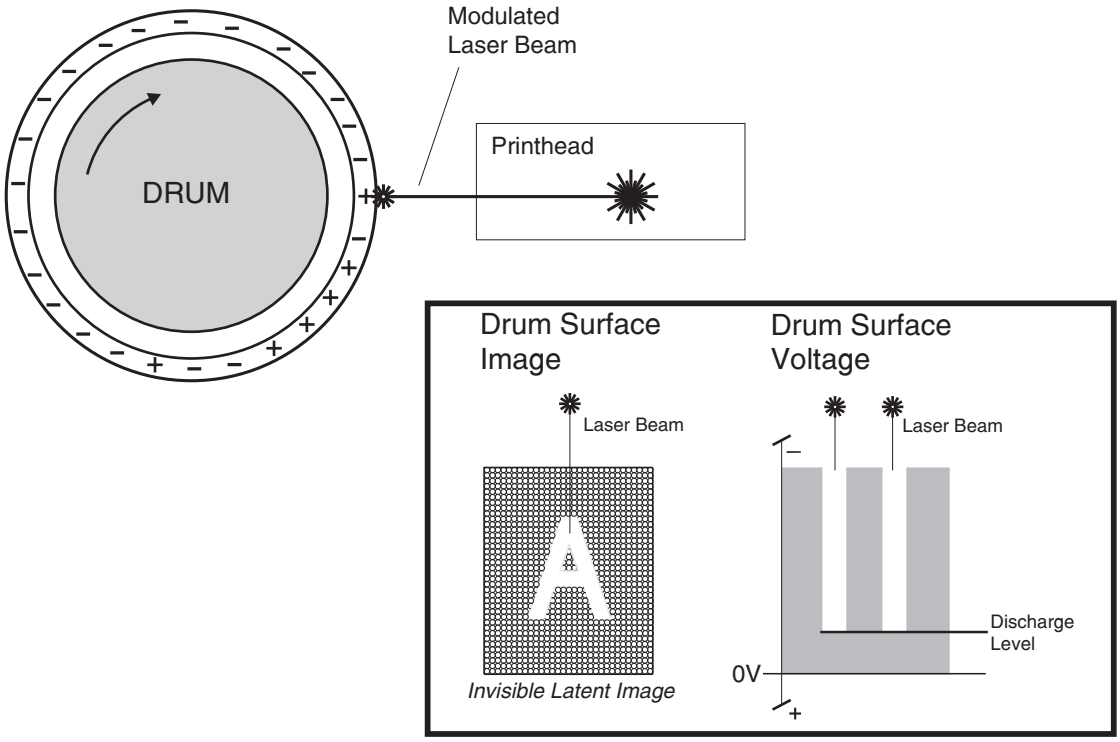



## Exposure

The printhead generates a beam of laser light. Image data received from the system 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 negatively 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.



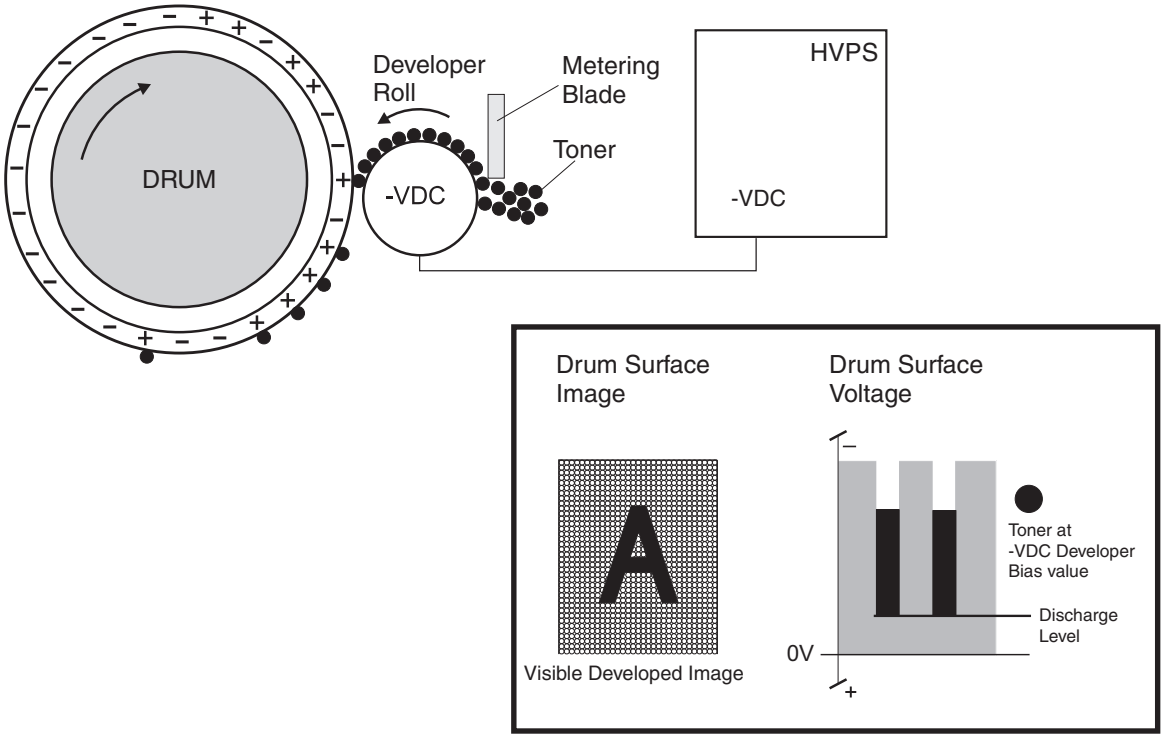

## Development

The toner contained within the PC cartridge has an electrical property that causes it to adhere to the development roll. The metering blade spreads the toner into a very thin layer on the development roll. Friction between the development roll and the CM blade development roll generates a small electrical charge that is transferred to the toner.

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

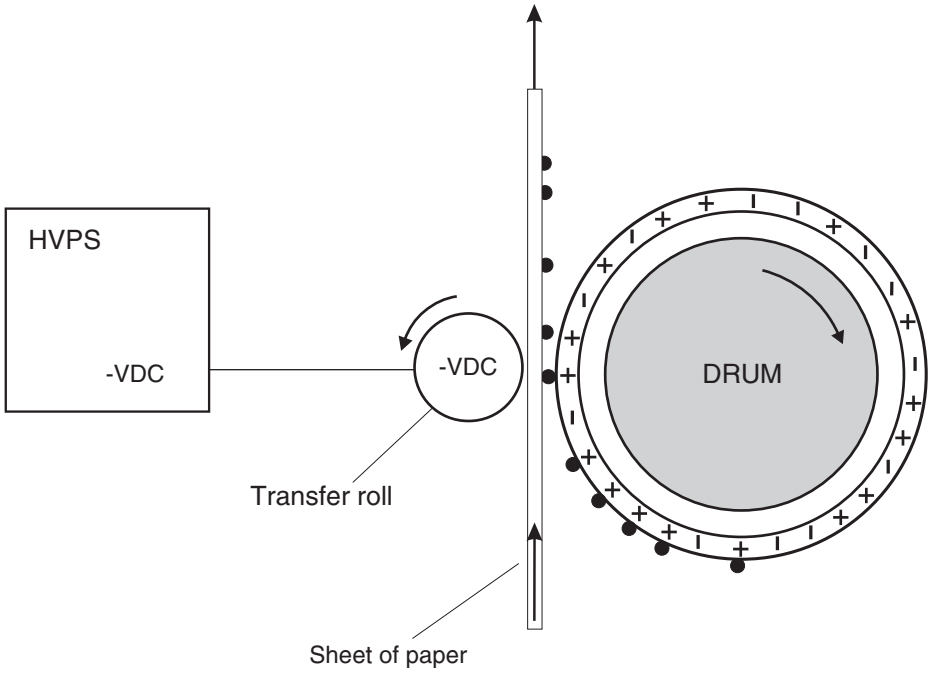
The development roll maintains a negative DC electrical potential. Negative charged areas of the drum have a lower electrical potential, or higher relative negative value than the development roll. Discharged areas of the drum have a higher electrical potential, or lower relative negative value, than the development roll. A discharged point on the surface of the drum now appears less negative in relation to the negative charge on the development roll.

The toner adhering to the development 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.



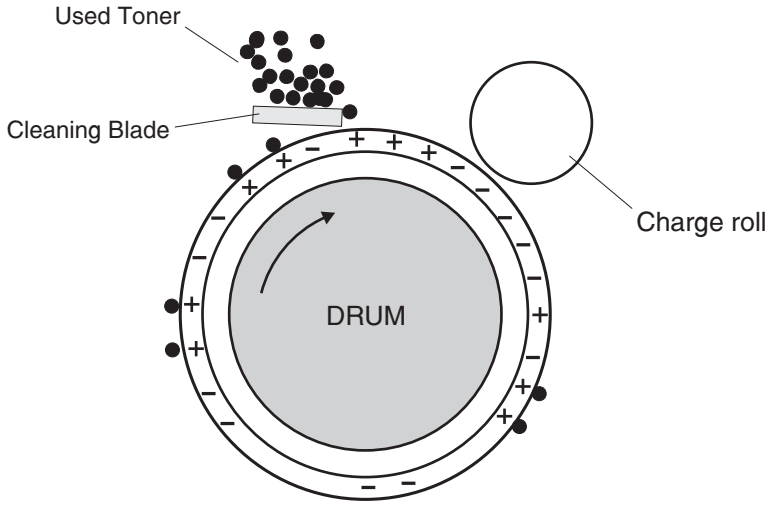
## Transfer

As the paper travels between the transfer roll and the photoconductor (drum), the transfer roll applies a charge to the back of the printing paper. This positive charge transfers the negative charged toner image from the photoconductor (drum) to the top surface of the paper. The toner image is now on the paper and the paper is now stuck to the photoconductor (drum) 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.



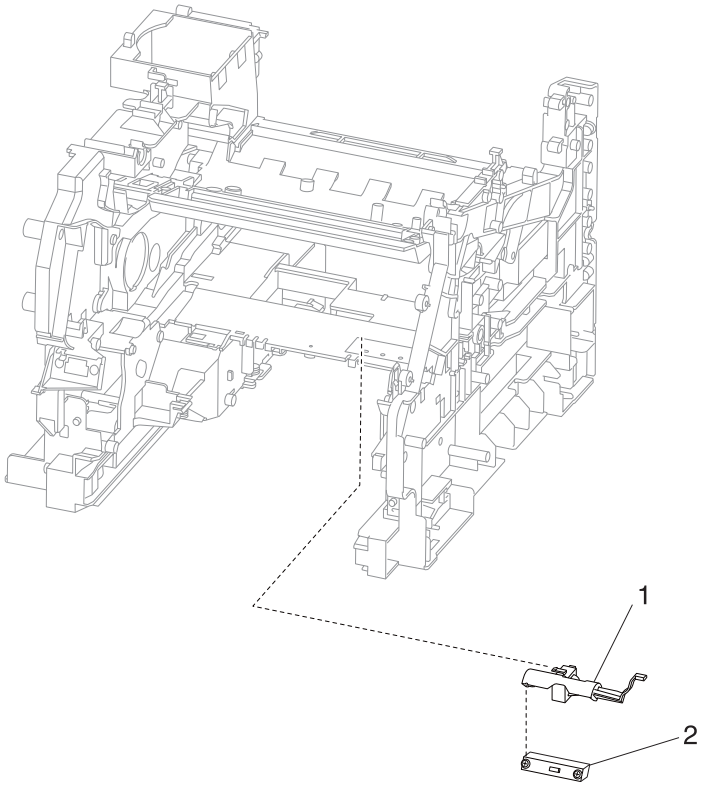

## Cleaning

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.



## Auto density sensing

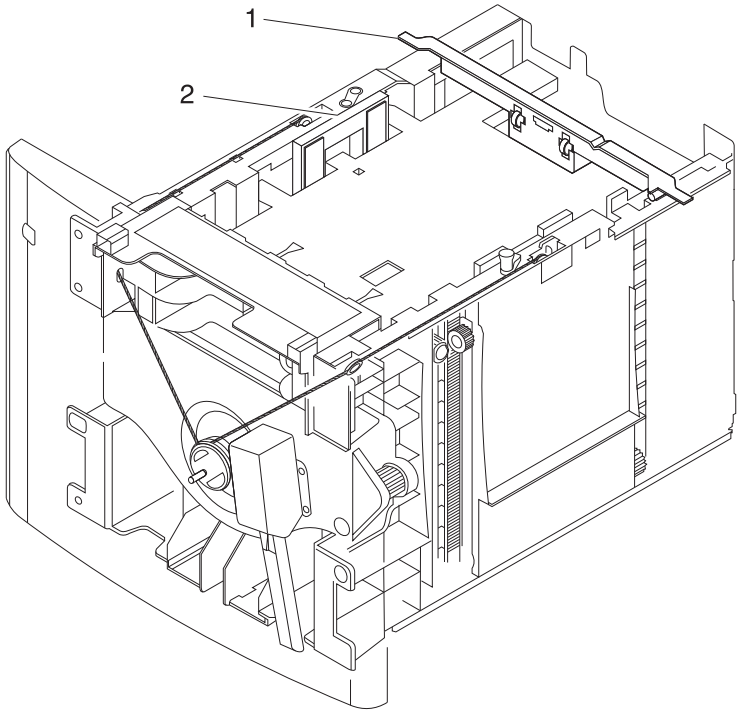
The cleaning blade removes any toner that remains on the drum after the transfer process. The toner that the cleaning blade removes is collected inside the sealed PC cartridge.



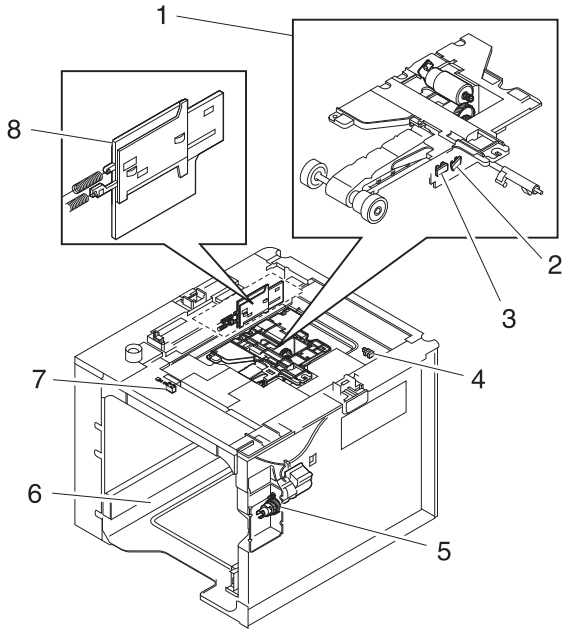

| # | Part |
|---|---|
| 1 | Sensor shield assembly |
| 2 | Sensor (toner density) |

The image density sensor assembly uses a reflection type sensor that detects a pre-placed toner patch and image on the photoconductor (drum) and outputs pulses when the central line of the patch image aligns with the central line of the detector. The sensor outputs pulses at the timing the patch image passes the sensor. Therefore, observing changes of intervals at which pulses are output leads to toner density detection.

## High capacity input tray (HCIT) tray assembly



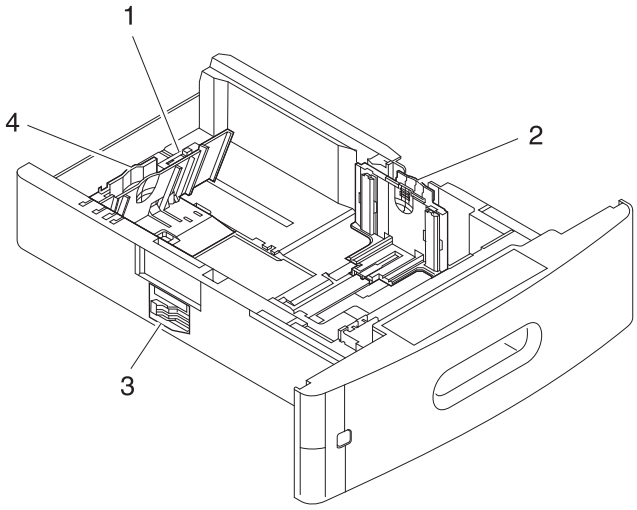

| # | Part |
|---|---|
| 1 | Rear media tray guide |
| 2 | Media end guide |




| # | Part |
|---|---|
| 1 | Pick arm assembly |
| 2 | Sensor (media empty) |

| # | Part |
|---|---|
| 3 | Sensor (media low) |
| 4 | Sensor (tray raised HP) |
| 5 | Tray lift drive motor |
| 6 | HCF drawer assembly |
| 7 | Sensor (pass through) |
| 8 | Media size actuator |

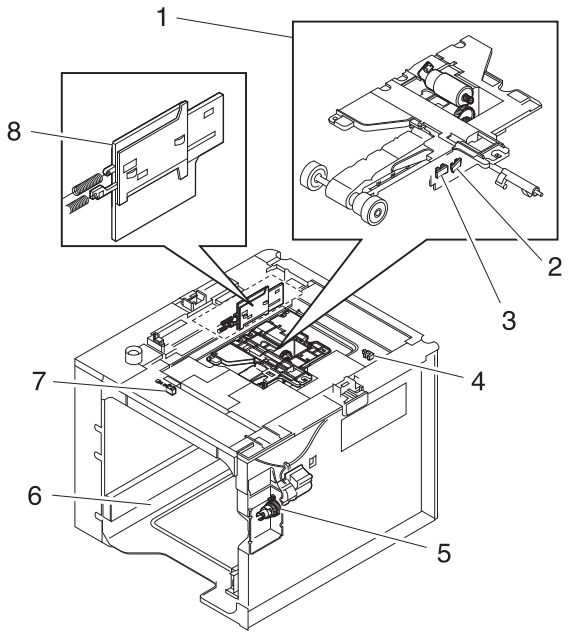
## 250-sheet/550-sheet tray assembly




| # | Part |
|---|---|
| 1 | Lockable back restraint |
| 2 | Media end guide |
| 3 | Auto size finger actuator |
| 4 | Rear media tray guide |

## Media size sensing

The media size set for the media tray assembly is set by positioning the right media guide, unlocking the slider lock, and sliding the rear paper guide. The rear paper guide triggers the movement of the auto size sensing finger, which then sets the switches of the controller card board. The combination of on/off position of the three switches provides information of the media sizes to the engine.




| Media size | Switch 1 | Switch 2 | Switch 3 |
|---|---|---|---|
| Unknown | OFF | OFF | OFF |
| A4 | OFF | OFF | ON |
| Legal | OFF | ON | OFF |
| B5 | OFF | ON | ON |
| A5 | ON | OFF | OFF |
| Executive | ON | OFF | ON |
| Letter | ON | ON | OFF |
| Custom | ON | ON | ON |

**Note:** Media size sensing through on/off switch combination

## Media level sensing

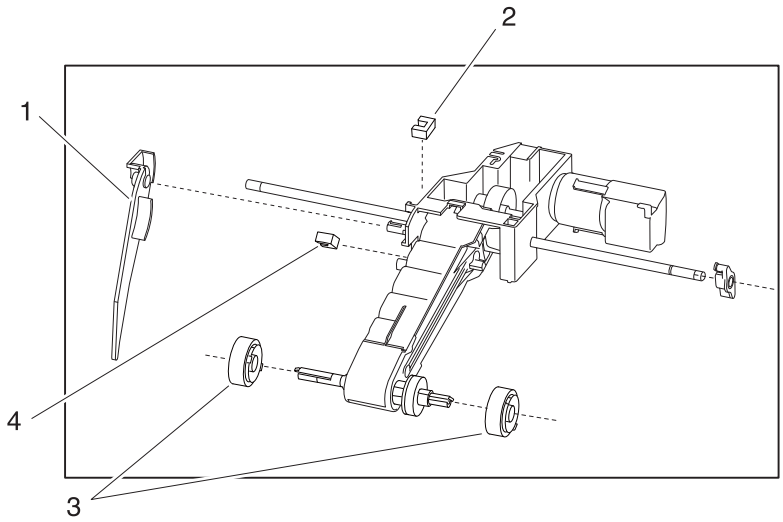
The media level for the media tray assembly is triggered by the actuator flag positioned in the two photointerrupter sensors in the pick arm bracket assembly. The actuator flag blocks and unblocks the two sensors in different sequence; it determines whether the paper tray is empty, low, or full.

| 250-sheet tray | Sensor A | Sensor B |
|---|---|---|
| Tray full | unblocked | unblocked |
| Tray low | blocked | unblocked |
| Tray empty | blocked | blocked |

| 550-sheet tray | Sensor A | Sensor B |
|---|---|---|
| Tray full | unblocked | unblocked |
| Tray low | blocked | blocked |
| Tray empty | blocked | unblocked |

**Note:** Media size sensing through sensor blocking sequence

## Pick arm assembly




| # | Sensor A |
|---|---|
| 1 | Media out actuator |
| 2 | Sensor (media empty) |
| 3 | Pick roll assemblies |
| 4 | Sensor (media low) |

Since all media trays are functionally equivalent in terms of the switch (media size), sensor (media empty), sensor (media low), only the components of one tray are described here.

The pick arm assembly is a mechanical unit supplying media from the media tray assembly to the printer. The driving force, from the pick arm drive motor on the pick arm assembly, is transmitted to the two pick rolls to feed media.

When the pick rolls pick up media, the remaining media decreases, and the media out actuator will lower and interact with the sensor (media low) and sensor (media empty) to determine the amount of media remaining. The pick arm assembly (autocompensator) is a paper pick device that generates its own normal force. This force generation is inherent in the fundamental design of the pick arm. If light media is used, it picks very gently. If a heavy media is used, it picks very aggressively. No customer adjustments are necessary, therefore no special trays are needed for card stock or labels. The gearing in the arm is designed so the input torque from the motor produces a movement about the pivot of the arm. This movement produces a downward force at the pick rolls. The friction between the pick roll and the paper produces a frictional locking condition. If the paper is physically held and not allowed to feed, then the motor stalls. Slippage between the roll and the paper is theoretically impossible. When the motor is energized, the pick rolls are driven down into the stack, increasing the normal force and drive force until the bending strength of the paper is overcome and the paper bends and moves up the wear strip.

## 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 system card assembly.

## Sensor (media empty)

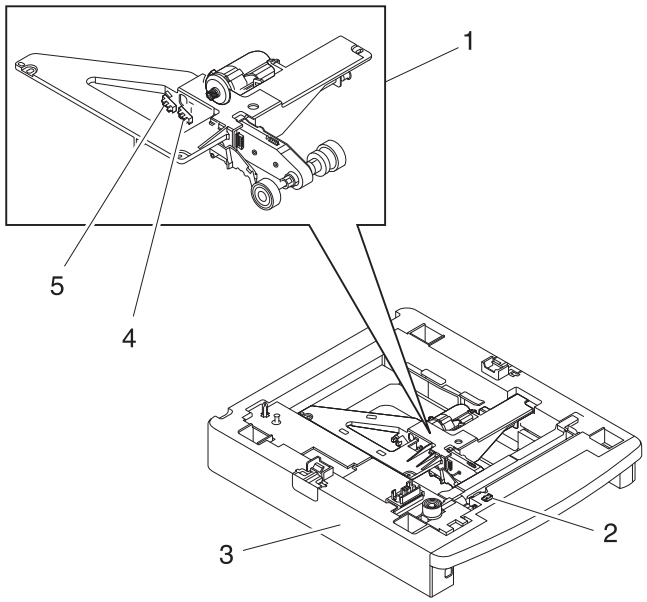
If media runs out in a media tray assembly, the actuator lowers and the actuator flag, unlocks the sensing area of the sensor (media empty). The sensor light is transmitted. When the sensing area is blocked (media is present), the signal is off.

## Sensor (media low)

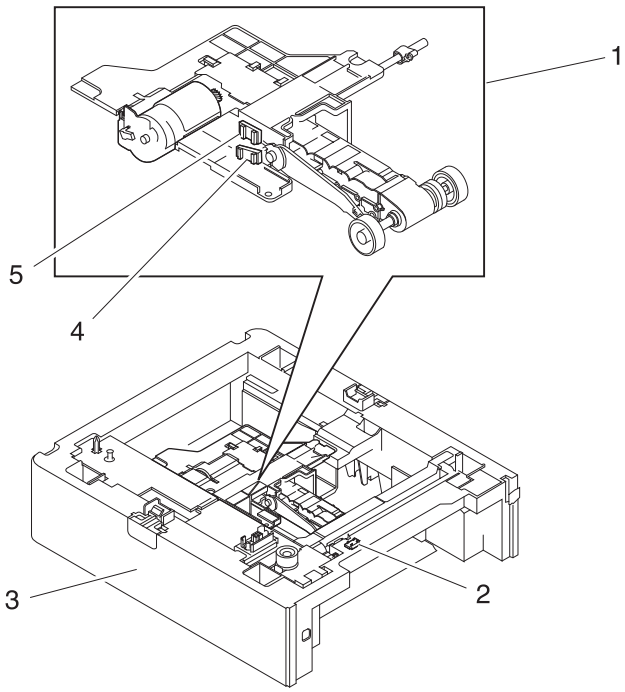
This sensor detects by the actuator position whether media in the media tray assembly is low. When the flag of the actuator blocks, then unblocks the sensing area of the sensor (media low), the media level is determined to be low.

## Sensor (pass-thru)

A photointerrupter sensor with a built-in flag that sends a signal to the engine where the media from the input tray passes. This will trigger the pick arm to pick the next media.




| # | Part |
|---|---|
| 1 | Pick arm assembly |
| 2 | Sensor (pass through) |
| 3 | 250-sheet drawer assembly |
| 4 | Sensor (media low) |
| 5 | Sensor (media empty) |



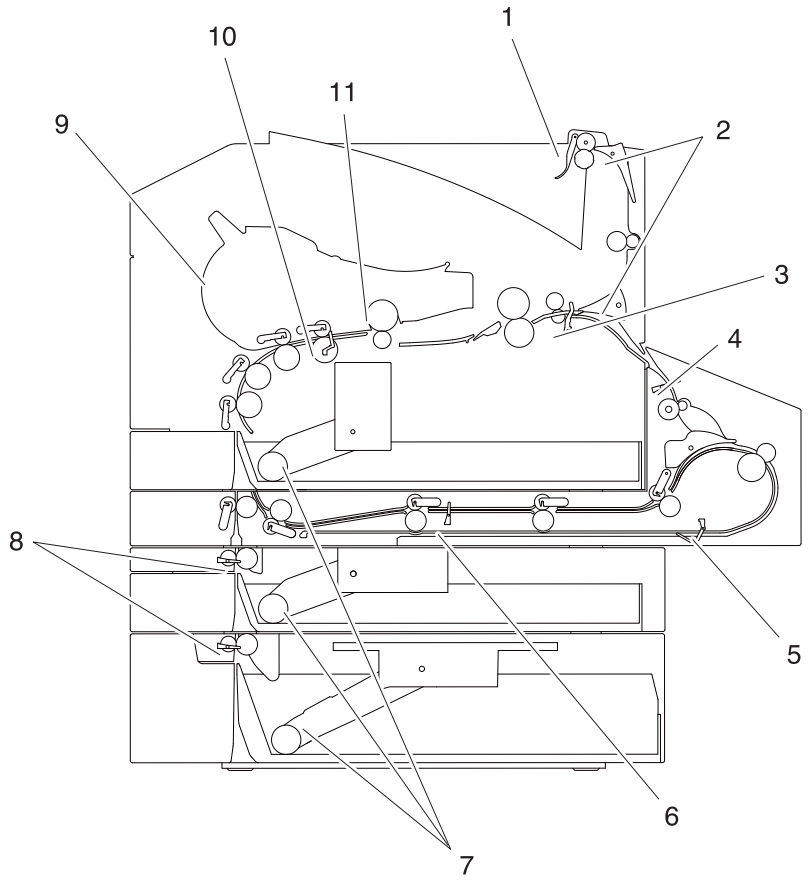

| # | Part |
|---|---|
| 1 | Pick arm assembly |
| 2 | Sensor (pass through) |
| 3 | 550-sheet drawer assembly |
| 4 | Sensor (media low) |
| 5 | Sensor (media empty) |

# Paper path, rolls, and sensors

## Media transport path

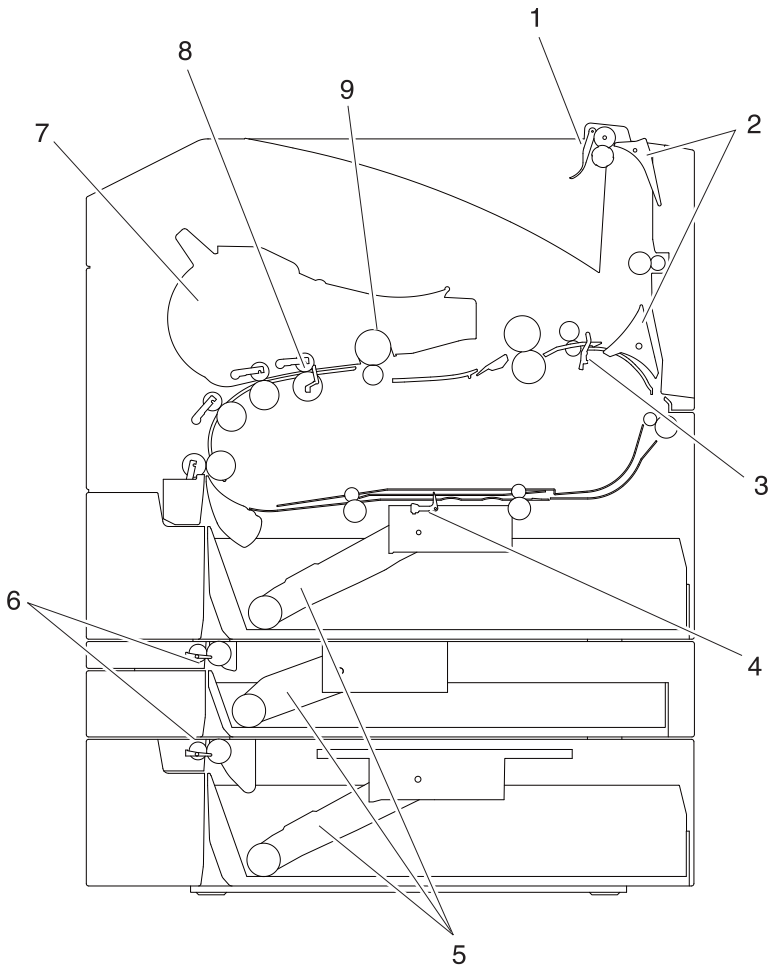
The following is a cross section of the printer and the tandem tray module, showing the main components directly associated with the media path and transport.

## Model T650 paper path, rolls, and sensors




| # | Part |
|---|---|
| 1 | Standard bin full actuator and sensor |
| 2 | Diverter |
| 3 | Sensor (fuser output, narrow media) |
| 4 | Sensor (duplex input) |
| 5 | Sensor (duplex double feed) |
| 6 | Sensor (duplex exit) |
| 7 | Pick arm assembly |
| 8 | Sensor (option pass through) |
| 9 | PC cartridge |
| 10 | Sensor (input) |
| 11 | PC drum |

## Model T652 and T654 paper path, rolls, and sensors




| # | Part |
|---|---|
| 1 | Standard bin full actuator and sensor |
| 2 | Diverter |
| 3 | Sensor (fuser output, narrow media) |
| 4 | Sensor (duplex input) |
| 5 | Pick arm assembly |
| 6 | Sensor (option pass through) |
| 7 | PC cartridge |
| 8 | Sensor (input) |
| 9 | PC drum |

## Functions of main components

When the 250 or 550 sheet input trays are installed under the printer, additional trays are available.

### Media tray assembly

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

### Rear media guide

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

### Side guide

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

### Wear strips

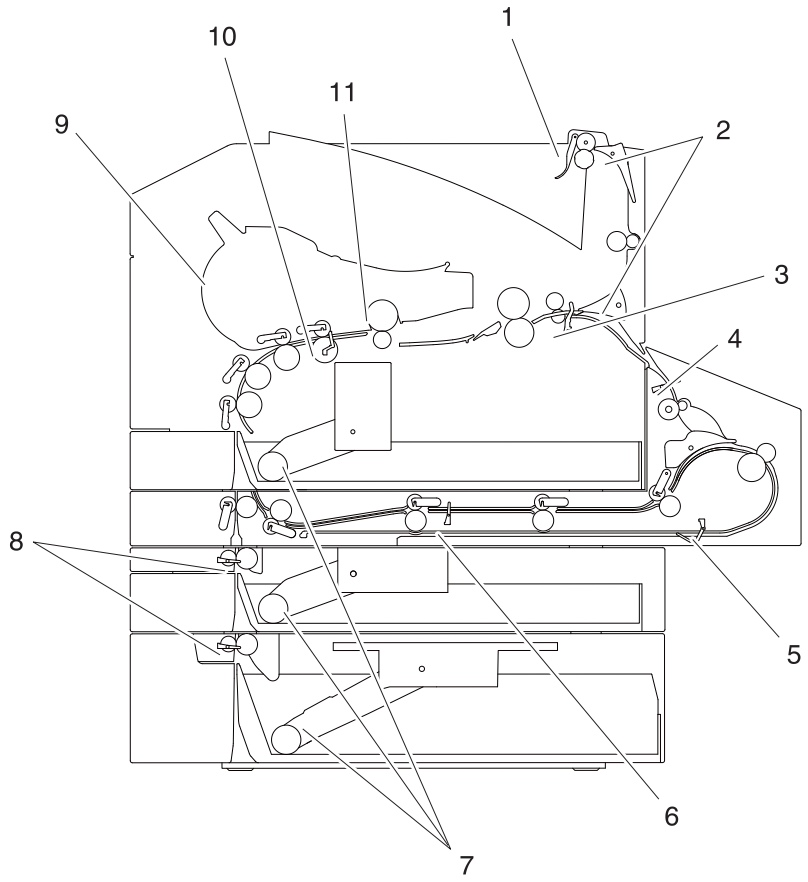
The wear strips are designed to provide a fixed resistance to ensure that a single piece of paper is properly fed out of the media tray. There are several types of wear strips available for custom or hard to feed media.

## Duplex

### Layout of media transport path

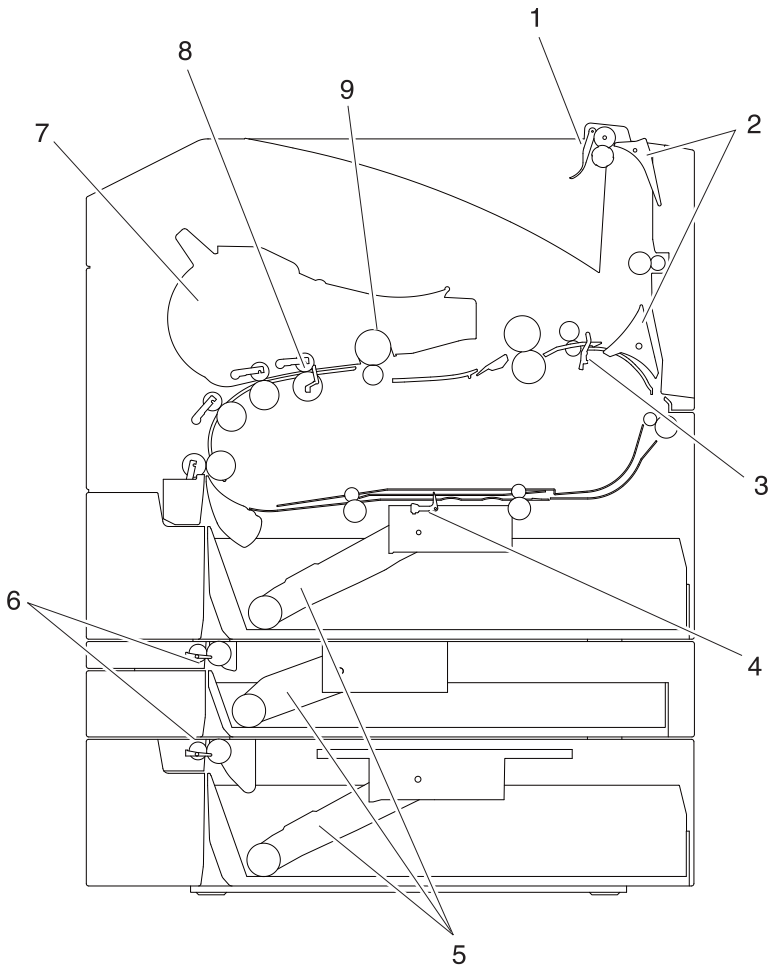
The main components associated with the media path and transport with the duplex installed.

## Model T650 duplex paper path




| # | Part |
|---|---|
| 1 | Standard bin full actuator and sensor |
| 2 | Diverter |
| 3 | Sensor (fuser output, arrow media) |
| 4 | Sensor (duplex input) |
| 5 | Sensor (duplex double feed) |
| 6 | Sensor (duplex exit) |
| 7 | Pick arm assembly |
| 8 | Sensor (option pass through) |
| 9 | PC cartridge |
| 10 | Sensor (input) |
| 11 | PC drum |

## Model T652 and T654 duplex paper path




| # | Part |
|---|---|
| 1 | Standard bin full actuator and sensor |
| 2 | Diverter |
| 3 | Sensor (fuser output, arrow media) |
| 4 | Sensor (duplex input) |
| 5 | Pick arm assembly |
| 6 | Sensor (option pass through) |
| 7 | PC cartridge |
| 8 | Sensor (input) |
| 9 | PC drum |

## Functions of main components

When the duplex is installed, duplex (double-sided) printing is available with the printer.

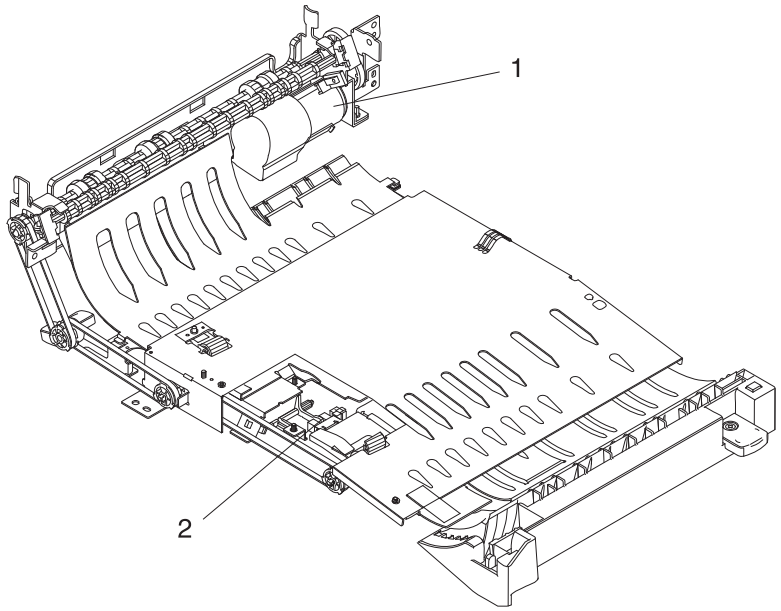
The following outlines the functions of the main components of the duplex.

## Sensor (duplex input)

The sensor (duplex wait) detects whether media is remaining in the duplex.

## Duplex drive motor assembly

The duplex drive motor assembly transmits driving force to the two duplex media transport roll assemblies and the duplex media center transport roll assembly middle that feeds media.




| # | Part |
|---|---|
| 1 | Duplex drive motor assembly |
| 2 | Sensor (duplex input) |

# Acronyms

## Acronyms

| | |
|---|---|
| BLDC | Brushless DC Motor |
| CRU | Customer Replaceable Unit |
| CSU | Customer Setup |
| DIMM | Dual Inline Memory Module |
| DRAM | Dynamic Random Access Memory |
| DVM | Digital multimeter |
| EDO | Enhanced Data Out |
| EEPROM | Electrically Erasable Programmable Read-Only Memory |
| EP | Electrophotographic Process |
| EPROM | Erasable Programmable Read-Only Memory |
| ESD | Electrostatic Discharge |
| FRU | Field Replaceable Unit |
| GB | Gigabyte |
| HCIT | High-Capacity Input Tray |
| HVPS | High Voltage Power Supply |
| ITC | Internal Tray Card |
| LCD | Liquid Crystal Display |
| LED | Light-Emitting Diode |
| LVPS | Low Voltage Power Supply |
| MPF | Multipurpose Feeder |
| MROM | Masked Read Only Memory |
| MS | Microswitch |
| 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 |
| PP | Parts Packet |
| PWM | Pulse Width Modulation |
| RFID | Radio Frequency Identification |

| | |
|---|---|
| RIP | Raster Imaging Processor |
| ROM | Read Only Memory |
| SDRAM | Synchronous Dual Random Access Memory |
| SIMM | Single Inline Memory Module |
| SRAM | Static Random Access Memory |
| UAT | Universally Adjustable Tray |
| UPR | Used Parts Return |
| V ac | Volts alternating current |
| V dc | Volts direct current |
| VOM | Volt Ohmmeter |

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| 40X1991 | Output expander media bin latch | 506 |
| 40X4376 | Output option interface cable assembly | 486 |
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| P/N | Part name | Page |
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| 40X3141 | Power cord HV, Paraguay, Austria, Belgium, France, Germany, Italy, Netherlands, Bluemark, Czech and Solvic countries, Greece, Hungary, Medmark 1, Medmark 2, Arabic, Poland, Russia, CIS, Spain, Portugal, and Ireland | 515 |
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| 40X1772 | Power cord HV, Switzerland | 515 |
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| P/N | Part name | Page |
|---|---|---|
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| P/N | Part name | Page |
|---|---|---|
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| 40X7002 | Wear strips, dimpled 250 sheet | 517 |
| 40X7004 | Wear strips, dinky 550 sheet | 517 |
| 40X7001 | Wear strips, smooth 250 sheet | 517 |

# 4062-T650 PRINTER

Power Switch
F2
250V
Fuser Power TBD
CR08
250V
CN3
LVPS
Card Assembly

Sensor
(STD Bin Full)
S_HOP_FULL LED
GND
S_HOP_FULL*
J1

OP Panel USB Port
GND
GND
S USB FP D+
S USB FP D-
S USB FP PWR
J12

Printhead Assembly
L_ENB* CN
S G BOOST
L_ADJ* CN
GND
E_POW_CN
E_+24HEAD
GND
VID 0-CN
VID 0+CN
L_ADJ 1* CN
GND
VID 1-CN
VID 1+CN
J6

Toroid
Toroid
Toroid
Toroid

Main Coding Fan
Print Cartridge Cooling Fan
GND
GND
+24V
MM START* CN
MM LOCK* CN
MM REF CLK CN
GND
+5V SW
PH HD THERM
HSYNC CN*
GND
J7

+24V
GND
MAIN FAN FEEDBACK
J8

+24V
GND
S FAN FEEDBACK
J9

System Card Assembly

Switch
(Top Cover Interlock)
S COV CLOSE
GND
S +5V FUSE1
Print Cartridge
ID Sensor
J11
J15
GND
S CLK CART
S CART 3V
S DATA CART

SFP Operator
Panel Assembly
GND
+3.3V
S OP INT
GND
S OP I2C CLK
S +5V FUSE1
S OP I2C DATA
J16

J14
INA PORT
JDC1
JDC2
J17
S TDS +5V
GND
S TDS SIG
NC TDS -4
GND
Sensor
(Toner Density)

Sensor (Input)
Sensor
(Toner Empty)
GND
S TONER WHEEL*
S TWHEEL LED
S IN SENSE PWR
S IN SENSE*
GND
S DEV
GND
S CHARGE
S +24V SW
S XFR
S TX ENB
S AT SERVO
J20

BLDC WIND 2
BLDC WIND 1
BLDC WIND 0
+5V SW
GND
BLDC FG R
BLDC HALL 2 R
BLDC HALL 1 R
BLDC HALL 0 R
J24

GND
FUSER_DAT
CLK FUSER
FUSER_3V
EXIT SNS*
THUMP SOL RET
+5V SW
THUMP SOL DRV
FLIPPER DRV*
F THERM
GND
NAR MEDIA*
J27

Fuser
Main Drive
Motor Assembly

To Photo Conductor Ground
To Developer Roll
To Toner Add Roll
To Doctor Blade
To Charge Roll
To Transfer Roll
PC D DEV TAR DR B
CHG B
To Charge Brush
CHG
TX
CN1
HVPS Card Assembly

ZEROXING R*
+24V RAW
+24V RAW
+24V RAW
+24V RAW
+5V
+5V
+5V
+5V
CN3
HEAT
GND
GND
GND
GND
GND
GND
GND
GND
+50V

J21
Ethernet
J23
J25 USB Device Port

GND
USBOUT+
USBOUT-
GND
USBIN+
USBIN-
GND
A0
INA RESET R
+5V
I2C DATA
+5V
I2C CLK
+5V
ISP

JDIMM1

GND
S TX OPT
GND
S RX OPT
J22
J26
GND
S TX OPT
GND
S RX OPT

J31
J32
J33
J34
J35

GND
+24V BOT OPT
GND
S +5V FUSE4
GND
+24V TOP OPT
To J32 [1]
To J32 [2]
To J22 [4]
To J22 [3]
To J22 [2]
To J22 [1]
To J32 [3]
To J32 [4]
Output Option
Interface

S PSIZE3
GND
S PSIZE2
S PSIZE1
S TRAY1 PLOW*
GND
S +5V PLOW
S TRAY1 POUT
GND
S +5V POUT
S AC LED2
S AC ENC
GND
+24V
AC MOT-
CN1
Switch
(Media size)
SW2
SW1
SW0
Sensor
(Media Low)
Sensor
(Media Empty)
Pick Motor
Encoder
Pick Arm
Motor
Pick Arm Assembly

GND
+24V
MPF Pick
Solenoid
S MPF POUT
GND
S MPF LED
Sensor
(MPF Media Empty)

To J31 [1]
To J26 [3]
To J26 [4]
To J31 [2]
To J26 [2]
To J26 [1]
Input Option
Interface

Fuser
Lamp

# 4062-T652 PRINTER

Power Switch
Fuser Power TBD
F2 250V
CR08 250V
CN3
LVPS Card Assembly

Sensor (STD Bin Full)
Redrive Motor Assembly
OP Panel USB Port
Printhead Assembly
Toroid
Toroid
Toroid
Toroid
Main Coding Fan
Print Cartridge Cooling Fan

J1 J4 J12 J6 J7 J8 J9

System Card Assembly

JDC1 JDC2
J14 INA PORT
JDIMM1
ISP
J21 Ethernet
J23
J25 USB Device Port
CN3

J11
J15
J16
J17
J20
J22
J26
J24
J27

Switch (Top Cover Interlock)
Print Cartridge ID Sensor
SFP Operator Panel Assembly
Sensor (Toner Density)
Sensor (Input)
Sensor (Toner Empty)
Fuser
Main Drive Motor Assembly

To Developer Roll
To Toner Add Roll
To Charge Roll
To Transfer Roll
To Photo Conductor Ground
To Doctor Blade
To Charge Brush
PC D DEV TAR DR B CHG TX
CN1
HVPS Card Assembly

J28 J30 J29 J31 J32 J33 J34 J35

Duplex Drive Motor Assembly
Duplex Cooling Fan
Sensor (Duplex Input)
Output Option Interface
CN1 Switch (Media size) SW2 SW1 SW0
Sensor (Media Low)
Sensor (Media Empty)
Pick Motor Encoder
Pick Arm Motor
Pick Arm Assembly
MPF Pick Solenoid
Sensor (MPF Media Empty)
Input Option Interface
Fuser Lamp

# 4062-T654 PRINTER

LVPS
Card Assembly

Power Switch
F2
250V
Fuser Power TBD
CR08
250V
CN3

Sensor (STD Bin Full)
LVPS Cooling Fan
OP Panel USB Port
Redrive Motor Assembly
Printhead Assembly
Toroid
Main Coding Fan
Print Cartridge Cooling Fan

J1 J2 J3 J4 J6 J7 J8 J9

System Card Assembly

Switch (Top Cover Interlock)
Print Cartridge ID Sensor
J11 J15

SFP Operator Panel Assembly
J16

Sensor (Toner Density)
J17

Sensor (Input)
Sensor (Toner Empty)
J20

HVPS Card Assembly
CN1
To Developer Roll
To Toner Add Roll
To Charge Roll
To Transfer Roll
To Doctor Blade
To Photo Conductor Ground
To Charge Brush
PC D DEV TAR DR B
CHG B
CHG
TX

J24

Main Drive Motor Assembly
Fuser
J27

Fuser Lamp

J14 INA PORT
JDC1
JDC2
JDIMM1

J19 USB Host Port
J21 Ethernet
J23
J25 USB Device Port
ISP

J22 J26

J28 J29 J30 J31 J32 J33 J34 J35

Duplex Drive Motor Assembly
Sensor (Duplex Input)
Duplex Cooling Fan
Output Option Interface

CN1 Switch (Media size) SW2 SW1 SW0

Pick Arm Assembly
Sensor (Media Low)
Sensor (Media Empty)
Pick Motor Encoder
Pick Arm Motor

MPF Pick Solenoid
Sensor (MPF Media Empty)

Input Option Interface